Title: Acoustic Guitar Practice and Acousticity: Establishing Modalities of Creative Practice.

Volume 1: Thesis

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ABSTRACT

The contemporary acoustic guitar has developed from its origins in the ‘Spanish’
guitar to become a global instrument and the musical voice of a wide range of styles.
The very ‘acousticity’ of the instrument positions it as a binary opposite to the
electric guitar and as a signifier for the organic and the natural world, artistry and
maturity, eclecticism and the esoteric. In this concept-rooted submission, the
acoustic and guitaristic nature of the instrument is considered in relation to a range
of social, cultural and artistic concerns, and composition is used primarily to test a
thesis, wherein a portfolio of original compositions, presented as recordings and
understood as phonograms, comment upon and reflect upon modes of
performativity: instrument specific performance, introspection, virtuosity, mediation
by technology and performance subjectivities.
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I am indebted to the following musicians for their musical contributions:

INTRODUCTION

Ask a contemporary guitar player to describe the acoustic guitar and their response is likely to consist of a series of adjectives which describe the physical nature of the instrument; interrogate them further about acoustic guitar practice and the names of particular performers often appear in an attempt to describe by association the nature of acoustic guitar styles. This is not unusual and I recognise in my own development as a guitar player that prior to carrying out this research, I would also find it difficult to respond in a meaningful way. Of course as guitar players we all know what an acoustic guitar is, how it feels to play and how it sounds, but what is acoustic practice? What is meant by the term acoustic? What is the nature of contemporary practice and how has it evolved? Many books have been written on particular histories of the guitar but they don't clearly succeed in articulating the inherent acoustic nature of the guitar, its sound, its musical style and performance characteristics. This research therefore, has developed out of a desire to attempt to answer these questions in a focussed and detailed way by engaging in a broad range of performance and compositional practice. The research is presented in two sections, a written dissertation which examines the multifarious articulations of style and practice that have coalesced to inform contemporary practice, and a recorded portfolio that engages composition, performance and recording in the realisation of real musical events. Combined, the two approaches provide a comprehensive picture, textual and aural, of the nature of contemporary practice. The written research engages with a discourse of eclecticism and the esoteric that reflects the guitars global distribution, its appropriation into localized practice and its adaption to technological change, and the recorded portfolio provides a body of compositions.
that place the instrument within various creative modalities — combined they aim to create a deeper, more clearly articulated understanding of the music of the acoustic guitar.
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1. THE ACOUSTIC GUITAR: AN HISTORICAL AND CULTURAL PERSPECTIVE.

1.1 History and Culture Context: an overview

This chapter will consider the nature of the primary cultural movements that are concurrent with the emergence of the modern acoustic guitar, those of modernism and postmodernism, and to interrogate the extent to which these discourses can be seen to be evident in the development of acoustic-guitar practice. Whilst it is not intended to debate the characteristics of the broader cultural conditions, it is an essential part of this process to clarify the over-arching concerns of postmodernism and modernism. While this will be initially limited to an elaboration of the general principles, an unavoidable reductionism, a more subtle and nuanced interrogation will take place when considering historiographic themes and contemporary practice in chapters #3, #4 and #5.

The emergence of the modern form of the acoustic guitar, the American¹ guitar (which is later discussed in detail) is concurrent with a movement towards science, rationalism, and industrialisation; a period of modernity, modernisation and the cultural response of modernism:

¹ The instrument is referred to as American, to differentiate between the Spanish guitar (and its derivatives) and the steel-strung contemporary instrument. This is discussed in more detail later.
The modern movement in the arts transformed consciousness and artistic form just as the energies of modernity – scientific, technological, philosophical, political – transformed forever the nature, the speed, the sensation of human life.2

Modernism was driven by an attempt to rationalise the immediacies of a rapidly modernising and changing world. This emphasis on the rational and the scientific privileged the avant-garde over tradition, repudiating the past and establishing a drive towards a continuous forward movement. The desire for rationality would encourage the establishment of singular universalising artistic theories, over-arching philosophies (metanarratives) and a superimposed cultural hierarchy: the elite (the modernist) who pursued the new and the popularists who produced music for consumption. Postmodernism emerged as a reaction to and development from modernism, at differing rates, in differing times, practices and locations. Lloyd Spencer considers that, 'Modernism and postmodernism are intimately interrelated responses to the crises of modernity,'3 and the two 'movements' are not disassociated entities as the impulse of both is to solve the problems of modernity. Joakim Tillman in 'Postmodernism and Art Music in the German Debate,' whilst considering the ideas expressed by Danuser, asks the following question:

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regards the relation of postmodernism to modernism: is it a continuance of modernism, a discontinuous opposite of modernism, or something else? 

Danuser questions whether the prefix 'post' implies a continuation of sorts, or a rejection of modernism. If modernism is viewed as a particular response to modernity, then postmodernism could be seen as a continuing but different response. To view postmodernism as a substantial position, it cannot simply exist as a passive rejection of modernism, to be worthy of consideration it must possess its own internal dynamic, with its own insistences. Bradbury and McFarlane consider that:

Modernism was an art of an age of growing cultural relativism and growing communications; what has followed it, the art of the Postmodern, is in a sense simply a yet more multi-varied replay, often in highly parodic form, of that rise in relativism and cultural pluralism.

If modernism is perceived as a heightened, more radical, more utopian form of the 'modern', seduced by a final vision of universal truths, postmodernism could be seen to have given up the hope of any finality. If a dominant narrative of modernism is the pursuit of rationality, singularity and the establishment of universal aesthetic values, then a dominant discourse in postmodernism is a recognition of plurality and diversity; a condition driven by the rapid development of communication technologies and the resultant ease of access to a diverse range of cultural practices. Any attempt at understanding postmodernism however, must remain provisional because of its ongoing nature and the 'fogging' produced by living in a period of

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postmodernity, as the disadvantage of not possessing a detached long view makes the ascribing of characteristics problematic.

When considering the concerns of these two positions, it could be argued that a third position emerges, that of anti-modernism, a residual category in which to place practices that can be seen as a rejection of both modernism and postmodernism. Anti-modernism, in this sense, becomes an effective term for describing practices that pursue a romantic notion of the past and a return to a pre-modernity free of any inflection or residue of a rationalised or industrialised world. However, the plurality of postmodernism also encourages the re use of historical signifiers, but here the intent is different, where the anti-modernist seeks to recreate historical styles, the postmodernist juxtaposes historical and contemporary referents to create dynamic juxtapositions, or playful, ironic, musical amalgams. What does delineate the concerns of the anti-modernist and the postmodernist is the way in which these traditions are appropriated. Where the anti-modernist may seek a purity—a synonym for tradition—in performance style and instrumentation, the postmodernist freely appropriates and reuses historic styles, with an often-ironic sensibility, as pastiche and collage. To highlight an example of an anti-modernist practice, The Jazz Guitar Duo (James Birkett and Rod Sinclair), were awarded an early music-touring award by the Arts Council of England, to tour and perform a repertoire of early jazz guitar pieces. The award, the first ever for the performance of jazz, was the result of an application that succeeded in articulating a convincing argument, that some historical forms of jazz are sufficiently significant as to be classified under the terms of the Arts Council criteria as early music. The recreation

of early popular or art music doesn’t reflect the progressive principles of modernism, or the inclusive plurality of postmodernism, but could be convincingly described as anti-modernist in its intention to recreate music from a particular historic period. Although the project was recorded and distributed using contemporary recording technology and performed on contemporary instruments in a time of postmodernity, it couldn’t satisfactorily be described as postmodern as the intention of the performers was to recreate an historical practice; any influence of contemporary life on the product is the result of a technological pragmatism, a simple means to an end. In contrast, guitarist Bill Frisell, who mixes elements of contemporary jazz with ethnic musics, and banjo player Bela Fleck, who melds the styles and techniques of bluegrass banjo with synthesised sounds and contemporary instruments, could be considered as actively seeking to juxtapose historical and cultural referents. Others express a playful, ironic sensibility, as in the work of John Zorn who assembles disparate musical fragments in overt juxtapositions to create exaggerated musical amalgams and a self-conscious replaying of historical styles. Where modernism favoured the avant-garde over historical referents and postmodernism views history as an eternal present, anti-modernism reflects a yearning for a return to romantic notions of a golden age. Kramer claims that a further distinction arises in that:

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anti-modernist yearning for the golden ages of classicism and romanticism perpetuates the elitism of art music, while postmodernism claims to be anti-elitist.8

This reactionary romanticism and rejection of modernity may favour the classical traditions, and in this sense could be seen to be elitist, but it could also include 'roots' music, folk, blues, early jazz, country and bluegrass. Both postmodernism and anti-modernism value the popular, but anti-modernism values those popular practices that signify authenticity and tradition. Anti-modernism therefore, is useful as a category in which to place cultural practices that consciously signify a romanticised pre-industrial society but do not necessarily perpetuate elitism. The overt use of technology may also be a signifier of this division: where postmodernism and modernism embrace technology, anti-modernist practice will often attempt to circumvent contemporary technology and modernity, by returning to traditional methods of performance. Therefore anti-modernism creates a useful category, alongside modernism and postmodernism, in which to consider a range of contemporary practices and this will be discussed in more detail in section 3.1.

1.2 Historiographic Themes

The historical development of the instrument will be considered with a consciousness of the postmodern debates surrounding the practice of history, particularly, what Keith Jenkins refers to as 'the fact-value problematic', where empiricism and empirical fact is interpreted through speculative thinking and the

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value that we place upon the fact. The construction of an historical narrative can, inadvertently, rely upon speculative processes and a re-interpretation of fact in relation to the available evidence, for example, prior to the advent of commercial recording, our knowledge of acoustic-guitar-practice and particularly specific performance characteristics can only be drawn from textual sources: descriptions in books, reviews, and music transcriptions, and surviving instruments. As audio recording provides the first sonic evidence of specific performance characteristics, one may be lured into considering early recordings as documentary evidence of performance practice and to then create a musical past by drawing a history backwards from these recordings. With the exception of 'field' recordings, such as those produced by John and Alan Lomax, which were intended to provide a national archive and aural history, what may not be considered, is the mediating affect of the recording process and the way in which the recorded artefact is, in itself, the result of a process of selective filtering by an emerging commercial recording industry who were attempting to establish markets for this new media.

It is also advisable to maintain an awareness of the 'the structuring role of history,' in which Keith Jenkins observes that the role of the historian often relies upon subjectivity and speculation:

they work with traces/sources which, by the use of evidential investigation, are mobilized into narrative accounts rather than just falling into shape under the weight of the sheer accumulation of "the facts."  

What facts exist and what is the documentary evidence from which we draw our conclusions and construct narrative accounts? As a recorded aural history has only existed since the development of effective recording technology and the production of the first commercial recordings (discussed in more detail later), our aural perception of earlier performers is based on narrative accounts, such as the one written by W.C. Handy when describing hearing a black performer playing 'slide guitar' on Tutwiler railway station, Mississippi, in 1903:

he pressed a knife on the strings of the guitar in a manner popularised by the Hawaiian guitarists who used steel bars. The effect was unforgettable...  

Whilst his account is evocative, it serves as a pointer to later recorded sounds: it is the recorded sound to which we refer and from which an aural impression can be constructed. A documented history of the instruments, performers and music, relies upon secondary sources of information gleaned from books, newspapers, photographs and catalogues. Textual sources consisting of manuscripts, popular song sheets and transcriptions for the guitar do exist, for example, Stefan Grossman possesses parlour guitar music from the 19th century and Maurice Summerfield owns a large library of guitar publications from the late 18th century. These obviously only represent music from the notated traditions (or later transcriptions of recorded

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12 Handy, William, C., Father of the Blues (Canada: Collier Books, 1970), 74
performances) and are often simplified, melodically, rhythmically and harmonically, and importantly, do not describe any performance characteristics. Some collections of early instruments do exist, for example, in the musical instrument section of London’s Victoria and Albert museum, the Smithsonian Institute (Washington) and in the hands of private collectors such as George Gruhn (the proprietor of Gruhn guitars) but because of their age, are usually unplayable.\(^{14}\) How this incomplete source of information is interpreted depends upon the significance placed upon the “facts.” Again Jenkins comments: ‘To give significance to the facts an external theory of significance is always needed.’\(^{15}\) Therefore an awareness of the value and significance that we attach to ‘facts’— empirical information — needs to be carefully considered. In this case a theory of significance may be drawn from the primary social and cultural movements extant during the periods in which the contemporary instrument emerged: Modernism and Postmodernism. For example, the effect of an increasingly industrialised society on the manufacture of guitars will be considered within a context of modernity and modernism.

With these factors in mind the development of the contemporary acoustic guitar will be considered in relation to specific key themes, that seek to elucidate the social, cultural, technological, economic and artistic conditions that have shaped the instruments development:

- Cultural Integration.

\(^{13}\) Stefan Grossman makes this claim in the email dated 4\(^{th}\) November 2006 (Appendix #1). Maurice Summerfield is the proprietor of Ashley Marks Publishing, the largest importer of guitar music in the UK.

\(^{14}\) Gruhn Guitars, 400, Broadway, Nashville, Tennessee TN37203, USA.

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The Americanisation of the Guitar.

American Guitar Music.

The Effect of Technology on Guitar Practice.

Digitisation and Acousticity.

- The Guitar: a global instrument

The contemporary Americanised acoustic guitar is a descendant of the ‘Spanish’ guitar, an instrument that reached its pinnacle of development in Spain around the middle of the eighteenth century. The ‘Torres’ guitar, designed by Antonio Torres (1817-1892) ‘the Stradivarius of the guitar’, drew upon the best of what had gone before to produce what would become the modern ‘Spanish’ guitar, and the standard design from which later guitars would be derived. The historical narrative of the guitar is one of a nomadic instrument, bound up with the diasporic movement of peoples and the colonisation of nations, it was carried to the new colonies, the Americas, Hawaii, the Polynesian islands, Africa and the Indian subcontinent, by Spanish and Portuguese sailors. The resultant diversity of performance styles and repertoire reflect this distribution across geographically distanced social/ethnic groups and integration into regionally specific music practices. The musical flexibility of the guitar facilitated an easy adaptation to the practice of local cultures, its transportability, accommodation of different tuning-systems and functional use as a rhythmic, melodic and percussive instrument, makes it uniquely flexible in absorbing the demands of local systems of music. Bob Brozman (slide guitar


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virtuoso and ethnomusicologist) suggests that the guitar's global influence is due to its:

diatonic applications (specifically, the use of chords) in the West, and the non-
diatonic ideas (specifically, an orientation towards modes and drones) of indigenous music from around the world' and its 'multiple musical functions (monophonic, polyphonic, homophonic, drone-plus-melody, instrumental versus accompanimental). 17

This universality, is reflected in the diversity of repertoire and performance styles that have absorbed both global and local influences, Kevin Dawe in Guitar Cultures suggests that the 'guitar exists in cultural space nuanced by the convergence of both local and global forces.' 18 and that:

form, tonal textures and associated playing techniques are the product of its appropriation and use in a variety of locally specific musical contexts. 19

Examples of this 'glocalisation' 20 can be found in the commonality of slide guitar techniques in Hawaiian slide guitar, the bottleneck blues of the Mississippi Delta and Indian slide guitar music. 21 A precise history of slide playing is difficult to

19 Ibid, 1.
20 Derived from the term 'glocal' used to describe the mixing of the global and local.
21 Examples of Indian slide playing can be found on Kabra, Brij, Bushan, The Call of the Valley (HMV ECSD 2382, 1968) re-released on (EMI/Hemisphere, 7243-8-32867-2-0, 1995). Hawaiian slide playing on Hawaiian Slack Key Guitar Masters, (Dancing Cat Records, 380382, 1995) and Delta blues on House, Son, Son House-The Original Delta Blues (Sony, 65515, 1998).

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delineate, but slide playing traditions have been common in India since before the 7th Century with the ‘North Indian vichitra vina and the South Indian gottuvadyam\textsuperscript{22} and trade routes between India, Hawaii and America have long been established, therefore the possibility of cross-fertilisations of music instruments and techniques is highly likely. Although the musics have some commonality and the instruments are derived from imported ‘Spanish’ guitars — although fitted with steel strings (a trait of Portuguese guitars) — the performance style is substantially different and reflects the music culture of the locality: in Hawaii the Spanish guitar was brought into the country by Mexican herdsman and adapted to localised song forms, tuned to an open major, seventh or sixth chord and played flat on the knee; in the Southern states of America bottleneck blues was played on an Americanised version of the Spanish guitar, which was held in standard position, tuned to an open G or D major chord and used to play minor pentatonic scales — this reflected African tonal traditions and the slide could mimic the micro-tonal vocal inflections of blues singing; in India the Spanish guitar, as the favoured instrument of Portuguese and Spanish sailors, was imported into Goa and other newly converted ‘Christian’ communities in the 16\textsuperscript{th} and 17\textsuperscript{th} centuries, and here although the design is not standardised — many differing string combinations and tunings exist — the instrument is played flat, as in the Hawaiian tradition, and it has been adapted to Hindustani classical music where it echoes the sound of other micro-tonal instruments such as the Indian Sitar and Sarod.\textsuperscript{23} All however have evolved from the


\textsuperscript{23} In all cases, the slide guitar traditions use guitars fitted with steel-strings; gut strings do not resonate when played with a slide.
Spanish guitar and been adapted to accommodate a broad range of musical performance techniques and the performance styles of many cultures.

- Cultural Integration

The socio-cultural context of music is intrinsic to an appreciation of the practice of indigenous musics, for example, to consider the performances of many early blues artistes detached from a social context — the music of a displaced people in a highly differentiated society — would reveal a music that is harmonically and melodically naïve, and often crudely executed on inferior instruments. What is easily overlooked are the complexity and nuances of rhythm and pitch, and a highly developed performance idiolect. To acquire a deeper understanding of the music, and its performers, other factors need to be considered, particularly the social role of the blues performer and the hegemonic relationship to the dominant society. Mississippi Fred Mc Dowell (1904-72) for example, is renowned for starting songs slowly and increasing the tempo as the song progresses. He also employs an unusual rhythmic device, placing the bass note accents on the syncopated off-beats (beats two and four); an unusual technique for this style of music as the accents are usually placed on beats 1 and 3. Knowing that he often performed on solo-guitar at dances, one assumes that the tempo variation and rhythmic pulse are not accidental and are more likely to be conscious performance traits that were engineered to produce a forward momentum and increased excitement.24 The very sound of the instrument also reflects the ‘homemade’ nature of his music as his ‘slide’ sound is raucous and brittle and may be the result of him having started playing with a polished bone

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before moving to a glass (bottleneck) slide. Another example could be the performer Woody Guthrie (1912-67), whose plaintive vocal style was supported by a simple guitar accompaniment, using open-string chords, which is redolent of the earlier guitar style of the 'cowboy' singer-guitarist Gene Autry.\textsuperscript{25} When detached from the historical context of the American depression, the music would lose all historical resonance and diminish the value of the accompanying guitar style to that of the primitive and naive musician. However, when locating the performance style within its socio-cultural context, the American depression, the consciously simplistic accompanying guitar style could be read as a signifier of the ordinary, the cultural imagery of the drifter, and a reflection of the lyrical content, the plight of the nation's poor, and a counterbalance to the plaintive vocal style. In both examples a mechanistic view of the musical practice would disfavour the idiosyncratic styles of the performers and fail to recognise this as central to the musical experience. Derek Scott, in considering musical style as a discursive code, intrinsically linked to the creation of meaning, considers that music style is:

\begin{quote}
established as conventions through social practice and can be related to social changes. Musical meanings are not labels arbitrarily thrust upon abstract sounds.\textsuperscript{26}
\end{quote}

Scott argues that musical style is directly related to social practice, therefore, vernacular music reflects the material practice of the performers: the sound of the 'bottleneck' guitar mimics the microtonal nuances of African vocal music; the percussive attack of the plucking fingers, or fingerpicks, results from a need by a

performer to generate as much volume as possible — an important consideration when playing for large groups of people or whilst busking outdoors.

The diversity of the guitar and its integration into culturally specific music practices is recognised in postmodernism’s insistence of pluralist values, situated knowledge and cultural context; a view that recognises ‘the values of specific cultures and their differences,’ and a confirmation of the stature and value of music which owes its existence to highly differentiated culturally located practices. 27 Vernacular and ethnic music, having been marginalised or neglected by a modernist perspective which was centred on a North American and European axis and which favoured an internationalist style based on Western musical forms, can be rehabilitated and re-valued through a postmodern perspective of plurality and diversity. This recognition of social context allows an examination of the inherent cultural differences in the performance of music, especially those of race, ethnicity and gender. A reclassification and valuing of these musics has taken place, aided by the increasing availability of previously deleted music recordings and the work of ethnomusicologists. 28 A recent conference held at Leeds Metropolitan University, The Sounds of the Guitar: A Global Crossroads, serves as a good example of the newfound legitimacy and elevation in status of vernacular music. Papers delivered at this conference covered a wide range of examples of guitar practice from many


27 Ibid 123.

28 Funky Junk, specialize in the reissue of recordings of guitar music, many of which have been deleted from general distribution. www.funkyjunk.com
culturally diverse locations including, the early jazz guitar styles of Eddie Lang, African guitar, the Cuban Tres and rock guitar.\textsuperscript{29}

- The Americanisation of the Guitar

The only guitar that evolved into its present form in Europe is the Spanish classical and the steel-string guitar is still very much an American instrument.\textsuperscript{30}

The contemporary guitar is the product of European and Spanish guitar making traditions that came together in nineteenth-century America. Both the ‘Spanish’ guitar and derivatives of the German guitar tradition were present in America at this time: the former having been imported into Latin America and the USA by Spanish colonisers and sailors, and the latter brought by immigrant guitar makers such as Christian Frederick Martin from Vienna, who in 1833 set up a workshop to manufacture parlour guitars, the style of which was derived from the German guitar. However, it was in America that the design, manufacture, distribution, musical voice and cultural identity of the contemporary acoustic guitar would emerge, through an interaction between the European guitar making traditions and a particular social, cultural and political economy: an ‘Americanization’. The historical narrative of the American acoustic guitar is intertwined with an emerging modernity, increases in

\textsuperscript{29} The Sounds of the Guitar: A Global Crossroads, University of Leeds, UK. November 26-27\textsuperscript{th} 2004.

global travel and trade, rapid industrialisation and the development of recording, broadcasting and amplification technologies.

The transition from ‘Spanish’ guitar to the contemporary acoustic guitar, took place during the latter part of the 19th century, in a society that was characterised by a highly differentiated social structure and in an environment of rapid industrialisation and commercial growth. The evolution from an agrarian to an industrial society produced the conditions in which the ‘Spanish’ guitar could be appropriated, adapted and ultimately ‘Americanized’. In part the dominance of American guitars throughout the 20th century is due to this early industrialisation; the rise in popularity of the instrument during the last two decades of the 19th century being coincident with the emergence of a cash economy, the establishment of a means of distribution and the development of nascent markets. The new ‘mass produced’ guitar, given impetus by its relative cheapness, versatility and portability, was distributed across the nation, through catalogues and retail outlets, to satisfy a demand for consumer goods that had been created by the new cash economy. This industrialisation, marketing and distribution, allied with the cultural commonality of stringed instrument traditions amongst America’s immigrant populations, created the ground on which the guitar would take a prime place in American music.

The infrastructure to support the industrialisation of guitar manufacture was already in place as craftsmen were already making parlour guitars, Spanish guitars, mandolins, ukuleles and banjos. Many of these musical instrument makers were immigrants from Europe who, having escaped social upheaval and political unrest settled in the USA, brought with them highly developed skills. A particularly good example of which are Orville Gibson, the Dopyera brothers, and Christian Frederick Martin. Orville Gibson (b.1856), of Italian extraction, opened up a shop in
Chateaugay, New York, prompted by a demand for the popular Italian mandolin, to manufacture and sell mandolins, and in 1902, after attracting the support of financial investors, he gave his name to the Gibson Mandolin-Guitar Manufacturing Co. Ltd. — Gibson went on to become one of the world’s largest and most influential guitar companies. The Dopyera Brothers, from Slovakia, set up the Dobro guitar company in Chicago, Illinois, around 1928 and began manufacturing instruments which combined the old world skills of craftsmanship, with the technological advancements of the new world. Their guitars represented a direct attempt to modernise the acoustic guitar: they were decorated with Art Deco motifs and the bodies of the guitar were made from brass or steel, which was sometimes finished in chrome, and employed a revolutionary internal resonator, made from spun aluminium, that substantially increased the volume of the strings. Christian Frederick Martin from Markneukirchen in Germany, a descendant of a long line of guitar makers, emigrated to the USA to flee the restrictive practices of the Violin Makers Guild and set up a guitar workshop and store in New York City in 1833.\textsuperscript{31}

Whilst the Spanish guitar and Torres design became the standard model for classical and flamenco guitars, the American model that emerged in the latter part of the 19\textsuperscript{th} century, has became the global template for contemporary guitar construction. The differences in design, the impact of industrialised processes of manufacture, the later fitting of steel-strings and pick-up systems, have largely been established within the USA.

American design and construction techniques have had an international effect on instrument manufacture — certainly in the western world. Several guitar

\textsuperscript{31}The violinmakers' guild was in dispute with the cabinetmakers guild (to which Martin belonged), to limit the making of musical instruments to their own members.
companies, including Hagstrom in Sweden, Hofner, Framus, Hoyer, Hopf and Klira in Germany and later Yamaha in Japan, started to mass-produce guitars in the American style. Some guitar companies did produce significantly different instruments, for example, the Maccaferri–Selmar company (Paris), using designs by Italian classical guitar player Mario Maccaferri, produced an instrument which was particularly resonant, loud and possessed a cutting quality that would project in any ensemble and became the favoured instrument of Belgian gypsy guitarist Django Reinhardt. All of the given examples however, excepting Yamaha and Hagstrom, have capitulated to an American dominance. As an example of this hegemony, or just simple economic dominance, the Levin guitar company founded in Sweden in the early 1900s by H.C. Levin, a luthier who trained at the American Martin Guitar Co., was ‘bought out’ by Martin who wanted to secure their supply of tone woods and, as they had started to become very good guitar makers, to remove their competition. The dominance in world markets of the Americanised guitar is a result of the coming together in mid-nineteenth-century America of many skilled luthiers, the early industrialisation of the processes of guitar making and the nascent markets for the instrument within a broad range of immigrant groups who already played stringed instruments. The most successful non–American guitar manufacturers produce guitars to fulfil specialist needs: Stefan Sobell (England) and Lowden Guitars (Northern Ireland) produce guitars that use a different internal bracing system and construction techniques to achieve a different resonant response — one

32 In Charles Alexander’s Masters of Jazz Guitar (p.26) and in Charles, Delaunay’s Django Reinhardt, Reinhardt appears in several photographs playing a Maccaferri guitar.
which is popular with players who use 'dropped' open tunings, for example players of Celtic music. American made guitars continue to dominate global markets, not only in monetary value and scale of distribution, but significantly, in cultural value. John Storey, referring to the ideas of Marx, comments that:

...whereas people tend to consume commodities of capitalism on the basis of their use-value. Commodities are valued for their symbolic significance. 33

The American guitar has come to signify a cultural embodiment of American music, the effect of which will be examined later. A continued dominance of American produced or styled guitars prevails and whilst in some cases this may be a reflection of a qualitative difference, it is also symptomatic of the perceived authenticity and status as a cultural icon of the American guitar. A status that is reflected in the almost fetishistic dominance of American guitars in revivalist traditions; it is rare to see a professional country music guitarist playing anything but an American guitar.

