FOLIO OF COMPOSITIONS AND PRODUCTIONS WITH CRITICAL COMMENTARY

BY STEVEN ANDREW WILLIAMS
STUDENT NUMBER: K0841784

This thesis is submitted in partial fulfillment of the requirements of Kingston

University for the degree of Doctor of Philosophy

March 2017

ACKNOWLEDGEMENTS

I would like to thank my first supervisor Allan F. Moore for his clarity of thought, attention to detail, and the valuable guidance he gave me during the completion this thesis. The practical portfolio was only made possible by the other creators that took part in its production, all of whom I would like to thank. Finally, I am forever grateful to my wife for her enduring support before, during, and I am sure after the creation of this PhD.

I confirm that the work presented in this thesis is my own and has not previously been submitted for an award at an institute of Higher Education either in the UK or overseas.

Signed . . . .

Steven Andrew Williams

ABSTRACT

This practical portfolio PhD presents a collection of my pop music compositions and productions, with an accompanying exegesis that examines my process whilst creating these tracks. The exegesis analyses the methods and techniques I use, with the aim of achieving a better understanding of my productions. This will in turn reveal my idiolect, which is the distinctive way an individual creates that produces their particular style (Middleton, 1990: 136, 174; Moore, 2012: 120, 166-7). This research also includes analyses of interesting, innovative and important moments or processes that draw on perspectives taken from theories of creativity, technology as well as the social aspects of creation and innovation. These theories are the systems approach to creativity (Csikszentmihalyi, 1997, 1999), and the Social Construction of Technology [SCOT] (Bijker, Hughes & Pinch, 1987, 2012). The focus of this thesis will be on understanding the detail of my creative practice.

This exegesis consists of critical commentaries of four of the fifteen portfolio tracks, each in its own chapter. It is the intention that concentrating on just four tracks will enable a better understanding of the processes in question. Other portfolio tracks serve as further examples of the points made, or demonstrate alternatives where relevant. An autoethnographical approach is used as a methodology for the commentary chapters. This is in order to achieve a comprehension of my personal experience (Bochner and Ellis in Denzin, 2000: 736-9; Muncey, 2010: 26-33). The reader could then potentially 'resonate with' this experience and 'reflect on it' (Bochner and Ellis in Denzin, 2000: 753).

Chapter 1 outlines the various roles I play when creating a pop music track, which include composer, producer, engineer, performer and collaborator. This chapter additionally explores my position as listener as well as the significance of the opinions of the audience. Chapter 2 focuses on composition and melody, including a discussion of intuition and invention. The vocal production techniques used in the creation of the featured track are explored as well as my approach to mixing. Chapter 3 centers on how my drum performances and the lead vocal parts were created, and edited for the portfolio track in question. It also outlines several models of collaboration that refer to the creation of this track. Chapter 4 discusses the frame of mind one draws upon whilst

creating pop music. It examines how I chose equipment for the production, the production techniques used, and the creation of timbre and texture. Chapter 5 examines the application of reverbs and effects, and also explores my approaches and attitudes, some philosophical, towards the perspective of the listener. The composition collaboration situation differs in each commentary chapter, including: sole composition for Chapter 2; equally shared composition between two collaborators in Chapter 3; three collaborators in Chapter 4, of which I have least compositional input; and two way collaboration in Chapter 5, where I have no compositional input.

As a result of this study, a better understanding of my creative practice has been achieved, which includes further comprehension of my idiolect. This research has not only informed my recent composing and producing, but it is also likely that it will influence my future productions. Furthermore, it is hoped that the insights presented in this thesis could potentially serve as useful knowledge for others, with the prospect that they can approach their own productions with this knowledge in mind.

TABLE OF CONTENTS

INTRODUCTION

'The process of making records remains at least a partial mystery to the majority of those who listen to them' (Zak, 2001: 26)

The majority of people who listen to records have probably never been inside a recording studio, let alone created a track in one. Moreover, most of those who are employed in the pop music industry, from record company executives, to managers, to session musicians, do not know the fine detail in the process of creating a track. The detail in question is of course esoteric, and there are many texts that have been written about this process (Cunningham, 1998; McIntyre 2008, 2012; Moore, 2001, 2003, 2012; Moorefield, 2005; Owsinski, 2010; Warner, 2003; Zagorski-Thomas, 2010, 2014; Zak, 2001). There are, however, few published texts that examine the process of creating a track, that are written by the creators themselves, and are specifically about their own productions. The aim of this thesis, therefore, is to examine my process when I create pop music tracks. I will be investigating the detail of my own creative practice, analysing the methods and techniques I use when creating pop music. This will enable a better understanding of my productions and consequently, will reveal my idiolect, which in this context is the distinctive way an individual composes, produces, performs or creates that produces their particular style, or sound (Middleton, 1990: 136, 174; Moore, 2012: 120, 166-7). I will therefore be presenting a model of the self-discovery of this idiolect. Chapter 1 will examine the significance and combination of the roles I play in the recording studio, considering particular aspects of my practice. The subsequent chapters will consist of critical commentaries on four of the tracks from my portfolio, each in its own chapter, and will analyse interesting, innovative and important moments or processes for the track in question. The remaining tracks in the portfolio will offer further examples of these processes, or demonstrate alternatives. The situations that occurred whilst producing the portfolio will also be discussed, as 'an understanding of the complex context in which people operate must eventually enrich our understanding of who the individual is and what the individual does' (Csikszentmihalyi, 1988: 336).

This thesis will consider two particular research questions as they relate to the practical portfolio. The first question is how do I bring fresh perspectives to music

production? I use many methods and techniques that can be considered common practice, however, I adjust them to suit the style of the music I am producing. Certain aspects of these techniques have to be re-invented in specific instances, the details of which are variable and the result of personal preferences and expertise. I will highlight where re-invention happens, and how it was developed. I will also outline how my creative work and my own philosophical approaches to studio creativity, build upon, extend or evolve common practice, considering what makes me an expert. The second of these research questions is how does my creative work explore and exemplify collaborative ways of working? Zak (2001), Hennion (1990) and Wicke (1990) state that a pop or rock production is rarely the result of the sole contribution of an artist. The participants 'interact in various ways' to create the track (Zak, 2001: 63). Many of the portfolio examples are the result of composition collaborations and as every track features performances from more than one musician, there is a collaborative aspect to each. I will examine the aspects that participants brought to the different collaborations, outlining where compromise happened and how it was negotiated. Ownership of the creativity of the tracks will be discussed as this can impact the relationship of the collaborators, and therefore affect the process and result.

In the main, I was aware of the range of theoretical perspectives discussed in this thesis when creating of the portfolio tracks. Nonetheless, the process of executing this research has enabled further learning to take place. As all of the tracks in the portfolio are original, in that they are composed and/or produced by me, it is the intent of this study to offer new learning from their examination. The experiences and insights considered in this thesis can therefore serve as useful knowledge for others.

TERMS

Pop Music

Of the numerous texts that define pop music (Cunningham, 1998; Gracyk, 1996; Martin, 1988; Middleton, 1990; Moore, 2001; Moorefield, 2005; Warner, 2003; Zagorski-Thomas, 2014; Zak. 2001) many attest to its origins. Allan Moore proposes that the 'strands of pop music were evident in the late eighteenth century, with the decline of artistic patronage, and the attendant rise of a bourgeois market' (2001: 18-22). Middleton further states that 'popular songs' existed in the first half of the nineteenth century (1990: 3). Others declare that pop music's source is found in the early part of the twentieth century with pop's prolific use of magnetic tape and high

quality microphones (Zak, 2001: 9-17; Moorefield, 2005: 2-5). The New Grove Dictionary of Music and Musicians regards pop music as having emerged in the 1950s, and is, according to Sadie & Tyrrell, 'a term that from the late 1950s that has been applied to the central and most widely circulated kinds of popular music . . . in particular rock and roll, reggae etc.' (2001). Hardy and Laing further state that pop music is 'a broad term normally used for the softer, even more teenage-oriented, sounds that emerged as Rock 'n' Roll' (1990: x).

This thesis, however, employs a more contemporary perspective of pop music particularly referring to the content of the pop music charts of the last few decades,[1] and the methods by which these tracks are created. This study regards pop as music that: is created using technology, probably in the recording studio; is popular; can consist of a variety of styles, which refer to songs in the pop music charts; and is less than four minutes long, as are the majority of tracks in the pop music charts (Warner, 2003: 3-17; Bennett, 2012: 142-3). I will first consider the technological element of pop music.

In the main, music in the pop charts consists of tracks that feature technological instruments that have been invented in the last 100 years, such as electric guitars and more recently in the last few decades synthesizers and samplers. It is not uncommon for pop music to be composed in a recording studio, with easy access to technology that enables recording of these instruments (Bennett, 2011; 7-8; Keitt, 2013). In addition, pop music tracks are often produced in a recording studio, using production techniques such as multi-tracking and overdubbing,[2] whilst perhaps employing various effects such as delays. One of the earliest examples of the use of production techniques to make a record was "How High The Moon" by Les Paul (1951).[3] Les Paul used multi-tracking and overdubbing techniques to create a sound that was then thought unique. Bruce Swedien comments that this was "one record [that] changed pop music forever . . . There wasn't a shred of reality in it – and it was wonderful" (1991: 40). Since then, technology based production techniques have been used to create the majority of pop music tracks in some way.

The next aspect to consider is that pop music is music that is popular. In the capitalist economy of the UK, success is often measured by monetary gain, and the UK

---

[1] This study regards the pop music charts as the UK Official Singles and Album Charts, which are published by The Official UK Charts Company (2016).
[2] Multi-tracking or overdubbing is recording one or more parts to the playback of previously recorded parts.
[3] All commercially released tracks, such as this, are hereinafter found on the USB stick in the folder called 'Commercially Released Tracks'.

Official Singles Charts lists the highest selling tracks including Internet streaming. The monetary gain from this situation would define the track as being successful and therefore popular in that context. Figures are clearly open to manipulation, with industry constraints and influence; however, as this is currently the principle measure of the best selling music, it would not be unreasonable to recognise it as having a degree of validity. Tracks are considered solely as objects in this context, 'neglecting their role in cultural practice or way of life' Middleton 1990: 6). Pop music is therefore 'a commodity to be sold in the market place' (Simon Frith in Martin, 1988:19).

Nonetheless, if a track sounds similar to the music in the pop music charts, with comparable characteristics, it could also be labeled pop music. Although the tracks I have composed and produced in the practical portfolio have not achieved a high chart position, I would define them as pop music because they contain similar characteristics to those tracks that have reached such a position. Joe Bennett (2011a: 3; 2012: 143) lists what he believes are the most common characteristics of mainstream pop music chart hits in the last 50 years:

- First-person sympathetic protagonist/s, portrayed implicitly by the singer
- Repeating titular choruses (where the song is in chorus form), usually containing the melodic pitch peak of the song, which summarise the overall meaning of the lyric
- Rhyme – usually at the end of lyric phrases
- One, two or three human characters (or a collective 'we')
- Feature an instrumental introduction of less than 20 seconds
- Include the title in the lyric
- Sung between a two-octave range from bottom C to top C (C2 to C4), focusing heavily on the single octave A2 to A3.
- Thematic lyric content relating to (usually romantic) human relationships
- Use underlying 4, 8 and 16 bar phrases, with occasional additions or subtractions
- Based on verse/chorus form or AABA form
- 4/4 time
- Maintaining one diatonic or modal key
- Between 2 and 4 minutes in length

In the main, the portfolio tracks adhere to the above constraints, with some variants, such as the structure is different to AABA on some portfolio tracks.

It is not uncommon for the UK Official Singles Charts to feature a variety of styles of music. These styles could therefore all come under the heading of pop music. In recent years, perhaps spanning two decades, pop chart successes have been rooted in

styles such as electronic dance music, rap, hip-hop, folk, alternative, rock, rock ballad, adult oriented pop, boy band pop, bubble gum pop, and more recently dubstep. This is not an exhaustive list and occasionally, there are tracks that enter the pop charts that have an incongruous style that could be thought unusual in that context. For example, "Ding-Dong! The Witch is Dead" from the 1939 film *The Wizard of Oz* reached number two in the UK Official Singles Charts in 2013, and is stylistically not a typical pop music track with its Hollywood orchestral arrangement. However, as it achieved such a high position in the charts, it could be thought a pop music track. It would seem, therefore, that the content of the pop music charts cannot be regarded as absolute. Pop music 'can only properly be viewed within the context of the whole musical field, within which it is an active tendency; and this field, together with its internal relationships, is never still - it is always in movement.' (Middleton, 1990: 7). The tracks in the portfolio for this thesis, however, are not stylistically incongruous to many tracks in the pop music charts.

Idiolect

The term idiolect is commonly defined as the particular way an individual talks: their speech pattern (BBC Bitesize: 2014; Oxford English Dictionary, 2016). However, in musical terms idiolect refers to an individual's particular influence on a track, part or sound (Middleton, 1990: 136). This influence can be affected by the context or locale of the individual(s) concerned, and is termed by Middleton as 'dialect'. For example, contextually a Jimi Hendrix single sounds different to a concert version of the same song; and geographically the 1960s Merseyside versions of Rock 'n' Roll have their own 'dialect'.

Idiolect as a concept is frequently conceived to be a subsidiary of style (Moore, 2012: 120; Middleton, 1990: 174). Style refers to the 'manner of articulation of musical gestures… [and it] operates at various hierarchical levels, from the global to the most local' (Moore, 2001b: 441-2). For example, an artist may decide to play a song in an R&B style rather than a Techno style. Thus Nirvana's music, represented by their idiolect, is couched within the style that is 'alternative rock'. However, Moore conversely suggests that for some artists, their idiolect is not confined to a particular style (2012: 166-7). It is hard to define the idiolect of Bowie, for example, as his canon includes many styles, such as Dance, Glam or Alternative Rock. Further, progressive rock bands often seem to have different styles, each with their own idiolect: 'folk' and

'synthesizer rock' in Jethro Tull, 'classical' in Genesis or Yes, and 'medieval' styles in Gentle Giant (Moore in Tate, 2009: 140-1). Moore also discusses the stylistic fingerprints that an individual contributes to the sound of a track, specifically the performers, and the ways that 'individuals articulate their expression' (Moore, N.D.: 6). I would extend this contribution to include producers and composers, with their methods and techniques, as well as their distinctive and unique way working and handling the tools available in the recording studio. In essence, producers and composers are performing on the instrument that is the recording studio.[4] This would involve choosing sounds and effects, real time performances on instruments, step time performances - of drum sample parts for example,[5] comping[6], editing and mixing.

Consequently, this thesis will indicate where certain moments and methods I use are specific to my idiolect. The combination of various performing, editing, mixing and production techniques that I use all result in the sound of a track; a sound that is ultimately determined by my idiolect.

METHODOLOGY

Each track in the practical portfolio was created without the intent of being part of a PhD practical portfolio. As a consequence, I was not influenced by the examination, immediate or potential, of these tracks; decisions of process and creation were therefore made purely for aesthetic reasons. The experiences and events that occurred, as well as decisions I made in the process of composing and producing these portfolio tracks, therefore have no formal documentary evidence. The examination of these tracks is thus a reconstructive process. However, the most important and significant thought processes are conspicuous to me and are therefore relatively easy to recall. As these tracks are considered by myself as reputable examples of my work, the processes and thoughts that inspired compositional and production decisions are more memorable than if I considered a production less worthy of inspection. Many decisions were subjective, so their consideration in this thesis comes from the authentic source. Subjective considerations, such as those included in this study, are part of reflective practice, which

---

[4] Geoff Emerick (2007: 370) states that George Martin taught him that the studio is an instrument, Alan Parsons refers to the studio as an instrument in Cunningham (1998: 169), and Moorefield (2005: 43) dedicates a whole chapter to this concept.
[5] Step-time recording is inputting musical data into a computer sequencer one chord or note at a time, out of time to the music, choosing the note durations for each chord or note. The part can then be played back at the correct tempo.
[6] Comping is compiling various recorded takes to create a single part.

according to Schön (1987) provides practitioners with opportunities to reflect in and on action.

Schön also asserts that 'Competent practitioners usually know more than they can say. They exhibit a kind of knowing-in-practice, most of which is tacit' (1991: viii). Polyani states that 'We can know more than we can tell', implying that tacit knowledge is internalised, and perhaps 'cannot be put into words' (1966: 4). I recognise that I extensively use my tacit knowledge to create my productions, which significantly contributes to the resulting track. I have a deep understanding of the materials I use, which includes musical sound, and am open to alternative ways of creating an appealing result, whether I am composing, producing or engineering. 'Just as mechanics use a working knowledge of materials and machines, so recording engineers deploy a working knowledge of the behavior of sound and the machinery of its propagation' an approach I use, not only as an engineer, but also as a producer, and a studio-based composer, (Schmidt-Horning, 2004: 707). The musical sound I create is manipulated by the techniques I employ, and my tacit knowledge not only involves an understanding of these two aspects, but also an internalisation of their connections. These connections exist because of my extensive use of the techniques I employ in a variety of creative and professional circumstances, and as such produce huge leaps of understanding that outsiders may consider to be lateral thinking. My experience potentially allows me to utilise these connections in a way that a novice would perhaps find difficult, as they would not have such a wide 'database' of potentially useful connections to draw upon. The problem solving connections, in other words my tacit knowledge, can be explained from a musical/technical perspective. They exist because my experience, and the seemingly unthinking nature of this tacit knowledge, arises from continuity of practice, such that the links and leaps between elements of this knowledge become subconscious. It is therefore a knowing-in-practice. I will attempt to further elucidate the relevant areas concerning tacit knowledge throughout this thesis.

Autoethnography

Criticisms of self-analytical and self-reflective research exist which tend to concentrate on the reliability of a subjective research position (Lynch 2000). The intention of this thesis, however, is to offer a reliable subjective research position whilst analysing the subjective information included. A further criticism suggests that the disadvantage to a methodology that relies on recollections of experiences is that of

anecdotalism (Silverman 2000). In opposition to this, Hillman (in Muncey, 2010: 2) states that 'a single anecdote lights up a whole world of vision'. For this reason, I do not intend to avoid anecdotal evidence and will use a narrative style where appropriate. Consequently, the methodological approach of this thesis could be compared to an autoethnography. As part of their study on qualitative research, Ellis, Adams and Bochner (2011) outline a definition of autoethnography as an approach to research and writing that 'seeks to describe and systematically analyse personal experience in order to understand cultural experience'. I will be describing and analysing my experience from within the culture of pop music and its production in the recording studio.

Although the focus of this thesis is based upon understanding the detail of my own creative practice, in order to maintain rigour in my methodology certain aspects of my productions will be explained using perspectives taken from theories of creativity, technology as well as the social aspects of creation and innovation. These theories are the systems approach to creativity (Csikszentmihalyi, 1997, 1999), and the social construction of technology [SCOT] (Bijker, Hughes & Pinch, 1987, 2012). The intention is that the theoretical positions in question can go some way in accounting for particular features of my practice. I will first deal with the most significant reference for this thesis, which is from the creative perspective and how it relates to my productions.

THE SYSTEMS APPROACH TO CREATIVITY

'A critical interrogation of creativity should be central to any understanding of musical production' (Negus and Pickering in Hesmondhalgh & Negus, 2002: 147).

Phillip McIntyre (2006: 2) defines creativity as 'an activity where some process or product, one that is considered to be unique and valuable, comes about from a set of antecedent conditions through the conditioned agency of someone'. Teresa Amabile describes creativity as 'the confluence of intrinsic motivation, domain-relevant knowledge and abilities, and creativity-relevant skills' (Amabile cited in Sternberg and Lubart, 1999: 10).[7] Although these concepts of creativity are relevant to my process, Csikszentmihalyi, in his systems approach to creativity, defines creativity in a way that I find is most applicable to pop music productions. Csikszentmihalyi proposes that creativity results from the interaction of a system composed of three elements (1997: 27-8). The first of these is the *domain*, which consists of a set of symbolic rules and

---

[7] Other definitions and models of creativity are outlined in Sternberg (1999) and (2012).

procedures; music or mathematics is a domain. Domains are in turn nested in a culture. The second of these elements is the *field*, which includes all the individuals who act as gatekeepers to the domain, deciding whether a new idea or product should be included in the domain. The third part is the *individual* person. Creativity occurs when a person, using the symbols of a given domain such as music, has a new idea or sees a pattern, and when this novelty is selected by the appropriate field it is included in the relevant domain.
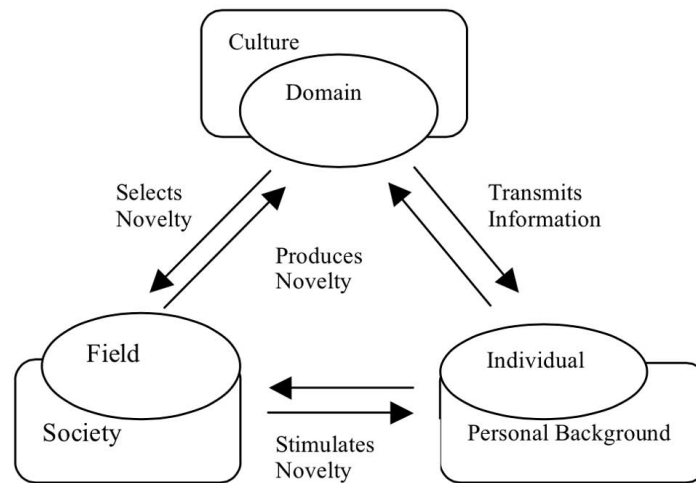

Figure 1: The Systems Model of Creativity (Csikszentmihalyi, 1999: 315)

The interactions of the three elements are non-linear, so each can interact with the other, and in no specific order. This is because the relationships between these elements are 'dynamic links of circular causality' (Csikszentmihalyi, 1988: 329). Csikszentmihalyi asserts that all three elements are necessary for a creative idea, product or discovery to take place and be recognised. The systems model therefore illustrates that creativity exists where individuals, domains and fields intersect (Csikszentmihalyi, 1999: 314).

This system is relevant for pop music productions, and can be explained as follows. The culture of pop music, recording studio practice and producing a track contain symbolic rules that relate historically to many styles of music. Weisberg states that 'creative products are firmly based on what came before' (in Sternberg, 1988: 173). Further, 'It is said that every painting is a response to all previous paintings, and every poem reflects the history of poetry' (Csikszentmihalyi, 1997: 85). Pop music has a history that consists of multiple examples of tracks. It also has a field of experts that create and contribute to the canon, as well as professional critics who evaluate this

music. Finally, as an individual, when I am innovative in my production process, one aspect I bring is an element of novelty into the domain of pop music. In this situation, I am adjusting and developing methods, many from common practice, to suit the original productions that make up the portfolio.

Csikszentmihalyi (1997: 23) suggests that creativity is an interaction between a person's thoughts and a sociocultural context, and that cultural affirmation enables a recognition of creativity. If a production is not heard by anyone apart from its creator, its creativity is not acknowledged by society. My productions have certainly been heard by particular areas of society. Not only has an academic community listened to my tracks, but also the ownership of each production belongs to an artist who promotes the track within the culture of pop music. The field would have easy access to listen to a track if it enters the UK official singles pop charts, perhaps within the top forty tracks (The Official UK Charts Company, 2016). Although none of the tracks in my portfolio have achieved such a position, they have entered other charts, for example, my portfolio track "I'm Too Smurfy" was number 25 in the Australian Download Charts, and "Take it Down" achieved a top 40 position in the Slovenian charts.

By way of commission, the field can inspire creativity. Florence is considered to have been an extremely creative place in the Renaissance period. Works of art were commissioned by rich traders and aristocracy, and without their support, many of these works would not have been created or recognised by the field (Csikszentmihalyi, 1997: 33-6). All but one of my portfolio productions are commissions, and without the support of the artists and industry executives who commissioned them, these productions would never have been created. McIntyre states that 'without some form of financial patronage most creative work in a modern studio will not happen' (2012: 156-7). Further, pop music charts also inspire artists to create, with the incentive of success and monetary returns, without which perhaps many pop music tracks would not have been produced. The field can therefore provide the right conditions for creativity to occur, including 'training, expectations, resources, recognition, hope, opportunity and reward. Some of these are direct responsibilities of the field, others depend on the broader social system' (Csikszentmihalyi, 1997: 330).

Nonetheless, aspects other than the field produce creativity. Creativity is often *autotelic*, which is a word of Greek origin that means something that is an end in itself, such as music. There is no reason for doing some activity except to feel the experience it provides (Csikszentmihalyi, 1997: 113). By internalising the field's criteria of

judgement to the extent that one can give oneself feedback, without having to wait to hear from experts, creativity can still exist (Csikszentmihalyi, 1997: 115). In addition, creative individuals often internalise their creative systems for creativity to occur (Csikszentmihalyi, 1995), again with little need for a response from the field. These approaches endorse a more simplified perspective of creativity that it is 'an idea or product that is original, valued and implemented' (Csikszentmihalyi and Wolfe, 2000: 81). Creativity in this context extends to an output that may not (yet) alter the content of the domain.

One aspect of the Systems Approach to Creativity is that some domains require the best equipment to create, and that the centres of distribution matter in order to be noticed by the field (Csikszentmihalyi, 1997: 54-5). My studio not only contains high quality equipment, such as the SSL Duality 48 channel analogue/digital recording console, but is also situated in London, a center of distribution for pop music. Csikszentmihalyi goes on to define what a creative personality consists of, outlining ten pairs of antithetical traits (1997: 58-74). The author is stating that creative individuals have the ability to consider opposite factors and alternatives, with contrasting facets to their character. These include suggestions that creative people are smart but naïve, playful yet have discipline, humble and still proud, passionate about their work but also show objectivity. Whilst recognising my humble nature, I would proudly suggest that my character seems to consist of many of these opposing traits, that at times I am aggressive and other times sensitive, that I can be dominant and perhaps follow with a submissive attitude (Csikszentmihalyi, 1997: 71). Csikszentmihalyi further offers advice that would potentially enhance personal creativity (1997: 351-4), such as enabling a situation where there are no distractions whilst you are in the flow of creativity. My recording studio is soundproof, so there are certainly no audible distractions. Other advice includes taking charge of your schedule, carving out some time for yourself when your energy is most efficient. Csikszentmihalyi suggests that the more we do things at the most suitable times, the more creative energy we can free up. I understand that my creative energy is at its best in the morning and early afternoon, which is when I operate most as a creative in my recording studio. In addition, as my family is either at work or school at this time, there are no disturbances: my studio is at the end of the garden of my home.

At this point, it would be pertinent to ask what stages an individual goes through to achieve something that is creative. There are a number of frameworks that have been developed that would account for these stages (Wallas, 1976: 69-73; Gordon, 1961; Isaksen et al, 2000; Scott et al, 2004; Sawyer, 2012). Csikszentmihalyi (1997: 79-81) outlines the following 5 stages of creativity.

1. Preparation – becoming immersed in a set of problematic and interesting issues.
2. Incubation – ideas churn around below the threshold of consciousness.
3. Insight – the "Aha!" moment when the pieces of the puzzle fall together.
4. Evaluation – is the insight valuable and worth pursuing?
5. Elaboration – the development of the idea. This involves the hardest work and is what Edison referred to when he said that creativity consists of 1% inspiration and 99% perspiration.

Csikszentmihalyi states that the amount of time each stage takes changes depending on circumstances, and there is no linearity to the process. 'The five stages in reality are not exclusive but typically overlap and recur several times before the process is completed' (Csikszentmihalyi, 1997: 83). For example, elaboration can be interrupted by periods of incubation, or preparation can be punctuated by small insightful epiphanies. These stages of creativity apply to my productions, and if I am composing a track, then the incubation can last from a few days to several weeks. Other stages, however, can occur relatively quickly. Some decisions are postponed until inspiration happens, others are more immediate and generally a natural flow transpires. As there is no linearity to the process, several stages can appear as a single stage, especially when decisions are made quickly. This process is labeled 'intuition' by Tony Bastick, who describes it as the 'non-linear parallel processing of global multicategorised information' (1982: 215). He proposes that the first three stages listed above, can be integrated into the term 'intuition', and that the creative process can therefore be thought of as just two stages, 'intuition… followed by verification' (1982: 310-11). Verification would then account for stages four and five in Csikszentmihalyi's five stages. This kind of cognitive perspective of intuition is perhaps limited in its ability to demonstrate how an individual interacts with the broader social and cultural structures. However, one could also view intuition as the 'subconscious application of complex

accepted norms that the individual accumulates as practical knowledge from working within their cultural domain' (Zagorski-Thomas, 2010: 78-9).

I recognise that intuition is an important part of my process and that it is often exercised 'spontaneously and in a non-cerebral fashion' (Hennion, 1990: 201). I also recognise that my skills are to a certain extent internalised in a tacit knowing, and that I am often unaware of having learned to do certain tasks, that I simply find myself doing them (Schön, 1991: 54). Tacit knowledge is interlinked with intuition, so much so that I would suggest tacit knowledge is a primary component of the process of intuition. Without this knowledge, intuitive decisions might be awry, as they would not have such immediate access to this internalised experience. Having developed my extensive tacit knowledge, it is apparent, therefore, that my creative process often involves the compression of the first three stages of intuition into an almost instantaneous process. This is a crucial aspect of intuition, that it can speed up decisions: the moment in which decisions are made is often transitory and ephemeral. As I am commissioned to produce the tracks, time in the studio is of the essence, and intuitive decisions are therefore an important part of my process. Eno (1999) explains this, commenting that 'Intuitive actions confine the detail of the work to a dedicated part of the brain, leaving the rest of one's mind free to respond with attention and sensitivity to the changing texture of the moment'. Zak further underlines the importance of intuition when producing, suggesting that one should keep technical worries from impeding the creative flow and preserve the inspiration of the intuitive moment (2001: 166). I would suggest that the more extensive the experience and tacit knowledge, the less likely it will be that technical worries will impede the creative flow.

As I have absorbed an extensive range of examples of musical sounds in my experience, demonstrated by the wide variety of styles in the portfolio, it is apparent that there is an automatic association with the techniques for improving them. This would match a similarly extensive range of examples that I would evaluate as being 'approved', and perhaps 'original' by the gatekeepers of the domain (Csikszentmihalyi, 1997: 27-8). This means that the fourth stage, evaluation, is often implicit in this intuitive process, because the automatic and swift identification of a problem and its solution involves an evaluation that it is, or will be the right solution. Consideration of both the perspective of intuition and the systems approach to creativity is therefore valuable for analysing my creative process. The following chapters will highlight specific instances in the process of creating the portfolio that pertain to these

perspectives.

THE SOCIAL CONSTRUCTION OF TECHNOLOGY (SCOT)

Technology's significant role in the creation of pop music tracks means the recording studio consists of many technological artifacts, without which, it is likely that the current sound of pop music would not exist. It is therefore important to consider technology and its place in the creative paradigm for this thesis.

