“THE GUY THAT HANGS AROUND WITH THE MUSICIANS”

Exploring the Relationship of Pitched Percussion to the Rock Band and The Traditions of the Rock Drummer

by

Tom Atherton

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ABSTRACT

This research explores the integration of tuned percussion into the rock band framework with the emphasis on creating innovative approaches as a composer and performer.

The portfolio of audio/ video recordings, scores and commentary will explore;

1) The roles of the rock drummer and percussionist
2) New composition and performance techniques for percussion within rock
3) Challenging the identity of rock music

This portfolio is a combination of several smaller practical projects designed around the parameters of;

- Ensemble size
- Instrumentation
- Tuned vs untuned percussion

It has been undertaken by a practitioner who works across the disciplines of rock drumming, orchestral percussion and free improvisation. As such, it places them in an unusual, interesting and unique position whereby elements of each framework blend and permeate into one another, both on conscious and subconscious levels. Such a position enables the practitioner to effectively view and analyse multiple, disparate musical spheres and create new work at their meeting points, as well as venture into the previously unexplored gaps in between.

Practical Work

This document refers to a number of associated audio and video files in conjunction with the practical research. To access these, please contact the author directly;

Tom Atherton - tompather@gmail.com

1. COUNT IN;

Background and Research Questions

This chapter will provide a general overview of the current relationship between tuned percussion and rock music. The contextualisation of specific existing practitioners within this, as well as that of my own work, can be found in Chapter 3.

The subdivisions of this research are explored in more detail in the following areas;

1) The roles of the rock drummer and percussionist (Chapters 2.4 and 6)
2) New composition and performance techniques for percussion within rock (Chapters 2.2 and 7)
3) Challenging the identity of rock music (Chapters 2 and 5)

1.1 An Introduction

The drum kit has traditionally been the dominant percussive force within the rock band (Moore, 2018). Whilst ensembles within particular genres have, on occasion, embraced auxiliary percussionists to provide additional groove and colour, rock[1] drummers have instead expanded the drum kit to broaden its percussive options, sometimes to gigantic proportions. Although such gargantuan percussive rigs are not unique to rock music, they are arguably more commonplace and in keeping with the aesthetics of the genre (Walser, 1993). Such an approach also suggests a unique self-perception of the rock drummer's role compared to that of other percussionists; in many cases this phenomenon may be attributed to a desire for spectacle and showmanship in equal measures to musical contribution. Such kits often contain large quantities of the same instrument, varying only slightly in size. Drummer Terry Bozzio unique inclusion of both diatonic and chromatically tuned tom-toms, as well as chromatically tuned cymbals, provides an extreme example of this kit expansion. These additions allow the simultaneous performance of both groove and melody (www.terrybozzio.com). However, such a radical concept does separate the instrumentalist from the band and moves them into definite solo territory, a 'solo percussion ensemble' of sorts.

There are many other practitioners who have developed similarly ambitious rigs; of note is drummer Bill Bruford. Somewhat contradicting Bozzio's method, Bruford's longstanding mantra of "music first and equipment second" (Modern Drummer, 1983) has often dictated his approach to designing drum setups; whilst his achievements within Yes are numerous, their output is quite traditional rock playing where the drummer's role is concerned. As such, his drum kit expanded through increasing rows of tom-toms and cymbals in a similar fashion to Bozzio. Bruford's rig within King

[1] The boundaries and identity of 'rock' are discussed in Chapter 2

Crimson was extremely different and this is perhaps attributable to the band's forward-thinking, non-repetitive and often deliberately avant-garde framework (Smith, 2001). Here, one can find an equally imposing percussive rig comprising a far more diverse instrumentation. This featured limited amounts of the same type of instrument and, often organised in pairs tuned a fifth or fourth apart; there are obvious parallels to other percussion instruments such as timbales and timpani, particularly apparent in the *Discipline* era of King Crimson in the early 80s. Of note is his replacement of tom-toms with other items such as roto-toms, octobans and Simmonds electronic drums. In earlier incarnations of the band, this even stretched to the inclusion of fully tempered mallet instruments such as the xylophone in the track *Melody Lament* (Paris, 1974). This emphasis of creating massive set ups through a *variety* of instruments, rather than differently sized versions of the same equipment, is able to satisfy both criterias of spectacle and musical contribution. However, Bruford's kit has changed drastically over the years; although making extremely creative use of alternatives to the standard setup, this has ultimately resulted in rigs featuring multiple sizes of the same drum. Interestingly and against the expected trajectory, his most recent kits are composed entirely of very traditional components. However, it should also be noted that these are organised in a non-traditional, symmetrical fashion emphasising an ergonomic design for the performer.

Although there are some notable exceptions, the incorporation of additional unpitched instruments has been less than commonplace in rock; even rarer has been the use of pitched/ mallet instruments. With the loud distorted guitars and overall 'power' of rock (Walser, 1993), it is a struggle to effectively use this kind of instrument as a constant force. However, other instruments that would appear to struggle with such a balance have been successfully integrated, such as the violin (King Crimson, My Dying Bride), flute (Jethro Tull) and numerous other traditional folk instruments (Eluveite, Korpiklaani), although practitioners have cited the previously mentioned difficulties with volume (Smith, 2001).

In addition, the cost of many percussion instruments, particularly those within the tuned and orchestral families, could prove prohibitive to performance and this may be at odds with what is traditionally a 'working class' genre (Walser, 1993: 3). However, such a notion is challenged by Moore's assertion that Progressive Rock realigned rock with a university educated audience outside of these roots (2018: 110). Does this suggest that tuned percussion should now be more widely found in rock? Their sheer size, particularly when presented as a collection of instruments, is still potentially prohibitive when compared to other available options; the use of the electric keyboard is far more widespread by comparison as it can be obtained and transported easily and cheaply. The aforementioned Terry Bozzio may similarly fall victim to an alienation from rock music with a drum kit that provides melodic

substance but is certainly less than portable or affordable. To add to this, there is some resistance to change, even going so far as hostility in parts of the rock world for using anything other than established guitar and drum kit combinations (Kahn-Harris, 2007). If such practicalities can be discarded, exactly *how* can mallet instruments be effectively used for this music? Previously, Frank Zappa has shown that this is possible within a larger rock ensemble through the "*Apostrophe*" album (1974); the marimba can often be found doubling guitar and keyboard lines with the percussionist using both pitched and unpitched instruments to punctuate lyrical ideas through occasionally quirky sound effects. It may be in question as to how much of a 'consistent' force this example represents, but his later arrangements expanded the role greatly; "*Peaches III*" (Tinseltown Rebellion, 1981) is sophisticatedly orchestrated, using vibraphone, marimba and additional unpitched percussion not only for doubling melodic lines but for counter melody, harmonic accompaniment and solo melody. Whilst this 5 minute track does show a real departure from convention through this instrumentation, the rest of the album does not follow this framework, with a greater focus on guitars, keyboards and vocals, albeit in ways less common to the rock world. This piece is also a re-arrangement of the earlier "*Peaches en Regalia*" (Hot Rats, 1969), which was not originally composed for pitched percussion, although the instrumentation is still far from the conventional rock band.

Another artist of note is Neil Peart of the band Rush. Peart is also famous for his extremely large drum kits; whilst they contain many duplicate items in the same style as Terry Bozzio, his setups have nearly always featured several tuned percussion items such as glockenspiel and tubular bells. This is at least partially attributable to the overall mantra of Rush, the idea that a rock trio could sound far more imposing and texturally full than the limitations of their size (Holm-Hudson, 2002). Tracks such as *Xanadu* (*A Farewell To Kings*, 1977) contain a huge variety of instrumental forces within the trio, such as pitched and unpitched percussion, guitars, basses, synth bass pedals and a host of synthesizers. Remarkably, such forces are maintained live with little to no removal of parts, as demonstrated on the live version of the song from *Exit...Stage Left* (1981). However, uses of tuned percussion are sporadic, with Neil Peart's playing focussed on a core identity of the band as a rock act. Such instruments feature largely as decoration for intros and outros, particularly on longer form tracks such as the aforementioned *Xanadu*. Peart's famous extended drum solo during *YYZ* (*Exit...Stage Left*, 1981) offered the necessary sonic space to make fuller use of tuned percussion. Though *fully* tuned instrumentation is not used, there is some exploration of semi-pitched ideas through the use of woodblocks and cowbells. However, this does develop in the later parts of Peart's career such as his solo from *Live in Frankfurt* (2004); here, he performs occasional marimba parts using the MalletKat. However, such usage does not appear particularly integrated, perhaps even tokenistic, as though demonstrating the *product's* capabilities rather than using it as a musically essential component of his work. Peart's soloing strategy with this

equipment also relies heavily on a call and response approach between the tuned and untuned elements; it is extremely rare that both are performed simultaneously. From his recorded output, one notable exception to this is his use of the glockenspiel during *The Spirit of Radio* (*Permanent Waves*, 1980); here, Peart plays the tuned part whilst maintaining a pulse on the kick drum. Such examples are both rare and transient, seemingly present for exotic effect more than as compositional technique.

However, there have clearly been some notable contributions from existing practitioners and these, amongst others, are further explored in Chapter 3 alongside my own practise. In the academic field, there would also appear to be a scarcity of exploration on the subject; there are no existing studies that deal *explicitly* with tuned percussion in the rock world. This alone strengthens the case for undertaking this research. If the idiom is broadened slightly to consider 'non-traditional' instrumentation[2] within the rock band, there are certainly a much greater variety of individual recorded examples. There are also many more readily available popular interest articles such as *25 Weird Instruments in Rock* (The Cavan Project: 2014); the fact that such instrumentation is described as 'weird' could actually be quite helpful in defining the boundaries of what is *normal* in rock, albeit in a slightly anecdotal sense. Furthermore, there are some tuned percussion entries to this list, thus demonstrating the author's disassociation between these instruments and the rock band. However, some of the entries here are questionable such as maracas, triangle and mellotron; there are numerous examples of the former two, with the latter being ubiquitous within the progressive rock sphere. Additionally, the implicit definition of rock made by the author is unclear, with examples quoted from such artists as Kate Bush and Paul Simon. This of course raises just how maligned 'rock band' and 'rock music' may be and highlights the need for solid and exclusive working terminology.

Academic literature offers *some* more detailed exploration of unusual instrumentation within rock: Martin comes close to doing this within *Avant Rock*, although his focus on musical ideology limits its use in my own research (xiii, 2002). The amount of study *focussing* on non-traditional rock instruments within rock music is surprisingly little, with examples stemming from crossover areas in other contexts, rather than *direct* analysis. Many of these examples come from biographical and auto-biographical sources (Smith 2001, Bruford 2009) some of which are referenced later in Chapter 3.

Moving away from non-traditional instrumentation, there are a plethora of works exploring the relationship of the guitar to rock music, such as Allan Moore's *Song Means: Analysing and Interpreting Recorded Popular Songs* (2012). Such material is useful in providing a deeper understanding of rock as a phenomenon, as well as

[2] i.e. outside of the usual guitar, bass guitar, vocals, drum kit and keyboard combinations

providing frameworks for my own analyses. Explorations of the relationship between the drummer and the rock band are *not* as plentiful, though relatively easily found in texts such as *The Routledge Companion to Popular Music Analysis* (2019). Interestingly, Moore directly confronts this issue in his third edition of *Rock: The Primary Text* (2018), citing one reason for this revision as his previous lack of attention to percussion as a force within the rock band. However, his focus on drum kit *fills* is of limited use to this research and does little to refine previous definitions of the drummer and percussionist. It is extremely telling that such a widely used and revised text within the academic study of rock music should feature such little focus on the drummer's role, particularly as this is described as a defining feature of the style. There are texts documenting the appearance of percussionist roles during the careers of specific artists', such as Sid Smith's discussion of Jamie Muir in *In The Court of King Crimson* (2001) or the numerous players mentioned by Kevin Courier in *Dangerous Kitchen: The Subversive World of Zappa* (2002). However, these focus more on *documenting* the existence of such practitioners and provide limited context or analysis. Particularly with *tuned* percussion in rock, there is really very little existing material; the closest literary works deal with the vibraphone within jazz (Brooks, 2007) and definitions of mallet percussion within orchestration studies (Forsyth, 1966), though the latter again documents, rather than offering much insight or discussion.

It may be appropriate to search for texts relating to my stylistic background, rather than focussing on instrumental divisions. There are numerous existing texts on both the Progressive Rock (Holm-Hudson 2002, Martin 2002) and Extreme Metal (Berger 1999, Kahn-Harris 2007) elements of my musical background[3]. The former is often referenced and discussed in more general rock texts such as that of the aforementioned Allan Moore (2018), as well as detailed analysis in works including *Progressive Rock Reconsidered* by Kevin Holm-Hudson (2002). Additionally, there are numerous relevant materials detailing the careers of specific bands and drummers, such as the previously discussed works on King Crimson (Smith, 2001) or the autobiography of Bill Bruford (2009). Extreme Metal is often referred to in passing by rock authors attempting to contextualise what is essentially a vastly disparate collection of sub-genres; texts exploring it as a specific phenomenon are few in number. A majority of written material is produced 'by the fans, for the fans'. Numerous texts list the existence of bands and specific recordings, such as *Extreme Metal* (McIver, 2000), *Extreme Metal II* (McIver, 2005) and *Precious Metal* (Mudrian, 2009); again all are focussed on documenting events. There is some interesting trivia from an audience perspective, but one would be hard pressed to use these for much more than a 'beginner's guide'[4].

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[3] Explored more thoroughly in Chapters 2.1 and 3.2

[4] Such books may hold little use today having being produced shortly before the explosion of the internet as an instantaneous and portable information tool

The limited research of Extreme Metal rarely delves into much of its musical content. In particular, studies of Black Metal tend to focus on the extra-musical and sensational activities of its founders, with *Lords of Chaos* (Moynihan & Søderlind, 1998) being the quintessential example. The book revolves around the crimes of early practitioners - namely church burnings and murder - but does little to define it as a unique musical movement. Such texts hold little relevance to my own practise or this research; somewhat ironically, there are definite sonic and strategic connections between my own work and the *modern* outputs of some of Black Metal's [5] early practitioners, specifically artists such as Ihsahn and Ulver who have now distanced themselves from its sub-cultural trappings. This is showcased by my arrangement of the *Peccatum* track *Stillness* (*Lost in Reverie*, 2004), originally written and performed by *Emperor* frontman Ihsahn (aka: Vegard Sverre Tveitan) shortly after this band's demise. It is both the sonically rebellious and somewhat restless attitude exemplified by the scene's founders that my work exhibits, rather than a direct integration of their sound world.

One exception to the reported lack of in-depth literature is the book *Extreme Metal* (Kahn-Harris, 2007); this goes to much greater lengths in defining specific subgenres under this umbrella term, as well as providing a useful overview of the term itself. However, even this focuses far more on extra-musical phenomena, particularly the identity of the audience. This is relevant in building an understanding of a subgenre that closely ties audience and practitioner, but of little use in working toward new compositional or performance techniques within my own framework. Whilst there clearly exists literature relevant to my practise, the lack of specific research surrounding the role of tuned percussion in rock substantiates the necessity for this study.

[5] What is commonly referred to now as Black Metal is technically the Second Wave of Black Metal, originating in Norway in the late 1980s/ early 1990s. Similarly to the New Wave of British Heavy Metal (NWOBHM) in the early 1980s, Black Metal has arguably usurped this term, causing previous movements to be redefined. It is characterised by fast tempos, raw production values, Satanic/ Anti-Christian lyrical themes and a fixation with black and white face makeup (known as 'corpse paint')

1.2 Research Questions

At present, examples of *fully* tuned percussion within the rock band are fragmented and often communicate a sense of novelty rather than acting as an organic component of the ensemble. Equally limited is the existing discussion of the *percussionist's* role within the rock band, as opposed to that of the 'rock drummer'.

As such, I will be examining the following research questions;

1. To explore the success (or failure) of tuned percussion as an organic component within the rock band.

a) Can this component become as consistent a force in the rock band as the electric guitar, keyboard or drum kit?

b) Can it fulfil the necessary functions as a member of the unit, such as leading, supporting and soloing?

c) Can it compete sonically and strategically in the rock band whilst contributing stylistically appropriate material *and* maintaining its identity?

2. Can the electric guitar be replaced as the dominant force within the rock band?

a) Can the resulting music still be considered 'rock' and should this be a measure of its success?

b) Is there a path of 'co-existence' whereby the focus is *shared* as opposed to centred around the electric guitar and what strategic framework might be created to achieve this?

3. What new composition and performance techniques can be formulated to facilitate such music?

a) How must the instrumentation adapt to the rock framework?

b) How must the rock framework adapt to the instrumentation?

2. GROTTY PUBS AND HAIRY BEASTS;

Defining and Creating Working Terminology

Rock, like so many other musical genres and movements, is extremely difficult to accurately define. Similarly, it is an umbrella term that encompasses a considerable amount of material. As is the case with much research within popular music, there is also some considerable ambiguity and/or debate as to the usage and definitions of particular technical terms (Doll, 2019). These are sometimes influenced or dictated by the sub-genre in question and as such require some concrete boundaries as to exactly what should and should not be included within the study. Therefore, in this chapter, I will be defining and contextualising the following terminology;

1) The Rock Band
2) The Riff
3) Tuned Percussion
4) The Rock Drummer

These terms are intrinsic to providing a clearer understanding of rock as a genre and developing the appropriate boundaries to ensure the research remains focussed, as well as cultivating a strong framework with which to analyse the work that I create.

2.1 The Rock Band

It is important firstly to give some definition of the 'rock band' format. I will be using the term to deal with the instrumentation and aural aesthetics of the music; it will refer to an ensemble composed of electric guitar, bass guitar, drum kit and vocals.

The electric guitar is synonymous with rock music (Moore, 2018) and one key feature of this research will be to explore this relationship; could rock have ever existed without the electric guitar? The guitar in popular music predates rock (Moore, 2018) and would have likely continued to exist in *some* form without it, but is the inverse true? Rock's popularity and profile must be partially attributed to a flamboyant level of showmanship enabled by the increased onstage maneuverability. This is possible with the guitar in a way that is unlikely with static instruments such as the piano. Of course there have been many flamboyant and energetic pianists, but it is much more challenging to bring such a large, heavy instrument atop a PA speaker[6]. Guitars as a dominant force within the genre have therefore tended to take the spotlight from other instrumental forces; although other instruments may be afforded solo time, it would be rare, if not impossible, to find *only* drum/ keyboard/ vocal solos *without* the inclusion of at least some guitar solos. In short, the guitar can

[6] Or to smash such an instrument to pieces onstage with one's bare hands of course!

no longer be confined to its humble beginnings as a harmonic supplement within the rhythm section.

Complete musical separation of genres has previously proved both an arduous and approximate endeavour at best (Levitin, 2006) and so I will be exploring a broad range from the umbrella term 'rock'. To maintain focus, this research will centre around the rock music from my own musical practice, namely my experience within Progressive Rock and Extreme Metal. Even within these somewhat specific subgenres, there is still considerable fragmentation and my definitions are extremely personal; as such, it is pragmatic to consider a thematic framework for my work, namely an approach combining aggression with technical experimentation in both composition and performance.

As all subgenres under this umbrella, the aforementioned have roots within R n' B, Rock n' Roll and Blues; whilst some comparison is inevitable, there will be no direct effort to include these as part of the research. A further unifying factor within the rock music of my own practice is the strategic use of the riff as a primary compositional force (Moore, 2018: 37). This continues to provide some separation from other subgenres. To fortify this process, I will primarily be focussing on pre-composed, rather than improvised, material throughout. This aligns the research more closely with the rock song format and thus with rock music itself. It is important that composed pieces do not merely act as backings for a soloist (whether percussion or otherwise); solos *must* hold strategic function as the aim is to create a sonically emancipated unit.

In summary, the Rock Band;

- Features electric guitar, bass guitar and drum kit
- Uses riffs as main compositional strategy
- Uses primarily pre-composed material, form and structure

2.2 The Riff

The term 'riff' is a central theme within rock music, but the definition and usage of the word is ambiguous at best. Primarily, it is used to describe a repeated musical phrase exclusively within popular music styles such as rock and jazz (Middleton, 1990). The equivalent term within classical music would be 'ostinato', a "persistently repeated rhythm or melodic figure" (Taylor, 1989: xix). In the strictest definition of the word, this repeating phrase should be both short and unchanging; strategically, the ostinato is used as a foundation to build and develop additional musical material (Freymann, 2017).

Is the difference in usage between the two more than mere genre specific language?

There are often many riffs to a single section of a popular song, whereas there would usually be only one ostinato within a classical piece. Other parts would be referred to by alternative terminology. Furthermore, in rock the term ‘riff’ is primarily used to refer to a *guitar* based pattern; as such, the two have a particularly strong bond. When played on another instrument, musicians will refer to a pattern by another term; the bass guitar plays the bass line and the drum kit keeps the groove or beat for example, although this is by no means a formal ruling. It is also linked to the previously discussed position of the guitar as the dominant force of the rock band, with other instruments adopting supportive terminology.

In classical music, there is no formal restriction on the instrumentation of an ostinato, although it is traditionally orchestrated for bass instruments, such as the famous ground bass of *Dido’s Lament* (see Fig 2.1).

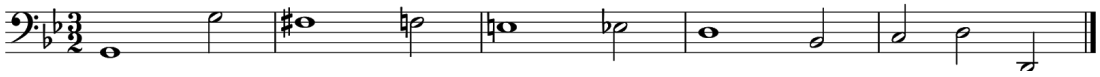

Fig 2.1: Ground bass from *Dido’s Lament* (*Dido and Aeneas*, Act III, Henry Purcell 1689)

The ostinato here functions as a central point of alignment and is one of *many* compositional strategies within the opera; classical music does not share rock’s dependence on riffs. However, there are further examples of ‘riff’-based material in the wider contemporary classical world, notably minimalist composers such as Steve Reich[7]. Works such as *Drumming* (1971) follow the traditions of the fixed ostinato, but create gradual variations through substituting notes for rests and vice versa (Reich, 2002: 64). *Music For Mallet Instruments, Voices and Organ* (1973) further expands the treatment of the ostinato through the process of rhythmic augmentation (Reich, 2002: 76). In such cases, the compositions are strategically reliant on the riff as a *developing*, rather than static entity. A further contemporary example of this is found in David Lang’s *Lying, Cheating, Stealing* (see Fig 2.2).

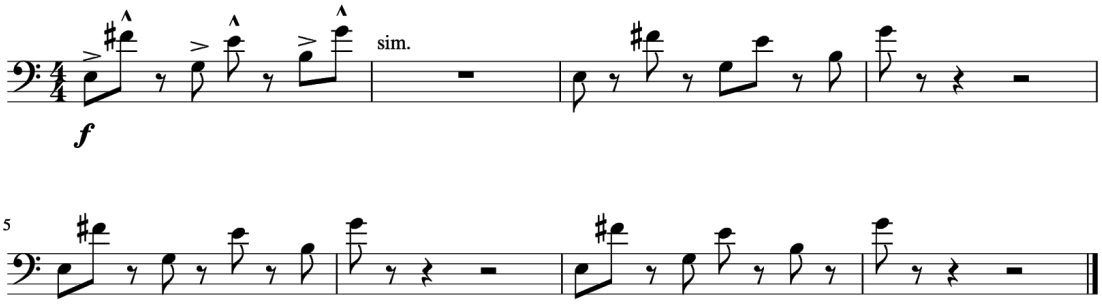

Fig 2.2: Marimba part from *Cheating, Lying, Stealing* (David Lang, 1993/ rev. 1995)

[7] Although such examples may appear disparate, the reader is hereby reminded of the author’s diverse musical practise

In this case, the initial riff is subjected to frequent yet very subtle rhythmic changes and is performed across a range of instruments including marimba, piano and bass clarinet with the cello providing additional texture. Notably, this unison morphing riff is also orchestrated across two separate brake drums; in concert, these are placed at either end of the stage, emphasising the rhythmic development and overall hypnotic qualities.

In Jazz, the definition of the riff is similar to rock (Middleton, 1990); this is also interchangeable with the term ‘lick’ and can refer to a musical idea and identity of a specific *practitioner* as opposed to that of a particular song. The musical material is chiefly used as part of the performer’s solos or ‘comping’ and can be easily transferred between songs, especially within a live context (Gridley, 1978: 35). Riffs in Jazz can also be used as a framework for composition and improvisation for a group of musicians as well as an individual (Gridley, 1978: 109), thus further muddying and loosening the term. There is a confluence between the popularity of riff-based music in all three worlds (Gridley, 1978: 254) and this is perhaps due to the infectiousness and digestibility of such simple hooks.

Further restrictions apply to the term riff when played on a guitar; should a pattern be played on the higher register of the instrument, it will often be referred to as a melody or solo. At what point then does the term ‘riff’ no longer apply when dealing with these repeating patterns? Is there a ‘golden register’ to which the term applies? The simple answer would be that a riff should generally be focussed on the lower two strings of the guitar and adhere to the octave E2-E3. In forms of rock such as Heavy Metal or Extreme Metal, the guitars are significantly downtuned (Kahn-Harris, 2007: 32); in some circumstances they are customised with additional strings to reach even deeper pitches, sometimes performing notes a full octave lower than a regular 6-string guitar (see Fig 2.3). How does the audience identify this as a riff when the pitch moves so far into the bass guitar register? From a performance perspective, this may simply be that the audience can physically *see* the performer using the lower end of the guitar. When discussing a studio recording however, the answer is not as obvious and the culture of ‘tabbing’[8] may have had an impact; many fans of this particular subgenre are also practitioners and tabs are an accessible method of learning to play existing material requiring very little musical knowledge, due to the numerical basis.

[8]Tablature or ‘tabbing’ is a numerical method of notation, as demonstrated in Fig 2.3

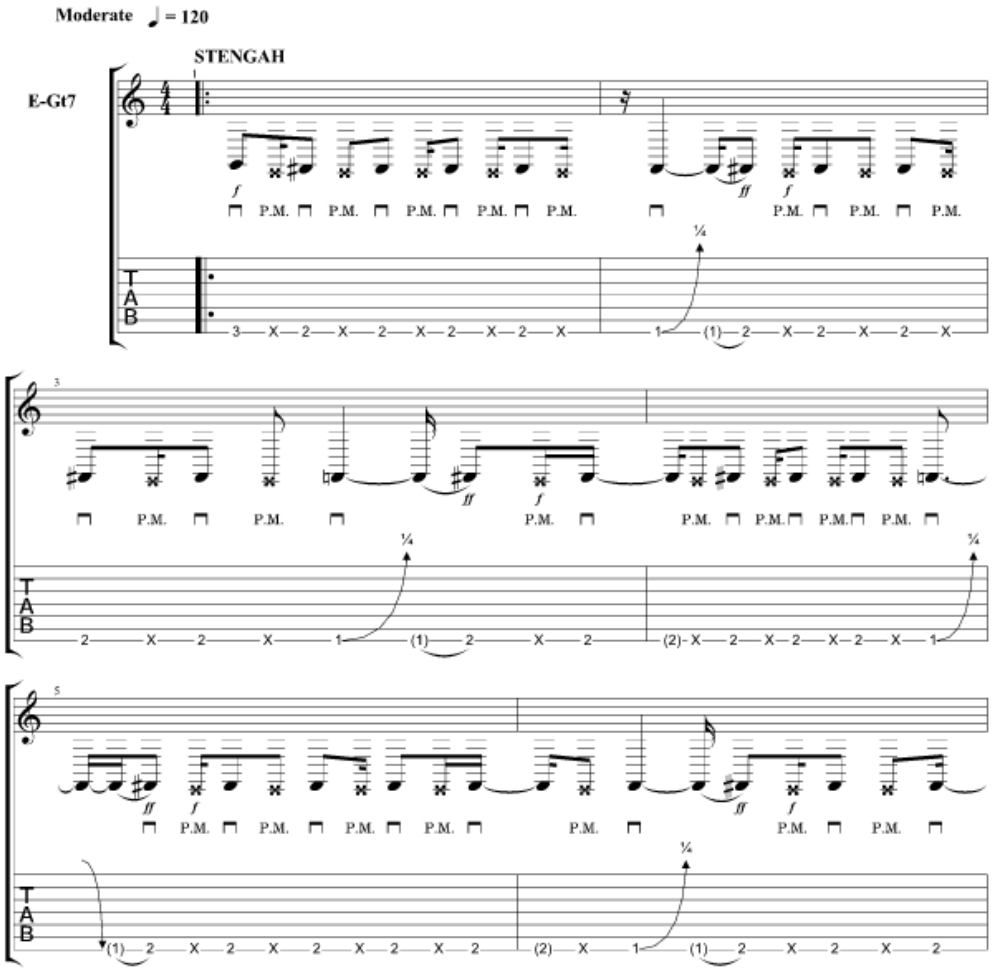

Fig 2.3: Intro to *Stengah*, Meshuggah (*Nothing*, 2002) featuring score and tablature (MusicNotes.com)

Whilst the use of tabs has undoubtedly provided a greater level of learning access, they are sometimes limited by their lack of attention to rhythm[9]. In Fig 2.3 for example, the online author has included a scored version to clarify this. Equally, the scored version would be ineffective when using so many ledger lines for Meshuggah's downtuned approach, although this could be easily remedied by an alternative clef or performance directions.