- American Guitar Music – a product of racial/ethnic integration

It is a commonly held view, that in mid-nineteenth-century America, the guitar was used to play European Classical music and Parlour songs and that it was:

little more than a parlor (sic) instrument with which ladies with pretensions to breeding could play light and pleasant music." 34

Tim Brookes questions 'the canard that in the nineteenth century the guitar was a ladies parlour instrument', adding that nineteenth-century America saw the guitar

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spread across America and that ‘Farmers (and farmers’ wives and daughters) played
guitars at square dances. Miners, cowboys, soldiers, whalers on whale ships, and
Mark Twain, who owned an instrument and carried it on his travels, shared a passion
for it. The guitar appears to have been widely established across the popular musical
life of the United States of America and significantly, it became increasingly
important in the styles of music that would shape the musical landscape of
twentieth-century American music: country, blues, folk, popular song and jazz.

The cultural melange precipitated by mass migration into North America
brought together peoples from Latin and Central America, Polynesia, Europe, Asia
and Africa. Racial and cultural differentiation, the enforced mixing created by
immigration and the slave trade, the coalescing of ethnic groups and the collision of
differing musical cultures would precipitate the formation of a multiplicity of hybrid
music styles; the cumulative effect of which becomes evident in the late 19th and
early 20th centuries. David Evans suggest that it is significant that the most
substantial musical developments took place where African traditions and European
styles merged:

The exceptional cases where more distinctive guitar styles were developed can
almost always be explained as influences from black-originated styles — the
mix of the music of the African slave and European traditions such a ragtime

and blues guitar around the beginning of the twentieth century, Hawaiian guitar in the 1910s and 1920s and jazz guitar in the 1930s and 1940s.\textsuperscript{36} Whilst these dates are useful as indicators of generalised movements, the guitar's pattern of development is often multifarious and interconnected and it becomes problematic to attempt to locate discrete and distinct histories. Each immigrant population brought with them their favoured instrument and music practice: the bania, a skin-covered gourd instrument from West Africa and a forerunner of the banjo; the Spanish and flamenco guitar from Spain; the mandolin and mandolin orchestras from Italy; the ukulele and Hawaiian slide guitar from Hawaii and the fiddle and bagpipe traditions from the 'Celtic' countries. The guitar was:

... one of many stringed instruments, and combinations of one kind or another – including banjo orchestras, mandolin orchestras, Hawaiian groups, Mexican mariachi groups, minstrel groups, and 'Gypsy' bands,\textsuperscript{37} it could be therefore easily integrated into a diverse and expansive range of music traditions.

The early formative guitar styles of blues, jazz and country music, clearly demonstrate the blending of different styles: in blues and country guitar traditions 'bottleneck' guitar or 'steel guitar' were most probably influenced by, respectively, the primitive didley bow and Polynesian/Hawaiian slide guitar.\textsuperscript{38} They share the


\textsuperscript{38}
capability to produce glissandos and microtonal slurs, imitating the vocal stylistic swoops of both musical styles, but differ in performance style and musical language. The blues guitar is often played solo, held in a standard upright position, and used primarily to play minor pentatonic scales and simple fretted chords, whereas, the country slide guitar is usually played as part of an ensemble, performed flat and uses, primarily, major tonalities. The guitar duos of Lonnie Johnson and Eddie Lang brought together blues and early jazz, on the track ‘Blue Guitars’ (1927), Johnson plays an improvisation on his nine-string guitar over a 12 bar accompaniment provided by Lang and whilst the improvisation of Johnson and the form is redolent of early blues, Lang provides a sophisticated accompaniment which includes a walking bass line, chordal interjections, chordal inversions and contrapuntal lines—an accompaniment more akin to early jazz and one which demonstrates his knowledge of the western harmonic system. 39 Fingerpicking styles that use the thumb to play a bass line and one or more fingers to pick out chordal notes and melodies are common in both country and blues guitar but were originally found in blues music; country finger picking legend Sam McGee recalls learning the guitar from two black railroad workers, and Palmer Moore in *The Roots of Thumb Picking*

38 An instrument created by stretching a piece of wire between two fixed points, along a piece of wood or fixed between a cabin wall and the floor, then raised on a bridge formed from nails or a brick, the instrument was then played by sliding a metal or glass object along its length to produce a sliding note.

zrefers to the Afro-American origins of this style, ‘which unfortunately came to be known as nigger pickin’. The degree to which differences in guitar style served to define one group in relation to another shouldn’t be ignored, and it is of interest to note the predominance of particular immigrant groups within specific musical idioms and to reflect on the causal links:

by the time the Twentieth Century was a decade or two old, two thirds (of) the East Coast of arch-top jazz guitars and nine-tenths of jazz guitarists, it seemed were Italian

This link between the Italian immigrant community and jazz guitar is noteworthy and leads to speculation about the musical character of the Italian stringed instrument traditions, particularly, any commonalities of practice. The popularity of the Italian mandolin tradition is evidenced in the existence of mandolin orchestras and instrument manufacturers established as mandolin makers. The Martin website states that:

During the 1890s, with the massive immigration of Italians into the United States, the mandolin (an instrument of Italian origin) became increasingly popular.

41 Brookes, Tim, Guitar An American Life (New York: Grove Press, 2005), 44.
As there is considerable evidence of the popularity of the mandolin amongst the Italian immigrant community, it would be reasonable to assume that the first musical experience of many Italian-American guitar players would be through listening to or performing on the mandolin, also, as the virtuous plectrum techniques associated with the mandolin are also common to the plectrum banjo and early jazz guitar, this shouldn’t pass without comment. 43 Eddie Lang (real name Sal Massarow), the son of an Italian immigrant and instrument maker, is widely regarded as the first great jazz guitar player. He revolutionised the instrument with a musical sensibility born from having studied the classical guitar, and a prodigious technique that demonstrated a consummate technical command of intricate picking techniques — including cross-picking, tremolando and the execution of rapidly picked notes.44 All of these techniques are common to instruments which are played with a plectrum: the Italian guitar school, the mandolin and later the popular plectrum banjo, and it is well documented that many of the great early jazz guitar players, Fred Van Eppes (father of George Van Epps), Django Reinhardt and Eddie Lang played plectrum banjo.45

43 Orville Gibson (of Italian descent) formed the Gibson Mandolin-Guitar manufacturing Company (Kalamazoo, Michigan) in 1902, but had been manufacturing mandolins and guitars since about 1896. Gibson also promoted the mandolin orchestra. Wheeler, Tom, American Guitars-An Illustrated History (USA: Harper Perennial, 1990), 94-99.

44 Cross-picking requires the player to accurately pick non-adjacent strings.


Blues, a reflection of the acculturation of African slaves in an environment dominated by their white, largely European, masters, provides a good example of the hybridisation of African and European musical influences. The emancipation of the slaves and the availability of cheap instruments saw a burgeoning market for mass-produced guitars. Nineteenth-century accounts of the development of folk music don’t mention the guitar until around 1890, then suddenly between 1890 and 1910 ‘the guitar is everywhere in the rural South’; Evans ascribes this phenomena to an, ‘age of industrialism, manufacturing, invention, and growing consumerism in American life’. Having arrived in the South the guitar offered a readily available and versatile stringed instrument that could be readily appropriated by the Afro-American community. The relative newness of the instrument and lack of cultural stereotypes is probably significant:

For blacks in particular the guitar also lacked any residual associations with slavery, minstrel music and its demeaning stereotypes, or even with the South. The playing techniques, musical form and structure, express significant elements of African musical traditions superimposed on the American guitar and function expressively as a vehicle for the idiosyncratic musical voice of the African slave.

The blues tradition that absorbed the guitar and these outside musical and cultural influences was firmly based in a pre-existing African American musical culture with many stylistic characteristics, structural elements, and

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musical instruments stemming ultimately from the African musical and cultural background of southern blacks. 48

The micro-tonal and percussive characteristics of African music are exhibited in the playing of early rural-blues guitarists such as Son House, who used a bottleneck to produce sliding notes and micro tonal alterations in pitch, and the percussive nature of the guitar body to produce rhythmic slaps. 49 The fixed semi-tonal intervals of the guitar were overcome by either, pushing the string across the polished frets (string bends), or sliding a piece of metal, bone or glass up and down the length of the string (slide) to produce micro-tonal changes in pitch, and in the case of slide, elaborate glissandos. The hollow construction of the guitar body has an almost drum like quality and reacts to percussive tapping and slaps on the body. 50

From an early incorporation into the blues, particular areas of the country developed their own stylistic variations; the Mississippi Delta areas produced many slide guitar exponents, Mississippi Fred McDowell, Robert Johnson and Son House, whilst the Piedmont area — located between the Appalachian mountains to the west, the Atlantic coast to the east, Washington, D.C. to the north and Atlanta city to the south — produced a group of guitar players who played a style based on ragtime. The main exponents of this style, Blind Willie McTell, Blind Blake, Blind Boy Fuller, The Reverend Gary Davis, and Barbecue Bob, developed complex finger picking techniques, where the melody and harmony were picked with the fingers, and the thumb executed powerful bass lines, often reminiscent of the left-hand

48 Ibid, 11.
50 The use of percussive slapping techniques is common to several guitar styles and is discussed in section 3.
technique of ragtime pianists. 'Southern Rag' recorded by Blind Blake in the 1920s is a good example of this technique.\textsuperscript{51} The Piedmont style more clearly reflects an integration of African music and the songster repertoires of the white communities, than the Mississippi Delta blues, and this probably reflects the demographic differences between both regions as the Piedmont area was more racially integrated than the South.

The guitar appeared comparatively late in the history of country music, whose roots are centuries long, and predates commercial recording by no more than two decades. Its introduction is credited to black players and the effect of blues fingerpicking styles on country guitar picking has been discussed earlier. Douglas Green comments on the influence of black blues performers on country-guitar styles:

Many performers, in fact, adopted an extremely bluesy style: Jimmie Rodgers, the \textit{Mississippi Blue Yodeler}, of course comes to mind, but Cliff Carlisle, for example, played extremely bluesy tunes on his acoustic steel guitar... \textsuperscript{52}

Compared to blues the guitar took on a role of accompaniment and only came into its own when influential performers such as Maybelle Carter developed a variation in picking style, known as 'Carter picking', which was more elaborate and became increasingly popular—the style is characterised by picked bass and melody notes on the lower strings interspersed with syncopated chords. The formative country styles would later influence a new generation of 'country pickers', including Chet Atkins and Merle Travis, who developed elaborate and complex picking styles. In the Southwest the influence came from a different source:

\textsuperscript{51} Blake, Blind, 'Southern Rag', \textit{The Best of Blind Blake} (Yazoo, 2058, 2000).
Spanish settlers, who brought with them guitars, transferred their love of this instrument to the border vaqueros (cowboys), who in turn influenced both with the instrument and with the music-cowboys north of the border.\textsuperscript{53}

Mexican cowboys introduced both black and white cowboys to their popular twelve-string guitar; an instrument which retained the tradition common in earlier European guitar music of arranging strings in double-courses to increase the volume of the instrument.

The influence of Hawaiian and Polynesian guitar styles, particularly the slide guitar and the use of open tunings, emerged after the U.S. took control of Hawaii in 1898. Before long, touring vaudeville troupes brought the music, the ukulele, and the Hawaiian guitar to the United States, stimulating a boom in the popularity of the ukulele: in the 1920s the Martin Co., which was already set up to manufacture guitars, turned to the production of ukuleles and 'Christian Frederick Martin III estimates that the company turned out nearly twice as many ukuleles as guitars during the 20s.'\textsuperscript{54} Although David Evans suggests that Hawaiian guitar styles first influenced American guitar music in the 1910s, there is evidence, in the account described by W.C. Handy in his autobiographical \textit{Father of the Blues}, to suggest that slide guitar techniques were being integrated as early as 1903. Any attempt to however to identify discrete developmental pathways of instrumental style and to isolate each strain of this tradition is probably unwise, but it is evident, that 'slide' guitar style was assimilated early into blues and its assimilation into country music is likely to be a combination of both blues and Hawaiian influence — this can be

\textsuperscript{53} Ibid, 281.

\textsuperscript{54} 'Martin Guitar Co. History', Chapter 7: \textit{Riding the Ukulele Boom}


p.35
supported by the fact that slide guitar in country music is played flat as in Hawaiian styles. In country music, Frankie Marvin, Cliff Carlisle and Dorsey Dixon became great experimenters and the slide guitar was featured on many of Jimmie Rodgers’ recordings during the period (1927-1933).55

The guitar, during the latter years of the 19th and the first decades of the 20th century, had been adapted to a wide variety of styles, blues, country, popular song and to some extent jazz, but in differing ways and to differing degrees. The instrument, which was particularly suited to a solo or accompanying role to other stringed instruments and the voice, was less suited to ensembles that included brass, woodwind, piano and percussion, as in the case of jazz, where its inherently low volume level restricted its use. By the time radio broadcasting (1920) and recording (1925) had developed into a functioning medium, the Americanised guitar was well established, both in design and musical role, but it was the new technologies that would provide new musical settings in which the relatively quiet intimate sound of the instrument could be introduced to new audiences.

- The Effect of Technology on Guitar Practice

Recording and Broadcasting.

The effects of modernity, industrialisation, the birth of a consumer economy and most potently the creation of effective systems of recording, reproduction, broadcast and distribution, precipitated a renaissance in guitar music and radically affected the ways in which the instrument was to develop. Tim Brookes suggests that:

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55 Rodgers, Jimmie, The Singing Brakeman (Bear Family BCD 15540, 1992).
Everything important that happened to the guitar actually happened between 1928 and 1941, and the guitar went from being a nineteenth-century instrument to a modern instrument in just fourteen years.\textsuperscript{56}

The beginning of this period of radical transition, 1928, is synchronous with the development of advanced systems of broadcasting and recording, and the latter date, 1941, the period in which the solid-bodied electric guitar found a new voice which transcended its acoustic character.

Although acoustic recording had been taking place since around 1890 it was not until 1925 that records produced by the modern system of electrical recording became commercially available. Where acoustic recording relied upon the volume and power produced as musicians gathered around and played loudly into a recording horn, the sensitivity of electrical recording could capture a relatively quiet signal and produce a more sophisticated, detailed, recording. In early jazz, the loud strident sound of the banjo dominated the rhythm section and although guitars can sometimes be seen in photographs of early ensembles, as in a photograph of Buddy Bolden’s Orchestra taken in 1895, it is the banjo that dominates early recordings.\textsuperscript{57}

The delicate nuances of the guitar had up to this time determined its role as an instrument for solo performance or part of a small ensemble of other string instruments, but with improvements in recording technologies and developments in instrument design the guitar began to transcend its functional use as an accompanying instrument and move from a utilitarian to a symbolic and artistic role.

Kittler talks of the illusion created by recording, where the most intimate whisper

\textsuperscript{56} Brookes, Tim, \textit{Guitar An American Life} (New York: Grove Press, 2005), 135.
appears to be present in the ear, a hallucination, and simulation, made possible by the intimacy of the recorded sound:

The sound of “music in my ear” can only exist once mouthpieces and microphones are capable of recording any whisper. As if there were no distance between the recorded voice and listening ears,58

Recording was able to capture the delicacy and intimacy of the acoustic guitar and relocate it in a closer, more intimate, relationship to the listener. In radio broadcasting:

A guitar or two in a tiny studio was ideal for radio. To the listener, it was like hearing a private performance in one’s own living room. The guitar’s greatest strength, its intimacy, was finally able to come to terms with the vastness of America.59

It was this ‘vastness’ of America that would produce a large range of diverse music, that could now be transmitted across large geographic, social and ethnic frontiers and had the potential to produce substantial markets for the newly recorded products and playback systems. For the first time, performers, rather than composers, whose work was distributed as sheet music, could be heard wherever the equipment was available. This marks a significant development in that performance style, idiolect, individual musical voice and interpretation could achieve precedence over the notated composition. The first radio broadcast in the USA took place 1920 and:

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In 1922 the American Society of Composers and Publishers (ASCAP) and the Music Publishers' Protective Association (MPPA) made it illegal to broadcast records.\textsuperscript{60}

As all performances were therefore live, this created two sources of income for musicians: recordings for sale — not for broadcast, and live radio performance. As the broadcasting medium favoured the delicate restrained volume of the guitar, as it was easier to broadcast than a larger, louder ensemble, the guitar became extremely popular. Also, radio broadcasting emerged at the same time as the Hawaiian guitar boom, a time when the guitar was at a peak of popularity.

In the field of blues, Sylvester Weaver recorded the first solo-blues guitar recording, 'Guitar Blues' on November 23rd 1923, followed in 1926 by Blind Lemon Jefferson and Blind Blake.\textsuperscript{61} In country music recording had begun earlier but it was not until 1922 that the first hillbilly records were recorded; the record companies having found out that the music sold as well as:

other non-legitimate music, blues, sold as well as or better than the operas and show tunes they were so fond of recording.\textsuperscript{62}

The two-guitar format became extremely popular, particularly in country and blues, which was already rooted in the tradition of the guitar. Several records with a two-guitar line up were recorded, for example 'Frisco Town' with Memphis Minnie and Kansas Joe McCoy, where the former sang and both played guitar, and others

\textsuperscript{60} Brookes, Tim, \textit{Guitar An American Life} (New York: Grove Press, 2005), 85.


including Big Bill Broonzy and Frank Brasswell, Charley Patton and Willie Brown, Frank Stokes and Dan Sane, and Willie Walker and Sam Brookes.\textsuperscript{63}

It is however, in the field of jazz guitar that developments in modern technologies had the most significant effect, as early jazz guitar developed in tandem with instrument design and electrical recording technology. Essential to this development were the highlighting properties offered by the recording medium, where the instrumentalist could be moved closer to the recording microphone, in relation to other instruments, and it was this that made possible the full range of melodic, rhythmic and percussive possibilities. The microphone, functioning as a moveable 'ear', could be creatively placed in the performance space to capture a particular balance of instruments, and it this mechanical change that had a profound effect on the role of the instrument.\textsuperscript{64} The functional and compositional possibilities of the 'American' guitar, having been previously restricted by its volume, developed a new sonic freedom; the guitar could be the primary focus in any ensemble and therefore suitable as an instrument for serious composition.

It was in the form of the jazz guitar duo that the compositional and arranging possibilities of the instrument could be fully exploited. Where previously the performance role in guitar duos was divided between rhythm and accompaniment,

\begin{itemize}
  \item \textsuperscript{63} Minnie, Memphis and McCoy, Kansas Joe, 'Frisco Town' \textit{Queen of Country Blues}, (UK: JSP, 7716, 2003).
  \item \textsuperscript{64} In the recording of \textit{Perfect} by Eddie Lang (1927), the guitar is highlighted by placing it closer to the microphone than the accompanying piano. Re released on Lang, Eddie, 'Perfect' \textit{Eddie Lang Guitar Virtuoso} (USA, Yazoo 1059, 1989). The Quintette du Hot Club de France are illustrate in a photograph taken in Paris in 1939 in the \textit{Masters of Jazz guitar} (p 26) carefully positioned around a recording microphone with the main melodic instruments, guitar and violin positioned closer to the microphone.
\end{itemize}
the early jazz duets featured a more advanced level of arrangement, with melodic and rhythmic interplay divided between the performers. One of the prime exponents of jazz guitar, Eddie Lang, recorded guitar duets with the Afro-American blues guitarist Lonnie Johnson. Lang brought a European musical sensibility, having undergone a classical musical training, and a virtuostic plectrum technique, developed through playing plectrum banjo, and Johnson, an expertise in blues guitar. Although the guitar duet was not a new concept — Roy Harvey, Leonard Copeland and Jess Johnson had teamed up in the late 1920’s to perform duets which drew on turn-of-the-century parlour-guitar styles, as well as blues techniques borrowed from black musicians — it was the new sophisticated arrangements and virtuosic performance of Eddie Lang and Lonnie Johnson that projected acoustic-guitar music to new heights.65 Eddie Lang, having trained in the European tradition, was renowned for his ability to lay down bass lines and chordal runs in the style of the stride piano and Lang and Johnson pieces often featured Lang playing an accompanying role and Johnson playing melody and improvised lines on his nine-string guitar.66 Teaming up two guitars offered the composers and performers many musical opportunities, Lieberson comments, ‘there are unlimited possibilities in the combination of single-string leads, chord solos, finger picking, and flat-picking

66 The twelve-string guitar was probably introduced to blues performers of the South by Mexican cowboys; twelve string instruments being popular in traditional Mexican music, and it was common practice to remove three of the strings — the octave strings on the bottom three strings — to produce a nine string instrument. This made it easier to play accompanying bass lines with the thumb on the bottom three strings.
As both instruments could produce, single-string lines, chords and a rhythmic percussive pulse, numerous possibilities were created for composition and arranging. Carmen Mastren and Albert Harris (English guitar player) wrote duets published in 1942, but not recorded, which combined double stops and triads to create four and five-part harmonies. "The guitarists play syncopations in imitation of band arrangements and create three and four part harmonies not possible on a single instrument".

The arrangements were often highly evolved, exhibiting sectional composition and elaborate modulation, and required virtuostic performance ability. They broke with the conventions of the classical guitar duet in that many recordings combined modern compositional forms with improvised sections and some were predominantly improvised. The duets, in terms of composition, sonic landscape, performance style, consumption and distribution, were a true reflection of an engagement with the modern world and could be seen as a modernist response to a changing environment. It was modernity that shaped the very nature of the music, the instruments were mass-produced, featured new designs, fitted with heavy-gauge steel-strings and recorded and distributed using the latest technology.

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68 Ibid, 262.


70 Contemporary instruments are usually fitted with a set of strings that range from 0.012-0.054th of an inch, the strings used by Eddie Lang ranged from 0.015-0.075th of an inch: 20% thicker.

www.acousticguitar.com/article/172/172,7431,GEARFEATURE-1ASP (2.4.07)
The early jazz guitar duos adopted the arch-topped, cello-guitar, a transitional instrument from banjo to the electric guitar: transitional because it would be this style of guitar that would be later fitted with the first electric guitar pick-up and ultimately develop into the solid-bodied electric guitar. Although the arch-top did not have the full acoustic resonance of a flat-top guitar, its design highlighted middle, rather than the lower and upper frequencies, making it the perfect instrument for 'cutting' through the harmonically dense rhythm section of dance bands and the complex tonalities of guitar duets. Eddie Lang played a Gibson L5, a new design which commenced production in 1923 and featured 'f' sound-holes (like a cello) rather than a round sound-hole, on which the strings lie across the bridge and are attached to a tailpiece which exerts a downward thrust onto the soundboard — unlike the flat-top, where the strings are fixed behind the bridge pulling the soundboard upwards. The guitars were fitted with steel-strings, which, although available in the late 19th century, were not fitted to factory-produced instruments till 1922. Steel strings were louder than gut strings, had a more even musical response, and produced a sound that was capable of cutting through other musical textures and ideally suited to the new recording environment.

Despite the late start — the end of the 1920s and beginning of the 1930s — a flourish of recordings were produced, and to satisfy the demand for new guitar music simplified transcriptions and a tutor book (written by Eddie Lang) were published.71 The popularity of the guitar duo led to the formation of more duos and the release of more recordings, the most significant being by Carl Kress and Dick McDonough, who reached new degrees of sophistication with material that

contained rubato sections, modulations, ballad interludes and tempo changes, that were structurally, harmonically, and rhythmically complex. John Cali and Tony Gottuso released six duet-recordings and Carl Kress and Mottola duets, which continued into the 1940’s, sometimes added clarinet, bass and drums.

The reliance upon and affect of the broadcast medium is evident in the fact that the duo format, which was very popular during the 1920s, 1930s and 1940s, was never performed live until the advent of the electric guitar. It is significant that this creative outpouring of material existed only within the realm of recording and broadcasting and that the first ‘live’ performances did not take place until 1961 when Kress formed a duo with George Barnes and they became among the first to adopt the electric guitar.  

Up until Barnes and Kress, jazz guitar duos had performed only on recordings and radio. Barnes and Kress went out into the clubs and concert halls, playing to enthusiastic audiences.  

It is significant that the guitar duo was restricted in its performance role until the development of the electric guitar pick up and that a return to acoustic performance of jazz guitar duo and trios did not take place until the advent of the acoustic guitar pick-up, the piezo transducer.

The International Effect of Recording and Broadcasting

The birth of the commercial record industry had a profound effect outside of the USA as recorded music filtered across the world. In Europe it brought the sound of ‘American’ music to indigenous performers and as recordings began to flow in both directions, the pattern of influence and development of style became circular. The virtuostic performance of Django Reinhardt (1910-53), formerly a plectrum banjo and violin player, who was steeped in a tradition of French popular and Gypsy music, was influenced by American jazz and blues and particularly by guitar player Eddie Lang (1902-33); his teaming up with violinist Stefan Grappelli has strong parallels with the combination of Eddie Lang and violinist Joe Venuti.

Delauney writes that in Paris, in the early 1930s, jazz was considered a cacophony, discordant and reserved for Negroes, but the effect of Django Reinhardt’s quintet was to absorb jazz into their own particular sound:

> With the arrival of the quintet and the reassuring presence of string instruments, jazz became a more delicate music, one that could be more easily assimilated by outsiders.\(^7^4\)

The commonality of stringed instruments in French music (Django’s quintet was comprised of two guitars, violin and double bass) and guitar-based jazz from America seemed to form a bridge between the two musics and suit French musical tastes. In a circular motion, Django’s suffusion of jazz with the exoticism of gypsy passion, crossed the Atlantic to influence American guitar players; creating a cycle of musical influence between American and European music and one that is still active and thriving: Birelli Lagrene (born into a Belgian gypsy family and steeped in the Django tradition) performs European gypsy influenced music, American jazz standards and jazz funk, and Howard Alden (American born) amongst others plays

in a gypsy guitar style. Similarly in Latin America, the guitar having been brought by Spanish and Portuguese colonists and imbibed the existing musical folk and dance cultures, was influenced by the music of the USA and Europe. Brazilian guitarists, Oscar Aleman (1937-2000) played in a swing guitar style similar to Django Reinhardt and Baden Powell (1909-1980) absorbed jazz influences into traditional dance styles, the Samba and Bossa Nova. These musical hybrids would themselves be exported to the USA; for example, in 1962 bossa nova had a lasting effect on the American jazz scene:

a group of Brazilian musicians, including Laurindo Almeida (1917-95), Bola Sete (1928-87), João Gilberto (b.1931) and Antonio Carlos Jobim (1927-94), blended their native musical traditions with the soft-spoken, relaxed sophistication of cool jazz in the later 1950s.