Bijker, Hughes & Pinch in their book *The Social Construction of Technological Systems* (1987) outline theories that deny technological determinism, proposing that it is the social environment that 'shapes the technical characteristics of the artifact' (1987: 6). They argue that the ways technology is used cannot be understood without a comprehension of how that technology is embedded in its social context. Pinch and Bijker (2012: 8) also state that there is not just one possible way, or one best way, of designing an artifact. One must look at how the criteria of being "the best" are defined and what groups participate in defining it. An 'interpretative flexibility' is therefore displayed, where findings are 'open to more than one interpretation' (Pinch and Bijker, 2012: 20; Oudshoorn and Pinch, 2003: 3).

Approaching the Social Construction of Technology (hereinafter SCOT) from the perspective of pop music production, if the recording studio were seen as a single piece of technology,[8] and the aim of its use was to create a pop track, then the problems that occur in its operation could be seen as reverse salients. Reverse salient for SCOT is something that hampers progress until it can be solved (Bijker, Hughes and Pinch, 1987: 6). Without solutions, a track's final and most appealing sound is unlikely be realised. During their development, individual pieces of recording studio equipment were subject to reverse salient situations, each of which were solved to achieve closure and stabilisation.[9] When the separate pieces of technology are considered as one article, the recording studio, these principles of SCOT can still be applied. The concepts of reverse salient, closure and stabilisation are also relevant to the processes I used when creating the portfolio tracks. For example, there could be a problem with the sound of the track that I would have to solve. Perhaps the vocal take was not sonically blending with the

---

8 Brian Eno discusses this concept in his lecture "The Studio as Compositional Tool" (Eno, 1979).
9 Closure is when a problem is solved or redefined. Stabilisation is the situation that there are no problems (Bijker, Hughes and Pinch, 2012: 6).

mix, and in this instance I would solve the problem by applying appropriate amounts reverb, EQ and/or compression using recording studio technology. From reverse salient through to closure and stabilisation, SCOT suggests that various groups will decide differently not only about the definition of the problem but also about the achievement of closure and stabilisation (Bijker, Hughes and Pinch, 1987: 7; Pinch and Bijker: 1984). This aspect of SCOT is similar to the systems approach to creativity in its approach, where these various groups could be perceived as members of the field, and in the context of pop music are perhaps the audience or participants in the track's recording. For my productions, it could be thought therefore that no outcome is absolutely right, and the various interpretations of the results can be considered as 'interpretative flexibility' (Bijker, Hughes and Pinch, 1987: xlii).

One of the main tenets of SCOT is that society shapes technology, relating the content of a technological artifact to the wider sociopolitical milieu (Bijker, Hughes and Pinch, 1987: 39-40). As the focus of this thesis is on understanding the detail of my own creative practice, this study will reference SCOT mainly by comparing some of the processes I use to specific perspectives of this theory previously mentioned, such as interpretative flexibility, reverse salient, closure and stabilisation, each and important aspect of SCOT.

Antiprogram

In addition to the Social Construction of Technology, another significant concept that concerns technology is that of the antiprogram (Akrich and Latour, 1992: 261), which in this context can also be termed 'creative abuse' (Keep, 2005). This describes how technology might be used in a way that it was not intended. A classic example for pop music production is the Urei 1176 compressor, which has several ratio buttons on its control surface, which were intended to be used individually. However, engineers found that if all buttons were pushed in simultaneously the compressor had a completely different sound, more like a limiter. This became an accepted option for the 1176. The way I use equipment in the recording studio is that I will explore possibilities that may be outside the equipment's accepted use. I not only use the equipment as it is intended, but I also am open to an antiprogram approach, an approach that can help achieve closure and stabilisation for my productions.

SCOPE

The focus of this thesis is to understand the detail of my own creative practice, and as such I will concentrate on the relevant aspects involved when creating the pop music tracks in the practical portfolio. However, as there are a multitude of aspects that are important in the creation of a pop music track, it is unlikely that each could be considered in detail in a thesis of this length. An example of such an aspect is meaning. There are many ways to create and interpret meaning in music. These can be lyrical, melodic, harmonic, rhythmic, metaphorical, environmental, or involve embodied cognition. Patel has identified more than eleven 'types of musical meaning that have been discussed by scholars of music' (2008: 305-26). A thorough consideration of these types and ways to create and interpret meaning would require a lengthy text, and although there are many published books on the topic of meaning (Clarke, 2005; Davies, 1994; Kramer, 2002; Meyer, 1956; Moore, 2001, 2012; Small 1998; Tagg, 2012-2013), the scope of this study will only include the aspects that are relevant to the process concerned.

CONTEXT

When composing and/or producing pop music, my decisions are influenced by my taste in pop music, whether consciously or unconsciously. Taste is influenced by the music one finds appealing, and is immersed in a history of experience; perhaps a time and a place that is conjured up when one hears this or similar music. It remains part of one's psyche, and manifests itself in one's musical output. It is therefore important to understand the source of my taste and inspiration. Musically, I believe my formative years to be those between 1974 and 1986. I still find tracks by David Bowie captivating, "Rebel Rebel" (1974), "Heroes" (1977) and "Young Americans" (1975) being some of my favourites. As I am also interested in the technological aspect of music production, one producer that influenced me is Martin Rushent, producer of The Human League, specifically his production of "Love Action" (1981). I find the overall sound of this track particularly appealing, especially its use of electronic instruments and drum machines. Other technological production influences on my work are the sounds of distinct elements and groupings in a track, such as the synthesizers in "Are "Friends" Electric?" (1979) by Tubeway Army, produced by Gary Numan.

Trevor Horn is a producer renowned for his musicality and technological

application, and his work on albums *Lexicon of Love* (1982) by ABC, *Welcome to the Pleasuredome* (1984) by Frankie Goes To Hollywood, and *Slave to the Rhythm* (1985) by Grace Jones, still inspire me. In my opinion, these productions have general sonic appeal, interesting arrangements, and engaging rhythmic content. Other musically and technologically oriented producers who have influenced me are George Martin, Brian Wilson, Quincy Jones, Brian Eno, and more recently Max Martin, Dr Luke, Timbaland, Will.I.Am, Kanye West, and Calvin Harris. Currently, artists who inspire me, who use various composers and producers, are Drake, Rihanna, Tinie Tempah and Galantis. The application of emotional aspects as well as attention to detail and the technical elements in the production are important to me in an influential song and track. These are aspects that I pay attention to when creating tracks, and could therefore be considered part of my idiolect. It would seem that my taste in pop music is an ever-evolving phenomenon for me, and I am often surprised as to what sounds and musical elements I enjoy in a production.

LITERATURE REVIEW

Even though popular music has arguably existed since the 18th century, only in the last few decades has there been any serious academic study of the roles of the composers, producers and engineers involved. Nicholas Cook (2010) states that 'recognition of the creative role of producers and sound engineers has been slow to develop'. The reason for this could be that the most visible figure for a recording is often the artist, who is usually a singer. Other members of the creative team have therefore remained invisible. One of the first studies focusing on the other members of the creative team was "The Studio as Compositional Tool" (1979) by Brian Eno, with other pieces of research following since. From the various texts now available, this literature review discusses some that are specifically relevant to this thesis and were referenced for the completion of this practical portfolio PhD.

Creativity

As featured previously in this introduction, *Creativity: the psychology of discovery and invention* (1997) by Csikszentmihalyi is the main book I am referencing for this topic as it is particularly relevant to my process when creating pop music tracks. In order to support some of the theories and concepts in this book, I also referenced several texts by Phillip McIntyre including 'Rethinking Creativity: Record Production and the Systems

Model' (2012b). McIntyre examines Csikszentmihalyi's concepts proposing some relevant perspectives, and also replaces 'individual' with 'agent' for Csikszentmihalyi's systems model (1997)[10], which for collaborative creativity is particularly relevant. Susan Kerrigan also presents an adjusted systems model of creativity in her article 'Accommodating creative documentary practice within a revised systems model of creativity' (2013). Fundamentally, she features creative practices as the central aspect as well as how each element affects novelty, amendments useful for this study.

Technology

Certain aspects of my productions will be explained using perspectives taken from particular concepts of technology, and the main reference for this topic is Bijker, Hughes & Pinch's seminal book, *The Social Construction of Technological Systems* (1987, 2012). This book contains many essays on this subject by different authors, and the viewpoints of each were found to offer a useful variety of opinions on this subject. In particular the essay by Pinch and Bijker entitled 'The Social Construction of Facts and Artifacts: Or How Sociology of Science and the Sociology of Technology Might Benefit Each Other' (2012:11-44) discusses the concepts of interpretative flexibility, closure and stabilisation. Reverse salient is explored in the essay by Thomas Hughes 'The Evolution of Large Scale Technological Systems' (2012: 56).

In an effort to extend the theoretical approach outlined above, a development that came out of the Social Construction of Technology (Bijker, Hughes and Pinch, 1987: xiv – xv) was considered called Actor-Network-Theory. *Reassembling the Social: An Introduction to Actor-Network-Theory* by Bruno Latour (2005) was referenced, as this is a leading text on this theory. One of the main tenets of Actor-Network-Theory is that networks that are part of a process consist not only of humans but also non-humans, usually in the form of material or abstract entities such as society (Callon in Bijker, Hughes and Pinch, 1987: 5-6; Latour, 2005: 10). The humans and non-humans in this network are called 'actors', each treated equally, and one actor can influence any other actor be they human or non-human. Although there are parallels between this theory and the workings of the recording studio, it was found that the inclusion of Actor-Network-Theory moved the focus of this research away from its aim, which is to understand the detail of my creative practice. It was therefore decided not to include the perspectives of Actor-Network-Theory in this thesis.

---

[10] See Figure 1 on page 19.

There are many texts that examine the application of technology specifically for composition and production in the recording studio. These are mainly based on how technology works, and how to operate it, such as *Computer Music: Synthesis, Composition, and Performance* by Charles Dodge and Thomas A Jerse, which outlines methods key to pop music composition and production such as subtractive synthesis and physical modeling. Another book used was *The Music Producer's Handbook* (2010) by Bobby Owsinski, which discusses what it terms 'The Mechanics of Production' (2010: 91), the producer's role and processes in recording sessions. These books were useful aids to compose and produce my practical portfolio. However, texts that are more specific in addressing technology's application to musical creativity were found in Timothy Warner's book *Pop Music - Technology and Creativity: Trevor Horn and the Digital Revolution* (2003) and *The Poetics Of Rock: Cutting Tracks, Making Records* by Albin Zak (2001). Warner considers technology's influence on creativity, and Zak outlines technology's effect on musical style (2001: 2-10). Both of these books use examples found in specific pop music tracks to indicate how technology is used creatively in these productions, again useful for the creation of my practical portfolio.

Composition and Production

A variety of books were studied that delineate how to compose music, including *Acoustic and MIDI Orchestration for the Contemporary Composer* (2007). This book was particularly useful as it covered a range of techniques for pop music composition in the recording studio, such as "Writing and Sequencing for the Rhythm Section", and for "the String Orchestra". The rhythm section is used throughout my practical portfolio, and strings are featured in "I Want to be Loved", "Forever", "No Tomorrow" and "The Fall". Whilst these books could be described as instruction manuals, they additionally offer insight into how meaning is generated by the processes discussed.

Although the theme of this thesis is not specifically musical and production meaning in a track, I recognise the importance of this aspect. For that reason, several books on meaning were referenced. A significant amount of literature on musical meaning is directed at classical music composing such as Davies' *Musical Meaning and Expression* (1994), some of which can apply to pop music, such as Davies' arousal theory. This theory asserts that emotions are expressed by the music, and meaning is recognised as being integral to the music itself (1994: 184). However, texts that are more specific to pop music, such as *Tunesmith* by Jimmy Webb (1998), *Song-writers on*

Song-writing by Paul Zollo (2003), and *The Songwriting Secrets of The Beatles* by Dominic Pedler (2003) were referenced as they outline the ways in which pop music composition can create meaning.

In the main, the pop music producer adjusts the composition, adding effects, blending new sounds, perhaps creating some new parts.[11] Anecdotal accounts of how producers have used these processes in successful pop music track releases is found in parts I (2000) and II (2009) of *Behind The Glass* by Howard Massey. Producer Tony Visconti, for example, discusses his methods for producing drums as well as the psychoacoustic effects created on his tracks (2000: 150-3). *The Musicology of Record Production* (2014) by Simon Zagorski-Thomas explores some of the complexities involved in producing tracks, and as such was a valuable reference. One such complexity is his concept of 'sonic cartoons' and how producers create recordings that are representations of performances and other sonic aspects of music (2014: 49-69). The combination of the producer and composer in one person is common in pop music, where the composer also produces the track, and Virgil Moorefield's book *The Producer as Composer* (2005) explores this combination in detail. This concept is particularly interesting to my process as I undertook both of these roles when creating the practical portfolio.

Listening

In order to examine and understand my process when creating pop music tracks, it was necessary to consider the opinions of the audience as end listener, including the types of listening situation that occur and the ways in which one listens to pop music. Anahid Kassabian in her book *Ubiquitous Listening* (2013) discusses these aspects, concentrating on the range of attentive and inattentive behaviour, which includes the responses of humans when listening to music. However, although Kassabian outlines some of the social aspects of listening, Tia DeNora's *Music in Everyday Life* (2000) has a greater focus on these aspects, highlighting the intricacies involved in the social situations of listening to music. One such intricacy that was valuable for this study is DeNora's discussion of how music is used for a variety of responses such as mood change or intimate activity (2000: 46-74). In the main, the audience ascribes meaning when listening to music and as such, Davies's book *Musical Meaning and Expression*

---

11 Effects are the addition of particular elements to a sound. Generally speaking, effects are reverbs and delays, but other effects can be added to a sound, such as chorus, or flange.

(1994) was again referenced, supplying many theories on this topic. Davies discusses the details of how one feels when listening to music, and the significance of these feelings (1994: 167-199). He discusses primary, secondary and tertiary expressions of emotion as a result of listening to music. These are descriptions of how humans might react to music; sobbing, for example, is a primary expression of emotion. These three books supplied much of the required theoretical framework on listening for the purposes of this study.

Collaboration

As this thesis considers certain collaborative aspects when creating a pop music track, several texts on this subject were referenced. Joe Bennett's "Constraint, Collaboration and Creativity in Popular Songwriting Teams" (2012) has a detailed exposition on the subject of collaboration, and was a primary reference on this subject. One of the most useful entries lists the variety of collaborative models that can exist in order to create a pop music track.[12] Albin Zak in his book *The Poetics Of Rock: Cutting Tracks, Making Records* (2001: 163-183) provides various perspectives concerning collaboration, including the multi-disciplinary approach I take in my creations. Further, Allan Watson's *Cultural Production in and Beyond the Recording Studio* (2015) was useful in that it not only discusses the various aspects of collaboration, but it also examines the ways in which technology, creativity and collaboration affect each other. Phillip McIntyre's 'Rethinking Creativity: Record Production and the Systems Model' (2012b: 152-161) applies the concepts of the systems model to collaboration and its effects on creativity. An individual taking on more than one role in the recording studio, as I do, could be thought to be reducing collaboration. It could also be seen as collaborating with oneself. This alternative view of collaboration was therefore thought relevant, and there are many examples of pop music producers who take on several roles to create their tracks in the writings of Cunningham's book *Good Vibrations: A History of Record Production* (1998) and Emerick's *Here, There and Everywhere: My Life Recording the Music of The Beatles* (2007).

Authenticity

The composer and producer's agency towards creating authenticity in a pop music track

---

[12] See Chapter 3, page 87

was a necessary consideration in this study. For example, as a producer, I would often guide the lead vocalist towards what I believed to be a more authentic delivery. Although the composer and producer can influence and initiate authenticity, this thesis regards authenticity as an ascribed attribute of music, rather than an inscribed one. The opinion of the listener is therefore crucial to the consideration of a track's authenticity. In his article "Authenticity as Authentication", Allan Moore states that

> Academic consideration of authenticity should thus, I believe, shift from consideration of the intention of various originators towards the activities of perceivers, and should focus on the reasons they might have for finding, or failing to find, a particular performance authentic. (2002: 221)

Moore further examines authenticity in pop music in his book *Song Means* (2012: 259-271) where he categorises and discusses its influence on listeners, enabling further exploration of this theme in this thesis.

PRACTICAL PORTFOLIO

'An understanding of the cross pollination that takes place between musics of different genres and artists is fundamental to any discussion of popular music.'
(Moore, 2009: 141)

The genre of pop music intersects with a variety of musical styles, and as pop music is a fundamental focus of this research, the practical portfolio of this PhD consists of comparable variety. The portfolio tracks therefore consist of the following styles: alternative "I Want to be Loved": rap "In Love With The Struggle": electronic dance "Number 1", "Take it Down", "I'm Too Smurfy": boy band "Sweet Satellite": adult oriented "The Fall", "No Tomorrow": bubble gum pop "Just Another Boy": rock "You Need Me": folk "A Song", "Here With Me": rock ballad "Forever": hip-hop "100 Lights": dubstep "Let You Go". The audio of all practical portfolio tracks is found on the USB stick included in the bundle for this PhD, as are any commercially released tracks mentioned in this thesis.

Extracts from the practical portfolio tracks are referenced throughout this thesis to provide illustrative evidence of the particular aspects concerned, pointing to my own practice. These audio files are available on the USB stick in the folder 'Practical Portfolio Audio Examples', each in its relevant chapter folder. These files emphasise a point, or demonstrate an alternative aspect, and although I have used what seemed like the most appropriate extract to exemplify the particular issue in question, it may be that

other similar examples can be found in the portfolio. Many of these audio example files consist of unprocessed sounds followed by processed sounds used in the tracks, or the effect experienced when the part is absent; this is for comparison purposes. Some files are separated into individual sounds and named accordingly, in order for the sound to be clearly identified. The Pro Tools session files of every practical portfolio track are available on the USB stick, as are digital copies of the Pro Tools session screenshots. There is a précis of each practical portfolio track in Appendix I with their relevant composers, lyricists, producers and performers, and the lyrics to all tracks are in Appendix II. Appendix III contains printed versions of the Pro Tools session screenshots for each track.

All tracks in the portfolio were mastered. Mastering is the last stage of the audio production process, taking place after the track has been recorded, produced and mixed (Katz, 2002: 11). It is the treatment of the stereo mix and is 'the stage of post-production where the overall final product is adjusted in terms of dynamic processing, leveling equalisation and noise reduction so that it is intelligible, in audio terms, across all playback systems' (McIntyre, 2012: 159). Mastering can significantly improve tracks and is therefore part of my production process. Mastering of all portfolio tracks was directed by me and performed by Mazen Murad at Metropolis Studios in London.

CHAPTERS

This thesis has been structured to first present in Chapter 1 the ways in which I apply myself to the process of creating a pop music track, specifically discussing the various roles I play including composer, producer, engineer, performer and collaborator. The examination of the complex detail of my workings will enable a better understanding of my productions, and inevitably reveal my idiolect. This chapter additionally explores my position as listener as well as the significance of the opinions of the audience.

Although there is no single portfolio track that is the focus for this chapter, the subsequent chapters 2, 3, 4 and 5 feature one specific track for each. These chapters consist of critical commentaries that highlight interesting and innovative moments or processes, illustrating my skills and talent set. Chapter 2 has a focus of composition and melody, and the featured practical portfolio track is "Just Another Boy". Intuition and invention are discussed as well as the vocal production techniques used and an

exploration of my approach to mixing this track. Chapter 3 centres on how my drum performances and the lead vocal parts were created, and edited for the featured track "I Want To Be Loved". It will also outline of several models of collaboration that refer to the creation of this track. Chapter 4 discusses the frame of mind I drew upon in regards to the creation of "In Love With The Struggle". It examines how I chose equipment for the production of this hip hop and rap track, as well as the production techniques used. It also explores my attitude to creating timbre and texture as well as how I developed common practice to bring fresh perspectives to the production. Chapter 5 examines the application of reverbs and effects in relation to the production of the portfolio track "The Fall". This chapter also examines several of my approaches and attitudes, some philosophical, towards the perspective of the listener.

The composition collaboration situation differs in each chapter, starting with sole composition in Chapter 2, where I am the only composer for "Just Another Boy". Chapter 3 features an equally shared composition collaboration for the track "I Want to be Loved". The featured track in Chapter 4 "In Love With The Struggle" was mainly composed by two other members of the collaboration team, and less so by me. Finally, "The Fall" in Chapter 5 has no compositional input from me, with my contribution mainly consisting of performing drums, producing vocals, and mixing the track.

CHAPTER 1

THE ROLES OF THE RECORDING STUDIO CREATIVE

'The tasks involved in record making are songwriting, arranging, performing, engineering and producing' (Zak, 2001: 164).

In order to enable a better understanding of my process in the recording studio, this chapter will delineate the roles and functions I undertake when creating pop music tracks. Taking the form of a typology, it will discuss particular aspects that are significant to my creations, with specific references to the practical portfolio tracks and commercial releases.

COMPOSER

The first main participant in the chain of creation towards the realisation of a piece of music is the composer. For pop music, composition can be defined as the creation of the fundamental parts in a song that becomes the track once it has been produced. These parts are the lyrics, melody, harmony and rhythm within an arrangement (McIntyre, 2008b: 47; Roessner, 2009). There are two main methods of pop music composition that I use, the first of which is 'songwriting'. Songwriting can take place using an acoustic guitar or a keyboard to compose the initial harmonic and rhythmic elements. Vocal melody and lyrics could be recorded into a device such as a smartphone or a computer, where chords and lyrics are perhaps written down on paper. In certain circumstances when I was not in the studio, I would use a smartphone to record ideas that might otherwise have been forgotten. This happened for the melodic idea I had for "Just Another Boy" and also vocalised drum parts for "I Want to be Loved". Composition can also take place in the recording studio, as was the case with many of my compositions for the practical portfolio, and is here termed 'studio-based composition':[13] the second method of pop music composition I use. A studio-based composer could not only compose the lyrics, melody, harmony and rhythm of a song,

---

[13] See Brian Eno (1979) "The Studio as Compositional Tool".

recording using high quality equipment, but might also create, choose and manipulate some of the sounds and parts. Consequently, studio-based composition can contribute recordings of final performances towards the production. This was the case in "Take it Down" where improvised vocal takes were eventually used in the final mix. In addition, the vocals in the middle section of "Forever" at 2:12 were composed using studio-based composition; vocal takes remaining in the final mix.

One of the significant characteristics of a pop music track is its sonic content, a content that is fundamental to its appreciation. There are several elements that make up the sonic content of a track, three of which are the track's melody, harmony and rhythm, which in turn contribute to the texture of the track's arrangement. These three elements are principally the responsibility of the composer, and for the studio-based composer, modern technological instruments are often used in the arrangement, such as the electric guitar. The electric guitar has been used extensively in pop music from the 1950s onwards, and the composer can utilise some of the unusual tensions it creates; when it plays a major chord using a distorted sound for example. Major chords are often thought as having a happy, bright, or positive aspect, whereas the distorted sound of the guitar could be construed as having aggressive or harsh suggestions (Cook, 2002: 89). Jimmy Hendrix's version of "The Star Spangled Banner" (1969) demonstrates this combination, but with the added dimension of a 'rebellious' distorted electric guitar sound juxtaposed to the conformity of the American national anthem it plays. Unusual tensions can also be found in the variety of sounds emitted from modern synthesizers, samplers and other technological sound creators. A sawtooth synth bass combined with the sweet tinkle of a high frequency sample, for instance, creates a contrasting and perhaps unique sound. An example of this kind of effect can be found in the portfolio track "Number 1" where punchy sounding bass and drums combine with high tinkling synth sounds at 0:15. "I Want to be Loved" features the dynamic transient sounds of the drums combined with a smooth string pad, again for a juxtaposed effect.[14]

Frequently, the sonic content of a track is not only an aspect of its style but can also frame the track's genre. There is much discussion on the differences between style and genre, as outlined by Allan Moore in his paper "Issues of Style, Genre and Idiolect in Rock" (2001c). Allan Moore states that both terms are 'concerned with ways of identifying similarity between different pieces (songs, objects, performances, texts) but

---

[14] Transients are the velocity of the onset of sounds.

the unresolved question is whether the similarities exist on the same hierarchical level' (2001c: 1). Robert Walser states that a musical genre is 'a social signifying system rather than an autonomous set of stylistic traits' (1993: xiv), a definition I agree with. Essentially, I believe that style is a subset of genre, and is based around the specific musical elements an individual chooses to include in their works. Lucy Green suggests that we cannot make sense of music without style, 'we must have some knowledge of the style of a piece of music in order to experience inherent meanings as distinct from non-musically meaningful sound, at all' (1988: 33-4). It is therefore important for a composer to have an understanding of the specifics of their style, as well as the genre of a piece they are composing. In reference to genre and style, Moore states that 'a rich understanding is dependent on both sets of conventions' (N.D.: 5). Without this understanding, the intricacies of the music, as well as its cultural context, may escape us.

Technology's use in modern pop music enables complex track content, with dance oriented beats and transients often being predominant features. In this context, over-complicated harmony can confuse the sound of an already complex track, so may be simple. Some pop music consists of only one or two chords throughout the whole track, as exemplified in "Milkshake" (2003) by Kelis; or a cycle of a few chords over several bars, repeated throughout much of the track, as in "Perfect Strangers" by Jonas Blue Featuring JP Cooper (2016) and my practical portfolio track "Take it Down". Allan Moore highlights a similar situation in regard to the form of a track, where 'any increase in musical complexity… be counterbalanced with a decrease in formal complexity (and vice versa)' (in Tate, 2009: 151). Harmony can also be considered part of the reception of style; indeed harmony can be dependent on style. For example, the dominant seventh chord of the tonic in a Phil Collins track carries a different kind of inherent meaning than when it is used in a Led Zeppelin track, essentially because of the style of music and sounds of the instruments that surround it (Moore, 2001: 196).

As a pop music track may consist of an intricate array of transients, basses and beats, for the sake of clarity it may be necessary for the composed melody to be simple. The melody may even be almost non-existent, as in Baauer's "Harlem Shake" (2012). The melody in this track is mostly one repeated note on a synthesizer, and the vocals are spoken. The advent of pitch correction software means the melodic content of a track could potentially be more complex, where a less than perfect performance can be pitch corrected to sound presentable. However, the melodically simple essence of much pop

music means complicated melodies are less likely to be created. In the main, pitch correction is used either to correct out of tune singers towards a natural sound, or to automatically tune a note for effect. All of the tracks in the portfolio contain vocal pitch correction, mostly for a natural sound. Auto-tune software is often used to automatically tune notes; sometimes tuning a note so quickly that it can sound robotic. Michael Bublé believes that Auto-tune makes everyone sound the same, "like robots" (3 News, 2013). This kind of robotic sound can be heard in many of T-Pain's tracks such as "Bartender" (2007) featuring Akon at 0:53. A similar effect can be heard on my portfolio track "I Want to be Loved", on the lead vocals from the first bar. In this instance, the tuning moves fairly quickly from one note to the next to suggest a robotic essence, but not so much that it might remove the human aspect.[15] This is in keeping with the theme of the song, which explores the notion of a robot having human emotions.

As is evident in many pop music tracks, the rhythmic composition of the timbres and transients present in the percussive layer of the music are crucial to the impact of the piece. In addition, the rhythmic element of a track often delivers genre specific content. Electronic dance music generally features a punchy bass drum sound as in "Girls Like" (2016) by Tinie Tempah featuring Zara Larsson and my portfolio track "Let You Go", or in reggae music a prominent snare drum side stick sound as in "Three Little Birds" (1980) by Bob Marley and the Wailers. Composition of the rhythmic layer in pop music is not only the responsibility of the composer, but is often created by the drummer or producer, thus extending collaborative input. Examples of this are found in my practical portfolio tracks "A Song" and "Here With Me". I produced the tracks, as well as created and played the drum parts, but was not the tracks' composer. Alternatively, the studio-based composer, or the producer, could write a drum machine part, often created on a computer using samples, which is found in my compositions "In Love with the Struggle", 100 Lights", "Take it Down" and "Number 1".

A pop music composer would not only be composing melody, harmony and rhythm, but notably they would be writing lyrics. As humans, words convey our thoughts and feelings, and language is an inherent and adaptive part of who we are (Hirst & Woolley, 1982: 78). This is why lyrics, with their direct as well as metaphorical implications, are a significant part of pop music's appreciation. An alternative viewpoint can be found in a report carried out by Prinsky and Rosenbaum

---

[15] An audio example of the lead vocal soloed can be found on the USB stick and is called "1. Auto-tune effect – I Want to be Loved".

(1987: 384-97). This report concludes that for American youths, listening to a song because of the appeal of its lyrics was the least well-supported reason for listening to it. This could mean that the instrumental content of pop music leads the listener's focus away from the lyrical content of a track. Technologically created and innovative sound palettes could therefore be more interesting to young people than the lyrics. However, the immense catalogue of pop music songs in existence would suggest that lyrical content is an important part of the genre, and an intrinsic part of its sonic make up. This of course does not indicate to whom lyrics are important, or indeed why. Author David Gouldstone on Elvis Costello states that it is Elvis Costello's lyrics that keep his fans interested (1989: xii). In addition, Allan Moore states that 'in order to discern the attitudinal relationship between music and lyrics, it is necessary to focus on the lyrics themselves' (2001: 185).

It is important to note that the performance of the lyrics can also be considered part of the composition. A recorded improvised performance, termed 'free association', is often used as a method of composition in the pop music field, with artists such as Madonna using this technique for their creations, "I'll listen to it and I won't even think about it . . . it's like free association. I'll start singing words to it and making them fit" (Zollo, 2003: 618). This form of composition is made easier by the prevalence of technological recording equipment and its portability, composing where and when desired. As mentioned previously, I used my smartphone to record ideas for some of the portfolio tracks, using free association in many instances. Ryan Tedder from One Republic states that he uses his phone to record all of his ideas when not in the studio (BBC News Entertainment & Arts, 2014). Free association can, however, also be part of the processes of studio-based composition, where high quality equipment is set up so the recordings can be used in the final mix if necessary. Paul Epworth[16] uses this technique as he believes the moment of a recorded performance is crucial to the performance, that you can "often get the right thing at the wrong time" (Epworth, 2016), meaning the equipment is not set up to record the performance. "Rolling in the Deep" (2010), co-written by Paul Epworth and Adel, features a lead vocal first verse that was the original performance recorded at a composition session. In subsequent recording sessions, Adel could not deliver the verse in the same emotive way as she did that day, the day she had split up with her boyfriend. The instrumental and vocal performances

---

[16] Paul Epworth is a four times Grammy Award winning English music producer whose credits include Adele, Florence and the Machine, Coldplay, Ceelo Green, U2, John Legend, Paul McCartney and Bruno Mars.

on pop music tracks often have improvised elements and as such are part composition. A performance may be based on a pre-composed part, but frequently, performers might enhance the part with their own embellishments.