This does not explain the treatment of the bass guitar and its relationship with the term 'riff' however; whilst it is relatively common for a bassist to use an expanded range instrument (5 or 6 string), this has *not* moved in parallel to the expansion of the guitar's range. In cases where extremely downtuned or added register guitars are used, the bass often plays within the same octave, such as is the case with Meshuggah's employment of both 7 and 8 string instruments. It is curious that the term 'bass line' is used for the bass as opposed to 'riff'; both are mechanically similar, performed with closely-related techniques (sometimes interchangeably) and

[9]Equally, with few checks in place, there is a serious question of accuracy; a cursory search for this song alone produces wildly varied transcriptions using different rhythms, pitches and guitar tunings

are capable of almost identical timbres with the use of effects pedals. The application of such terminology would appear to be a method of differentiating the perceived role of each musician with little regard to the musical or sonic content they produce.

Extreme Metal requires a more thorough exploration of its relationship with riffs; whilst many popular musicians use the term interchangeably with ‘musical idea’ (Middleton, 1990), it is in the more extreme subgenres of rock that the riff can become the very fabric of the song (Kahn-Harris, 2007: 31). This may be because so many elements of popular song, such as chord progressions and vocal melody, are stripped away to provide an ever distorted and often deliberately obtrusive sound. A crucial and tangible difference in definition emerges in that ostinati are used to create a grounding or drive in specific pieces of classical music from which the melodic, rhythmic and harmonic interest are then constructed; in this form of rock, riffs are usually the centre point of the song and are integral in the process of identifying a piece as a rock song. Furthermore, it is often the *collection* of riffs that define the rock song as opposed to a single ostinato; it will feature a ‘verse riff’, ‘chorus riff’ and ‘bridge riff’ that are not necessarily related but serve to work as the fabric and structure of the piece in a way that other genres rarely do. Artists within the Heavy Metal and Extreme Metal worlds have also greatly stretched this idea, creating increasingly interwoven riffs that are still instantly recognisable and repetitive (see Fig 2.4).

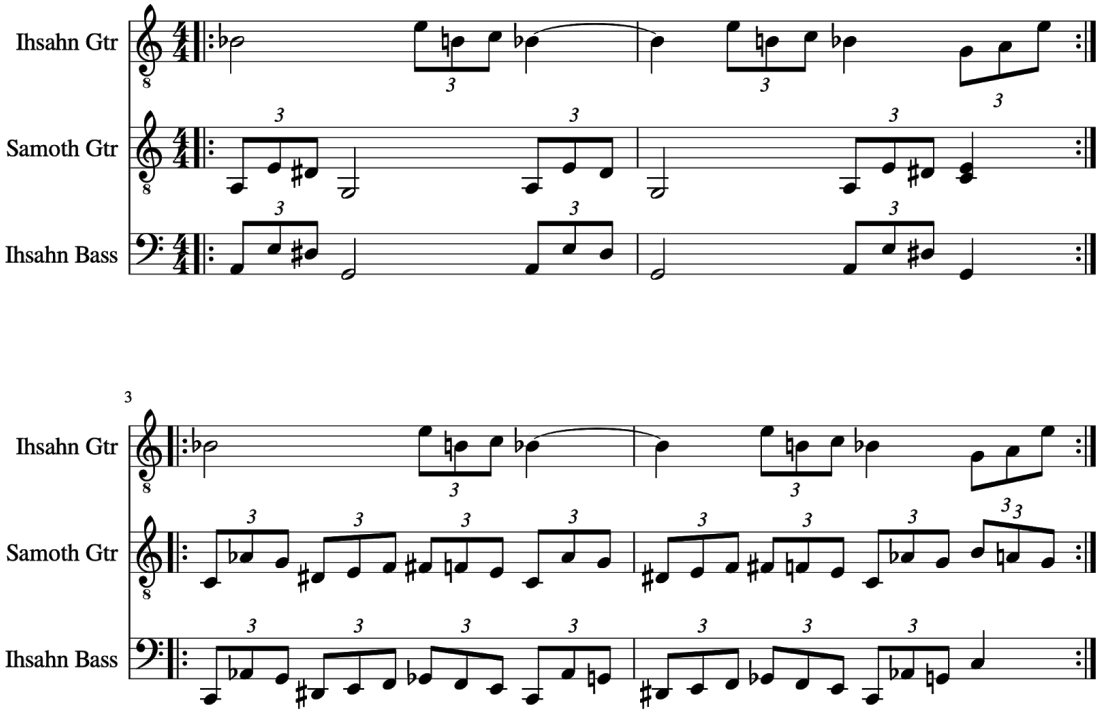

Fig 2.4: Extract from 0’53” *The Tongue of Fire*, Emperor (*Prometheus*, 2001) ♩= 100

The riffs in such circumstances are largely made from very short ostinatos that support layers of additional material which in turn repeat through their own cycles.

The key difference here is that the entire short section of musical material is treated as the ‘riff’ and repeats as a whole; the term ostinato and riff are separated by more than genre. The riffs themselves are not confined to existence solely as short fragments and may contain more classical uses of the traditional ostinato as a compositional tool within a single section of the rock song.

In summary, a Riff is;

- A repeated musical fragment forming the main compositional framework
- Malleable or fixed as desired
- Performed on any instrument

2.3 Tuned Percussion

Having built a working definition of both the ‘rock band’ and subsequently the ‘riff’, it is equally important to provide some formalisation of ‘tuned percussion’ in conducting this research. As mentioned, there are a variety of percussion instruments that fit this description; one may often overlook that *all* percussion instruments produce pitch, although this may not fit perfectly into the chromatic scale and may be difficult for an audience to fully perceive. Such knowledge proves particularly useful in the recording studio where fundamental pitches of ‘untuned’ percussion instruments are adjusted for effect during a piece, either through direct acoustic re-tuning or during post-production. As such, any item can theoretically be tuned, with varying degrees of difficulty to the process[10]. However, one must also consider the function any instrument plays when attempting to define it. A tom-tom for example, is not generally designed for direct contribution to melodic and harmonic content; to do so requires adapting it far outside its comfortable parameters, or reconstructing it altogether[11]. By way of contrast, a vibraphone is fully tempered and designed to perform melodies, chords and other forms of chromatically centred material. Comparing the two on *potential* function alone, there could be much greater scope for pitch variation with unpitched drums as they are not locked into the chromatic scale in the same way. Retuning the vibraphone microtonally would be both extremely arduous and very much permanent, achieved by physically removing material from individual keys. Importantly, the pitch could only be *raised* in this fashion; adding further material to a key would not allow it to resonate and one would need to recast it from scratch to achieve a flatter note.

There is a middle ground for tuned percussion instruments that is even more challenging to define. These are items of multiple but *limited* pitch and arranged as a set. A good example of this is the pentablocks, which feature 5 woodblocks grouped

[10] A drum is far easier to tune by altering the skin tension compared to a cast cymbal, for example
[11] See *Terry Bozzio* in Chapter 1

together and tuned approximately to a pentatonic scale. They do not usually serve to perform tuned material, rather adding variation to a sound otherwise considered unpitched. Much as is the case with the vibraphone and other fully tempered apparatus, these cannot be retuned in any practical fashion. There are other items that *can* in fact be adjusted such as timpani and roto-toms; in terms of arrangement, these are nearly always set up with between 2 and 5 pitches. They are not so adaptable as to perform complex melodic or harmonic lines, unless as part of a multi-track studio effort. As such, these are also to be considered semi-pitched.

Under these guidelines, the previously discussed individual tom-tom would therefore be referred to as an untuned instrument, but a small collection would be referred to as semi-pitched, provided that they were deliberately tuned to specific notes. A much larger collection spanning several chromatic octaves *could* therefore be referred to as tuned percussion, but is uncommon due to the obvious practical difficulties. Ergo, both the function and arrangement of each instrument is paramount in determining which category best describes each item.

Below, I have included working definitions of pitched (tuned), semi-pitched and unpitched percussion, and have briefly categorised a series of common instruments that will be used during the research. The terminology is partially aligned with the definitions established by Smith-Brindle in *Contemporary Percussion* (1970); however, he categorises percussion instruments in an alternative fashion;

"*(1) tuned instruments, (2) instruments of indefinite pitch, (3) instruments usually considered to be of indefinite pitch but which can be tuned"* (1970:2)

These categorisations are somewhat unsatisfactory for this research, particularly without the 'middle ground' of semi-pitched or limited-pitched percussion; such definitions are certainly functional when dealing with individual instruments, but fall short when considering larger collections. This is highlighted in the previous example of the individual tom-tom versus the set of tuned tom-toms; there is a greater categorical mobility that reflects the extended, malleable and unique functions of percussion apparatus. In recent years, some of these practises have been pushed to ever more extreme lengths, some of which are discussed further in Chapter 3; as such the discrepancy in definition may stem from the time in which Smith-Brindle was working. Additionally, his terms focus on instrumental construction rather than practical or strategic function.

Pitched Percussion; Fully tempered idiophones (primarily *concussion idiophones*) that can perform multiple chromatic pitches as standard; comparable to keyboard instruments. Can also be referred to as *tuned percussion*.

Examples; **Marimba, Vibraphone, Xylophone, Glockenspiel, Tubular Bells**

Semi-Pitched Percussion; Partially tuned idiophones that feature some definite or related pitches, but are limited to performing either a small range of fixed notes or a larger range that require frequent retuning.

Examples; **Timpani, Temple Blocks, Roto-Toms**

Untuned percussion; Idiophones of no specific pitch (often membranophones). Used primarily for purely rhythmic and textural purposes with no direct contribution to melodic or harmonic content.

Examples; ***Snare Drum, Tom-Toms, Bass drum, Triangle, Cymbals, Gong***

2.4 The Rock Drummer and The 'Rock Percussionist'

This research aims to explore the roles of both the drummer and the percussionist within the context of rock and as such, it is necessary to provide some context and comparison of both.

A core feature of most rock bands[12], there is an abundance of drummers in rock, both currently and throughout its history. Much rarer in rock is the percussionist; drummers occasionally dabble with this role, perhaps performing a song on hand drums or similar. Full-time roles within a band are uncommon and can face accusations of pure novelty as is the case with the two auxiliary percussionists of *Slipknot*; McIver does much to dispel such notions of gimmickry however (2012), instead supporting this as part of an overall striking performance practise.

So what defines and separates these two roles? Examples of full-time percussionists within rock bands are at best sporadic, especially when compared to the position of the rock drummer. It is therefore important to discuss the strategic function of each, as well as to examine the related styles and techniques employed. Several percussionists come from non-rock musical backgrounds and many arrive equipped with classical training. There is an obvious comparison here to high profile keyboard players within rock bands, namely Rick Wakeman of *Yes* and *Jon Lord* of Deep Purple. Such players add depth to the sounds of their respective bands and it is prudent to briefly discuss the relationship of classical training to each role's musical practise.

Below is an assessment of each role, taking into account the following criteria;

[12] See Chapter 1 for details

1) Classical training/ notation reading
2) Strategic use/ function
3) Style/ technique

Drummer

1) Historically, rock drummers cannot read music. Those that can are often able only to read drum specific notation and cannot read other instrumental scores. No understanding of harmony is usually necessary, so there is generally little participation in such elements of songwriting.

2) Rock drums are the backbone of the music and lock in with the bass guitar/ electric guitar riffs to underpin the music. Whilst there are certain virtuosic moments[13], the function is mostly to keep time and ensure the key rhythmic points of the other instruments are punctuated. Simplicity is favoured over complexity. Solos are only occasionally permitted; at best these are a chance for the drummer to demonstrate their skill for a short section of a concert, at worst these are a chance for the audience to visit the bar. Within recorded songs, they are practically unheard of. Neil Peart's solo on Rush's live version of *YYZ* (*Exit...Stage Left*, 1982)[14] is a notable exception to this, although crucially it is taken from a live performance, serving to reinforce this point. The original album version (*Moving Pictures*, 1980) features a shorter 2 bar fill as part of a longer conversational section between drum kit and bass guitar. Such tactics are more widespread within rock drumming; in Extreme Metal, they are demonstrated on Decapitated's *Babylon's Pride* (*Nihility*, 2002) with drummer Vitek using a virtuosic drum fill to connect two otherwise opposing musical sections. A more common strategy is the rock 'drum intro', such as Judas Priest's *Painkiller* (*Painkiller*, 1990); in fig 2.5, Scott Travis' fill announces the song before introducing the main guitar riff.

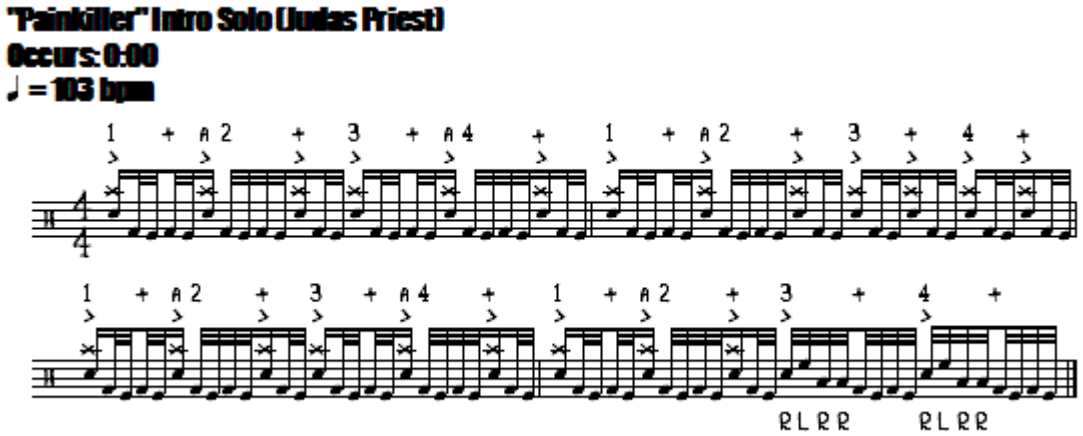

Fig 2.5: *Painkiller*, Drum Introduction (drumstheword.com)

[13] Extended fills and flamboyant song endings for example
[14] Discussed in Chapter 1

It is interesting that this method is still subservient to the guitar, as opposed to being a compositional device in its own right. Overall, such examples do provide excitement to their respective songs, but do not feel satisfyingly integrated; there is a sense that the rock drummer is considered ‘other’ when a majority of their foreground presence is unaccompanied.

Comping and improvisation are generally discouraged; such actions could potentially destabilise the music for the ‘soloists’ (i.e. guitars and vocals). The drummer also leads the dynamic focus of the music; whilst generally encouraged to play at a consistent volume, this is often achieved by varying the ‘busy-ness’ of the part. More spacious playing is used for a lower dynamic level, with an increasing frequency of notes to demonstrate a crescendo or build up. Overall, the groove of the song and whether this plays behind, on or ahead of the beat dictates the direction and general feel of a song.

3) Rock drum grooves feature a heavy emphasis on the backbeat and subdivision ‘feel’ of the song such as quavers or semi-quavers. Other rhythms, such as the bass drum pattern, interlock around these. Performance tradition is to hit forcefully, energising and exciting the music and fellow performers. The drummer appears aggressive, masculine and physical whilst playing; broken sticks, skins and cymbals are taken as trophies by audience members.

In summary, the Rock Drummer;

- *Primarily* keeps time, although is not limited to this function
- Establishes and directs the feel and energy of the band
- Plays a largely supporting role

Percussionist

1) The ability to read is a higher priority amongst percussionists; in part this is because band ‘members’ will often be hired session musicians needing to digest and perform a set within a short timeframe. This is of particular importance when the percussionist is required to perform on tuned instruments due to the increased relationship with melody and harmony. Conversely, there is less emphasis placed on music reading for purely unpitched apparatus such as hand drums and timbales.

2) The idea of a purely ‘rock percussionist’ is quite rare, especially when compared to the ubiquitous rock drummer paradigm. The few existing practitioners tend to deal with emphasising rhythm in a similar fashion to the drummer as is the case with Slipknot (*Slipknot*, 1999) or creating pure sonic colour as in the case of Jamie Muir,

once of King Crimson fame (Smith, 2001: 159). Generally, the instrumentation comprises auxiliary equipment to the drum kit such as timpani, marching quads and field snares; interestingly, both of the aforementioned examples have a penchant for found instruments, whether beer kegs played with baseball bats or toast racks with knitting needles. As such, there is a greater scope for both comping and improvisation; such a strategy is less intrusive to the backbone of the music and still seeks to support the soloists.

If virtuosity is a low priority for the drummer, it is lower still for the percussionist. Practitioners are often required to play sporadically through a performance and frequently have to search for additional parts to include, or 'sit out' for extended periods. When in doubt, this may involve playing a shaker or tambourine. This provides at least the illusion of participation, but in live performance such parts add little to the music when buried beneath the rest of the band. Interestingly, rock singers can often be faced with a similar dilemma during extended instrumental solos; the options are either to appear part of this or leave the stage temporarily. This does raise interesting questions regarding the very nature of participation and collaboration within the rock band.

In the studio, percussion parts will often be undertaken by the drummer of the band, unless more specific instrumentation is required, such as non-Western or tuned apparatus; occasionally this extends to live performance. It is difficult to categorise such players fully as rock percussionists as their conventional practise exists elsewhere; indeed many, such as Ruth Underwood, are from orchestral or Jazz backgrounds and adapt to meet the needs of the music. From a very similar era and further into the world of experimental rock music, Henry Cow incorporate xylophone on albums such as *Unrest* (1974) and *In Praise of Learning* (1975). Interestingly, this is performed by guitarist Fred Frith as part of his approach as a multi-instrumentalist. The instrument is used sporadically, usually during freer improvised sections and thus it is difficult to categorise him as a rock percussionist when the xylophone and the guitar are treated as separate entities. Furthermore, it challenges the notion that such a role should *automatically* be filled by a rock drummer, although drums and tuned percussion do share similar technique in terms of grip and strike (Blades, 1961: 74).

Whilst such percussionists add texture and a richness in colour, they could be perceived as mere status symbols, demonstrating the sophistication and arguably success of a band or artist[15]. Despite an outwardly DIY and rebellious attitude, there is an apparent desire to work with 'proper' musicians using notation; including a

[15] This is not a unique trait to percussion; historically many artists have included increasingly diverse instrumentation as their artistic status and financial situations have improved

percussionist is one way for an artist to publicly imply that they have joined such an elite.

3) When used as a full member of the band, the rock percussionist will often make a significant contribution to the live spectacle; the simple fact that they will likely be playing standing up, rather than ‘taking the chair’ of the drummer, enables a greater level of audience interaction and a stronger visual performance. They are still limited by non-mobile equipment in a way alien to guitarists, bassists and singers. Moreover, the role of the session musician within this can be quite the opposite, with an emphasis on *separation* from the band and audience.

Traditionally, there is a scepticism toward musical theory and notation within rock music[16], in part governed by a belief that such knowledge will undermine musical expression or hinder creativity. This attitude has certainly lessened in recent history, perhaps from a greater acceptance of rock as an increasingly diverse and legitimate form of music; the idea of studying the musical aesthetics of rock, rather than examining in a social, psychological or cultural context, would be previously rejected in academia. Furthermore, notated music arguably takes more unorthodox forms with musicians using MIDI software such as Logic, Pro Tools and Cubase as compositional devices in a comparable method to handwritten manuscript. Such devices are used to record and communicate notated musical information to other players and require at least expertise in rhythmic subdivision and meter; knowledge of harmony and harmonic relationships are however not required to use these tools, although this is perhaps appropriate to the framework of rock.

In summary, the Rock Percussionist;

- Plays a largely supporting role to the Rock Band
- Is often viewed as other to the Rock Band
- Adds sonic texture and colour to the band

2.5 Comparing Pitched Percussion and the Electric Guitar

A common theme throughout this research was the relationship between the electric guitar and pitched percussion (as defined earlier in Chapter 2.3). It was therefore necessary to directly compare the two and consider any potential adaptations in pairing them. The relationship between the two instrumental roles within the context of the research is considered later on in Chapter 6.3.

[16] As well as many other branches of popular music, of course

Sound Generation and Mechanics

The first and perhaps most obvious difference here is that the electric guitar will conventionally produce sound through striking one or more strings; this is 'sensed' by an electromagnetic pickup detecting movement in the magnetic field with the resultant signal being amplified to produce sound (French, 2000: 89). The instrument produces minimal volume without amplification. In contrast, with pitched percussion instruments the performer creates sound *directly*, primarily by striking the keys; this *can* be amplified, but would require microphones to directly capture the acoustic sound and a speaker system to project this. Pitched percussion therefore tends to favour reverberant performance environments to highlight its nuances and thicken the sound acoustically. Electric guitars favour drier spaces to focus the sound; reverb levels can be *controlled* through effects and even changed during performance.

Playing Techniques

The strings of the electric guitar are primarily struck with a plectrum in rock music; players occasionally pluck the strings with fingers for variety, though there are very few examples where this is used as the primary technique[17]. Pitched percussion instruments are struck using mallets composed from a variety of materials to provide a wide range of hard and soft tones. Conventionally, up to 4 of these can be used by the performer, allowing fairly complex chords comparable to those produced by the 6 (or more) strings of the guitar, although the latter does thus have *slightly* more notes available. When played in partnership, this could be managed by limiting the chord sizes for the guitar, using additional mallets to the tuned percussion or arranging the notes of larger chords between the two.

Sustain

Both pitched percussion and the electric guitar have different methods of performing longer, sustained notes; for the former, this is achieved through acoustic resonator tubes, with the latter through its pickups. The length of sustain is governed by specific models in both cases. Specifically with the vibraphone and certain models of glockenspiel, this is dramatically increased by the inclusion of a sustain pedal; on the electric guitar this can be achieved through electric effects pedals. For both, the opportunity to blend even greater quantities of notes is available as a result. Further to this, the EBow can create 'seemingly endless vibration' of the strings (Kohl, 2020: 112). Orchestral bows have been employed by guitarists to a smaller extent. For the vibraphone, a similar bowing of the keys is relatively common in contemporary music, although applying either in a rock band could present issues in balancing the

[17] Mark Knopfler of Dire Straits is one such example

sound. With instruments such as the marimba or xylophone, the sustain is generally softer and shorter; as such, sustained notes are produced by rapidly alternating two mallets as a roll. The electric guitar is capable of a similar effect through rapid alternating strokes known as tremolo picking. When partnered, the guitar could match the shorter sustain through dampening techniques such as palm muting.

Timbre

Both instruments have a wide range of timbres available; for pitched percussion, this is partly achieved through the variety of instruments available[18] and furthered by an assortment of beaters. For the electric guitar, electronic effects pedals provide significant diversity, as well as instrumental and amplifier choices. In theory, such pedals can be used on *any* instrument; however, it is also important that the identity of the percussion instruments is maintained and more extreme effects should be managed carefully. In partnership, the guitar will potentially need to reduce and simplify its usage of these so as not to overpower the pure tones of the acoustic instruments with textures overly rich in overtones. The pitched percussion can also aim to match this sonic power by layering and blending instrumental parts; performing in unison across several instruments would create a more complex sound across several octaves. Additionally, the most obvious method of creating a more cutting sound would be to use harder beaters on the instruments; it is likely that musical material performed with soft mallets will need to remain separate from heavily effects-driven guitar parts. However, blending sounds using a *variety* of beaters could create a textural richness to match the electric guitar.

In terms of instrumental registers, the two are comparable although pitched percussion has a more significant range advantage when considering the *collection* of available instruments. However, the electric guitar is not constrained to permanently fixed pitches; multiple-tunings can easily be facilitated to alter and expand the pitch register[19], although this would commonly involve an expansion into a bassier range only. Crucially, this flexibility of pitch also places the responsibility for accurate tuning on the guitarist; tuned percussion *cannot* adapt in the same way. Expanding the range of pitched percussion conventionally involves adding or even constructing new instruments for the percussionist's rig. The marimba is the primary target for such adaptation and apparatus of up to 5 octaves can be found, although 4.3 octaves is more commonplace owing to the significant reduction in size and cost. Additional pitches for tuned percussion may be accessed through electronic effects such as the guitar's octave pedal; this would apply no *direct* distortion to the sound and as such may overcome any issues concerning loss of identity or character.

[18] See Chapter 2.3 for a list of the main apparatus
[19] This can also be achieved via extra strings, which is discussed in Chapter 2.2

3. WE'RE GOING TO NEED A BIGGER VAN;

Exploring and Contextualising Existing Practise

3.1 Existing Practitioners

Frank Zappa/ Ruth Underwood

Whilst the relationship of tuned percussion and the rock drummer are traditionally separate, which practitioners have already made steps to change this? Perhaps the most obvious and widely recognised example is Frank Zappa. Originally trained as an [unsuccessful] drummer (Courier, 2002: 30), Zappa has a long history of bringing traditionally non-rock instruments into his compositions. Several prominent examples of this exist through his work featuring percussionist Ruth Underwood, notably the albums *Overnite Sensation* (1973) and *Apostrophe* (1974). Whilst Zappa's previous and subsequent albums did use instruments such as timpani and vibraphone, it was during this period that the role of the percussionist was brought firmly into the foreground of the band. Given the history of almost exclusively male-dominated lineups, it may also seem that this has more to do with the 'novelty' of Underwood's gender than her musical contribution; Underwood herself disagrees with this notion however (Courier, 2002: 257). This point is fairly succinctly mooted as Underwood's skill as a player and charisma as a performer is clear on compositions such as *Zomby Woof* (*Overnite Sensation*, 1973) and *St.Alphonzo's Pancake Breakfast* (*Apostrophe*, 1974), the latter of these be shown below in Fig 3.1.