The effect of the bossa-nova guitar style had a lasting effect on American guitar playing and introduced the nylon strung 'classical' guitar into jazz. American guitarist Charlie Byrd (1925-1999), already a classical guitar player, used the nylon-strung guitar, with its musical referents of Spain and flamenco, in his own hybrid

75 Alden, Howard, 'I’ll See You In My Dreams' Sweet and Lowdown (Sony, SK89019, 2000).

Lagrene, Bireli, My Favourite Django (France: Dreyfus FDM 36574-2, 1995).

76 Aleman, Oscar, Swing Guitar Masterpieces (USA: Acoustic Disc, ACD-29, 1998).

Powell, Baden, Afro Sambas. (USA: JSL, 008, 1990).

style of Latin Jazz. The nylon-string acoustic guitar had repositioned itself in relation to the classical guitar to add another contemporary voice to the family of acoustic guitars.

The development of recording and broadcasting encouraged a cross-fertilisation of musical style and practice, something that has always taken place, but as it was reliant upon the movement and intermingling of people, this happened at a much slower pace. As mass communication technology has expanded, the speed and intensity of transmission has increased. In my own work, I am constantly making reference to the music of other cultures and eras, to the extent that the boundaries and distinctions are, for myself, increasingly becoming blurred and less defined — a reflection of the postmodern experience.

The Electric Guitar

Electricity is a vocabulary in itself.

Before the advent of the electric guitar pick-up (late 1930s), the guitar player, with the exception of the great virtuosos, primarily functioned as a member of the rhythm section. Initially the new electromagnetic pick-up was attached to acoustic instruments, but this quickly gave way to the solid-bodied electric guitar, a truly experimental, progressive and modern instrument and one that signified a break with the past. No longer was the natural acoustic resonance of the guitar the defining

79 Carr, Ian, ‘Jazz Britannia’ (BBC2, 29th July 2005).
80 The electro-magnetic pick up converts the vibration of a steel-string into an electrical current that can then be amplified. The body of the guitar affects the way
character of its sound, the electric instrument offered a new musical vocabulary and sonic palette.

Douglas Green places the first use of the pick-up in 1935, when Bob Dunn of Milton Brown And His Musical Brownies, electrified his Hawaiian guitar by using a crude home made pick up. The electrification of the standard guitar came close behind with Muryel Campbell of The Light Crust Doughboys, Eddie Shamblin with Bob Will's Texas Playboys in 1939 and Charlie Christian who 'was setting the jazz world alight'. In 1937, the electric Hawaiian guitar was being offered in the Gibson catalogue and shortly before 1940, Gibson marketed the ES 150 single pick-up guitar — this would became known as the Charlie Christian model.

Charlie Christian, an early pioneer of the electric guitar, used the new amplification to forge new ground as a soloist and to feature the guitar more prominently. He took advantage of the sustain of the electric instrument to play legato phrases that mimicked the flowing lines of horn players, rather than the staccato pickings style of the earlier acoustic players. Whereas earlier guitar players had employed a powerful down-stroke picking technique to produce the volume necessary to cut through other instruments, the increased volume produced by the amplified guitar allowed the player to use a lighter picking technique and to produce legato phrases by hammering the guitar strings, with the fretting hand, onto the string resonates but adds little else to the amplified sound — particularly in the case of the solid-bodied guitar.

82 Ibid, 281.
the fingerboard. However the electrification of the instrument was often used functionally as a method of amplifying acoustic-guitar techniques without any alteration of the playing style and the contrast is quite noticeable when comparing the performances of Charlie Christian who adapted his technique to the new instrument, and Django Reinhardt who applied his powerful technique to the new instruments without any noticeable compromise. The techniques employed and the sound produced by Christian is defined by the sonic and performance possibilities of the electric instrument, whilst the sound produce by Reinhardt, who plays electric guitar with the same picking technique with which he played acoustic guitar, is less satisfactory and lacking in the finesse and nuance of his acoustic work.

With the development, in 1941, of the electric solid-bodied guitar, the transformation of the guitar from a nineteenth-century to a modern instrument was now complete. The guitar player, previously limited in role by the inherent volume of the instrument, was primed to become the power force of popular music in the 20th century and to function as a signifier of modernism, technology and a popular music revolution. The amplification of the guitar allowed the fore fronting of the instrument, and its great pioneers, Charlie Christian, Joe Pass, Wes Montgomery et al., elevated the guitar player from an often perfunctory role as a member of the rhythm section, to a new dominant musical position. This new found expressivity


allowed the guitarist to, participate in all musical ensembles, expand the tonal palette of the instrument, and to supplant a broader musical language onto the guitar — modern jazz guitar players increasingly looked to saxophonists and piano players for their musical vocabulary rather than to the earlier guitar players.

As well as developing the solid-bodied electric-guitar, Les Paul was experimenting with multi-track recording, made possible by the commercial production of magnetic tape recorders, and producing recordings, which featured a single guitarist recorded on multiple tracks, to create a guitar ensemble — in effect a modern string band. The popularity of the multi-tracked guitar spawned the formation of multiple-guitar ensembles and, importantly, marked another transitional point — the complete integration of the guitarist with recording technology. This integration of practice with technology, a combining of the role of artist and technician, allowed the guitarist to function as a lone producer of music, a role that has resonances with contemporary digital-recording practice and is discussed in more detail in section 2.

Paradoxically, the development of the electric guitar pick-up is central to the twentieth-century evolution of the acoustic guitar; in the age of the electric guitar the acoustic instrument could easily have been relegated to a lesser role, what did happen was that the instrument developed a new voice and a broad cultural resonance. The differences between the electric guitar and the acoustic guitar became more than a mere distinction of volume and timbre, the very ‘acousticity’ of the instrument — a conceptual signifier and product of sonic qualities and cultural values — positioned it as a binary opposite to the electric guitar. If the electric guitar

signified modernity then the acoustic guitar signified tradition and authenticity; it functioned as a signifier for the organic community, the natural world and an antimodernism. Tim Brookes suggests that a great part of its popularity was because it became associated with ‘popular and financially viable myths’ particularly the myth of the cowboy as a signifier for the American life and the mythology of frontier America. In the 1930s the guitar playing ‘singing cowboy’ was such a popular figure of the Hollywood cinema that the Harmony guitar company (a subsidiary of Sears and Roebuck) brought out the ten dollar Gene Autry cowboy guitar and two song books. The singing cowboy format — a signifier for the ordinary man — was repeated with many performers: Eddie Dean, Rex Allen, Lan Slye (Roy Rogers), Monte Hale, Tex Hill and Tex Ritter, and the guitar became established as a vehicle for expressing the troubles of the lonesome cowboy and in turn a signifier of individual personal expression. This expression of ideological purity was mobilised by the radical folk music tradition, where the guitar became a signifier of communality, continuing tradition and a musical vehicle for articulating the concerns of everyman and the ordinary. The musical significance of Woody Guthrie, Peggy Seeker, Ewan MacColl and later Bob Dylan and Joan Baez were intrinsically bound with the cultural connotations of the acoustic guitar. Woody Guthrie famously had the slogan ‘this machine kills fascists’ emblazoned across his guitar and Bob Dylan was accused of being a ‘Judas’ by a member of the audience when he first played an electric guitar on stage at the Newport Folk Festival in 1965 and later a

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89 Such was the popularity of the cowboy songs that they are still reissued. An example being a collection Gene Autry sheet music in a compendium: Various composers, *Cowboy Classics, 62 Classic Saddle Songs* (USA: Hal Leonard Publications, 2005).
similar experience occurred in the British Isles. In blues, jazz and country music, the acoustic guitar signified a continuity with tradition and by seemingly being untainted by the commercial world and its technological products, the articulated connotations of purity and honesty — paradoxically an historical distortion as the acoustic guitar was equally a product of industrialisation and consumerism. Whilst the electric guitar was fully absorbed into rock and roll music, some blues and popular music, within some musical traditions, notably jazz, the solid-bodied electric guitar (the antithesis of the acoustic instrument) was not quickly accepted and the hybrid semi-acoustic instrument maintained prominence.

In popular music the acoustic guitar became part of the rhythm section, providing a percussive textual layer to the sound of rock and roll music as in Eddie Cochran’s ‘C’mon Everybody’ or as an accompaniment to a ballad as in Elvis Presley’s ‘Love Me Tender’. So potent is the image of the acoustic guitar that many performers, including Elvis Presley and Cliff Richard, would appear with an acoustic guitar slung around their necks, sometimes to be played, but primarily functioning as the intimate tool of the confessional singer and a statement of symbolic opposition to the electric instrument. The guitar functioned as a symbolic link that grounded early rock and roll music within country music traditions and probably more importantly, for non-American performers, within America itself.

As the new electric-guitar didn’t have to be pointed at a microphone it allowed a new freedom in performance style, the performer could move around more easily

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and interact more closely with the audience and other performers. Freed from the figure of eight shape of the acoustic guitar and considerations of acoustic resonance, the electric guitar, for example those made by Fender, Gibson and Rickenbacker, developed abstract shapes and took advantage of new high-tech finishes, cellulose and metallic paints and gold or chromed metal finishes. Electric guitars had not only developed a 'sonic hegemony' but could 'function as visual symbols of power'.

The result of this symbolic association can be seen in a fetishising of equipment, where the value placed upon the guitar as a cultural symbol is evident in the avid consumption of guitar paraphernalia and the enormous amount of artefacts available to the electric-guitar player. A visual expression of this consumption is to some as important as the music; the seemingly endless reissuing of 'classic' and 'signature' series guitar models is evidence that a large market exists for the guitar as a cultural signifier. This also exists, but to a lesser extent, in the world of the acoustic guitar where a certain fetishism is apparent in the collection of old instruments, not necessarily for their quality as instruments, but for their cultural value.

The schism created by the electric guitar pick-up grew ever wider as the electric guitar, functioning in new settings, developed a new sonic language — a vocabulary of electricity — one which because of its ease of playing, volume and the ability to manipulate the sound, could absorb the musical language and performance techniques of other instruments, and manipulate these elements to produce a broad range of musical textures and dynamics. Meanwhile the musical language of the

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93 Jimi Hendrix highlighted this vocabulary of electricity in his expressive use of sound manipulation devices and engagement with the recording studio. Hendrix, Jimi, The Best Of (KBOX3270 A, 2000).
acoustic guitar was rooted in the past and its functional use bound by its acoustic qualities. This was however to change with the emergence of a new generation of acoustic guitar players who would project the acoustic guitar into a new role, not as the inferior partner to the electric guitar but as an instrument of considerable vibrancy and a tool for innovative practice.

In 1959 in the USA, John Fahey released *The Transfiguration of Blind Joe Death*, an album of steel-string guitar instrumentals which represented an irreverent and eccentric new approach to acoustic guitar music and in the UK Davy Graham was performing a complex finger picking arrangement of 'Cry Me a River' on Ken Russell’s BBC film *Hound Dogs and Bach Addicts: The Guitar Craze*. Davy Graham was part of an newly emerging generation of guitarists which included Bert Jansch, Martin Carthy and John Renbourn, who whilst rooted in folk and eclectic music traditions, where experiencing American blues, jazz, country and rock music. Davy Graham, a British born guitarist of East Indian and British parentage, spearheaded a movement in Britain that would draw upon American, Celtic and Middle Eastern influences. Harper suggest that he ‘single-handedly introduced Britain to the concept of the folk guitar instrumental’ but more importantly he was, a consummate performer, and one who consciously mixed a broad range of idiomatic elements. In attempting to emulate the Middle Eastern oud he created a new guitar tuning — DADGAD — and this tuning would prove to have a far reaching effect on many guitar players, including, Pierre Bensusan (Algeria), Tony MacManus


p.54
(Scotland) and Martin Simpson (England).\textsuperscript{96} The use of open-tuning systems, although a common feature of ethnic stringed instruments and early country and blues slide guitar, revitalised the acoustic guitar by creating a new musical palette and a distinct acoustic guitar practice. Graham also embraced the recording environment by producing tracks recorded with acoustic guitar and drum kit, a unique combination, which is difficult to recreate live because of the differences in volume level between the instruments.\textsuperscript{97} Graham's postmodern musical response in embracing eclecticism and technology influenced a new generation of British guitar players including, Bert Jansch, John Martyn, Michael Chapman and Jimmy Page (Led Zeppelin); an influential cohort of musicians who were interested in forging new roles for the acoustic guitar. Whereas Jansch retained a natural acoustic sound, Chapman and Martyn embraced sound processing technology by experimenting with electromagnetic pick-ups and 'echo chambers' to create repeated sound loops, and Page moved seamlessly between electric rock and acoustic guitar. The influence of these players in combining eclectic musical influences, embracing sound technology, using open tunings, and a pursuit innovatory practice has had a substantial effect on the work of contemporary guitar players. Importantly, although traditional modes of performance continued, these new younger performers developed a specific identity for acoustic guitar music, not as the un-amplified antecedent of the electric guitar, but a new vibrant guitar-centric practice.

\textsuperscript{96} Bensusan, Pierre, \textit{Intuite} (FN2130-2, 2001).

McManus, Tony, \textit{Tony McManus} (Greentrax CDTRAX096, 1995)


\textsuperscript{97} Graham, Davy, \textit{The Guitar Player Plus - Davy Graham} (See for Miles Records Ltd., SEECD 351, 1963).
Paco de Lucia refers to ‘a victory for the acoustic guitar’ in describing his 1980 tour with John McLaughlin and Al Di Meola: a groundbreaking combination of musical style and virtuosity, but more importantly, an international performance tour of a trio of acoustic guitar players. The trio performed on acoustic guitars, which were partially amplified using individual microphones, but with the exception of Paco de Lucia, the signal was reinforced with built in acoustic pick-up systems. Where de Lucia used his flamenco guitar, McLaughlin and Di Meola used the then modern Ovation electro-acoustic guitars — a hybrid guitar in which the back and sides of the guitar body were constructed from a composite plastic. McLaughlin and Di Meola, coming from a background of pre dominantly electric guitar performance, needed additional amplification whereas de Lucia, grounded in a tradition of acoustic guitar playing (flamenco), was comfortable with only a microphone. This may seem like a small point but seeing them perform for the first time was remarkable, not only their music and individual virtuosity, but the very fact that it was possible to play acoustic guitar music on large stages to large audiences. It is useful to remember, that it was not until 1961 that earlier forms of the guitar duo (Barnes and Kress), emancipated by the electric guitar pick-up, could perform live to a large audience; what was really being observed was the effect of the acoustic guitar pick up — the piezo transducer. 

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98 Paco de Lucia, quoted in interview with Don Menn and Tom Mulhern in Guitar Player Magazine (USA: GPI Publication, March 1981), 70.
99 Both McLaughlin and De Miola’s Ovation guitars were factory equipped with piezo transducer pick-ups.
Tillman in a study entitled *The Response Effects Of Guitar Pickup Position and Width*, refers to the complexity of the acoustic guitar sound in relation to the electric guitar:

> On an acoustic guitar every component of the string vibration is audible. Longitudinal waves, transverse waves, along any axis, any direction, every harmonic; they all eventually find their way to being a force on the bridge and thus a contributing component of the sound of the instrument. On an electric guitar only the displacement of the string at the pickup location is sensed, and then only the displacement of transverse waves along the axis of pickup sensitivity.  

It is this complexity of resonance that makes successful amplification of the instrument difficult. Amplifying the acoustic guitar with a microphone, which is the preferred option for many players, is beset with problems, as the relatively quiet acoustic-guitar requires high-levels of amplification to produce a volume suitable for large stage performance. This is exacerbated when there is background noise, or, the guitar is in combination with louder instruments — as is very common with popular forms of music. Whilst microphones can produce the most accurate reproduction of the acoustic instrument, they can also create a ‘feedback loop’, an uncontrolled audio howl created when the microphone starts to amplify its own signal. The electro-magnetic pick-up, designed for the electric guitar, offers a solution, as a signal is picked up directly from the vibrating string, but it retains little of the instrument’s acoustic properties and produces a sound that has more in common

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100 Donald J, Tillman, *Response Effects of Guitar Pickup Position and Width*, Till.com, 2007,  
with the electric guitar and only works effectively with steel strings — acoustic guitars use phosphor-bronze or nylon strings. The piezo transducer differs functionally from the electro-magnetic pick-up or microphone in that it detects the vibration of the acoustic body of the instrument rather than just the movement of the strings and converts this vibration into a small electrical signal. The pick-up, which is fixed under the saddle or bridge of the guitar, picks up the vibration of the soundboard and the actual acoustic resonance of the instrument. However, the resultant amplified sound has a reduced dynamic range and a synthetic sounding high frequency response — sometimes referred to as a piezo ‘quack’ — never a truly acoustic sound and more a hybridisation of acoustic and electric qualities, hence the term electro-acoustic guitar. Some manufacturers, in an attempt to achieve a more natural acoustic sound, have developed pre-amplifiers and equalisation processors to modify the pick-up signal and address this piezo ‘quack’, others such as B-Band have developed a transducer that uses a superior interface, and Fishman Co., are using digital technology to trigger digital samples of real instruments from a piezo signal. However, the pursuit of a natural electro-acoustic sound is still elusive. The piezo transducer nevertheless offered a unification of the acoustic sound of the instrument and its performance traditions, with the extended musical language, improvisational opportunities, techniques, tonal-palette and volume of the electric guitar: the piezo revolutionised the functionality of the instrument by placing it into the same performance arena as the electric guitar.

The creation of a hybrid electro-acoustic instrument formed a bridge between musical traditions that had been separated by the electrification of the guitar. By

aligning the performance qualities of the acoustic guitar with the functionality of electric instruments, the electro-acoustic guitar, a truly hybrid design, offered the acoustic resonances and performance qualities of the acoustic instrument with the sound manipulation techniques and sonic palette of the electric guitar. As the acoustic volume of the guitar was of lesser importance when amplified, electro-acoustic instruments could be fitted with lighter gauge strings and the techniques of the electric guitarist could be supplanted onto the acoustic instrument. Removing the need for the performer to produce as much volume as possible by using a heavy attacking technique with the plectrum or fingerpicks, allowed a re-evaluation of acoustic guitarist technique and freeing the performer to play as softly or as loudly as they wished.\textsuperscript{102} In addition, acoustic guitarists could play in an acoustic style, in any ensemble type and in any performance space. Consequently the hybrid electro-acoustic was embraced by both electric and acoustic guitar players and re-established across a wide range of music practice.

Evidence of the extent to which the piezo pick-up redefined areas of practice exists in recordings, where, separated from the need to amplify the guitar (conventional studio practice would use only microphones to record the 'natural' sound of the guitar) the guitar was often recorded using the piezo pick-up and fed through sound modification devices, in the same way as it would be treated live. Several guitarists for example Adrian Legg recorded the album 'Techno Picker' using an electro-acoustic Ovation guitar which was processed to reproduce the live 'electro-acoustic' sound and in doing so the sounds and techniques of the studio

\textsuperscript{102} James Taylor for example plays acoustic guitar with a very soft intimate picking style that is only possible when using effective amplification. Taylor, James, \textit{Classic Songs} (CBS WEA 2292-41089-2, 1987).
were supplanted back onto the live guitar.\textsuperscript{103} The freedom offered by the piezo transducer encouraged the reintroduction of the acoustic guitar into avant-garde and progressive musical movements, as can be witnessed in the work of Robert Fripp, who having embraced the electric guitar and its conceptually different space in ensembles, transplanted new techniques and modernist musical concepts — improvisation, electro-acoustic formats, and experimental performance techniques — onto the instrument.

The piezo transducer became the defining voice of the acoustic guitar (and other acoustic instruments) during the last quarter of the 20\textsuperscript{th} century, and formed a bridge between electric and acoustic guitar practice. At the start of the 21\textsuperscript{st} century, although the piezo transducer is still the industry standard pick-up system, it is increasingly combined with built in graphic equalisers, pre-amplifiers and used in combination with internal microphones and electro-magnetic pick-ups, however the goal of an untainted amplified acoustic sound has still not been achieved.

2.0 DIGITISATION AND ACOUSTICITY

2.1 Digitisation

As discussed in the previous chapter, the evolution of acoustic-guitar practice can be seen to mirror the key technological developments of the twentieth century: the emergence of broadcasting and recording technology, the electric guitar pick-up, and the acoustic guitar pick-up — the piezo transducer. These technological demarcations can be effectively mapped against key changes in, repertoire, performance style, the sonic quality of recordings and the cultural location and musical value of the instrument. A continuance of this investigation therefore

\textsuperscript{103} Legg, Adrian, 'L'amour manque' Waiting for a Dancer (Red House Records, RHR99, 800-695-4687, 1997).

p.60
necessitates a consideration of the interaction between contemporary practice and the primary communication technology extant at the start of the 21st century — digitisation. This chapter will therefore attempt to illuminate the effect of digital technology on acoustic guitar practice and interrogate the nature of acousticity as a conceptual signifier — the product of sonic qualities and cultural values — and in so doing highlight the inter-relationship between digitisation, contemporary practice and acousticity.

Three figures dominate postmodern science: the hybrid, the network and non-linearity.\textsuperscript{104}

Iain Hamilton Grant identifies three general characteristics of postmodern science that could be directly related to the specific affects of digitisation and digital technology on music practice: the hybridisation of styles and forms; the development of digital networks which encourage interactivity and an inter-textual merging of audio, visual and written forms; and the non-linearity and often fragmented experience of digital practice. Our lives, in an increasingly technologically dominated world, where we are bombarded with multiple stimuli — sounds, text and images, consists of fragmented, partial and incomplete experiences: we hear snippets of music as we pass a clothing shop; moving digital images and sound bites fill our television screens and computer workstations and websites tease, or irritate, us with video and audio ‘pop-ups’. Networks of communication technologies are encroaching across all facets of life, in work and leisure places, systems of transport, commercial outlets, and public buildings — even the doctor’s surgery is likely to

play 'soothing' background music. The effect of this deluge of information has impacted on our lives in both public and private spheres, and urban and rural environments — people seeking refuge from the city are very likely to be carrying MP3 players, digital-cameras, mobile-phones or a single device which can function as all three. In addition, there is an increasing convergence of textual forms into singular unifying communication systems and the merging of these into single pieces of hardware: the Apple iPhone, which merges communication — mobile phone and internet, with audio, text and visual images, being a particularly good example.\(^{105}\) Michael Heim (quoted in Landow) refers to the way that the digitisation of books allows the reader to instantly access further 'books, which in turn open out onto a vast sea of databases systemizing all of human cognition.'\(^{106}\) Parallels can easily be drawn with digitised music, where audio files, music samples, software and hardware, knowledge and experience can be accessed from any computer terminal and transmitted to any location. This convergence, integration and hybridisation of technology is the result of digitisation, the converting of sound, vision and text into a singular form — a digital code and it is digitisation that is increasingly becoming embedded in the very processes of production and creative practice — even if this interaction is only in the form of accessing information and data storage.

Digital technology is integral to the working process of this research, where copious use has been made of word-processing, data-storage, notational/audio/midi-sequencing software, internet music archives and subject specific web-sites. The working methodologies offered by digital technology directly shape my creative

\(^{105}\) www.apple.com/iphone/ (10.5.07)

practice and it would be a bold but justifiable statement to suggest that digital technology affects the practice of all acoustic-guitar players, in fact those wishing not to engage with digital technology need to make a positive decision — an ‘anti-modernist’ rejection of contemporary technology and a desire to disengage from the technological world — to avoid what has become the normal modus operandi. Digital technologies are integrated into all areas of contemporary music practice: the production of text and notation, recording and broadcasting and the digitisation of archive material. Contemporary recording is most often completed within the digital domain — analogue recording has become an expensive option — and the final recording is usually digitally mastered, if not, it will be converted to a digital format when compiled as a CD or DVD where the very material of distribution is digitised. Channon comments on how ‘digitization and the home recording studio have converged’ and the effect that this has had on ‘the established roles and identity of the producer and the recording engineer, as musicians took over the control of the apparatus…’ the musician can now be in control of the whole process, functioning as composer, performer, engineer, producer and record company.107 It is the multi-textual nature of digitisation, the ability to digitise audio, text and visual material, the increasing universality of software operating on PC and Apple Mac platforms, allied with the relative cheapness and portability of digital equipment, that shape the nature and practice of this research.108 Paradoxically, it is in contemplating the effect and presence of acousticity in creative practice that digital technologies have been so useful.

108 Digital technology is relatively cheap and accessible in relation to the analogue alternatives.
Live performance increasingly incorporates some form of digital manipulation, ranging from the covert use of digital-reverb units, to replicate acoustic environments, to the overt use of software, to manipulate the sonic palette and sample and repeat musical sections; John McLaughlin on his 2007 tour with Remember Shakti performed live with a semi-acoustic guitar processed through a laptop computer.\(^{109}\) The Fishman Aura, now factory installed into some Martin guitars, uses the signal from a piezo transducer to trigger, in real-time, digital samples of a previously recorded guitar and blend these samples with the guitar being played. This could be an example of what Baudrillard refers to as the hyperreal, where the real has been replaced by a sign of its existence; the perceived sound of the instrument is in part the sound of another instrument recorded at another location and at another time.\(^{110}\) In the 1970s Michael Chapman and John Martyn used analogue tape-loops to create multi-layered guitar parts, this can now be easily achieved using digital-samplers such as the Boss Loop Station which is capable of recording and replaying rhythmic and melodic loops in real-time performance.\(^{111}\) Contemporary performers are embracing digital technology as a medium through which to expand the performance options and sonic capabilities of the instrument.


2.2 Acousticity

The term acoustic is insufficient to describe a practice that is characterised not just by its sonic characteristics, but also by its cultural location and articulated systems of value, therefore, acousticity, a useful but ugly neologism, will be mobilised hereon as a conceptual signifier of philosophical and scientific concerns.

When Segovia first took to the concert platform to perform a solo guitar repertoire in a large auditorium (first USA concert in January 1928), he was completely reliant upon the interaction of his instrument with the natural acoustic resonance of the space. Segovia’s ability to create a range of dynamic and timbral variation, relied upon a composite of the interaction of a series of pitched frequencies and overtones produced by a vibrating string, amplified by the resonant diaphragms and cavities of the instrument and the resonance and reflection of these vibrations in the performance space. Benade, in a scientific analysis of the acoustic guitar, comments that:

After a musical string is excited in a complicated way, it sets up what we might call a two-dimensional, reverberant sound field in the soundboard. The soundboard in its turn communicates via the elaborate motion of dozens of its vibrational modes with thousands of room modes.¹¹²

The instrument, interacting with the reflective characteristics of the performance space, produces an unadorned acoustic experience in which the spatial relationship

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of the listener to the performer is crucial.\textsuperscript{113} Outside of the concert hall and in settings where the social etiquette of the occasion didn't demand an attentive quiet audience, performers had to coax as much volume as possible out of the instrument and this was achieved by adopting a pronounced attacking style, using heavy-gauge plectrums or fingerpicks, to pluck or strum heavy-gauge strings. Perversely, the necessity to produce a high volume level has become a stylistic marker long after the need to do so has past, with the result that a strong attacking picking style is still a performance characteristic of some acoustic blues and jazz players. However, for most guitar styles, playing the instrument with force compromises the sound of the instrument and the technique of the performer. After years of fighting for my own acoustic guitar to be heard, I have to constantly monitor my own approach in an attempt to reduce the amount of picking attack that I use.