It is apparent that technology plays a significant role in the composition and content of pop music, with studio based composition and the prevalent use of technological instruments (Moore, 2001: 120). Timothy Warner states that 'musical creativity in pop music is inextricably bound to developments in audio technology and the working practices which ensue' (2003: xi). Examples of composers using the recording studio as a compositional instrument include the members of the Beatles utilising Abbey Road's studio equipment when writing *Sergeant Pepper's Lonely Hearts Club Band* (1967). More recently, David Guetta's compositions and productions involve his varied applications of technology in this respect. This is also how I used the studio when composing many of the tracks in my practical portfolio. In addition, the use of the virtual studio-as-instrument is currently prevalent, as computers and their musically creative software are made extensively available. A virtual studio can be defined as the software representation of the physical equipment in a recording studio, such as mixing consoles, instruments and effects, which are combined and contained virtually in a computer. I used a mixture of outboard equipment and the virtual studio to compose and create my portfolio tracks. This kind of studio use is not only relevant to composers, but also to the pop music producer, an example of many overlaps between their roles and function.

PRODUCER

'Record production is a mode of creative expression [and] turning musical utterance into electrical current requires, by the project's very nature, an intervening aesthetic sensibility which may, in turn, impinge on the final result.' (Zak, 2007: 1)

Production often follows composition when creating a pop music track. Although the role of producer can be described in many ways, ultimately s/he is sonically responsible for the final version of the track. There are several types of producer, the first of which is the composer/producer, who not only composes the music, but also produces the track. Leiber and Stoller, the composition and production duo that created many hits in the 1950s and 1960s, are reputed to have said 'we don't write songs, we write records' (in Zagorski-Thomas, 2014: 51). More recently, Max Martin composed and produced

many of Katy Perry's tracks, and I was the composer/producer when creating nine of the portfolio tracks including "Just Another Boy" and "Take it Down". The second type of producer is the engineer/producer, who directs from behind the mixing console to sculpt the sound, as Hugh Padgham did for The Police on several of their albums. I was an engineer/producer when creating six of the portfolio tracks including "Here With Me" and "A Song". The third kind of producer is the organiser/producer, who arranges the sessions and motivates the artists. Pete Waterman operated as an organiser/producer with his productions for Rick Astley and Kylie Minogue in the 1980s and 1990s. Many of these roles could also be present in a single producer. Will.I.Am, Prince or Pharrell Williams, for example, produce, compose, arrange and organise productions. They also perform vocals as well as many of the instruments on their tracks. This was the case for my roles in several of the productions presented in the practical portfolio, such as "You Need Me" and "Forever".

There is also the type of producer whose production input is considered an integral part of the composition. In the 1960s, recording moved away from recreating the sound of a live performance, and more towards a studio-produced sound. Examples of this are found in albums *Sgt. Pepper's Lonely Hearts Club Band* by The Beatles, or *Pet Sounds* by The Beach Boys. Virgil Moorefield states that 'recording's metaphor has shifted from one of the "illusion of reality" (mimetic space) to the "reality of illusion" (a virtual world in which everything is possible)' (Moorefield, 2005: xiii). As technological know-how is crucial to sculpting the sound, mood and ambience of a track, encompassing the "reality of illusion", producers became responsible for bridging the two worlds of imagination and technology. The sound and production of a track is so important to the impact of the piece, that it is considered part of the composition (Moorefield, 2005: xv; Théberge, 1997: 186; Zak, 2001: 48). The producer effectively becomes the auteur of a track (Moore, 2001:189). Producers such as Phil Spector, Brian Wilson, Toni Visconti, through to more recently Brian Eno and Daft Punk would come under this heading.

The producer often assigns the position of where sounds seem to come from in a track. Allan Moore's 'soundbox' (2012: 29) describes this area of perception, stating that the soundbox provides a way of conceptualizing the textural *space* that a recording inhabits. A sound's virtual location is therefore a key aspect. Distant sounding drums, similar to those found in "The Fall" from my practical portfolio, close sounding guitars,

lead vocals that seem to be whispering in your ear, all these positions are crucial to the impact of a piece and are in the control of the producer.[17]

The producer can also create an unexpected element as a new sound in the production, wherever it is in the soundbox, which can produce adaptive pleasure and increase arousal. This response can be explained by comparing it to the surprise discovery of a new route to food (Levitin, 2009:107). Thousands of years ago, human evolution depended on finding food in the wild. Adaptively, when we discovered something that would help us survive, such as a new route to food, hormones were released into our bodies that gave us pleasure to reward our behaviour. This helped shape our actions, enabling human survival. It would therefore follow that when we hear a surprise element such as a new sound, adaptive pleasurable hormones are released. Alternatively, when hearing a surprise sound that is perhaps more forceful and aggressive, humans may anticipate action to face the new discovery and prepare for major energy expenditure, resulting in excitement (Huron, 2006: 21). A surprise event could also be experienced as friction, 'that friction will always carry an affective value' (Moore, 2012: 168), and it could be that we may not enjoy the event. Personal taste would affect an individual's response to surprise sounds, where enjoyment of the sound could release hormones and a dislike could be encountered as friction.

Another role of the producer is to guide the vocalist's performance towards its final version. Attention to the enunciation, attitude and texture of the voice is essential to create effect (Moore, 2012: 101). A producer might direct vocal performances towards authenticity, and this direction is crucial to the effect of a track. Moore states that the authentic is what we trust because it emerges from integrity, sincerity, and honesty (Moore, 2001: 199). Authenticity is not dependent simply on what is sung, as composed parts, but how it is sung, which is often guided by the producer (Moore, 2012: 189). It can also be what the singer does not sing that gives a performance its effect: the utterances, moans, or gasps. Simon Frith believes that evaluation of pop singers is dependent on the sounds and noises around the words (1983: 35). In addition, the producer's sculpting of the arrangement and texture, the elements behind the vocals in a pop track, often creates a setting that is crucial to whether we trust or find the singer authentic (Moore, 2012: 191).

---

[17] Close up sounding vocals can be heard in "Wait (The Whisper Song)" by Ying Yang Twins (2005) at 0:08.

Authenticity issues also arise when new technology is introduced and listeners do not understand, or are not used to, the processes and production techniques that create the sound. They therefore cannot commit to believe in its authentic creation. For example, multi-tracking was once a new technology led technique, made possible with the advent of multi-track tape machines and the public might have thought multi-tracking inauthentic. This is now ingrained in people's sonic experience and authenticity of a production using this technique is more accepted. Repeated exposure to tracks that used multi-tracking techniques, especially since the early 1960s, thus enabled its more established position. Currently, issues of authenticity are prevalent where vocal pitch correction is concerned. If pitch correction were noticeable by the audience, the track would perhaps lose its authenticity. Alternatively, pitch correction editing might improve the part without losing the natural sound of the performance, authenticity remaining intact. As people become familiar with the sound of vocal tuning, and perhaps the production methods used, authenticity of pitch corrected vocals could then become a more accepted stance.

Pitch correction and technology are clearly important for modern pop music production. It is worth considering that although technology currently plays a crucial role, for centuries it has been responsible, in no small part, for the creation of music. The use of then cutting edge technology created instruments and sounds for the symphony orchestra in the seventeenth through to nineteenth centuries (Moorefield, 2005: xvii). The technological instrument played these days is the studio. The studio-as-instrument is therefore not only utilised by studio-based composers, but is also an integral part of being a producer for the creation of sonic elements in pop music tracks.

The use of technology in production influences the sound of pop music in a number of ways: from recording and editing digital audio on a computer, to manipulating the soundbox and ambience using outboard and virtual effects: or from mixing a track through a mixing console, class A amplifiers, and a variety of hi-fidelity speakers, to multi-tracking a singer using condenser microphones. Synthesizers, electronic drums, guitars, MIDI,[18] mixing consoles, multi-track recording, software, quantizing, tuning, sampling, compressing, equalising; all of these technological units, instruments, aspects and production techniques exist not only because of the technology that created them, but also because of the human desire to create the sonic articles that

---

[18] MIDI stands for Musical Instrument Digital Interface, a computerised protocol that allows a computer to control electronic music instruments.

are pop music tracks. SCOT's Interpretative flexibility permeates modern pop music output, with users passing opinion on equipment, its uses, and the tracks produced.[19] Society and technology are intertwined in this context, each affecting the other, which results in the pop music we currently hear.

The way the tools are used also affects the resultant pop music track. If a producer uses the default settings for all of his/her equipment, such as 120bpm on much sequencing software, it is more likely that s/he will produce a track that sounds like many others. Alternatively, if the producer engages in creative abuse,[20] then the resulting track would perhaps sound more original, and less like other pop music releases. This approach is one I am open to, employed in many of my portfolio productions. For example, I made the volume of the backbeat in "In Love With The Struggle" overload to give the rhythm a distorted aspect, one that I felt was required.

Referencing other tracks and being inspired by their sound is not only common practice for myself, but also for many other producers and engineers. Jonny Greenwood, guitarist and composer in Radiohead, comments that when creating music, Radiohead simply 'copy our favourite records' (Oldman, 2000: 20). In 2010 when I was part of the creative team for producer, Youth, I noted that he uses this method, and often has streaming service Spotify available to find music that inspires him. Using this practice, producers can follow convention and fashion, or be inspired towards a different sound and direction. At the root of this method of inspiration is not just a recognition of the sonic aspects of a production, it is also the effect and meaning involved. A producer can be inspired by the mood created by the arrangement in another production, its essence, the performance attitude, and spiritually influenced by what could be termed as the soul of the track. These are some of the aspects I consider when referencing another track. This means that the track I produce doesn't necessarily sound the same, but the core of its essence can be influenced by these aspects. My approach is that every production has its own set of requirements, and as you make each production decision, adding parts or effects to an arrangement for instance, a new set of requirements are revealed. Following this, subsequent choices reveal more and different options, which likely culminate in an individual and potentially unique production. The selection of choices available means that the track is unlikely to sound exactly like the original reference track that first inspired you. In regard to the specific processes an individual chooses,

---

[19] Interpretative flexibility is discussed on page 24 in the Introduction of this thesis.
[20] Creative abuse is discussed on page 25 in the Introduction of this thesis.

idiolect also affects the decisions made, and ultimately the sound of the produced track. It should also be noted that referencing other tracks is also a part of a person's idiolect, which must be 'preoccupied with derivation and idiosyncratic patterns of influence as it is with individuality' (Moore in Tate, 2009: 141). However, one has to remain open to letting the track develop away from the original influence, and allow the flow of creativity to prevail (Csikszentmihalyi, 1997: 107).

Paul Epworth also uses referencing for inspirational purposes (Epworth, 2016). However, his referencing is centered more on imagining the sound of the referenced track, perhaps mentioning the artist and track to a collaborator by way of influence rather than listening to the track itself. Paul Epworth believes that one should only listen to the specific track reference when it is essential to do so, stating that confusion is often the result as the collaborator does not necessarily hear the aspect in question in the way that Paul does. This kind of imagined referencing is useful to keep the creative flow moving, instead of stopping to listen to tracks. In this circumstance, one is inspired by what one believes the referenced track is offering. Nevertheless, I am often astonished to hear how a track differs from what I imagined it sounds like, and I can then not only reference my imagined influence, but also find new aspects that I wouldn't have otherwise discovered. Consequently, I bear the above aspects in mind when choosing to reference a track or not.

The delineation of the roles of producer and composer when creating the portfolio tracks was sometimes undefined. When I was in a creative frame of mind, it never occurred to me what role I was playing. If I were hired to be a producer, and not the composer of the track, I would nevertheless still create parts, and venture into the role of the composer. To avoid this, and stick to one role, would seem counter-productive, as my aim is always to complete the most appealing track possible. If that entails composing as well as producing, then I am content in the combination of roles. Nevertheless, to dwell on labeling the role one is currently engaged in would direct the attention away from the task and more towards an analysis of the role. This would likely affect the quality of the parts or sounds created or edited.

When undertaking these roles, I recognise that the decisions I make, as I create pop music tracks, are based on suppositions, some unconscious, about the way that part of the world works. This means that these decisions are influenced by my experience,

and are therefore likely individual. These individual decisions are thus an essential part of my idiolect, and are evidenced in the critical commentaries of the following chapters.

ENGINEER

> "Engineers are in fact responsible for much of what we hear on a recording – from the quality of the sound colours to the refinement of the smallest details in the mix."
> (Zak, 2001: 165)

Although the composer and/or producer may be responsible for much of the sound of a pop music track, s/he may not be an engineer. A recording studio engineer typically operates the mixing console, places microphones, records sounds, and mixes the track. Indeed, the single role of engineering can be considered as a significant contributor to the aesthetic value of a track, 'sound mixing, once a mere technical specialty, had become integral to the art process and recognized as such' (Kealy, 1979: 25). Engineers often take instruction from a producer, and unless this instruction is implicitly understood, it can impede the creative flow. Geoff Emerick (2007) recollects that he and George Martin communicated in a 'telepathic' way, that without asking they seemed to know what was required from each other when producing and engineering the track. In addition, Paul Epworth states that his engineer, Matt Wiggins, is intuitive with him, and they both "understand each other's philosophies" (Epworth, 2016). This kind of communication can be described as a shared tacit knowledge; an ability to understand the problem and its potential solution. This solution, however, may be different, depending on the aesthetics of the producer and engineer involved and a mismatch is possible. The hierarchy of the producer over the engineer in most cases, would nonetheless mean the engineer is likely operating with the intention of pleasing the producer, perhaps anticipating the correct solution in the eyes and ears of the producer. As I was both the producer and the engineer for all of my portfolio tracks, there was never a problem with communication. There was no mismatch of aesthetics and a cohesion between the two roles was the result.

Positioning microphones is a crucial skill for an engineer, and Susan Schmidt-Horning (2004: 710) defines the 'art of microphoning', as 'the careful selection and placement of microphones in the recording studio based on the instrument or voice to be recorded (Canby, 1956).' Schmidt-Horning argues that 'microphoning is a good example of tacit knowledge in action as it is very hard to formalize and those who

possess the skill have acquired it in practice.' My microphone technique is borne out of studying the relevant theory as well as years of practice in mine and other recording studios. The tacit knowledge I use is an aspect of the multi faceted skills with which I create recordings. As I am the producer, and on some tracks also the composer, the application of engineering skills is not the main focus. I am considering all roles simultaneously, and as producer, I communicate with myself as to how certain engineering tasks will be performed. On the whole, the main weight of concern is with producing, and engineering is often more of an automatic process, tacit knowledge significantly coming into play. Cunningham (1998) and Emerick (2007) give numerous examples of producers who are also engineers, and it should be recognised that certain engineers who have made prolific recordings with notable engineering qualities, were also producers. For example, Joe Meek and his heavily compressed, close microphoned productions; or Hugh Padgham and his gated drum sound on "In The Air Tonight" (1981) by Phil Collins at 3:40.

As engineering specifics are not the focus of the commentaries in this thesis, I will now outline some of my approaches when engineering the mixes of the portfolio tracks. Two of the main considerations when mixing "Number 1" were a recognition of the style of electronic dance music, and the cosmic, ethereal nature of the lyrics. For this reason, the track was mixed with a punchy aspect emphasising short and hard transients for the rhythmic dance music element, and also with a boosted high frequency EQ to metaphorically suggest height and 'other worlds' that cosmically exist seemingly above our heads. An audio example of the chorus that demonstrates the mix without, then with high frequencies boosted is available on the USB stick.[21] As can be heard, this kind of mixing changes the sound and impact of the track. The punchy aspect was further appreciated by compressing the bass and bass drum, allowing their transients to escape the compressor's attack. The same treatment was also given to the brassy synth sound in the chorus at 0:45, a sound that could metaphorically imply a heavenly herald, perhaps of another world. The mix was then carefully balanced to appreciate these elements.

Although the acoustic sound of "A Song" is different to "Number 1", certain mix requirements remain, such as the application of high frequencies. This application was, however, used for a different reason in "A Song". The intent was to create a close and intimate sound, as the singer was singing about her personal feelings and emotions.

---

[21] This audio file is called "2. Number 1 – Boosted High Frequencies".

Psychoacoustically, higher frequencies are more present when a voice is closer and on a level plane to the ear (Clarke, 2005: 19-24). High frequencies were therefore boosted in the lead vocal part, as metaphorically, the closeness of the sound would potentially represent the closeness of intimacy.[22] In addition, the soundbox application for the lead vocals was made to sound naturally close to the listener for similar intimate appeal (Moore, 2012: 186). This was achieved by applying slightly more reverb to the backing instruments than the vocals, which had the effect of placing the instruments further away from the listener. This track also used the stereo placement of instruments to make the mix sound like each instrument in the band was in a slightly different place. All instruments however had the same type of reverb to imply they were all in the same space, again to emphasise a close and intimate scenario. These decisions were influenced by a combination of experience and learning. Experience: as I apply the higher frequencies, I experience the music seemingly drawing towards me. As I apply the reverb, I can hear how the apparent positioning of the vocals and instruments change. Learning: I originally learned these aspects many years ago in conversations with Simon Osborne (2001), who was Phil Collins and Sting's engineer for multiple albums.[23]

Not only was the outcome of the mixes of both tracks the result of the actions of myself as producer/engineer, and the influence of the studio-as-instrument, but there was also additional influence from the memories that "A Song" inspired in me: multiple influences were occurring concurrently. Whilst creating the mix, I was referencing my personal experiences with the subject matter of the track, using empathy to intuitively appreciate the mood of the piece. Specifically when I broke up with the woman who is now my wife, and the pain I experienced in relation to the lyrics of "A Song".

> If you let your emotions get a hold of you
> You get carried away with breathtaking dreams
> But a dream is a dream and you have to wake up
> He's not coming back, that's when the going gets tough

An appreciation of this mood enabled me to realise the essence of the track, and create a compatible sound to the mix.

---

[22] There is an audio example of the mix with the lead vocal high frequencies reduced, then gradually introduced back into the lead vocal sound to demonstrate the apparent closeness when high frequency content is added. This audio file is called "3. A Song – Vocal High Frequencies Gradually Introduced".
[23] Simon Osborne interview can be found at:
http://www.audiotechnology.com.au/PDF/14/AT14_Simon_Osborne_and_Sting.pdf

For the two practical portfolio tracks mentioned in this section, I referenced other track mixes that were similar, recognising aspects and elements in these mixes for sonic inspiration. For "A Song", I referenced "Perfect" by Fairground Attraction (1988). The first two minutes of this track has the same instrumentation as "A Song", and although the acoustic guitar rhythm is very similar, I decided to apply less reverb to create a more intimate mood.[24] For the track "Number 1", I was inspired by the mix of "One More Day (Stay With Me)" by Example (2014). The rhythms are similar in both tracks; however, I didn't copy the sound exactly, as I intended to create an innovative sound to the mix for "Number 1".[25] It could be thought that I veered away from common practice by creating a different sound in these two portfolio tracks, however, I would suggest that the application of the different sound was not only in keeping with the style of the composition and production of these tracks, but also an intuitive development of their sonority. This can be explained as an aspiration I have to create originality of sound in my productions and compositions, an aspiration not uncommon to pop music creators (Bennett, 2011a: 1; McIntyre, 2001: 100-111).

The final mix of a pop music track is not only a product of the engineer's or producer's intent, but is also affected by aspects not necessarily within the control of the participants, such as elements of genre, stylistic choices, as well as the memories and emotions of the creators of the mix. Nonetheless, as an engineer, I can only contribute to the outcome considering the aspects that are significantly under my control. In this respect, my focus is more on roles of production and composition, roles that have substantial control of the elements within a track. My approach to engineering is therefore that its tacit knowledge complements these other roles, by supporting my production and composition decisions. As I am all three of these roles in the recording studio, the communication of engineering requests to myself is direct, and engineering decisions are made without discussion. 'People who cooperate to produce a work of art' such as a composer, producer or engineer, 'rely on earlier agreements' (Becker, 1982: 28-9), and as these agreements are contained within one person, then the exchange is not only simplified but is also fluid. The recording studio engineer, for me, is therefore part of the whole production effort that is contained in one entity: my role as creator.

---

[24] An audio example of this reference track, followed by the relevant portfolio track, is called "4. Reference Track - Perfect - Then Practical Portfolio Track - A Song".
[25] An audio example of this reference track, followed by the relevant portfolio track, is called "5. Reference Track - One More Day - Then Practical Portfolio Track - Number 1".

PERFORMER

> "There are three things that make a record: song first, performance second, then the sound" (Massey, 2000: 187).

Performance is a crucial aspect in a pop music track. It is capable of conveying particular emotions in the delivery of the take, and as such it is key to the effect a track has on a listener. Although the lead vocal performance on each of the portfolio tracks was the responsibility of the artist, I perform many of the remaining parts. Performance is therefore another role I undertake when I create pop music, mainly performing on keyboards, drums, percussion and as a backing vocalist. On some tracks I played live drums and percussion, on others I played sample drums and percussion on a keyboard or used step-time performance, as in "Take it Down", "In Love With The Struggle", "100 Lights", "I'm Too Smurfy", "Number 1" and "Let You Go". It could be thought that I also performed on the studio-as-instrument on all of the tracks, interacting with the various pieces of equipment as a cohesive whole to perform. As I am a composer, producer and engineer whilst also a performer, there is an interdisciplinary perspective to my frame of mind. I often apply myself to these roles concurrently, considering aspects relevant to each role as I operate. For example, I am composing the part as I improvise a performance, assessing microphone placement and distance as an engineer, as well as how the part will fit into the arrangement as a producer. Operating in this integrative way can be beneficial to the final sound of the track as knowledge of the aspects of each role can mean decisive and informed decisions are taken. In the past, I found it difficult to simultaneously apply myself to several roles in the recording studio. However, through practice, this is no longer an issue.

A performance can fundamentally change the direction a production takes, especially a lead vocal performance. For example, a lead vocal could perform with a carefree attitude, like a punk singer might, or alternatively with heart felt emotion. The backing performances and production would perhaps then have to be suited to the chosen attitude in some way, complementing the vocal performance in order for the track to sound cohesive. Consequently, I would always be open to the possibility that the sound of the track could change depending on the delivery of performances, and a willingness to adapt the production is therefore part of my approach and idiolect.[26]

---

[26] See Csikszentmihalyi (1997: 58-74) and Introduction, page 21 for how creative individuals consider alternative factors.

Quincy Jones (in Rushnell, 2001: Chapter 13) once said that you have to "leave room for God to walk through the room". I interpret this to mean that there has to be a readiness to adapt, to change performances, parts and production elements depending on the influences experienced in the moment.

Although it is evident that performance affects composition and production, I would like to consider a particular aspect that affects performance: authenticity. Authenticity is part of my considerations not only when I perform, but also when I guide performances as a producer and choose the best takes for a track. There are four aspects of authenticity to regard in this context. The first is sincerity - whether the track is sincere to its message or whether the track is a true representation of the feelings of the performers and creators (Moore, 2001: 198). Authenticity is not only meaning what you say, but also knowing what you mean, stipulating a position of ultimate sincerity. A performer may have personally encountered the experience s/he is singing about, truly knowing the emotions and intricacies of what it means. If a vocalist sings about having their heart broken, for example, s/he may mean the lyrics s/he sings, but might not have had their heart broken. Thus s/he would not truly know what it means. It might however be that an insincere performance is part of the track's message and as such a track may be considered authentic. A punk rock track, for example, could feature an apathetic and careless vocal performance, which might be thought insincere. Yet because this attitude is typical of the genre and its message, the track could be thought authentic. The second type of authenticity is persona - whether the personality of the singer is identical to the character or role projected by the singer when performing (Moore, 2012: 179). If the audience does not believe that the two are compatible, then it is likely s/he would find the singer and therefore the track inauthentic.

The third type of authenticity is originality, which has two applications. One is the originality of the composition and the production; does it sound unlike other tracks? Performances would certainly contribute an original element to a production, and the way a track is sung or performed creates its discrete meaning (Zagorski-Thomas, 2010: 20). Moore states that unless an artist adds their own original element to a track 'then what they are doing is frequently seen to have no value' (2012: 259). The other application is whether a track is the original recording with the original performances, production and mix. Fans of particular artists often find the original track to be the most appealing, and therefore the authentic article, in their opinion. The concept of original recording with the original performance, production and mix is purely a recorded music

phenomenon, as live music would have a different delivery, production and mix at each performance.

The fourth type of authenticity is personnel - the performers in the recording need to be of a high standard and convincing, in the opinion of the listener. "All Along the Watchtower" was originally written and performed by Bob Dylan, released in 1967, and was later recorded by Jimi Hendrix, released in 1968. Although the Hendrix version is not the original, his delivery and his band's performance is of such a high standard and is so convincing that few would regard it as inauthentic. A similar position can be found more recently in the song "Hurt". This was first recorded by Nine Inch Nails in 1994 and re-recorded by Johnny Cash in 2002, whose emotive performance can be described as nothing but authentic. It is often the case that re-recorded tracks have to show a significant degree of the first aspect, sincerity, to pass as authentic. An auditor that is committed to a version and performance that is convincing would therefore regard their choice as the authentic version, regardless of performers, composer, producer or date of recording.

As performance is clearly a key ingredient in an appealing pop music track, achieving technical proficiency along with a convincing and perhaps emotive performance in this area is often my aim. First-rate performances not only contribute to the authenticity of a track, but also make producing and mixing easier as there is less need for editing or to use production techniques in order to conceal an unconvincing performance. For this reason, choosing the best takes is a principle concern for myself as producer, and when I am also the performer, I always make an effort to be objective when choosing my own takes. This means that I assess my performances without ego, as if performed by another person, with regard to its suitability within the track.

LISTENER

The roles of the producer, composer, engineer, performer, or a combination, also play another role: that of the listener. Essentially there are two perspectives of listening I would like to consider. The first is that of the end listener, which is the audience: people not involved in the creation of a pop music track. The second is the creative listener, who listens as they create or adjust parts and sounds. I will first deal with the perspective of the audience.

As pop music is mostly a commercial venture, the appreciation of the audience plays a fundamental role in the potential success of a pop music track. Pop music creators listen not only for their own appreciation of the music, but can also position themselves in the place of the audience to ascertain its potential reaction. The producer, composer, engineer and performer could then create with reference to this reaction. Evan Eisenberg states, however, that the paradox for recording is that 'the audience is not there' so the creator cannot truly evaluate the audience's response (2005: 157). Consequently, I cannot accurately know the feelings of the audience when creating a track; I can only make decisions based on supposition and what I am feeling. The response of the audience would only then be a consideration, and not the ultimate reference when making creative decisions. I would also have to enjoy the stylistic characteristics of a track to be able to listen with such consideration. Consequently, although I mainly immerse myself in the sense of flow when creating, I am also able to take an objective attitude to the music I create, as if I am an audience member. This is not something I do simultaneously; I am either in one frame of mind or the other, interchanging between the two positions as and when required. Paul Epworth comments that whilst working with Paul McCartney, he noticed that Paul had the ability to be objective whilst in the flow of creativity, and take on the position of auditor (Epworth, 2016). Bennett (2012: 163) also discusses how creators reference a listener's perspective whilst composing a pop music track.

Musicologist Leonard Meyer suggests that the composer might position himself or herself as listener in order to create the intended effect.

> It is precisely because he is continually taking the attitude of the listener that the composer becomes aware and conscious of his own self, his ego, in the process of creation. In this process of differentiation between himself as composer and himself as audience, the composer becomes self-conscious and objective. (1956: 41)

It should also be noted that the audience, as end listener, is also creative to the extent that they create an understanding and meaning of the track whilst listening to it. In this respect, there is debate as to whether meaning is ascribed by its creators or attributed purely by the listener (Barthes, 1967; Frith, 1986: 256). Wolff states that the creator 'as fixed, uniform and unconstituted creative source has indeed died' (1981: 136). Moore comments that listeners extract different meanings from their listening experiences, and that their role is to impose such a meaning (2012: 221). Creating meaning for a track therefore consists of an on-going interchange between the creators,

the product (track) and the interpreters (audience), involving a continual shifting power relationship between all of these elements (McIntyre, 2012: 68).

Pop music creators not only consider the perspective of the audience, but also listen for creative purposes. This kind of listening, here termed 'creative listening', describes how a composer, producer, engineer or performer listens whilst creating or adjusting parts and sounds. Creative listening can occur before a note has been composed. The composer might have an idea of what s/he will write and is in essence listening to that idea, imagining the parts and sounds. The next stage is listening as the part is being created and performed; this may be the composer, producer, vocalist, or instrumentalist performing. The creative listener then listens to and evaluates that part, choosing the next creative step. They might consider the part complete, adjust it, or add another part to it. These stages of creative listening are cyclic where the composer, producer or performer as creative listener repeats the process to create the parts, composition and production. Creative listening can therefore take place before, during and after creating parts.

The producer, as creative listener, not only creates parts, but also evaluates and selects the best takes of performances in order to guide the track towards its desired sound. An audio example of my choice of takes as producer is available and is called "6. Creative Listener – You Need Me - Lead Vocal - Producer's Choice". In choosing between the two takes, I was the creative listener assessing the aesthetic appeal and suitability of each take for the track. According to my evaluation, the second version has an improved delivery and tuning, and was used in the final arrangement of the track. The difference between the two takes is slight because the singer was fixed in his style of performance for these phrases. In order to make the choice between the takes, as producer I focused on my feelings when listening to each performance, and how apposite each vocal take sounded in the mix. Ultimately it was a decision that was guided by my intuition.[27]

The engineer also listens creatively, assessing the existing and potential sounds in a pop music track. In order to create appealing recordings, an engineer would have to imagine the required sonic elements, use suitable and properly placed microphones, choose pre-amps, connect electronic instruments, as well treat each appropriately with

---

[27] Intuition is discussed on page 22 in the Introduction of this thesis.

EQ, compression and effects. An engineer would then creatively listen to the resulting sounds, and adjust them in order to make them apposite within the mix.

The staging of the performance is an important consideration for creative listening. The singer may want to be in the same room as the band so s/he can listen to and sense the band's presence in order to improve his/her performance. Alternatively, the band and/or singer might record separately in isolation booths, or overdubbing could take place. In any of these situations, the quality of performances often depends on the mix the performers hear. Headphone balances are crucial in this respect: if a singer's vocal is too loud in their headphones, they may perform with less effort and perhaps sing flat. The opposite may be the case if the vocals are too quiet and the singer performs with too much emphasis, exerting beyond requirement, perhaps singing sharp in the process. When producing the practical portfolio tracks, I was aware of these possibilities and advised the singer if I thought their headphone balance was affecting their performance. There is an example of the vocal level being too loud in the rapper's headphones whilst he performed, available on the USB stick and is called "7. In Love With The Struggle - Headphone Balance and Authenticity". Over several performances, the headphone level was reduced to a more suitable level, and the second version on this example has the resulting performance with the desired emphasis. It should be noted that the emphasis on the second performance was influenced not only by the headphone volume reduction, but also by the rapper's repeated performance of the part, and a take with a higher degree of persona authenticity was the result.