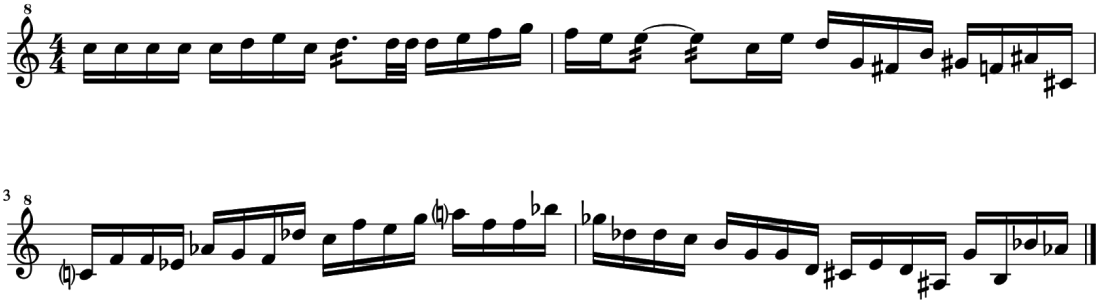

Fig 3.1: *St.Alphonzo's Pancake Breakfast (from 1'09")*, Middle section marimba part extract

The section features a combination of *moto perpetuo* semiquavers coupled with an unpredictable approach to harmony; the expansive range of pitch and intervallic leaps further promote Underwood's technical dexterity.

It is noteworthy that Dweezil Zappa uses a mallet player during the *Zappa Plays Zappa* performances, suggesting that he views this as an integral element of the Zappa sound. Developing such a role at this time can only be considered forward thinking; as discussed, it is not uncommon for artists to experiment with additional

instrumentation in the studio without developing a full-time and integral role in the band. The iconic use of the timpani at the beginning of the King Crimson track *Epitaph* (*In The Court of the Crimson King*, 1969) for example, appeared 'almost by accident' (Smith, 2001: 62), with the instruments left over in the studio from a previous session.

In Frank Zappa's case, this position is still treated as *auxiliary* to the band, appearing intermittently throughout his considerable studio and live career. It is not a staple, central theme in the same way as the guitar; indeed, the '*Shut Up and Play Yer Guitar*' albums (1981) act as a testament to its importance within his music[20]. Very little Zappa music does *not* contain guitar-based material, with notable exceptions being his work with the synclavier and London Symphony Orchestra albums (*London Symphony Orchestra Vol.I,* 1983 & *London Symphony Orchestra Vol.II*, 1987). Percussion does not hold the same status. In addition, the percussionist role within his music is often still that of a supporting player and rarely takes centre stage *above* the vocals or guitars; despite being a highly effective section, even the famously virtuosic *St.Alphonzo's Pancake Breakfast* marimba solo (Fig 3.1) is doubled by both the guitar and keyboard. Furthermore, the role of the rock drummer is largely unaffected by that of the percussionist. They exist in parallel with the former remaining largely unchanged, although extremely challenging technically, and the latter being a recontextualised classical position.

Terry Bozzio

The various incarnations of Zappa's band have produced many world class drummers such as Vinnie Coliatua, Chad Wackerman and Terry Bozzio to name but a few. Bozzio's more recent work is of particular relevance as he has arguably pushed the rock drum kit to its extremes[21]. The visual impact of such a rig cannot be overstated. Being centred around varied and tempered pitch, the creation of this apparatus is extremely relevant to this research; his aim was to create a framework for the drum kit to play melody in a solistic fashion (Terry Bozzio: FAQs, 2019). Technical facility to play such a rig is understandably high. Composition *Pat's Changes* (2012) aptly demonstrates this, with extremely concise multiple bounce roll technique[22] and impressive coordination to maintain and develop the accompanying foot ostinato. Bozzio performs clear, repeated melodic lines displaying a *thoroughly* composed solo percussion piece. He has an unusual approach to note groupings and scales, possibly affected by the unorthodox diagonal order in which the tuned instruments are positioned (Terry Bozzio: The Big Kit, 2012). There is further

[20] This is in fact a *series* of albums, only reinforcing this point
[21] See Chapter 1 for more details of Bozzio's 'solo percussion ensemble' rig
[22] Interestingly, this is performed using the orchestral triplet technique, rather than the typically 'crushed' method usually employed by drummers in popular music

evidence of Bozzio's attention to tuning in that every drum[23] clearly display pitch names. It is notable that an electronic triggering system is used on many of the tom-toms, kicks and djembes (Terry Bozzio: The Big Kit, 2012); this helps to enhance and clarify the melody lines (Terry Bozzio: FAQs, 2019), but also suggests that this could be achieved on a much smaller instrument or set thereof[24].

Bozzio is certainly innovative in his approach, but the resulting rig loses some of its character as a drum kit; more importantly, it loses stylistic identity as a rock instrument. Furthermore, despite featuring so many components, the compositional possibilities are surprisingly limited. Perhaps this is due to restricted instrumental choices that comprise mainly of differently sized tom-toms, cymbals and bass drums accompanied by relatively few additional effects, most of which can be found on any conventional rock drum kit. Additionally, although there is an effective 'call and response' feature to the composition between melodic phrases and rock style groove, these are rarely combined into one element, similar to Neil Peart as discussed in Chapter 1. Other similar works such as *Slow Latin* and *Klangfarben Melodie* follow comparable structures featuring both the pitched versus unpitched format underpinned by a foot pedal based ostinato. Perhaps expanding the function of the electronic triggers could be a way of breaking these patterns? Many of the melody lines Bozzio plays rely on multiple bounce rolls to execute longer notes and legato passages; this requirement could be removed via electronic enhancement. It would be interesting to see closer attention to tuning on other parts of the kit, such as the cymbals; although the rig features a set of tuned gongs, these seem to be used extremely sparingly. It is worth noting that Bozzio has also experimented with an entirely cymbal based kit (Sabian Cymbals, 2020); though producing some highly unusual sounds and displaying his technical dexterity, there is a weaker relationship with measured pitch, with the limited number of compositions for this set up following the same format as discussed.

Despite an overwhelming physical presence, solo performances risk becoming stale once the audience are accustomed to the equipment. The apparatus also struggles to find sonic space when used in collaboration with other artists, despite Bozzio being a highly experienced and undeniably capable practitioner in this field. One example of this is his collaboration with Eduardo Kusdra (*Face to Face*, 2014); Bozzio seems to take a more traditional approach to drumming in such work and the kit makes limited contribution to the melodic and harmonic content of the piece. Furthermore, the abundance of tom fills and cymbal sounds can be somewhat misplaced, at times clouding the music and detracting from the composition. This is echoed in similar collaborations with Korn's *I Will Protect You* (*Untitled*, 2007) and *Amsterdam Percussion Group* (2006); much of his melodic approach is here

[23] Including even the kick drums
[24] Of course, this would detract from the sheer spectacle of such a rig!

abandoned in favour of a traditional rock drummer role. The overall conclusion is that this rig seems suited to solo performance, despite Bozzio being a proficient collaborator.

Pierre Moerlen

From a similar era as the Zappa/ Underwood collaboration is *Pierre Moerlen's Gong*. Crucially, this project is not to be confused with the other branch of the band following their split, simply labelled '*Gong*'. With Moerlen's version of the band, compositions are built around the percussion parts, rather than being constructed around guitar parts with extended instrumentation (*Downwind*, 1979*/ Time is the Key*, 1979). The pieces consistently place tuned percussion as the central focus; this is often achieved in a group setting with layers of marimbas, vibraphones, glockenspiels and more as opposed to a single soloist supported by the band. Thus, there is a strong suggestion of a conservatoire-style percussion ensemble. The band are often referred to as jazz-rock (Gibbels, 2011), a questionable label given that there is so little improvisation or traditional jazz instrumentation, save the odd dabbling with jazz-style vibraphone[25]. In fact, the compositions appear *meticulously* pre-ordered and controlled in a manner more associated with classical music. Moerlen's work has also been compared to Gamelan (Bowler, 2018); when considering compositions steeped in repetition with metallic percussion and a ritual quality, such comparisons are perhaps inevitable. A more accurate description than jazz-rock, could therefore be Gamelan-rock, although this may imply a separate set of limitations or restrictions.

Applying the term rock may actually be inappropriate in any capacity for Moerlen's work, with or without genre suffix. There are clearly comparable elements with rock music; it contains a mostly repetitive, riff based approach and occasionally shares some of the same instrumental strategy including drum kit based rock grooves, distorted guitar lines and solos, and strong bass guitar lines underpinning the harmonic direction (Moore, 2018: 38). There are also some interesting non-percussive instrumental additions helping to provide further fresh textures; particularly notable is the extended use of the bass guitar, which is treated as a lead instrument at points, such as on *An American in England* (*Time is Key*, 1979). However, despite some usage, the large-scale absence of other dominant rock factors, particularly vocals and guitars, does create a disconnect from the rock framework.

Moerlen would holds a comparable musical heritage and skill set to my own, having performed firstly as a rock drummer within the pre-split *Gong* lineup and later expanding his percussive palette (with Mike Oldfield and *Les Percussions de*

[25] The track *Supermarket* from *Time is the Key* (1979) is one such example

Strasbourg) before stretching his abilities as a composer (*Pierre Moerlen's Gong*). As mentioned, it is debatable as to how much of his compositional output actually can be considered rock compared to his early work as a performer, despite being heralded as a pioneer in raising the profile of tuned percussion. There are relatively few examples that could be described as a 'rock song' within his work, although this may be somewhat symptomatic of the era in which he was working, with extended Progressive Rock pieces and concept albums being commonplace (Holm-Hudson, 2002). Given such rejection of rock's boundaries, it is curious that a majority of the instrumental solos in his work are performed on either the guitar, bass guitar or keyboard with few taken by percussion. Is this Boerlen taking a humble approach as a composer or suggesting something more fundamental about the nature of tuned percussion within the rock band? Mallet percussion still features *almost* constantly through his work and as such can be described as a consistent sonic presence. Does this then suggest that the traditional instruments of a rock band are somehow better suited to soloing?

The ritual qualities of Moerlen's work are demonstrated on tracks such as *Arabesque* (*Time is the Key*, 1979). Here, there is a repetitive simplicity to both rhythmic and harmonic approaches within the *moto perpetuo* lines that invite the previously mentioned Gamelan comparisons. Occasionally, such techniques can become formulaic, such as the apparent reliance on parallel arpeggios on *Supermarket* (*Time is the Key*, 1979), although this also acts as a vehicle for one of Moerlen's few mallet solos on the album.

His later work pushes rhythm, harmony and texture in more advanced directions (*Pentanine*, 2004), as well as further into more obvious jazz-rock territories with increasingly extended, improvised solos and a harmonic language suited to 'fusion'. Simultaneously, mallet percussion is no longer such a consistent force within his work, although it does feature often; there is a greater draw toward musical ambience, with entire soundscape tracks and an ever increasing move toward synthesisers.

Johnny DeAngelis (Oni)

In heavier rock music, there have been even fewer practitioners; however, the band *Oni* does feature Xylosynth[26] player Johnny DeAngelis. If a tuned percussion player in a rock band is rare, then finding one within an Extreme Metal act is a true oddity. DeAngelis has a virtuosic style that is placed in the foreground both musically and aesthetically, displayed on tracks such as *Barn Burner* **(***Ironshore*, 2017). The track features complicated four mallet passages, rhythmically precise rolls and arpeggios

[26] For the uninitiated, the Xylosynth is an eclectic MIDI instrument made by UK company Wernick. It resembles and is operated as a mallet percussion instrument but with additional electronic capabilities as desired

travelling over several octaves at considerable speed. There is no doubt of his or the band's technical dexterity. However, the use of the Xylosynth in this context does diminish the identity of both mallet percussion and the mallet player; this is little to do with the use of the instrument itself and more to do with strategic role and sound choices. The entire soundscape of the Xylosynth within Oni centres around deliberately and ostentatiously electronic sounds. In the few interviews currently available, DeAngelis explains that his role is as an alternative to a lead guitar player and this could contribute to such obtrusive sound choices (Pink, 2017). Sonically, this does make his contribution significantly harder to identify as percussion of any description; it could be argued that such a role would be far easier to fill for a keyboard player or even as a fully sequenced component, particularly in the studio.

The strategic uses of the Xylosynth within this context are more complex. Some material still struggles to hold any sonic resemblance to a percussion part. DeAngelis is however a classically trained mallet player and the apparent absence of common techniques such as mallet rotations could be a deliberate decision, particularly when he displays mastery in advanced techniques such as 'Musser grip'. The riff based 'rhythm guitar' parts played on the Xylosynth are actually closer to traditional mallet playing in many ways. These are adapted 'djent'[27] style sections that can be executed effectively through careful and precise mallet rolls, similar to the alternate and tremolo picking techniques of the electric guitar. It would be difficult to perform such musical content on a keyboard, if not sequencing software.

DeAngelis' contribution in raising, if not *creating* the profile of the mallet player within the world of metal should not be overlooked however. Even with the relatively modest profile of Oni, he is still one of the *only* practitioners operating in this role and both this and his technical prowess are to be commended. By the same token, there is a resulting tendency to 'overplay' or to play *continuously* throughout each composition, which places obvious restrictions on the diversity and dynamic range of the music. This is certainly not a unique phenomenon to Oni and is ubiquitous within the metal world; indeed, the focus on distortion and power within the music generally serves to encourage such behaviour, regardless of the instrumental forces employed (Walser, 1993). Perhaps then, this is something that both DeAngelis and Oni will address in the future.

Danny Carey (Tool)

With a much higher profile is drummer Danny Carey of the heavy metal band *Tool*. Carey is more obviously attuned to the traditional rock drummer role, but with some interesting adaptations through the use of electronics. His use of Mandala drums compliment his hard hitting rock drummer style and can be programmed to play any

[27] 'Djent' is a subgenre of Extreme Metal named onomatopoeically after its chugging rhythm guitar riffs

sound or series of sounds in a similar way to both Neil Peart's MalletKat or Johnny DeAngelis' Xylosynth. Volume is of clear importance to Carey with the kit featuring an array of large, heavy cymbals, large tom-toms and dual oversized bass drums made from reformed cymbal alloy[28] as opposed to the usual ranges of wood (Azevedo, 2016). The Mandala drums allow effective incorporation of a range of exotic percussion instruments that can match the volume of his acoustic drums. There is an obvious practical advantage to this in maintaining a streamlined rig, with extensive sound choices available at the touch of a button. Notably, the Mandala drums are even re-tuned on several tracks to meet with the harmony of each song (Mann, 2012); this process is similar to the far more common practice of re-tuning tom-toms and snares in the recording studio. This can be arduous and time-consuming and the electronics enable this strategic device in a reliable way. There is an obvious comparison to Bill Bruford's approach[29], particularly during *Discipline*-era King Crimson. Bruford's integrated Simmonds drums were used in a similar fashion, although less concerned with measured pitch. Carey even used vintage Simmonds before helping to develop the Mandala drums. The two also share a powerful approach, perhaps best characterised through Bruford's famous snare sound, renowned for its aggressive and cutting tone through a high pitched aluminium shell and rimshot played off-centre (Bill Bruford: FAQs, 2020). The Mandala drums could be considered as similar to a timpanist re-tuning via pedals for key changes and extended note ranges. However, though the Mandala drums are fully integrated into the setup of the kit, it is an important strategic point that they are not solely used for their harmonic contribution. They are primarily used for texture and colour and are rarely, if ever, used for any discernible melody within Carey's work. As such, one has to question their importance as tuned aspects of Tool's music and/or Carey's identity as a drummer.

Both Carey and DeAngelis open up areas of audio versus visual presentation; with DeAngelis, it is unclear that he is playing mallet percussion until one physically *sees* it. Oni provides a showcase for both the Xylosynth and for the position of a mallet player in a metal band, but could be accused of gimmickry when the surrounding music is quite standard tech-metal and adapts little to the presence of such an instrument; indeed, the Xylosynth is the *first* question that is raised in any interview with him or Oni. With Carey, the distinction between audio and visual is even more subtle; the audience can see that he uses electric drums as part of his kit, but the changing pitch relationships to the rest of the band is not obvious. He is *at times* expanding the role of the rock drummer by providing a deeper link with the melody and harmony of the music, although this is inconsistent.

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[28] The cymbals in question are from the Paiste 2002 series, renowned for their usage in heavier music styles

[29] See Chapter 1's for further discussion

3.2 New roles

The above practitioners have focussed on either transferring and adapting existing roles as a percussionist or expanding the role of the rock drummer. Sometimes this has meant recontextualising existing roles; Moerlen for example, arguably has borrowed the role of classical percussion ensemble player and forged it with rock instrumentation, without doing a great deal to adapt either. So is there a rock drummer who has created a *new* role altogether? Much rock is composed from the guitar first (Moore, 2018: 59), but is there anyone in the rock world writing from percussion outwards and *composing* for these new roles?

Josh Dion

The first point to address with drummer Josh Dion is that he does *not* use tuned percussion in his practice; his compositional *process* is however of great relevance in developing an extended role for the rock drummer. Dion's work integrates a synthesiser to the right hand side of the kit, largely replacing the 'riding'[30] hand with bass lines, riffs and comps whilst performing rock drum parts with the remaining three limbs *and* singing. This provides Dion facility and diversity as a fully functioning soloist on drum kit. He has adapted several elements of his playing, such as a 'sparser' approach to drumming generally and greater use of the left foot to perform 'riding' patterns using the hi-hat pedal. This requires a unique dexterity compared to other practitioners. It is not one of obvious virtuosity where streams of rapid notes are dispensed in showman fashion. The real expertise comes from coordinating and strategically planning the various elements on display. As such, one can forgive any performer attempting this for greatly simplifying some or all of the components. Remarkably, none of the simultaneous drummer, keyboardist and vocalist have been sacrificed in technicality, such as in his performance of The Paris Monster track *Vision Complete* (Little Big Beat Studios, 2016) and there are a plethora of complex instrumental interactions within each of Dion's compositions.

Nate Wood (fOUR)

Similar to Dion is drummer Nate Wood with his *fOUR* project. The complexity here is even more impressive, with Wood performing the same range of instruments as Dion *plus* a bass guitar. Wood places this across his lap in a seated position, but often plays using one hand with a series of 'hammer on' and 'pull off' patterns in a percussive fashion, not dissimilar to the techniques of 'slap bass'. He adds other percussion items to further expand the available palette, incorporating elements of drum n' bass and other electronic styles in particular. Wood also uses vocals,

[30] Typically for a right handed drummer, this would involve the right hand maintaining quavers, semiquavers, triplets or combination patterns on either the ride cymbal or hi-hat

although they are less of a feature compared to Dion's work. This is symptomatic of a greater difference in focus with Dion aiming to write 'soul, funk and synth-influenced pop songs' (Stitched Sound, 2019) and Wood writing technical compositions, perhaps similar in character to classical études. There is limited scope for making either of these part of a larger band however; perhaps it is simply not necessary, but such restrictions can place limits on the longevity, scope and impact of such artists. Although considerably more manageable in practical terms than the gargantuan rigs of Terry Bozzio, all three artists may fall victim to their practice becoming somewhat one-dimensional without interaction with other performers.

In the classical world, artists such as Evelyn Glennie, the first 'professional solo percussionist' in the world (Evelyn Glennie, 2019), have balanced solo careers with collaborative efforts; indeed, Glennie is still actively seeking collaborations, with recent performances and an album with 'Trio HLK' (*Standard Time*, 2018). Admittedly, Glennie is also less tied to a particular set-up, instead building new rigs for each project; would Dion, Wood or Bozzio adapt in such a way? It is likely that all certainly *could* as all demonstrate high levels of musicality and technical dexterity, but removing these complex and refined apparatuses also remove the intrinsic elements making each unique stylistically. There is a symbiotic relationship and arguably, simultaneous dissonance between performer and equipment in these cases. A key difference is that all three operate as composer-performers as opposed to Glennie who has modelled her career as a performer, perhaps attributable to her background as a classical player rather than within popular music.

Here also, deeper questions surface about the very nature of the drummer, percussionist and perhaps musicians in general; how effectively can they exist without the social and interactive elements provided by a band or ensemble? Dion does perform sometimes with a bass player in the 'Paris Monster'. His compositions themselves would be relatively standard indie rock or pop if performed by a full band; Wood's would still hold technical challenges when performed by a group of musicians, but be decidedly less interesting. In both examples their role as vocalist also places the drummer in the forefront of the performance, which is uncommon. Performing any of this work within a band may push them to a more background position, both aesthetically and strategically. Both of these artists have certainly built a stronger relationship between the rock drummer and melody/ harmony; however as mentioned, neither Dion nor Wood use tuned percussion. It would therefore be interesting to create a version of this role whereby it is integrated into the kit and compositional voice.

Are these artists really *rock* in the truest sense? Certainly they display some aesthetics of rock. Dion in particular has an appealing vocal style where the voice is clearly pushed to its limits of register and volume. They do lack some of the 'chemistry' associated with rock bands on the other hand; there is no opportunity to

interact with other band members and any connection with the audience is inhibited. Wood especially struggles to build an ‘atmosphere’ whilst focussing on performing such complicated pieces. However, Dion makes stronger connections with the audience. The key difference here is that he centres his performance *around* his vocals whereas Wood focuses primarily on pushing technique and coordination boundaries. Understandably, the latter might more readily impress musicians and potentially alienate those without the technical knowledge or understanding.

Interestingly, both artists use bass guitars but not electric guitars. Could this in fact be a conscious (or subconscious) method of distancing themselves from rock traditions? As discussed in Chapter 2.1, the guitar is synonymous with rock music; its absence would therefore imply some degree of separation from rock music. Equally, it could be a move for both sonic and aesthetic space, a strategy for maintaining focus on the *other* instrumental forces of the rock band.

There is an extensive question of live versus studio performance; both Dion and Wood’s practice is somewhat undermined once one can no longer *see* that they are performing these different elements simultaneously. In the studio, any technical challenges could easily be overcome through multi-track recording, performing each component separately. The virtuosity comes from these challenges being performed in real time by a single performer *and* being viewable by an audience.

3.3 Personal Practise

My own background is rooted in rock drumming, with a specialism in Extreme Metal playing. This stylistically aligns me with many, if not all, of the players mentioned in the previous section. In particular, my involvement with the Extreme Metal subculture links me to Johnny DeAngelis, who also began his musical practice as a drummer within this idiom, but later gravitated toward mallet playing. One key difference here is that DeAngelis now sees himself primarily as a tuned percussionist, with a somewhat lapsed approach to drumming (Damnation Magazine, 2017). I see myself as a dual practitioner and welcome opportunities to combine the two elements. In addition, I am experienced as both a classical and contemporary percussionist; I am comfortable in orchestral, chamber and theatre environments. A surprising number of practitioners at least hint at backgrounds encompassing some of these elements, in particular Terry Bozzio, who trained as a ‘symphonic percussionist’ within his college studies (Terry Bozzio: Biography, 2019). Information on this for some of the other artists is not as readily available and one might speculate that this is something deliberately withheld from a rock audience for fear of hostility, or at least lack of credibility and kudos.

My other frame of reference within the drumming world is that of taiko drumming. Many practitioners have made use of taiko sounds within their work, including both

Terry Bozzio and Danny Carey. However, for me this runs much deeper having performed in a full taiko ensemble (*Taiko Meantime*); this has provided me not only with a more authentic knowledge of taiko playing and performance style, but helped to shape my framework for percussion ensemble playing as a whole. In particular, it has allowed me to cultivate effective skills in both leading and supporting roles, as well as enhancing my understanding of visual presentation.

An added and less common component within my practice has been composition. This has been a multi-faceted role with numerous comparisons to the artists mentioned previously. Firstly, this began as a co-composer within the various rock and metal bands I was working with in my formative years; this initially aligns me with every aforementioned practitioner and still forms part of my practice to this day. I take this further as a band leader in similar ways to Bill Bruford's *Earthworks* project, acting as a conducting composer-performer although still working within the rock framework. Usually, I am involved in the performance of my own work and this is a common theme for those operating across the popular music spectrum. Even with the arguably more traditionally classical, prescribed approaches of Frank Zappa and Pierre Moerlen, these artists still act as central performers. This trait applies to much of my solo work as a composer with parts often tightly controlled, excepting instrumental solos.

Each discipline has its own framework and it's not usually necessary to reconcile any differences between them; however, it is inevitable that elements of each will affect my habits in the others. Moore discusses at length the various approaches to comparing popular and classical music (2018: 19) with the main conclusion being that writers are now hesitant to openly place value on one more highly than the other. However, my work within Extreme Metal may be viewed as lower status with a genre that is often 'devalued' and 'ridiculed' (Berger, Greene & Wallach, 2011: 4). In this sense then, my practise potentially overcomes the need to consider such musical separation through a level of comfort and authenticity with the 'learned language' (Moore, 2018: 20) of both this maligned corner of popular music and the more established classical traditions. Furthermore, I have the composition skills to understand, contextualise and link each as appropriate and as such I hold a unique position. Such experiences allow me to compare and contrast both composition and performance practice on a conscious and subconscious level. This is useful in ensuring that I do not merely scratch the surface of each discipline. Instead, it enables me to develop a deeper understanding of the mechanics and strategies involved within my practise. Indeed, the danger would be to judge each framework on a purely aesthetic or even superficial level; becoming a skilled practitioner in *all* musical styles would be an unrealistic goal. I am, therefore, only referring to and considering those elements where I have the highest level of experience. I have previously worked in jazz and free improvisation for example, but feel my practical

knowledge and ability is not comparable to my skills within the previously discussed disciplines. Referencing such frameworks for analysis would of course be useful in contextualising my research, but delving *deeply* into these genres in the practical sense would prove unfocussed and thus provide weaker results.

One of many challenges as a practitioner is bridging the gap between written music and aural tradition within rock[31]. These are mutually beneficial, rather than mutually exclusive. Whilst I recognise the differences in the strategic roles, I view the role of the drummer as another side to my skill set as a percussionist. As such, the terms 'drummer' and 'percussionist' *could* become interchangeable - they already *are* within my own practise. This attitude is more prevalent in the contemporary classical and experimental worlds; David Cossin of the performance group Bang On A Can All-stars is one such example, highlighted during their concert rendition of Steve Martland's *Horses of Instruction* (2015). Here, Cossin initially performs a groove-based, Latin-tinged drum kit part before moving to a rhythmic yet textural 4-mallet marimba part and eventually returning to the kit part. It is notable that this live arrangement differs from both the original score and studio recording from The Steve Martland Band (*Horses of Instruction*, 2001), both of which feature separate players for the drum kit and marimba parts. However, Cossin's approach within the reduced ensemble demonstrates versatility and a certain interchangeability of the two roles.

Additionally, my interests and practise as a composer have created a desire for an active role in melody and harmony as a drummer; this is arguably a rare quality[32]. Although not true for all, many performers are happy to view themselves *solely* as 'drummers' or 'percussionists' and separate from the 'musicians'. Interestingly, this can be a prevailing attitude amongst all instrumentalists in larger ensembles such as orchestras, wind bands and big bands; the players are concerned with the mechanics of their own instruments without the context of the composition. How crucial this is to achieve effective work is debatable, perhaps even detrimental to the performer's focus and practice. However, as an active composer, I seek a deeper understanding of the construction of the music when performing. This is somewhat inevitable as the thought process cannot merely be 'switched off'.

There is an additional path for the drummer whereby they are *aware* of melodic and harmonic points of interest, but lend support in a more passive fashion. This is a far more common approach than direct participation, particularly in the jazz world; indeed, it is a well established strategy to use the main head as a way of constructing drum solos and comps, similar to other instrumental forces. However, this is less common in the rock world, perhaps due to simpler approaches in these

[31] This is discussed further in Chapter 1
[32] Although there are notable exceptions as outlined

areas (Moore, 2018: 36). The rock drummer must also *consistently* maintain a high level of drive and energy to the music that does not permit such methods. In my own work within rock, I have always aimed to follow this midway supporting role, although many of the practicalities of the job pose obstacles during live performance. My desire for a more leading role during composition, including melodic and harmonic development, is less common and coupled with my skill set - rock drumming, mallet percussion and classical musician - places me in a potentially innovative position.