In an attempt to produce more 'acoustic' volume, luthiers, have experimented with the size and shape of the guitar body, the choice of tone woods and the internal bracing system; but with a limited degree of success. One of the most radical solutions was produced by the Dopyera Brothers who designed and built guitars out of aluminium, steel or brass and which employed an internal resonating-diaphragm onto which the bridge of the guitar was mounted, the vibration of the string was then amplified by both the body and the resonant cone. The result was the Dobro guitar, an instrument with a greater volume level, but with a considerably altered timbre from the standard guitar and as such has become associated with the resonant slide guitar sounds of country and blues music.\textsuperscript{114}

\textsuperscript{113} The characteristics of which, are defined by its size, shape and the presence of reflective and absorbent surfaces.

\textsuperscript{114} A Dobro guitar is used on 'Hang on JJ', 'You Cooda' Told Me' and 'The Black Isle' (CD #3).
The guitar's limited dynamic level has always restricted its performance role and it is only an engagement with technology that has altered this musical hegemony. This engagement has often been avoided by classical and 'roots' performers because of a strong identification with acoustic performance traditions and until recently the poor quality of sound amplification and pick-up systems. Bob Brossman (slide-guitar virtuoso and ethnomusicologist) prefers not to use a pick-up system and instead rely upon the volume produced by the guitar and the acoustic space, only when absolutely essential — when the size of the venue is too large — will he use a microphone amplified through a public address system. Although preferring the 'natural' sound of an instrument in an empathetic acoustic environment, most guitarists will usually employ some system of amplification. However, the degree to which they engage with technology often reflects the musical preference of the performer, with traditional and roots music performers placing a greater emphasis on a 'natural' sound and players in contemporary styles openly engaging with technological sound-modifying devices; it is however accepted that experimentation with amplification techniques is practiced in all musical genres. In my own practice I tend to be pragmatic, by choice I would always prefer to play in a complimentary acoustic space using a microphone as necessary, but when performing in a space which is often designed as a multi-functional area with a poor acoustic response, or, faced with a challenging non-attentive audience, I will use a piezo transducer pick-up amplified through a p.a. system or a designated acoustic-guitar amplifier. However, when recording, I always record the natural sound of the guitar in the best acoustic space available — a room with some reflective floor surfaces and one which is not too heavily dulled by soft furnishings — the sound of
this 'space' will then be enhanced or corrected with the application of a small amount of equalisation.\textsuperscript{115}

When considering acoustic instrument practice, it is necessary to consider not only the sonic characteristics of an instrument and the, often complex, interactions with a performance environment, but the cultural associations of acoustic music and its practice. To this end the neologism 'acousticity' becomes useful as a signifier of not just sonic characteristics but attached cultural and ideological values. As discussed in chapter 1, the term acoustic often points to ideas of authenticity, naturalness and purity, and could be seen as a binary opposite to the rational and mediated technological world, but it is also loaded with its own ideological significance, ideas and or mythologies. Peter Narváez comments:

..the myth of acousticity, which was embraced during the folk boom, attaches ideological signifieds to the acoustic guitar, making it a democratic vehicle vis-à-vis the sonic authoritarianism of electric instruments.\textsuperscript{116}

The descriptor acoustic, being unnecessary until the advent of the electric guitar pick-up, is sometimes used as a relational term to differentiate between the values of a traditional 'folk' and 'mass' technological cultures and mobilised in favour of particular ideological discourses. Acousticity, is often valued for what it isn't, a commercial product of an industrialised and corporate modernity, and represents a

\textsuperscript{115} A term used to describe the additive or subtractive filtering of sound frequencies, in effect a tone control. The name is derived from early recording practice, where tonal manipulation was intended to make the recording sound 'equal' to the real instrument.

reactionary stance to the modernised world; ignoring the obvious paradox that acoustic instruments are equally the product of mass production and consumerism. Whilst the instrument is valued for its sonic and performance characteristics (which shall be discussed in chapter 3) it has developed, in some areas of music, a mythological status and become a signifier for an organic community and a naturalness that perhaps never existed, as the very design and construction of the instrument has always reflected the prevalent technology of the time, the techniques of industrial manufacture and systems of commercial distribution; instrumentalists and manufacturers have always tried to make it louder. In addition, it offers a further articulation with high-art traditions as the nylon-strung variant of the acoustic guitar, is perceptively articulated with classical music and an implied cultural authority. Even the electric guitar, which was often treated with equivocal distrust and defined by its association with popular music, has made forays into art music with John Williams in the classical/popular cross over band Sky and in Steve Reich’s *Electric Counterpoint*, but the combination is experimental and marginalised by the ‘classical’ acoustic guitar — the nylon-strung instrument associated with ‘classical’ performance — which maintains a cultural and artistic hegemony. The electro-acoustic guitar has helped to bridge the divisions of tradition and modernity and achieve a spectacular double articulation in uniting an instrument of the classical and high-art traditions with contemporary forms of jazz, rock and world music. This articulation of ‘art’ values can be witnessed in the work of specific performers, for example, Ralph Towner who combines classical and steel-string acoustic guitar with jazz and rock, and the acoustic guitar trio of John McLaughlin, Al Di Meola, and Paco De Lucia who combined flamenco, jazz and rock influences; McLaughlin, Di

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117 Reich, Steve, *Different Trains & Electric Counterpoint* (Elektra Nonesuch79176-
Meola both used electro-acoustic nylon-strung guitars — a modern version of the ‘classical’ guitar. However, the flat-top steel-strung acoustic guitar has largely been omitted from ‘serious’ music traditions and as there are no practical reasons for this omission, one can only assume that it is its intrinsic association with popular forms of music that have precluded it from a wider range of inclusion. However, these associations are being challenged, Martyn Harry, a composer with recognised credentials, was commissioned by the Arts Council of England in 2003, to compose a piece of music for The Jazz Guitar Duo (James Birkett and Rod Sinclair), to be performed on two flat-top, steel-strung acoustic guitars — an usual departure from the oft favoured classical-guitar-duo.

Concepts of acousticity also extend to the process of recording, wherein there is an assumed hierarchy of authenticity that is directly derived from the performers degree of interaction with recording technology, in descending order they are, live-recording, single-take recording then multi-track recording. The live recording is assumed to be the most authentic, as it is untainted by technology, and the multi-track recording the least authentic — some recordings carry a statement, as a declaration of authenticity, to declare that the whole recording was completed live and without overdubs. Again, it is the unadorned natural acoustic experience that is valued, however as it is through technology that we most often experience music, as recordings or broadcasts, it is important to consider the prevalent recording and distribution technology extant at the beginning of the 21st century — digitisation.

2, 1987).

118 Towner, Ralph, Solstice (ECM 1060, 1975).
McLaughlin, John, DiMeola, Al and De Lucia, Paco, Passion Grace and Fire (West Germany: Philips, 811334-2, 1983).
119 Harry, Martyn, Grace (Unpublished, 2003).
2.3 Digital Recording and its impact on the practices of the acoustic performer.

For digital recording or performance to take place, the sonic qualities of an acoustic instrument must be coded into a digital language (binary code), once encoded the digitised signal can be manipulated and reproduced without any degradation of sound quality. The ability to produce clones of the original, rather than copies, is in itself an evolutionary step as digital recording produces an artefact which can be endlessly duplicated, edited and imported into other digital domains; not a fixed immutable object, but a creation in an eternal process of development — this point is crucial and will be examined later. Audio/digital conversion can take place in two distinct ways, firstly, the conversion of an audio sound wave into a digital waveform — a digitised replica of the original sonic qualities, and secondly, the conversion of an electrical signal into a MIDI message — a digital code which records no audio characteristics but can be used to send midi-messages to other musical devices.¹²⁰

To convert the 'acoustic' sound of the instrument into a digital code, the sound pressure wave created by the vibration of a string and amplified through the soundboard of the guitar must be converted into an electrical current. In the first example, conversion takes place when a change in air pressure is detected by the diaphragm of a microphone, or the vibration of a surface is detected by a vibration sensitive 'piezo crystal' transducer and the resultant electrical current is converted by a DAC (digital audio converter) into a binary code. The process of converting the string vibration into a digital code retains the performance and sonic characteristics

¹²⁰ MIDI: Musical Instrument Digital Interface, a system of communication which enables digital musical systems to interact.
of the instrument, but in a form mediated by the microphone or pick-up system. In
the second method, the vibration of the string over a digital pick-up produces an
electrical current, which is then converted into a binary encoded midi-signal. The
midi signal retains most of the performance characteristics but none of the sonic
qualities; instead it creates a sequence of midi-information that via the universal
system of MIDI provides an interface with other midi-sound generators. The midi
pick-up offers the acoustic guitar player the ability to control other digital sound
sources, to trigger audio samples in real time and/or to record midi information into
sequences of events that can be edited and played back on demand. Most
importantly, both systems of digital recording, the digital audio waveform and the
midi message, produce a coded system that can be infinitely edited and reproduced,
and this characteristic is crucial to an understanding of the effect of digitisation on
the recording of the acoustic guitar.

Digital recording systems offer a recording medium that is sonically
transparent (free of distortion), accurate in its reproduction of sound sources and free
of inherent noise. Whilst advocates of analogue recording argue that digital
recording lacks the warmth of analogue systems, most recording engineers would
agree that contemporary digital systems, operating at a sample rate of 92 kHz and bit
depth of 24 bits, are comparable in their quality of reproduction to analogue tape.\textsuperscript{121}
However where digital technology is inferior to analogue recording is in the
replication of very quiet sounds: as the sound level reduces there is insufficient
information for the digital converters to recognise, to compensate for the lack of this
sonic information, ‘dithering’ is applied to the sound source — a low level noise is

\textsuperscript{121} 92000 samples per second, with each sample consisting of around 16 million
‘slices’ of information.
mixed with the audio signal to increase the information to be processed. Some audiophiles claim to be able to hear this deficiency, when for example, an acoustic guitar string is played with the nail and finger tip, the soft 'fleshy' sound of the note is lost on digital systems. Personally, I'm not aware of this deficiency and consider that as the specification of digital systems is developing rapidly, any perceived lack will be eradicated. Another definitive difference between analogue and digital recording, is the ability for analogue recording systems to tolerate peaks in dynamic level: where it is common practice in analogue recording to record some instruments 'hot' to tape — ignoring dynamic signal peaks — signal distortion is generally not audible and the result is a denser perceptibly louder sound, whereas, if digital signals are allowed to run 'hot' the result is an audibly unpleasant digital clipping.

Digital technology is less tolerant of dynamic variations, therefore the source signal needs to be processed to achieve the natural limiting effect of analogue tape and this may be one reason why digital recording is considered by some audiophiles to sound 'cold'. Whilst debate may continue in relation to the comparative audio qualities of both systems and definable differences do exist, the most profound effect of digital technology has been on working methods and in creative practice.

The convergence of the acoustic instrument with the technological world exacts a symbolic articulation in locating the visceral organic practice of the musician into an electronically coded world — a nexus of invisible connections, potentially limitless manipulation of sonic landscapes, timbre and interactivity with other media. Philosophically, digitisation engages cultural notions of acousticity in a situation of potential conflict, paradoxically, it is digital recording that offers the potential to capture more of the instruments acoustic qualities in real acoustic

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environments. It is increasingly digital technology and the reproduction, or simulation, of an acoustic instrument in natural or simulated environments that enables us to access and enjoy 'acoustic' performance. Where electrically amplified music transcends space — the fact that it is amplified determines that it may or may not owe some of its character to a particular acoustic space — acoustic music relies on real or simulated acoustic environments. The portability of high quality digital recording equipment, allows the flexibility to record in almost any location, and to make use of the natural resonance of particular spaces. However, the distinction between real and virtual spaces is becoming increasingly blurred as convolution technology — the sampling and re-creation of real acoustic environments — can be applied to any recording to create the illusion of a real space, and in so doing, merge the real and the imaginary.

But to what extent is the naturalised acoustic experience desirable and how often does it really exist? Not withstanding the increasing availability of high definition recordings of the acoustic guitar, the truly acoustic experience is rare, as our perception of acousticity is mediated through amplification systems and recording. It is more likely that most listeners will experience the acoustic guitar through recordings rather than in real environments and as the contemporary listener has become so accustomed to hearing the instrument enhanced in a recording, there is an expectation that the live performer will recreate the recorded sound — the live performance points to the recording. With the exception of the performers of traditional and roots music, who in taking an 'anti-modernist stance' will use technology only where absolutely essential, most acoustic guitar performers tacitly

122 A compressor or limiter can be used to electronically reduce the dynamic peaks of sound.
accept an interface with technology and many openly engage with the opportunity to sonically manipulate sound. Adrian Legg comments:

Although we may look fondly on the simple acoustic instrument, and while it still has a sweet little voice, the mechanical and technical opportunities offered by this constantly evolving instrument are there to be enjoyed by any artist who wants a broader palette.\textsuperscript{123}

Legg chooses to supplant the sound processing possibilities of the recording studio onto the live acoustic guitar and uses an intricate array of signal processors to produce a simulated and enhanced live acoustic sound, not always an amplified 'acoustic' sound.

Reviewing the contemporary market of electro-acoustic guitars, acoustic-guitar simulators and sound processors, reveals a plethora of sound modifying devices and purpose built electro-acoustic instruments that claim to reproduce a true acoustic effect but more often recreate an enhanced supra-acoustic sound. The ability of digital technology to create illusions of the real by simulating acoustic environments and manipulating recorded sound, concords with Jean Baudrillard's ideas of simulacra and hyperreality, 'the real without origin or reality'.\textsuperscript{124} Music in the twentieth century is predominately experienced as simulacra, an illusion of the real, disassociated from a performance in the presence of the receiver and accessed through reproduction technology. Having been accultured by 80 years of commercial recording and broadcasting however, the majority readily accept recorded music and enhanced live performance as the real experience.

\textsuperscript{123} www.adrianlegg.com/press_page.htm. (10.5.07)
Whilst the technical characteristics of digital recording can be considered objectively, the nature of the interface and the working methodologies of digital technology are not neutral, they privilege particular working practices. As well as being used to replicate acoustic instruments and their environment, sound recording techniques and sound processing are used to alter and/or enhance the original sound, even if this is as subtle and non-invasive as the addition of ambient reverb. Michael Channon refers to ways in which 'recording has transformed music by changing the experience of the ear.'\textsuperscript{125} This is significant in the history of recording where the intent of recording has moved from the desire to express the real to the recording expressing the technology. Compared to vinyl records and analogue hi-fi systems, which relied on a scrupulous maintenance of the records and equipment to maintain a high quality of replication, digitised music recordings and playback systems are very cheap and most households have access to high quality audio reproduction. Therefore there is an expectation that digital recordings will possess enhanced sonic qualities, clarity, separation of sound sources, and an enhanced tonal palette. This privileging of the sonic qualities of digital sound has affected the way that we listen, the technology is as apparent as the music and may herald a new aesthetic of listening, an aesthetic of production values, a re-focussing of the attention on the process rather than product. I am very conscious in the production of my own recordings that they will be listened to by contemporaries whose listening experience is attuned to contemporary standards of recording and who will make comparisons


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and judgements, overtly or covertly, in relation to contemporary standards — they will be listening to the technology.

2.4 Digitisation and Practice

Recent years have seen the re-release of many historical and eclectic recordings, years after their deletion from record company catalogues, and this is the result of digital reproduction and the change of format from vinyl records to CD which has made the issue of small numbers of recordings financially viable. However this transition into the digital domain is not without detractors as the sonic qualities of material transferred from analogue to digital recordings is often altered; it was common practice during analogue recording to mask the inherent ‘tape hiss’ of recordings by boosting the higher frequencies, when transferred to CD, they can sound harsh and unpleasant: *The Guitar Player Plus* by Davy Graham suffers form this effect.\(^\text{126}\) It is however through access to these readily available materials that I, like many others, have been able to experience an aural history of guitar playing and in so doing gain a greater insight into the developmental path of the guitar. Indeed the compilation of research materials for this PhD is indebted to the availability of these recordings.

Historic ‘field’ recordings, such as those created by John and Alan Lomax, form a substantial part of the aural history of America’s folk musics.\(^\text{127}\) They were recorded using portable equipment which produced easily damaged glass-based


acetate records and the fact that they lost several seminal recordings of Muddy Waters when the originals, as copies were not possible, shattered whilst travelling along bumpy roads, is testimony to the precarious nature of this early recording media. Whilst digital recording is far from fool proof, it is now possible to produce field recordings which can be immediately replicated in other media, electronically delivered to any global location and stored indefinitely; in so doing a substantial aural history is being amassed for future generations. If it is through the ability of technology to store information for reuse that knowledge evolves and endures, then digitisation has produced a plethora of recorded music and the potential for future archives and research opportunities is enormous. Michael Foucault’s notion that books function as a ‘node within a network...[a] network of references’, could be also applied to the textual world of music, where recordings function within a digital world as nodes of reference to the entire history of recorded guitar music — an eternal ahistorical present.  

Jonathan Kramer refers to ‘the blurring of the distinction between past and present,’ if all of the history of guitar music exists simultaneously, synchronically and diachronically, then the characteristics of this music and musical referents become freely interchangeable. The effect of this plurality and diversity can be experienced in the work of several performers including Antonio Forcione, a guitarist who freely mobilises a wide range of styles and modes of performance that draw from historically and culturally diverse

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referents — for example African music and European Gypsy jazz. As a practicing musician I can see this reflected in my own work and this will be discussed later.

The impact of digital recording technology with its added clarity and sensitivity to low volume levels has exerted its own influence on performance style. Performers from the first half of the 20th century, in an attempt to project the relatively low volume of the guitar, played instruments which were strung with heavy-gauge strings and plucked with heavy gauge plectrums or fingerpicks. Apart from revivalist styles, this technique of playing has diminished in popularity (and necessity) to be replaced by a consensus that unless replicating historical styles, it is more efficient and effective to play with a softer attack. Digital recording allows the recording of acoustic instruments at very low volume levels and in any environment, therefore, the subtle nuances of performance can be easily captured and performers can play without restrictions. This has encouraged experimentation in performance techniques and the supplanting of electric guitar techniques such as fret-tapping and flamboyant string bending onto the acoustic guitar.

The early history of sound recording is characterised by recording systems that were capable of capturing a single performance, the selected ‘take’ was immutable and fixed in time, a singular record of an actual event, music was experienced as a whole, a complete entity, the performer who was in the presence of the listener(s) played complete pieces and a coherent repertoire. It was not until the development of magnetic tape recording and later multi-track recording that a finished recording — produced sometimes after several takes — could be edited to produce a final

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131 King, Kaki, *Legs To Make Us Longer* (USA: Red Ink, WK92426, 2004).
version. Editing was achieved through either the recording engineer cutting the tape and reattaching the cut ends with adhesive tape, or different 'takes' on parallel tracks being compiled to create a finished recording. The ability to edit, after the recording had taken place, changed the nature of recording practice forever as the final composite recording was not necessarily an actual record of a musical performance, it could be a composite of several recordings. With the development of digital recording systems the transition from a relatively crude editing system, although very effective in skilled hands, to a system with almost limitless flexibility was achieved. In such a recording environment where technical perfection can be achieved through a combination of repeated performance and editing, it is useful to consider how the pursuit of 'perfection' affects the practice of the performer. Michael Channan in Repeated Takes talks of Busoni complaining about 'the strain and artificiality of recording' and the 'brutal objectivity of the microphone', this is a feeling common to most recording musicians as the pressure to perform quickly and accurately is acute. To some degree this can be alleviated when using digital recording equipment as the opportunities for multiple takes and editing after the event are limited only by the storage capacity of the recording media, the processing power of the recording system and the patience of the producer. The atmosphere created during live performance that encourages the performer to play 'in the moment' and take greater musical risks with expression and improvisation, can be reinstated by the knowledge that inaccuracies in the initial recording can be easily removed and several recording takes can be edited together to produce a finished recording.

132 The recording tape could be erased and a new recording made on the same tape.

Audio waveforms can be edited down to the resolution of individual audio samples, for example a series of demi-semi-quavers played at 300 beats per minute (a substantial musical achievement for any performer) would produce 32 slices of information in one second, a digital recording system running at a sample rate of 96kHz produces 96,000 samples per second, therefore each note would be sampled 600 times. This fragmentation of the musical performance (a concept of postmodernism) has become more exaggerated with digital systems, as any recording can be edited down to a resolution of one sample, copied, and reordered. The option to edit after recording allows, often encourages, the musician, engineer and producer to construct and edit new and existing work, to montage previously recorded material, manipulate the sonic qualities of recordings and to edit and rearrange midi information. Michael Channan refers to how 'music, becomes more and more fragmented and this is evident not only the editing of previously recorded material, but in recording studio practice, musicians often restricted by financial and time constraints are encouraged to use editing to save on studio and session fees. Editing is part of the recording process and not an adjunct to it and therefore has a direct effect on the performance practice of musicians: in some circumstance it is only necessary to accurately record 'chunks' of music which can then be collated into a manufactured whole. The very availability of editing functions demands that they be used; editing has become enmeshed in the very

\[134\] Digital recording systems 'sample' an audio waveform at various sample rates ranging from 44.1 kHz — 44100 samples a second, to 192 kHz — 192,000 samples per second.


\[136\] In some cases single notes, chords or percussive strikes are recorded and re-assembled later into musical sequences.
fabric of the recording process. Although this technique of recording is used by musicians across the full spectrum of ability the approach does mean that an inexperienced player can avoid the difficulty of executing particular difficult pieces in favour of constructing them from a series of smaller segments. Recording's original purpose — to capture what is real, has been transformed into a process that is more frequently employed to embellish or in some cases sanitise the real. Editing and manipulation of previously recorded material is not only a process of correction, but a creative tool. The musician in some cases becomes a donor, offering musical ideas that can be renegotiated to such a degree that they bear little relationship to the original material. No longer is the finished recording an immutable artefact, a fixed 'record' of an actual musical event, the digital encoding of the recording, the very digitisation and conversion of musical waveforms into a binary code produces a work which can be endlessly reused and reworked. There are parallels to be drawn with Roland Barthes use of the word 'scriptor' as an alternative to author in describing one who assembles texts, from which the reader derives meaning — the reader in this case refers to the music producer/composer. A recording is not necessarily fixed within a particular context with a singular function and meaning, it is always available for reassembly and the creation of new meaning.137 This is particularly evident in the use of musical samples, where previously recorded material can be reused and reworked. The very essence of music is derived from a process of fragmentation and a reduction to an editable digital code.

I have approached the recording of the PhD portfolio with an awareness of the editable functions of digital recording and this has had a direct effect on my working methodology, in some cases I have used a 'click track' to enable multi-track


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recording to take place and in others I have recorded music live — the particular working modalities are discussed in more detail later. Accepting that editing is part of the recording process places particular strictures on the performer, the most ubiquitous being the use of ‘click track’ when constructed musical events are to be edited together.138 It requires a very experienced musician to play with expression and accuracy to a click-track and this can greatly affect the nature of the recorded music. Spontaneity is sometimes restricted in favour of achieving metronomic accuracy, and fluctuations in tempo, diminuendo and accelerando, all natural processes of performance, have to be electronically programmed and ‘quantised’ to maintain consistency and accuracy.139 As audio editing programmes are becoming more sophisticated the ability to alter the position and length of an audio signal, to time-stretch musical sections — increasing and decreasing tempi — to ‘auto-tune’ and correct the pitch of notes and to alter the timbre of single or multiple notes, have also become editable functions.140 In my own work I am aware that because of time constraints (high calibre professional musicians are busy people) I may only need, in some instances, one good recorded passage of a specific musical phrase; I can then reassemble and reuse the material in any way I choose. Corrective editing to timing and pitch errors can be used to correct inaccuracies of performance and this I have applied as necessary — experienced musicians are aware of this and not

138 The ‘click track’ is a metronomic pulse that produces a ‘click’ at a predetermined tempo. Each recording needs to be made using the click track as a timing guide.
139 The process of automatically locking recorded notes to a pre-determined grid.
139 Melodyne software, manufactured by Celemony, enables the editing of audio pitch, length, and timbre.
uncomfortable with the process, although, trust in the producer is paramount and a certain discretion is essential.

The domestication and institutionalisation of recording facilities is democratising as there are more studios in domestic homes and educational institutions then there are professional commercial studios; this allows the luxury of time and lack of financial imperatives that until recently were the preserve of major performers and record companies. It is possible to set up a high quality digital recording system for around £5,000 compared to between £30,000 to £50,000 for a comparable analogue system ten years ago; the differences between professional and amateur studios are becoming less distinct, with the result that professional recording studios are being squeezed out of a competitive market in which amateur, semi-professional and professional are capable of creating high quality recordings. Although professional recording studios often have the advantage of acoustically designed recording rooms, esoteric and specialist equipment, and experienced staff, the availability of professional quality equipment at affordable prices, aligned with the portability of lap-top computers — making recording possible in any space — and the expanding market in recording tuition books and magazines, has created a thriving cottage industry. Information and communication is increasingly distributed through the internet and anyone with the necessary software, hardware and a sufficiently fast internet connection can participate within a global, international musical community. The performer through new modes of communication can dissolve barriers of geography and interchange digital-audio files in cyber-space. With proprietary software Cubase Rocket and ejamming, subscribers can book a virtual studio space and collaborate with others in the production of music, and through Digital-Delivery and YouSendIt, digital audio files can be transferred to any
The recording process I undertook in producing a recent commercial CD illustrates the degree to which boundaries of time and location have been dissolved by digital technology. One song was recorded in five different locations, four in the UK and a vocal performance by international artiste Sting that was recorded in Tuscany, Italy. The recording was produced on a range of digital recording systems and recorded in spaces ranging from a domestic garage to a million pound recording studio. The working tracks and finished mix were then transmitted through Digital delivery to various parts of the world including the USA and Italy.

- The Effect of Digital Recording on My Practice

During the last twelve years, in addition to producing and performing on other commercial recordings, I have been involved in three substantial acoustic-guitar recording projects whose time span, 1995-2007, has been concurrent with a general movement from analogue to digital recording and it is useful to reflect on the substantial impact that this has had in establishing my own working practice: project #1 — a commission by an international guitar magazine to transcribe and record a series of 'classic' acoustic-guitar pieces; project #2: the production of a CD, The Jazz Guitar Duo, for commercial release, which included new recordings of some of the earliest recorded guitar-duets (transcribed and re-recorded) and a composition

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141 Cubase Rocket by Steinberg Media Technologies is a proprietary 'cyber' studio in which subscribers can book time and work on collaborative recordings. Ejamming offers subscribers the possibility to play in real-time with other performers across an internet connection. www.ejamming.com

142 Richardson, Gerry, This What We Do (Jazz Action, JA10, 2007).

commission ‘The Suite for Two Guitars’;\textsuperscript{145} and project #3: The PhD portfolio — the recording of a range of compositions for the acoustic guitar.