Listening as a performer could also involve listening as a producer. For the practical portfolio tracks "Sweet Satellite", "Just Another Boy", "You Need Me", "A Song" and "Forever", I was both the producer and drummer. When operating in both of these roles, I am listening from two different perspectives, as a dual listener. As producer, I appreciate that the drums are often the fundamental element of a track, so should be one of the first instruments recorded, unless there seems to be a more important part on which the track can be based; a sequenced synthesizer part for example in certain styles of music. Modern day recording techniques enable drummers to record their initial parts listening to a click track and nothing else. Other parts have to be listened to in the imagination of the drummer, using his/her own imagined creations of the rest of the arrangement. The disadvantage to this method of recording is that the final parts may not be the same as the drummer's imagined parts, and the drum take may therefore not be completely suited to the final mix. I try to alleviate this problem by

first recording both a guide vocal and a harmony instrument part, perhaps on a keyboard or guitar, so I can have a better idea of the arrangement.[28] I would then creatively listen and perform drums to these guide parts, whilst also listening as a producer to create a part that will potentially be apposite within the mix. This does not eradicate the problem, however, as I would still have to imagine the improved performances of these parts, as well as parts I think may be subsequently added. Such imagined listening, as a producer and drummer, is nonetheless useful in recording performances for the required arrangement and this type of imagined listening occurred whilst recording the drum performances of my aforementioned portfolio tracks. Overdubbing after the initial parts have been recorded, such as drums, has the advantage that the recording can take place whilst listening to these finished takes, responding appropriately. This was the case in the above portfolio tracks for final vocal, guitar, bass and keyboard parts.

As previously mentioned, listening to tracks that have reached a high position in the UK singles charts is part of my creative process, not only as an engineer and producer, but also as a composer. Perhaps a part, combination of parts, or a single sound in the reference track might creatively influence other parts and sounds in the track I am creating. The general sound and essence of a track could also inspire me. My practical portfolio track "Just Another Boy", for example, was inspired by One Direction's "What Makes You Beautiful" (2011). Both tracks have similar sonic elements, notably a slightly distorted mix and comparable sounding electric guitars. The inspiration I gleaned from "What Makes You Beautiful" however is not immediately discernible as the melody, harmony, rhythm and tempo clearly differ from "Just Another Boy".[29] Consequently, as part of my process, and as creative listener, I will often import one or two commercially released tracks into the Pro Tools sessions for comparison and inspiration.[30]

Several aspects of authenticity should be considered in the context of listening, which involve the perspectives of both the creative listener and the audience. First person authenticity occurs when 'an originator (composer, performer) succeeds in conveying the impression that his/her utterance is one of integrity, that it represents an attempt to communicate in an unmediated form with an audience' (Moore, 2001: 200-

[28] A guide part is often recorded in one or two takes as a rough version. It may be a less intricate and lower quality performance, and is likely unedited.
[29] An audio file that compares these two tracks is available on the USB stick and is called "8. Creative Listener - Inspiration Track Comparison".
[30] See this Chapter, page 44 for more on referencing other tracks.

1). This may be where the performer records with no overdubs, in one take, without editing. Second person authenticity occurs when the performer succeeds in conveying to listeners that the performance represents the listener, that the listener's experience of life is being validated in the message of the track. Third person authenticity occurs when the performer succeeds in conveying the impression of accurately representing the presence of another, not the listener, performer, or creator. In this positioning of the listener, one could say the listener becomes the protagonist, or an observer, or the antagonist (Moore, 2012: 185). Authenticity can also be found in music as a capacity for listeners to find a place of belonging, a 'centeredness' and experience that can be trusted (Moore, 2012: 270). When composing and producing the practical portfolio tracks, these aspects of authenticity were considered in my perspective as creative listener. An example of this would be as producer, I am evaluating the authenticity of performances, assessing whether the vocalist succeeds in conveying the impression that his/her delivery is one of integrity, or that the performance is convincing in that it represents the listener, or the presence of another.

Creative listening plays a large part in the roles of the composer, producer, engineer and performer as it affects the parts and performances created, chosen and adjusted. The methods used to listen to music influences performances in the studio, listening on headphones for example, or the singer listening to the band simultaneously playing in the same room. The concepts of imagined listening and dual listening are also important parts of creative listening, especially where the roles of the composer, producer, engineer and performer combine. In addition, creators can be creatively influenced by listening to commercially released tracks as well as considering the opinions of the audience. It is clear that listening is a subjective pursuit: we cannot possibly know the precise personal experience every listener has. There can be no extraneous judgement of a listener's relationship with the music (Moore, 2012: 260), and the subjectivity of listening is therefore an underlying consideration when creating a track. Listening affects the creativity involved in the roles of the composer, producer, engineer and performer, even when these roles are undertaken by just one participant. Nonetheless, the creation of the portfolio tracks involved more than one person, and as such, each has a collaborative aspect that should be considered.
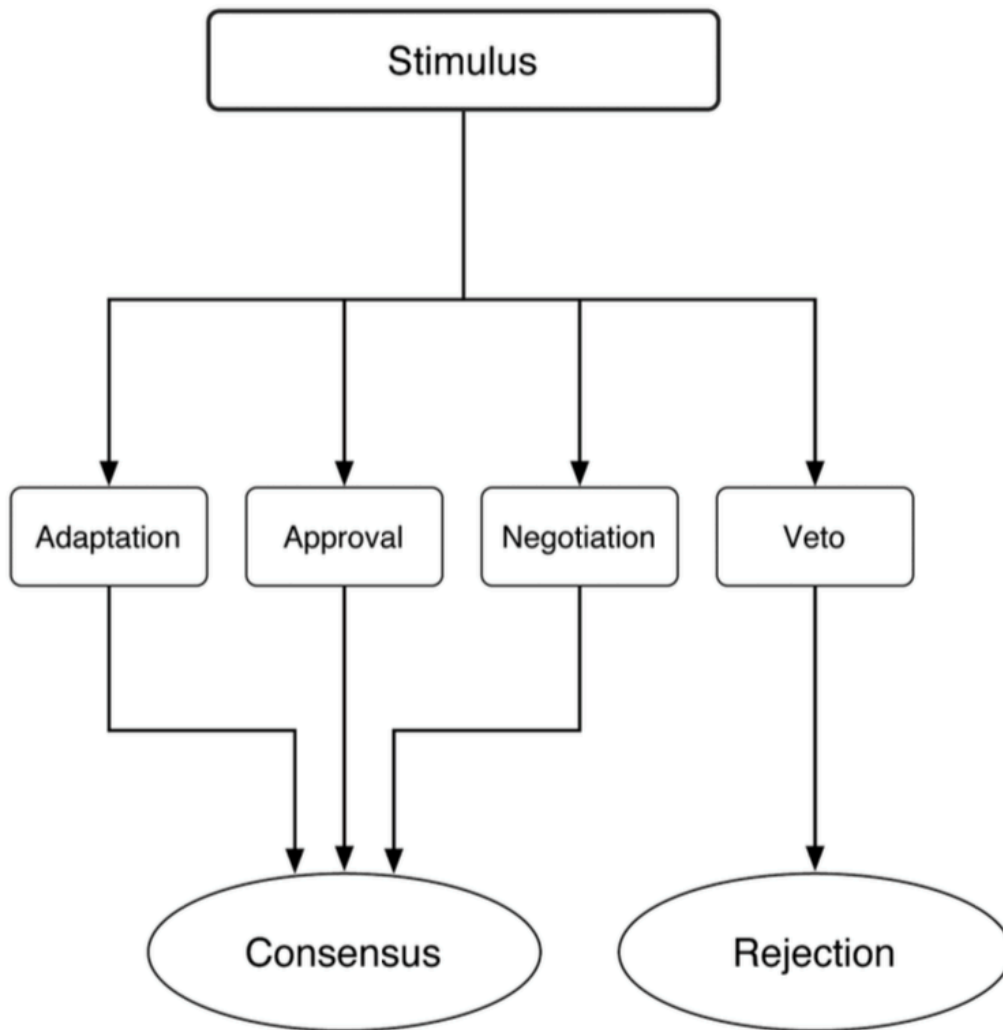
Collaborator

'Given the array of aesthetic sensibilities engaged in the making of a single recording, the creative activity of the recording studio is very much a collective one.'
(McIntyre 2012b: 150)

Collective creative activity certainly exists in many pop music track recordings, with creative contributions from composers, producers, engineers, band members and session musicians. Historically, around half of UK and US 'hits' are composed collaboratively, most commonly by two people (Pettijohn II & Ahmed, 2010: 2). At the time of writing, July 2016, the Official UK Singles Charts is dominated by collaboratively composed and produced songs, with all five of the top five singles being composed by collaborative teams, and four out the top five being produced collaboratively. Collaboration, in my portfolio productions, is exemplified by the fact that all tracks have at least two collaborators in their creation. Apart from myself, the other main collaborator is often the lead singer, who in some cases is also a co-composer. If the collaborator is the co-composer, then the fundamental elements of the song are discussed such as the melody, harmony and rhythm, and decisions on the content of the parts are made between the two participants. Bennett delineates seven processes that are at play in a co-writing environment, which are stimulus, adaptation, approval, negotiation, veto, consensus and rejection. (2011a: 9).

These processes are present when I collaborate to compose. For example, I could be stimulated by an idea a collaborator has, which I approve, then adapt it to suit the requirement of the track, negotiating the eventual part content, where the collaborator either vetoes the completed part rejecting it, or there is consensus that the part is effective and appealing.

Production often follows composition, and although composition of some kind is often involved when producing, production tasks are carried out by me with little collaboration in this part of the procedure. Even though the collaborator might provide the stimulus, the production decision and operation is still my own. The portfolio track "I Want to be Loved", for example, was a collaborative composition effort, with the lead singer contributing a roughly equal share to mine at the composition stage. Although I composed approximately half of the song, I also produced the whole track

but with little collaborative input from the co-composer at this subsequent stage. Portfolio track "Take It Down" on the other hand only had a modicum of compositional collaborative input from the lead singer, mainly personal inflection elaboration, with the majority of the track therefore composed by me and the whole track being produced by me.

Apart from "I Want to be Loved", the featured artist for each portfolio track commissioned me to create the relative productions. My relationship with the artist is not only important to achieve and retain the commission, but is also crucial to the process and successful completion of the track. McIntyre comments that producers need to employ tact and diplomacy as well as maintain empathy with the participants to help realise the creative vision of the project (2012: 154). I am aware that this attitude is beneficial to the relationship between the artist and myself, and am generally empathetic to their requests as well as diplomatic when I disagree with their suggestions. There are times when I have misjudged a situation, and am less than empathetic to the artist. However, I recognise that these moments are valuable as they help guide my attitude in future circumstances.

As collaboration is involved in the creation of the portfolio tracks, it could be assumed that ownership of creativity is an issue. However, this is not the case as I am aware that possessive attitudes with parts could potentially lead to a less creative atmosphere, where egos might become overbearing and communication may then be strained. For this reason, I agree the split of the publishing copyright before or at the first session with an artist. In my case, the split is usually 67% to 33% in favour of the artist. I suggest this split as it means that potentially the artist would be more enthusiastic to promote the track, getting paid more if the track is successful. It may be that without this impetus, the track could fail to earn money, and my share would result in little recompense, even if I retained a substantially higher percentage. If the artist wants a higher percentage, or I feel that my collaboration input is relatively small, then I would agree a smaller share. Ownership of the final mix of the track, which is the sound recording copyright, is also not an issue, because the commissioning artist legally owns the recording. UK law states that whoever pays for a track to be recorded, owns the sound recording copyright (Rutter, 2011: 82), and thus receives the revenue from track sales. Documentary evidence to suggest if this 67% to 33% split is common practice is hard to find. Nonetheless, Paul Epworth states that arguments about copyright splits

tend to stunt creativity, and that "creating great pop music isn't about the money, it's about the music" (Epworth, 2016).

As I am the producer and owner of the recording studio used to create the portfolio tracks, I was in charge of the recording sessions. The respect this position commands from other collaborators means that there are few arguments. This is in line with my approach of avoiding friction in the studio as I find it hinders creation. Csikszentmihalyi highlights the benefits of 'flow', which is an 'almost automatic, effortless, yet highly focused state of consciousness' when undertaking creative tasks that are enjoyable, often involving 'painful, risky, difficult activities that stretch the person's capacity and involve an element of novelty and discovery' (1997: 110). My experience is that the mental state required to be in the moment of flow is disturbed by friction and arguments with collaborators. Nonetheless, I would rather air views than suppress them as this can also create tension and dissuade creativity. If disagreements occur, they are often mild. My approach is to think of any disagreements as a dynamic part of a collaborative relationship, and each resolution as a positive step towards the realisation of the track. Primarily, the aim is to create an atmosphere of open attitudes and little tension, an atmosphere that in most cases enables creativity to flourish. Hugh Padgham comments on how important the atmosphere is in a studio, "Fifty percent of making a record is the microphones and equipment, and the other fifty percent is the vibe in the room" (In Massey, 2009: 178).

Nonetheless, there are occasionally times when the artist insists on a direction for the production which I disagree with. I would air my views, but if the artist were resolute in their opinion, I would relent as the artist is commissioning the production. If I decided against the artist, this may result in the project being cancelled. There was a moment, for example, during the production of "A Song" where I disagreed with the artist in selecting parts for the track. She was determined to choose parts which implied a direction that I didn't find quite as appealing. I nevertheless had to agree with the artist, and I made the most of the result, offering other parts and sonic modifications to suit the slightly different direction.

As part of my production process, I undertake many of the creative roles for my portfolio tracks, often merging or overlapping tasks as a coincident 'bundle of tasks' (Van Maanen, 2009: 36; Becker, 1982: 11), which can be considered a vital part of my idiolect. In this circumstance, if collaboration were taking place with myself where

conversations are internal, it would be difficult to argue that there are moments of friction, which would perhaps suggest moments of schizophrenia. Collaboration in this context is therefore interdisciplinary. Zak comments on the combination of roles, that 'producers may act as arrangers, performers, songwriters or engineers. In short…distinctions among the roles need not be definitive' (2001:164). Carter (2005) also remarks on the inter-changeability of roles, acknowledging that participants often multi-task.

Collaboration considerations can extend beyond the participants previously mentioned. When one considers the culture and field of pop music, it is likely that a creator would need to reference historical contributors in order to create. Sarimento and Stahl (2008: 1) comment that 'creation is never ex nihilo but built on the shoulders of predecessors'. Previous artists, composers and producers can therefore influence the creation of a track, and individual creativity could thus be acknowledged as 'a group-cognitive achievement' (Ibid). Consequently, the history and culture of pop music could be seen as a kind of tacit collaborative contributor.

Although I am the main participant and creator of the portfolio tracks, I still recognise and embrace the collaborative contributions of the other participants. In this respect, my aim is always for my creations to sound agreeable to the artist, whilst still adhering to my own exacting high standards of creativity and production. This approach is part of my idiolect, and even though collectively my methods and production decisions would inevitably create sonic aspects that are part of my sound, producing my sonic signature is not the intent. My goal is to create productions that represent an ideal sound and style for the artist, so they will not only feel proud of their track, but also comfortable promoting it. The conflation of my production values and the artist's designs therefore means that collaboration is certainly an important aspect of my productions.

Specific instances of collaboration will be highlighted in the following chapters, including the way that I worked with different collaborative partners, moments of friction or disagreement, compromise, and ideas about ownership.

Subsequent Chapters

The aspects I discuss in this chapter relate to my creative process for the portfolio productions, and are also found in subsequent chapter commentaries. For example, the free association I outline in the Composition section of this chapter is not only used in many of my compositions, but is also discussed in Chapter 2, page 66. Another example is how the producer guides the vocalist's performance towards its final version, found in the Producer section of this chapter. This is outlined in Chapter 4, page 100, where I guided the rapper enabling him to deliver a convincing performance. As an engineer, I was using my tacit knowledge when selecting and positioning microphones for tracks, also found in Chapter 4, page 95. Whilst performing on the portfolio tracks, I am additionally aware of the other roles I am playing, those of the composer, producer and engineer. This was the case on "I Want to be Loved" featured in Chapter 3, where I played the drums as well as composed, produced and engineered the track. My role as listener for all of the portfolio tracks means I am aware of the issues I raise previously in this chapter, such as how I consider my reactions when acting as if I am an end listener; or how I listen as I create parts in any track I am composing or producing. These concepts are explored in Chapter 5, page 106. Finally, even though my role as collaborator is apparent in all of the portfolio productions, each to its own particular degree, in the main this role does not include production collaboration. I therefore mostly make production decisions alone, referring to the artist only for approval, which is illustrated in all subsequent chapters. In addition, aspects of 'The Act of Musical Composition' diagram found in this chapter on page 59, are featured in Chapter 3 on page 81.

Chapter Conclusion

It would seem that my role in the creation of the portfolio tracks could not be described as one particular function. I am not solely the composer, the producer, the engineer, or a performer. My role is multi and inter-disciplinarian, a blend of many roles, each undertaken as and when required, and is an approach that could be described as that of an auteur. Richard James Burgess comments that 'auteur producers write the songs, play instrumental parts, lay down guide vocals, engineer, edit, and perhaps even mix' (2013: 10). This approach is evident in many pop music productions, such as *1999* by Prince

(Warner Bros., 1982), and *Innervisions* by Stevie Wonder (Motown, 1973), where both artists composed, produced, arranged and performed on these albums. Technology is responsible for the proliferation of computers and music software that is relatively easy to use, enabling many roles to be undertaken by an individual: composer, producer, engineer and performer. The easy access to computers and music software over many years was one of the reasons I was able to learn how to create a pop music track. Without the available tools, my route would certainly have been different, and perhaps less inter-disciplinarian, where I may have solely taken on the role of a composer, or a producer, or an engineer or a performer. Having knowledge of the intricacies of each role, understanding where they overlap and influence one another, making decisions based on this knowledge to enable a full and immersed responsibility in the creation of a pop music track, is perhaps the ultimate in creative control in this field. This is a position I relish with the satisfaction that I create so much of a track, and is an approach that I consider to be a crucial part of my idiolect.

CHAPTER 2

CRITICAL COMMENTARY - "JUST ANOTHER BOY"

AUTOETHNOGRAPHICAL NARRATIVE

An autoethnographical approach will be used in the composition of the following chapters. Bochner and Ellis (in Denzin, 2000: 736-9) and Muncey (2010: 26-33) suggest that writing a personal narrative, in this style, is a way of understanding the experience of the writer. Bochner and Ellis (in Denzin, 2000: 739) state that academic writing may not necessarily communicate the "multiple layers of consciousness, connecting the personal to the cultural". While other methodological strategies exist (see Silverman, 2013: 120-138 & Bochner and Ellis in Denzin, 2000: 740), my approach will attempt to illustrate my personal experience whilst creating the portfolio tracks, allowing the reader to 'resonate with' this experience and 'reflect on it' (Bochner and Ellis in Denzin, 2000: 753).

This chapter will consist of a critical commentary of the practical portfolio track "Just Another Boy". In order to examine the order of my process, this will take place on a timeline, analysing interesting, innovative and important moments or processes that occurred in the track's creation. This will include a discussion of the ways in which intuition affects my creativity, as well as examining my use of melody and metaphor in the track. The chapter will conclude with an investigation of the vocal production techniques used and an exploration of my approach to mixing this track.

COMMENTARY

Initially, I was approached by a mother and two of her daughters, one a singer aged 14, and the other a lyricist aged 11. The mother wanted a song composed and produced for commercial release, with creative input from her two daughters. At a meeting with the mother and two daughters, we established the genre and style of the track. They said they liked the band One Direction, specifically the track "What Makes You Beautiful" (2011). This track indicated a potential arrangement, production and lyrical approach

for the track that would be created. As mentioned previously, I often refer to commercially released tracks for inspiration. "What Makes You Beautiful" was therefore useful for reference purposes. The meeting resulted in a decision that the theme of this song would be of a girl who has had her heart broken so many times that it becomes a commonplace occurrence. If I am composing for an artist, I find it important to refer to their style of singing in order to create parts that they are capable of singing convincingly and that they also find appealing. However, the singer was not a confident performer so vocal melodies were all composed by me using free association,[31] and were created using a combination of songwriting and studio-based composition methods.[32] Songwriter composition method was used first as it is relatively quick and easy to document ideas, rather than set up high quality recording equipment for a studio-based composition method. As I was not the vocalist, recording the parts as low quality files did not matter. Melodic ideas were therefore recorded on a smartphone at the same time as some of the lyrics were created. It is important to note that these melodic ideas may have been forgotten if I hadn't instantly recorded them. As melody is an impalpable entity and is abstract in this respect, I find it difficult to remember melodic phrases that I have improvised. This is a similar situation to that of many of my musical peers, who have expressed this problem in conversations and collaborative sessions with me. Paul Epworth in particular states that he often forgets parts so needs to record them straight away (Epworth, 2016). Lyrics were written down on paper, a traditional method that enables quick access and easy adjustment of the text.[33]

At this point, I discussed the ownership of the creativity with the group, as it seemed to me that I would be creating most of the track. UK law states that the composer and lyricist own 100% of the copyright for the song they have composed and written, and can of course distribute this ownership as they see fit. Copyright of each song is therefore treated on an individual basis, and as situations differ, common practice is difficult to determine. Because the creation of the track was a commission, and the mother wanted some ownership, it seemed appropriate to suggest my normal share of 33% of all royalties. The mother and daughters would therefore receive 67%, regardless of the distribution of creativity. In my experience, disagreements about creative ownership often result in friction, which can stunt creativity and potentially

---

[31] Free association is a kind of recorded improvisation and is defined in Chapter 1 on page 39.
[32] See Chapter 1, page 35, for definitions of songwriting and studio-based composition.
[33] An example of some of the free associated musical and lyrical phrases can be found on the USB stick and is called "1. Just Another Boy - Lyrics and Notes Free Association"

result in the termination of the project. My approach is that a 33% share of the profits of a released track is better than a higher percentage of a track that isn't released. The family having the larger share of the royalties also means that they are perhaps more content to promote the track. The family was satisfied with this arrangement and the creation of the track proceeded. The family left me to compose the song alone, and I agreed to send them an audio file of my ideas when I required their opinion. The younger daughter would then send me some lyrical ideas that would scan with the melodies I had created.

Whether composing alone or with others, there is no absolute linearity for my composition process (Csikszentmihalyi, 1997: 83). My composing therefore has no strict formulae (Bennett, 2012: 150 & 154) and comes from an inspirational basis, adding to the song with whatever inspires me at that moment. When producing, I take a similar approach, making an effort to create what I believe to be the next most important element. I learned this approach from a colleague of mine Simon Osborne (2001), who said he learned it from his experience with Bob Clearmountain in the early 1990s.[34]

Intuition is a key factor when I create, and if I intuitively think a sound or part appealing, then it is more likely to remain in the song. As the main impetus for the initial creation of this track is melody, I will examine my intuitive influence for this element. It is commonly understood that parents affect their children in many aspects of their personality and taste (see Krumhansl & Zupnick, 2013). I believe one reason for my intuitive sense of melody stems from my mother's southern Irish inflection, where her conversational phrasing could be perceived as having a melodic contour. She would sing to me when I was young, perhaps further inscribing a melodic sense in me. I am often reminded of her voice when composing melodies. Her singing and inflection also inspired me to sing, as well as appreciate other singers that influence me, such as Frank Sinatra, Donald Fagen and Sting. An example of their influence is how I intuitively produced the smooth and gentle sound of "A Song" from the portfolio, whilst perhaps unconsciously being affected by the sound of tracks like "Girl From Ipanema" (1967) sung by Frank Sinatra and Carlos Jobim. One of my principle melodic inspirations is The Beatles, primarily Paul McCartney's vocal delivery and melodies, which still affect me up to the current day. Paul McCartney often uses "melodic appoggiaturas", which

---

[34] Bob Clearmountain is a Grammy Award winning mix engineer and producer who has worked with many prominent artists and bands including The Rolling Stones: *Sticky Fingers* (1971), Bruce Springsteen: *Born in the U.S.A.* (1984), and David Bowie: *Let's Dance* (1983), amongst many.

are non-triad tones which *lean* on the harmony on strong beats before resolving onto a strong chord tone on a weak beat' (Pedler, 2003: 740). This musical feature is found in the Beatles song "Yesterday" (1965) opening word, and also in my practical portfolio tracks "You Need Me" 0:35 on the word "for", "Just Another Boy" 0:07 - "Every time I *pass* you by", and "Forever" 0:56 - "There's never been *anyone*". It should be noted that intuition is not only my main point of reference for creating melodies, but also when creating other parts and sounds in a track, whether this be when I am composing, producing, engineering or performing.

In order to access intuition as a reference point, it is often necessary to be in a process of flow, as documented by Csikszentmihalyi (1997: 110 & 351-4). This frame of mind could also be described as a trancelike state (Boo Hewerdine in Bennett, 2012: 157), where many operations become automatic. In this frame of mind, I considered the melody of "Just Another Boy". As the singer was fourteen years old at the time of the track's creation, younger than many pop artists, a childlike melody was deemed suitable. Contemplating my childhood experiences, I remembered a specific playground teasing melody sung to the text "Naa na na naa na" similar to the nursery rhyme "Ring a Ring O' Roses".[35] This melody resonates with me as I have used its exact notes in one of my previous compositions about my son, who was five years old at the time of composing the song.[36] Robbie Williams also uses this melody in his composition "Candy" (2012) at 0:08. This influence can be construed as a kind of cultural and historical inspiration, which accounts for one aspect of Csikszentmihalyi's systems model of creativity.[37] In response to this playground teasing melody, I intuitively composed a similar melody for the chorus.[38] At this point, the inflections of the melodic ideas composed were deemed important, some being close to what I thought would be a final melody and style of delivery. As the performances of these melodies and inflections would then be situated with other backing instruments in the track, it was necessary to record the performances on high quality recording equipment, and studio-based composition began. Smartphone recording is not only of a lower quality, but is also less flexible than multi-track recording using recording studio equipment, as the

---

[35] "Ring a Ring O' Roses" can be found on the USB stick in the folder 'Commercially Released Tracks'.
[36] This song, called "Fabian", is in the folder 'Chapter 2 - Just Another Boy' on the USB stick and demonstrates the playground teasing melody from the first vocal entry.
[37] See Introduction page 19, Figure 1.
[38] An audio file of a comparison of both melodies is on the USB stick and is called "2. Just Another Boy - Melodic Inspiration Comparison".

files cannot be played simultaneously with other recordings of sounds, instruments and voices.

It could be thought that some people would perceive there to be a substantive difference between the intuition involved in the writing of a melody and the processing of a kick drum, perhaps seeing melody writing as a learned activity. This could be because melodies are ostensibly more complex than a kick drum part, and therefore might need more knowledge and experience to compose. Melodies consist of pitched notes, that can suggest scales, or harmony if they are arpeggiated, with changing timbres in their syllables if they are sung to lyrics, and might have rise and fall of pitched notes that could have a certain emotional perception to a listener. Kick drum sounds and parts on the other hand are likely to be less complex, probably with one timbre and one pitch, which could be undefined, often with a repeated rhythmic pattern. As a composer and producer, I intuitively make decisions on the parts I write and produce, no matter how complex or simple they are, much of which is based on tacit knowledge. These decisions are taken with regard to: my knowledge of the type of sound that complements other parts, that will suit the arrangement; my evaluation of the part and sound that would be approved by the gatekeepers of the domain (Csikszentmihalyi, 1997: 27-8). I am not always right of course, and if I then deem a part to be wrong, immediately after it is created, or after a some time, I am still using my intuition to make this decision. If the part disturbs me in the wrong way, or isn't doing the job I intended it to do, my knowledge and intuition are two aspects that I would principally draw upon. I do, however, recognise that different creators would be deploying different levels and types of skill and have different aesthetics, as well as an alternative opinion of how successful a specific example is in regard to different sectors of the social field.

"Just Another Boy" was not only being written for a young artist, but was also inspired by the genre of bubble gum pop. This genre is mainly aimed at a young audience, many of whom perhaps appreciate a simple style of pop music. Along with the youth of the singer, the youth of the audience was another reason for the melodies to be simple. This is illustrated in the first two lines of the verse at 0:06, and of the chorus first heard at 0:46. This is a metaphorical comparison, that the style of composition implies a similar meaning. As highlighted by Lakoff and Johnson (2003), metaphor is a significant part of how we communicate as humans, and as such is an important aspect in the meaning of a song and track. Theories of metaphor are frequently used to explain and describe musical meaning, and there are many musicologists who have adapted

such theories in their concepts. These include Scruton (Trivedi, in Gracyk & Kania (ed.) 2014), Becker (2004), Iyer (2002), Keil and Feld (2005), McClary (1991), and Monson (1996). A recognition and application of the metaphorical aspects of meaning is part of my idiolect, and I understand the impact I create when I consider metaphor whilst composing and producing pop music. The small repetitive up and down movements of the melodic pitch in the first two lines of the chorus melody of "Just Another Boy" could metaphorically be interpreted as the singer perhaps repeatedly experiencing a similar situation, that of having her heart broken. Or could be thought as the up and down shrugging of the shoulders, as if she doesn't care. It could also remind the listener of the playground teasing melody from which it was inspired. There are countless possibilities of meaning for melodic contour and the meaning ascribed is therefore subjective. Many examples of metaphor exist in my portfolio tracks that are not just connected to the melody. A production example of metaphor can be found at 0:21 in the track "Let You Go" where the reverse cymbal could be described as sounding like a sharp intake of breath, ready for action, which in this case is the start of the first verse.

Referencing Csikszentmihalyi's five stages of creativity, the composition of this track started with preparation, the problem set out by the family.[39] There was very little incubation and once I had heard "What Makes You Beautiful" by One Direction I let my creative output flow using free association, with insight and evaluation ostensibly merging into one. Elaboration followed after the family had left, which was punctuated with many moments of insight and evaluation. As the creation of this track took many days, creative activity often reverted to preparation and incubation of new issues and problems. Consequently, it is apparent that my creativity isn't necessarily linear, and one creative action may not connect directly with the next creative action, which could be part of another process. A melodic idea could inspire a different idea for drums for example, with composition and adjusting of parts and sounds therefore created in no specific order. Phil Oakey has a similar attitude, commenting that he has no formula or wider conceptual approach to his creativity (Oakey, 1998-2000).[40]

Having recorded ideas on keyboards and vocals, I sent a rough mix to the family. Even though it is a rough mix, I believe it still has to sound convincing to the artist, so that they approve the work done. Vocal effects and double tracking[41] were

---

[39] See Introduction, page 22 for more on Csikszentmihalyi's five stages of creativity.
[40] Lead singer and co-producer for The Human League
[41] Double tracking is recording a performance of the same part more than once. More than one of these performances

therefore included in this mix.[42] The family approved these ideas. The 11 year old lyricist then sent me some lyrics for this song that I found were lacking in style and didn't scan well with the melodies I had created. For the song to sound appealing, I had to significantly rewrite her lyrics to make up for their shortcomings.[43] As I had already agreed the copyright share with the family, the main focus was on creating an appealing track, and there was no egotistical requirement to use the 11 year old's lyrics.[44] Further, in order to keep relations amiable, I said that my lyrics were fundamentally inspired by the daughter's lyrics, and the family seemed content with this attitude.