4. WHAT GOES ON TOUR, STAYS ON TOUR;

Project Overviews and Methodologies

Having established working identities for rock music, percussion and my own practice, this chapter provides details of the practical research. It is divided into 7 projects and provides a brief context for their respective background and processes.

To recap, each research project was designed to explore the following areas;

1) The roles of the rock drummer and percussionist
2) New composition and performance techniques for percussion within rock
3) Challenging the identity of rock music

As highlighted in chapter 2.4, there is a notable absence of percussionists within rock bands when viewed as a different role to the ‘rock drummer’. These projects aimed to explore and explain this phenomenon using the following parameters;

- Ensemble size
- Instrumentation
- Tuned vs untuned percussion

The concept of each was to adapt the traditional rock band format to such a point that tuned percussion could constitute a *consistent* sonic force. In particular, the synonymous relationship of the guitar with rock (Moore, 2018) needed careful attention and challenging where appropriate. The listed *variables/ parameters* for each project existed to facilitate such challenges; notably, vocals were often strategically included or excluded as a way of aligning or distancing the music from ‘traditional’ rock playing.

Importantly, whilst studio techniques are occasionally referred to, pioneering new recording and production techniques was *not* one of the research objectives. The focus throughout was on the integration of tuned percussion and thus the recording studio was viewed as a means of capturing performances, rather than as a creative tool in its own right. To incorporate a thorough discussion of production was therefore outside of the reach of this research; to do so would have proved restrictive to its broad impact for tuned percussion and the tuned percussionist. Instead, the recording studio is one of a variety of research methods including workshops, live concerts and video performances. The research itself has been left relatively ‘raw’ and unedited throughout in an effort to more accurately assess the processes and results of each project.

4.1 Project 1: Large Ensemble Recording (Thing)

Synergising frameworks and ideas from early progressive rock, psychedelic rock and smaller-scale classical music to create an 'amplified chamber ensemble' in the recording studio.

This project was devised to integrate tuned percussion as part of a larger ensemble; the theory was that by greatly expanding the instrumentation to include a *range* of traditionally 'classical' instruments, percussion could be organically fused into rock music. A heavily augmented rock band would not focus solely on the anomalous presence of tuned percussion, instead presenting it as a component of wider sonic expansion, helping to preserve the identity of both the rock band and rock music.

Variables/ Parameters;

- Unlimited ensemble size
- Unlimited number of players
- May use traditional rock band instruments as desired (drum kit, electric guitar, electric bass)
- **Must** include vocals
- **Must** be original composition
- All instruments performed live
- Should use a range of unpitched/ semi-pitched and pitched percussion instruments

Track List;

1) Heimdall
2) Allfather
3) Thor
4) Loki
5) Frigga
6) Ragnarok
7) Yggdrasil

Personnel;

- Tom Atherton - Drum Kit, Percussion, Vocals
- Chris Harrison - Vocals
- Maja Rivić - Vocals
- Ali Bros - Vocals
- Paul Nazarkardeh - Guitar
- Arran McSporran - Bass Guitar
- Andy Hall - Trumpet
- Andrew Linham - Clarinet
- Rob Milne - Bass Clarinet
- Soroush Omoumi - Flute
- Corinne Larzul - Flute
- Grahame Painting - Cello

Method;

The aim was to create an open framework, free from the pressures and constraints of realising the material in a live context. Working towards live performance presents numerous additional challenges when dealing with such a large ensemble; such obstacles include limitations on rehearsals and performance spaces, both of which would contradict the desired freedom of compositional approach. There would inevitably be restrictions on ensemble size and instrumentation, which again would move further away from the brief. Working exclusively in the recording studio provided the liberating framework for this research; as well as compositional freedom, this enabled greater clarity of sound and increased space for instrumental experimentation, both crucial to these early stages.

The initial musical content was composed for a variety of percussion, rock band and traditionally classical instruments to build a large scale virtual ensemble within the studio. A range of sub-genres under the rock umbrella were explored to develop a rich and varied approach. This was the first of many projects - also the least restricted strategically - and it was important to venture out in several directions to identify points for exploration later in the research. My practice has already been established in Chapter 2 and this recording incorporates Math Rock[33] (*Allfather*), Rock Ballad (*Ragnarok*), Heavy Metal (*Allfather, Loki*) and Fusion (*Yggdrasil*). The style also borrowed heavily from Progressive Rock and was conceived as a concept album; as well as making use of associated compositional techniques, an overall narrative developed during the process which became extremely useful in framing the work. This was not the initial intention but eventually provided thematic cohesion to the musical content and lyrics through repeating and reframing material across the 7 tracks. Structurally, I focussed on standard verse/chorus approaches, as found throughout the popular music world. In addition to the aforementioned concept album ideas, many pieces then developed more unique structures. Large textural and dynamic differences between sections mask otherwise simple pop formats. For example *Heimdall* uses the structure of 'Intro ABAB', where B is thought of as the chorus; however, the 'rock' chorus is here reimagined, with the second B section heavily re-orchestrated. A similar process occurs during *Frigga*, where Verse 2 takes on different melodic focus, texture and dynamic over the same harmonic pattern, before the original verse melody returns. *Yggdrasil* has an even simpler structure; although various different chorus style sections and variations were experimented, all seemed to undermine the message and urgency of the song. As such, one riff and chord sequence underpin the entire composition, with a sense of movement created through the various orchestrations and dynamics throughout.

The use and treatment of the rock riff was a key point of the project; riffs are a defining feature of many rock subgenres, although of course not exclusively a rock trait[34]. It was crucial that riffs were not based solely around the guitar and as such, these were distributed around the instrumental forces. It was vital that such material

[33] Math Rock is a descendant of Progressive Rock that focuses on odd time signatures and deliberately angular rhythms

[34] See Chapter 1 for further discussion

was *not* used solely as a showcase for virtuosic instrumental technique; exploring the relationships *between* instrumental forces was paramount, rather than merely promoting a ‘guitar alternative’. As the concept album further developed, riffs became subject to adaptation and re-orchestration; often this involved building stacks of ideas across several forces with multiple patterns interlocking. An example of this is the last section of *Loki*, where complimentary polyrhythmic ideas create a chaotic climax to the song. These were sometimes technically challenging, but any virtuosic elements were included to support the overall composition, rather than the ego of the individual.

4.2 Project 2: Call For Scores/ Workshops

Investigating the wider perception of tuned percussion in rock through the participation of outside practitioners; using this information to build a broad and cohesive framework for my work.

Project 1 dealt with musical material built around my own previous experiences to date. It was therefore appropriate and necessary to build a wider perspective and understanding of how creative practices and terminology are perceived within the greater musical community. Specifically, my aim was to gain greater insight into how other practitioners view rock music, the role of the percussionist and the limitations in combining the two.

Variables/ Parameters;

- Limited ensemble size (6 players maximum)
- May use traditional rock band instruments as desired (drum kit, electric guitar, electric bass)
- **Must** be original composition (up to 5 minutes in length)
- All instruments should be performed live
- Can use a range of unpitched, semi-pitched and pitched percussion instruments as desired by the composer

Track List;

1) *Lyke as a Huntsman*, by Oliver Weeks
2) *Marimba de Sade*, by Paul Nazarkardeh
3) *The Braid*, by Andy Hall
4) *Nocnice*, by Mak Murtić
5) *Pilot, My Pilot*, by Ben Zucker

Personnel (workshop);

- Tom Atherton - Percussion
- Jack Painting - Drum Kit
- Paul Nazarkardeh - Guitar
- Arran McSporran - Bass Guitar
- Andy Hall - Trumpet
- Maja Rivić - Vocals

Method;

Firstly, a ‘call for scores’ document was created. This outlined the basics of the project and set the parameters for interested composers. Achieving the correct wording of the document was challenging; it needed to balance a specific focus against an openness to the composers’ personal subjectivity to gain my desired insight. Therefore, I decided to restrict the number of players, instrumentation and maximum piece length whilst omitting arbitrary definitions for terms such as ‘rock band’. I also used the expression ‘rock piece’ rather than ‘rock song’ and this was a deliberate choice designed to steer composers away from *only* writing vocal music. The document does insist that the use of percussion is mandatory, although this term is not defined, which was a further purposeful tactic.

The ‘call for scores’ was targeted at as broad a range of practitioners as possible, in line with the project’s aims. There was an excellent response from this group with 5 composers submitting material. Their respective backgrounds were diverse including Extreme Metal, Balkan Jazz, Contemporary Classical and Free Improvisation. The scores were then studied with any potential difficulties noted. Occasionally, this meant making amendments through consultation with the composer, although this was kept to a minimum in the interest of understanding each practitioner’s methods.

The revised works were then rehearsed and developed during a one day workshop. Wherever possible, the composers were in attendance to offer guidance with Oliver Weeks conducting to assist during his piece *Lyke as a Huntsman*. Time was limited to 1-1.5 hours per piece, partly to encourage a focussed working pace as well as restricting the overall time commitments for individual players. However, with the focus being to understand individual processes, rather than completed performances, the aim was to play each piece through, rather than prepared to concert standard. I performed during the workshop and it was important to ensure objectivity of analysis; as such, each playthrough was filmed for later evaluation. In addition, I memorised many of my parts, allowing me greater space to lead and direct wherever necessary.

There was an extremely pleasing diversity in the compositional styles, strategies and interpretations amongst the 5 composers. Despite a reasonable freedom of instrumentation, *all* of these pieces employed both guitars and basses; this suggests that both are perceived as essential in defining the boundaries of rock. The use of the drum kit was more unexpected, with *Pilot, My Pilot* omitting it altogether and *Lyke As A Huntsman* redefining the instrument in a far more classical role.

Each composer employed the riff in contrasting ways and from this perspective, there was a closer alignment with rock. It was interesting to see how there was a collective drive to spread these patterns out amongst the ensemble, rather than purely as material for guitar. There was a noticeable tendency toward rhythmic complexity, with frequently changing meters, tempo changes and polyrhythms abundant throughout the material, albeit in distinctively different forms. At times, I wonder if this became gratuitous; certainly several compositions, or sections thereof, could be simplified to be more effective, although doubtless this would improve given

further rehearsal time. It is intriguing that composers are compelled to include such challenges when writing for percussion, a factor that I had not previously considered and was useful in building my understanding.

The whole project was a fascinating insight into both compositional technique and stylistic perception; in this sense it was extremely successful. However, I do feel that overall, these works move beyond the boundaries of rock, rather than extending them; were I to research further in this method, I would enforce a stricter sense of genre. This may be achieved by a parameter that all work should be performed without the use of scores. Developing a clearer sense of these boundaries was also *highly* useful for future work and the importance of this cannot be underestimated. Furthermore, *every* piece made clear steps to destablise the guitar as the central focus of the music; this was done chiefly through promoting features of the other instruments throughout. This was especially true of the tuned percussion, which held a soloistic role through much of the material, although this is perhaps unsurprising given the brief. However, there were many extended roles for other forces as well; for example, the bass guitar took on a much greater presence in *The Braid*, where it performs a cutting melody in a high register, removed from its usual 'bass line' confounds. The guitar was also pushed into new territories with an increasing soundscape and effects-driven role in *Lyke As A Huntsman*. Although this particular strategy is borrowed from the Post-Rock[35], it is here recontextualised as a supporting instrument to blend with the various ambient sounds, underpinning the aria-like form of this vocal-led piece. This particular work also extended the scope of the marimba by using a 5 mallet part; the composer and I came to the conclusion that this could be reduced to a 4 mallet part whilst maintaining effectiveness, but this did open doors in terms of which effects were possible with different approaches to mallet choices when composing.

4.3 Project 3: 'Solo' Percussion Ensemble Recording

Practising rock composition in a non-collaborative context; creating an extended percussion ensemble through a solo practitioner.

Whilst both Projects 1 and 2 explored expanded ensembles based on traditional rock bands, this project deliberately deviated from this course to further explore the boundaries of rock and challenge the dominance of the guitar. The role of the percussionist within rock was displayed as the *central* focus, as opposed to the integrated position from earlier research. The main question was could this still be considered rock music with the percussionist *replacing* the guitar as the dominant force?

[35] A rock subgenre with particular emphasis on texture and timbre; it is sonically characterised by extensive and varied use of guitar effects pedals compared to using riffs as the dominant strategy

Variables/ Parameters;

- Limited to one player only (myself); unlimited number of instruments, but **must** be played by the solo practitioner
- Conventional rock band instruments (such as drum kit, guitar and bass) are permitted, but priority should be for non-conventional instruments
- **Must** be original composition
- All instruments should be performed live
- Can use a range of unpitched, semi-pitched and pitched percussion instruments

Track List;

1) *Global Grooves of Ganymede (part 1)*
2) *Global Grooves of Ganymede (part 2)*
3) *Global Grooves of Ganymede (part 3)*

Method;

The genesis of this project stemmed from a short exercise to create 3 sketches based upon a central repeating pattern; the aim was to create material for a longer form piece that used the riff as a central bond. The riff was taken from the earlier work *Heimdall* (Project 1), chosen for its simple, yet effective polyrhythm and ambiguous harmony. Each piece was required to include differing approaches to tonality, mood and ambience.

It was crucial that all parts were composed and performed *solely* by me; in part, this was to ensure that the composition was conducted non-collaboratively. Although many of the projects during this research were directed by me, it was prudent to fully explore the limits of the solo composer-performer role, especially in contrast to Project 2's inclusion of multiple practitioners in creative positions. It also provided a specific set of limitations based upon the limits of my abilities as a player. This resulted in a total absence of guitar parts; I am *not* a sufficiently accomplished guitarist and thus this was an excellent opportunity to explore work *without* guitars. It was appropriate therefore to dispense with any traditional approaches to drum kit as well. I decided to treat any drums on this recording as semi-pitched instruments and developed a 5 drum rig consisting of roto toms and tom-toms, all of which were fully tuned[36]. There is only one drum solo in the finished piece and I included it to demonstrate this particular apparatus.

From the initial sketches, the next challenge was to weave these into a longer narrative. As this was always intended as a studio based project, I decided to make use of various fading and cross fading techniques as a method of linking each section. This created cohesion by promoting subtle changes between movements,

[36] This was not dissimilar to the 'rig' needed for the Xenakis *Rebonds* pieces, although smaller in size

rather than more obtrusive juxtapositions. Furthermore, I began to experiment with other studio effects during this time; very gradually increasing the amount of a particular effect on a repeating idea became an effective technique for transformation.

The treatment of the central bonding riff also became a useful tool in moving between sections. Deconstructing and reconstructing its rhythm created an effective ambiguity of pulse at points, as well as metric modulations and polyrhythms. In the initial sketches, this riff was entirely programmed. The chosen sound helped to characterise and shape the development of the material and as such, felt appropriate to include it in its original form, despite bending the given parameters. Furthermore, gradually morphing this into a live part added to the transformative qualities of the overall piece and did not harm the aim of the percussionist as the central focus.

4.4 Project 4: Live Band Performance

Exploring and overcoming the challenges of live performance within my established framework.

Previously, my previous research focussed largely on the recording studio. Project 2 of course expanded this to the rehearsal studio (or ‘workshop’), but nothing thus far had tested the material with the added pressures and complications of live performance; the rock ‘gig’ is an established pillar of the genre as a whole. As part of the continuing exploration of the percussionist role within rock, it was therefore necessary to bring this music onstage, away from the now comfortable studio environment. Doing so would provide greater insight into the specific challenges of incorporating this role and in turn, develop a greater understanding of its apparent absence to date.

Variables/ Parameters;

- Limited to 6 players
- Conventional rock band instruments (drum kit, guitar, bass) should be used
- Material can be a combination of original and covers
- All instruments should be performed live
- Vocals should be included for at least part of the material

Track List;

1) *Nebulous*
2) *Stillness*
3) *Tunnel Chase*
4) *Loki*
5) *Baltar Ego*
6) *Yggdrasil*

Personnel;

- Tom Atherton - Percussion, Vocals
- Harry Pope - Drum Kit
- Paul Nazarkardeh - Guitar
- Tom Sullivan - Bass Guitar, Vocals
- Andy Hall - Trumpet
- Tannaz Abbassioun - Vocals

Method;

The aim was to curate a live set of around 40-45 minutes for an ensemble of limited size. The performance was closely connected to Project 5's 'Medium Ensemble Recording' and much of the musical material was shared by both. Additional repertoire was rearranged from Project 1 for the reduced ensemble size, the challenge of which was both useful and rewarding. The focus was on arrangement for the live band, rather than composing much new material; thus, the set list also consisted of covers, although these were dramatically transformed in the cases of *Tunnel Chase* and *Baltar Ego*.

Due to the reduced band size, most players were required to assume multiple roles; for example, both myself and the bass player performed backing vocals during *Loki* to achieve the conversational style of the track. This extended to the use of effects on the trumpet; initially this was incorporated as a key feature in *Tunnel Chase* as part of a wider electronic film score influence. However, this became extremely useful in padding out textures at other points and was one of my main reasons for including this instrument in the reduced ensemble. Sourcing suitable personnel was also key; the aforementioned brass role was relatively easy as I share a strong rapport and playing history with trumpeter/ composer Andy Hall. This was a similar case for both the guitar and bass roles. Much more challenging was finding a drummer with a comparable skill set to my own. Harry Pope and I do have a limited playing history together, but in very different contexts; however, we do have previous experience in working as a drummer/ percussionist duo within a larger ensemble. Furthermore, we have performed rhythmically complex material; as such, he was a suitable choice in managing the more complicated and angular moments required.

With so much work centring around the recording studio in Projects 1-4, it was important to explore the challenges of delivering this material in a live context. However, as a performer and leader of the ensemble, an objective viewpoint was needed to analyse the performance; similar to the workshop of Project 2, both the performance and afternoon rehearsal were therefore filmed for later evaluation. This process helped to explore the aesthetic aspects of such a performance, although these were considered in some level of detail during organisation. For example, what type of venue is appropriate? How should the band be arranged on stage? Should the band perform with another act? The answers to these helped frame the presentation of the performance. My own practice is extremely diverse and finding

the right venue to represent this was a challenge in itself[37]. Performing at the Courtyard Theatre helped achieve an effective balance between the underground rock gig and the classical recital; it was small and intimate enough to connect with the audience whilst maintaining a suitable level of formality appropriate to its more experimental nature. However, in such an environment, onstage space was at a premium; as such I chose to make use of the Xylosynth, which provided access to the full range of tuned percussion instruments as needed without monopolising the performance area (this included vibraphone, marimba, tubular bells and more). Additionally, this was a practical way of ensuring that the tuned percussion was heard amidst the sonic power of the band. The Xylosynth has the advantage of wooden keys compared to the rubber keys of similar electronic instruments such as the MalletKat, Malletstation and Silicon Mallet. This coupled with the vibraphone-style sustain pedal created a closer relationship and feel to an acoustic instrument compared to the alternatives. Of course, there are several systems available that can be attached directly to an acoustic instrument, such as the Ludwig Electro-Vibe pickups for vibraphone. However, such products tend to focus on direct amplification and as such would not have managed to create the necessary instruments such as the marimba, although additional sounds would be available through the use of effects pedals[38]. Furthermore, MIDI compatible piezo-based systems, such as the K & K Sound Vibraphone Amplification system, require a degree of modification to the apparatus, namely glueing the pickups directly to the bars. This would have been totally unsuitable when using a borrowed or hired instrument as would have been the case. The Xylosynth therefore provided the simplest solution overall, allowing for a compact setup without compromising the range of percussion sounds and a comparable feel to acoustic apparatus without the need to adapt or damage an existing instrument.

The ‘gig’ itself was eventually performed with the semi-improvised electro-salsa band *Arcadio*. Although not a ‘rock’ band as such, we were able to successfully frame the event as an evening of rhythmic exploration. Curating the performance conceptually, rather than on genre, was a better alignment with my own practice; a more conventional rock night may have been a mismatch at this stage.

4.5 Project 5: Medium Ensemble Recording

Expanding the developing framework through arranging and recontextualising existing work; limiting the ensemble size to bring percussion into focus.

Project 1 integrated tuned percussion ‘by proxy’ with its greatly expanded ensemble size; Project 3 dispensed with anything resembling a traditional rock band. This project aimed to explore the area in between, with the percussionist holding a much closer, yet *not* centralised focus within the rock framework. This was necessary to more thoroughly solidify the role of the percussionist in the rock band, as well as explore the subsequent effect on compositional and arrangement strategies. Having

[37] Further details of this diversity can be found in Chapter 3.2

[38] There was a much earlier attempt to combine the vibraphone and marimba into a ‘super-xylophone’ by Clair Omar Musser in 1931 (Blades, 1970: 407). This functioned entirely acoustically, but would be impractical compared to the electronic examples given due to its massive size, weight and cost

developed a deeper understanding of using such instrumental forces, it was appropriate timing to now consider the emerging ‘rock percussionist’ role.

Variables/ Parameters;

- Limited to 6 players
- Unlimited percussion instruments
- Conventional rock band instruments (drum kit, guitar, bass) should be used
- Material can be a combination of original and covers
- All instruments should be performed live
- Vocals should be included for at least part of the material

Track List;

1) *Nebulous* (original composition)
2) *Running Man* (based on the film soundtrack ‘The Running Man’, 1987)
3) *Tunnel Chase* (based on the film soundtrack ‘The Terminator’, 1984)
4) *Baltar Ego* (based on the series soundtrack ‘Battlestar Galactica’, 2004 - 2010)

Personnel;

- Tom Atherton - Percussion, Drum Kit
- Ali Bros - Vocals
- Paul Nazarkardeh - Guitar
- Arran McSporran - Bass Guitar
- Andy Hall - Trumpet

Method:

In conjunction with the live performance of Project 4, Project 5 was in contrast focussed around a studio recording of the limited size ensemble. The aim was to increase the use of each instrumental force as might occur in a traditional rock band, tasking players with multiple roles and responsibilities within each piece. Simultaneously and as part of the ongoing exploration of the rock’s boundaries, this recording was based on arrangements of existing material, rather than on brand new works. As such, the project consisted of one previously composed track and 3 creative arrangements of popular film and television soundtracks. The latter theme was a way of exploring the role of the riff *outside* of rock aesthetics and structure; in such music, the material is largely built on distinctive motifs and thus the compositional style is comparable to rock’s strategic uses of the riff. It was *not* a conscious decision to base all of the arrangements on a sci-fi theme and this evolved organically whilst researching appropriate material. It was particularly effective on two fronts; firstly, I already had a good level of knowledge of the musical material through my interest in the genre. Secondly, much of the original recorded music is based around synthesisers, which were more interesting to arrange for the prospective instrumentation than pieces already closely related to rock.

However, there was no intention of merely replicating particular arrangements; each of the 3 soundtrack pieces pays reference to *several* musical themes and sections from its source material. *Baltar Ego*[39] is a collection of themes that organically interlock as part of the series' overall concept and thus was well suited to my own compositional practice of layering riffs. The piece progressively evolved into song format; the inclusion of material from the *Gaeta's Lament* provided a lyrical basis, as well as fulfilling the requirement for vocals during the project . Both *Running Man* and *Tunnel Chase* feature many of these interwoven borrowed themes but are through-composed, rather than in song structure. Blending the excerpts effectively was challenging when mixing so many snippets of material, particularly when in different meters. However, this served to create multiple layers of polyrhythm, as well as other interesting transitional points within the arrangements.

A specific obstacle for this project was in obtaining the source material. Where various recordings and scores exist for many other styles, this particular set of pieces was more difficult to find. Some of the music was transcribed by ear, at times using software to slow down faster passages for a clearer insight such as the main *moto perpetuo* line of *Tunnel Chase*. There was a risk that sections could be misheard, but was simultaneously very much in keeping with rock's unscored and aural traditions.

Conversely to the soundtrack focus, *Nebulous* was a piece written around 2007, originally written for vibraphone and band. It was included in Project 4 and appropriately demonstrated the arrangement process of the live set. It does *not* directly fit the sci-fi theme, but does again explore the 'riff' from outside the rock canon[40].

4.6 Project 6: Percussion Solo Videos

Devising extended roles, playing techniques and apparatus through non-collaborative composition; exploring the composer-performer role as a soloist.

Having thoroughly explored multiple permutations of the rock band in Projects 1, 2, 4 and 5, there were still areas left unexplored with smaller ensembles and soloists. Following a similar path to Project 2, this project stripped back everything to a single practitioner; removing all other instrumentation helped to provide the necessary focus on the percussionist, as well as continuing to challenge the dominance of the guitar. The specific aim of this project was to combine the roles of the rock drummer and the rock percussionist. Each previous project defines these as separate entities; in deliberately blurring these definitions, an extended role was created, presenting a greatly expanded form of the rock drummer more readily accepted as part of a rock band.

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[39] The title is a word play based around one of the show's lead characters, namely *Gaius Baltar*

[40] The original piece was composed by fusion guitarist and long time colleague Richard Figg

Variables/ Parameters;

- Limited to one player only (myself); unlimited number of instruments on setup, but no recorded loops permitted
- Conventional rock band instruments are permitted and should be blended into the main setup
- **Must** be original composition
- Should be performed live
- Can use a range of unpitched, semi-pitched and pitched percussion instruments

Track List;

1) *Octopode 1*
2) *Octopode 2*
3) *Octopode 3*
4) *Octopode 4*
5) *Octopode 5*

Method;

Taking a different focus to many of the band orientated works, this project's aim was to create a series of solo works for a single rock percussionist. One of the main research parameters was ensemble size and moving to a solo instrument was the logical antithesis to Project 1's lack of restrictions. Although sharing similar intentions to Project 3, the focus was on achieving this through a more 'live' performance approach, rather than as a multitrack studio recording. This demonstrated that the tuned and untuned elements of the rig *could* be played simultaneously. Furthermore, the material was composed almost exclusively in the rehearsal room, rather than working away from the instrument and later realising the pieces.

Numerous existing practitioners have produced video showcases for solo drum kit and these are partially aligned with Project 6. Equally similar, though less ubiquitous are the performance videos of classical percussionists. Both can easily be found through a brief internet search, or through the promotional material of instrument manufacturers[41]. There is also some comparison with contemporary classical solo work, namely Xenakis' *Rebonds*. However, there are substantial differences; firstly, Project 6 deals with fully pitched instrumentation, as opposed to unpitched or limited pitch. Secondly, there is a degree of improvisation not present in *Rebonds*, such as in *Octopode 3* and *Octopode 5*. This was to allow the drummer to bring their own level of complexity and individual voice to each piece, rather than predetermined definitions as determined by the composer. This is symptomatic of the traditions of drum kit writing, as opposed to classical percussion.

The initial idea was to integrate tuned instruments into the drum kit set up so that the 'riding' hand could perform tempered pitches as part of the drum groove. For

[41] The Vic Firth Youtube channel is an excellent example of this

diversity and rhythmic interest, such procedures featured a combination of mallet rotation and drum rudimental technique. Early experiments and previous successes in Project 4 concluded that the Xylosynth would be appropriate for this; apart from providing a suitable balance and variety of sound, it also allowed the audience a closer inspection of the performer's actions through the open style stand supporting the instrument. This layout was also extremely practical, replacing the area usually reserved for rack toms on a standard drum kit and visually centralising the focus on the tuned percussion for the audience.