Project #1: (1995-1997), was produced using analogue recording equipment and techniques. The original tracks, which were recorded on vinyl disc or CD, were transcribed by firstly recording them onto analogue tape, slowing down the playback speed to determine some of the more densely detailed sections — which resulted in a lowering of the playback pitch, identifying aurally the musical rhythms and pitches, transposing them back into the original key, notating the parts by hand, learning the parts on the guitar and re-recording the track in the appropriate style. To ensure accuracy and the right ‘feel’, the original tracks were recorded onto two-tracks of a multi-track analogue tape recorder (if originally recorded in stereo) and the new parts were recorded on to two additional parallel tracks. When the playing was sufficiently accurate and all of the original inflections recreated — through a long arduous process of rehearsal and repetition — the new recording was mixed to DAT and subsequently transferred by the publishing company to a finished CD.\textsuperscript{146} This linear process of recording relied upon traditional working methods of transcription, notation, rehearsal and recording.

Project #2: The recording of the Jazz Guitar Duo: this was the first substantial project that I undertook using digital technology and as my experience of the process was new the working methods were also experimental. After an initial attempt using analogue tape, it was decided that because of the limited time available, the whole

\textsuperscript{144} Birkett, James and Sinclair, Rod, \textit{The Jazz Guitar Duo} (JPC 102, 2000).


\textsuperscript{146} DAT: Digital Audio Tape

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process would make use of all of the available working methods offered by computer based digital recording, particularly the ability to edit. The system used was Cubase VST recording software installed on a Power Apple Mac computer, equipped with a Yamaha DSP sound card which provided an analogue to digital conversion resolution of 16bit/44.1kHz — considerably lower than 24bit/96kHz resolution used when recording project #3.\footnote{Cubase VST: proprietary audio-recording and midi sequencer software manufactured by Steinberg Media Industries.} The whole process was experimental and developed as the work proceeded, the method of transcription and notation was the same as project #1, but the compilation of the recording was substantially different. An effective recording methodology developed: each piece would be constructed in sections, each section would be played along with a click-track, at least three times, and the final section would then be a composite of the three ‘takes’, created by cutting and pasting selected sections together. Any inaccurately picked notes or omissions, would be added on another parallel track and mixed into the final master track. This proved to be an efficient method of recording and one that produced an accurately executed performance, but subjectively lacks a degree of spontaneity and the natural variation in tempo that would be expected in music performance. This can be illustrated by comparing the original and the recreated recording of the same piece — ‘Stagefright’, the first recorded in 1934 by Dick McDonough and Carl Kress (CD #5/track #2) and the second recorded in 2000 by

A sample rate of 44.1kHz produces 44100 samples of sound per second, whereas, a sample rate of 96 kHz, produces 96000 samples per second, each of these samples contains a quantity of information determined by the bit depth of the file, a 16 bit file sample consists of around 64000 ‘slices’ of information whilst a 24 bit file consists of around 16 million ‘slices’ of information.
James Birkett and Rod Sinclair (CD #5/track #1). The first recording was carried out on early electrical recording equipment, which at the time was a great improvement on the results of early acoustic recording methods. An immediately obvious difference in the audio quality of the tracks is the presence of background noise on track #2 and the absence of residual noise on track #1. The level of surface noise on the original vinyl recording cannot be quantified as this recording is taken from a re issued CD, but an assumption is made that it is similar to that on the reference recording. Certainly on this recording the surface noise is substantial and amounts to approximately 30% of the overall volume of the track, whereas on track #1 there is no audible background noise. The frequency spectrum of the two tracks is also noticeably different and a fairly crude but indicative analysis was carried out using a frequency analyser: track #2 is mostly between 250Hz-4kHz peaking at 500Hz, with a noticeable drop above 4KHz — most of the frequencies above 4kHz appear to be tape hiss; track #1 is mostly between 80Hz-16Khz with an even response between 250Hz and 1K. This large variation in the frequency range of the recordings is to be expected as early electrical recording was only capable of capturing frequencies up to approximately 10kHz. Track #2 exhibits a considerable degree of wow and flutter, which is indicative of the recording having been recorded or played on equipment that ran at an uneven tempo, whereas track #1

148 McDonnough, Dick and Kress, Carl, ‘Stagefright’ The Pioneers of The Jazz Guitar (Yazoo Records, 1057, 1928), and Birkett, James and Sinclair, Rod, The Jazz Guitar Duo (UK: JPC102, 2000).

149 The level of background noise evident in the original recording was determined by readings from a VU meter on the playback system.

150 Multi-meter is a Logic Pro 7 plug-in module, which is designed to analyse the frequency spectrum of a recording.
exhibits no audible variation. Track #2 is recorded in mono and #1 in stereo: this has a profound effect on the effectiveness of the musical arrangement, in fact, when mixing track #1 it was noticeable how panning the guitars in stereo had the immediate effect of making the instruments sound more isolated and less unified than the original. As a result it was felt necessary to use a narrow stereo-pan-width, compared to modern production methods, to maintain a sense of unity. Because of the mono recording on track #2 and the fact that the two instruments were probably recorded on one microphone, it is harder to differentiate between the two instruments than on track #1, which was recorded using two microphones onto two separate tracks. Track #2 is noticeably faster than track #1 and the tempo is much more variable, this is probably the result of track #1 being recorded to a click-track and the resultant mathematical averaging of the tempo, whilst track #2 was played in a much freer manner. The synthesised reverb used on track #1 is evident, probably due to the lack of background noise, whereas any reverb on the original recording has been masked by a high-level of surface noise. The choice to use flat-top guitars rather than cello guitars, as on the original recording, greatly affects the tonal palette as cello guitars tend to emphasis the middle frequencies and this could partially account for the reduced frequency range of the original recordings. The picking style on track #2 is very precise but delivered with a somewhat stiff, almost mechanical articulation that is very much in keeping with the performance style of the era.

Whilst this type of mechanistic analysis may seem to be contrived and be in danger of stating the obvious, it is an indicator of how the medium and working

\[151\] Wow and flutter: the terminology used to describe the effect produced when a magnetic tape recorder runs at an uneven speed and creates noticeable, although often minor, fluctuations in pitch.

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methods have impacted on musical interpretation and performance style. Whereas the reduced dynamic range of the original recordings — the ratio of the loudest sounds to the softest — restrict the musician’s ‘expressive compass’ as musicians are required to play loudly and restrict the use of softer dynamics, the resultant clarity of digital recording systems will capture sound over a wide dynamic level. In addition, dense harmonies and polyphonic lines are more distinguishable, nuance in performance techniques more easily expressed, subtleties in tonal variations achieved, the character of instruments and individual musical lines more identifiable and the spatial placement of instruments more accurately reproduced. 152 Perhaps the greatest surprise was the degree to which transferring a performance from mono to stereo recording had such a dramatic effect on the musical integrity of an arrangement and as such is a useful point to consider when writing and recording duets for two similar instruments.

Project #3, which was born from a desire to further explore, through processes of composition, performance and recording, the musical character of the acoustic guitar and was stimulated by the experience of the first two projects. The work fully utilises the integration of digital technologies into the creative process and makes full use of the inter-textual and convergent modes of practice that make it possible for an individual to function as an independent practitioner and producer. The role of the independent producer is a direct reflection of the democratising effect of digitisation, as artists, being freed from the financial and technical restrictions of analogue systems, can singularly or in small groups take on multiple creative roles. The fact that my role is multi-functional, I function as performer, composer, engineer and producer, enables me to fully shape and control the creative process, I


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can record music at any time, in any location, and have full jurisdiction over all aspects of the work; it is arguable that a substantial element of the character of the music is determined by the chosen modus operandi.

The digital tools employed are Sibelius notational software and Logic Pro 7 audio and midi-sequencing software, installed on two Apple Macintosh computers, a laptop and a G5 tower. I have made full use of the interactive and inter-textual functions of digital technology (notational and audio) and adopted working methodologies which allow ease of use, almost infinite flexibility of editing at all stages of creation, are responsive to different modes of working and can quickly capture musical ideas for later development. The use of notational and audio/midi software are central to my own practice and as score writing and recording are becoming closer together exert an increasing effect on the compositional process. Notated scores can be exported as midi-files and to some degree audio recordings can be converted into a score, the user can edit a score by adding and removing material in 'real-time' and 'step-time' and by importing 'midi files' from other programmes. Unlike the linear working methods of analogue recording, digital systems offer a non-linear approach where any part of the work can be accessed in a non-sequential mode. This free-flowing digital material could be considered as similar to 'hypertext', a term coined by Theodor H. Nelson in the 1960s to describe 'nonsequential writing', where the reader can access and traverse information by any route of their choice; in this case the writer (composer/performer) can access and

153 Sibelius; proprietary notation software produced by Avid Technologies. Logic Pro 7: proprietary audio and midi-sequencing software produced by EMagic.

154 Midi-files contain sequenced midi information that can be converted into notation — however substantial editing is usually required to convert this information into a useable score.
manipulate all of the digitally stored information — audio files, midi-files and digitised scores — and combine/separate and edit them in almost limitless ways. The sheer flexibility and multi-textuality of the process allows systems of composition and arrangement which embrace both aural (organic) and textual (academic) traditions, the notationally literate and illiterate musician can use the same software to create musical compositions, inputting sequences of notes and chords through a MIDI compatible device, a midi-guitar pick-up and/or by ‘hand’ in a conventional scholarly manner. Whilst inputting material by hand is more accurate, software packages are becoming more ‘intelligent’ in quantising the rhythmic variants of real-time performance and are able to produce, within limits, a readable score.

In creating the compositions I have consciously adopted two distinct approaches, the scholarly notated tradition and the organic improvised tradition. The first approach involves developing musical ideas by writing conventional scores using notational software and this has the substantial advantage over written notation that it can be played back and monitored through a MIDI playback system. Sometimes the musical ideas have been written directly to the score, at other times, musical ideas developed on the guitar have been transcribed and added to the score; an interactive and intuitive approach where one method doesn’t take precedence over the other. When a composition and arrangement is substantially developed, the score is exported from Sibelius as a midi-file and imported into Logic Pro, using the midi-file and a click track as a template, acoustic instruments are then recorded live.

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Substantial editing to the score will then take place to reflect the performance elements that become apparent when the composition is realised. Where musicians have been employed to play specific parts and the performance idiolect of particular players suggest new ideas and approaches, these can be easily accommodated into the emerging arrangement. These edits are then worked on in the notated score and the process transfers backwards and forwards until a finished result is achieved. Sometimes the edits are substantial, using cut and paste techniques to move whole sections of music (audio and notated) around within the arrangement and this may continue right up to the final mixing stage. This flexibility of working mirrors the elaborate rehearsal and development processes of live ensembles, but with the distinct advantage that the financial and time considerations of using live musicians is eliminated. Indeed, the ‘freedom’ offered to the lone producer can in some respects become problematic, as there is no one to determine when the work is complete. My experience of being employed as a session musician on other recording projects is that time constraints, a financial imperative of commercial projects, result in an expectation that the recording will be complete in one or two takes. As a lone producer working in the digital domain (where the tape is never full) the process of creation can be open-ended.

The second working method is substantially different and relies upon methods of composition that develop through performance and improvisation. This is an established tradition in aural music where musical ideas develop through

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156 Notes can be written on a stave by using mouse or keyboard commands.
performance, a practice that Roland Barthes refers to as *musica practica*. Channon comments:

*musica practica* is nothing but the form that musical knowledge takes directly from musical practice. Theoretically filtered or not, fundamentally it has no need of theory or even notation.

The music develops through processes of performance and improvisation and while I would contest that in this case the music is intrinsically informed by a theoretical knowledge, notational systems serve little purpose as the compositions are intentionally performer-centric and any transmission to others will be aural. The form of the music tends to be cyclic, where repeated thematic ideas are interspersed with improvisational episodes that are intended to express particular performance skills. My working approach is to develop the musical ideas in real-time, then record the piece as it develops, in this way the recording process becomes a form of instant feedback. After exhaustive development the tune will be recorded live. The technology in this case is transparent and the end result should feel spontaneous and organic. In addition, another compositional method was inspired by Mick Goodrick, who in his book *The Advancing Guitarist*, suggests the compilation of improvised material in the following manner, on the first day the performer records two minutes of improvised music, on the second and subsequent days the performer listens to the previously recorded two minutes and adds a further two minutes, only when thirty minutes of music is complete does the performer listen to the whole recording.

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digital recording technology is perfectly suited to this mode of working, I have employed this technique and used some of the improvised material as the inspiration for some of the recordings on CD #3: notably ‘Mmm Interesting’, ‘The Darkest Hour’ and ‘You Cooda’ Told Me’. The flexibility, intuitive nature and sense of freedom offered by this process, seems to encourage a varied and imaginative musical response and produces a stream of musical ideas which can be edited and developed into complete compositions.

In a designated digital recording system — a digital audio workstation (DAW) or a computer host running audio recording software — the number of available tracks is limited only by the processing power, storage space and memory of the recording system. The availability of multi-tracking facilities makes it possible for a single performer to record all of the parts for a single performance. Whilst this is convenient and offers a flexible range of working methodologies, it removes the interaction between differing performers and raises questions regarding the degree to which interplay is an integral part of a musical performance. For some types of music this may not be important, but if we consider that performance idiolect — the individual identifiable voice of a performer — is a prime factor within popular music practice, then it takes on a new significance. If music is a communicative interactive process, the reduction of the interplay to a single or small pool of performers, disallows the organic conversational interplay achieved during group performance, the stylistic palette of individual inflections and range of musical interpretation being restricted to the abilities and inclinations of the lone producer. Some performers or music idioms demand that recording takes place collectively and without a ‘click track’, this is particularly true of jazz and ‘roots’ music where
authenticity and immediacy is often perceived to be of more importance than metronomic accuracy. To present a sense of balance and contrast to the portfolio, some of the recording has taken place live with an emphasis on the interactive nature of performance. Here the recordings have been completed in a real acoustic space with all of the musicians performing live, however, some overdubs were added later and the reasons for this are discussed in the commentary section. Some of the musical materials used have evolved from the ‘2min composition exercise’ and have been developed into lead sheets and the performers were selected because of their individual performance characteristics. All of these points are considered in more detail in sections 5 and 6.

Digitisation is ubiquitous: to be distributed the material must be digitised, even if the recording is made on analogue equipment, the artefact will become digitised when transferred to CD, it is therefore inevitable when the instrument transcends from the private to the public space. Even the systems of accessing music have altered as the iPod generation experience music internally, directly from headphones, not externally through air movement which is mediated by external factors such as the size and resonance of a listening space, this has a particular effect on the defining of recording parameters such as stereo-imaging where the detailed use of stereo becomes more exact and therefore of a greater importance. The means of production and distribution of all musical products is increasingly located in the digital agora and in my own practice, once encoded the music never leaves the digital domain, it is recorded, mixed down to a stereo-file, transferred to iTunes,\textsuperscript{160} to an iPod\textsuperscript{161} uploaded for digital transfer or recorded to a CD. Whilst digital

\textsuperscript{160} Proprietary software manufactured Apple, Inc.

\textsuperscript{161} A proprietary MP3 player manufactured Apple, Inc.
recording is not without its detractors and the comparative qualities of digital and analogue recording are often debated, the enormous difference in the cost of producing and distributing analogue recordings and the rapidly developing improvements in digital recording will probably marginalise these debates to the rarefied world of the audiophile and less so to the practicing musician; particularly as a new generation of musicians and consumers have grown up with, and openly embrace, digital technology.

3: ACOUSTIC PRACTICE

As discussed in chapter #1, musical characteristics of the contemporary acoustic guitar can be traced both diachronically (historical stylistic families) and synchronically (culturally diverse styles), and it has become as prevalent in ‘art’ music as it is in ‘popular’ music. The acoustic guitar is a signifier of immediacy and intimacy, authenticity and tradition, ethnicity and diversity and artistry and maturity. This chapter will attempt to place guitar practice in a broader cultural context and to consider the determining factors that have impacted on the nature of acoustic guitar practice.

3.1 Contemporary Practice: an historical and cultural overview.

To understand the context in which acoustic guitar practice exists, it is necessary to consider the modern instruments development in relation to the broader cultural movements of postmodernism/modernism and anti-modernism. The term contemporary is not in any sense intended to signify a sense of modernity, i.e. contemporary because it is modern, but contemporary in that it reflects a postmodern plurality where many styles, some modern some historic, coexist and the
The contemporary practitioner is free to draw on musical referents from any place or time. With this in mind contemporary practice will be considered in relation to the three broad cultural categories mentioned above. Whilst mindful that there is always, in this type of analysis, the danger of producing a crude mechanistic listing and categorisation of prevailing characteristics, it is a useful starting point in attempting a more nuanced and deeper understanding of the diversity of contemporary practice. In addition, it must be recognised that the work of any musician/performer/composer may be placed in differing categories at different times and as such will never be entirely discrete and distinct.

- Postmodernism

To some degree postmodern thinking challenges the dictum 'Art for Art's sake', which was born out of a 19th century distaste for industrialisation and a desire for a return to a golden age of romanticism, by prefiguring a return to the valuing of specific cultures and their differences. Postmodern music is therefore often characterised as being a free-flowing interplay of musical hybrids and fusions, eclecticism, juxtaposition of historical and cultural traditions and the resulting fragmentation. But in reality many music practices exist that express some of these qualities but may not necessarily considered as postmodern. It is worth being mindful of Jonathan Kramer's comment that it is more fruitful to think of the concerns of a movement as being an attitude — of the composer, performer and listener — rather than a list of markers that can be checked off. 162 An

attitude not only in compositional terms but also in ‘how we listen to and use music of other eras’. Kramer argues that it is us that have become postmodern and by association the way that we use music has defined the music itself: ‘Music has become postmodern as we, its late twentieth-century listeners have become postmodern’, in other words, it is in the way that we listen, compose and perform, that elements of the postmodern emerge. There must be truth in this assertion as we as listeners, writers and performers are conditioned by the world in which we live, a world in which the whole history of recorded music coexists and is available in a variety of media. Our choice is to reject, absorb, combine or play with these ideas with a sometimes-ironic sensibility. I’m aware as a practitioner of the vast body of work that constitutes acoustic guitar music and of my own esoteric development as a guitarist which, rather than being linear in its development, has been formed by often random meetings and exposure to other musicians and musical styles. I have learnt from others and from listening and the opportunity to do this has increased exponentially with an increase in the digital communication revolution.

In considering how a postmodern attitude may be expressed it is useful to consider the work of two guitarists, Antonio Forcione and Bill Frisell. Italian guitarist Forcione, as mentioned earlier, draws upon a wide range of historic and culturally located styles, the percussive slaps of flamenco music, the improvisational sensibilities of European gypsy jazz, the rhythmic complexities of African music and performance techniques of ‘classical’ guitar, these he combines with the electric guitar techniques of ‘string-tapping’ and sound processing. In a more conscious and

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163 Ibid, 14.
163 Ibid, 15.
elaborate way American guitarist Frisell also juxtaposes and blends the musical styles of jazz, country, blues, rock, middle-eastern, African and classical music, but in a way that at times appears less cohesive and often exerts an ironic sensibility where diverse musical styles collide, for example on the track ‘We’re Not From Around Here’ from the album Nashville he juxtaposes the traditional instruments and harmony of a country band with angular musical phrases and dissonant chordal voicings.\(^{165}\) Both performers juxtapose historical and cultural music referents, but to a greater degree in the latter, where the juxtapositions are overt and lesser degree in the former, where differing stylistic references are more gently absorbed. If attitude is a prime consideration of a postmodern practice then this is probably more distinct in the work of Bill Frisell whose music has been described as a ‘postmodern Americana’, a free flowing recontextualising of American music.\(^{166}\) This comfortable engagement with the present and the past through the reuse of diverse musical references, recording practice and instrumentation, present a universalising collage and an attitude which accords with the postmodern diktat of a rejection of ‘the linearity of historical progress’, a consciousness of the existence of all recorded music and the withdrawal of a modernist dictum to reject the past. Kramer sees postmodern music as an attitude that is anti-historical and history as a cultural construct and as such demotes the importance of an historical lineage, in so doing this allows the postmodern composer to ‘enter into a peaceful coexistence with the past’ and not be in a permanent struggle to challenge and repudiate what has gone

\(^{165}\) Frisell, Bill, ‘We’re Not From Around Here’ Nashville (Nonesuch Records, 79415-2, 1997).


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This is very much an attitude that concords with my own practice, where for example, the composition ‘Afro-Diz’ is a conscious musical collage of African musical referents and ‘It’s Not My Fault’ openly engages in a process of musical fragmentation. To deny the historical musical development of the instrument in one’s own aesthetic realm is to ignore centuries of musical acculturation and a rich organic musical language that is deeply ingrained in our consciousness. Postmodernism recognises that the past shares the same recorded space as the present, a digitised documentary record which is increasingly intertwining the local and the global and in so doing transfiguring and re-contextualising music. In a technologically dominated world the producer/performer/composer, in an attempt to find an individual voice (a modernist concept), has at their disposal the complete history of recorded music, from which, they can freely extract musical elements and idiomatic performance styles and fashion hybrids from a multiplicity of pluralist voices — assuming sufficient income, a computer and an internet connection.

Musical unity, the presence of an over arching form and structure to a musical composition, is of prime importance to the modernist and the anti-modernist, but for different reasons, to the modernist form denotes the rational, to the anti-modernist it denotes a conformance with stylistic traditions; unity is of lesser importance to the postmodernist and is therefore a useful defining characteristic. Jonathan Kramer considers that:

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For both antimodernism and modernists, unity is a prerequisite for musical sense; for some post modernists, unity is an option.¹⁶⁸

The whole notion of musical unity is therefore not only of lesser importance to the postmodernist, but reflects the fact that the world is a place of incomplete partial experiences and the product of an increasingly technology-saturated society, where our attention is sought, often simultaneously, by a multiplicity of aural, visual and textual media. The very production of contemporary music is in itself often a process of fragmentation, as recorded music is assembled from a discontinuous series of musical experiences that are reassembled during a final process of editing and assemblage. The discontinuity of modem lives and short attention spans of the consumers of technology 'has created a context for fragmentation'.¹⁶⁹ 'It's Not My Fault', presented in the portfolio, represents this very fragmentation in its conception and realisation, the composition is consciously fragmented and episodic and the recording process makes full use of processes of digital editing — cut and paste techniques and the sonic manipulation of acoustic sounds. A postmodern acceptance of fragmentation in music demotes in importance the existence of an over arching schema and encourages the inclusion of different music types, for example, the cyclic and linear modes of vernacular music, where the functional role of indigenous or situated music (ritual, song and dance) determines the need for repetition, embellishments then occur in an additive linear progression. This cyclic nature


precludes the development of large-scale forms and favours an improvised organic rather than an imposed schema; it is acknowledged that large-scale works also contain cyclic structures, but these are usually part of a larger compositional scheme. Formal structures are less common in the aural music traditions but are evident in some early-recorded material, for example in some of the early guitar duets where Stagefright, as mentioned earlier, is a good example.\textsuperscript{170} Whilst large-scale works and formal structures are sacrosanct to the modernist composer, a postmodern ‘attitude’ accepts that many diverse elements can exist within a composition. Again guitarist/composer Bill Frisell, whilst at times employing conventional compositional processes, has more recently chosen to allow the music to develop through improvisation, bringing together performers that he enjoys musically and letting the music develop out of prepared musical sketches.\textsuperscript{171} This could be seen as a postmodern response in actively eschewing large scale and rationalised compositional methods in favour of fragmentation; the absence of a schema encourages fragmented music ideas, plurality and eclecticism, by encouraging the interaction of individual voices and the granting of musical autonomy to the performers.

- Modernism

A modernist aesthetic or ‘art’ music practice exists in some acoustic guitar practice, where the intention is to signify and attempt a dislocation of traditional continuities. It is evident in the work of such performers as Robert Fripp, who interestingly

\textsuperscript{170} Birkett, James and Sinclair, Rod, \textit{The Jazz Guitar Duo} (UK: JPC102, 2000).

\textsuperscript{171} In response to a question about compositional approaches at a workshop in The Opera House, Newcastle upon Tyne, November 2003.

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developed returned more to acoustic guitar playing after a substantial period of playing the electric guitar and the modernist approach seems to have followed his progression to the acoustic instrument. Robert Fripp, who in seeking to exert a modernist refiguring of guitar music, has developed new methods of working with the specific intent of breaking with traditional practice. Fripp’s Guitar Craft movement offers an instrumental and philosophical approach to guitar playing in which he specifies a new tuning system, the type of instrument to be played, the way the instrument is to be held and a precise pedagogy for the development of playing technique.\textsuperscript{172} His conceptual approach to performance and composition is designed to remove all previously acquired ‘guitaristic’ conceptions and to challenge the orthodoxy of common practice. The devotees undergo an extremely disciplined routine of instruction and progress through various levels of ‘craft’ to become instructors and spread the movement. Others, for example Derek Bailey, have sought to carry on in the ‘free’ improvisation tradition, using the guitar in a randomised aleatoric mode in which the instrument becomes a resonant box for the creation of sound-scapes, freed from the confines of received guitar practice.\textsuperscript{173} The way that acousticity is viewed by the modernist is different from that of the roots or revivalist performer: the modernist readily uses instruments that are electro-acoustic and hybrid designs to produce a modified acoustic response, not at all naturalistic more an enhanced ‘supra’ acoustic sound, whilst roots and revivalist performers pursue an unadulterated ‘natural’ sound where acousticity is a sign of authenticity and tradition.

\textsuperscript{172} Tamm, Eric, Robert Fripp: From King Crimson to Guitar Craft (Boston and London: Faber and Faber, 1990).

\textsuperscript{173} Bailey, Derek, Improvisation (USA: Ampersand 02, 2006).

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Anti-modernism

Anti-modernist concerns are reflected in practices that attempt to maintain continuity with historical styles and to revive traditional practice. The music is often performed on authentic instruments that are either replicas of original designs or original instruments from the relevant era; a fetishism not only for stylistic convention but the original artefacts, vintage instruments, amplification and recording systems, often for the sake that they are old, not necessarily better. The practice is intentionally anti-modern and attempts to recreate musical practices of a perceived 'golden age'. The availability of record back-catalogues, specialist broadcasting and music festivals, have created an outlet for performers who practice revivalist music styles, where importance is placed on a continuance of tradition and authenticity. Contemporary performers such as The Be Good Tanyas, Jessie Sykes and Gillian Welch could be described as anti-modern in their traditional approach to the performance of music: the acoustic instruments are played in a traditional way and amplified using simple microphone placements rather than pick-up systems. Some bluegrass performers have taken this approach further by returning to traditional recording and performance techniques where everyone stands around one microphone, moving closer as necessary to forefront particular instruments. The practice of performing at low volume levels to an audience weaned on the rock aesthetic of high volume is in itself a statement of authenticity.