In order to create a suitable production for a specific singer, it is sensible to record the singer as a guide vocal track. All additional parts and sounds can then refer to this singer's style and approach. A singer's delivery could range from reserved to forthright, and the arrangement would have to complement their performance, whether this is with a similar attitude, or even in opposition to it.[45] I therefore recorded the vocalist as a guide in a short session. I deemed the recording of the backing instruments to be the next most important part of the production process, and the family did not want to attend this part of the production. I believe this allowed my creativity to flow, free from potential interruptions and requests from the artist, the lyricist and the mother. Further, as the next session was several days later, there was time for my unconscious mind to perhaps develop the parts (Freud, 2001: 159-217; Bennett, 2012: 155-6).

A fundamental element of many pop music tracks is the drum part, and as "What Makes You Beautiful" features live drums, the first instrument to be recorded properly, not as a guide part, was the drum kit. This would potentially add significant emphasis to the sound of the production, and crucially set up the rhythmic aspect of the track. As mentioned in Chapter 1, I play many roles when creating pop music tracks. Composing and performing drums, whilst engineering and producing are four of the roles I undertook at this stage. As I understand the composition and meaning of the song, as well as the editing capabilities of the recording studio, I was able to competently deliver a satisfactory drum performance with a suitable attitude. In order to create a drum part that is comparable with many current successful pop tracks, I believe the timing should

---

is used in the mix of a track, which often emphasises a part.

[42] There is an audio file of this rough mix on the USB stick which is called "3. Just Another Boy - Rough Melody With Some Lyrics & Piano".

[43] The rough mix of my amended lyrics is available on the USB stick and is called "4. Just Another Boy - Steve's Lyric Amendments".

[44] Paul Epworth states that egos can often get in the way of creativity (Epworth, 2016).

[45] Tracks by Paramore often contain smooth vocals with harsh sounding distorted guitars, an example of which is "Still Into You" (2013) at 0:47.

be accurate, as it is in "What Makes You Beautiful" or "One Dance" (2016) by Drake featuring Wizkid and Kyla amongst many examples. Accuracy in this context means that individual notes of a part are played and placed exactly on specific subdivisions of the bar, known as a timing template, and are in keeping with the other accurately placed parts. The success of dance music tracks in the UK singles charts means that the public is also used to hearing the machinic accuracy of dance music drums, as in "This is What You Came For" (2016) by Calvin Harris and Rihanna, and I believe that attention to this aspect is key to creating a commercially viable production. Once I had chosen the best takes and compiled a drum track, I set about applying Beat Detective in the Pro Tools session. Beat Detective splices up individual hits at transient trigger points, times them to a template of the user's choice, then fills in any gaps between the audio splices, backwards from the following splice, so the whole part sounds like a cohesive performance. The aspect of drum timing is further explored in Chapter 3.

There are many guitars in the arrangement of "What Makes You Beautiful", and as I do not play guitar to a high standard, I organised for a guitarist to record on this track at my studio. Musicians are usually influenced by a distinctive variety of other instrumentalists and as such often develop an individual style, where certain phrases are played with confidence and others might sound awkward. For this reason, when I ask an instrumentalist to record on a track, I may suggest phrases, but ultimately I let the instrumentalist create their own parts within their capabilities. In the main, this results in confident playing, which then translates to the sound and impact of a track. Clearly if the part doesn't sound apposite within the sonority and style of the track, another part is created until I am satisfied. This was the approach I took when recording the guitarist on this track. Allowing instrumentalists to create their own parts is, however, perhaps a luxury. If I was producing in an expensive studio, then it may be necessary to prepare precise parts so session time and cost would be at a minimum; a similar situation to that experienced by Paul Epworth when producing "Skyfall" in Abbey Road studios (Epworth, 2016). Once all the guitar parts were recorded, I timed them, paying attention to the style required.[46] I believe accuracy of rhythmic placement, not only of drums but of all parts, to be a crucial element in many successful pop tracks and I will spend many hours editing parts until I am satisfied. With this accuracy, the track often sounds more cohesive, giving a unified impression. Nonetheless, in some instances, less accurate,

---

[46] An audio example on the USB stick called "5. Just Another Boy – Guitar and Drums, Beat Detective" demonstrates before and after timing of the drums and guitars.

looser playing may be more appropriate, and I recognise that aspects such as this can only truly be evaluated on hearing the result, and adjusted where necessary.

Warner (2003: 25) outlines a situation when a producer creates 'finely wrought music arrangements painstakingly assembled over many hours of work'. Simon Osborne, for example, would often spend hours on drum and guitar sounds, where he might try five different guitars each with 5 different amps (Osborne, 2001). A determined attention to the sounds, and additionally in my case, to the accuracy of parts, is a crucial aspect of my idiolect, without which, I believe my productions would lose appeal. This attention is almost obsessive and my opinion is that it is rooted in my experience of being bullied between the ages of 23 and 27: 1988 to 1992. Whilst touring in this period, the artist repeatedly intimidated me, supposedly for the unacceptable standard of my musicianship whilst performing. My response was to always make the best effort to play with as much technical and artistic proficiency as I could, with the hope that I could avoid his negative attention. This experience of bullying means I have self-doubt and question the value of my work, a situation not uncommon in creatives, though perhaps for other reasons (Bennett, 2012: 149). I have tried to use this to my advantage, in that I am dedicated to creating the very best parts, searching for the right sound, method and process, all in order to unconsciously avoid an intimidating situation. Csikszentmihalyi states that 'creative problems generally emerge from areas of life that are personally important' (1997: 364), such as the bullying situation I experienced. Csikszentmihalyi goes on to suggest that 'the first step in solving a problem is to find it, to formulate the vague unease into a concrete problem amenable to a solution' (1997: 365). In trying to use my experience to my advantage, I have made an effort to formulate my unease into a concrete problem and subsequently produce a solution.

Reading interviews with pop music creators (see Eriksen 2010 and Doyle 2012), speaking to prominent producers such as Paul Epworth (Epworth, 2016) and George Martin (Martin, 1991, 2015), as well as listening to successful pop music releases has enabled me to ascertain that this kind of attention to detail is common practice. Each production, however, requires differing amounts of attention to editing, and in that respect I develop the task depending on the track in question. As my main instrument is the drum kit, I am acutely aware of the rhythm in a production, and as such, I often pay close attention to the rhythmic aspects of harmonic and melodic instrumental parts. This is evident in the guitar parts of this track, where each part intertwines to create a

rhythmic tapestry of sound.[47] This is again part of my idiolect and is an element that can be heard in many of my productions, such as "Number 1", "Take it Down", The Fall" and "Let You Go".

Even though I pay considerable attention to the rhythmic aspects of a production, I am also as fastidious where the tuning of parts are concerned. I have noticed that current pop music tracks pay close attention to accurate and suitable pitch correction. Some commercially released tracks are tuned so the vocals still sound natural. Others have vocal parts that intentionally sound pitch corrected, as in "Starboy" (2016) at 0:57 by The Weekend featuring Daft Punk, or "OMG" (2010) at 0:01 by Usher featuring Will.I.Am, which features a robotic pitch corrected lead vocal sound. I recorded the lead vocal part with the singer for "Just Another Boy", chose the best takes that I intuitively thought offered a convincing and authentic performance, and then tuned the final compiled version. I did not want the pitch correction to sound robotic or even be noticeable. I thought it should sound natural and suit the meaning of the track, as if the singer is sincere in her feelings of being tired of getting her heart broken. The backing vocals also needed to be accurate in order for them to sound cohesive. For this reason they were timed and tuned accurately, double tracked backing vocals benefitting greatly from this process. I used Vocalign software to time the vocals, which manipulates the waveforms of vocals so they correspond with an example vocal part, in this case the lead vocal, or a dominant backing vocal part. In order for some of the backing vocals to sound like multiple voices, but keep them audibly similar, I used several techniques. I used a quick single delay as well as tuning a left send up by around 10 cents and a right send down by around 10 cents. I also used Hass technique, which is delaying the left send of a part by approximately 10 milliseconds and the right by around 20 milliseconds to widen a sound. I developed each of these techniques by adjusting the delay and tuning of the sends until the sound suited the style of the production.[48] Combining these three techniques is a re-invention that creates suitable effects of this kind for my productions. These techniques individually could be thought common practice, and I am adjusting and combining them to produce a different and perhaps fresh sound. Alternatively, the requirement of the track's sound could be seen

---

[47] There is an audio example of the guitar rhythms on the USB stick called "6. Just Another Boy - Intertwining Guitar Rhythms ".
[48] An audio example is available on the USB stick which is called "7. Just Another Boy - BVs Gradually Add Delay, Then Detuning, Then Haas".

as a reverse salient that has to be solved. My combination of effects could then be considered as closure and stabilisation of the reverse salient situation.[49]

A fairly common effect that I was hearing on pop music tracks when "Just Another Boy" was created was distortion on a lead vocal. As this is a Bubble Gum pop track, it seemed unfitting to add distortion directly to the lead vocal, distortion often being the sound applied to a vocal for an aggressive sound, similar to "Helter Skelter" (1968) by The Beatles at 0:41, or the death growl sound on Heavy Metal tracks such as "Lift Me Up" (2013) by Five Finger Death Punch at 0:52. For this reason, I developed a method based on parallel compression, where the source audio is split into two feeds with one feed compressed and the other left untreated. The combination is then balanced to taste. I approached the problem of what could have been an over-aggressive distorted vocal sound with a different perspective, and instead of compression as the effect on one feed, I used distortion. The resultant sound is subtle, but I believe sounds apposite to the style and mix of the track.[50]

Once the recording of all parts was complete, I left the production for a few days and then returned to mix the track. Mixing a track immediately after recording has finished can produce less appealing results for two reasons. The first is that if one mixes on the same day as recording, perhaps at the end of the day, the volumes of parts could sound incorrectly imbalanced. Humans are known to psychoacoustically attenuate certain frequencies when they are louder than others, a phenomenon called auditory fatigue ("Auditory Fatigue Management", ND; Deruty, 2011; Jacobson, 1998). This is an adaptation developed to protect our hearing, and means that certain instruments may be mixed too loud as their dominant frequencies are attenuated in the mix engineer's perception. The other reason is that taking a break from the production enables a fresh perspective to the attitude and sound of a track. One might be able to experience a reinvigorated understanding of the meaning and impact of a track with a less recent exposure. Again, during the mix process, I referenced commercial releases, mainly "What Makes You Beautiful", "Oops!... I Did It Again" (2000) by Britney Spears and "Teenage Dream" (2010) by Katy Perry from the genre of Bubble Gum Pop. This referencing enabled me to adjust the mix so that it was comparable to commercial releases, and could potentially compete with their appeal. From the perspective of

---

[49] See Introduction page 24 for definitions of 'reverse salient', closure' and 'stabilisation'
[50] An audio example is available on the USB drive which is called "8. Just Another Boy - Lead Vocal Distortion".
This example demonstrates the lead vocal with no distortion, then with distortion, then parallel distortion.

SCOT, the objective was for all efforts to result in closure and stabilisation. Consequently, it is always my intention to finish a production to an extremely high standard, so much so that the artist requires no changes after they have heard the final mix. The final mix of "Just Another Boy" was sent to the family who ratified this version, and a situation of consensus transpired. The track was then mastered at Metropolis Studios.

CHAPTER CONCLUSION

There are several notable aspects of my process that have been revealed in this commentary, which can be thought part of my idiolect. The first of these is how this track demonstrates the many roles I play when creating a pop music production. I was a composer, producer, engineer, performer, collaborator and a listener. The second is how I place myself in a particular mental context to produce a creative flow. I do this, particularly when free associating, by dwelling on experiences, moods, reference tracks and musical examples such as the playground melody and the memories it inspires in me. I also consider the influence of the co-writer, who is stimulated by their own set of experiences, moods and musical examples. This is a strategy I have developed over many years, and I recognise that it constrains my workflow in such a way that it will produce sonic results that match my assessment of that portion of the domain and social field. Intuition is a key part of this process and for my purposes, I have found that it works well: practice and experience of this method enables its effective function and operation. The third aspect is how I pay attention to what I deem the next most important task. Certain creators have a sequence of process that could be thought inflexible; perhaps they might always start with the bass drum sound and part for example, as Tony Visconti often does (Shilling, N.D. 1:45). I find that a strict order of process often directs attention away from what could be the main focus, unless of course the most important part is the bass drum. In my opinion, the creation of parts and sounds has to reference other more important parts and sounds, otherwise they may not sound apposite in the production. Less important elements should therefore complement the main focus of parts and sounds. The fourth of these aspects of process is my approach to collaboration. Some composers and producers can be argumentative and awkward with the artist. Phil Spector, for example, was notoriously difficult to work with (see Womack, 2009: 157). I have found, however, that a cordial atmosphere is

conducive to creation. This is also important where the ownership of creativity is concerned, and I would rather create an amiable mood and give away a substantial proportion of my copyright than manage contentious situations. This approach also enables me to enjoy producing pop music tracks, which in my experience is an important impetus for creating. The final aspect is my focus on the timing and tuning of parts. Attention to detail is a principle aspect of my process, and I will give a production as much attention as is required to make it sound appealing to me and to the artist. This appeal is of course subjective, and even though the artist states their opinion of the final mix, my opinion is the only one I can completely trust.

CHAPTER 3

CRITICAL COMMENTARY - "I WANT TO BE LOVED"

This chapter will analyse interesting, innovative and important moments or processes that occurred in the creation of "I Want to be Loved", featuring the machinic and human timing of drum parts as well as robotic vocal pitch correction. It will inspect particular aspects of performance in relation to this track, as well as discuss trust in a collaborative relationship. This chapter will also examine issues of authenticity that pertain to "I Want to be Loved", and conclude with an outline of several models of collaboration used in the creation of this track. These are: Nashville, factory, Svengali, demarcation, jamming, top-line writing and asynchronicity (Bennett, 2011a: 7).

COMMENTARY

 "I Want to be Loved" was a speculative endeavour and is the only track in the portfolio that was not a commission. The reason for its inception is therefore important, as it demonstrates a different inspiration for creativity to occur. "I Want to be Loved" was initiated by an email I received from Sarah McIntosh asking if I would be interested in collaborating with her. She sent me a list of collaborative partners she has worked with who have a history of successful track hits, which I found impressive. These include Fernando Garibay (Lady Gaga), Jim Eliot (Kylie Minogue, Olly Murs, Ellie Goulding), Guy Chambers (Robbie Williams), Fraser T Smith (Adele, Ceelo Green) and Miranda Cooper (Girls Aloud, Sugababes). I listened to the MP3 she sent me[51] as well as some of her music on the Internet that she linked me to. This included performances by her band "The Good Natured" who were previously signed to record company Parlophone. I found her voice engaging, and enjoyed Sarah's songwriting abilities. On phoning Sarah, I found that we had a good conversational rapport, which would make creative collaboration easier. In order to start the creative process, and also to see if our ideas were appealing to each other, I then sent Sarah an audio file of a drum idea I had. This

---

[51] This track is on the USB stick in the folder 'Commercially Released Tracks' entitled "The Good Natured – Lovers" (2013).

rhythm had been playing in my imagination for a few days, like an earworm, so I recorded it and sent it to Sarah.[52] Sarah then responded to my drum rhythm with an emailed file containing my drum idea as backing, with Sarah contributing a melody and lyric as well as the introduction theme that were all used on "I Want to be Loved".[53] We both stated that we would like to work together and organised a writing session date.

The above route to Sarah and I working together involved consideration of a variety of aspects, each of which had to satisfy both parties in order for the first composition session to take place. The aspects in question are: history and experience, examples of previous creations and style, good communication skills and rapport, an enthusiasm to work. Although each route to working together would perhaps vary in some way, it is however likely that common practice would include satisfying most of these aspects for a speculative production. This can be explained as follows. If the other party has no experience, they may not compose appropriate parts; if the style of one is unappealing to the other party, there would likely be a mismatch of ideas; if communication is lacking, then there could be friction or no mutual inspiration; if there is no will to work, perhaps no work would be completed.

Meeting in person at the first writing session, our initial discussion involved the ownership and copyright share of anything we created. Paul Epworth often has, what he calls a "pre-conflict dialogue" before collaborative sessions start, to settle matters of copyright (Epworth, 2016). The plan was that we would each compose around half of the song. Sarah does not produce, so I would be producing the whole track, meaning I would potentially be contributing more than half of the creation of the track. In the interest of avoiding friction, I compromised and agreed a 50% copyright and sales share of anything we created. This is different to the track discussed in Chapter 2 "Just Another Boy", as "I Want to be Loved" was not a commission. In my experience, creating with equal interests when a project is speculative and not a commission seems to produce a situation that enables creative collaboration to prosper. Further, if I took a larger share of the copyright than Sarah, she might be less inclined to promote the track, which could hinder its success.

As Sarah is an experienced, competent composer and singer, I thought performances could potentially be used in the track, so I set up the equipment for studio-

<hr>

[52] This drum idea can be found on the USB stick and is called "1. I Want to be Loved - 1st Drums Sent to Sarah"
[53] This file is available on the USB stick and is called "2. I Want to be Loved - Sarah's Initial Emailed Ideas".

based composition to take place. The session proceeded with Sarah free-associating some melodies and lyrics based on our emailed contributions, whilst I played keyboards.[54] This was performed to a click at an agreed tempo, so prospectively the drum part could easily be performed with the new parts and the tempo would not fluctuate. If improvisations take place without a click, I find that performances can significantly change tempo and are therefore less usable, as the change in tempo can potentially affect the feel and delivery of other parts. Quantizing these improvisations is also difficult. There are of course occasions where improvisations are better performed without a click, such as when the tempo has yet to be decided. My insistence to use a click at this stage, and indeed throughout the creation of a track is typical for my process, and is therefore part of my idiolect. The vocals and keyboard parts were essential constructive elements in the track, and a basic introduction, verse and chorus were then formulated using these parts.

The next most important part to record was Sarah's previously composed acoustic guitar idea. I felt her part had a suitable tone, rhythmically subdivided the slow tempo whilst adequately emphasising the drum rhythm, and also represented the harmonic content of the section in which it played. Referencing Bennett's collaboration processes, [55] Sarah's stimulus was approved by me, resulting in a consensus that the part would be used. Sarah's various guitar performances were less than satisfactory so I timed the comped part to make it fit into the rhythmic fabric of the track.[56]

As a producer, there is always the option to edit poorly played or sung parts to make them suitable for a production. When recording, I save all performances so I can even take just one well-played note from a variety of performances to use in the comped part. This is often the case when a lead vocalist delivers unsatisfactory performances, and commercial artists who supposedly have little talent and few vocal skills would be subject to this process. Information revealing such editing is often confidential, as producers and engineers could possibly lose work if artists knew the producers and engineers would publicise the recording experience with that artist. Portfolio track "Take it Down" required more than 20 takes to achieve the final comped lead vocal, as

---

[54] A file of this free association is available on the USB stick and is called "3. I Want to be Loved - Lyrical Free Association"

[55] This thesis, Chapter 1, page 58.

[56] There are three audio files on the USB stick that demonstrate the development of the acoustic guitar recording. These are "4. I Want to be Loved - Acoustic Guitar 1st Performance Untimed", "5. I Want to be Loved - Acoustic Guitar 2nd Performance, With Some Backing", and "6. I Want to be Loved - Acoustic Guitar Final Part Timed, Without Then With Click".

the vocalist's skills were lacking. For some phrases, I had to choose a single word from a variety of takes, with editing and tuning taking many hours. Nonetheless, even if the performer is highly proficient in his/her instrument or voice, a producer might record multiple performances in order to achieve what they deem a suitable, comped part. For example, Peter Gabriel's vocal on "Love to be Loved" was recorded around 40 times, with phrases and sections from each performance to construct the final version that is featured on the track (Watson, 2015: 26).

Musical parts and ideas came to both Sarah and I as the collaboration session progressed; and so that they wouldn't be forgotten, I immediately recorded the parts or made detailed notes of the ideas.[57] These included harmonies, counter melodies, backing vocals, and further structural sections, including a breakdown, where there would be few instruments with the vocal performances. The elements of the song that had been recorded so far were then collated into a structure. I appreciate that this structure was not absolute, as changes are always possible when I create songs and tracks.

At this point, it was thought that a well-performed and accurate drum part was needed. I therefore recorded drums to the previously recorded parts, the click enabling a more precise placement of the rhythm as I performed. As my original drum part didn't suit the newly composed elements, I improvised another, which can be found on the USB stick.[58] This part was then further developed, mainly in the attitude and emphasis of the performance, finally ending up with the part that is on the finished track.[59] My method for improvising a part is based around flow (Csikszentmihalyi, 1997: 110). I enter a kind of meditative state, allowing my 'psychic energy' to absorb the surrounding sonic influences (Bennett, 2012: 157; Kerrigan, 2011: 11). Many years of practicing this method enables me to enter this state easily. Once I have completed a part, I then listen as a producer and an end listener, evaluating the results, specifically whether the part sounds suitable and appealing, always looking for a way to improve it. As a producer, I also listen to how and whether I can edit the part to get the sound I want, or whether I should perform the part again[60]. Many producers, particularly those who do not drum, use a drummer to create the drum part. As I am not only the drummer, but also the

---

[57] See Chapter 2, page 66 for more on remembering parts.
[58] This audio example is called "7. I Want to be Loved - Drum Rhythm Development, Without Then With Click".
[59] This drum performance can be heard in the audio example "8. I Want to be Loved - Final Drum Rhythm Untimed, Without Then With Click.
[60] See Chapter 1, page 57 for more on dual listening.

composer, producer and engineer, it could be thought that this less common combination of roles brings a fresh perspective not only to the performing of drums, but also to composing and producing tracks.[61] Once three performances of the most suitable part were created, I comped these to produce the main drum part for the production. Although other performers may be different, I find three suitable takes is enough to create an appealing part for my performances. This was the case in other portfolio tracks on which I performed drums, such as "Sweet Satellite", "You Need Me", "A Song", and "Forever".

The track was then recorded as a rough mix so that we could listen whilst away from the studio, to consider the merits of the parts and potentially inspire more ideas for the next session.[62] As can be heard, the lyrical content in this mix is lacking, and the vocals are mainly "aahs" in the verses. Nonetheless, before the end of this first session, Sarah and I discussed the meaning the lyrics could take, centering on the free associated lyric "I Want to be Loved". We questioned how we could take a different perspective of this phrase; perhaps the first person could be a person/creature/object/thing that would not normally be party to this desire. A final decision was made that the first person would be an automaton. An automaton that has so many human aspects programmed into its function, that unintentional to its human creators, it gains the facility to have emotions, specifically desire and a need to be loved. Although themes similar to this have been explored in literature such as Peter F. Hamilton's *Commonwealth Saga,* (2002 – 2014) and films such as *I, Robot* (2004) and *Ex Machina* (2015), Sarah and I had not heard of this specific theme, a robot's desire to be loved, being used in a pop music track. This meant that potentially, the track would have an original theme. Pop music tracks often contain originality in their sound or theme, which is the third type of authenticity.[63] The quest for originality in a pop music track could therefore be seen as common practice. George Martin comments that a successful pop music track often has a degree of originality to its sound or theme (Martin, 2015). Further, in terms of the systems approach to creativity, the originality of the theme could mean that the field could potentially deem the track original, which may perhaps contribute to its success (Csikszentmihalyi, 1997: 27-8).

---

[61] Phil Collins, Prince and Stevie Wonder are some of the few examples of artists who compose, produce, and play drums on their tracks. However, in the main, they use engineers.
[62] This rough mix is available on the USB stick and is called "9. I Want to be Loved - Rough 1".
[63] See Chapter 1, page 49 and 51 for more on the originality and authenticity.

Because the theme of the song is based around a combination of machine and human traits, it was necessary for the drum part to not only sound accurately in time like a machine, but also have a human aspect in its performance. As previously mentioned, accurate timing is an important part of my idiolect.[64] However, in order for the drums not to sound too machinic, I timed them with just a 93% accuracy in Pro Tools' Beat Detective. Intuition was used to decide the exact percentage of the timed drums. I listened to the part timed with a high percentage of accuracy, and then with a lower percentage, adjusting the timing until the right percentage was found. Many commercial releases commonly use timing to place individual drum kit instrument notes precisely together, played at exactly the same time. Nevertheless, the method of computer timing I used left the slight inaccuracy that I played in the simultaneous placement of drums, again retaining a human element in the editing. In order to demonstrate the difference such timing makes to the part, there are two audio examples of the drums on the USB stick, one before timing has taken place and one after.[65] These examples demonstrate the influence technology has on the part, where the untimed version seems to be less appealing. Although the percentage timing feature in Beat Detective has been an available aspect of the software for many years, its use is not well publicised. It may be that I am innovative in its use, or that it is uninteresting to mention it in interviews and is used prolifically. Using this percentage feature is certainly common practice for me, and can therefore be considered part of my idiolect.

Sarah did not comment as I performed the timing of the drums, as she later said she trusted my rhythmic and production skills. Trust is an important part of collaborating in the creative process. It is a 'sociospatial process enacted by agents through relations' (Murphy, 2006: 429), which in this context is shaped by emotions, knowledge and reputation. Ettlinger (2003: 146) identifies two types of trust: emotive trust, which is based on one's personal feelings about others, and capacity trust, which is based on one's judgements about another's capacity for competent work. In the main, creative collaboration requires capacity trust in order for consensus to take place. If I thought Sarah an incompetent songwriter or singer, I would be less likely to collaborate with her.

---

[64] See Chapter 2, page 71 for more on accurate timing.
[65] These audio files are entitled "8. I Want to be Loved - Final Drum Rhythm Untimed, Without Then With Click" and "10. I Want to be Loved - Final Drum Rhythm Timed, Without Then With Click".

At the next collaborative session, Sarah and I brought various lyrical ideas to the meeting. We both used a notepad and pen, writing ideas down as they came to us, brainstorming, building and collating the various elements and subjects that each section of the song could feature. I find it is important to be positive about each other's ideas in this circumstance, as a negative attitude often creates friction, resulting in fewer ideas that are frequently uninspiring. If there is no consensus, and the other party does not like the idea put forward, one could develop the idea into a more suitable option, or make a completely different suggestion. In a situation where there is no consensus, one of us would likely be silent after the other makes a suggestion. This silence is often then interrupted by an adaptation of the idea, or a completely new idea, and in this way, positivity and an amiable relationship can continue. Negotiation and adaptation are therefore essential parts of the creative paradigm at this stage, and my approach to operate in this way came about through practice: years of writing lyrics with others enabled this collaborative action to become my habitual attitude.

Once the lyrics had been completed, all of the vocals were to be recorded. These vocals were treated with pitch correction editing software Melodyne. Paul Epworth states that "modern pop is often reliant on the availability of modern technology, for example, the tuning of vocals" (Epworth, 2016), suggesting that the use of pitch correction software is common practice in pop music. This is exemplified by the use of pitch correction editing on every track in the practical portfolio. In the main, the lead vocal on "I Want to be Loved" was to sound human, so pitch correction was used in a way that made the vocals sound natural, as if the voice was untreated. The main theme of the introduction and its repetition elsewhere in the track, however, would have a more obvious pitch correction, in order to represent the robotic aspect of the protagonist. One of the main methods of making vocals sounds robotic using pitch correction software is by editing so vocal notes quickly move to the following note with no portamento and no vibrato. Conversely, the way to retain a natural delivery of the pitches is by keeping any elements of portamento and vibrato in the parts when editing. There is an audio file on the USB stick that demonstrates before and after pitch correction was applied to the vocal part of the introduction.[66] As can be heard from this audio file, there is a part doubling the main vocal, which is an octave below. The performance and resulting sound of this part was weak in comparison to the octave

---

[66] This file is called "11. I Want to be Loved - Before and After Pitch Corrected Vocals". In order to demonstrate robotic vocal pitch correction treatment when lyrics are sung in a different track, there is a file on the USB stick called "12. Take it Down - Robotic Lead Vocal". This robotic vocal is not used in the final mix of "Take it Down".

above, like Sarah was struggling to reach the low notes. I then lowered the pitch of the formant in this part in order to make the performance sound convincing, as if her natural range was low.[67] Some commercial releases use formant editing to change the sound of the upper of vocal performances, examples being "Runaway (U & I)" (2014) by Galantis at 0:51 and "Heathens" by Twenty One Pilots on backing vocals at 2:31. However, I used formant editing in the lower end of the human vocal range, which could be thought a development of pitch correction and formant editing's more common use.

Pitch corrected vocals often raise issues of authenticity in pop music tracks. One principle argument against the use of pitch corrected vocals is that they are not authentic as they have been treated, and in many cases audibly so if they have a robotic sound. Nonetheless, the aim might be to create what could be called an authentic robotic performance, as in the introduction of "I Want to be Loved". The sound produced is sincere to the intended first person representation of a robot. The lack of acceptance of the authenticity of pitch corrected vocals could be a transitory attitude. Just as many listeners have become accustomed to the sound of multi-tracking, giving it authentic status, potentially, they may also accept the sound of pitch corrected vocals as authentic.

Once all parts had been recorded I mixed the track. I use a similar approach for mixing as I do when creating the track, that I tend to the next most important aspect as it occurs. This allows spontaneity to exist, an aspect that Mike Brauer[68] favours, stating that many of his peers are also spontaneous when mixing (Brauer, 2016). The fresh approach that spontaneity creates can also inspire innovation to occur when mixing. One production technique I used during the mix stage, that could be though innovative, was how I combined several effects. These were a chorus effect, as well as a stereo doubling effect and reverb, all on the delayed lead vocal, first heard on the word "tripping" at 0:19. These effects are commonly heard individually, but combining them could be thought as a development of common practice. I often investigate the possibility of amalgamating various effects so that an original yet suitable sound can be produced. In this case one might think it subtle, but it is nonetheless effective. As Sarah didn't want to attend the mix session, I was to send her a mix by email for comment. In the process of selecting the most appealing mix, I wanted to try out some alternatives,

---

[67] A formant is a concentration of acoustic energy around a particular frequency in the speech wave and in this context is an acoustic resonance of the human vocal tract.
[68] Michael Brauer is a Grammy Award winning mix engineer whose credits include John Mayer and Coldplay.

so I completed several mixes and was again fastidious in my attention to detail. This attention to detail when mixing can be seen as another aspect of my idiolect. Some of the more significant changes I made in the mix stage were the addition of an orchestral double bass section, drum adjustments, and reverb differences.[69] I then sent my choice of mix to Sarah who approved, which is the version featured in the practical portfolio.