It was important that the rig contained recognisable drum kit features such as the snare drum, kick and hi-hat to ensure a solid connection to rock drumming traditions. The research at this stage largely took the form of 'jam' sessions to experiment and refine ideas; the rig began to expand with other semi-pitched additions such as penta-blocks and roto-toms. Moreover, the Xylosynth allowed the 'stacking' of tuned percussion, as well as performing notes outside of its usual range. In this sense, the identity of the instruments was maintained, whilst creating both sonic individuality of the rig and richer texture in the music.

From these sessions, 5 sketches were developed. Importantly, these were both filmed and scored, with an extended approach required to notation, discussed in more detail in Chapter 7.3. The visual elements were again crucial for later analysis. As such, they were performed in collaboration with a professional videographer and used a multi-angle camera set up to more effectively demonstrate the variety of processes occurring. The sound was recorded during the performances to create the sense of live performance within the controlled studio environment. Most of the final videos therefore display *mostly* complete takes, albeit from multiple angles.

4.7 Project 7: Metal Duo Videos

Devising extended roles, playing techniques and apparatus through partially collaborative composition; exploring the composer-performer role as the leader of a duo; direct comparison of the roles and identity of the percussionist and guitarist.

This project was a companion to Project 6 in that it explored the percussionist role within rock outside of the framework of the rock band. Rock's relationship with both the guitar and percussion have been ongoing themes throughout this research and thus a more direct and focussed comparison was appropriate. Furthermore, whilst previous projects destablised the role of the guitar by reducing its sonic and compositional contributions, the potential partnership with percussion remained insufficiently explored. Therefore, the aim for this final project was to *directly* pair the roles of percussion and guitar.

Variables/ Parameters;

- Limited to two players only (myself and a guitarist); unlimited number of instruments, but *must* be able to be performed live
- Conventional rock band instruments are permitted and should be blended into the main setup
- **Must** be original composition
- Electronic effects are permitted, but **not** recorded loops
- May use a range of unpitched, semi-pitched and pitched percussion instruments as well as electric guitar

Track List;

1) *Dear Djentlemen*
2) *Mesh Hugger*

Personnel;

- Tom Atherton - Percussion
- Paul Nazarkardeh - Guitar

Method:

The partnership of the two instruments was implied and subtly explored through many other moments of this research and thus it was appropriate to experiment in a more focussed and direct fashion. Simultaneously, this project aimed to venture into the heavier subgenres in rock to explore the relationship of tuned percussion in this context. The initial sketches were based on the rhythmically focussed Djent and Math Metal[42] branches of Extreme Metal and appropriated some of the timbres, textures and compositional strategies involved. Both pieces open with a minor 9th interval, exemplifying the dissonant soundscape of the subgenres. Additionally, they demonstrate the synonymous ‘drop-tuned’ sound; this is often achieved on either seven or eight string guitars. With some experimentation, this was delivered through the transposition function of the Kemper amp profiler.

The sketches were then developed in the rehearsal room; however, this differs from Project 6 in that the pieces were largely composed *before* realising them as a duo, although the sessions were extremely thorough in exploring specific tones, effects and dynamics. As composer of the initial material, I wanted this to be a collaborative effort between the two players and it was important to leave sufficient space for interpretation within the notated parts. The most appropriate way of communicating this material was again to film it and the project took on a similar focus to Project 6 in

[42] Math Metal is very much related to Math Rock and shares a similar heritage from Progressive Rock, reframing this in a more aggressive and distorted fashion

this sense with the previous videographer and mutli-camera set up returning. Initially, there were several sketches written for this project; however, quality was prioritised above quantity and the two final pieces are sufficiently thorough in their exploration of the style.

The percussion rig was originally due to be based on the same apparatus as used in the solo pieces; however, it became necessary to use a purely acoustic percussion approach in contrast to the increasingly effects-laden electric guitar parts as the material developed. It also provided further opportunity to experiment with acoustic sounds and combination patterns between instruments in a live context. Despite using a fairly diverse range of instruments, there were few issues in balancing them, both with the other elements of the rig and the electric guitar parts.

5. IT'S ROCK, JIM - BUT NOT AS WE KNOW IT

Challenging the Identity of Rock

As discussed in Chapter 1, it is often difficult to place the terms 'rock' or 'rock band' in a satisfying and correct manner. However, such terminology is needed to identify whether this research is 'rock' or not. It is therefore necessary to analyse how closely the work aligns with each framework, as well as examining at what stages it tests or breaks the boundaries.

Chapter 2 identifies both the guitar and the riff as both central forces and defining characteristics of rock; as such, it is appropriate to now explore these in relation to this research. Additionally, as the creation of new music was a pillar of this study - as opposed *solely* to arranging or performing existing work - an analysis of compositional style is included, specifically in contextualising this within rock.

5.1 Guitars and Their Absence

The guitar and in particular, electric guitar, is ubiquitous within rock music; indeed, the instrument appears in most recognisable forms of the genre and is arguably quintessential to its very identity (Moore, 2018: 36).

Much of the research challenges this in some way and attempts to destablise the dominance of the guitar. Perhaps most noticeably is *Global Grooves*[43] which features its total absence. This was a deliberate move aligning with the project parameters, specifically that all instruments must be performed by me. The intention was that the guitar would be minimal or even non-existent within the composition. Largely due to a lack of technical skill on the instrument, this led to the latter option. The question is raised; how closely can this be identified as rock music? Despite initial impressions, *Global Grooves* has a surprising amount in common with rock traditions; it is riff-based and emphasises modality in its harmonic language. It features an approach to dynamics not dissimilar to Heavy Metal, whereby dynamic and textural variety is created by the number of instruments playing simultaneously as opposed to varying volumes during individual performances. Overall this piece eventually falls *outside* of rock's boundaries; there is just too much sonic and aesthetic difference, with no usage of a conventional rock band line up and more in common with percussion ensemble composition. Structurally, this also has little in common with rock tradition; even the extended forms of Progressive Rock or the deliberately non-conventional structures of Extreme Metal rarely feature one continuous element marrying the entire piece together.

[43] See Chapter 4.3 for details of this method

However, many of the other projects would be more recognisable as rock bands, albeit in extended formats. Possibly the most typically rock project overall was the Medium Band Recording (Project 5)[44]. This was essentially a traditional rock band lineup with extended instrumentation. Tracks such as *Baltar Ego*, featured in both Projects 4 and 5, are largely driven by distorted guitar riffs with tuned percussion adding counter melodies, texture and colour in a comparable role to the rock keyboard player. The use of trumpet within this ensemble is a further non-conventional addition; although commonly found within other rock subcultures such as Ska Punk, it is not traditionally paired with such heavy guitar riffing. There have been an extremely limited number of artists to use brass from the heavier side of rock, either live or in the studio. One exception to this is the band Sear Bliss who feature a trombonist within their Black Metal style, although there is limited function to this role with the instrument used sporadically. However, it is common for brass players to spend extended periods resting during performance, particularly within orchestral music, and this is therefore true to wider instrumental tradition. Both Projects 4 and 5 challenge this and provide a more extensive role for the trumpet, primarily through electronic enhancement. In turn, this further pushed boundaries with elements such as free improvisation and noise usage, as demonstrated in *Tunnel Chase*. Increased stylistic diversity was achieved through *Nebulous***,** featuring lead playing, brass stabs and electronic-based solo comping from a trumpeter role that consistently challenged the definition of the rock band. The track moves into fusion based territory with a combination of swing, funk and Latin/ Afro-beat style grooves; the vibraphone intro also provides alignment with a jazz aesthetic. The guitar largely comps during the piece, only entering in the 2nd minute. However, the middle section features a ‘trade off’ between the guitar and marimba, both supporting one another through underlying comps.

Nebulous was particularly successful in readjusting the sonic dominance whilst maintaining sufficient aesthetic tradition to integrate into the rock canon. Furthermore, the ‘trade off’ section was exemplary of the growing relationship *between* guitar and percussion; the focus on the guitar as the central force was replaced by a symbiotic partnership that continued to push the boundaries of style. The idea can also be found in *Running Man* from Project 5; the piece features a heavily effected guitar coupled with a glockenspiel playing the main theme of the composition. This is comparable to orchestral writing, where such a melody may be doubled by percussion, particularly in combining flute or piccolo and glockenspiel. In this context, there is also comparison to Frank Zappa’s treatment of marimba parts, namely the doubling or trebling thereof, as discussed in Chapter 3.1. However, later guitar and tuned percussion lines, specifically vibraphone, are paired in a similar fashion to the ‘dual lead’ approach popularised by Hard Rock and Heavy Metal acts such as Thin Lizzy and Iron Maiden. They complement one another through rhythmic

[44] See Chapter 4.5

unison and parallel harmony notes to create a richer texture. Overall, such a partnership creates a framework where the rock boundaries are stretched through this augmentation of the band and extension of the roles within.

5.2 Compositional style

On the surface, the compositional process throughout the research may appear alien to the traditional rock approach; the pieces were largely written by a single composer/ arranger who then *precisely* dictated the individual parts through notation and verbal instruction. However, there were several opportunities for performers to contribute to the creative process, such as during the numerous instrumental solos as can be found throughout tracks such as *Nebulous* (Projects 4 and 5), *Tunnel Chase* (Projects 4 and 5) and *Mesh Hugger* (Project 7). Such instrumental solos were devised through verbal guidance or suggestion of style and timbre to integrate musical personalities in the context of each composition. In addition, a deliberately ambiguous approach to phrasing within the notation led to more individualistic nuances in performances, such as the woodwind lines in *Loki* (Project 1). Project 4 furthered this by involving the performers in rehearsals and working through the material in a more collaborative way. This was still largely directed by a sole practitioner and overall was somewhat removed from the traditional democratic approach to composition and arrangement found in rock. However, it is notable that in the internet-era, an increasing quantity of musicians are eschewing this method of 'rehearsal room writing' and the 'jam session' in favour of remote collaboration. Many drummers, especially those in rock, work with a number of bands and musicians having never met face to face; material is recorded at personal studios and audio files exchanged online. Although the approach was mostly autocratic and comparable to classical composition, it is also symptomatic of a more modern and industrious approach to rock music in the internet age; musicians were chosen *purely* on their abilities, rather than their location and practicality. Therefore, this element may contradict 'classic' rock collaborative working practice, but aligns well with a more contemporary framework.

Many of the rock compositional techniques can be found throughout this research. Firstly, there was an abundance of riff based material that was treated in a variety of ways; this extended to standard rock riffs in *Baltar Ego* (Projects 4 and 5), through Math Rock styles in *Mesh Hugger* (Project 7) and interlocking polyrhythmic patterns in *Global Grooves* (Project 3) to name but a few[45]. As mentioned in chapter 2.2, rock does not have exclusive ownership of the riff as a device, but in thoroughly exploring its nature, the overall effect was to closely align the compositional style of the research.

[45] Deeper discussion of specific techniques can be found in Chapters 5.3 and 7.2

Harmony and Modality

The harmony within much of this research is connected to its riff based approach; chord progressions were rarely the focus or stimulus to compositions, instead favouring a linear style where parts interlock to create harmonic interest. One example of this is *Yggdrasil* (Project 1) where the entire piece was developed from one arpeggio of a Gmaj7#11, voiced non-conventionally with a doubled 3rd. Such extended harmony is not common to the rock framework, with this particular example more closely resembling the 'Lydian Chord' more easily found within the jazz world. However, it is then moved strictly in parallel, passing Amaj7#11 before landing on Bbmaj7#11 (see Fig 5.1).

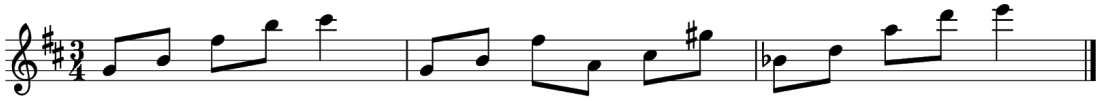

Fig 5.1: *Yggdrasil* (Project 1), Opening Arpeggio ♩= 120

There is an obvious contradiction here to basic classical harmony that is fairly common within rock, specifically the heavy metal world. For example, Black Sabbath famously used power chords to create anthemic and heavy melodies on tracks such as *Iron Man* (*Paranoid*, 1970). The use of parallel harmonies is a central approach within Extreme Metal (Berger, 1999: 167) and is exemplified by the parallel minor 3rds of black metal, used to create an 'evil' or 'cold' sound.

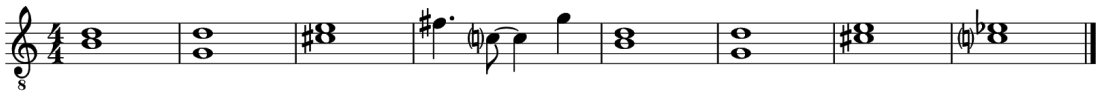

Fig 5.2: *Cosmic Keys To My Creation and Times* (*In The Nightside Eclipse,* 1994), ♩= 163
Extract at 2'19" showing harmonic movement

The last two bars of Fig 5.2 demonstrate this harmonic technique within a longer sequence. Interestingly, the harmonic base of *Yggdrasil* (Project 1) would appear to align fairly closely to the latter. It uses parallel *major* 3rds and further augments the harmony to develop the rock language. This approach is similarly used during *Dear Djentlemen* (Project 7) whereby the semitone movements of the main rhythmic riff shift the tonal centre and create an unsettled mood. Such an atmosphere is further developed with the use of chromaticism, such as the G, F# and Ab sequence at letter 'B' (see Fig 5.3).

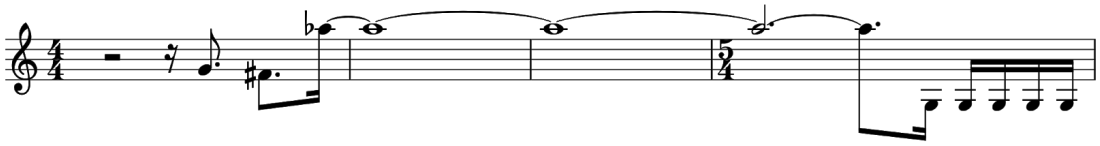

Fig 5.3: *Dear Djentlemen* (Project 7), Letter B, ♩= 110

Using deliberately non-scalic note orders is again comparable to a number of metal styles (Kahn-Harris, 2007: 31). In addition, this is representative of a much wider usage of the semitone interval around the tonal centre, also explored in the opening riff of *Mesh Hugger* (see Fig 5.4).

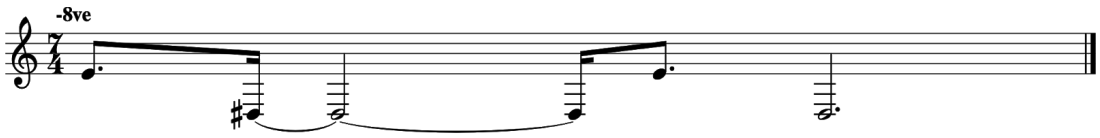

Fig 5.4: *Mesh Hugger* (Project 7), Opening Riff, ♩= 96

This is more commonly used in rock as a minor 2nd within the Phrygian mode (Kahn-Harris, 2007: 31); the minor 9th approach found in both pieces of Project 7 seeks to exploit and develop this. The mode can be found in a more typical form during *Baltar Ego* (Projects 4 and 5) where at 1’02” the guitar and bass perform an E Phrygian riff within an approximate A harmonic minor tonality, complemented by textures and counter melodies from percussion and trumpet. The A natural minor, or Aeolian mode, is used in *Octopode 1* (Project 6); such a scale is fitting for mallet instruments, partly because two mallets will most comfortably create 4ths or 5ths when using 4 mallet technique. This is expanded as intervals are stretched to develop the harmonic interest whilst maintaining a clear tonal centre. Interestingly, this is also realigned to E Phrygian in bb.5-6 (see Fig 5.5).

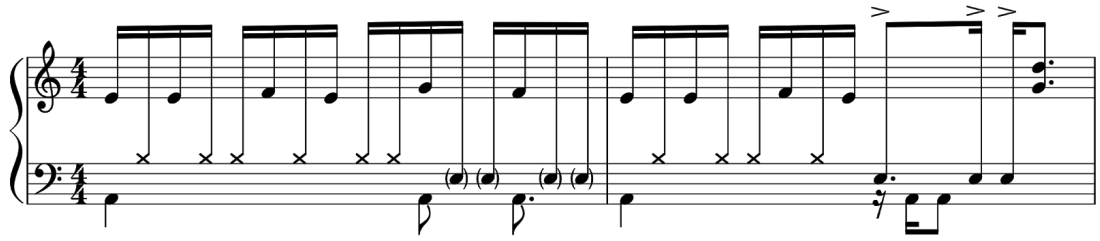

Fig 5.5: *Octopode 1* (Project 6), bb.5-6 ♩= 88

As mentioned, this mode is ubiquitous within the rock language and thus, such devices more closely align this research to it, although not always in an obvious manner.

Structure

Furthering this notion was the choice of structure within the research; much of the work followed variations of song formats from popular music. An example of this from early in the research is the track *Heimdall* (Project 1), where the overall structure is roughly 'ABAB'; the sections themselves are repeated with considerable variation, most notably the 'B' or 'chorus' material changing dramatically in mood and focus on its second appearance. This approach can be found through several other points including *Baltar Ego* (Projects 4 and 5) and *Frigga* (Project 1); basing such material around song structure aligns the research with rock music[46]. The song format is also supported by the use of vocals through most of Project 1 and in parts of Projects 4 and 5. In cases such as *Heimdall*, *Frigga* (Project 1) and *Baltar Ego* (Projects 4 and 5), this presence helped to strengthen the structural alignment through repeated melodic and lyrical phrases; they helped to define recognisable 'verse' and 'chorus' sections, despite other instruments performing augmented and sometimes drastically different material simultaneously. Traditional song structures are also found in the numerous instrumental pieces of the research, such as *Nebulous* (Project 5) and *Octopode 4* (Project 6). These examples use a conventional ABABCAB form; in both cases, C is centred around soloistic development and furthers the alignment with rock structure.

Projects 1 and 3 overall embrace longer forms; the former was written as a set of songs joined by melodic and rhythmic themes, with the latter as a continuous piece, later divided into separate movements. They offer two alternative perspectives on extended structures within rock. There is comparison to be made with the forms of the 'epic' songs of Progressive Rock such as *Supper's Ready* by Genesis (*Foxtrot*, 1972). In particular, *Heimdall*, *Allfather* and *Ragnarok* (Project 1) use a similar strategy of returning to melodic fragments, especially in the vocals.

Returning lyrical phrases helped to convey the nature of the subject matter, namely the cycle of creation and destruction of the Norse myths. The key difference with the album *Thing* (Project 1) is that it is *not* presented as a single song in the same way as *Supper's Ready*, although the latter is clearly sectionalised in the linear notes. Aesthetically, *Global Grooves* (Project 3) closely shares this approach; however, the relationship of these two pieces is more complex and is expanded upon in Chapter 7.2. What is apparent is a *conceptual* alignment between Projects 1 and 3, and the 'epic' Progressive Rock form.

There are further diverse structures found in Project 7, with both *Dear Djentlemen* and *Mesh Hugger* sharing characteristics with Extreme Metal. The subcultures of this umbrella term practise a structural approach devoid of nearly any alignment with conventional popular music format (Kahn-Harris, 2007: 33). However, the pieces from Project 7 do feature a certain logic within their structures and do not juxtapose riffs of wildly different mood and tempo, nor do they reject the repetition of sections. In this sense they are better aligned with more 'refined' Extreme Metal recordings, such as Ihsahn's *The Paranoid* (*Eremita*, 2012).

[46] Further structural techniques are specified in Chapter 7.2

Such pieces build tension through their use of ‘extreme’ elements, such as dissonant riffing, frantic drumming and distorted vocals before providing relief in the form of an extended melodic and anthemic section. Although not strictly a chorus, this does act as a ‘destination point’ in the track, with the contrasting mood maintaining a suitable level of structural interest and progression within the composition. This is comparable to *Mesh Hugger* and *Dear Djentlemen* (Project 7); both begin with an unsettled atmosphere created through prominent dissonance. The latter is played *moto perpetuo*, creating a similar sense of urgency to *The Paranoid (Eremita*, 2012). Neither has an intentional song format, but both do have a ‘chorus’ of sorts, insomuch that there is a repeated and anthemic unison section gravitated towards. This process provides the ‘relief’ to the listener in a similar fashion; such a strategy can, in part, find alignment with this particular area of the wider rock tradition, albeit one with considerable aesthetic differences.

5.3 Treatment of the ‘Riff’

Chapter 2.2 discussed the importance of the ‘riff’ as an essential stylemarker of rock music, as well as a useful framework in defining its identity. It is therefore fitting that this research made thorough use of riffs as a primary strategy. At times, this usage aligned the material with the aesthetics of rock, such as the verse of *Baltar Ego* (Project 5). The driving guitar riff and unison bass line are a centre point to the section with other instruments adding layers through their own repeating patterns[47]. This strategy provides the listener a familiarity to rock, despite the piece’s augmented instrumentation; in particular, the use of E Phrygian as a modal centre sonically aligns with many Heavy Metal subgenres. Comparison to such music can be found throughout this research, arguably inevitable from my background as a practitioner[48]. However, riffs were *not* the exclusive property of the guitarist; indeed, the guitar-less *Global Grooves* (Project 3) featured an array of repeating and developing patterns that created extended melodic phrases and polyrhythms. There is an aesthetic difference in instrumentation here, but similar procedures can be found in rock, particularly through the more technically orientated subgenres of Math Metal and Djent. An example of this is *Dancers To A Discordant System* (*Obzen*, 2008). Meshuggah are considered pioneers of this style; a particular and ubiquitous feature of their sound is drummer Tomas Haake’s crotchet pulse, usually performed on hit-hat, crash or china cymbal, played against angular rhythms performed in unison between kick, snare and guitar. Such devices create complex polyrhythms, as well as a certain rhythmic freedom. *Global Grooves* (Project 3) achieves similar effects in places, although with far less sonically aggression; the pulse is here provided by the central 5/4 polyrhythmic riff, performed on a variety of tuned percussion and keyboards, as opposed to Haake’s unpitched cymbals. In this sense, there is a striking similarity of procedure, despite vast aesthetic difference.

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[47] This technique is discussed further in Chapter 7.2

[48] See the discussion of personal practise in Chapter 3.3

Project 7 made more tangible aesthetic connections with this area of rock; the mechanical and precise nature of such rhythmically focussed subgenres was appropriated into both pieces. With *Dear Djentlemen*, the initial riffs were constructed from an angular broken tonic pedal rhythm on guitar, coupled with a note row on marimba, performed in rhythmic unison. The 12 note melodic figure therefore moves against the main pulse of the piece. It moves further out of phase with an augmented rhythm in the marimba part, before the two forces rejoin at the beginning of the next phrase (see Fig 5.6).

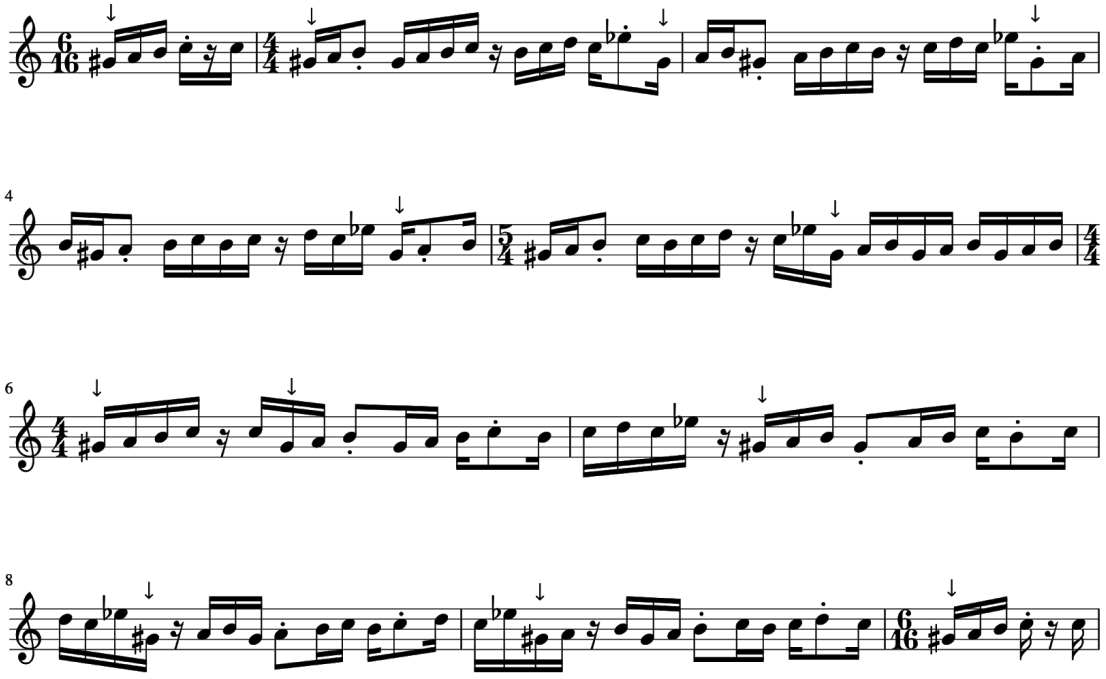

Fig 5.6: *Dear Djentlemen* (Project 7), note rows marked ♩= 110

Although less angular and frantic, *Mesh Hugger* uses a similar process; during both solo sections and ending of the piece, a crotchet pulse is maintained on a cymbal against the other musical elements. Although straighter and less complicated rhythmically, the procedure is once again comparable to Meshuggah; in this circumstance, both performers are directed to use stacked china cymbals to play the crotchet pulse, thus creating a further sonic alignment with Haake. Indeed, this is demonstrated in the opening of the piece, whereby the guitar plays through an octave pedal to simulate the heavily ‘down-tuned’ sound of extended range 7 and 8-string instruments, so common to the subgenre. The vibraphone is also set to a fast motor speed for this section to appropriate the chorus-laden effects of the ‘clean’ passages of tracks such as *Dancers To A Discordant System* and more prominently *Bleed* (Obzen, 2008). Such sections lend a greater dynamic range to these tracks. Project 7 furthers this and moves beyond what is arguably a purely transient device in a consistently ‘heavy’ and often challenging sonic palette. Both *Dear Djentlemen* and *Mesh Hugger* feature *extended* quiet passages as well as various dynamic

levels in between. This therefore aligns with this area of rock music in terms of treatment of the riff, but makes appropriate developments to the framework and combination of instruments.

Interestingly, there were further comparisons of this Math Metal/ Djent process in Project 2's 'Call for Scores'; *The Braid* for example, uses an extremely angular and syncopated main rhythm to underpin the frenetic percussion line. It is initially based around the A diminished scale and shares some clear sonic character with *Dear Djentlemen* (Project 7). *The Braid* also features a drum part emphasising the crotchet pulse on the hi-hat, although in a less 'muscular' and brutal manner. As such, this is a comparable treatment of the riff. Furthermore, its near obsessive rhythmic pattern is performed across all instruments; in this manner, the entire band *share* the riff, as opposed to focussing on the guitar as the sole provider. *Lyke as a Huntsman* (Project 2) similarly uses this rhythmic process; following the opening sequence in 3/4 time, the marimba and guitar continue to play the same line across the subsequent 4/4 section, thus creating ambiguity within the pulse and meter. It then develops through subtle harmonic changes, as well as diminishing the rests between phrases on these instruments to further the sense of rhythmic freedom. Sonically, this is a far cry from artists such as Meshuggah and this piece's identity as a rock track is questionable. However, it is particularly useful to see such processes at the borders of, or even outside rock; it is a reminder that rock does *not* hold exclusive ownership of such methods whilst framing it as an ever evolving and diverse framework.