The difficulty with categorisation becomes less distinct when considering 'roots' music, which is rooted in a traditional musical lineage but often realised in a

contemporary context. The popularity of roots music has been aided by the
digitisation of historic recordings, giving the audience and performer easy access to
back catalogues of recorded material and it is access to these materials that has
spawned new markets for the performers of roots music. Roots music stands outside
of the concerns of the modernist, being built upon aural musical traditions and what
Anne Le Baron refers to as a simple type of automatic music created through
improvisation, repetition and embellishment.\textsuperscript{175} The music doesn't possess a large-
scale form as it tends to be based on cyclic patterns and has a tendency to be
episodic in structure; oscillating between recurring ostinatos or simple harmonic
sequences to which improvised episodes, adornments and flourishes are freely
added. Examples of this approach can be found in flamenco, blues, country and
European folk music, for example, 'Angie' by Davy Graham\textsuperscript{176} 'The Boy Plays
Guitar while Kissing the Girl' by The Reverend Gary Davis,\textsuperscript{177} 'Hats Off To Davey'
and 'Afro-Diz' in the portfolio.\textsuperscript{178} Musical unity is not consciously challenged, as in
the sense employed by the postmodernist, but it is disfavoured and demoted in
importance, what is evident is that the overall form, as a musical journey, is of lesser
importance than the relationship between the isorhythmic — repeated
rhythmic/harmonic scheme — and the improvisations. The performer becomes

\textsuperscript{175} Barron, Anne, Le, 'Reflections of Surrealism in Postmodern Musics' in Lochead,
Judy and Auner, Joseph (eds.), 'Postmodern Music and Postmodern Thought ' (New
\textsuperscript{176} Graham, Davey, 'Angie', \textit{The Guitar Player Plus } (See for Miles Records Ltd.,
SEECD 351. 1963).
\textsuperscript{177} Davis, The Reverend, Gary, 'Boy Plays Guitar While Kissing the Girl' \textit{The Blue
\textsuperscript{178} 'Afro-Diz', 'Hats Off To Davey' CD#2 PhD portfolio.
central to the realisation and the character of the music; the process is less compositional in that its intention is not to create music to be performed by others.

3.2 Pedagogy

A pedagogic tradition for the classical guitar has existed for over 200 years during a period in which a musical canon of both repertoire and performance techniques have been established. Around the middle of the 19th century however the guitar as an instrument of the classical orchestra fell out of favour, to be replaced by the modern pianoforte in an example of what Tim Brookes describes as the Victorians’ ‘fascination with the gigantic’ and it was not until the early 20th century when Segovia toured Europe and the USA that it made its reappearance as a classical instrument. During this period the modern guitar was left to develop a new trajectory unrestrained by a structured pedagogic tradition and Brookes refers to this as ‘possibly the greatest thing that happened to the guitar’, as the guitar was left unrestrained during a period that witnessed the emergence of the musical forms of early jazz and blues. The lack of a defined pedagogic structure allowed the development of highly differentiated and personalised styles, and encouraged an unfettered aural tradition in which players learned by listening and doing.

Irving Sloane comments that:

Until after the Civil War, few Americans knew how to read music. Self-taught instinctive musicianship was the rule. Music without words, based on formal theories of counterpoint and harmony, was in fact unknown to most Americans until the late nineteenth century.

179 Brookes, Tim: during a telephone conversation on Saturday October 29th 2006.
This lack of a tradition rooted in classical European music helped shape the character of American music. Rhythm, the stepchild of classical music, and a strong melodic line became the hallmarks of the folk, hillbilly, and jazz traditions that are uniquely American.\textsuperscript{180}

The nature of aural musical cultures, the inherent need to improvise and to adapt to differing demands, form the basis of many guitar styles, in fact, some of the more interesting styles have developed where players were attempting to emulate other instrumental techniques on the guitar, for example, in western swing when steel guitar players attempted to sound like horn sections, in blues and ragtime when guitarists such as Blind Blake developed guitar styles that sounded like piano players and when blues players such as Charlie Patton used a slide to mimic the wailing human voice. The essence of reading and aural cultures intrinsically differ: the reading culture develops a text based (notated) canon of music over a period of time, which establishes and confirms conventions of performance, whilst the aural culture creates a fluid musical canon through repetition and performance, the very nature of which alters as it is passed between performers and listeners.

Channon refers to this relationship between notated music and aural cultures:

\begin{quote}
Jazz and blues, with their roots in improvisation and oral tradition, initially lacked notated forms at all. The first written blues (using the twelve-bar shape which would later influence rock ‘n’ roll) were published around 1913-1915, rapidly followed by the first recorded blues\textsuperscript{181}
\end{quote}


Functionally the purpose of notation in the two traditions differed, in popular song and classical repertoire the notated music presents a standardised melody and harmonic sequence as defined by the composer, in music from the aural traditions notation is transcribed from performance and was always intended as a template for individual interpretation. Channan refers to how the availability of recordings affected interpretation:

…the role of the record was not to substitute for the written score, which did not exist in jazz; it communicated what cannot be indicated in any score, the nuances of articulation and timbre that are among the central stylistic concerns of jazz.\footnote{Channan, Michael, \textit{Repeated Takes} (London and New York: Verso, 1995), 19.}

Channan talks of jazz, but there is a commonality with all aural musical styles as having access to a recording and to experience nuances of articulation and timbre alleviated the need to be in the presence of the performer — the performer could be relocated into the ‘presence’ of the listener. The effect that this has had upon the development of musical styles and their subsequent transcendence from localised markets to global markets cannot be overestimated. To the aural musician, whose very means of learning relied on being in the presence of a performer, the recording and broadcasting industry brought a constant flow of new material. Harold Courlander, quoted in Channon, refers to a feedback that is produced when another performer takes a recorded song, adapts it to his own performance style, and then re-records the song.\footnote{Ibid, 51.} Paradoxically, although the process mirrors the aural tradition, where performance styles are based on what is heard and passed down, recording...
can initiate a process of canonisation and fixing of style where the record becomes
the standardised and approved version.

The popularity of the guitar in the early years of the 20th century is reflected in
the existence of specialist magazines, tutor books, and transcriptions. In the United
Kingdom, the Banjo Mandolin and Guitar Magazine (BMG) was first published in
1903 and although initially containing more transcriptions of banjo and mandolin
music, included in the 1920s the Hawaiian guitar and ukulele and increasingly
featured the plectrum guitar.184 During the 1930s many tuitional books for the
plectrum guitarist were published: the Modern Advanced Guitar Method185 by Eddie
Lang, the Manual of Practical Harmony for the Guitar by James Marchisio186 and
Modern Plectrum Guitar Playing by Dick Sadler.187 In addition, transcription books
of popular recordings such as the Dave Berend publication of Eddie Lang and
Lonnie Johnson guitar duets became available. These transcriptions were however
perfunctory, being greatly simplified for the sake of brevity and ease of performance
and they carried with them an implicit assumption that the performer would have
already heard the recordings — the transcriptions pointed to the recordings.

From my own experience of listening to early blues recordings, where
performers often used differing tunings systems and played in idiosyncratic
performance styles, it was often very difficult to understand how individual

185 Lang, Eddie. (ed. Dave Berend) Modern Advanced Guitar Method (New York:
Robbins Music Corporation, 1935).
Day and Hunter Ltd., No publication date).
187 Sadler, Dick. Modern Plectrum Guitar Playing (London: Herman Darewski

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techniques were achieved. This became easier when I discovered specialist guitar magazines such as Guitar Player.\textsuperscript{188} Guitar magazines, tutor books DVDs and CDs are now commonplace; a survey of materials in the Ashley Marks Publishing on-line catalogue (Fretsonly.com) reveals an expansive range of tuitional material covering a comprehensive range of guitar styles.\textsuperscript{189} In addition, specialist guitar periodicals, covering a wide range of guitar styles, are currently on sale.\textsuperscript{190}

3.3 Notational systems

Two structurally different systems exist for the notation of guitar music, standard notation and tablature, the standard notational staff employed in music from the European tradition and tablature, a graphic pictorial system that has been in use for over 250 years. Although most early twentieth-century transcriptions and tuitional materials for plectrum style and classical guitar were written in standard notation, a choice that probably reflects the formality and notational hegemony of the publishing industry, tablature was occasionally used — Stefan Grossman, the proprietor of Homespun records, claims to own a Hawaiian guitar tutor from the 1920s and some nineteenth-century parlour songs written in tablature.\textsuperscript{191} In contemporary practice both systems are used, but there is considerable debate in

\textsuperscript{188} Guitar Player Magazine (USA: Grove Press)
\textsuperscript{189} www.fretsonly.com
\textsuperscript{190} I was commissioned to write 32 tuitional articles for Total Guitar magazine, Future Publishing Ltd.,
\textsuperscript{191} Homespun Records specialize in acoustic guitar tuitional materials. The existences of historical pieces that are written in tablature were outlined in an email (Appendix 1).
relation to the validity of tablature. To understand these debates it is useful to consider the historical development of both systems.

Fernando Ferandiere's *Arte de tocar la guitarra española por música* (Madrid 1799), is the first known instruction manual to teach guitar players to read from standard notation; previously, guitar music from the earliest known book of arrangements of popular songs and dances for the French guitar, 192 *Le premier livre de chansons, gaillardes, pavannes etc.*, Paris 1552 (one of a series of four books), were written using the graphic notational system of tablature. In 1639, the tablature system was extended when Juan Carles y Amat’s *Guitarra española y vandola*, Gerona, also included diagrams and illustrations of hands playing chords on the fingerboard. 193 Although the use of tablature was also common to other instruments such as the lute, the viola da gamba, and the Northern-European organ, Ferandiere’s publication broke with a 250 year old tradition of using tablature as the sole means of writing guitar music. Whilst offering a broader repertoire base for the guitar, the very system of writing in a generic rather than an instrument-specific style is significant. Grunfeld makes the following observation:

This sounds a new and ominous note in the literature of the guitar—a theme of instrumental transvestism which we shall have occasion to hear a great deal more about during the romantic era. 194

192 A seven-stringed instrument, six of the strings were set in three double courses plus one melody string.

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Although his comments re an instrumental transvestism relate to the romantic era they sound a warning of the potential loss of identity for guitar music. The adoption of standard notation created the means through which the guitarist could function in a broader musical sphere but also created a divide and musical hegemony that would separate the notationaly literate performer from the rest. This hegemony is reflected in the fact that transcriptions and tuitional materials for classical guitar and the plectrum guitar styles of the early 20th century were generally notated in the received style, whilst music from the aural traditions, consisting of a simplified melody and guitar accompaniment, were represented in a graphical musical shorthand as chord boxes. Examples in this form can be found in sheet music and songbooks of the 19th and early 20th centuries where notated piano arrangements were provided for the musically literate and chord boxes and/or chord symbols provided for the guitar, banjo or ukulele; players of rhythmic instruments were expected to construct a suitable musical accompaniment. Whilst this hierarchy was often the result of expediency and brevity, it also reflects particular understandings about the role and musical authority of particular instruments, the piano represented the world of musical literacy and strummed or picked string instruments, rather than bowed instruments, an aural music culture. Tablature didn’t disappear altogether as evidenced by Stefan Grossman, and it is significant that tablature was revived to notate Hawaiian slide guitar music, the music of an aural musical culture, which because of the use of open-tunings and the elaborate glissandos and microtonal pitches, created by using a slide, is very difficult to notate

195 Chord box: a graphic representation of the instrument neck, marked with finger positions. Chord symbols: a nomenclature which indicates the chord root-note, the
in standard notation. For similar reasons it made a significant return in 1969, with the publication of Stefan Grossman's transcription books of early blues and ragtime tunes, this could be seen to mirror a cultural shift at the end of the 1960s towards traditional forms of music and signaled a return to the use of tablature in mainstream music publications. Tablature as a notational system functioned as an effective musical shorthand for the non-reading guitarist of a new generation, who, being dislocated from the continuities of traditional aural music cultures, found it very difficult to gain first hand experience of American music other than through the occasional touring artist and scarce recordings; some American guitarists notably John Fahey and Stefan Grossman sought out the original performers. Tablature offered a specialised system that could indicate precise performance characteristics of what were often idiosyncratic playing techniques. In the case of blues and ragtime tunes tablature was re introduced because of its functionality and graphic clarity and was a rational choice for music styles which are characterized by the use of non-standard tunings, idiosyncratic and often complex techniques.

Examples of both methods of notation, standard and graphic (tablature and chord diagrams) are still used in contemporary practice, but the choice of system is often articulated with particular ideas of legitimacy and authority. The debate is often polemic, with those favouring the standard notational system stressing its universality and the self-imposed limitations of an instrument specific system — tablature, in its simplest form, indicates the position of notes but not the pitch, chordal quality and any alterations to the standard intervallic relationships i.e G7 (b5)

196 Described in an email communication of 4.11.06. (Appendix 2)
intervallic or rhythmic information. Whereas advocates of tablature stress its graphic ability to indicate explicitly the position of notes, which is particularly useful in contrapuntal music such as finger picking, when non-standard tunings are used and when guitaristic techniques such as slide or tapping are employed. In addition, as a graphic positional, rather than pitch-related, system, it provides accessibility for those who do not possess a notational literacy. Although in its simplest form tablature only indicates the position of notes on the guitar neck and excludes rhythmic information, it can function as a complete musical system that precisely indicates pitch, note values, and the rhythmic and metric relationship of notes.

The inherent complexity of the guitar, which results from the multiple locations in which most notes can be found, presents particular difficulties for the composer or transcriber: where standard notation indicates the note implicitly, a specific pitch is specified but not its location, tablature indicates the note explicitly, determining a precise location for each note. I would argue that because of its generic musical qualities standard notation is important, but that a cogent argument can be made for the use of tablature as a useful system that explicitly describes guitar-specific techniques. In the following example the guitar arrangement is played in the open tuning DADGAD and it is apparent how tablature provides precise positional information in a graphic form and in this instance is much easier to read than standard notation.
To elaborate, the following mechanistic analysis reveals the difficulty in notating and sight-reading guitar music: the lowest five notes E2-G#2 (where middle C is C4), and the highest five notes G#5-B5 (on a nineteen-fret instrument) are playable in a single position, the other 34 notes (77%) are playable in between two and five positions. The availability of multiple locations in which the same pitch can be played, but with a distinctly different timbre, creates an instrument which is rich with timbral possibilities but is also complex to play, difficult to accurately notate and challenging to the sight reader. To make a comparison with the piano, where each note can be played in only one position and with a possibility of five fingerings, produces five fingering options — assuming that one hand is used to play a particular phrase, the guitarist in some cases has to select from 20 possible combinations (four fingers and five positions) to produce the same note, in addition to coordinating both the picking and fretting hands.

An alphanumerical system established by The Acoustical Association of America for defining the pitch of notes by using a pitch name and octave number, for example, Middle C = C4.
The common practice of writing guitar music on one stave determines that several ledger lines have to be used above and below the stave. The guitars range from a low E₂, written below the third ledger line below the stave to the highest note C₆ (on a twenty fret instrument) two octaves above middle C, written above the fifth ledger line, necessitates the use of an additional eight ledger lines:

Section 3.3, fig #2: the written range

Composers will often avoid the full range of the guitar’s compass and simplify the performance parameters but this is not always the case, Martyn Harry’s composition ‘Grace 2003’, commissioned for the Jazz Guitar Duo, spans from a E₂ on the bottom string to a B₅ and presents a particular challenge to read and execute.

Section 3.3, fig #3: bar no.105 from Grace 2003 eMartyn Harry

Some attempts have been made to address this issue in the publication of classical guitar repertoire in which the guitar is notated in its actual pitch across bass and treble clefs.¹⁹⁹ When standard notation is employed, position indicators and sometimes fingerings are also notated; this however is achieved automatically using tablature. The use of open strings, a performance characteristic common to acoustic-

¹⁹⁹ Elliker, Calvin, Your Cry Will Be a Whisper, USA” Pennsylvania, Merion Music, c1996).
guitar-music and particular techniques such as 'harping' make copious use of open-strings alternating with fretted strings, to create a cascade of overlapping notes and again this is much clearer when written as tablature (see fig. #4).

Section 3.3, fig #4: Extract from Hats Off To Davey

Where non-standard tunings are used the complexity is expanded exponentially: the relocation of musical pitches on the guitar neck and often increased pitch range can be difficult to encompass within a stave, with the result that notating and reading become more complex. Certainly, most players would baulk at the thought of sight-reading a conventionally notated piece in a non-standard tuning. Therefore, the reason for writing some music in standard notation has to be questioned, if it does not make the performance of the music easier then why is it notated in this way.

There are two answers to this question, one that musical traditions will often dictate that the received system is used and secondly the use of the universal system makes musical analysis possible. In conclusion, the arguments for a textual orthodoxy and universality are compelling but they should not deprive the performer of a practical and easily interpreted system of tablature. Paradoxically, it is technology that is
uniting the two historic systems as notational software programmes allow music to be written in either system then converted (with careful editing) to the other. 200

3.4 Acoustic guitar / Electric guitar

To employ the neologism ‘acousticity’ to describe acoustic-guitar-practice, infers that it differs from the electric guitar in more ways than simply its acoustic resonance, and as such necessitates an investigation into its specific musical characteristics and performance techniques. As the concept of the acoustic guitar did not exist before the advent of the electric guitar pick-up — all practice was guitar practice — any discrete, distinct and identifiable modes of practice have developed as a result of this division. However, although both the electric guitar and acoustic guitar share functional musical qualities and commonalities of practice, the flat-top acoustic guitar became the vehicle for new distinctly acoustic guitar techniques. It is in these distinct modes of practice that acoustic practice can be defined. The hybridised electric-semi-acoustic guitar — an acoustic instrument specifically designed to be amplified — has been omitted from these considerations as it at times functions in the same role as the solid-bodied electric guitar, as in the case of blues, and at other times, particularly in jazz, tends to function in a similar role as the acoustic guitar. 201 In addition, contemporary developments in amplification and instrument technology are producing a range of hybrid instruments that possess some of the performance and sonic qualities of both instruments. 202

200 Sibelius notational software by Avid Media Industries.

201 The semi-acoustic guitar is the signature instrument of blues guitarist B.B King and jazz guitarist Martin Taylor.

202 Godin (Canada) have produced a range of guitars that are equipped with piezo acoustic, electric magnetic, and midi pick-ups.
For reasons of pragmatism, most guitar players function as both electric and acoustic players: in particular settings which demand performance at low volume levels; where it is idiomatically appropriate and the instrument has a signifying role as in the performance of folk and 'roots' music and to create timbral variation as a textural alternative to the electric guitar. However, some performers can be categorised as being either primarily acoustic or electric-guitar players: Martin Simpson is primarily considered to be an acoustic-guitar player whereas Hank Marvin is perceived as an electric-guitar player, others, for example Mark Knopfler, Eric Clapton, Ry Cooder and Pat Metheny, appear to be equally comfortable and convincing in both modes. So what characterises the acoustic-guitar player in relation to the electric player and is it possible to define what divides or unites the two approaches? Obviously the resultant sound is determined by the mode of performance, electric or acoustic, but the simply drawn distinction between an amplified (modified) and un-amplified (natural) timbre is insufficient as a descriptor of differences in performance styles. To a large degree these differences are bound up with musical role, the acoustic instrument is more closely associated with solo or small ensemble practice whilst the solid-bodied electric-guitar functions primarily as part of a rhythm-section.\textsuperscript{203}

It is this role as a solo instrument or part of a small ensemble — the guitar-duo, string-band, or accompaniment to a voice or other melodic instrument — that has necessitated the development of particular performance techniques, with the player functioning, often simultaneously, in a rhythmic, percussive, harmonic and melodic role. Alan Lomax refers to the way that black guitar pickers turned their instruments

\textsuperscript{203} A rhythm-section is comprised of a percussion player (usually drum-kit), bass player, and a minimum of one chordal instrument.

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into one-piece orchestras by employing a range of rhythmic and percussive techniques:

...black country guitar pickers taught their instruments to sing the blues and, at the same time, to serve as one-piece dance orchestras, evoking the multiple patterns of the old string band by beating, picking, plucking, hammering, pushing and sliding.\(^{204}\)

This differs from the role of the electric guitar, which in the context of a rhythm section, where everyone takes on a highly differentiated role, tends to adopt differing modes of performance at different times. To achieve this multi-functional role — rhythmic, percussive, harmonic and melodic — the acoustic-guitarist often adopts a finger picking or hybrid-picking technique. It could be argued that acoustic players tend to employ finger-picking styles and electric-guitar players tend to use plectrum technique, and whilst this blunt distinction reflects certain truisms there are obvious exceptions to this ‘rule of thumb’, two striking examples being the plectrum guitar styles of the acoustic gypsy-guitar-players and the bluegrass flat-pickers, who with the use of a plectrum produce percussive rhythmic accompaniments and flurries of precisely articulated notes. Interestingly, Doc Watson a founding father of the bluegrass guitar style originally developed the style on electric guitar and only transferred to acoustic guitar to satisfy the ‘traditionalist’ demands of the ‘folk revivalists’.\(^{205}\) So, whilst there are tendencies towards different picking practice — fingerpicking v plectrum style — fingerpicking styles are more commonly used and


\(^{205}\) When performing at the Newport Folk Festival in 1963.

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highly developed in acoustic-guitar playing.\textsuperscript{206} The ability to perform complex rhythmic picking patterns will earn the epitaph of “a real picker” from American acoustic guitar aficionados.

- Picking styles

The picking technique employed by guitar players is subdivided into those who primarily use plectrums or finger picks and those who use the fingernail and or the flesh of the fingertips and thumb. The variation in picking techniques is as old as guitar music itself, with both finger-picking and plectrum techniques being common throughout the history of stringed instruments, Grunfeld, describes a plectrum, made from an eagle’s talon, being in use in Al-Andalus (Andalucia, Spain) as early as AD 1015 and again in the 14\textsuperscript{th} century where it was made from a quill (peñola).\textsuperscript{207} However the choice of a particular technique has a profound effect on the quality of the note produced and the execution and development of particular musical styles. Bluegrass and swing-guitar styles owe there character to the precise use of heavy-gauge plectrums, Travis-picker Chet Atkins and slide-guitar blues guitarist Bob Brozman use of thumb and fingerpicks, bossa-nova guitarist Louis Bonfa and Canadian 12 string guitar player Leo Kottke to the use of fingers and nails.\textsuperscript{208} Sometimes particular techniques can be traced back to their historical roots, as in the case of Eddie Lang who ‘founded a melodic “single string” style (punteado as

\textsuperscript{206} As previously stated, players of semi-acoustic guitar are included in this category, particularly country-guitar-pickers and solo-jazz players.


\textsuperscript{208} Travis picking: a style developed by Merle Travis where a thumb-pick is used to play a strong alternating bass line.

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opposed to rasgado, in the older terminology) fusing jazz with the Italian popular
guitar", the Italian guitar tradition favours the use of the plectrum as does the Italian
mandolin tradition and plectrum jazz banjo styles which Eddie Lang played before
changing to guitar. \textsuperscript{209} The choice of plectrum or fingernails is sometimes dependant
upon the type of strings used, steel strings easily damage the nails and therefore are
usually played with a plectrum or fingerpicks whereas nylon strings respond
effectively to the use of fingers and nails. These distinctions serve well to mark the
historic development of some guitar styles, but contemporary practice reflects many
variants to traditional practice with some nylon-strung players using plectrums (John
McLoughlin, Antoine Forcione) and steel-string players using fingers and nails (Leo
Kottke and Tony McManus); this is probably the result of improved amplification
technology which alleviates the need to produce a high volume levels, leaving the
guitarist to experiment with a variety of picking techniques. Whilst different picking
styles can create textural differences, this is not an absolute, a plectrum is generally
used on steel strings to create a percussive texture but Louis Bonfa playing on nylon
strings can create a similar effect with the back of his nails. Some jazz guitar players
favour the plectrum because of the evenness of timbre across different strings whilst
others use finger picking techniques: Wes Montgomery and Jim Mullen use the
thumb of the picking hand to spectacular effect. Whilst some generalisations on a
relationship between picking techniques and acoustic or electric instruments and
picking styles and musical idioms can be made, many deviations from these
tendencies can be commonly found. With this caveat the following tendencies can
be determined: plectrum style is effective for executing single-note lines and
rhythmic comping with a precise articulation and consistency of timbre, but has

\textsuperscript{209} Ibid, 258.
inherent limitations imposed by reducing the picking possibilities of any plectrum stroke to a single chord, arpeggio or note. Whilst the combining of melodic and rhythmic material is achievable, it requires considerable skill to balance single-note passages with chordal interjections and limits the possibilities when playing contrapuntal lines. To overcome these limitations the plectrum guitarist will often adopt a hybrid-picking style, which combines the use of the plectrum with one or two of the fingers of the picking hand to pluck additional notes. Finger picking styles, whilst often not possessing the picking power or timbral consistency of the plectrum, offer numerous picking options: the thumb can be used to play bass lines and melodic passages — when a particular timbral weight is required — whilst the index, middle and annular fingers (the little finger is less often used), provide harmonic and melodic material. In summation finger-picking or hybrid-picking styles provide a great degree of flexibility and the possibility of combining bass-lines, rhythmic interjections and melody lines simultaneously, they are therefore more commonly used in acoustic guitar styles where the function of the instrument is to provide multiple musical roles, rhythmic, percussive, harmonic and melodic. Plectrum techniques offer an evenness of timbre, a strong percussive rhythmic texture, increased volume and are often used when a performer is working with other chordal instruments and there is less necessity to undertake simultaneous multi-functional roles. In my own practice, I have developed plectrum and finger picking techniques to achieve a broad range of performance possibilities and variation: for example, plectrum techniques are used in ‘Put it In The Pocket’.

The thumb provides more flesh and mass with which to strike the string.

The sound produced by the thumb and fingers may differ, and consistency of timbre across all fingers is difficult to achieve.
'Mmm Interesting' and 'Its Not My Fault' and finger picking techniques in 'Dark' and 'Afro-Diz'.

- Tunings

The fact that the instrument can be retuned easily, unlike fixed pitch instruments such as the piano or accordion, has made experimentation with tuning systems commonplace. Although alternative tuning systems are used on the electric guitar, this is less common and the tunings used are usually derived from the acoustic guitar. It is worth noting that the guitar's standard tuning, from low to high E-A-D-G-B-E, where four string pairs are tuned an interval of a fourth apart with one pair, the second and third, tuned a major third apart, is an anomalous system and a contrivance to maintain a separation between the top and bottom strings of two octaves. The advantage of the standard system is that it makes the playing of six string-barre-chords possible and this aids the guitarist to move easily between different key centres; this factor was crucial to the instrument's modern development as it produced a guitar which could function effectively in the diatonic music traditions. However, the standard tuning derived from nineteenth-century European systems is only one of many possibilities, the desire for the acoustic guitarist to experiment with tunings, which are more suited to particular musical genres and styles, is natural and is common in global guitar practice.