MODELS OF COLLABORATION

In order to describe and understand the detail of my own creative practice, I will now delineate several models that represent the ways in which I collaborated to create "I Want to be Loved". The creation of this track is particularly interesting in that each of the models outlined below refer to its collaboration in some way, which is the reason for its inclusion at this point in the thesis. Other portfolio tracks have also been included as further examples.

Bennett outlines seven models of collaboration (2011a: 7) which cover the main methods collaborative pop music composers use to create together. The models do not necessarily apply individually, with only one model per song; they can be combined, applying several models in the creation of a single track.

Nashville: minimal technology. A 'pen and paper' approach typically featuring two writers, who usually do not have demarcated roles. This method was used in the lyric writing of "I Want to be Loved". Both Sarah and I used a pen and paper whilst we created most of the lyrics to this song. Some of our roles were less demarcated than others; we would both write lyrics and harmonies for example.

Factory: staff songwriters. Notable examples include Tin Pan Alley (late 19th/early 20th Century), The Hit Factory (1980s), The Brill Building (1950s/60s) and Xenomania (2000s). It is defined in part by a regimented timeframe – songwriters 'come to work' in the morning. The timeframe mentioned for this method is how I composed "I Want to be Loved", and indeed all of the songs I created in the portfolio. I tend to start work at 10am and finish at 6pm. I find that the expectation of a potentially creative period creates personal anticipatory excitement that facilitates the task. In

---

[69] These three examples can be found on the USB stick called "13. I Want to be Loved - Master 18 Based on Master 16, No M6000 Including Double Bass", "14. I Want to be Loved - Master 10 No M6000 More Drums", and "15. I Want to be Loved - Master 16 Based on Master 11, No M6000, Mid Rev Changed".

addition, the thought that I have to be creative in this period means that I have no choice, and creativity therefore occurs with reasonable certainty.

Svengali. The artist is one co-writer. Their input may vary from a small contribution such as a title, through to a substantial one such as a complete lyric. Typically the other co-writer(s) are more experienced than the artist, and may have collaborated with a large number of others. Sarah McIntosh was the artist and co-writer whose input was substantial. However, as I not only co-composed, but also produced the track, my input was significantly more. My role could therefore seem to possess an element of Svengali. Nonetheless, Sarah has collaborated with many more successful writers than I have, could be considered the Svengali in this context. "Just Another Boy" and "Take it Down" also used the Svengali model, as I composed and produced the whole track, with the artist only contributing a minimum amount.

Demarcation. One composer provides an element of the song, such as lyrics, whilst the other provides another element, music perhaps. Examples are Elton John and Bernie Taupin or Chris Difford and Glenn Tilbrook. The parties need not meet in order to co-write and the line of demarcation need not be split between music and lyric. It could, for example, be split between tonal material and drum programming. I provided all of the drum parts for "I Want to be Loved" and Sarah most of the melody. This demarcation occurred in part whilst we were not together: I initially emailed Sarah the drum part, she then responded by sending me a melody and main theme lyric. If a track has, in the main, already been composed, and I offer other parts during the production stage, demarcation of the roles occurs. My demarked role is therefore to contribute additional elements, mostly rhythm and harmony parts as well as suggestions for backing vocals. The main composer's role is to offer other aspects of the composition such as lyrics, and melody. This was the case for the portfolio tracks "100 lights" and "Let You Go".

Jamming. Live ideas are created whilst rehearsing, forming the song from individual contributions to the arrangement. Sarah and I would jam certain sections, she would play her acoustic guitar and/or sing, and I would play the keyboards, to create parts in the arrangement. Jamming also occurred in the creation of portfolio tracks "You Need Me" and "A Song". Improvisation and free-association are key to this model.

Top-Line Writing. A completed backing track is supplied by a producer to a top-line writer who will create a melody and lyric. Although this model wasn't used to

create "I Want to be Loved", an EDM artist requested the vocals only as a top-line so he could create an EDM backing. This EDM version of "I Want to be Loved" was not completed is therefore not available.

Asynchronicity. The co-writers work separately but do not necessarily define clear or exclusive creative roles. An example would be if two writers worked separately on a track, passing their changes backwards and forwards, perhaps online. The demarcation model is usually implemented asynchronously, but asynchronous writing need not be demarcated (by activity or creative contribution). Whilst creating "I Want to be Loved" there was initial demarcation between my rhythmic input and Sarah's melodic input. However, once we had met and the track was part created, we would occasionally email ideas for aspects of the composition and production. For example, lyrical ideas were sometimes adjusted because of an emailed idea from one or the other collaborator; or a string counter melody idea would be passed back and forth whilst apart. Other co-composed portfolio tracks could also fall into this category, as co-writers would often work whilst away from the studio, bringing any creative additions or adjustment suggestions to the sessions. Examples include "100 Lights" and "Sweet Satellite". As all contributions are considered for potential inclusion in the track, the roles are not strictly defined. Nonetheless, the most appealing parts were created according to the specific talents of the individual. Some co-composers were more talented in lyrics than say melody writing, as was the case for the co-composer of "You Need Me".

It is clear from the above examples that these models do not apply absolutely to "I Want to be Loved". In the case of the Svengali model, it is unclear who the Svengali is, as it depends on which aspects the model is based. It is also apparent that the models do not apply individually to this track. Although some collaborations might be based on just one of these models, most of my collaborations from the portfolio tracks are based on several models. For example, "Forever" used the models Nashville, Factory and Svengali, and "You Need Me" used Factory, Demarcation and Jamming.

CHAPTER CONCLUSION

The creation of "I Want to be Loved" is different to the other portfolio tracks in that its collaborative compositional contributions were ostensibly equal. In addition, this track

was not a commission, and was the only speculative endeavour undertaken out of the portfolio tracks. Despite these two important differences, my idiolect remained the same, as my influences, history, inspirations and experience were unchanged. As is often the case with my creative input, I try to evaluate what is best for the eventual sound of the track, approaching decisions appropriately. This constant in my approach, as well as the consistency in my history, experience, and inspirations means that all tracks are party to the same personal influences. This does not necessarily mean all of my tracks will sound the same, but they will have aspects that are influenced by my idiolect. As previously mentioned, although David Bowie has an idiolect, the styles of music he created were extremely varied.[70] The attention to detail, the fastidious consideration for the timing of parts, the almost obsessive attention to pitch correction, are all elements of my idiolect, yet can produce very different pieces of music, as is exampled by the variety of styles in my portfolio. One must also consider the influences of co-writers. Whilst "Just Another Boy" had little input from the commissioning artist, "I Want to be Loved" had a substantial contribution from its co-writer, bringing fresh influence to the implicit aspects of our combined social field. Although the tacit knowledge that each of us brought to this creation was different, a successful collaboration requires there to be a good level of agreement about what constitutes an appealing composition and production, resulting in a track both parties are happy with.

It should be noted that there is a difference between "I Want to be Loved" and some of the other tracks in my portfolio by way of the creative ownership split. My compromise was to make this ownership, the copyright, equal, so that the creative process could prosper, and an amiable relationship could continue.

There are many theoretical perspectives that can be considered for the creation of "I Want to be Loved". A key aspect of my idiolect is to be open to alternative sounds and techniques, for example, the chorus, stereo doubling and reverb effects applied to the lead vocal delay mentioned earlier. This could be thought in terms of the systems approach to creativity, where the consideration of opposing or alternative aspects is often part of the character of a creative individual (Csikszentmihalyi, 1997: 58-74). It could also be explained as a kind of 'interpretative flexibility' where findings are 'open to more than one interpretation' (Pinch and Bijker, 2012: 20), as alternatives. The

---

[70] See Introduction, page 15 for more on David Bowie's idiolect.

creation of this track again demonstrates that my process shows no absolute linearity,[71] and the next most important task is the route I tend to follow. Another aspect of the systems approach to creativity to consider is that Sarah is an experienced writer and performer, and in that respect she is also a member of the field. Kerrigan states that 'during the individual analysis the collaborative interactions with crew members could also be placed in the field analysis section, where interactions with others are currently situated.' (2011: 12). This perspective would suggest that the elements of the systems approach to creativity could also be considered in confluence, where members of the field can also be creators.

It should be noted that the inception and completion of this track was dependent on technology. Without my information, compositions and productions being available on the Internet, without email, without the studio based composition, or the production techniques used, this track would perhaps not have been created. This demonstrates that we as humans manipulate and synthesize with technology, indicating that society and technology are intertwined, an approach supported by SCOT (Bijker, Hughes and Pinch, 1987: 39-40).

One could also interpret the use of pitch correction software from the perspective of SCOT. Pitch correction is used extensively for pop music vocals, mostly for: a robotic sound; a natural and in tune part; or instances where the formant has been changed. It is likely that the popularity of the sound of pitch corrected vocals has encouraged a variety of manufacturers to create applications that can either do the job more effectively, or offer additional features for pitch correction. Society's enthusiasm for tracks that contain pitch corrected vocals has therefore enabled its proliferation; society is thus affecting technology and the manufacture of this product. The users of the software are further inspired to create a variety of sounds, perhaps 'creatively abusing' the product in an effort to be original. These original sounds are then heard by society who may find the sounds appealing. This can be seen as a cyclic event, and stands as an example of one of SCOT's tenets that human action affects and shapes technology.

This Chapter focuses on the production techniques used for timing drums and vocal pitch correction. It is clear that timing and tuning are important parts of my production process and therefore my idiolect. This Chapter has shown how I treated

---

[71] See Csikszentmihalyi (1997: 79-81) and the Introduction of this thesis, page 22, for stages of creativity.

these aspects in a different way than was outlined in Chapter 2 - pitch correction for a robotic sound including formant editing, and attention to part human and part machinic elements for drum timing. And even though "something perfectly in time, something perfectly in tune – could be perfectly boring" Massey (2002, 129), I hope that the results of the creation of "I Want to be Loved" indicate that this is not necessarily the case.

CHAPTER 4

CRITICAL COMMENTARY - "IN LOVE WITH THE STRUGGLE"

This chapter will consist of a critical commentary of the portfolio track "In Love With The Struggle". It will discuss the frame of mind I drew upon when creating this track, as well as the equipment and production techniques used. The relevant aspects of the texture of "In Love With The Struggle" will be explored, which will include its timbres and transients. Particular production perspectives will also be considered, including alternative moods and absence of parts in a track. The focus will again be on understanding the detail of my own creative practice.

COMMENTARY

I co-composed, produced, engineered, and was one of the performers on this rap music track. Unlike the tracks featured in the previous commentaries, the fundamental elements of "In Love With The Struggle" were composed by two other collaborators, and not by me. The composition of these elements, which are melody, harmony and lyrics, took place in meetings previous to the first recording session which was in my recording studio. Once studio sessions started, the collaboration models used were *Factory* - strict studio session times were adhered to, and *Demarcation* - my roles were different to those of the other two collaborators. It could also be thought that I was the *Svengali* in this collaboration, with my years of experience in the field. My compositional contribution consisted of composing various parts that were realised as the production progressed. These parts were: drums, percussion, bass, samples, keyboards and synths. There are other tracks in the portfolio that have a similar composition assignment where I did not compose the fundamental elements. These tracks are: "Number 1", "Sweet Satellite", "You Need Me", and "100 Lights"; In addition to my compositional contribution, the other two collaborators thought my production contribution an essential element to the track's overall sound. As such my creative role could be thought similar to that described in Chapter 1, page 41, where the producer's input is considered an integral part of the composition.

I started this production solely as a producer and not co-composer, with an agreed fee for the commission. However, once the track was completed and mixed, the other two collaborators offered me 10% of the composition copyright to represent what they concluded was my important contribution. This proposal was welcome, and I did not negotiate as not only was it more recompense than I expected, but it also enabled an amiable relationship to continue. Many producers are paid by receiving a percentage of sales copyright; however, with diminishing returns on physical and downloaded units, as well as streaming revenues being relatively small (Salmon, 2008), a percentage of the composition copyright seemed a more lucrative prospect.

As the track's fundamental parts were already composed, the other two collaborators attended the first session in order to record these pre-composed parts. This was fairly straightforward, with few adjustments to parts performed. Nevertheless, as is part of my idiolect, I still paid attention to the tuning and timing of vocals and instruments, with some editing taking place immediately after comping. I find it is important to create an appealing sound to the track as the production progresses, making it easier to imagine how new parts might sound in relation to the edited parts. I also find that having a decent sonority to the mix as it develops is creatively inspiring, enabling an enthusiastic attitude to persist. Nonetheless, one has to be aware of the flow of creativity and process in a session, so time spent editing must not be excessive as it may stifle the creative mood and affect the resulting production. Judgements have to be made with each performance that are an essential part of producing. These judgements determine whether time spent editing would ultimately promote a better sounding track or whether it is best to leave the part as it is, editing taking place at another time. Experience plays a large part in this, as historically in previous sessions with other artists, I edited for too long where creativity and enthusiasm suffered. In other sessions I didn't edit enough, and it was difficult to evaluate new parts in comparison to the unedited parts.

Whilst producing this track, one of my considerations was my frame of mind: my attitude and approach to immersing myself in the meaning of the track as I operate. This is an important aspect of producing, as the mood one is in can significantly affect creativity. The following explains how I approached this consideration for "In Love With The Struggle". The subject matter of rap music lyrics is often personal to the composers, and is commonly based around the lives of gangsters, their struggles and dreams, as in "Gangsta's Paradise" by Coolio (1995), or "Gangsta, Gangsta" (1988) by

N.W.A. An example of this is found in the lyrics of "In Love With The Struggle", which are about the rapper's problems in his life. At 0:58 he states "Blind by money to the game, I lost my wife and child. Nowadays, the mic is my gun and the words are my ammo". This means that the rapper's love of money in the 'game' of gangster criminal activity cost him his relationship with his wife and child. He used to use a gun, but now he raps instead. I am not a gangster, and have no experience of guns. However, in order to appreciate this track's attitude, I interpreted the lyrics in relation to my own experiences. I have a wife and a child and I imagined the anguish I would experience if they left me, which in turn created a suitable mood that I could draw upon, when necessary, to immerse myself in the meaning of the track.

In order to produce this track, I also wanted to consider processes and sounds used by other creators of a similar style to "In Love With The Struggle". Weisberg states that 'rather than breaking out of the old to produce the new, creative thinking builds on knowledge' (Weisberg in Sternberg, 1999: 226). Consequently, in order to build on such knowledge, I researched the make and models of particular equipment used on the vocals of rap tracks that I found appealing, such as some of Kanye West's productions.[72] Producer Phil Ramone[73] states that "the key is a good preamp, a good microphone, and a good limiter. Give me those and, hello, I'm a hero" (Massey, 2000: 50). These were therefore three types of equipment I researched. I also included the type of EQ used as this was deemed an important piece of equipment in my investigations. I found that the compressor/limiters commonly used for rap music are the Teletronix LA2A as well as the Tube-Tech CL1B, and the EQ often used is the API 5500.[74] These modules are available as plug-ins; however, my experience with recording equipment is that the hardware versions tend to sound more appealing. Many producers prefer the sound of analogue equipment to computer based processing, including Hugh Padgham (Massey, 2009: 179), and Sean Genockey[75] (Shilling, N.D. a: 10:00). I nonetheless tried both the software and hardware versions and found the hardware models had a more agreeable sound. These modules were then used in the production of "In Love With The Struggle", LA2A being the main compressor/limiter for the lead vocals as it offered the required punch with a warm sound that suited the track. The Neumann U67 microphone

---

[72] "How to Get Rap Vocals Like Kanye West" 2013, Accessed August 27 2015. http://www.adgmastering.com/how-to-mix-rap-vocals-like-kanye-west/
[73] Fourteen times Grammy award winning music producer for George Michael, Paul Simon and Billy Joel amongst many.
[74] "Compressor Shoot Out Rap Vocals / Comparison LA2A Vs" ND, Accessed August 27 2015. http://beat4mc.com/en/video/19/compressor+shootout+rap+vocals++comparaison+la2a+vs+cl1b.html
[75] Producer of Kula Shaker, Tom McRae, and Reuben amongst many.

is often used through a Neve 1073 pre-amp for rap music vocals.[76] I own a 1073 pre-amp and decided to use the Neumann U87 microphone I already have, as this is also commonly used and budget would only allow a certain amount to be spent. A common console used for rap productions is the SSL 4000 and my SSL Duality has several similar features to the SSL 4000, such as the same design of EQ.[77] It is difficult to know whether the production would have sounded better if I had used different equipment and plug-ins. However, my experience is that using equipment that is commonly used for a particular style of music on commercial releases can potentially aid the creation of high quality and appealing productions. Even though I am choosing to try out units that are commonly used for this style of music, I still evaluate whether I believe the models are appropriate for use on the track and output a high quality sound. Personal preference is a significant part of my decision to buy or not, with experience, taste and intuition playing a large part in this process. From a SCOT perspective, buying the modules means I am contributing to the popularity of that specific design. The support I am providing for the design is a social context that promotes the proliferation of those products, and thus of their design; society therefore affecting the content and production of technological artifacts (Bijker, Hughes & Pinch, 1987: 6; Pinch in Oudshoorn and Pinch, 2003: 247).

In order to produce a suitable sound for "In Love With The Struggle", and to build on knowledge, I not only researched commonly used equipment, but also production techniques used for this style of music. These were found on Internet sites, in magazines such as Sound on Sound,[78] and also by conversing with engineer colleagues of mine. From a systems approach to creativity perspective, it could be thought that I was researching the domain and the field,[79] and for SCOT, the journalists and engineer colleagues were part of a defining group.[80] An example of a production method I learned from a colleague used in the track "In Love With The Struggle" is as follows. I recorded three performances of the same rap part by the rapper. The main performance comp was positioned in the center of the stereo panning, and treated with an EQ and compression that suited the part within the track. Each of the remaining two versions was panned left and right, and treated with a limited frequency bandwidth: high frequencies were slightly reduced and low frequencies were substantially reduced. The

---

[76] "Compressor Shoot Out Rap Vocals / Comparison LA2A Vs" ND, Accessed August 27 2015. http://beat4mc.com/en/video/19/compressor+shootout+rap+vocals++comparaison+la2a+vs+cl1b.html
[77] https://archive.org/stream/synthmanual-duality-se-owners-manual/dualityseownersmanual_djvu.txt
[78] Paul Tingen, "Secrets of the Mix Engineers: Young Guru", 2009, Accessed August 26 2015. https://www.soundonsound.com/sos/dec09/articles/it_1209.htm
[79] See Introduction page 18 for descriptions of domain and field.
[80] See Introduction page 24 for more on defining group.

volume of these three vocal parts was then balanced to make them apposite within the mix.[81] Effects similar to this can also be heard on other rap tracks such as Eminem's "The Monster" (2013) at 1:27, and "In Da Club" (2003) by 50 Cent at 0:13. These reference tracks do not contain exactly the same effect as the one on "In Love With The Struggle" as some aspects had to be re-invented in order for the effect to sound apposite in the sound of my production. The technique itself may be part of a wider common practice; however, personal preference and expertise changes the application of this effect, making each instance on each track different. The adjustments I made were based on an intuitive response, of what I found most appealing, which is a common method used to produce pop music. Kipper [82], for example, uses intuition when he produces, deciding on which takes to use from his own instinctive responses (Shilling, 2010: 13:15). My method involved modifying the EQ and stereo panning until I found a suitable sound. I would constantly gauge my reactions, evaluating my levels of enjoyment, adjusting until the parts sounded apposite within the mix. I tweaked this production technique, developing it as a practical innovation, perhaps bringing a fresh perspective to this track.

Another consideration for the production of "In Love With The Struggle" was the texture of the track and the effect it generates. One of the ways rap music creates textural impact is through its use of transients, found mostly in the drums and vocals. This aspect is part of the style of the music where the quick transient attack and short notes of the drums are accompanied by other short noted timbres of the rap vocals, and in this track, the acoustic guitar at 0:10. These short notes contrast with longer legato notes of acoustic guitar strums and bass synth to form the overall texture of "In Love With The Struggle".[83] The compositional and production intention was for the transients in the rap section to represent a tough attitude. Short transients could suggest physical hits and aggression, which can be explained by theories of primary metaphor and embodied cognition. Primary metaphor is where an aspect of the music is related to an emotion, a memory, experience, event, concept, or image (Grady, 1997; Zagorski-Thomas, 2010: 11). Embodied cognition is the belief that many features of human cognition are shaped by aspects of the body beyond the brain. One of the key concepts

---

[81] An audio example of this technique is available and is called "1. In Love with the Struggle - Reduced Frequency Triple Performance". The solo lead vocal is heard first in the centre, followed by just the two reduced frequency panned takes, culminating in all three parts played in the file.

[82] Grammy award winning producer for Sting albums *Brand New Day* (1999) and *Sacred Love* (2003).

[83] An audio example of these sounds in solo, then as a mix, is available and is called "2. In Love With The Struggle – Short and Long Notes".

is "image schema", which is the experience of a repeated activity affecting our perception of phenomena we encounter in our environment (Lakoff and Johnson, 2003; Zagorski-Thomas, 2014: 9: Moore, 2012: 238). The overall texture and sound of much rap music, with its hard aggressive transients and prominent bass sounds, additionally creates a secondary metaphorical meaning.[84] This is because other tracks of this style often have lyrics with a hostile sentiment, coupled with aggressive sounding musical elements. The history and background of the rap genre would suggest this essence of hostility is often the received perception, which has perhaps now become an established part of the culture of rap music for secondary metaphorical reference. As secondary metaphorical meaning is subjective, it is therefore open to interpretation.

A further aim for the texture and timbres of "In Love With The Struggle" was to create an appropriate representation of the alternative moods of the sections: from a smooth and empathetic delivery in the singing section at 0:12, to more aggressive transients in the rap at 0:32. The juxtaposition of these sections illustrates a notable difference in the timbres present. Portfolio track "Here With Me" also creates a gentle texture, again using drum sounds and guitars, but within a less aggressive lyrical context. Its performances feature lightly played finger plucked acoustic guitar and a gentle djembe drum part. In order to create the intended mood, I applied the primary metaphorical concept that a gentle performance and delivery produces a gentle meaning. The reverse could also be applied where an aggressive performance and delivery produces an aggressive meaning. I intuitively adjusted the production in each track whilst applying these concepts for the relevant sections, gauging my responses in order to create the desired moods.

The balance of the timbres within the texture of a track is also crucial to the effect produced. If a part is loud and therefore prominent, other parts may need emphasis of some kind to be heard, using production methods such as double tracking, or removing the reverb applied to the other parts to bring them forward in the soundbox. These methods would perhaps compensate for the loud part, changing the resulting texture. Like many pop music tracks, technology played a large part in the creation of texture and timbre for "In Love With The Struggle". Without a computer and software sampler, there would be few accompanying sounds to the vocals. If this were the case,

---

[84] Secondary metaphor is based on culturally grounded relationships to the music as in Philip Tagg's description of the TV music to Kojak where a 'flowing string line over a busy wah wah guitar figure is likened to a strong character (with the historical establishment associations of violins) soaring above the bustle of contemporary (with a modern, urban, technologically mediated wah wah) life.' (Philip Tagg, 1982: 89).

the impact created by the texture and timbre of the track would change. The thinner textures created may result in a less committed attitude in the overall sound, resulting in a lighter impression, which was not the desired outcome for this track.[85]

When producing pop music tracks, I am aware not only of the impact that parts create, but also the affect of when parts are not present. This includes the absence of previously iterated parts, an aspect recognised when producing "In Love With The Struggle". The vocal chorus melody was composed using tonally functional pitched notes, juxtaposed to lack of tonally functional pitched notes in the subsequent rap section. In this rap section, the comparative absence of the singing of tonally functional pitched notes has additional influence on the impact. This may emotively suggest that there is something missing; or the existence of a comparative other, as a replacement, may highlight the absent part. Derrida outlines a similar concept, referring to the non-object as a kind of apparition: something we know is there but at the same time know it is not (1994: 5). We may feel the presence of the missing part, and even though it is not there, it is still affecting the experience. This could manifest in many ways. A fast and aggressive sounding rhythmic part, for example, could stop at a certain point in the track, and the release of tension for the listener could potentially have a distinct effect. One could also consider the end of a piece of music where all notes and sounds cease; a moment that offers poignant effect, as the memory of the music is all that remains. An example of such poignant effect can be found in "In Love With The Struggle" at 0:37, where the backing music and rap pauses, with only the chorus melody interjecting for just one phrase. A moment that perhaps leaves the listener to ponder on the lyrics, to reflect on all this listening experience evokes. Another example of this effect is featured in portfolio track "Sweet Satellite" at 3:02 where all parts pause. The music starts again a few seconds later, but with a different tempo and no bass guitar in the arrangement, a notable absence. The bass, however, re-enters at 3:20 to relieve the tension. These musical aspects and techniques offer a certain perspective to production considerations, and a way of contemplating production decisions. Techniques similar to these are also found in other pop music tracks, such as "Rockabye" by Clean Bandit featuring Sean-Paul and Anne-Marie (2016) at 1:13 with many other instances throughout the track, or "Let Me Love You" by DJ snake featuring Justin Bieber (2016) at 1:05 and. As such, these techniques could be thought common practice, and my treatment could therefore

---

[85] There is an audio example of how the track would sound with a thinner texture, as computer sounds and samples are removed, which is called "3. In Love With The Struggle – Thinner Texture".

be considered a development of this common practice. As Miles Davis said "It's not the notes you play, it's the notes you don't play" (apassion4jazz, 1998 – 2016).

As previously mentioned, authenticity is an important aspect of pop music productions and the position of this study is that authenticity is an ascribed attribute of music rather than an inscribed one (Moore, 2002: 221).[86] My opinion of what is authentic is therefore relevant to me as an ascriber. Whilst producing this track, my personal experiences of the subject matter contained in the rap lyrics thus affect my opinion. Taking this into consideration, I am then able to evaluate how authentic a performance is: in this instance whether the rapper is sincere to the meaning of the lyrics, and whether I believe he has experienced the emotions and events that are rapped.[87] It could be that I imagine similar events in order to ascribe a level of authenticity, as in the earlier example of my "wife and child" on page 95. Other responses may occur with commercially released tracks that resonate with me. When I compare elements of these commercially released tracks to similar elements on this track, I can ascribe a level of authenticity to these similar elements. Whilst gauging whether the rapper for "In Love With The Struggle" was authentic in his delivery, I could then comment on and guide his performances. One instance where I guided the rapper's performance was when I thought his delivery lacked what could be described as an inner anger. To create this inner anger I asked him to repeatedly shout profanities just before recording his rap. This worked well, resulting in the rap that can be heard in the mix of the track. Other types of authenticity are also present in this track, an example of which is an upright piano heard at 1:18. The age of this piano is sonically suggested in that there is no distinct clarity to its out of tune sound, perhaps implying that that it is an old piano and its musical sound has a history: age can often suggest an established aspect of authenticity.

CHAPTER CONCLUSION

As I did not compose the main body of this track, the challenge was to influence the sonority principally by using production methods. I approached this by not only referencing other tracks for their sound and methods, but also the equipment commonly used for this style of music. To decide which equipment would best suit the sound of

---

[86] See Introduction, page 32.
[87] See Chapter 1, page 51 for relevant aspects of authenticity.

this particular rap track, I used an intuitive sense of what I found appealing. This is a crucial aspect of my process, in that I trust my own opinion more than that of others. I nevertheless take their points of view into account. I still experience self-doubt, but after many years of contemplating this issue, my logical conclusion is that as I can never know exactly what others are feeling, and I can only ever really know what I am feeling, my opinion is therefore the one that I trust. The bullying I experienced was likely a principle cause of this self doubt, however I now believe that the reason I was bullied was less to do with my shortcomings, and more to do with an inadequate feeling in the bully. Developing a trust in my opinion is essential to how I approach composing and producing pop music, and without this trust, it is likely that I would find decision making difficult. If my decisions are proved wrong, based on trusting myself, then I can evaluate future choices bearing any mistakes in mind.

As there were three collaborators all present in the studio, I was aware of the flow of the sessions. Too much editing would perhaps result in a lull in creativity, so I left unnecessary editing for a later date. I also tried to immerse myself in the required mood to understand the sentiment of the track. My personal experiences played a large part in this process, and I understand that a connection with my own history results in a greater emotional commitment to the production.

Apart from my conscientious attention to various aspects of the production, including tuning, timing, texture, moods created, choice of equipment, and development of production techniques, my idiolect for the production of this track was additionally present in my recognition of absence in the music: the effect caused by the absence of parts or notes previously iterated, or silences. Where appropriate, this is something that I am often keen to incorporate in my productions. Other portfolio tracks that include this aspect are "Number 1" at 2:44, "100 Lights" at 2:27, and "The Fall" at 1:53.

As with other portfolio tracks, the production of "In Love With The Struggle" showed no absolute linearity, and I would tend to the next most important task. This enabled an evaluation of the elements of the track in order of their importance. The systems approach to creativity view, that there is often no linearity to the creative process (Csikszentmihalyi, 1997: 83), is therefore recognised. This is similar to the approach taken by Simon Osborne, who comments that "there's not a conventional pre-production, recording, mixing process" when he works on Sting tracks (Audio Technology, N.D.: 37). From the perspective of the Social Construction of Technology,

Pinch and Bijker state that "all members of a certain social group share the same set of meanings, attached to a specific artifact" (Pinch and Bijker, 1984: 414). For the production of this track, the social group concerned were the collaborators, who understood the meaning of the artifact, which in this case is the track. I was also a member of a defining group when choosing equipment (Pinch and Bijker, 2012: 8). However, I was not aware of the specifics of that group, and could only speculate that my group included members that were dedicated composers, producers and engineers. Finally, I realise that social relations are only ever in process and must be performed continuously (Latour, 2005: 35). This is why I always try to promote an amiable situation when collaborating. In the case of "In Love With The Struggle", actions that supported the cordial social relations of the group were that I agreed to the proposed copyright shares, as well as composed parts, even though I was commissioned only to produce.

CHAPTER 5

CRITICAL COMMENTARY - "THE FALL"

This chapter will analyse particular aspects of the production for "The Fall", discussing its performances, as well as the methods used in the application of effects. This will consist of an investigation of the use of multiple reverbs, where conceptual blending will be considered. This chapter will also evaluate the ways in which my history and experiences affect my appreciation of a track, as well as exploring several of my approaches and attitudes, some philosophical, towards the perspective of the listener.