6. IT'S ONLY RUFFS n' ROLL

Challenging the Role of the Rock Drummer

6.1 Beyond the Rock Drummer

The rock drummer is often confined largely to the background of the rock band. In performance and staging terms, this may be attributed to the lack of portability and difficulties in achieving sonic balance of the drum kit in comparison to other instruments, as discussed in Chapter 1. Indeed, Walser explains that to concentrate on the drummer proved extremely challenging over the guitars and vocals, citing a "more intimate experience" with the latter (1993: 173). This is a particularly interesting observation, given the analytical context of his research, although effectively demonstrates a common attitude. Such traditions have led to increasingly extravagant performance styles over the years, from gargantuan, obtrusive percussive rigs to flamboyant stick tricks and other feats of showmanship. Certain drummers have taken this to greater extremes by physically demolishing their kits during performance, such as Keith Moon of The Who. These behaviours continued offstage and into the media; players like Moon, and John Bonham of Led Zeppelin, became notorious for their outrageous extra-musical activities as well as their skill behind the kit. During this research, there were several occasions where the rock drummer's role was expanded as part of the continued effort to create a sonically emancipated unit from *within* the musical content.

Soloing As A Strategic Device

Many of the Projects in this research feature drum solos as a strategy of developing a piece; in the rock tradition, solos are usually moments of unaccompanied virtuosity, separate from the main musical material[49]. The ending section of *Baltar Ego* (Project 5) challenges this notion. In contrast to rock tradition, the drummer here takes a soloistic approach with the rest of the band maintaining pulse. This directs the song to its climax and works in partnership with the additional musical forces. Furthering this idea is *Tunnel Chase* (Project 5), whereby the drum kit is engaged in a solo 'trade off' with the percussion. In this circumstance, the drummer is free of any 'beat keeping' duties with the pulse being provided by the bass and guitar. The solos themselves are both dynamic and virtuosic; furthermore, in avoiding typical note divisions, such as semiquavers and sextuplets, there is a developing rhythmic freedom less common to rock, certainly outside of flamboyant song endings. This method is further demonstrated in Project 4's version of this piece, although it was necessary for the percussionist to reinforce the pulse in this circumstance to maintain structural integrity within the composition. The *integration* of the drum solo

[49] See Chapter 2.4

as a compositional strategy therefore brought the drummer into the foreground and expanded the role. This was further demonstrated in *Allfather* (Project 1) through the use of a solo drum kit part to add rhythmic interest and diversity. Contrasting the previously mentioned ‘free’ solos, these are tightly controlled and pre-composed. They maintain elements of virtuosity, but prioritise the development of the composition rather than promoting the role of the rock drummer or satisfying individual egos. Such a combination is less common to rock drumming and perhaps shares more characteristics with an orchestral approach to composition.

Classical Percussionist

The borrowing of orchestral strategies can also be found in the live version of *Loki* (Project 4); to simulate the snare and timpani combination of the recorded version (Project 1), the drummer performed a controlled military snare march accompanied by a kick drum pulse. The use of short, semi-improvised fills within this part also helped to align it with rock drumming traditions whilst simultaneously expanding the role. *Lyke as a Huntsman* (Project 2) pushed the rock drummer even further into classical percussionist territory; the performer is here *not* tasked with maintaining pulse or ‘keeping time’. Instead, the focus is on multiple sound effects to compliment specific strategic points moments in a manner common to more contemporary settings. The second verse of this does however contain a repeating phrase that could be described as a ’beat’ of sorts (see Fig 6.1).

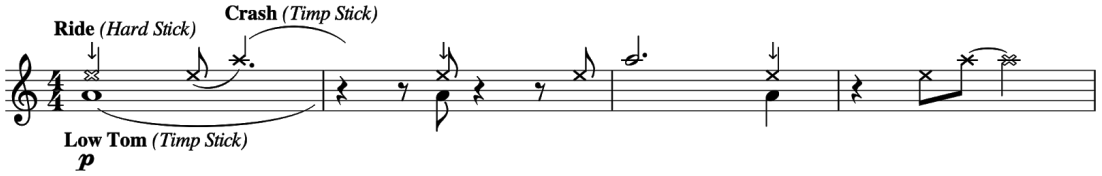

Fig 6.1: *Lyke as a Huntsman* (Project 2), Percussion part, Polyrhythm marked

The four bar pattern is performed twice in identical fashion before developing as the piece progresses; aesthetically, it holds little common ground with rock drumming traditions and perhaps functions as an indicator for the limitations of the idiom. In *Running Man* (Project 5) there is a different approach to this altogether with the drum kit playing a series of ‘broken fills’ or ‘stabs’ in unison with the bass guitar. These are again precomposed and tightly controlled similarly to the classical percussionist, with *every* element strictly prearranged. A comparable strategy can be found in experimental pieces such as Steve Martland’s *Horses of Instruction* (*Horses of Instruction*, 2001) whereby the drum kit plays similar stabs in unison with both electric and bass guitars in between a more conventional timekeeping role. Interestingly, both still resemble rock drumming, even if no longer constantly keeping a solid groove or maintaining time as would commonly be expected. In this sense,

Running Man manages to effectively integrate elements of classical percussion practice into the rock drummer's role.

The 'Rig'

The relationship of the drummer and their apparatus, or 'rig', was interesting throughout this research. The above examples have focussed on developing the role using a traditional kit consisting of kick, snare, tom-toms and cymbals. However, Project 6's large rig was surprisingly in keeping with the flamboyant kits and 'gargantuan' set-ups discussed in Chapter 1 and held an imposing aesthetic quality that might be expected from such apparatus. It was a deliberate decision to create an 'open' feel to the kit, ensuring that the audience could physically *see* the player perform the pieces. With the performer usually seated and hidden behind enormous apparatus, some of the intricacies could easily have been lost. Giving the rig an open setting demonstrated the practicalities of the compositions and allowed the audience better connection with the performer. Although there is significant crossover with the 'rock percussionist'[50], the process of 'demystifying' a large rig also furthers the rock drummer's role; they are no longer hidden, and arguably dehumanised, behind the kit. This is comparable to the multi-camera approach of rock drummers in the internet age; attention is drawn to the intricacies and key points within performances through edited footage of both hands and feet, often displayed simultaneously. Indeed, this practice served as the inspiration for my own shot choices during Project 6. However, it is rarer that the setup would be designed to allow this level of openness for the audience; in doing so, the drummer is brought into the musical focus and the role further expanded.

6.2 The Emerging 'Rock Percussionist'

So, can the rock drummer be brought into the foreground of the rock band, or to a position comparable to other band members? My research has *not* aimed to answer this question by replacing the rock drummer as the centre of the rock band; instead it has sought to challenge the position by developing new and enhanced roles within it. A large part of this has been integrating and expanding the 'rock percussionist'[51] role into a full band member, as opposed to the discussed auxiliary or 'other' position as a separate session musician. To explore this, the parameter of ensemble size was extremely useful. Project 1 featured the rock percussionist as one of a number of additional band members; much of its material stemmed from the tuned percussion parts, rather than treating them as an additional colour to existing, guitar-driven music which challenged the traditionally auxiliary role. Tracks such as *Loki* demonstrate this; the opening glockenspiel arpeggio lays both the rhythmic and harmonic foundations of the song as well as providing support to the bass guitar

[50] Discussed in Chapter 6.2
[51] See Chapter 1 for an outline

solo. All other musical lines, percussion or otherwise, are stacked on top of this. Such strategies were adjusted as the ensemble size decreased over Projects 2, 4 and 5; these stripped back the group to a more traditional, but augmented rock band. The results of this were varied, but consistently brought the rock percussionist into the foreground. *Nocnice* and *The Braid* from Project 2 were particularly focussed on placing the player as a soloist. Both were successful in developing the rock percussionist role to an integral strategic point with parts intrinsic to their respective compositions. This role could *not* have been performed by another instrument due to the note choices and techniques required.

Other pieces from Project 2 were less solo-orientated; both *Marimba de Sade* and *Pilot, My Pilot* provided suitable technical challenges through strong partnerships between the guitar and percussion. In the former, this manifested through the exchange of driving *moto perpetuo* lines and colourful comping; in the latter, this was through blending the textures of the two players, often playing unison lines to support the meandering trumpet melodies. This was a highly interesting strategy as it maintained the more obvious rock connections whilst simultaneously developing the roles of *both* instruments. Exploring this relationship and joint function was inspirational to many later arrangements.

As well as developing the identity of the rock percussionist, many of the pieces from Project 2 took a reasonably conservative approach to the rock drummer's position; as discussed, they are largely expected to 'keep the beat' with occasional soloistic flourishes and textural support. In contrast, *Lyke As A Huntsman* abandoned this idea, instead treating the player as more of an orchestral percussionist with colourful decorations on suspended cymbals and timpani. Although atypical of drum kit parts, it was written on a single line with the performer playing multiple instruments simultaneously and as such does resemble a kit chart.

Projects 4 and 5 further expanded both rock drummer and percussionist roles. In these cases, the reduced band size brought them yet further to the foreground. During Project 4, the percussionist was both musical director and band leader. The former chiefly involved conducting rehearsals, with the latter leading the performance, communicating with the audience and introducing the band. From an audience's perspective, a percussionist acting as frontman is a distinct rarity in the rock world, although more common in jazz with vibraphonists such as Roy Ayers or Lionel Hampton. The rock drummer also featured more time in the foreground. Similarly to the rock percussionist, my intention was *not* to bring this role exclusively into the spotlight to usurp the guitarist's position, but to work toward a more sonically emancipated unit. In particular, the live performance of *Tunnel Chase* (Project 4) allowed extended solos for both the drummer and percussionist from within the composition, differing greatly from the traditional rock drum solo whereby the music is halted to showcase the performer. Famously, this tactic has been employed to

provide a rest for the other band members and audience, or merely to ‘pad out’ a live set. Integrating the drum solo more organically allowed for greater musical and aesthetic interaction onstage within the band. Interestingly, during these projects, the only instruments that did *not* have extended solos were the guitar and bass, although they did take predetermined lead lines and roles at various points.

As the ensemble size was yet further reduced, the roles of rock percussionist and drummer continued to develop; with Projects 6 and 7, these were blended and augmented. Project 6’s percussion solos placed *all* melodic and harmonic responsibility on the drummer as well as subverting the concept of the rock drum solo. Pieces such as *Octopode 1* featured one player keeping the ‘rock beat’ whilst simultaneously performing tunes, riffs and chord patterns. In this sense, the player is no longer playing a background role; instead they act as support to their *own* solo. Although drum solos have existed for some time, it is unusual to see them presented as thoroughly pre-composed or with fully tempered pitch. Moreover, virtuosity within the playing was demonstrated through the coordination and musical challenges present, rather than through speed and showmanship. *Octopode 3* and *Octopode 5* do contain elements of the traditional rock solo however, with both pieces featuring elements of improvisation and a greater focus on semi-pitched or unpitched playing. Both also halt the music to allow showcasing of the drums in a free manner. The rock drummer role was here expanded by using a greater dynamic range and sensitivity, as opposed to a focus on raw power and energy.

6.3 The percussionist/ guitarist partnership

One of the most interesting, if unexpected outcomes of this research was the blossoming relationship between the guitar and percussion. The two are initially compared in Chapter 2.5 and their continuing partnership became crucial in defining the rock percussionist.

Throughout this research, there has been a mantra of destabilising the dominance of the guitar in rock; it has *not* aimed to usurp this position with percussion, rather to *expand* the palette of rock. This idea first materialised in the early stages of Project 1 which featured the two instruments working side by side as part of a larger band[52]. In the mid section of *Allfather*, the two begin to play unison Math Metal style riffs; the sonic weight they achieve from this is comparable to the standard twin guitar pairings commonly found within this genre. The marimba maintains its identity through this section with the addition of mallet rolls on the longer notes. *Yggdrasil* furthers this with joint lead melody lines, this time played between the guitar and vibraphone. Such examples are reminiscent of Frank Zappa and Ruth Underwood’s approach as discussed in Chapter 3.1. However, the use of the vibraphone as opposed to the

[52] This was initially thought of as an ‘Amplified Chamber Ensemble’

marimba does begin to advance this relationship. It is here used as a compositional strategy and not designed as a showcase or as a point of novelty.

This partnership continued to evolve throughout Project 2 and this is discussed further in Chapter 6.2. In conjunction with the research of Project 1, a more solid framework emerged and was explored throughout Projects 4 and 5; Chapter 5.2 contains a more detailed discussion of the instrumental 'trade offs' from the track *Nebulous* as well as the Heavy Metal style twin harmonies of *Running Man*. However, Project 7 focussed *solely* on the partnership between guitar and percussion. The developing strategies of interchangeable leading and supporting roles were thoroughly explored, with both players performing a variety of riffs and solos throughout. This led to the exchange of compositional and performance techniques, such as the percussion's broken pedal riff at the beginning of *Dear Djentlemen* and the ambient comps of the guitar in the drum solo of *Mesh Hugger*. Sonically, these pieces share traits more common to contemporary performance group's such as Bang On A Can Allstars; in *Believing* (*Renegade Heaven*, 2000), composer Julia Wolfe employs both tuned percussion and electric guitar as key elements of the larger ensemble. They are then briefly featured as a duo at 3'31" creating an insistent, restless effect through the dissonant moto perpetuo lines of both, comparable to those of *Dear Djentlemen*. However, *Believing* does not remain in this sonic space for long, contrasting Project 7's strategic focus. Such direct cross-pollination between the two forces led to the expansion of the *guitarist's* position as well as furthering the growing partnership of the two throughout this research. Working closely as a duo helped to reveal the limitations of the guitar in this context as well as exploring areas where it could be given alternative duties. This process had begun in earlier projects, but it was here that it was most thoroughly realised through the close proximity and focus on the two players. This provided a compositional language and strategy for writing percussion parts more easily integrated and aligned with rock. Whilst the earlier work *Allfather* (Project 1) contained definite nods to Math Metal and Djent riffing, performing in a more consistently 'heavy' context further expanded the capabilities of the rock percussionist. It demonstrated that this role could be successfully integrated within a more 'extreme' musical environment without sacrificing its own identity. In addition, the duo format of Project 7 may appear more immediately 'rock' to an audience; there are more familiar rock reference points such as the presence of distorted guitars and a 'band' of sorts. There are limited numbers of duo acts within the rock world however and thus this aspect of the project may appear striking in itself.

What was particularly notable with both Projects 6 and 7 was the importance of visual presentation; whilst neither was performed on the live stage, filming was an essential component to both in demonstrating the complex mechanics and strategies involved. The former served to highlight the highly aesthetic nature of the drum solo

and the latter further solidified the rock percussionist as a viable choice within the rock band.

6.4 The drummer as composer/ performer

The role of composer-performer is a familiar feature of rock, particularly when relating to collaborative group work and 'jam session' style practice. Throughout a majority of this research, the percussionist acted as both sole composer and lyricist. An autocratic approach to composition is commonplace in the classical world but contradicts the apparent collaborative nature or rock. However, there are prominent examples of rock composers using this non-collaborative framework; Frank Zappa[53] for example, exhibited a great degree of control over other instrumental parts than would commonly be found in such music. In connection with this, he also used notated scores as part of his working practice, contrasting the widespread aural tradition. On the relatively rare occasions that such frameworks are used within rock, they are the domain of guitarist-composers[54]. Examples of this for other instruments are rarer still. An important element of the research therefore is that the composer-performer role has been recontextualised by a percussionist. It would have been easy to fall into a parallel framework whereby percussion became the dominant force as a *replacement* to the guitar. Whilst it is clearly a much greater voice within the work than would be commonplace, it largely sits *alongside* the guitar and other instruments of the ensemble. There are also numerous moments of focus and virtuosity for the guitar, with prime examples being the large scale sweep picked arpeggios of *Thor* and the chorus driven lead lines of *Loki* (Project 1). The material from this project used several different instruments as compositional starting points including percussion, guitar and more. As such, it developed a stronger ensemble-based focus, rather than centring on individual abilities. Such a strategy is akin to the percussion ensemble writing[55]; although groups are not opposed to highly technical playing, there is an ethos of serving the overall composition, rather than catering to individual egos.

The percussionist composer-performer role is most thoroughly explored in Project 3; the recording was completed *entirely* as a solo endeavour, from composition through to finished product. There are some similarities with single performer solo projects; interestingly, these are prominent within the Black Metal scene with projects such as Burzum[56], although they share very little in terms of strategy or aesthetics with this research. More artists from this scene operate as duos such as Darkthrone and more recently Bölzer to name but a few; there is a further unexpected alignment with

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[53] See Chapter 3.1 for further background on Frank Zappa's work
[54] Arguably this further fuels a cycle of guitar-dominated music
[55] Chapter 3.3 details the author's experience within percussion ensemble playing, particularly with taiko drumming
[56] The project name of the now infamous Count Grishnack, AKA Varg Vikernes

Project 7 despite their obvious differences, although this is through no conscious effort[57]. Other acts have also been marketed as multi-instrumental solo work, such as Mike Oldifield's *Tubular Bells* (1973). Although Oldfield does perform a majority of the instruments, the recording is rife with additional musicians and this weakens the strategic alignment. However, none of these projects work with percussion or drums as starting or central points; in all cases, such instruments are placed in exclusively background roles, mainly in support to the guitar and occasionally other sonic forces. In contrast, Project 3 *does* work with percussion as the central focus and as such, extends the roles of both rock drummer and percussionist into 'rock composer-performer' in a way previously reserved for the guitar.

[57] This is perhaps a subconscious decision affected by the author's longstanding history with this subgenre. More details are provided in Chapter 3.3

7. YOU CAN'T DO THAT ON STAGE ANYMORE

Pioneering Extended Techniques

Throughout this research, a variety of new and extended techniques were developed. These can be organised into instrumental, compositional and notational methods.

7.1 Instrumental Techniques

Tuned percussion was a core feature of most of the research and a number of extended mallet techniques emerged. Some were simple concepts such as the 5 mallet parts involved with *Lyke As A Huntsman* (Project 2); playing with 4 mallets is standard practice for the tuned percussionist and this added another to the left hand. It should be stressed that the use of 6 mallets[58] can occasionally be found in contemporary classical work. However, parts with multiple mallets in *either* hand are highly unusual in rock and this recontextualisation can be viewed as an extended technique. Furthering this development of 4 mallet technique was the single handed flam[59] during *Mesh Hugger* (Project 7). Each hand was hereby required to perform these using marimba mallets on tom-toms, snare and cymbals; whilst it is not uncommon to strike drums with a variety of implements in the classical and contemporary worlds, it is unusual to play them with anything other than sticks in rock. This was necessary to facilitate a rapid mallet changeover. Here, a technique requiring two sticks is appropriated using 4-mallet method, setting one marginally higher than the other to achieve the flam. Furthermore, the combination of multiple tuned and untuned instruments in Project 7 required additional levels of dexterity and precision. The harmonic development at the end of *Dear Djentlemen* (from 3'58") needed a strengthened single handed mallet technique to perform marimba comps between the vibraphone melody. This is relatively straightforward on most kit components, but much more challenging to execute effectively on mallet percussion as the keys do not provide the same elasticity as a drum skin or cymbal. Tackling this required an adjustment of mallet grip to maximise the available rebound without 'choking' any of the notes.

Project 7 was particularly fruitful in extending performance techniques and this continued with the treatment of mallet percussion rolls. It is considered standard practice to execute rapid single stroke rolls to create a sustained note on instruments such as the marimba or xylophone. However, *Mesh Hugger* required the players to perform these in unison with the guitar in a similar fashion to the tremolo picked style of many Extreme Metal subgenres. To develop the percussionist/ guitarist partnership discussed in Chapter 6.3, the rolls were played with an increased level of

[58] In exceptional circumstances, 8 mallets are called for, although this is extremely rare
[59] A flam is a common drumming technique whereby a single hit is embellished with a grace note

rhythmic precision. In this sense, the demi-semi quaver patterns were performed in a comparable fashion to the rapid, yet highly specific double bass drum pedal lines found in Extreme Metal drumming. On the subject of percussion pedals, there was further technical expansion with the use of the hi-hat stand in *Mesh Hugger*; here, the guitarist was required to maintain a crotchet pulse using the hi-hat pedal whilst performing an ambient rhythm guitar part simultaneously. In contemporary performance groups, it is not uncommon for other instrumentalists to cover particular percussion parts; one example of this is in Bang On A Can Allstars' 2014 performance of David Lang's *Cheating, Lying, Stealing* where both guitarist Mark Stewart and bassist Robert Black switch from their regular roles to perform the two brake drum parts. However, it is less common for them to add percussive parts whilst performing on their main instrument. Electric guitarists are expected to manage effects and expression pedals as a core element to their practice and it was a logical step to include this as part of the accompaniment to the drum solo. In addition, this did not use a conventional pair of hi-hats, but a set of 'trash hats' made from partially damaged china and crash cymbals to achieve the signature sound of Djent drumming. During this drum solo, the percussionist also incorporates vibraphone notes; they are used for texture rather than melody or harmony, perhaps akin to the role of an effects cymbal on a drum kit. A similar process occurred during the percussion solo of *Tunnel Chase* (Project 5); the vibraphone performs a series of comps at predetermined points during the section as part of the larger percussion rig. These are coordinated with cymbal hits from the drum kit and feature some additional harmonic development. In both examples, it is the mixture of the two sonic worlds that advances technique and develops a richer texture.

A more obvious development of advanced technique was the hybrid of mallet rotations[60] and rudiments[61] used in the *Octopode* series (Project 6). This combined 4 mallet techniques from the tuned percussion world with snare drum rudiments to create a method similar to linear drum kit playing augmented with tempered pitches. The apparatus itself was an extended instrumentation within this context and thus required this technique to facilitate simultaneous pitched and unpitched performance. The setup also relied on the Xylosynth to function effectively; its central position enabled easy access to the tuned instruments without interference from other elements of the kit. Drummers have previously incorporated similar equipment, such as Neil Peart's use of the MalletKat with Rush. However, the central focus of tuned instruments, literally as well as strategically, is unusual. The Xylosynth was used in other contexts, such as throughout Project 4; in this case, the instrument overcame some of the sonic and staging difficulties presented by the use of tuned percussion in such live performance. This process alone covered no new ground, but the

[60] A series of set patterns numbering the mallets 1-4 (left to right) and reordering the sequence in which these are played, e.g. 1324 or 3241

[61] A series of ordered right and left hand combinations used on battery percussion, e.g. RLRL or RRLL

instrument was used to create extended textures by stacking sounds, such as by combining marimba and vibraphone in a single hit. The new textures and effects created also meant that some softer mallet sounds could be used; during previous projects, harder mallets were used almost exclusively, although both *Heimdall* (Project 1) and *Global Grooves* (Project 3) contain notable exceptions. In both cases, the material is entirely separated from the guitar, which allowed the use of softer mallets. Blending sounds on the Xylosynth across multiple octaves and instruments created the 'textural richness' discussed in the guitar and percussion comparison of Chapter 2.5.

These sounds were also adjusted to push each instrument outside of their respective acoustic registers. Furthermore, in pieces such as *Octopode 3* (Project 6), a key was programmed to perform a tubular bell note extremely far outside its range; this was then treated with reverb and very slight distortion effects to create an explosive electronic sound within the composition.

The extensive use of the recording studio throughout the research also facilitated extended technique; in part, this was reliant on studio effects and this is discussed in more detail in the next chapter. However, one particularly interesting development was the 'Santoor effect' as used in *Allfather* (Project 1) and *Global Grooves* (Project 3). This sound was inspired by the use of the Persian Santoor on some of the intermittent album tracks from the band Akercocke, such as *Prince of the North* (*Choronzon*, 2003). It was possible to research the instrument during a short research session with the band's frontman and composer Jason Mendonça. However, it was more difficult to source an appropriate instrument for recording; the 'santoor' parts during the research are therefore achieved by striking grand piano strings with glock mallets. In *Allfather* (Project 1), this was achieved by recording each individual strike and sequencing the audio files to construct the part, largely to maintain the quality of sound whilst playing so many notes in such small and delicate circumstances. Conversely, the shorter and simpler melody in the closing stages of *Global Grooves* (Project 3) was performed as a complete take, although certain neighbouring notes were dampened for security. In both examples, there is a process comparable to contemporary piano techniques such as string plucking and prepared piano. In this, there is a development of percussion technique through appropriating the procedures of another instrument. Such extended methods were not solely confined to the studio however; during the piece *Nocnice* (Project 2), the acoustic vibraphone was treated with reverb and distortion effects. In this case, the keys were played with a violin bow to create an ambient and colourful solo. Such techniques can be found in a number of contemporary situations, but running this sound through effects pedals and an amplifier is more innovative, especially when outside the controlled recording studio environment.

7.2 Compositional techniques

Throughout this research, a variety of compositional devices were employed and examined. In some cases, this involved pioneering and expanding new methods as a composer. As discussed in Chapter 5.3, riffs were a compositional cornerstone and were treated in a number of ways. What was notable during this research was the increasing focus on interlocking riffs as a strategy for building musical complexity, creating additional layers of harmony, rhythmic ‘phasing’ and polyrhythm. Project 3 for example uses a 4 over 5 polyrhythm as its central point (see Fig 7.1).

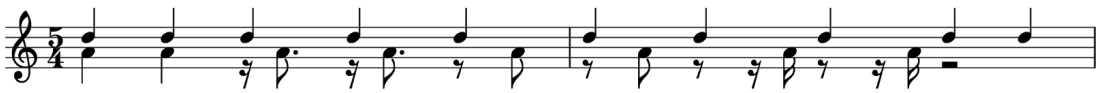

Fig 7.1: *Global Grooves*, Central Riff ♩= 60

In *Global Grooves*, this riff has numerous permutations in terms of rhythm, harmony and instrumentation. However, it is the third movement where this became most prominent at 11’55". In this section, the central riff is performed on the glockenspiel and continues to develop harmonically in a slow 5/4 meter. Accompanying this is a marimba melody with a 7,7,6 quaver phrasing and a chromatic xylophone/ tuned tom-tom duo in a 7,7,7,7,7,5 semiquaver phrasing. The additional vibraphone melodies are loosely a 4,4,2 crotchet phrasing, although these are not as striking as the more angular rhythms. This series of riffs meets every two bars of 5/4, building an intensity and drive supported by the developing harmony and chromaticism within the music. *Baltar Ego* (Project 5) is another prominent example of this process whereby the verses feature a 9/8 vibraphone line superimposing the main 3/4 pulse (see Fig 7.2).