Bob Brozman comments:

..... the diatonic European system of music is, in fact, the odd man out in world music cultures, the rest of the world preferring the more mathematically simple and therefore natural-sounding modal approach. Open tunings not only facilitate this, but also provide drone strings, making self-
accompaniment much easier. For example Open G major tuning occurs in the guitar music of: Hawaii, Mississippi, west Africa, south Africa, Philippines, India, Mexico, [and] South America. Many guitarists use open tuning systems, both to resolve the complexity and difficulty of playing solo acoustic guitar and in the pursuit of new timbres, these tunings with their ease of access to drone notes and simple primary chords are particularly suited to modal tonalities and music that remains in the same key centre and as such often simple vernacular music. In some cases this simplification and naturalness may be also a musical limitation, Bob Brozman argues strongly for the validity and value of modal tonalities as being predominant around the world and that diatonic music systems only account for only ‘20% of music’, the rest being made up of rhythm, pitch variation and percussion. Whilst open tuning systems may limit the harmonic complexity of music, they offer a rich palette of timbral possibilities creating resonant chordal voicings, multiple drones, increased melodic development —micro-tonal systems when used in conjunction with a slide, percussive possibilities and tuning systems that reflect the characteristics of the instrument; the guitar is not attempting a ‘musical transvestism’ as suggested earlier by Grunfeld, it is used to perform in specifically guitaristic modes of practice. Bob Brozman goes further by saying that Western diatonic music has probably run its course as all the new developments are in the modal systems of global music rather


213 Interview with James Birkett, CD #6 PhD portfolio.

214 In conversation with Bob Brozman at Beckfoot House, Cumbria on 26.11.06
than westernised diatonic traditions — a contentious but thought provoking point. A reference to commonly used tunings is included in section 7.0: Tunings.

- Percussive qualities

So prevalent are the use of percussive strikes on both the strings and the guitar body that the acoustic guitar could almost be considered as a tuned-percussion instrument. As the resonating strings of the guitar are amplified through the flexible membrane of the soundboard, the instrument responds to percussive strikes, whether they be the picking action of the performer and the variable dynamic attack of notes and chords, or physical strikes and slaps on the guitar; it is this percussive quality which very clearly separates the acoustic instrument from the solid-bodied electric guitar.

James Birkett comments:

> you are using the way that the instrument is fundamentally built...to create the music, the material it is made from, the actual design, structure and resonance, you are using that as part of the music, you are absolutely not using that with an electric guitar.\(^\text{215}\)

Although the body of the electric guitar does have an effect on the sound and resonance of the instrument, it is much less pronounced and utilised as a musical parameter than in the case of the acoustic guitar. Al Di Meola talking about the experience of playing acoustic guitar with John McLaughlin and Paco de Lucia says:

> You can’t strum an electric the way we strum acoustics. You can switch from rhythm to lead very comfortably on acoustic, but not on electric. It’s easier to have a conversation on acoustic.\(^\text{216}\)

\(^\text{215}\) Interview with James Birkett, CD #6 PhD portfolio.

The percussive aspect of the instrument has long existed in the rhythmically
dynamic music of Flamenco, where the guitar style is characterised by the use of
‘golpes’ (blows, or fingernail strokes) on the instrument’s soundboard and the
striking of the body of the guitar with the fingers and hands. Using the percussive
qualities of the guitar has become extremely popular and almost de rigour for the
contemporary solo guitarist with players such as Tommy Emmanuel and Antonio
Forcione having absorbed the technique into their live performances and particular
exponents Thomas Deeb and Kaki King have made it a central part of their
performance techniques.\textsuperscript{217}

Using the material from which the instrument is made to produce percussive and
dynamic qualities produces a very physical reaction, James Birkett again comments:

it is definitely a physical interaction; this is a very personal physical
relationship that you have with the making of notes and the sound, and the
vibration of those notes through your body.\textsuperscript{218}

The acoustic responds differently to the electric guitar and the player interaction
with the instrument is more of a physical full-body experience. The electrification of
the instrument has detached the sound source from a personal physical interaction
with the instrument to a separated detached sound and although this mediation with
electricity and amplification has created new timbres and sonic landscape a
fundamental physicality has been lost.

- Sonic characteristics and timbre

\textsuperscript{217} King, Kaki, \textit{Legs To Make Us Longer} (Red Ink WK92426, 2004).
\textsuperscript{218} Interview with James Birkett 1.11.06, CD #6 PhD portfolio.

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A characteristic of the instrument is its relatively short sustain, the initial transient created by the strike of the pick or finger diminishes very quickly and it is this short percussive transient to each note that encourages the performance of particular styles — finger picking, rhythmic strumming and the rapid execution of notes. Long sustained notes are not possible but a note can be extended by using a slide, tremolando picking and vibrato: a bottleneck or slide extends the sustain of the note by applying an exaggerated vibrato, the ‘slide’ is moved rapidly backwards and forwards along the length of the string, encircling the chosen pitch and using the friction between the string and slide to produce additional vibration; with tremolando picking a note is repeatedly picked to extend the duration; applying vibrato by pushing and pulling a string across a fret extends the length of the note. This lack of sustain encourages the playing of many notes, if long sustained notes are not possible players will tend to fill out silences by playing more notes. The lack of sustain also encourages the use of open-strings as drones and sympathetic tonalities: when playing a fretted note if the open strings are not damped they will resonate sympathetically with the selected pitch and this device can be used effectively. The use of open-strings is disfavoured in some guitar styles, particularly when the guitar is playing a melody, as the consistency of timbre produced by using all fretted notes is considered to be preferable and the uncontrolled sustain of an open-string can cause problems when amplified. Whilst open-strings may be utilised for their simplicity of use, in providing the simple harmonic language of vernacular music, execution of primary chords and the resonant power of unrestricted open-strings, they can also be used in sophisticated ways to exploit the natural resonances of the instrument — it is to take advantage of open strings that flamenco guitarists play in the first position. Acoustic guitar players implicitly make use of these
resonances as drone notes, pivotal points for ostinatos, additional or optional note choices in finger picking, 'harping', open-tunings, when using a capo and in extended chordal voicings; all of these techniques are used copiously in the portfolio.

3.5 Performance Style: virtuosity and repertoire

In reference to flamenco guitar playing, Peter Manuel refers to 'guitar-technique fetishists, who hoot and howl after every lightning sixteenth-note run', a similar response can be witnessed during the performances of many contemporary acoustic players, where there is an expectation of virtoustic performance and great importance is placed on the performers ability to amaze the audience with a display of technical brilliance.\footnote{Manuel, Peter, Flamenco guitar; history, style, status in Coelho. Victor A., (ed.), The Cambridge Companion to the Guitar (Cambridge: Cambridge University Press, 2003), 23.} This is in some way inevitable, in that the solo-guitar player is performing to an audience that demands entertainment; Maurice Summerfield views this is as nothing new as performers have always vied for attention in an extremely competitive mass market, Paganini, for example, was renowned for his flamboyant and extravagant viroustic displays. The link between music and entertainment is so strongly woven that it is to be expected that an audience will at times expect to be amazed by virtoustic dexterity as well as musical and interpretive ability. This compounded with an increasing emphasis on visual performance will also demand a greater visual display. Perhaps the guitar at this point in the 21\textsuperscript{st} century has matured to a similar point to that achieved by the violin in the middle 19\textsuperscript{th} century. Has the guitar reached a nadir, a summative point, have
all of the substantial techniques now emerged and developed, is all that remains, apart from compositional development, pastiche, novelty and virtoustic display — an aesthetic grounded in technique and an expression of style over substance? In conversation with James Birkett he refers to the presence of a fretboard olympics and the way in which performers are graded in accordance with their ability to perform tricks rather than express a compositional or interpretative ability: ‘the pyrotechnics are just part of the firework display that is released here and there, but is not a central point of the performing experience’, there is a place for virtoustic display in all music performances but this shouldn’t be the primary focus of any performance. Whilst younger performers and less experienced guitarists may be dazzled by the exciting pyrotechnics, whether it is on electric or acoustic guitar, it is questionable whether the music is enhanced rather than backed into a corner and limited by an over emphasis on the technique of the individual performance rather than the broader development of a repertoire base. Is there a problem when contemporary music is derived from an individualistic approach rather than a communal establishing of repertoire? James Birkett asks:

‘How much is established as repertoire... in the same way that Segovia in many ways set up the repertoire for Classical guitar’ and ‘Is the virtuoso thing, one of the ways of attracting attention and getting an audience...you almost have to draw attention to yourself as being a phenomena because there is no established repertoire base?’

These are valid questions but probably questions that apply to large areas of popular music practice. If there is not a ‘systematic base line set of techniques as again there are for the classical guitar’, this personalising of the instrument produces an arena in

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220 Interview with James Birkett CD #6 PhD portfolio

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which performance tricks may be at the expense of a musical and compositional logic and performance becomes so personalised that the ‘sound world’ that an individual can create may be impossible to recreate for another. It has to be recognised that composition serves a different function for the solo performer where it is often as a vehicle for their own technical display, and that entertainment value, which has always been a part of music performance, becomes increasingly important in a mass market where individual players have to establish particular stylistic markers in order to gain any recognition.

4.0 PERSONAL CREATIVE PRACTICE

4.1 Formative development

My first substantial memory of the guitar is of watching the Beatles perform ‘She Loves You’ on Thank Your Lucky Stars. The power of the music, the physical presence of the Beatles, the exotic clothes and rebellious long hair, combined with the screaming adoration of teenage girls were instantly articulated with an instrument that seemed to offer entrée into an adult sexualised world — the electric guitar. Although I must have seen and heard guitars before this time, I had never been so affected by, and felt such an inextricable fascination with, a musical instrument.

As an electric instrument was well beyond my meagre income as a paper-boy, I bought a very cheap acoustic guitar from a second-hand shop; it was cheap because several of the strings were rusty, some of the machine-heads (tuning pegs) were damaged and the guitar could only be tuned with the aide of a pair of pliers. What

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221 Interview with James Birkett CD #6 PhD portfolio.
222 22nd August 1963, Thank Your Lucky Stars: ABC Production.
constituted an 'electric' guitar was a complete mystery to me, but the boy next door, a teddy-boy in his mid-20's, confidently explained that mains-voltage electricity (240volts) ran through the guitar strings and that is why electric guitarists used plectrums, to have the fingers of the fretting hand on the strings at the same time as the picking hand would result in electrocution — an imaginative if somewhat misguided explanation. I did for some time consider wiring the strings of my acoustic instrument to the mains to see if this would work, luckily, when I mentioned this theory to my father his reaction halted my invention of a truly electrified guitar.

Growing up in a mining village in County Durham during the 1950s and 60s, my experience of the guitar and access to guitar players was through a limited exposure to guitar music on television, radio, and records and not through real-life encounters; unknown to me, several other people in my locality were undergoing similar experiences. The 'otherness' of the guitar, created by this sense of distance, added to the exoticism of the instrument and its players and heightened my senses to the existence of another parallel exciting world. The guitar to me was an exotic and remote instrument and articulated with my adolescent ideas of glamour, youth and excitement.

I owe my formative musical training to five sources, my father, radio, television, recordings and the Christian church: a curious mix of the pious and the profane. My father was a self-taught multi-instrumentalist whose musical experience and repertoire, as an anglicised Scotsman, was confined to popular Scottish songs; with his skills he helped me to tune the guitar and identify simple chords. The learning of music as demonstrated by my father and grandfather was primarily an aural process, one learnt by doing, when watching my grandfather play the
harmonica and asking him how I could learn to play, he replied, “Ach its easy son all you do is bla, suck, bla, suck, suck, suck, bla” and it surely is, the result is a major scale. Having establishing a strong auto-didactic ethos, I listened intently to recordings and became increasingly successful in mimicking the guitar parts on records. This process was alternately one of puzzlement and frustration followed by a great sense of fulfilment when I succeeded in playing (often inaccurately) my favourite guitar lines — the James Bond theme tune was a particular milestone. Although I was unaware of the importance of nurturing aural skills, this exploratory and experiential process of learning would enable me to later freely interact with music and musicians from other aural traditions. Conversely my experience with the available pedagogic materials was less useful, an attempt to learn from Bert Weedon’s ‘Play In a Day’, the instructional manual that is cited by many as their introduction to guitar playing, was of limited value: the chord shapes written as chord diagrams were useful but the notated tunes were of little value to someone who had embarked on an aural musical education.223 I discovered later that there were other tuitional materials available, of which I was unaware at the time, but the practice of using standard notation and the limited stylistic range of materials available would probably not have been of interest to me (see section on pedagogy). Perhaps the most unexpected interface with the ‘devil’s music’ was my association with the local church and church youth club, which led me to spending two summers at a Christian summer camp on the Northumberland coast.224 This was a formative and enlightening experience as, removed from the confines of pit-village life, I was

exposed to other young people who came from a broad geographic and social spectrum. Here I met three particular guitar players, who being several years older than me, had a much wider experience of music: from them I learnt to finger-pick and was exposed to the songs and guitar styles of progressive-folk-guitarist Bert Jansch, blues and embryonic attempts at jazz-guitar. This was a true epiphany for me (musical not religious), as I could watch closely and play alongside players whose knowledge and experience was more advanced than my own. This experience converged with my growing awareness of an emerging music counterculture (1968), a new cohort of acoustic performers, Bob Dylan, Donovan, Nick Drake, John Martyn and Michael Chapman and a tradition of exciting guitar music. The problem was finding this music as it was rarely broadcast; the solution necessitated a determined search for old recordings. One of the most influential recordings I found was a recording of American rural-blues, the discovery of which led to a rich musical seam in which the acoustic-guitar was central and its proponents played in an unorthodox and compelling manner. A fascination with the historical traditions of the acoustic-guitar had begun.

Concurrently the allure of the exotic and highly sexualised world of the electric guitar led me in another direction, one which would give me the opportunity to perform and, importantly, to make money. The sonic hegemony of the electric guitar sidelined the acoustic-guitar for many years to performances in small social and domestic settings and a serious return to the instrument didn’t come about until the first electro-acoustic guitars became available and re-established the possibility of public performance. Having worked as a guitar player for approximately 39 years,

\[224\] The church hall would later become the venue for rehearsing my first band and first ‘gig’ in front of an audience.

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playing electric guitar in a wide range of performance settings, it was not until the early 1980s that the technical limitations of acoustic amplification were sufficiently resolved for the new electro-acoustic guitar to be introduced into live performance. Acoustic guitar music had never left the performance stage, but to the working professional, there were so many technical issues to resolve that until a simple method of amplification emerged, the piezo transducer, the instrument was unpredictable, subject to feedback, poor quality sound, and a lack of volume.

4.2 Current Practice

My practice is located in the concrete experience of performance, composition, recording, and education and my experience as a performer, composer, and producer of guitar music provides a strong contextual base from which to consider contemporary practice. I have performed on the guitar on radio, television, movie sound-tracks, vinyl and CD releases, toured in the United Kingdom, Europe, Eire and Romania, performed at major festivals and venues, composed and recorded music, transcribed recordings, been the joint recipient of an Arts Council of Great Britain touring award and composition commission, written tuitional articles for an international publishing magazine, worked as an educator on an bachelor of music honours degree programme in jazz, popular and commercial music and have delivered specialist performance workshops.

I continue to perform on both electric and acoustic guitar, but have become increasingly fascinated by the acoustic instrument: its history and musical development encompassing a wide range of diverse guitar practice, much of which predates the development of the electric guitar pick-up. In addition, I have become increasingly aware of the acoustic guitar as an instrument that is separate and
distinct from the electric guitar, an instrument that is defined by its acoustic nature and it is this difference that has become increasingly fascinating for me.

4.3 Acoustic Guitar Practice

The compositional framework is purposefully guitar-centric (instrument specific) and is intended to highlight the mechanisms, structurally and contextually that influence the guitarist as a composer/arranger. All of the pieces in the portfolio have been written to highlight the expressive performance and sonic characteristics of the instrument, ‘The Black Isle’ for example is performed in a DADGAD tuning, often used in Celtic guitar music, and it is from the inherent resonances offered by this modal tuning that the composition draws, in contrast, ‘For You’ employs a less guitar-centric, more abstract compositional approach that develops through different key centres, at times tonally at other times in parallel harmonic shifts, to produce a piece of music that could be performed on any instrument. Whilst the guitaristic nature of ‘The Black Isle’ is self evident, ‘For You’ provides an exploration the guitar’s timbre by juxtaposing it in a setting which relies upon the forefronting qualities of the recording medium to feature the guitar as a melodic and improvising instrument. The setting of the guitar differs but it is the timbral and harmonic palette of the guitar that is the central focus of the composition. Although some of the pieces could be performed on other instruments they are intended to function as ‘guitaristic’ that is guitar-centred compositions that express specific performance

225 Structurally: the inherent characteristics of the instrument; pitch range, timbre, tunings, string gauge, and tension. Contextually: style and idiomatic factors, groove, form and rhythmic style.
characteristics of the instrument and importantly the performance style of the performer(s).

In developing an instrument specific approach to composition, it is essential to understand the performance and physical characteristics of the instrument from which the performance elements of the music can be drawn. These can be divided into physical characteristics: the limitations of the instrument imposed by its design and performance characteristics: the various ways in which the instrument can be played.

- Physical characteristics:
  - tuning: the standard tuning of the instrument produces fixed pitched notes between E2 and B5 (in some cases C5) a span of approximately three octaves and a fifth. This range can be altered by using different tuning systems. See section 7: Tunings;
  - chordal voicings: the standard six-string guitar limits the voicing of any chord to six simultaneous pitches and in some cases, where adjacent voices are separated by small intervals, six separate pitches cannot be used;
  - string groupings: variations in the grouping of strings are relatively common, the most common being the 12 string instrument, where the bottom three strings have an additional course of strings tuned an octave higher and the top three strings a course tuned in unison. Many variations to this exist, the most common being the nine-string guitar used by Lonnie Johnson and Big Bill Broonzy where only the top three strings are doubled;
- Performance characteristics:
  
  - **sustain**: the limited amount of sustain make it particularly suited for rhythmic and percussive strokes and maintaining definition between rapidly executed notes in finger-picking styles and single string runs;
  
  - **volume level**: limits its performance role;
  
  - **dynamic level**: although the guitar is a relatively quiet instrument, certainly in relation to other chordal instruments, for example the piano, accordion or banjo, it can produce a wide range of dynamic levels;
  
  - **open strings**: the presence of 'open' strings has impacted on the keys in which guitar music is often written and performed. Consequently there is a tendency for guitar compositions, particularly arrangements that don't feature a bass player, to be in keys where an open string can be used as a tonic or drone note:
E major /minor, A major /minor, D major /minor, G major /minor. Although this is sometimes seen as a limitation, it does encourage the use of open strings in creative ways: open strings can be used as drone notes, strong resonances in chord voicings and alternative note choices to produce timbral variation;

- tunings: the ability to retune the guitar allows for a large degree of performance flexibility;
- percussion: the percussive nature of the instrument allows for strikes, blows and taps on the strings and guitar body, to be incorporated into performance;
- picking styles: common to other stringed instruments, the strings can be strummed, plucked with fingers, fingernails or picks;
- pitch alteration: the pitch of individual or combinations of strings can be altered by using a slide, bends and vibrato; the timbre of each note can be varied in many ways and micro-tonal pitches and elaborate glissandos created;
- the ability to play the same note in several different positions on the guitar allows in some instances for up to five timbral variations for any single note.

4.4 Compositional Practice

'All art is a synthesis of improvisation and order' 227

The compositions, whilst paying homage to historical and idiomatic traditions, attempt to explore new juxtapositions, contemporary performance techniques, and the sonic characteristics of the instruments. There is no overarching thematic narrative that serves to unify the work, as in a large-scale composition, but a series

226 The range of 'open' keys can be simply extended by using a capo (capo dastra) on higher frets.
227 Mike Leigh (Film director): The South Bank Show October 13th October 2002.
of discrete compositions each of which attempt to engage with performance and idiomatic contexts. The intention of the compositions vary in that some provide a transmutable text, a notated score — an artifact that could be used for further performance, others are performer-centred and aim to expresses the musical character of the performer. The harmonic language is varied, in some examples the harmonic schema is driven by an abstracted musical logic and at other times by guitaristic practice, in other words, at times the harmonic vocabulary is advanced and contains several key changes, parallel and diatonic harmony and many chromatic alterations as in ‘For You’ and in other occasions the harmonic scheme is intentionally simple as in ‘Afro-Diz’ which is based on the to use of drones and ostinatos. This concords with Peter Manuel’s comments on the relatively simple harmonic language of Flamenco guitar, where guitar harmonic practice ‘evolved in direct connection with the guitar rather than developing as an abstract harmonic repertoire along the lines of Western common practice’; he is making the point that guitar styles have adopted, stylized and sometimes simplified a harmonic language to suit the instrument and this is particularly evident where the guitar is used in modal open-tunings and the emphasis is on other musical elements rather than harmonic complexity. 228 The compositional process at times reflects Western notational practice and at others an aural ‘organic’ approach in which performance and improvisation are integral to the compositional method, Channon comments that: ‘In the Afro-American tradition, composition and performance are part of a

single act', an acknowledgement that the distinction between composition and performance is not always fixed.\footnote{Channan, Michael, \textit{Repeated Takes} (London and New York: Verso, 1995), 52.}

I recognize the way in which my musical ideas and expression are drawn from my own performing and listening experience and the assertions of Julia Kristeva's that all texts to some degree owe their existence to other texts; how true this is in relation to music that is grounded within and reflects the practice of musical stylistic families.\footnote{Kristeva, Julia, \textit{Semiotike} (Paris: Tel Quel, 1969).} Where evidence of musical influence and quotation was an issue for modernists, the non-linearity of postmodernism is accepting of the polymorphous existence of aural traditions: without musical influence and quotation aural music would not exist. In adding to an instrument-specific musical tradition, where musical and instrumental practice is the product of a 'guitaristic' approach, how can this be denied? If our lives are constructs derived from an amalgam of experiences, how else do we learn other than through mimicking? In my own experience of learning to play guitar in the late 1960s, the only method available to an aspiring player (outside of classical and dance band guitar) was the 'aural' studying of others, a process which involved listening to vinyl records in an attempt to absorb and replicate what was heard; it is through these processes of absorbing a musical language and performance style that aural traditions endure. However, when style is casually drawn from a broad range of historical and cultural referents and becomes separated from a musical context, the resultant hybridisation of style could be considered as an appropriation and watering down of other musical cultures. I would argue that because all of the compositions are intended for performance on a particular instrument and therefore adapted to the musical character of that instrument a new
context is automatically created. In addition the nomadic nature and flexibility of the guitar has always encouraged the guitarist to draw from and adapt the music around them.

In summation therefore, the compositions are intended for performance on the acoustic guitar, and to a large degree, they are an expression of my own musical personality. I recognise the inherent weaknesses in such an approach, in that being so performer-centred, my own idiosyncrasies are overly exposed, and attempting to cover such a wide range of styles may be over ambitious. However, the breadth of approach reflects my own varied musical history and the realization of the portfolio establishes a specific set of personal and musical challenges.

4.5 Modalities of Creative Practice

It has been my intention thus far, to establish a context for contemporary practice through undertaking a nuanced and reflective study of the synchronic and diachronic factors that have shaped the musical character of the acoustic guitar, the instruments historical development, and its relationship to broader cultural practice. Although I am aware of the potential difficulties of drawing a history backwards from the present and the dangers in drawing conclusions from narrative histories (as discussed in section 2.1), I consider that a cohesive argument for the impact of specific historical and cultural practices has been developed and clearly articulated. The value of carrying out such detailed research is in establishing a context for my own work and one that serves to inform my own creative practice. As a practitioner of approximately forty years I am aware that my own development, and in probability that of many others, has often been the result of random encounters — rather than a linear progression, therefore the opportunity to systematically research
and codify the factors that have influenced contemporary practice provides an invaluable base from which my own work can be considered.

Where large-scale compositions achieve artistic unity through the presence of an over arching aesthetic or philosophical theme, the unity of this portfolio, which is comprised of a series of discrete compositions, is drawn from the exposition of instrument specific composition: it is the performance characteristics of the instrument that are being explored rather than an abstracted theme. It is useful therefore, in considering the essence of contemporary practice, to attempt to define specific performance criteria and propose a series of modalities that circumscribe this diversity of practice. Drawing on my research into the development of contemporary practice it becomes evident that three distinct, but not always discrete, modes of practice can be proposed, and where each focuses on specific aspects of performativity, compositional practice, and mediation by technology. It is not intended that each mode is distinct and discrete as it is accepted as axiomatic that some musical pieces may overlap particular modes, this is not however considered as a weakness or a flaw in the proposition as the purpose of defining modes is purely structural — it provides a framework in which creative practice can be developed. Therefore the portfolio is presented in three parts, three recorded sections, each representing a particular working mode. Each mode encompasses, in varying degrees, performance, composition improvisation, and an engagement with technology. Written notation is used, as appropriate to the practice, but the recording is considered to be the finished artifact: it is within the recorded performance that all of the creative musical elements are encapsulated. The scores function as working documents; they have been produced as part of the compositional process rather than for live performance (except in modality #3). As material has been developed during

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the recording process, some updating of the scores has taken place but this has only been done on a pragmatic basis and where necessary, the scores therefore serve to convey specific information and are not always intended as discrete documented compositions.

The three modalities of creative practice:

1. **Technological**: practice that fully embraces and interacts with technology and where the effects of this interaction are intentional and evident.

2. **Traditional**: practice where technology functions only to record the music and to simulate acoustic environments.

3. **Interactive**: where the creative emphasis is placed upon improvisation and the interaction of performers and where the performance takes place in real time and in real spaces. Technology functions only to record the music and to simulate acoustic environments.

Each modality is intended to express particular characteristics of the instrument notably the acoustic quality and guitaristic nature but in addition is centred within a particular mode of practice.

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**- Modality #1: Technological**

Practice that fully embraces and interacts with technology and where the effect of this interaction is intentional and evident.
Primary characteristics:

- practitioner/producer: digital recording systems, notational software packages and the intertextual processes of creative practice, as outlined in Chapter #2, have made it possible for a musician to function as a lone practitioner by taking on several or all of the creative roles, composer, arranger, performer, engineer and producer and only employing the services of other performers as necessary;

- instrumental balance: any instrument, regardless of their inherent sonic characteristics can be juxtaposed with other instruments in any musical setting. The sonic emancipation of the acoustic guitar — a product of the interfacing with sound technology — allows the, often intimate, musical voice of the guitar to be fore-fronted in any ensemble;

- sonic manipulation: when recorded and particularly when the audio sound source is digitized, the resultant code can be endlessly manipulated and altered; this has resulted in the acoustic guitar being reunited with the electric guitar in its ability to create an almost limitless sonic palette.