COMMENTARY

"The Fall" was commissioned by an artist/composer who wanted me to co-produce, perform drums as well as mix the track. As I would not compose any of the music, the artist/composer decided that I should not receive a share of composition copyright, and I did not disagree as he was commissioning the production. Apart from drum kit, all of the instruments for "The Fall" were samples, composed and recorded at the artist's home. The artist's significant contribution to the creation of the sounds on the track means he is also considered a co-producer. The drum kit parts I would perform were notated as previously written parts, and I had to read exactly what the composer wanted me to play. Even though I proposed and played some improvised drum parts to the composer, he preferred his own drum composition, so I resorted to his written parts without argument, the relationship remaining amiable. As a performer, I find that if there is little of my own input into the invention of the parts, my playing can often sound less committed and unconvincing. Pop music performers, including myself, often develop an individual style, confidently playing certain phrases whilst others might sound awkward. When a player contributes to the invention of a part, my experience is that this often results in confident playing, which then translates positively to the sound and impact of a track.[88] This meant that I played many drum performances of the

---

[88] See Chapter 2, page 72 for more on confident contribution of performers.

written parts before the artist and I deemed them acceptable. I usually record three complete drum takes, however, for this track there were twelve performances recorded in all, and the artist preferred to comp and time the parts himself at his home. Once the artist had completed this task, the drums sounded apposite within the arrangement.

The artist originally recorded all vocal parts at his home, however, I was not entirely happy with the quality of the sound. After failing to significantly improve the sound of his home recorded vocals by using compressors, EQ and reverb, I convinced the artist to record a few lines of the song using the equipment in my studio. The difference was appreciable and the artist agreed to re-record all of his vocals at my studio. Once the vocals were re-recorded, the artist comped and tuned his vocals at his home, the results of which were satisfactory to my standards. I believe that in the main, the performance of a part is more important than the sound of the recording. However, if the quality of a recording is too low, and does not fit into the sound of a mix, then it is probably unusable, and the part would have to be recorded again. If a performer re-records their parts, it can often be the case that their prior experience and practice of these parts enables an improved performance. The artist's newly recorded vocals were performed to an extremely high standard with the correct emotive emphasis, so both sound quality and delivery aspects were satisfied. There is an audio example on the USB drive that demonstrates the difference between the original vocal recording and the re-recorded version.[89] The original vocal recording that Giles brought to the studio had reverb and delays embedded in the file, however, it is clearly a less appealing performance with a lower quality sound than the re-recorded version. The re-recorded performance seems to have more commitment and emphasis, and the sound quality of this version has a fuller frequency content than the original recording with plenty of low and high frequencies. In certain productions, some re-recorded phrases may not be as acceptable as the original recording, and the original phrases are then placed in the comp. By using production and mix techniques, producers and engineers can occasionally accommodate for the lower quality recording, perhaps adding a special effect just to this phrase, or it could be that the phrase is ephemeral and appealing enough to make the sonic difference sufficiently unnoticeable. This was not the case for the re-recording of "The Fall" as every phrase was deemed to be of a higher quality performance and sound than the original recording. Another example of replacing vocals can be found in the portfolio track "Number 1" where the original vocal was

---

[89] This audio example is called "1. The Fall – Original Then New Vocal Recording".

recorded in Norway. The second verse was found to be lacking in emotive emphasis and so was re-recorded at my studio. Although I adjusted this re-recorded vocal with EQ and compression, treating it with the same reverb as the rest of the vocal sections, there was still a slight sonic difference. However, because it is a complete verse, with no other verses close enough to compare, the difference is almost unnoticeable.

My idiolectic attention to detail includes many aspects of production, including a conscientious consideration of the environmental space that a track occupies, and the position of where sounds seem to come from. Allan Moore's 'soundbox' describes this area of perception, (Moore, 2012: 30) an example of which is the distant sounding drum part heard in "The Fall". I will now discuss some of my considerations whilst creating the soundbox for this track.

The first of these considerations is that I would always try to use the best equipment to provide the virtual environments for the production. This approach is in line with an aspect of the systems approach to creativity, that some domains require the best equipment to create (Csikszentmihalyi, 1997: 54-5). As previously mentioned, my idiolect also includes how I carefully choose high quality equipment, often trying out industry standard models.[90] The reverb and effects equipment in my studio were chosen over many years, and I took advice from my colleagues, as well as heard and tried equipment out either in other studios or by borrowing the units. I investigated what reverb and effects were used in several renowned studios around the world, information available on their websites. These included studios such as Abbey Road in London, Ocean Way in Los Angeles, and Electric Lady in New York. This information enabled me to select which units I would test and I now have a Lexicon 960L, a Bricasti M7, a TC Electronic M6000 and an Eventide H8000. There are plug in versions of all but the Lexicon 960L, which I have tried, but as previously mentioned, the hardware units seem to have a more appealing sound, with a higher concentration of detail and complexity.

The method I use to choose the correct reverb for a pop music track is an essential part of my production process. It involves an intuitive evaluation of what sounds appealing, personal preference and experience playing a large part. The effects for all of the portfolio tracks, including "The Fall", were chosen using the following method. I start by imagining the kind of space in which I would like the lead vocal to be situated. I then try out a variety of effects that might sound similar to this imagined

---

[90] Industry standard in this context means the equipment commonly used in many successful recordings.

space. For instance, if I thought the vocal required a short reverb, I might try a small room, or a short plate reverb. If the vocal felt like it needed a large space to virtually place it in, then I would probably first try adding some delays, as delays can often leave room in a mix for other parts to be heard. The wash of sound present in a long reverb tail can potentially fill a mix up so that other parts are less audible. If this does not work, then I would try a large reverb, perhaps also adding delays, as in "The Fall" at 1:00. I would try all of my effect units: Lexicon, Bricasti, M6000, Eventide, as each offers different sounds, and select individual effects that I thought suited the part most. I would then edit the individual effects whilst listening to each within the mix. This initially involves changing the length, size and pre-delay of the reverb, or feedback and EQ of the delay. Having adjusted and saved perhaps four of five carefully chosen effects, I would listen to each to compare, again within the mix. I could then choose which one I thought sounded the most appealing, gauging my intuitive responses throughout. I would subsequently fine tune the parameters of the chosen effect, perhaps also adjusting other elements such as the low frequency content of the reverb, or the stereo spread of the delay, adding compression if needed. Following this, I would send the other parts of the track to this effect, from the most important part to the least important in my opinion. If a part doesn't suit this effect, I would then consider another effect, starting this process again. This is a lengthy undertaking that in my opinion is worth the effort, as I believe attention to detail in this area is crucial to the effect a production has on a listener. The space in which we as humans believe ourselves to be, whether it is real or virtual, is essential to our responses, and therefore how we react to music positioned in this space.

The sonic properties of a track that suggest a specific environment are therefore likely to affect the listener, and can create particular ecological and metaphorical effect. Perhaps a track's reverb is that of an empty warehouse, and an empty, desolate effect is the result. On the other hand, there might be very little reverb, with performers seemingly close to the listener, and an intimate effect is the consequence (Zagorski-Thomas, 2014: 78-9). The soundbox for "The Fall" has a virtual environment that includes the sound of distant African drums at 0:38.[91] Contextually, the listener is placed in a virtual environment, and perhaps might even experience an essence of Africa.

---

[91] There is an audio example of these drums available on the USB stick called "2. The Fall – African Drums".

There might be more than one reverb in the soundbox of a track where each reverb is heard simultaneously and considered by the listener as a single space (Zagorski-Thomas, 2014: 80). This is similar to Fauconnier and Turner's 'conceptual blending', the mapping of two features from mental spaces onto a third blended mental space (2002: v-vi & 18-21). The following outlines in detail the blending of several reverbs in the mix of "The Fall". As part of the African drum sound in this track, the 'War Drum' has reverb embedded within its sample, followed by a long sustain of the drum. A live tom-tom performance was layered on top of this sound, and I applied an outboard TC Electronic M6000 warm cathedral reverb to both the 'War Drum' and the tom-tom sounds.[92] A 'Metal Hit' sound can also be heard on the offbeat, the sound containing a long reverb tail embedded in its sample.[93] Other reverbs are heard in the final mix of this track, such as the orchestral string samples, which were recorded in a recording studio that was mostly made of wood, a small amount of reverb remaining on their sound. The acoustic guitars were also samples, and a warm cathedral reverb was added, again from a TC electronic M6000 unit. Consequently, the reverbs of the percussion, the orchestral strings, and the acoustic guitars blended together in the mix of this track.[94] If one of these reverbs were removed, then it is likely that the effect on the listener would change. For example, removal of the dominant M6000 reverb would potentially mean the sound of the remaining reverbs is more prominent, resulting in a different blend and therefore effect. Or perhaps the removal of the reverb on the metal hit would change the effect. As is evident, conceptual blending is an integral part of the mix for "The Fall" and is also present in other portfolio tracks such as "No Tomorrow", that offers a soundbox whose blend of reverbs creates what could be thought an unreal space. The instruments in this track have a Bricasti M7 Vocal Chamber applied. However, the M7 Berliner Concert Hall reverb is the predominant reverb applied to the voices, and to help the vocals blend with the instruments, a small amount of Vocal Chamber is also applied. The prominence of the vocal is primarily created by volume balance, where the vocals are the loudest in the mix. If the balance of reverbs for the

---

[92] Audio examples are available on the USB stick and are named "3. The Fall – War Drum - Without Reverb and With Reverb", and "4. The Fall – Toms - Without Reverb and With Reverb".

[93] An audio example of this sound can be found on the USB stick and is called "5. The Fall – Metal Hits - Reverb Embedded in the Sample". In addition, each of these percussion instruments can be heard mixed together, with their appropriate track balances, on the audio example called "6. The Fall – Mix of Percussion as in Track - Toms & War Drum Both With Reverb, & Metal Hits Embedded Reverb".

[94] An audio example of each of these groups of instruments with their relative reverbs, followed by a full mix where each can be heard in situation, is available called "7. The Fall – Individual Instruments With Applied & Embedded Reverbs, Followed by Full Mix".

vocals was adjusted, where the Vocal Chamber was the dominant effect, this would create a different perspective for the listener, an example of which is supplied.[95]

I am, however, aware that too much reverb information can sound unappealing, as human experience commonly involves just one reverb. It would be unusual for a human to be standing perhaps between two doors for a length of time, the reverb of one room in the left ear and the other in the right ear. The reverbs that I applied in "The Fall", and "No Tomorrow" took this into account, as I was mindful that hearing more than one reverb at a time could sound confusing. This kind of confusion was avoided primarily by making one reverb the dominant effect, which for "The Fall" was Warm Cathedral from the M6000. Many commercial releases sound like they have just one reverb applied. In a conversation I had with Simon Osborne in 2009 at my studio, he said he likes to hear just one reverb at a time, the exception being that rhythmic sounds, particularly snares, can often have a different reverb. This can sound appealing in a mix, and a snare reverb can often seem to be an intrinsic part of the snare's sonority. Simon Osborne's preference for reverb application can be heard on many of his mixes for Sting, including the rim (0:37) and snare sound (3:10) on "A Thousand Years" (1999). Simon Osborne further commented that one reverb applied to a whole arrangement, including snares and other rhythmic sounds, could potentially make the mix sound cohesive, as if all elements in the track are performed in the same space, real or unreal.

Current pop music, however, is often less concerned with the illusion of reality, and more the reality of illusion (Moorefield, 2005: xiii).[96] Creating unusual spaces is therefore fairly commonplace in this genre. Portfolio track "I'm Too Smurfy" uses plate reverbs that do not represent any real space as they are created by sending the sound through a metal plate, which in this mix is simulated digitally. This track also blends effects to create the reality of illusion. At 2:03 there is a breakdown section where there are two different applications of space. The lead vocal is situated in a small amount of plate reverb, and the stereo electric guitars have a long delay, implying that the guitars are distant from the listener. The positioning of these two parts in the production creates a soundbox that is not intended to sound like a real space.[97] Similar examples can also be found in tracks from the pop music charts. At the time of writing this thesis, the

---

[95] This audio example starts with the Berliner Concert Hall being the dominant vocal reverb, followed by the Vocal Chamber being the dominant reverb, and is called "8. No Tomorrow – Vocal Reverb Dominance".
[96] See Chapter 1, page 41 for more on the reality of illusion.
[97] There is an audio example of the this passage with, then without guitar delays, demonstrating the effect this distancing has on the sound at this point, and is called "9. I'm Too Smurfy – Breakdown & Distant Guitars".

number one track "Cold Water" (2016) by Major Lazer featuring Justin Bieber and MØ at 0:03 uses one reverb on the vocal part and another concurrently applied to the electric guitar. Another example from the same period is the number three track "Closer" by Chainsmokers featuring Halsey (2016) in the introduction and the first verse, where the keyboards, vocals, finger clicks and claps have different reverb application, followed by a snare entry in another reverb at 0:29. My simultaneous use of more than one reverb could therefore be thought a development of common practice.

When producing, I also recognise that my history and experiences affect my appreciation of a track. When pop music connects with my experiences, I appreciate that it is a valuable asset as it often produces a committed attitude. As long as these experiences are not too upsetting, I am keen to be creative and work hard on the track that is reminding me of past occurrences and emotions. For example, I understand that the orchestral instruments heard in "The Fall" remind me of my time at The Royal Academy of Music, where I studied between the ages of 18 and 22. This is an example of the 'associationist' view held by John Nolt, where the music inspires memories and associations with places, causing feelings and emotions that are projected on to the music (Davies, 1994: 188; Nolt, 1981: 139-150). Not only does the music in "The Fall" affect me, but also the lyrics. For example, there have been times in my life where I have been desolate, yet resolute that I would pull through this bad period, sentiments suggested in the lyrics of "The Fall", in the first verse at 0:55.

> I loved and I lost
> Some days I count the cost
> But then I raise my head and scream,
> I ain't done yet.

A person with different experiences to me would perhaps be affected in another way, and as there are a multitude of possible experiences, the potential effects are many and various.

A further aspect I appreciate when composing and producing is that the social context of the working environment and listening experience influences the effect of the music (Greasley & Lamont, 2009: 165-6). In other words, the person one is with when listening to music often influences the effect of the experience. Perhaps the listener is alone, which might create a contemplative attitude to the music. They could be with a hated adversary and the music would potentially take on a less appealing trajectory. Or the listener could be missing the one they love, and music holds a melancholy meaning,

perhaps making them cry. Alternatively, a listener could indeed be with the one they love, enjoying the music they are listening to, possibly in a moment of passion where the listener is oblivious to the music, indifferent to its effect. It could also be that the listener is in a mass of people where the atmosphere creates a sense of euphoria as the crowd enthuses simultaneously. When producing and mixing "The Fall", I was always with the composer. As he was intently focused on his creation and its betterment, his company seemed to influence my attitude, making it easy to be eager to improve the production and mix of the track. This is based on my own evaluation of the situation and cannot be tested, as I cannot produce the track again without the composer present and without a prior knowledge of the production. Other portfolio tracks were produced in a variety of situations, including "In Love With The Struggle" with two other collaborators that influenced my responses, and "I'm Too Smurfy" where there were two humans dressed in fur smurf costumes present in the room whilst I mixed the track.

CHAPTER CONCLUSION

This chapter has discussed how reading music affects my performing. Years of studying to read music to a high level has ironically resulted in a recognition that I tend to perform better if I am not reading music, and when there is an element of my own invention in the parts performed. I appreciate that this can also be an issue for other pop music session musicians. Admittedly, many cannot read music. However, if I dictate the part to the session musician, and make him/her play it exactly, then in my experience it is likely that the part is not played to a satisfactory level. This of course depends on the musician in question, and I appreciate that session musicians of an extremely high standard may not have this problem.

The collaborative model for "The Fall" could be thought similar to demarcation,[98] where both collaborators contribute specific elements to the production, often working separately on these elements. This meant that the artist created most of the arrangement, as well as comped and edited the vocals and the drums, all at his home. Although it is sometimes necessary to re-record parts because they have a low sound quality, as is the case with the artist's home recorded vocals, I recognise that re-recording also takes place because the standard of the performance is thought lacking in

---

[98] See Chapter 3, page 87 for models of collaboration.

particular ways, such as the part may have too little emotion, or have an unconfident delivery.

One aspect of my idiolect is that I always try to use high quality equipment when producing. The quest to find the most useful and appealing effects equipment could therefore be thought as researching the domain and the field (Csikszentmihalyi, 1997: 27-8); or that I was a member of a defining group (Bijker, Hughes and Pinch, 1987: 7; Pinch and Bijker, 1984: 415; Oudshoorn and Pinch, 2003: 3). This chapter has further made it apparent that the choices I make when creating a pop music track, including deciding on equipment used as well as various musical and production elements, are guided by intuition. Personal preference and experience are two aspects that play a major role in my intuitive responses.

I also appreciate that the soundbox is an important aspect of a production: placing the track in an environment that influences the effect on the listener. The application of multiple reverbs is now perhaps common practice, with many current pop music chart hits using this method. My use of multiple reverbs in "The Fall" could be thought a development of this common practice, and the blending of reverbs in "No Tomorrow" can further be seen as an extension of this practice. Nonetheless, I am aware that too much reverb information can make a track sound less appealing, and am therefore diligent in my application of reverbs.

This chapter has outlined how history and emotional experiences can influence responses to a track. The connection between music and emotion in music is well documented (Juslin & Sloboda, 2001; Meyer, 1956; Becker, 2004; Schubert, 2013), and I regard my emotional response as a positive aspect when producing or listening to pop music. When producing, this kind of reaction feeds my enthusiasm and encourages me to work on the track. My opinion that emotional response is key specifically to the enjoyment of much pop music is a common view held by other pop music creators, such as Martin Sutton,[99] who states that "pop music songs must evoke emotion" (Sutton, 2016). Social context, in particular the person one is with when listening to or producing pop music, also affects one's response. I was particularly aware of the vivacity displayed by the artist during the creation of "The Fall", and the positive effect this had on my mood. Other contexts, including fashion and the culture within which one lives, also influence how music is perceived. It may be that because the culture and fashion in

---

[99] Martin Sutton composed tracks for Backstreet Boys, Celine Dion, LeAnn Rimes, Mike and the Mechanics.

which I live is western and has a tradition of a classical and pop music, I find "The Fall", with its classical instruments, guitar and drum kit sounds, to be sonically appealing with lyrics that resonate with my experiences. This is, of course, amongst many reasons I find it appealing, melodic and rhythmic content included.

Finally, it should be noted that although the specifics of this chapter refer mainly to the portfolio track "The Fall", they could also be applied to other portfolio tracks, and potentially pop music by other composers and producers. Consequently, the appreciation of performance methods, the process of selecting high quality equipment, the choosing of reverb effects, the approach to the use of multiple reverbs, the consideration of the perspective of the listener, can all be applied to other productions.

Conclusion

The aim of this research has been to examine my process when I create pop music. I have therefore investigated the detail of my own creative practice, analysing the methods and techniques I use when creating the practical portfolio pop music tracks. This has enabled a better understanding of my productions and consequently, has revealed my idiolect.[100] The following sections outline the areas that were investigated, demonstrating the extent to which I have satisfied the aim of this research.

Idiolect

This research has presented a model of the self-discovery of my idiolect. One of the main aspects of my idiolect is how I undertake multiple roles in the realisation of a production. In the main, these roles are the composer, producer, engineer and performer. A primary reason for my multiple role approach is financial, as I would find employing another person too costly. There are, however, many advantages to undertaking multiple roles. One such advantage is that an increased sense of cohesion and flow is experienced.[101] This includes easily moving the creation in a direction that the artist and I find appealing, rather than having to consider the opinions of many participants that could potentially result in disagreements. Sometimes a specific role is required, and I am not competent in that role, such as when a particular instrument is needed in the arrangement. I would then employ a session musician who plays that instrument. Many years of practice in these roles has enabled a competency in them all, albeit a subjective opinion. For some aspects of these roles, a 'tacit knowledge' has developed, such as how I place microphones as an engineer, or guide performers as a producer. Although employing multiple roles is perhaps not the most common approach, there are sundry examples of successful pop music creators who are composers, producers, engineers and performers, such as Prince, Stevie Wonder, Will.I.Am, and Pharrell Williams. Even though I undertake many roles, I would nonetheless consider myself a 'holon', which is 'an entity that when viewed one way is a complete object but when viewed in a different way is a component part of another possibly larger entity' (McIntyre, 2013: 91). I am

---

[100] See Introduction pages 11 and 15 for more on idiolect.
[101] See Introduction page 21 to 23 for more on flow.

therefore an individual who is the main creator of my portfolio tracks, who can be considered a component not only of the recording studio, but also of the process of creating a pop music track. I am also a participant in the domain, and a member of the field (Csikszentmihalyi, 1999: 315).

When composing and producing pop music, I usually reference commercial releases of similar sounding productions, often importing one or two tracks into the Pro Tools session for inspiration and comparison. This aspect of my idiolect means that I am building on knowledge and exploring what has gone before. I believe that my productions should contain some similar elements to previously released commercial tracks. If there is no comparative similarity, there would be no reference point for the listener, and it is perhaps less likely that they will enjoy the production as there would be a stylistic mismatch. My intention is not to copy the commercially released tracks, but merely to be inspired and influenced by aspects of their composition and production.

I recognise that my contribution to the composition and production of a track creates particular effect and meaning for the listener. Lakoff and Johnson (2003), outline how metaphor is a significant part of how we humans communicate, and as such is an important aspect in the effect and meaning of a track. An example of this is where I created metaphorical meaning with the inflection of the melody in the portfolio track "Just Another Boy" illustrated in the first two lines of the verse at 0:06, and in the chorus first heard at 0:46.[102]

My diligent attention to detail is a significant part of my idiolect when creating pop music tracks. For my productions, I believe that editing, specifically tuning and timing, are of paramount importance to the quality and impact of a track. Once performances have been compiled, I often tune and time vocals and instruments, paying careful attention to whether the part should sound machinic or perhaps more human and natural. Dance music tracks, such as "Number 1", Take It Down", "I'm Too Smurfy" and "Let You Go" from my practical portfolio, often need their instrumental parts and sounds to have a regimented and machinic timing as this frequently adds to the rhythmic appeal in this style of music. Vocal pitch correction in the portfolio tracks has mostly been applied to sound natural, except where a robotic sonority was intended, as in "I Want to be Loved" at 0:01. It seems that most successful pop music tracks sound as if their vocals and instruments are accurately tuned and timed, whether this be for a

---

[102] See Chapter 2, page 69 for more on this example of metaphor.

machinic, robotic or natural delivery. I believe this accuracy is a feature of the genre of pop music, and in this respect I am not only adhering to its style, but also in some circumstances developing this common practice. For example, in "I Want to be Loved" I used formant adjustments in the introduction's low octave vocal, and also created a blend of human and machinic timing for the drum parts. My conscientious attention to detail also involves an approach that I will spend as much time as is necessary on the production, so that the final mix is as close as possible to the intended sound.

I pay careful attention to the soundbox, the virtual position of sounds and environmental space that a track occupies, choosing reverbs and delays to improve the production. I realise that the soundbox has particular effect on the listener, and can transport the auditor virtually to another place, whether real or unreal. The equipment I use to create the soundbox is crucial to the quality of the experience, as units of a high caliber can produce an appealingly complex and detailed sound. Consequently, I always make an effort to ensure that the equipment I use whilst creating a pop music track is of an extremely high caliber, unless there is a lower quality piece of equipment needed that specifically achieves the sound required. Financial constraints can of course restrict access to equipment. The use of high quality units is in line with the systems approach to creativity, where some domains require the best equipment to create (Csikszentmihalyi, 1997: 54-5).

Fresh Perspective

As has been highlighted in this thesis, I am open to variety in a production, including the methods used, with alternatives often considered.[103] I am not averse to using equipment in a way that it was not originally intended, engaging in creative abuse.[104] For example, the backbeat of "100 Lights" is made up of several sounds, some of which I put through a CL1B compressor with all knobs turned to maximum. Although this is not the intended use of this compressor, the idea came from reading about engineers who sometimes use an 1176 compressor with all buttons pushed in, which is outside of its intended use. Both methods would achieve a similar effect. I would also allow the production to move in a direction that is perhaps thought unconventional, exploring new ideas, with no rigid set of rules to abide by. Using this approach enables a greater

---

[103] See Csikszentmihalyi (1997: 58-74) and Introduction, page 21 for how creative individuals consider alternative factors.
[104] Creative abuse is discussed on page 25 in the Introduction of this thesis.

possibility of originality in the production. This is exemplified in the portfolio track "Forever" in the mid section at 2:12, where I spontaneously free-associated a backing vocal part using harmony extensions that initially sounded out of place. I then decided to expand on this idea until many voices and harmonies were performed that supported these extensions. This resulted in a suitable backing vocal part that can be heard on the track.

In order to create a fresh perspective, I believe an acceptance of a variety of sounds and parts has to be achieved. Even though I was at first unsure of the backing vocal part I sang in "Forever", I persevered until an appealing sound was produced. This is, however, not always the case and there were many occasions where I rejected my ideas whilst creating the portfolio tracks. I nonetheless prefer to try ideas out, as without experimentation, there is less likely to be innovation. Csikszentmihalyi states that 'Solving problems creatively involves continuous experimentation and revision' (1997: 367). Consequently, an open-minded attitude, along with an acceptance of the possibility of failure is a crucial part of my idiolect.

Collaboration

I always make an effort to create a track that is not only appealing to the artist, but also to myself. That way the tracks I produce are in a style that the artist enjoys, and are created to my exacting standard. The appeal experienced by the artist would then potentially make them feel confident promoting the tracks, perhaps giving them further impetus to make the track successful. Even though elements in the production are guided by the requests of the artist, I still make a connection to the music and subject matter of the lyrics. This is in order to achieve personal association with the track, enabling my enthusiasm in the process. As can be heard from the portfolio tracks, there are a variety of styles produced, and I believe that there is no sonic signature as such, as each track is created in a style that is particular to the artist.

I would also make an effort to keep a positive and amiable relationship with the collaborative participants. This is in order to aid the production of a creative atmosphere, as my experience is that arguments can potentially stunt creativity. Copyright share is usually discussed early in the production timetable, allowing collaborators to then focus on creating an appealing track, as opposed to egotistical claims of creative ownership.

Certain aspects of my process were explained using perspectives taken from the systems approach to creativity (Csikszentmihalyi, 1997, 1999). This involved: exploring how I was part of the creative system; considering my participation in the domain and in the field; examining my character traits as a creative individual; studying my inspiration; and analysing the flow experienced. I examined my stages of creativity, and found that there is no linearity to my process. Further, I researched other productions that can influence my work, building on knowledge, an aspect outlined by Csikszentmihalyi (1997: 85). I also drew on theoretical perspectives taken from SCOT (Bijker, Hughes & Pinch, 1987, 2012). Problems that occurred in the realisation of a track were compared to SCOT's 'reverse salient', such as a vocal that does not sound apposite within a mix might need compression, EQ and reverb treatment to achieve 'closure' and 'stabilisation'. SCOT's tenet that it is the social environment that 'shapes the technical characteristics of the artifact' (1987: 6) was also considered. For example, the equipment I bought for the practical portfolio productions could be thought to have influenced the proliferation of these products because of my support.

CREATIVITY AND INTUITION

One of the fundamental aspects to consider in my process is the reason why I am creative. The answer is simple: I enjoy being creative, which is probably one of the most common reason why creativity occurs. Creativity is oftentimes also *autotelic*, meaning something that is an end in itself;[105] in my case this end is composing and producing pop music. Csikszentmihalyi states that there is no reason for doing some activity except to feel the experience it provides (Csikszentmihalyi, 1997: 113). I do however make my living from creating pop music, which I consider a bonus to my otherwise autotelic activity. There are times when the state of flow I enter 'will produce a sense of exhilaration, energy, and fulfillment that is more enjoyable than what people feel in the normal course of life' (Csikszentmihalyi, 1992: 29). Consequently, the reasons I create pop music enable an understanding of my impetus and subsequent processes I undertake.

---

[105] For more on autotelic, see the Introduction, page 20.

The examples given in this research have made it clear that a vital part of my creative process involves intuition. My composing, producing, engineering and performing all involve a significant degree of intuitive response, some of which is exercised 'spontaneously' (Hennion, 1990: 201). The way that I respond to sounds and situations, gauging my instinctive reaction, further enables an evaluation of what the next step should be in the process. Evaluations include those involving free-association, performance, editing, and application of production techniques; and all are taken with consideration of my intuitive response.

It is also clear that tacit knowledge is an intrinsic component of my intuitive response, that without this knowledge, it would be difficult to make decisions as quickly, and as certainly. As part of this tacit knowledge, I have developed a broad ranging experience of what professional, and potentially appealing pop music sounds like, in a variety of styles. I have my own conception of what the social field would judge as being appealing, creative, original, commercial, that I draw upon, which is a valuable facet in my decision making. In musical terms, this aspect of my tacit knowledge can be characterised as my aesthetic. In some instances, this aesthetic is tied to an understanding of a range of technical processes that would achieve sonic results that fulfil the requirements of that aesthetic. This aesthetic is also related to other aspects of my personality and thus, the attention to detail that my idiolect exhibits flows from a mix of both my broader personality and the particular responses to changes in musical features such as melody, harmony, rhythm, and the sonic aspects of tracks.

In other instances, this same aesthetic is also connected to the ways in which I approach more general problem solving strategies. Thus, my strategy of deliberately placing myself in a particular mental context to inspire my creative flow by selecting a reference track (Chapter 2: 69) and using it as a stimulation to structured improvisation, free associating along with a specific pre-composed chord sequence for example, is another part of that idiolect. Nonetheless, even though there are confines to some of my process, I endeavour to be open to alternative outcomes, in order to be more creative and potentially make a track more original.

It would seem, therefore, that intuition - an instinctive and often instant knowledge of what is the right thing to do – is thus a complex amalgam of these learned behaviours: a deeply ingrained aesthetic, combined with a tacit knowledge that relates

particular characteristics of musical sound with particular processes or techniques enabling a composer and producer to create effectively.

ALTERNATIVES

It is difficult to know if approaching aspects of the production in a different way would have produced more appealing results. In some instances, I could have arrived at the same decision sooner, a situation dictated by experience. The particular mood I was in at the time of creation likely affected the resulting production decisions, however, I believe there was still regularity in my approach whilst creating. My method would involve trying alternatives in some instances, rejecting those I thought unappealing until a desirable outcome was created. This thesis has not featured the decisions that were rejected, but has mainly focused on the decisions and direction taken. It is recognised that some of my creative decisions would now be different, as my capability for creating pop music tracks evolves. I appreciate that in the main, one can only ever make decisions with the information and knowledge available at the time, including the influence of the situation in which one finds oneself. I am therefore mindful of my most recent opinion, but with an understanding that circumstances can affect my point of view.

FUTURE

The aspects outlined in this thesis have informed my practice, helping me to develop my approach and methods, influencing my future productions. The intention is that these new insights might also serve as useful knowledge for others, aiding their own compositions, productions, engineering, performances and collaborations. As I am the creator writing about my own experience, the subjective knowledge that I communicate involves direct access to my thoughts, perhaps demonstrating a deeper comprehension that otherwise might be lost. I realise that there are few pop music creators who have written practical portfolio theses about their own compositions and productions. However, a significant increase in this number could enable further contribution to knowledge in this field, and extend the scope of this particular type of research.