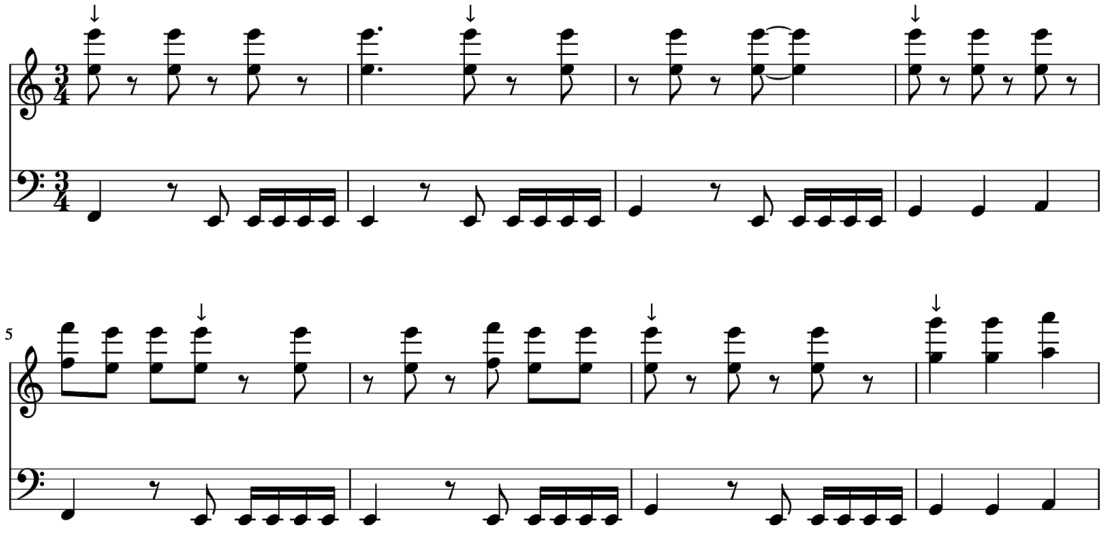

Fig 7.2: *Baltar Ego*, 9-9-9-9-6-6 Polyrhythm marked, ♩= 120

Although a less complicated procedure compared to *Global Grooves* (Project 1), the rhythm does remain out of phase with the main pulse for longer in this example and builds tension before resolving during the final vocal phrase. Composer Steve Reich has made much use of this phasing technique for a number of years; specifically from the rock world is the King Crimson track *Frame by Frame* (*Discipline*, 1981), with the process shown in Fig 7.3.

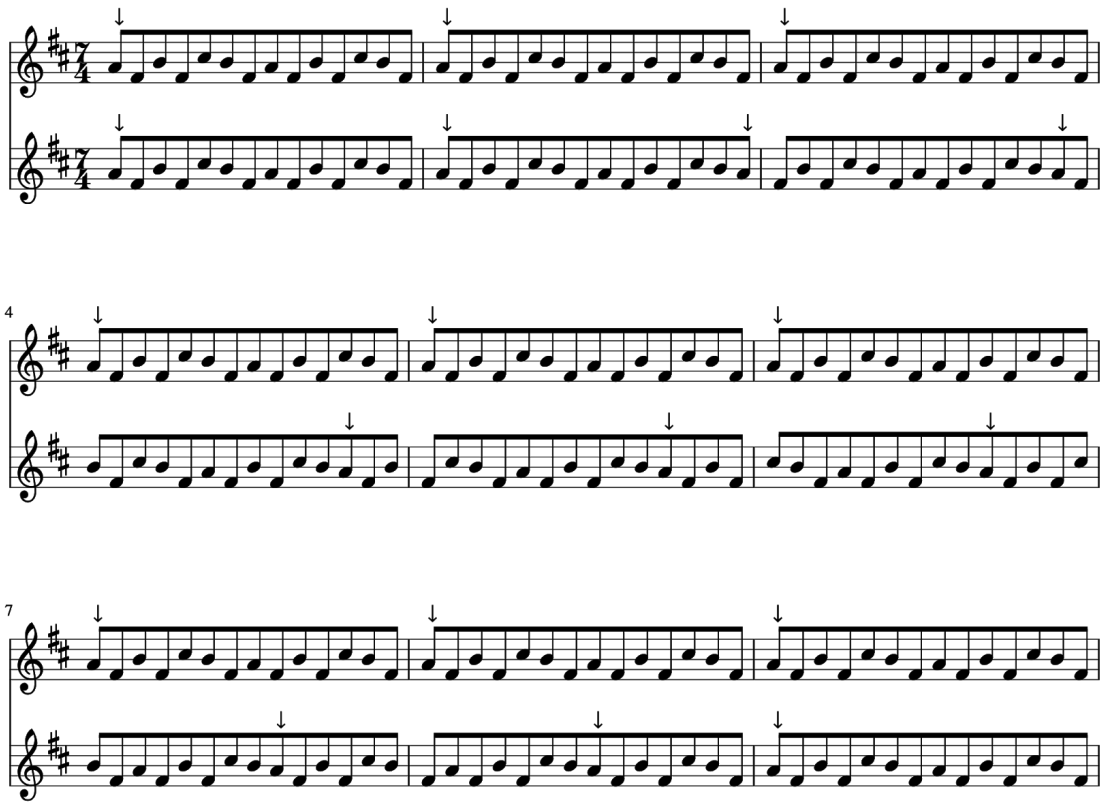

Fig 7.3: *Frame by Frame*, Phasing Riffs, 13 Phrase Marked, ♩= 160

However, with *Global Grooves* (Project 3), such processes are *continually* stacked for a denser texture, playing a variety of rhythmically and harmonically contrasting lines. *Baltar Ego* (Projects 4 and 5) also uses a seemingly unrelated part, rather than any rhythmically augmented or diminished version of the lead riff; surprisingly, this 9/8 line is conceptually the central focus of the song and is the basis of its bridge. Furthermore, there are a few 9/8 bars inserted into verse 2 played in duplets, starting at 2’29” (see Fig 7.4).

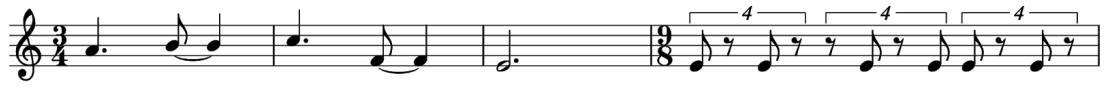

Fig 7.4: *Baltar Ego*, Verse 2 Extract, Vibraphone Part, ♩= 120

The effect is to rhythmically ‘stretch’ the pulse via transient metric modulations. Both Figs 7.3 and 7.4 feature their own methods of integrating complex rhythmic

processes into the rock song format as popularised by composers such as Steve Reich.

The use of rock song structure within the research is discussed in Chapter 5.2 and there was a deliberate effort to expand conventional ABAB, or 'verse-chorus' formats. In Project 1, this involved dramatic changes to particular repeated sections such as *Heimdall*'s ABABi layout (where 'Bi' is the chorus variation) or *Frigga*'s ABAiBCA structure (where 'Ai' is the verse variation). In both cases, this featured a striking dynamic change, as well as additional melodic and harmonic material. In *Baltar Ego* (Project 5), there was a similar process whereby the material is structured ABAiCBA; in this circumstance, 'Ai' is an extended version of the first verse. It is played with comparable dynamic level to A, but features a different vocal melody, phrasing and groove, as well as an augmented arrangement. On the surface, it appears as a new section, but still maintains much of the accompanying material from the opening. The C section is based upon a repeating counter rhythm, found throughout the verses and is conceptually the centre of the song. Here the dynamic is once again reduced significantly before returning to the B or chorus section. Interjecting this *before* the chorus, rather than after as might be expected, is an interesting diversion within conventional song structure and promotes longer forms in a logical and subtle way. *Global Grooves* (Project 3) does this in a different way and this was a deliberate move to create a longer form piece connected by a central riff (see Fig 7.1).

This centre point of the composition switches instrumentation and rhythm, later developing harmonically. This seems at odds with the traditional song based structures of rock. However, the piece can be logically divided into 3 shorter movements; within each of these exists a shorter, simpler structure. In particular, movement 2 follows an approximate ABABCAB format closely aligned with song format. The composition follows a structure similar to some 'epic' Progressive Rock recordings such as *Supper's Ready* (*Foxtrot*, 1972)[62]. The long form composition could be described as a suite of songs linked by a narrative, as opposed to a single piece; indeed, the linear notes do list *Supper's Ready* as containing 8 distinctive sections. Although there are clear references to earlier material, the song largely focuses on introducing new ideas, sometimes on arguably illogical tangents such as *Willow Farm*. Similarly, *Global Grooves* (Project 3) switches style through its 3 sections, although in a less drastic fashion; however, the nearly continuous presence of the central riff, as well as the uniform tempo, provide a greater cohesion to the structure. Furthermore, its conclusion features a clear return to the introduction, gradually dismantling the musical layers as an inverse to the opening, giving a greater sense of the piece 'coming home' and providing an effective ending to unify

[62] See Chapter 5.2 for a more detailed discussion

the content. Thus the piece developed an enhanced approach to framing the concept, or ‘epic’ rock song structure.

Project 3 provided further new compositional approaches, namely in the use of semi-pitched and limited pitch percussion; much prior work focussed on fully tuned or untuned material and it was extremely useful to explore instruments falling into the middle ground. This included a rig of tom-toms and roto-toms performing parts of tempered pitch, as well as timpani performing bass lines. In addition, there was a deliberate absence of drum kit style parts; the existing lines from the third movement were developed from previously recorded drum samples. This provided the opportunity to tune kick and snare notes, bringing the drum kit further into harmonic territory. The results are subtle and exist mainly as sub-frequencies, but do add extra colour to the music. This is comparable to the practices of electronic producers, who focus in much greater detail on tuning individual sound samples and sources. As such, this adds a new depth to rock composition within the recording studio in a comparable way to Danny Carey’s approach to tom-toms as discussed in Chapter 3.1. Furthermore, other studio effects were experimented with during this time; very gradually increasing the presence of a particular effect on a riff became an effective technique for transformation, as in the end of *Global Grooves*’ (Project 3) first movement at 2’55”. It is common to use production techniques such as reverb, compression and EQ, but more unusual to use expanded effects on tuned percussion instruments in this way. In this sense, the practice begins to align with the more advanced electronic procedures involved with creative guitar treatments.

7.3 Notational Techniques

Chapter 2.4 discusses the relationship of notation to rock drumming; it is part of a greater aurally-focussed tradition within rock music, as well as an apparent resistance to music theory in the greater popular music canon. Conventional notation was used through parts of the research, particularly when needing to communicate precise parts to ‘non-rock’ instruments such as the trumpet, violin and cello. In other areas, the notation is in the form of MIDI charts, which were used to create some of the original demos in the developmental phases. The need for accurate record keeping in a research context is obvious and the use of notation should not challenge the authenticity of the material as rock music. The notational style was left deliberately ambiguous at points to allow individuality within the phrasing and expression of the performance[63]. There was therefore a reduced autocracy within the parts that would seem better aligned with the more democractic procedures of rock and this was an effective compromise between the two.

Project 2 was extremely useful in developing suitable written formats; it was interesting to gain insight into a variety of notational styles, including some genre

[63] See Chapter 5.2 for more details

specific material. There was considerable difference in presentation and level of detail when comparing pieces such as *Marimba de Sade* and *Lyke as a Huntsman*, the former listing only the ‘dots’ and chord names, with the latter specifying tunings, timbres, dynamics and more. This was perhaps due to the differing backgrounds of each composer and suggested much about the traditional level of control for these. Interestingly, both *Lyke as a Huntsman* and *Nocnice* feature the most specific instruction for the guitar part, the latter requesting an approximation of a particular album’s production sound (see Fig 7.5).

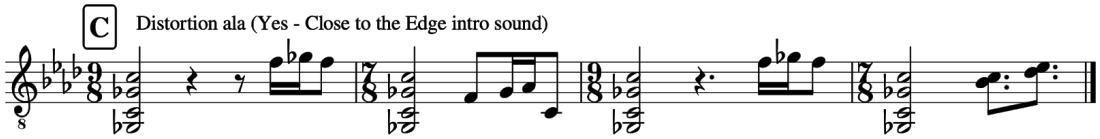

Fig 7.5: *Nocnice* (Project 2), Guitar part extract, ♩. = 80

Huntsman goes into almost *molecular* detail, specifying even the type of guitar that should be used (see Fig 7.6).

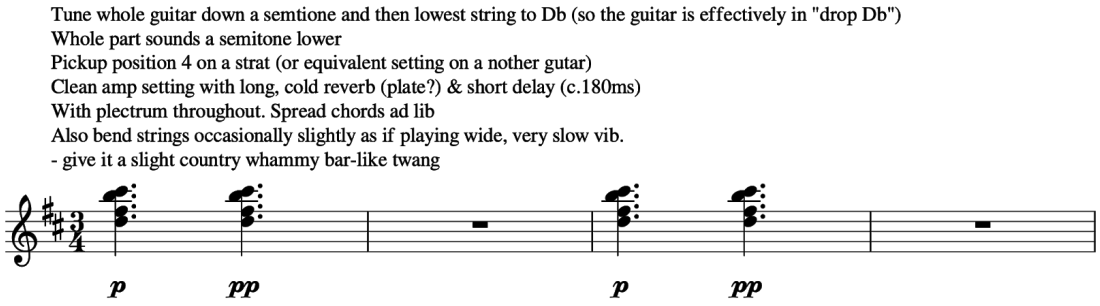

Fig 7.6: *Lyke as a Huntsman*, Guitar part extract, ♩= c.92

Comparable levels of performance detail can be found in the scores of such 20th Century composers as Bartók and Boulez (Blades, 1970: 413), with practitioners specifying playing techniques, instrument sizes, stage arrangements and more. Given that the Project 2 brief was percussion-focussed, one might therefore reasonably expect this level of precision to be matched for other players, particularly the percussionist. Interestingly, neither of these players are first-instrument guitarists, which would otherwise be the simplest explanation for such a phenomenon. However, this study of notational practice provided insight into the perception and position of the guitar within the rock band as viewed from *outside* the rock canon. As such, it helped to develop suitable levels of precision within the subsequent research.

An example of this approach to score writing can be found in *Mesh Hugger* (Project 7); the guitar amplifier settings and effects were crucial in creating the authentic Djent sound. They are therefore provided in a high level of detail, similar to *Lyke as a*

Huntsman (Project 2). The guitar solo however, is left open with only vague adjectives to guide the performer. This was a deliberate decision to invite individual identity *within* the sonic framework. Initially, there is a far lower level of precision in the percussion part, specifying only ‘hard mallets’ and ‘medium-fast motor speed’. Conversely, the solo for this player is *very* defined; this was to allow the integration of vibraphone notes to the drum solo. Both elements needed to be consistently present and thus orchestrating a solo was the most certain way to achieve this. In contrast, the comps underneath the guitar solos are extremely free on the left hand, whilst maintaining the mechanical crotchet pulse with the right. Here, there was an effective combination of free and prescribed elements.

The *Octopode* series of Project 6 makes use of slash notation for the performer to create their own fills (see Fig 7.7).

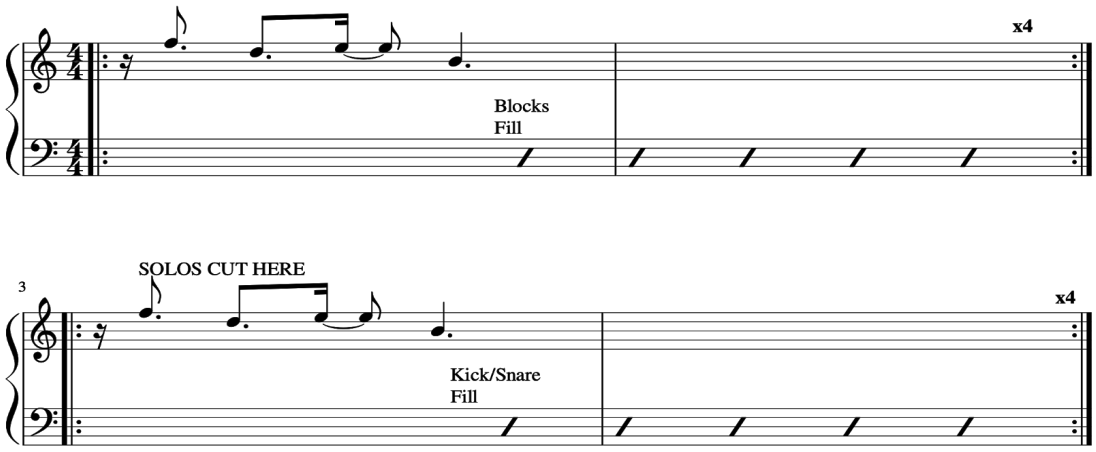

Fig 7.7: *Octopode 5* (Project 6), Solo section extract from 2’32”, ♩= c. 65

In this circumstance, the sound sources of these are specified to promote textural and timbral development. Score writing in this method is common practice for drummers and thus was the most appropriate method for notation on this apparatus. Furthering this idea was *Octopode 3*, which featured a greater frequency of indeterminate elements within the score (see Fig 7.8).

The instrumentation is again provided to promote developmental direction, although there are also “suggested fills” to provide some stimulus for the performer. In both of these pieces, there are ‘free’ solos; there is a minimal level of direction for both, providing scope for contrast when performed as a suite. Such devices were designed to be easily interpreted by both rock drummers and classical percussionists alike, making the pieces accessible to both worlds. As such, the notational style promotes elements of improvisation and individuality within the performance.

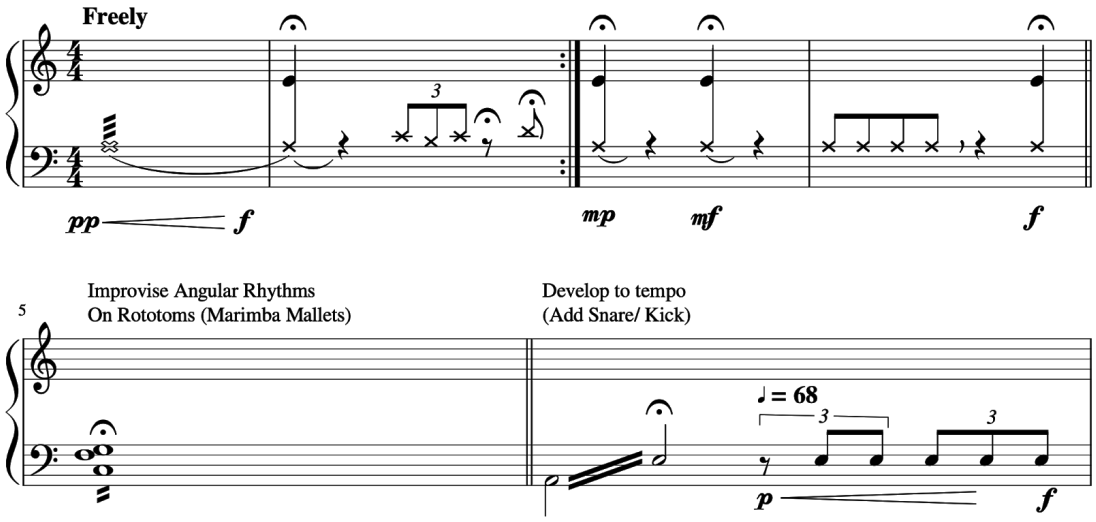

Fig 7.8: *Octopode 3* (Project 6), Directed improvisations

Project 6 also required an extended notational style to incorporate the simultaneous performance of tuned and untuned elements. Initial experiments on a single stave proved rather messy and lacked clarity (see Fig 7.9).

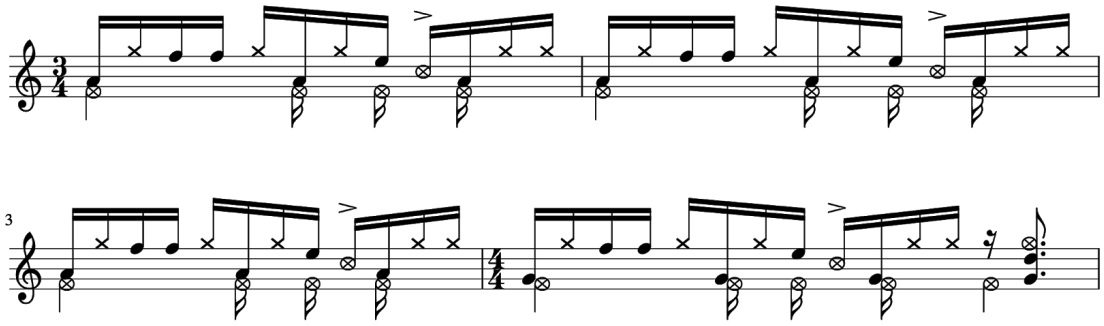

Fig 7.9: *Octopode 1* (Project 6), Early sketch on single stave

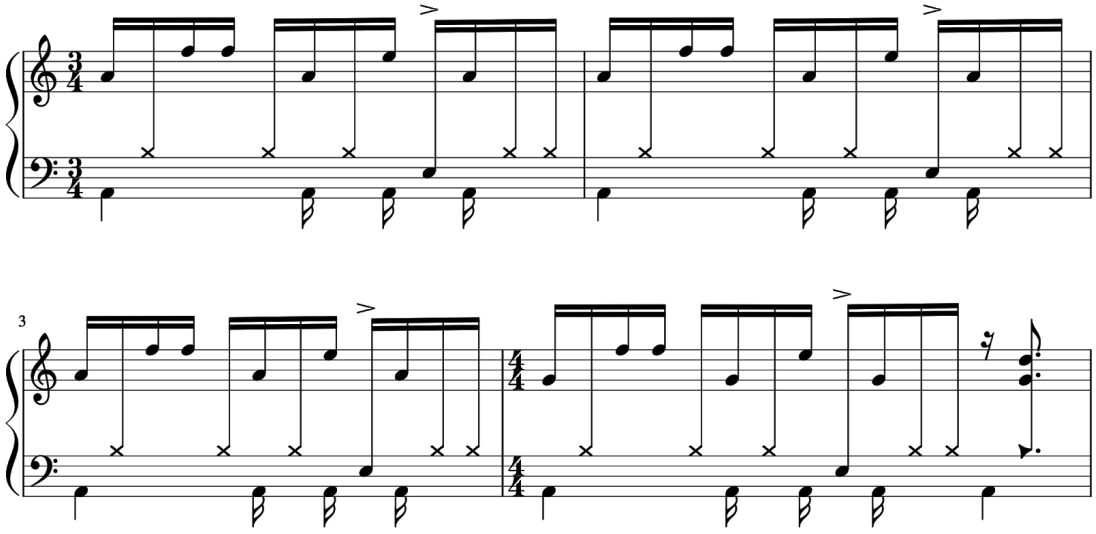

Fig 7.10: *Octopode 1* (Project 6), Grand stave version of **Fig 7.9**, ♩= 88

As such, a grand stave style was developed, based loosely upon solo marimba writing (see Fig 7.10). Usually, the top part depicted the fully tempered notes and was played with the right hand, unless otherwise specified. The bottom used the common drum kit layout, with the three roto-toms replacing the conventional tom-tom score positions. This focussed on the left hand and both feet; therefore, it seemed logical to place the vibraphone pedal markings on this stave, as they were treated in a similar fashion to the drummer's hi-hat. The practice of joining both staves was vital in demonstrating the synchronicity between the two parts, similar to more complicated marimba rotations across bass and treble clef in mallet based scores. This resulted in a new notational style that clearly displayed simultaneous instruments in a digestible format, recognisable by performers from a variety of backgrounds.

8. ONE MORE SONG!

Conclusions and Parting Thoughts

This research was aimed chiefly at integrating tuned percussion into the framework of the rock band. It was vital that the role of the percussionist was *thoroughly* embedded in the work on a conceptual level, lest it were to fall into the trappings of gimmickry. Initially, this was done by expanding the ensemble size far beyond the traditional guitar/bass/drums/vocals combination within the rock band. Subsequently, reducing the group size was a key factor in achieving varied results, as was reasonably succinctly anticipated; what was unexpected was the strength of the emerging 'rock percussionist' that has established tuned percussion as a legitimate and authentic element of the rock band. This role is now comfortably integrated and has proved capable of operating in a variety of foreground, complimentary and supportive strategic positions within rock music, particularly apparent during the duo pieces of Project 7. Perhaps most importantly, this role has been successfully integrated as a *consistent* presence within the material; Chapters 1 & 2 identify the issues of novelty and tokenism surrounding tuned percussion within rock music, both of which were necessary to avoid. Destabilising the guitar as the dominant force of the rock band has produced sonic space for other members, such as the drum, bass guitar and trumpet solos found in this research. It has not relegated the guitar to any level of obscurity, rather created a more 'even playing field' for the instrumental forces involved. Using multiple instrumental 'teeing off' points in composition, as opposed to *solely* building work up from guitar riffs, has provided new textures and a 'sonic emancipation' of the rock band.

I will now focus on providing answers to my research questions, as laid out in Chapter 1.2.

8.1 To explore the success (or failure) of tuned percussion as an organic component within the rock band.

There was a directive throughout the research that tuned percussion (and subsequently the tuned percussionist) should be integrated *organically* into the rock band. This is crucial to evaluating the success of the 7 major projects and I aim to assess this through answering my devised sub-questions below.

a) Can this component become as consistent a force in the rock band as the electric guitar, keyboard or drum kit?

'Tuned' percussion, as defined in Chapter 2.3, was *not* used in every single moment of every single project; *forcing* it to appear 100% of the time would be inorganic *and* inauthentic. However, *every* individual piece does feature multiple tuned percussion

lines and a variety of instruments; in this sense alone it was successfully a consistent force. Augmenting this instrumentation with additional unpitched and semi-pitched apparatus organically provided variety and helped to further solidify this consistency.

Establishing this instrumentation in a way that could compete with the power of electric guitars and keyboard was a different matter. To achieve a balance between the instruments is relatively simple in the recording studio as individual volumes can be easily managed through the mixing desk. Matching the sonic power of amplified instruments was more of a challenge; the main strategy employed was to interlock tuned percussion lines across several instruments, often spanning several octaves. An example of this process can be found in the song *Loki* (Project 1, 2’30” to end) where various tuned percussion instruments join the central glockenspiel pattern against the distorted, Heavy Metal style guitar line. The advantage of working in the studio was that these multiple parts could be performed by a single player. This did present however, an added obstacle to overcome when performing live, particularly with Project 4. Using the Xylosynth was vital to a successful performance; as an effective amplified instrument, it provided a more ‘level playing field’ with the rest of the band without compromising instrumental authenticity. Although this did mean that some parts needed to be omitted or transferred to other players, the Xylosynth was able to maintain tuned percussion as a consistent force for this project.

Whilst this was a solid framework, it was not without its faults; in particular, the sound technician was unsure as to how to treat the instrument in relation to the rest of the band, such as in the marimba solo of *Nebulous* (Project 4, 4’30”). Consequently, it was perhaps not as prevalent as was necessary for its multifaceted role. This was discussed with the technician ahead of the project, but it will be important in future research to clarify and ensure that the nature of this instrument is *thoroughly* understood. Additionally, there is room to improve the ‘force’ provided by the Xylosynth by ‘stacking’ individual instruments; this is a process that was used extensively in the solos of Project 6 whereby one key is programmed to simultaneously trigger several instruments in multiple octaves, thus providing extra frequency range and sonic weight. This may also feed back into the recording studio process for future research, although executed by double tracking several individual instruments. This began to take place in tracks such as *Ragnarok* (Project 1, 0’00”-0’49”) and *Global Grooves* (Project 2, 5’23”-7’11”) and there is certainly room to build on this in future work.

b) Can it fulfil the necessary functions as a member of the unit, such as leading, supporting and soloing?