FINALE

It is clear that my contribution to the portfolio productions was essential to their creation. My creativity, composing skills, attitude, production values, methods and techniques, engineering capabilities, performances as well as my approaches to collaboration, all contributed to the completion of the portfolio tracks, the singular variety of which makes their creation unique. This thesis has explored the various aspects of my approach, aspects that culminate in the distinctive way I compose, produce, and perform; in other words, my idiolect. I am aware that there are areas in my process that could be improved upon, and I will attempt to do so in future productions. I believe that there is no such thing as the perfect track, and refinements are always possible. This means I am open to adjusting my methods, as well as furthering my knowledge so that I can enhance my creative capabilities.

Ultimately, this research has enabled me to gain insight into my own evolving creativity, and to achieve further comprehension of the detail of my own creative practice. I hope that readers of this thesis not only acquire an in depth understanding of the specifics of the composition and production of my pop music, but are also able to approach their own productions bearing this knowledge in mind.

BIBLIOGRAPHY

3 News (2013) [online]. Available at: http://www.3news.co.nz/Buble-Auto-Tune-is-overused/tabid/418/articleID/292609/Default.aspx [Accessed: 13 September 2013].

Akrich, M. and Latour, B. (1992). 'A Summary of a convenient vocabulary for the Semiotics of Human and Nonhuman Assemblies'. In W.E. Bijker and J. Law (eds). *Shaping Technology, Building Society: Studies in Sociotechnical Change.* Cambridge, MA: MIT Press.

Apassion4jazz (1998 – 2016). [online]. Available at: http://www.apassion4jazz.net/quotations3.html [Accessed: 2 September 2016].

Audio Technology (N.D.) "Simon Osborne - Recording Sting". [online]. Available at: http://www.audiotechnology.com.au/PDF/14/AT14_Simon_Osborne_and_Sting.pdf [Accessed: 10 September 2016].

"Auditory Fatigue Management". (ND). [online]. Available at: http://earfatigue.weebly.com/about-auditory-fatigue.html [Accessed: 11 June 2016].

Barrie, T. (2015) "Pop Music Overtakes Rock As UK's Most Popular Genre". [online]. Available at: http://www.gigwise.com/news/99413/pop-music-overtakes-rock-as-uks-most-popular-genre [Accessed: 22 July 2016].

Barthes, R. (1967). *Death of the Author*. [online]. Available at: http://www.tbook.constantvzw.org/wp-content/death_authorbarthes.pdf [Accessed: 28 January 2014].

Bastick, T. (1982). *Intuition: How We Think and Act*. Chichester: John Wiley and Sons.

BBC News Entertainment & Arts (2014). "Ryan Tedder: Songwriter shares his rules of pop". [online]. Available at: http://www.bbc.co.uk/news/entertainment-arts-26848897 [Accessed: 25 April 2014].

BBC Bitesize (2014) "Listening for Idiolects" [online]. Available at: http://www.bbc.co.uk/schools/gcsebitesize/english/spokenlanguagestudy/listeningrev3.shtml [Accessed: 23 July 2016].

Becker, H. S. (1982). *Art Worlds*. Los Angeles: University of California Press.

Becker, J. (2004). *Deep Listeners: Music, Emotion and Trancing.* Indiana: Indiana University Press.

Bennett, J. (2011a). "Collaborative Songwriting – The Ontology of Negotiated Creativity in Popular Music Studio Practice". [online]. Available at: http://researchspace.bathspa.ac.uk/864/1/Bennett%20-%20Collaborative%20Songwriting.pdf [Accessed: 26 July 2016].

Bennett, J. (2011b). "How long, how long must we sing this song?" *Joe Bennett music blog*. [online]. Available at: http://joebennett.wordpress.com/2011/05/03/how- long-how-long-must-we-sing-this-song/ [Accessed: 26 July 2016].

Bennett, J. (2012). "Constraint, Collaboration and Creativity in Popular Songwriting Teams". In Collins, D ed. *The Act of Musical Composition: Studies in the Creative Process. SEMPRE Studies in the Psychology of Music*. pp. 139-169. Farnham: Ashgate Publishing Ltd.

Bijker, W. E., Hughes, T.P. and Pinch, T. ed. (1987; anniversary edition 2012). *The Social Construction of Technological Systems: New Directions in the Sociology and History of Technology*. Cambridge, MA: MIT Press.

Brauer, M. (2016). "Deconstructing The Mix 8- Part 1". [online]. Available at: https://mixwiththemasters.com/video/deconstructing-mix-8-part-1 [Accessed: 30 August 2016].

Burgess, R.J. (2013) *The Art of Music Production: The Theory and Practice*. New York: Oxford University Press.

Callon, M. (1986). "Some elements of a sociology of translation: domestication of the scallops and the fishermen of St Brieuc Bay" in J. Law, *Power, action and belief: a new sociology of knowledge?* London: Routledge.

Carter, D. (2005). 'Well Past Time: Notes on a Musicology of Audio Recording Production', Art of Record Production conference 2005. Refereed Conference Paper, London.

Clarke, E. F. (2005). *Ways Of Listening: An Ecological Approach to the Perception of Musical Meaning*. New York: Oxford University Press.

Cook, N. (1990). *Music, Imagination and Culture*. Oxford: Clarendon Press.

Cook, N. (2002). *Tone of Voice and Mind: The Connections Between Intonation, Emotion, Cognition and Consciousness*. Amsterdam: John Benjamins Publishing Co.

Cook, N. (2010). 'Beyond Reproduction' School of Music Research Seminar, University of Liverpool. Available at: http://www.charm.rhul.ac.uk/studies/p6_1.html [Accessed: 2 March 2016].

Cooke, D. (1959). *The Language of Music*. Oxford: Oxford University Press.

Covach, J. & Boone, G. M. (1997). *Understanding Rock: Essays in Musical Analysis*. New York: Oxford University Press.

Crawford, C. S. (2005). "Actor Network Theory" in Ritzer, G. *Encyclopedia of Social Theory*. Los Angeles: Sage Publications Inc.

Csikszentmihalyi, M. (1995). 'Creativity across the life-span: A systems view', *Talent Development III*, pp. 9-18, Gifted Psychology Press.

Csikszentmihalyi, M. (1996, 1997 & 2013). *Creativity: the psychology of discovery and invention.* New York: Harper Collins Publishers.

Csikszentmihalyi, M. (1988). 'Society, Culture and Person: A Systems View of Creativity', in R. J. Sternberg (ed.), *The Nature of Creativity: Contemporary Psychological Perspectives*, pp. 325-29. New York: Cambridge University Press.

Csikszentmihalyi, M. (1999). 'Implications of a systems perspective for the study of creativity', in Stenberg, R. (ed.) *Handbook of Creativity,* pp. 313–35. Cambridge: Cambridge University Press.

Csikszentmihalyi, M. & Wolfe, R. (2000). 'New Conceptions and Research Approaches to Creativity: Implications for a Systems Perspective of Creativity in Education', in K. A. Heller, et al. (eds.), *International Handbook of Giftedness and Talent,* 2nd edition. Oxford: Elsevier.

Cunningham, M. (1998). *Good Vibrations: A History of Record Production.* London: Sanctuary Publishing Limited.

Davies, S. (1994). *Musical Meaning and Expression*. USA: Cornell University Press.

DeNora, T. (2000). *Music in Everyday Life*. Cambridge: Cambridge University Press.

Denzin, N. ed & Lincoln, Y. ed (2000) *Handbook of Qualitative Research* 2nd ed. London: Sage Publications Ltd.

Derrida, J. (1974). *Of Grammatology.* Baltimore: The John Hopkins University Press.

Derrida, J. (1994). *Specters of Marx.* Oxon: Routledge.

Deruty, E. (2011). "Psychoacoustics: Where Sound Meets Your Brain" [online]. Available at: https://www.soundonsound.com/sos/mar11/articles/how-the-ear-works.htm [Accessed: 19 May 2016].

Development III. Reno: Gifted Psychology Press. [online]. Available at: http://www.david-songifted.org/db/Articles_id_10009.aspx [Accessed: 17 March 2016].

Dodge, C. and Jerse, T. (1997). 2nd ed. *Computer Music: Synthesis, Composition, and Performance*. USA: Schirmer.

Doyle, T. (2012: January). "Jake Gosling: Producing Ed Sheeran's +". *Sound On Sound Magazine.* Cambridge: SOS Publications Group.

Edmonds, L. (2014) "Young at heart: Average age of BBC Radio 1 listener is STILL 32 despite desperate attempts to shake-up the station and bring in younger listeners" in *Mail Online.* [online]. Available at: http://www.dailymail.co.uk/sciencetech/article-3086498/In-30s-past-musical-peak-Taste-popular-music-stagnates-33-parent-accelerates-this.html [Accessed: 23 July 2016].

Eisenberg, E. (1st ed 1987, 2nd ed 2005) *The Recording Angel.* New York: McGraw Hill.

Ellis, C., Adams, T. E., and Bochner, A. P. (2011)."Autoethnography: An Overview", [online]. Available at: http://www.qualitative-research.net/index.php/fqs/article/view/1589/3095 [Accessed 17: March 2016].

Emerick, G. (2007) *Here, There and Everywhere: My Life Recording the Music of The Beatles.* New York: Gotham Books.

Emmerson, S. ed. (1986). *The Language of Electroacoustic Music*. London: MacMillan Press.

Eno, B. (1979). "The Studio as Compositional Tool", [online]. Available at: http://music.hyperreal.org/artists/brian_eno/interviews/downbeat79.htm [Accessed: 23 March 2016].

Eno, B. (1999). "The Revenge of the Intuitive", [online]. Available at: http://www.wired.com/1999/01/eno/ [Accessed: 4 May 2016].
Epworth, P. (2016). Personal live conversation with Steven Williams. 9 August at Church Studios, Crouch Hill, London.

Eriksen, M. (2010: May). "The Stargate Writing & Production Team". *Sound On Sound Magazine.* Cambridge: SOS Publications Group.

Ettlinger, N. (2003). "Cultural Economic Geography and a Relational and Microspace Approach to Trusts, Rationalities, Networks and Change in Collaborative Workplaces". *Journal of Economic Geography* 3 (2):145-171. Oxford: Oxford University Press.

Fauconnier, G. and Turner, M. (2002). *The Way We Think: Conceptual Blending and the Mind's Hidden Complexities.* New York: Basic Books.

Freud, S. (2001). *The Standard Edition of the Complete Psychological Works of Sigmund Freud, On the History of the Psycho-Analytic Movement , Papers on Metapsychology and Other Works. Volume XIV (1914-1916).* London: Vintage.

Frith, S. (1983). *Sound Effects.* London: Constable.

Frith, S. (1986). *Performing Rites: Evaluating Popular Music.* Oxford: Oxford University Press.

Gibson, J. J. (1979). *The Ecological Approach to Visual Perception.* Hillsdale, NJ: Lawrence Erlbaum.

Gibson, J. J. (1966). *The Senses Considered as Perceptual Systems.* Boston MA: Houghton Mifflin.

Gordon, W. J. J. (1961). *Synetics: The Development of Creative Capacity*. New York: Harper & Row Publishers.

Gouldstone, D. (1989). *Elvis Costello. A Man Out of Time*. London: Sidgewick and Jackson.

Gracyk, T. (1996). *Rhythm and Noise: An Aesthetic of Rock.* Chapter 5: Jungle Rhythms and the Big Beat. New York: I.B. Tauris & Co Ltd.

Gracyk, T. and Kania, A. (ed.) (2014). *The Routledge Companion to Philosophy and Music.* Oxon: Routledge.

Grady, J. (1997) *Foundations of Meaning: Primary Metaphor and Primary Scenes.* Dissertation: University of California Linguistics Department: Berkeley, California.

Gray, R. (2015). "In your 30s? Then you're past your musical peak: Taste in popular music stagnates at 33 - and being a parent accelerates this" in *Mail Online.* [online]. Available at: http://www.dailymail.co.uk/sciencetech/article-3086498/In-30s-past-musical-peak-Taste-popular-music-stagnates-33-parent-accelerates-this.html [Accessed: 23 July 2016].

Greasley, A. & Lamont, A. (2009). "Exploring Engagement with Music in Everyday Life using Experience Sampling Methodology". Proceedings of the 7th Triennial Conference of European Society for the Cognitive Sciences of Music (ESCOM). Jyväskylä, Finland.

Green, L. (1988). *Music on Deaf Ears: Musical Meaning, Ideology and Education.* Manchester: Manchester University Press.

Haraway, D. (1991). "A Cyborg Manifesto: Science, Technology and Socialist Feminism in the Late Twentieth Century" in *Simians, Cyborgs and Women: The Reinvention of Nature.* New York: Routledge.

Hennion, A. (1990).'The Production of Success: An Anti-Musicology of the Pop Song' in S. Frith & A. Goodwin (eds.) *On Record: Rock, Pop and the Written Word.* London: Routledge.

Hirst, P. & Woolley, P. (1982). *Social Relations and Human Attributes.* London: Tavistock.

Huron, D. (2006). *Sweet Anticipation.* Massachusetts: MIT Press.

Ingham, T. (2015) "Rock Music is Twice as Popular as Pop in America – But R&B Rules Streaming". [online]. Available at: http://www.musicbusinessworldwide.com/rock-music-twice-popular-pop-america-rb-rules-streaming/ [Accessed: 21 July 2016].

Isaksen, S. G., Dorval, K. B., & Treffinger, D. J. (2000). *Creative Approaches to Problem Solving: A Framework for Change.* Buffalo, NY: Creative Problem Solving Group.

iTunes Charts (2016) [online]. Available at: http://www.apple.com/uk/itunes/charts/ [Accessed: 23 March 2016].

Iyer, V. (2002). *Embodied Mind, Situated Cognition and Expressive Microtiming in African-American Music.* Music Perception vol.19, no.3.

Izhaki, R. (2008). *Mixing Audio: Concepts, Practices and Tools.* Oxford: Elsevier Ltd.

Jacobson, B. D. (1998) "Human Ear". [online]. Available at:
http://web.mit.edu/2.972/www/reports/ear/ear.html [Accessed: 13 May 2016].

Juslin, P. N. and Sloboda, J. A. (2001). *Music and Emotion: Theory and Research.*
Oxford: Oxford University Press.

Kassabian, A. (2013). *Ubiquitous Listening: Affect, Attention, and Distributed
Subjectivity.* Berkeley and Los Angeles: California University Press.

Katz, B. (2002) *Mastering Audio: The Art and the Science.* Burlington MA: Focal Press.

Kealy, E. R. (1979). 'From Craft to Art: The Case of Sound Mixers and Popular Music'.
Work and Occupations Vol. 6(1), pp. 3-29. [online]. Available at:
http://wox.sagepub.com/content/6/1/3.abstract [Accessed: 13 April 2016].

Keil, C. and Feld, S. (2005). *Music Grooves.* Chicago: University of Chicago Press.

Keitt, G. (2013). "What are the stages of recording a song in a professional studio?" in
Quora [online]. Available at: https://www.quora.com/What-are-the-stages-of-recording-
a-song-in-a-professional-studio [Accessed: 26 July 2016].

Keep, A. (2005). *Does Creative Abuse Drive Developments in Record Production?*
[online]. Available at: http://artofrecordproduction.com/index.php/arp-conferences/arp-
archive-conference-papers/17-arp-conference-archive/arp-2005/72-keep-2005
[Accessed: 3 November 2013].

Kerrigan, S. (2011) 'Creative Practice Research: Interrogating creativity theories
through documentary practice'. [online]. Available at:
http://www.textjournal.com.au/speciss/issue8/Kerrigan.pdf [Accessed: 24 August
2016].

Kerrigan, S. (2013) 'Accommodating creative documentary practice within a revised
systems model of creativity', Journal of Media Practice 14:2, 111-127. London:
Routledge.

Kramer, L. (2002). *Musical Meaning: Toward a Critical History.* Berkeley and Los
Angeles: California University Press.

Krumhansl, C. L. and Zupnick, J. A. (2013) "Cascading Reminiscence Bumps in
Popular Music". *Popular Science,* October 2013, Volume 24, No. 10, 2057-2068.
Chicago: Association for Psychological Science.

Lacasse, S. (2000). *Listen to My Voice: The Evocative Power of Vocal Staging in
Recorded Rock Music and Other Forms of Vocal Expression,* [online]. Available at:
http://www.mus.ulaval.ca/lacasse/texts/THESIS.pdf [Accessed: 3 November 2013].

Lakoff, G. and Johnson, M. (2003). *Metaphors We Live By,* 2nd Edn. Chicago:
University of Chicago Press.

Latour, B. (2005). *Reassembling the Social: An Introduction to Actor-Network-Theory.*
Oxford: Oxford University Press.

Latour, B. (1996). *On actor-network-theory. A few clarifications plus more than a few complications,* [online]. Available at: http://www.bruno-latour.fr/sites/default/files/P-67%20ACTOR-NETWORK.pdf [Accessed 2 June 2014].

Law, J. and Hassard, J. (1999). *Actor Network Theory and After*. Oxford: Blackwell Publishing.

Levitin, D. (2009). *The World in Six Songs.* London: Aurum Press Ltd.

Levitin, D. (2006). *This is Your Brain on Music.* USA: Dutton.

Lynch, M. (2000). 'Against reflexivity as an academic virtue and source of privileged knowledge'. *Theory, Culture & Society*, 17: 3, pp. 26–54.

Martin, G. (1991 & 2015). Personal live conversation with Steven Williams. Montserrat and London.

Martin, G. ed. (1988). Making Music: The Essential Guide to Writing, Performing and Recording. London: Barrie & Jenkins Ltd.

Massey, H. (2000). *Behind The Glass: Tope Record Producers Tell How They Craft The Hits.* Backbeat Books: San Francisco.

Massey, H. (2009). *Behind The Glass, Volume II: Top Record Producers Tell How They Craft The Hits.* Backbeat Books: Milwaukee.

McClary, S. (1991). *Feminine Endings*. Minneapolis: University of Minnesota Press.

McIntyre, P. (2001). "The Domain of Songwriters: Towards defining the term Song". *Perfect Beat: The Pacific Journal of Research into Contemporary Music and Popular Culture,* 5(3). Sheffield: Equinox Publishing Ltd.

McIntyre, P. (2006). 'Creative practice as research: "testing out" the systems model of creativity through practitioner based enquiry', in Bourke, N. Haseman, B. Mafe, D. and Vella, R. (eds), *Speculations and Innovations: Applying Practice Led Research in the Creative Industries.* Queensland University of Technology, 30 March – 1 April 2005, Brisbane.

McIntyre, P. (2007). Collinson, I. and Evans, M. ed. "Learning to be Songwriters: creativity, the systems model and domain acquisition", Sounds and Selves: Selected Proceedings from the 2005 IASPM Australia/New Zealand Conference. Sydney: IASPM and Perfect Beat Publications.

McIntyre, P. (2008) 'The systems model of creativity: Analyzing the distribution of power in the studio'. *Journal on the Art of Record Production*, Issue 3, November 2008, [online]. Available at: http://arpjournal.com/686/the-systems-model-of-creativity-analyzing-the-distribution-of-power-in-the-studio/ [Accessed: 14 April 2016].

McIntyre, P. (2008b). "Creativity and Cultural Production: A Study of Contemporary Western Popular Music Songwriting". *Creativity Research Journal*, volume 20, issue 1, p, 40-52. London: Routledge.

McIntyre, P. (2012a). *Creativity and Cultural Production: Issues for Media Practice*. Basingstoke: Palgrave MacMillan.

McIntyre, P. (2012b). 'Rethinking Creativity: Record Production and the Systems Model' in S. Frith & S. Zagorski Thomas (eds.), *The Art of Record Production*. London: Ashgate.

McIntyre, P. (2013). 'Creativity as A System in Action' in Thomas, K. & Chan, J. (Eds.), *Handbook of Research on Creativity*, pp. 84-97. Cheltenham: Edward Elgar. Meyer, L. B. (1956). *Emotion and Meaning in Music.* Chicago: The University of Chicago Press.

Middleton, R. ed. (2000). *Reading Pop – Approaches to Textual Analysis in Popular Music*. Oxford: Oxford University Press.

Middleton, R. (1990). *Studying Popular Music*. Maidenhead: Open University Press.

Monson, I. (1996). *Saying Something: Jazz Improvisation and Interaction.* Chicago: University of Chicago Press.

Moore, A. F. (2001). *Rock: The Primary Text. Developing a Musicology of Rock.* Aldershot: Ashgate Publishing Limited.

Moore, A. F. (2001b). "Categorical Conventions in Music Discourse: Style and Genre". *Music and Letters,* Volume 82, Issue 3. Oxford: Oxford University Press.

Moore, A. F. (2001c). "Issues of Style, Genre and Idiolect in Rock", [online]. Available at: http://www.allanfmoore.org.uk/questionstyle.pdf [Accessed: 8 March 2016]. Originally published 'Questioni di stile, genere e idioletto nel rock'. *Musica realtà 64*, March, pp. 85-102.

Moore, A. F. (2009). "Style and Genre as Mode of Aesthetics", [online]. Available at: http://www.allanfmoore.org.uk/styleaesth.pdf [Accessed: 8 March 2016].

Moore. A. F. (May 2002). "Authenticity as Authentication" in Popular Music / Volume 21 / Issue 02. Cambridge: Cambridge University Press.

Moore, A. F. ed. (2003). *Analyzing Popular Music.* Cambridge: Cambridge University Press.

Moore, A. F. (2012). *Song Means: Analysing and Interpreting Recorded Popular Song.* Farnham: Ashgate Publishing Limited.

Moorefield, V. (2005). *The Producer as Composer: Shaping the Sounds of Popular Music*. Massachusetts: The MIT Press.

Muncey, T. (2010). *Creating Autoethnographies*. London: Sage Publications Ltd.

Negus, K., & Pickering, M. (2002). 'Creativity, Communication and Musical Experience' in Negus, K. & Hesmondhalgh, D. (eds.). *Popular Music Studies*. London: Arnold.

Nolt, J. (1981). 'Expression and Emotion'. *British Journal of Aesthetics 21*. Oxford: Oxford University Press.

Oakey, P. (1998-2000). Steven Williams drumming for Human League tours. Human League Studios, Sheffield; Europe and USA.

Oldman, J. (2000, September 30) Interview with James Oldman, *New Musical Express*. UK: Time Inc. (UK) Ltd.

Osborne, S. (2001). Personal live conversation with Steven Williams at Steerpike Studios, Salisbury, Wiltshire UK.

Oudshoorn, N. & Pinch, T. (ed.) (2003). *How Users matter: The Construction of Users and Technology*. Massachusetts: MIT Press.

Owsinski, B. (2010). *The Music Producer's Handbook*. Milwaukee: Hal Leonard Books.

Oxford English Dictionary (2016). [online]. Available at: http://www.oxforddictionaries.com [Accessed: 25 July 2016]. Oxford: Oxford University Press.

Patel, A. D. (2008). *Music Language and the Brain*. Oxford: Oxford University Press.

Pedlar, D. (2003). *The Songwriting Secrets of The Beatles*. London: Omnibus Press.

Perjolo, A. and De Rosa, R. (2007). *Acoustic and MIDI Orchestration for the Contemporary Composer*. Oxford: Elsevier Ltd.

Pettijohn T. F. & Ahmed, S. F. (2010). "Songwriting, Loafing or Creative Collaboration?: A Comparison of individual and team written billboard hits in the USA". *Journal of Articles in Support of the Null Hypothesis*. Vol 7, No 1. Texas: Reysen Group.

Pinch, T. J. and Bijker, W. E. (August 1984) "The Social Construction of Facts and Artefacts: Or How the Sociology of Science and the Sociology of Technology Might Benefit Each Other." *Social Studies of Science* 14: 399-441.

Polyani, M. (1966). *The Tacit Dimension*. Chicago: The University of Chicago Press.

Prinsky, L. E. and Rosenbaum, J. L. (1987). ' "Leer-ics" or Lyrics: Teenage Impressions of Rock 'n' Roll', *Youth and Society*, [online]. Available at: http://yas.sagepub.com/content/18/4/384.full.pdf+html [Accessed: 15 February 2015].

Roessner, J. (2009). *Creative Guitar: Writing and Playing Rock Songs With Originality*. Pacific, MO US: Mel Bay Publications Inc.

Rushnell, S. (2001) *When God Winks: How The Power of Coincidence Guides Your Life.* New York: Atria Books.

Russell, S. (May 1986). "The Social Construction of Artifacts: Response to Pinch and Bijker." *Social Studies of Science* 16. Pages 331-346.

Rutter, P. (2011) *The Music Industry Handbook.* Oxon: Routledge.

Sadie, S. & Tyrrell, J. eds. (2001) *The New Grove Dictionary of Music and Musicians*. Oxford: Oxford University Press.

Salmon, R. (July 2008) "A Guide to Contracts For Producers: Deal or No Deal?" in *Sound on Sound Magazine.* Cambridge: SOS Publications Group.

Sarmiento, J. W., & Stahl, G. (2008). 'Group Creativity in Interaction: Collaborative Referencing, Remembering, and Bridging'. *International Journal of Human Computer Interaction*, Vol. 24(5), pp. 492–504.

Sawyer, K. (2012) Explaining Creativity: The Science of Human Innovation. 2nd edition. Oxford: Oxford University Press.

Schmidt-Horning, S. (2004) "Engineering the Performance: Recording Engineers, Tacit Knowledge and the Art of Controlling Sound" Social Studies of Science 34 /5 (October 2004) 703–731. California: Sage Publications Ltd.

Schoenberg, A. (1982). *Fundamentals of Musical Composition*. London: Faber & Faber.

Schön, D. (1987). *Educating the Reflective Practitioner*. San Francisco: Jossey-Bass.

Schön, D. (1991). *The Reflective Practitioner*. Farnham: Ashgate Publishing Limited.

Schubert, E. (2013) "Emotion in Popular Music: A Psychological Perspective". [online]. Available at: http://www.cairn-int.info/article.php?ID_ARTICLE=E_VOLU_101_0265 [Accessed: 8 September 2016].

Scott G., Leritz L. E., Mumford M. D. (2004). 'The Effectiveness of Creativity Training: A Quantitative Review'. *Creativity Research Journal, Vol. 16*, pp. 361–388.

Shilling, G. (2010) "Kipper – Music Producer Interview at Chapel Studios, London". [online]. Available at: http://www.recordproduction.com/kipper-producer.html [Accessed: 1 September 2016].

Shilling, G. (N.D. a) "Sean Genockey – Record Producer Feature at Rockfield Studios". [online]. Available at: http://www.recordproduction.com/sean-genockey-producer.html [Accessed: 2 September 2016].

Shilling, G. (N.D. b) "Tony Visconti – Record Producer Feature at Metropolis Studios". [online]. Available at: http://www.recordproduction.com/tony-visconti-record-producer.html [Accessed: 31 August 2016].

Silverman, D. (2000). *Doing Qualitative Research.* London: Sage Publications Ltd.

Small, C. (1998). *Musicking: The Meanings of Performance and Listening.* Middletown USA: Wesleyan University Press.

Smalley, D. (1986). 'Spectro-morphology and Structuring Processes' in *The Language of Electroacoustic Music*, edited by Simon Emmerson. London: MacMillan Press.

Smalley, D. (1997). 'Spectromorphology: explaining sound-shapes. Organised Sound', [online]. Available at:
http://journals.cambridge.org/download.php?file=%2F7046_24AD86EF1A65CD9C74F CED260AC36059_journals__OSO_OSO2_02_S1355771897009059a.pdf&cover=Y&c ode=67f8c102c6f5a055329e7a33e0a9df0e [Accessed: 6 May 2014].

Statista (2014). "Genre Breakdown of Music Album in the United Kingdom (UK) in 2014". [online]. Available at: http://www.statista.com/statistics/276213/genre-distribution-of-music-album-unit-sales-in-the-united-kingdom-uk/ [Accessed: 22 July 2016].

Sternberg, R. and Lubart, T. (1999), 'The concepts of creativity: Prospects and paradigms', in Sternberg, R. J. (ed.) (1999). *Handbook of Creativity*. Cambridge: Cambridge University Press.

Sternberg, R. J. (ed.) (1999). *Handbook of Creativity*. Cambridge: Cambridge University Press.

Sternberg, R. J. (2012). 'The Assessment of Creativity: An Investment-Based Approach', [online]. Available at: http://www4.ncsu.edu/~jlnietfe/Creativity_&_Critical_Thinking_Articles_files/Sternber g%20(2012).pdf [Accessed: 10 June 2016].

Sutton, M. (2016). Personal live conversation with Steven Williams. 5 September, Cavendish Square, London.

Swedien, B. (1991). "Tear Down The Walls" in EQ magazine (June)

Tagg, P. (1982). *Analysing Popular Music: Theory, Method and Practice*. Popular Music 2: 37–67.

Tagg, P. (2012-2013). *Music's Meanings.* Larchmont, NY: The Mass Media Music Scholar's Press.

Tate, J. (ed.) (2009). *The Music and Art of Radiohead.* Farnham: Ashgate Publishing Ltd.

Théberge, P. (1997). *Any Sound You Can Imagine: Making Music/Consuming Technology.* Middletown, CT: Wesleyan University Press.

The Official UK Charts Company (2016) [online]. Available at: http://www.officialcharts.com/charts/singles-chart/ [Accessed: 23 March 2016].

Van Maanen, H. (2009). *How to Study Art Worlds: On the Societal Functioning of Aesthetic Values*. Amsterdam: Amsterdam University Press.

Wallas, G. (1976). 'Stages in the Creative Process' in A. Rothenberg, & C. Hausman (eds.), *The Creativity Question*. Durham: Duke University Press.

Walser, R. (1993). *Running With the Devil: Power, Gender, and Madness in Heavy Metal Music*. Hanover, NH: University Press of New England.

Warner, T. (2003). *Pop Music - Technology and Creativity: Trevor Horn and the Digital Revolution.* Aldershot: Ashgate Publishing Ltd.

Watson, A. (2015) *Cultural Production in and Beyond the Recording Studio.* Oxon: Routledge.

Webb, J. (1998). *Tunesmith: Inside The Art of Songwriting.* New York: Hyperion.

Wicke, P. (1990). *Rock Music: Culture, Aesthetics and Sociology*. Cambridge: Cambridge University Press.

Wolff, J. (1981). *The Social Production of Art.* London: MacMillan.

Womack, K. (2009). *The Cambridge Companion to The Beatles.* Cambridge: Cambridge University Press.

Zagorski-Thomas, S. (2010). *PhD in Music Composition (Studio Based) By Portfolio Submission*. London: Goldsmiths College.

Zagorski-Thomas, S. (2014). *The Musicology of Record Production.* Cambridge: Cambridge University Press.

Zak, A. J. III. (2001). *The Poetics Of Rock: Cutting Tracks, Making Records.* California: University of California Press.

Zak, A. J. III (2007). *Journal of the Art of Record Production* (Editorial). Vol. 1, no. 2.

Zollo, P. (2003). *Song-writers on Song-writing.* 4th edn. Cincinnati: Da Capo Press.