Throughout the research, there are numerous instances of tuned percussion becoming the central focus and fulfilling a leading role. Below is a table that provides *some* select examples, although this is of course not a comprehensive list;

Function	Project	Track/ Instrument	Time
Lead Melody	*3*	*Global Grooves (Vibes/ Mar)*	*05'23"*
Lead Riff	*4*	*Stillness (Vibes/ Glock)*	*00'04"*
Solo	*2*	*Nocnice (Mar)*	*07'50"*

Fig 8.1: *Examples of tuned percussion as a central focus*

Equally, tuned percussion was comfortable in supporting roles;

Function	Project	Track/ Instrument	Time
Comping Soloist	*5*	*Nebulous (Mar)*	*03'02"*
Harmonic Backing	*1*	*Yggdrasil (Mar)*	*00'35"*
Rhythmic Backing	*7*	*Dear Djentlemen (Mar)*	*01'43"*
Counter Riff	*5*	*Running Man (Vibes)*	*02'53"*
Counter Melody	*5*	*Baltar Ego (Vibes)*	*04'25"*

Fig 8.2: *Examples of tuned percussion as a supporting device*

The track *Nebulous* (performed live in Project 4 and recorded in Project 5) perhaps demonstrates the greatest variety of roles within a single piece, exemplifying most of the listed features for both leading and supporting roles. Its relatively simple ABABCAB structure and extended solos provided the opportunity to greatly vary the instrumental roles and orchestration with each repeat of the sections[64]. The marimba solo in this piece was particularly effective, especially when trading off against the guitar. Featuring tuned percussion as a solo instrument was generally very successful throughout the research. However, this is also an area where there were a few key areas for improvement; the effects-driven solo section at 3'55" of *Nocnice* (Project 2) produced an interesting atmosphere, but was not effectively projected over the rest of the band. In this sense, it failed to fulfil the desired role, although the particular technique could work as a supporting function, similar to the electronic

[64] See Chapter 5.2 for a more detailed analysis of this track

trumpet textures at 4’30” in *Nebulous* (Project 4). Furthermore, there was a technical issue with the marimba solo during this same section, as discussed in part a).

The drum kit/ semi-pitched percussion trade offs from 5’49” of *Tunnel Chase* (Project 4) could have been more effective, with the latter clearly struggling to match the power of the former. However, each solo *is* individually effective here and this could be improved through better instrumental choices and solving the aforementioned mixing issues; in such circumstances, it would probably be prudent to feature the drum kit solo second, allowing for its higher dynamic ceiling.

Although there were some clear areas for improvement, it is accurate to say that tuned percussion *can* fulfill the necessary functions; in many instances, this has already happened and at very least a suitable set of frameworks has now been devised to continue this integration.

c) Can it compete sonically and strategically in the rock band whilst contributing stylistically appropriate material and maintaining its identity?

As mentioned above in section a), the issue of the tuned percussion competing sonically with the electric instruments was fairly easy to manage in the recording with appropriate mixing choices. For live performances, such as Project 4, this was more of a challenge and the Xylosynth was used to ensure that the tuned percussion instruments could match the power of amplified components[65]. Using this apparatus did raise a question of identity however, which was managed by using *only* traditional tuned percussion sounds; to do otherwise could have jeopardised the identity of the instrumental family as discussed in the work of Johnny DeAngelis in Chapter 3.1. The one exception to this was the deliberately electronic sound used in the live performance at 10’05” in *Tunnel Chase* (Project 4); this was a strategic and stylistic decision to ensure the line was properly communicated and that the piece had an appropriately electronic flavour for the subject matter. On the studio version (Project 5) this is performed at 5’08” on the marimba and the composition of the part is very much authentic to mallet percussion, as opposed to an electronic keyboard. Section a) also discusses the technique of ‘stacking’ multiple instruments that are triggered simultaneously via a single Xylosynth key. This is potentially an excellent strategy for maintaining the identity of tuned percussion whilst fortifying its sonic presence; it provides a small mallet percussion ensemble with the strike of each bar, thus further enabling it to compete with its electric counterparts.

Tuned percussion would struggle to perform riffs with the same level of rhythmic aggression as a distorted electric guitar; in fact early experiments with distortion pedals often undermined the identity of the instruments, leaving them completely unrecognisable as their source inputs. However, further experiments in distorting a

[65] There is further discussion of this earlier in Chapter 8.1a

bowed vibraphone were more successful, culminating in the solo section at 3’55” of *Nocnice* (Project 2); although the execution was far from perfect[66], the source material was effective, stylistically appropriate *and* maintained the vibraphone’s identity. In Project 7 the *acoustic* mallet instruments were successfully able to compete with the electric guitar by stripping away the other components of the band and creating sonic space for the two players to coexist. Furthermore, the marimba line at 0’04” of *Dear Djentlemen* (Project 7) demonstrated a greater rhythmic emphasis found throughout these pieces, in particular borrowing the compositional technique of complex broken tonic pedal patterns associated with the ‘Djent’ subgenre in metal. In this sense, the material was able to be stylistically appropriate and authentic to both instruments.

It would have been inappropriate *solely* to mimic guitar patterns in an effort to align tuned percussion with rock; doing so would have been neither authentic nor interesting. Instead, the instrumentation had to function on its own terms. The numerous additional strategic uses are discussed above in section b); each of these examples further demonstrate the uses of tuned percussion in an authentic manner appropriate to the rock band. Balancing the issues of ‘appropriate material’ and ‘maintaining instrumental identity’ was extremely challenging, but was largely achieved successfully.

8.2 Can the electric guitar be replaced as the dominant force within the rock band?

The relationship of the electric guitar to rock music is introduced in Chapter 2.1. Overall, this research did *not* aim to depose the instrument as a vital component of the rock band, but to destablise its position, thus allowing a wider instrumental focus. The natural conclusion of this was to explore forms of rock where guitars are either ‘sidelined’ in favour of other instruments, or absent altogether.

a) Can the resulting music still be considered ‘rock’ and should this be a measure of its success?

Chapter 5 provides an in depth analysis of the relationship of the devised musical material to rock music and whether or not it is appropriate to describe it as such. However, below is a very brief visual summary of this discussion, using the qualities discussed throughout Chapters 1 and 2 for comparison;

[66] As discussed in Chapter 8.1b

Qualities Aligning With Traditional Rock Features	Project(s)
Rock Band Instrumentation	1, 2, 4, 5
Electric Guitar as a consistent force	1, 2, 4, 5, 7
Drum Kit as a ‘beat keeping’ role	1, 2, 4, 5
Modal Harmonic Style	1, 2, 3, 4, 5, 6, 7
‘Riff-centric’ compositional style	1, 2, 3, 4, 5, 6, 7
Rock song structures (eg ABABCB)	1, 2, 4, 5, 6
Use of vocals	1, 2, 4, 5
Democratic compositional process	7

Fig 8.3: *Examples of traditional rock features found in the research*

Qualities NOT Aligning With Traditional Rock Features	Project(s)
Autocratic compositional process	1, 3, 4, 5, 6
Absence of Guitar	3, 6
Absence of Vocals	1, 2, 3, 4, 5, 6, 7
Unorthodox/ Extended Instrumentation (excepting tuned percussion)	1, 2, 4, 5
Deliberately extended/ jazz harmony	1, 2, 3
Unorthodox Structure (outside of song structure)	1, 2, 3, 4, 5, 6, 7

Fig 8.4: *Examples of features outside of rock found in the the research*

This is by no means an exhaustive comparison and is designed to demonstrate a cross section of the discussion. Figs 8.3 and 8.4 imply that the research has more in common with rock than not, but this is too simplistic an answer to a complex question. The reader is therefore encouraged to read both Chapters 4 and 5 for more details of the individual project processes and their relationship to rock. The short answer to this question is that the research *is* closely related enough to *my* specific experiences of rock, as outlined in Chapter 2.1, namely the areas of Progressive Rock and Extreme Metal. As such, another practitioner may find *less* in

common with their own practise, thus reinforcing the diversity of ‘rock’ as an umbrella term.

The more pertinent question is ‘should the research’s relationship with rock be a measure of its success?’ Rock has constantly evolved since its emergence; as a consequence, there are sizeable differences between the music of The Rolling Stones and Anaal Nathrak[67]. Rock acts have generally sought to evolve in an organic way; drummer Bill Bruford mentions that his early fusion style occurred because he “knew no other way to play”, rather than in an effort to create Progressive Rock or similar (www.rollingstone.com, 2019). This research deliberately seeks to destabilise one of its core elements. In this sense, my ethos may be ‘non-rock’ in that I am *purposefully* working against rock tradition, rather than doing this subconsciously.

It has also become clear that certain pillars of rock’s identity are not *owned* by it; Chapter 5.3 discusses the relationship with the riff as an authentic component, but simultaneously highlights that rock does not have exclusive rights to it. Similarly, it is important to remember that rock does not *own* the electric guitar nor vice versa, despite their near-symbiotic relationship; this research has certainly demonstrated any such notion to be untrue. Without innovation and experimentation, rock would quickly become tired and stale[68]. Thus, it would be ill-fitting to use the ‘rockness’ of this research as a measure of its success beyond identifying the similarities of compositional style and technique, summarised above and analysed in Chapter 5.

Therefore it is an intensely personal conclusion as to whether it matters that *my* music is considered ‘rock’ or not. From my perspective, the vast majority of the research *is* rock; it holds sufficient relationship to more traditional rock music in terms of its instrumentation, composition and style. However, it is unimportant to me as a practitioner to be perceived as a ‘rock’ artist; it would be more satisfying to be seen as going *beyond* rock and its confines. A genre that traditionally prioritises self-expression and self-realisation would surely be remiss to chastise innovation? It would further be cruelly ironic should rock fall victim to the very conservatism and snobbery experienced during its lengthy fight for legitimacy and recognition.

b) Is there a path of ‘co-existence’ whereby the focus is shared as opposed to centred around the electric guitar and what strategic framework might be created to achieve this?

The aforementioned efforts to create rock music that was *not* guitar-driven led to some unexpected instrumental relationships, not least an emerging partnership

[67] The two disparate examples are here chosen deliberately to reinforce the point
[68] This idea can of course be applied to other genres, or even music as a whole

between the guitarist and the rock percussionist[69]. This surpassed my initial expectations and became prevalent throughout the research. It is found early on in the ‘dual lead’ lines of tracks such as at 1’24” in *Yggdrasil* (Project 1); there are obvious comparisons here to the strategy employed by Frank Zappa of doubling the lead guitar line with auxiliary instruments, as set out in Chapter 3.1. On the recorded version of this song, the resulting sonic space is filled with ‘pad’ style chords performed on the woodwind. It is important to note that this track required some rearrangement when performed live in Project 4; although the band’s performance itself could have been stronger, transferring this ‘pad’ role to an effects-saturated trumpet was an effective substitute given the significant reduction in ensemble size (1’02”, *Yggdrasil*, Project 4). Thus, this strategic consideration emerged through managing additional sonic spaces in the arrangements using the given instrumental forces.

During Project 5, this relationship blossomed further, firstly with the instrumental trade offs at 3’02” in *Nebulous* (Project 5) as discussed in Chapter 5.1; in this case, the sonic space is filled with both players comping during their respective solos, underpinned and supported each time by the drum kit and bass guitar. This is a fairly standard strategy in rock with the added comp figures adding fusion and jazz elements. Furthermore, at 4’27” the track *Running Man* demonstrates both instruments performing complimentary lines partially in rhythmic unison (Project 5). This is a more malleable version of the strategy employed in *Yggdrasil* from Project 1, particularly as the two players swap roles and harmonise at 4’55” (*Running Man*, Project 5). Project 7 therefore was the logical culmination of such strategies and placed a much more intense focus on this path of ‘coexistence’. The pieces *Dear Djentlemen* and *Mesh Hugger* place emphasis on this dual approach (rather than encouraging the forces to compete or ‘duel’) with each player provided space to lead, follow and support as appropriate. One interesting idea here was to add a small amount of percussion to the guitarist’s rig, namely the ‘trash hats’ used to keep pulse in *Mesh Hugger* at 3’45” and 5’57” (Project 7). This enabled the performer to include this important stylistic feature of the ‘djent’ sound without compromising the ‘full’ texture of the section; it also presents further opportunities for the percussionist to escape the role of merely ‘keeping the beat’ for the rest of the band, as discussed in Chapter 2.4.

To summarise, there *is* a path of coexistence for the electric guitar and tuned percussion, the results of which exceeded my initial expectations. This emerging partnership is reminiscent of classic guitar pairings found in the rock tradition, particularly in heavy metal subgenres; both instruments compliment one another by harmonising and/or interlocking riffs, and provide effective support to their solos.

[69] See Chapter 6.3 for a thorough analysis

8.3 What new composition and performance techniques can be formulated to facilitate such music?

In the development or expansion of any musical style, there will inevitably be developments and expansions of technique. This research managed to successfully adapt existing rock frameworks as well as pioneer hybrid techniques in both composition and performance. Chapter 7 contains a thorough discussion of the individual processes used; this section will focus on contextualising these in relation to existing frameworks.

a) How must the instrumentation adapt to the rock framework?

The primary sonic difference between the rock band and the 'auxiliary' instrumentation is volume; most of the former is amplified (electric guitar, electric bass, vocals) or acoustically designed to match the sonic power of amplification (drum kit). Acoustic instruments, even traditionally 'loud' apparatus such as the trumpet, were always going to struggle to compete. Technically, the drum kit - already identified as a crucial component of the rock band - often has the same issue, though can be played considerably louder unamplified than mallet percussion, particularly in larger venues where sound rapidly dissipates. With the drum kit, the solution is commonly to provide some level of amplification through the PA system; in smaller venues, this may be limited only to bass and snare drum[70] although it is equally prevalent to mic up entire kits in larger settings. The issue of effectively amplifying tuned percussion is more complex and involves isolating the player to prevent bleed from the other instruments; as such it would seem impractical for the size of stage I was working on.

In Project 4, the Xylosynth functioned as a middle road between the amplified nature of rock and the instrumental identity of tuned percussion[71]. The acoustic mallet instruments *cannot* compete alone with the volume of overdriven guitars pumped through loud amps and vocals booming from a PA system, but the Xylosynth does provide a more 'level playing field'. A certain adaptation of technique was needed to perform on this electronic instrument compared to its acoustic counterparts. However, it is expected of the percussionist to constantly adapt to a number of instrumental nuances[72] and as such, this was arguably little different to common practise.

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[70] Something that always seems *slightly* wrong to the author given that the snare drum is naturally much more 'cutting' than the tom-toms in a live mix; perhaps he has seen just one too many skins subsequently broken by overplaying in an effort to be heard

[71] See Chapter 8.1 for further discussion

[72] When non-percussionists joke about playing an 'easy' instrument, it is common to ask if they may play the triangle: "so long as you can play both orchestral and Latin" is usually the response

In addition to its amplification, the trumpet was also treated electronically at 3'11" in *Tunnel Chase* (Project 4). This adaptation of its regular function helped it to provide a greater variety of timbres and textures that were able to compete with the vast array of pedal effects available to both the guitarist and in this circumstance, the Xylosynth player. Competing with the available sonic palette of the electric guitar was an ongoing consideration throughout the research; interestingly, *all* of the material features the tuned percussionist using a variety of instruments in *every* track, often centring around the combination of the marimba and vibraphone[73]. It is notable that the exceptions to this rule are all found in Project 2, namely *Lyke as a Huntsman*, *The Braid* and *Pilot, My Pilot*, which used only one tuned percussion instrument per piece. Chapter 5.3 questions the former's authenticity as a 'rock' piece; this question must also be extended to the latter, although this should not be an obstacle in assessing either's success, as laid out above in Chapter 8.2. Both pieces eschew common drum kit roles, *Huntsman* by reimagining the role as an orchestral percussionist and *Pilot* by jettisoning it altogether. All three works demonstrate a limited range of instrumental textures, largely setting single timbres for each component of the band; it is therefore possible that this was a deliberate restriction set by the individual composers in an effort to focus the sound of each piece. In these cases, the rock framework is adapted more than the instrumentation, which is discussed below in section b).

Further on the topic of extended instrumentation, tracks such as *Loki* made use of Project 1's unrestricted ensemble size, employing a wide variety of orchestral instruments to achieve a competitive diversity of colour and texture. Using such an array of 'non-rock band' apparatus also helped to normalise the presence of tuned percussion and simultaneously destablise the electric guitar's dominance, reframing the latter as another member of a 'chamber ensemble' of sorts[74]. An additional innovation in the quest for sonic variety was the development of the tuned/ rock kit 'hybrid rig' used in Project 6. I had intended to create something of this nature from the earliest stages of the research, but found the resulting apparatus and extended splicing of technique to work beyond initial expectation. It successfully created a suitable platform for solo percussion work by aligning elements of the contemporary percussionist's role with that of the rock drummer. Additionally, I had *not* anticipated the effectiveness of allowing the audience to clearly *see* the inner workings of the music through the 'open-plan' setup and multi-camera filming style.

To summarise, meeting the needs of the rock framework required the instrumentation to adapt dynamically through amplification and appropriate studio

[73] Again, this is much easier to achieve in the recording studio through multi-tracking
[74] There was a particular logic behind this addition; if adding one 'auxiliary' instrument, it seemed fitting to try others as well

mixing; it also required the use of wider scale instrumental forces and electronic effects.

b) How must the rock framework adapt to the instrumentation?

The above section a) touches upon the variety of the lineups used throughout this research; the abstract identifies ‘ensemble size’ as one of my main variable parameters and as such, this is somewhat to be expected. A majority of the projects also featured instrumentation that would be easy to identify as a ‘rock band’ as defined in Chapter 2.1. Although much of the research featured the guitar, none of the projects featured more than one part or performer at any point. This was primarily to allow space for other instrumental forces which may have been undermined with either the ‘dual lead’ or ‘rhythm and lead’ approaches common to guitar partnerships. The guitar was also limited to a smaller number of effects during the research, without the usual bank of multiple distortions, solo and fill boosts amongst others. Instead, this was largely reduced to a single ‘clean’ and distorted effect, save for the occasional specific timbre such as the lead lines at 1’05” in *Loki*[75] (Project 1). Careful attention was needed when orchestrating guitar parts; using only single notes at 0’14” of *Baltar Ego* (Project 5) instead of power chords was both a highly simple and effective strategy for ensuring that it did not overpower other elements. Chapter 5.1 discusses the absence of the guitar as part of the ongoing process of destablisation and the main aim of the given examples was to sufficiently adapt the guitarist’s role, allowing space for the other ensemble components.

Strategic functions such as lead and solo lines were more evenly distributed amongst other instrumental forces, rather than being centred around the guitar as might commonly be expected in rock. This allowed other traditional rock band elements to take more of a leading role; in particular, the drum kit was permitted greater ‘foreground’ roles, such as the pre-composed solo at 2’09” in *Allfather* (Project 1) and the free solo of *Tunnel Chase* at 2’45” (Project 5,). Although the instrument does often fulfill the more common ‘beat keeping’ function, such examples are refreshing within the rock framework. With a role dedicated *solely* to ‘auxiliary’ percussion, the ‘gargantuan percussion rigs’ discussed in Chapter 1.1 were no longer necessary; instead, much smaller drum kits were used, featuring only bass drum, snare, tom-toms and cymbals and contrasting the elements used by the additional percussionist.

Additionally, there has been a distinctive approach to structure emerging from the research; it leans heavily toward popular song format, but with repeated material often drastically reorchestrated or otherwise dramatically altered. Examples of this can be found in *Frigga* and *Heimdall* from Project 1, as well as *Baltar Ego* from

[75] This particular guitar sound was based on the band *Type O Negative*, who favoured a very chorus-heavy tone on tracks such as *I Don’t Wanna Be Me* and *My Girlfriend’s Girlfriend*

Project 5[76]. This technique maintains a freshness and satisfying unpredictability for the listener within a musically logical and recognisable framework. There are other areas of the research that take structure into different territories, such as the 'through-composed' approach of *Running Man* and *Tunnel Chase* from Project 5, or *Yggdrasil*'s single chord sequence in Project 1. These examples are effective, but the previously described 'augmented song format' goes further in challenging the identity of the rock song from within its own boundaries and thus adapting the rock framework to suit the instrumentation's capabilities.

Further adaption of the rock compositional process included reducing and sometimes abandoning its collaborative elements. Much of the music was written in an autocratic and traditionally 'classical' method whereby a single composer dictates the material to other players and communicates through instruction, such as notated scores. There were however several instances of players writing their own parts, such as the guitar at 3'02" in *Nebulous* (Project 5) and *all* of the instrumental solos within Project 4. Additionally, Project 7 was devised in a much more collaborative way with the initial material heavily workshopped between the two players. There is arguably however, greater room for a more traditional collaborative or 'rehearsal room' approach and this is something I intend to explore in my continuing research.

I would also counter this with asking if rock actually *is* as democratic a writing process as its reputation would suggest? In the progressive and metal worlds that have shaped my framework often feature a single, central and 'alpha' force who would appear to hold creative control and a higher status; Robert Fripp of King Crimson, Daniel Gildenlöw of Pain of Salvation, Mikael Åkerfeldt of Opeth, Steven Wilson of Porcupine Tree and Ihsahn of Emperor would all appear to work in a largely autocratic way, steering their respective bands according to their own creative urges, rather than as the product of a group debate.[77] It is perhaps unsurprising that each of the aforementioned acts have had multiple line-up changes over the years and often hold a blurred relationship with their collaborators as to whether they are 'band members' or 'session musicians'. I therefore find the notion of a democratic ensemble with equal voices for all members to be somewhat idealistic and often impractical; as such, I feel that my process has been authentic to these strands of the rock spectrum.

8.4 So where's tomorrow's gig? Thoughts on the future...

During this research, I have endeavoured to research new and relatable practitioners working closely and/or comparably to my own position. This has been invaluable in

[76] All of these pieces are discussed in Chapter 5.2

[77] It is noteworthy that the listed examples are all guitarists, posing the question of whether rock is dominated by the guitar because of a particular quality of the instrument and/ or player, or merely because of an existing tradition; either way, it provides yet further justification for conducting this research.

providing context and inspiration in my work, and I have been influenced by an extensive catalogue of players, composers and composer-performers. Perhaps favourably for my research, I feel that many of the same gaps in knowledge and practice remain. Chapter 1 & 2 highlight the relative lack of rock practitioners with a focus on tuned percussion; in the final stages of this research, this remains largely unchanged outside of my own work. It is also evident from Chapter 2 that many of the appropriate practitioners hail from earlier eras, despite the technologies and resources available in modern times. One does have to question whether rock music, or indeed popular music as a whole, now holds a more fixed or conservative framework compared to previous eras. Indeed, Frank Zappa took the view that the 60s were a golden age of creativity within popular music recordings, largely because of a self-aware lack of understanding from those that were funding them (Courier, 2002: 250).

Reflecting on this body of research and now looking to the future, I feel that the following areas will require further exploration;

1) Tuned percussion in the live rock band
2) Tuned percussion in Extreme Metal
3) Further exploring the ‘hybrid rig’ of Project 6

The first of these *was* explored within the research; indeed, Project 4 was entirely dedicated to this area, with Projects 6 and 7 being live performance videos. However, I feel that the percussionist as part of the traditional live rock *band* is a concept that demands some further dissection, particularly as Project 4 was not without its shortcomings. This will also help to continue developing the aforementioned relationship between the rock percussionist and guitarist. The use of the Xylosynth is a solid framework to achieve this, but I would be interested in performing with entirely acoustic instruments at a time when the surrounding practical issues can be overcome. The ‘stacking’ discussed in Chapter 7.1 would be one area to more thoroughly explore, taking the strategy employed for the Xylosynth and using this across multiple percussion instruments, either as a recorded project with one player, or a concert with multiple performers. There is generally less of a need to focus on studio projects however, as these were plentiful, with the already successful processes only improving with repetition.

Further to this, there have been numerous references to Extreme Metal throughout this PhD, largely as it has formed a key component of my practice over my active years. Whilst parts of the portfolio do touch upon this as an inspiration, particularly in Project 7, exploring this as a template for my work was eventually outside of the confines of the research. Intriguingly, I was able to employ relatively heavily distorted guitar sounds in many tracks (*Baltar Ego*, *Allfather* and *Running Man* being good examples) and little was required in terms of toning them down or reducing their

intensity. It would be interesting to explore the rock percussionist role as an ‘Extreme Metal percussionist’, facing the added hurdles of even *greater* volume, lack of musical space and potential audience [mis]perception[78]. This would help to maintain the growth of the sonic and strategic palettes within rock music, continuing to frame it as an evolving paradigm, as opposed to risking stagnation. As such, I have already begun creating new music with this framework at time of submission.

Finally, I also feel that there is *much* more to discover with the rig developed in Project 6. This unfortunately fell outside of the scope of this research and I am already in the process of rectifying this at time of submission; I have begun to explore this in my personal practice with recent collaborations in the world of improvised music as part of *VLookUp Trio*. It would be apt to use this in a more traditionally ‘rock’ context as well, and I am eager to follow up on this, perhaps in conjunction with the ‘live rock band’ idea mentioned above.

For all my discoveries and conclusions, this research has also provided a sense that there is yet a great deal more to unearth in the relationship of percussion and the rock band; every successful project and conclusion has created yet more questions and areas for experimentation and development. As such, this is the beginning of a wider research practice, rather than a conclusive and neat ending. This is something that I am only too happy to embrace.

[78] Extreme Metal audiences can, in the author’s humble experience, feel an even greater sense of ownership over ‘their’ music than any other; convincing them that including this instrument is ‘rebellious’ and/ or ‘innovative’ rather than inauthentic will be a fascinating process.

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- Black Sabbath, *Sabbath Bloody Sabbath*, Vertigo (1973)
- Brad Fiedel, *The Terminator Original Soundtrack*, Enigma (1984)
- Decapitated, *Nihility*, Earache (2002)
- Deep Purple, *Machine Head*, Purple (1972)
- Emperor, *In The Nightside Eclipse*, Candlelight (1994)
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- Frank Zappa, *Apostrophe*, DiscReet (1974)
- Frank Zappa, *Hot Rats*, Bizarre/ Reprise (1969)
- Frank Zappa, *London Symphony Orchestra Vol.I,* Barking Pumpkin (1983)
- Frank Zappa, *London Symphony Orchestra Vol.II*, Barking Pumpkin (1987)
- Frank Zappa, *Overnite Sensation*, DiscReet (1973)
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- Frank Zappa, *Tinseltown Rebellion*, Barking Pumpkin (1981)
- Genesis, *Foxtrot*, Charisma (1972)
- Harold Faltermeyer, *The Running Man* Original Soundtrack, Colosseum (1988)
- Henry Cow, *In Praise of Learning*, Virgin (1975)
- Henry Cow, *Unrest*, Virgin (1974)
- Ihsahn, *Eremita*, Candlelight (2012)
- Judas Priest, *Painkiller*, Columbia (1990)
- King Crimson, *In The Court of the Crimson King*, Island (1969)
- King Crimson, *Discipline*, E'G (1981)
- Korn, *Untitled,* EMI (2007)
- Meshuggah, *Nothing*, Nuclear Blast (2002)
- Meshuggah, *Obzen*, Nuclear Blast (2008)
- Mike Oldfield, *Tubular Bells*, Virgin (1973)
- Oni, *Ironshore*, Metal Blade (2017)
- Peccatum, *Lost In Reverie*, Mnemosyne Productions (2004)
- Pierre Moerlen's Gong, *Downwind*, Arista (1979)
- Pierre Moerlen's Gong, *Pentanine*, Musea Records (2004)
- Pierre Moerlen's Gong, *Time is the Key*, Arista (1979)
- Rush, *A Farewell to Kings*, Mercury (1977)
- Rush, *Exit...Stage Left*, Anthem (1981)
- Rush, *Permanent Waves*, Mercury (1980)
- Rush, *R30: 30th Anniversary Tour*, Anthem (2005)
- Slipknot, *Slipknot*, Roadrunner (1999)
- The Steve Martland Band, *Horses of Instruction*, Black Box (2001)
- Tool *Lateralus*, Volcano (2001)
- Terry Bozzio, *Terry Bozzio Live in Japan*, [no label] (2012)
- Trio HLK, *Standard Time*, Ubuntu (2018)
- Yes, *Close to the Edge*, Atlantic (1972)