- Modality #2: Traditional

Practice where technology functions, primarily, to record performance and is evident only the process of recording and the simulating of acoustic environments.

Primary characteristics:

- formal (notated) and intuitive (improvised) modes of composition that express the acoustic qualities of the instrument;

- solo and small ensemble performance: compositions arranged for the solo-guitar, guitar-duo, and, guitar and percussion;
• guitar-centric composition: the compositions serve to express specific idiomatic performance characteristics of the instrument.

- Modality # 3: Interaction and Improvisation

This model draws upon processes of improvisation and interaction that occur in a variety of performance settings. The relationship to technology is simple in that digital technology allows the recording of expansive tracts of music without the limitations of material cost:

• interaction: the creative emphasis is placed upon the musical interaction between selected performers brought together to create music in real time and in real spaces;

• interpretative and improvisational skills: the compositional stimuli vary from complete arrangements to 'lead sheets' and skeletal musical stimuli that the performers realize through their own interpretative and improvisational skills.

5.0 THE RECORDED PORTFOLIO AND COMMENTARIES

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The intention of this section is to provide a context for the recorded tracks, not just as individual pieces, but also in relation to the posited creative modes. To aid clarity the portfolio and the commentaries are presented in three parts where each corresponds to a particular mode. In each section, a brief outline of each recording is given, along with a more detailed consideration of the generic mode of practice that draws upon specific details from individual tracks to illustrate particular points. In this way, the specific aims of each of the compositions will be considered in direct relationship to the outlined modes of production.

Although three modes have been posited as descriptors of contemporary creative practice, it should be recognised, that it was never intentional that each individual composition should slavishly adhere to specific criteria, as to do so would artificially distort the nature of creative practice. Rather it is considered as axiomatic that certain characteristics may appear in some or all modes; what it is being argued, is that there exist tendencies in each different practice that impact upon the musical and creative voice and as such are worthy of consideration.

- Modality# 1: Technological (CD #1)

The intention of each recording/composition in this section is to express the particular performance and musical characteristics that result from the interaction of performance, composition, and technology. As previously outlined, the interaction between the acoustic instrument and technological processes has had a significant effect on performance and compositional practice, and the instruments sonic characteristics. It is taken as axiomatic that the degree to which this interface with technology is overtly apparent in the finished recordings will vary as it is often in the
process of producing the music that working methodologies have been most greatly influenced.

This section is comprised of five compositions: Lydian Dance, For You, It's Not My Fault, Songs of Summer Past, Put It In The Pocket.

- **Lydian Dance**: the rhythmic feel of the track is based on a Salsa dance style where the rhythmic pulse is provided by congas, shaker and triangle and the acoustic bass plays a bass line which varies between playing an accented semi-quaver before the 2^nd^ and 4^th^ beats of each bar, to create a feeling of forward momentum, and the crotchet-beat walking bass line of the B section. The melody, derived from an A Lydian mode, develops from a simple melodic motif through a process of melodic extension and augmentation and has been arranged for flute and acoustic guitar to provide a contrast between the percussive attack of the guitar and the soft transient of the flute. A diatonic harmony in 3rds and 4ths has been added to the melody to provide a textural and harmonic contrast to the melodic motif. This tune has been included in this section as it is the process of multi-track recording that has allowed the freedom to experiment with a broad range of textural voices for the acoustic guitar in spreading harmonically dense chords over two and three guitars — in a similar way to the techniques employed by the early guitar duos.

Performers:

Guitars: Rod Sinclair

Double-bass: Neil Harland

Percussion: Paul Smith and Roger Hempsall

Flute: Garry Linsley.
- For You: a jazz ballad. The composition is comprised of a strong melodic theme and a highly developed harmonic schema that alternates between two contrasting sections. The arrangement juxtaposes the acoustic guitar with a string quartet, flute, rhythm section, and a midi ‘pad’ that provides a chordal accompaniment. The composition has been arranged for two acoustic guitars, double-bass, drum kit, flute, sequenced midi pad, and a string quartet of first violin, second violin, viola, and cello.

Performers:
Guitars: Rod Sinclair
Double-bass: Neil Harland
Drum kit: Paul Smith
Flute: Garry Linsley
Violin: Stuart Hardy
Strings section and midi-pad sequence: Rod Sinclair.

- It’s Not My Fault: the title is taken from a speech-text warning which was used by the Apple Macintosh computer operating system 9, and was often an indicator that a serious processing fault had taken place. Being so reliant during the development of this portfolio upon computer software score and recording packages, I, on several occasions, became the victim of technological failure and learned to dread the auto-generated computerized response of ‘it’s not my fault’. I was inspired by this technological disclaimer to write a musical response that reflected the postmodern inter-textual nature of computer-based recording. The form and musical elements of the piece are angular to reflect the often-dramatic swing between periods
of elation, when everything works smoothly, and frustration when computers seem
to have their own agenda.

Performers:

Guitars, Rod Sinclair

Double-bass, Neil Harland

Drum kit, Paul Smith

Hammond Organ, Gerry Richardson

Sequences: Rod Sinclair.

- Songs of Summer Past: a composition with a melody that could also be
used for the setting of lyrics. The standard tuning system of the guitar where
adjacent strings are tuned in intervals of fourths (with the exception of the major
third interval between strings three and two) makes the playing of chords built from
a quartal harmony to be relatively easy. The A section of the composition tune
makes use of this particular feature by embellishing the main melodic theme with
elements of quartal harmony; this is then contrasted with the B section which uses a
ternary harmony. The title of the composition reflects the song like melody and the
lyrical flowing quality of the instrumentation. The melody and improvisation are
played on a nylon-string guitar — the Americanised version of the ‘Spanish’ guitar
— which is used to contrast with a rhythm section in which several of the
instruments have been sequenced and the sounds generated from midi triggered
samples and loops. The use of sequenced instruments playing sound samples is a
conscious decision as the instruments are intended to sound sequenced rather than an
imitation of acoustic instruments, as is often the case, and contrast with the acoustic
guitars and percussion. In addition to the acoustically recorded guitar, the digital
audio file has been duplicated and converted to a midi-signal that has been used to trigger other sample sounds to create further textural opportunities and emphasise the juxtaposition of the organic and the technological.

Guitars and sequences: Rod Sinclair
Percussion loops: Roger Hempsall

- Put It In the Pocket: a simple and repetitive composition in a ‘funk’ idiom where the musical interest is provided by the rhythmic pulse and interplay of the rhythm section instruments, the textural contrast of acoustic and electric instruments, and the guitar improvisation. The tune is purposefully simple in both form and melodic content as my intention was to emphasise the strong rhythmic characteristics of funk music as expressed in the title ‘Put It In the Pocket’, where, in popular music parlance, ‘in the pocket’ describes the effect of achieving an effective groove. A substantial difference exists in relation to most music from this genre in that acoustic guitars and double-bass have replaced the idiomatically standard ‘electric’ bass and guitar, and the ‘horn’ section consists of flugel horn and tenor saxophone to provide a light texturally balanced response to the acoustic guitar.

Performers:

Guitars: Rod Sinclair
Double-bass: Neil Harland
Drum kit: Paul Smith
Tenor saxophone: Garry Linsley
Flugel horn: Dave Hignet
Hammond Organ: Gerry Richardson
Sequences: Rod Sinclair.

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The availability of relatively inexpensive technology (compared to the analogue equivalent) allows the composer to function as a lone producer who calls upon the services of other musicians as necessary. All of the compositions in this section have been produced (composed/recorded/mixed) with an overt use of the available technologies. Scores have been produced using notation software (Sibelius), exported as midi-files and imported into audio/sequencing software (Logic Pro7) to function as either a template for the overdubbing of acoustic instruments, or, to generate midi-sounds. All of the tracks in this section have been constructed from a process of multi-tracking, sometimes for expediency, where the same track will be repeated several times and the through a process of cut and paste techniques assembled or 'comped' (compiled) into a single track, or where the ability to spread musical material over several tracks can create a particular aural effect that would be difficult to reproduce live, for example in 'Lydian Dance' where for part of the arrangement four acoustic guitars are used (five in bar no. 31). Although some of the underlying harmonic structures could be played by one guitar, with some alteration to the voicings, using several guitars allows four and five note chords to be voiced across different instruments to achieve a wider more sonically 'open' voicing:

Section 5, fig. #1: extract from Lydian Dance

Guitar

\begin{music}
\begin{musicstaves}
\begin{musicstave}
\begin{musicnotes}
A_{maj9(11)}
\end{musicnotes}
\end{musicstave}
\begin{musicstave}
\begin{musicnotes}
A_{maj9(11)}
\end{musicnotes}
\end{musicstave}
\begin{musicstave}
\begin{musicnotes}
G_{maj9(11)}
\end{musicnotes}
\end{musicstave}
\end{musicstaves}
\begin{musicstaves}
\begin{musicstave}
\begin{musicnotes}
A_{maj9(11)}
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\begin{musicstave}
\begin{musicnotes}
A_{maj9(11)}
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\end{musicstave}
\begin{musicstave}
\begin{musicnotes}
G_{maj9(11)}
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\end{musicstave}
\end{musicstaves}
\begin{musicstaves}
\begin{musicstave}
\begin{musicnotes}
A_{maj7(11)}
\end{musicnotes}
\end{musicstave}
\begin{musicstave}
\begin{musicnotes}
A_{maj7(11)}
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A_{maj7(11)}
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A_{maj7(11)}
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\begin{musicnotes}
A_{maj7(11)}
\end{musicnotes}
\end{musicstave}
\begin{musicstave}
\begin{musicnotes}
G_{maj9(11)}
\end{musicnotes}
\end{musicstave}
\end{musicstaves}
\end{music}
In 'It’s Not My Fault', the acoustic guitars in bars 17-27 are doubled and spread across the stereo spectrum. The ability to divide chordal voices in such a way and duplicate tracks across a wide stereo field creates a broader spread of chordal and textural voice.

The use of acoustic and synthesised or sampled sounds in this section range from ‘Lydian Dance’, where all of the instruments are acoustically recorded, to ‘Songs of Summer Past’, where all of the instruments, except the acoustic guitars and some percussion are sampled or synthesized. The choice of using acoustic instruments or digital samples is sometimes aesthetic and sometimes pragmatic, in ‘Lydian Dance’ the juxtaposition of multiple acoustic guitar voices is artistic, in ‘Songs of Summer Past’, sequenced rhythmic loops and mediated sampled sounds are intended to create contrasting textural and rhythmic layers to the sonically acoustic and natural sound of the nylon-strung guitar. In ‘It’s Not My Fault’, acoustic and sampled instruments are dynamic juxtaposed. Very often however, the decision is pragmatic, particularly when the practical implications of using live instruments and musicians can be prohibitive, for example, in ‘For You’, the string quartet parts were produced by string samples, then later the first and second violin parts were overdubbed with an acoustic violin; I would have undoubtedly preferred to record a full string-quartet but the practical implications of time and money were prohibitive. This however reflects real world practice as many professional composers particular in the film industry almost exclusively use sampled orchestral sounds: Hans Zimmer, a leading film composer, has invested over a period of time
in a large library of string, samples which he used recently on the feature film *Pirates of the Caribbean: At World's End.* In 'Put It in The Pocket' the use of a midi sequence and sampled Fender Rhodes piano and Hammond Organ parts (some of) are pragmatic but suited to the repetitive rhythmic nature of this idiom.

The relatively low volume level of the guitar restricts the size and type of ensemble in which the acoustic guitar can be performed acoustically and without the aid of additional amplification — which always has an effect on the acoustic sound.

Multi track recording removes the performance limitations of the acoustic guitar, imposed by its relatively low volume, and allows it to be recorded acoustically and mixed with any ensemble size or type. In two of the compositions 'For You' and 'Lydian Dance', a live recording could have been attempted, although the guitar would have to be effectively separated from the rest of the ensemble, but in 'Put It In the Pocket' and 'It's Not My Fault' where the guitar is juxtaposed with a dynamically loud rhythm section this would have been impossible. Once recorded in the digital domain the sonic character of the instrument can be easily manipulated and this has been used in 'Put It In the Pocket' where the dynamic level of the guitar has been compressed to achieve a greater overall dynamic level and 'It's Not My Fault' which contains a reverse 12-string guitar sample, the doubling of guitar tracks and a distorted acoustic guitar solo, and in 'Songs of Summer Past' where the acoustic guitar signal is augmented with an additional midi sound sample.

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In summary, this particular mode of working produces a wide range of flexibility in the use of resources — musicians, instruments and time, the ability to sonically manipulate sound (although this can also be achieved in the other modes), and opportunities to juxtapose any instrument regardless of its inherent volume. The conventional considerations of the arranger to use multiple instruments to provide a balance between musical textures, as in orchestral arrangement, are removed. In addition, the ease of transferring material between different media — notation, midi, digital audio files — allows a flexible range of working methods. The disadvantages are a corollary of the advantages. The flexibility of working methods and the ability to manipulate the recorded material, with virtually no limitation, can result in a process that is never concluded as material can always be reworked, extended, and re-positioned. Also, the ability to work as a lone producer can separate the producer from the musical stimuli of others, in a conventional process of composition » rehearsal » performance, the music can be informed by the input and observations of others. Because of the necessity of using a 'click track' and or quantized midi-sequences, when multi-tracking it requires experienced musicians with a high level of interpretative and technical skill to remove the musical sterility of the 'click track' and add an appropriate feel to the recorded performances.

- Modality #2 Traditional (CD #2)

This mode of practice is described as traditional in that the working practice of the compositional and recording process is largely unaffected by technologically determined practices and all of the pieces could be performed acoustically in a live performance situation. The compositional process engages formal notated and
organic aural traditions to express specific 'guitar-centric' and acoustic performance characteristics.

This section is comprised of five compositions: 'A Long Way Home', 'Dark', 'Afro-Diz', 'Sorry To See You Go' and 'Hats Off to Davey'.

- **A Long Way Home**: the inspiration for this guitar duet came during a long car journey and was inspired by the constant movement and rolling rhythm of the moving car. To achieve this I intended to build upon the guitar style of 'Sorry To See You Go', but with a greater focus on the development of the accompanying rhythm guitar styles. The harmonic and rhythmic structure emerged first and the melody was derived from improvising over the developing accompanying part. It is therefore a simple theme that is supported by an intricate and rhythmically strong accompaniment. This technique is particularly evident in the introduction where guitar 2 combines walking bass lines and chordal interjections to create a strong rhythmic statement.

![Section 5, fig. #2: A Long Way Home](image)

In the B section, again the predominant interest is in the accompanying guitar part that negotiates through three key centres. The interaction between the two guitars is largely rhythmic, and in particular passages, rhythmic and melodic material is echoed across the two instruments.

Guitars: Rod Sinclair
- **Dark**: a solo guitar piece. Dark draws its name from the use of the lower register of the guitar to play melodic themes. In solo guitar techniques the melodic material is usually played on the upper strings with the lower strings providing bass notes and the supporting harmonic material which is voiced in the register beneath the melody notes. In this instance, the melody is intentionally voiced in the lower register to draw different sonorities from the guitar; this is further pronounced by tuning the lower string down by one tone. The tempo is very slow to allow the harmonically dense resonances to project.

Guitar: Rod Sinclair

- **Afro-Diz**: A composition for solo guitar. The title of this composition is a play on the words aphrodisiac and African and it was intended to reflect the stimulating and exciting effect created by combining the strong percussive rhythms and repetitive musical phrases which are characteristic of African music. There is an inherent danger when appropriating the playing styles of the African sub-continent in that it is easy to inadvertently reduce a rich tradition of highly stylized, differentiated music styles and subtleties of performance nuance into an homogenised parody; this was never intended, rather, the intention is to create a homage to the great traditions in African music. Aware of this danger, the title ‘Afro-Diz’ points to the dizzying array of existing styles, and the attempt to play with a range of musical ideas drawn from African music traditions, it is not an attempt to be a piece of African music. The piece is performed with a percussion player playing a Djembe.

Guitar: Rod Sinclair
- Sorry To See You Go: a guitar duet in a bossa-nova style.

Because of the popularity of the guitar in Latin America, it is present in many indigenous music styles; this is particularly true of bossa-nova, which was developed as a guitar style by players such as João Gilberto and Luiz Bonfá. The rhythmic underlay to this tune is a bossa-nova rhythm and the form is thirty-two bars long being comprised of sections A1 (8 bars), A2 (8 bars), B (8 bars), A2 (8 bars). The piece was arranged to express the interaction between the two instruments and this has been achieved by closely integrating the two guitars, it is not simply an arrangement for melody guitar and accompanying guitar, as the two parts are closely interwoven to express the resonance of the instruments.

Performers

Guitar 1: Rod Sinclair
Guitar 2: James Birkett

- Hats off to Davey: an improvised fingerpicking tune.

As discussed earlier, the guitarist Davey Graham, spearheaded a movement in British guitar music in the late 1950s, that drew freely on a wide source of musical styles — traditional European folk music, American blues and jazz and the Oud playing of the Middle East — to produce a rich palette of musical and sonic possibilities. The impact he had on shaping contemporary acoustic guitar practice is profound as he encouraged through example the acoustic guitarist to experiment with new musical forms. ‘Hats off to Davey’ is in recognition of his role in shaping
the music of the contemporary guitar.

Guitar: Rod Sinclair

This section reflects a range of guitar playing traditions and as such is guitar centric in style and form. The compositional approach, arranging methods and performance techniques reflect the acoustic guitar in an unadorned natural state. The compositional approach in this section of the portfolio employs both notated and aural methods. 'Sad to See You Go', 'A Long Way Home' and 'Dark' were developed through a combination of playing and writing in a score form, in contrast 'Afro-Diz' and 'Hats off to Davey' were developed through a process of performance and improvisation. The method through which the music has been developed has a tangible effect on the musical structure of the completed pieces, where 'Afro-Diz' and 'Hats off to Davey' are cyclic and episodic in nature, 'Sad to See You Go', 'A Long Way Home', and 'Dark' have a more formally structured musical schema with both sharing an A, A, B, A structure, but with some variation in the bar numbers: 'Sad to See You Go' — A1 (8 bars), A2 (8 bars), B (10 bars), A (8 bars) 'Dark' and 'A Long Way Home' — A1 (16 bars), A2 (16 bars), B (16 bars), A (16 bars). Differences also exist in the harmonic scheme where the two improvised pieces are much simpler: 'Afro-Diz' is built on a D drone with a simple harmonic progression and 'Hats off to Davey', although predominately in A major, contains some chromatic and parallel harmonic movement, in the other three the harmonic movement is more advanced, in 'A Long Way Home' the tonality is established in the introduction as E major but each A section starts in the relative minor (C# minor) before working towards a resolution at the end of the sixteen bar sequence to E major. The B section begins in C major, which is established during a
two bar modulation where a G triad is suspended over an E bass note which progresses to a G triad suspended over an A and then a first inversion G triad.

Section 5, fig. #3: A Long Way Home

The B section moves through three key centres C major (4 bars), A-flat major (4 bars) and Eb major (4 bars) before the introductory 4 bars are reintroduced to re-establish E major as a key centre. In ‘Sorry to See you Go’ the A section is in a B minor tonality and contrasts with the B section which develops through a series of minor I/IV harmonic progressions before briefly resolving to G major, then modulating through a series of secondary dominants to return to B minor, the harmony and melody of ‘Dark’ is predominately modal (D Phrygian) contrasting with short sections in A-flat major (bars 25-27). These differences in harmonic complexity reflect both the idiomatic musical language and the compositional method, in that there is a tendency for notated material to be more harmonically complex and aural music to be simpler in its use of a harmonic language.

An important factor in acoustic guitar music is the choice of key and use of guitar tunings as they both determine the availability of open strings with which to provide drones and resonances. ‘Afro-Diz’ is written in D Major and a dropped D tuning is used (the bottom E string is tuned down a tone to D), ‘Dark’ again uses the dropped D tuning, but with the whole tuning system detuned by a further tone to produce a dropped C tuning which extends the melodic range and gives access to the
open C and G strings. The other three pieces are in standard tuning but the choice of key is important in that it increases the resonance of the instrument: the A section of ‘A Long Way Home’ is in E making use of open E, A and B strings, with a contrasting B section which modulates through C, E-flat and A-flat major creating different timbral resonance as the root notes are on fretted strings and therefore less resonant. The choice of the key of B minor for ‘Sorry To See You Go’ gives rise to a series of sympathetic resonances from the unfretted ‘open’ strings B, G, D and E. and creates opportunities to construct a bass line utilizing open strings. ‘Hats off to Davey’ uses all of the open string notes particularly A and E as strong bass resonances and the rest to produce ‘harping’ effects.

The percussive qualities of the guitar are used extensively, particularly in ‘Hats off to Davey’ and ‘Afro-Diz’, where the finger picking technique draws percussive resonances from the guitar strings and body. In ‘Afro-Diz’, dampening the strings dramatically alters the resonant nature of the guitars timbre and this is achieved by interweaving a piece of folded paper between the strings and close to the bridge. I discovered this technique in the late 1960’s when matchsticks were split and placed on the strings to emulate a banjo, but was re introduced to the idea when seeing guitarist Lionel Loueke playing with Herbie Hancock at the Sage Gateshead on November 13th 2006. The effect is compelling and by dampening the resonance of the strings, the percussive nature of the instrument is more greatly expressed.

Several of the tunes draw directly from other guitar styles ‘Afro-Diz’ from African guitar ‘Hats off to Davey’ from blues and country and jazz, ‘Sorry to See you Go’ from bossa-nova and more tangentially, ‘Dark’, from Flamenco music. ‘Afro-Diz’ is a playful celebration of African guitar styles, the introductory motif is drawn from musical and textural qualities of the Kalimba, the African thumb piano,
an ancient instrument that is common across Africa and which is used to produce cyclic ostinatos and is mimicked on the guitar by dampening the string resonances with the hand at the guitar bridge. This ostinato acts as a pivot around which episodic improvised sections occur. The tune develops through a series of musical sections that draw upon the styles of South African township music, where strong melodic themes are developed and repeated with embellishment, and the Malian tradition of guitar playing exemplified by Ali Farke Toure.

Where two guitars are used, the arranging possibilities are greatly increased as the presence of two melodic, harmonic, percussive and instruments offer a wide range of timbral and rhythmic possibilities. In 'A Long Way Home' both guitar interact closely and this interaction becomes more pronounced in the coda where the same rhythmic figures move between the two guitar parts.

In 'Sorry To See You Go', the combining of two guitars expands the harmonic possibilities and the introduction section is particularly effective in its use of two syncopated and synchronous parts. In 'Dark', 'Sorry To See You Go' and 'A Long Way Home', specific sections of the music are arranged for improvisation whereas, in 'Afro-Diz' and 'Hats off to Davey', which were devised through improvisation, the performer is required to reinterpret, embellish and improvise at each performance.
A click track has been used to record the guitar duets because, whilst two performers could perform these compositions live, they are in this instance recorded through a process of multi-track recording and the click track becomes important in synchronizing the two parts. The decision to record in this way is pragmatic rather than aesthetic and has been determined by time constraints and the difficulty of finding someone to learn or sight-read the part. The use of a click track always has an impact upon the degree to which any musical interaction can take place as it artificially restricts any metronomic variation. The solo pieces were recorded using a combination of live recording and click track ‘Afro-Diz’ was recorded live with a Djembe player, ‘Dark’ was partially recorded with a click track but the pulse was freely interpreted and variations in tempo played without the click, ‘Hats off to Davey’ was recorded without a click track. Again, the choice in all cases would be to record all of the pieces without any click track but the time constraints of recording encouraged its moderated use.

- Modality #3: Interaction and Improvisation (CD #3)

In this section, the intention was to realise compositions in real time and real spaces as a direct contrast to the first mode, and it was executed by bringing together a selected group of musicians to create music prepared compositional material. In this process, the choice of musicians is crucial as they are being chosen because of their individual skills and interpretative talents. Two recording sessions were arranged in which to record a variety of material with two different groups of musicians:

Group #1: a band comprised of double-bass, drum-kit, percussion, acoustic guitar, Dobro guitar, and fiddle.

The double bass and drum kit players (Neil Harland and Paul Smith) are both professional musicians with a national and international reputation as performers.
and session musicians. They both perform in a wide range of music styles and are considered as 'first call' musicians for professional work in the North of England. The Dobro guitar was played by Jim Hornsby who is a leading national exponent and has performed on many performance tours and recordings, and Andy Lawrenson a musician resident in Yorkshire who has a wide experience of playing in vernacular folk styles, and, unusually for a 'fiddle' player, jazz and popular music.

Group #2: a band comprised of double-bass, drum-kit/percussion, steel-string acoustic guitar and nylon-string acoustic guitar.

In this ensemble Adam Sinclair (drum-kit), Andy Champion (double-bass) and Jamie McCredie (nylon-strung guitar) are representative of a new generation of performers who in this instance are graduates of music education programmes — in this instance the BMus (Hons) Jazz, popular and commercial music degree at Newcastle College. All three players are making a name for themselves as accomplished versatile musicians. The acoustic guitar in both instances was played by myself.

The two bands were very different and these differences are reflected in the way the recording process was conducted. The first band are all seasoned professional musicians but with a considerable degree of difference in their skill base, where all of the musicians possess highly developed aural skills and the ability to interpret and improvise in different performance genres, a wide difference exists in sight-reading skills. This difference is directly related to their working practice, the drummer and bass player require a high level of reading skills to function as professional players in a commercial music market, whilst the vernacular traditions from which the Dobro and fiddle player have emerged place more importance on the ability to interpret music in very specific music genres. The second band, are much
younger professional musicians who have developed their skills through academic/instrumental study and who can all confidently improvise and sight-read at a high level. The compositions chosen for each recording session were carefully conceived to suit the particular players — this is an important point and has a considerable effect on the way the music was composed, arranged, communicated, interpreted, performed, and recorded.

Session #1:

Four pieces were prepared for the first session two as a feature for the Dobro guitar and two as feature for the fiddle player. In each pair of compositions one was very prescriptive with detailed notated parts and the other, a much more skeletal 'lead sheet', this was a purposeful decision to leave room for interpretation and improvisation. The two-featured players were each given one part that was intended to present a challenge to their own performance style, and one piece in which their improvisation abilities could be comfortably expressed.

Two pieces written to feature the Dobro playing of Jim Hornsby: 'You Cooda' Told Me' and 'Hang on JJ'.

- **You Cooda' Told Me**: a country ballad for slide guitar. The Dobro guitar can be tuned in many different tunings, but the most common tuning, and the one preferred by Jim Hornsby, is open 'G' major tuning (see tunings), this makes playing in G major and closely related keys easy, but much more difficult when chromatic harmony, key changes and altered notes are present. Knowing the playing style of Jim, I wanted to write a piece that, I hoped, would present a challenge for him both melodically and harmonically, therefore this composition is considerably more complex than most country ballads. The A section starts in G major but modulates into B minor and A minor and contains several secondary dominant chords and tri-
tone substitutions, and the B section develops modally through a parallel harmonic movement of dominant 9th chords to finally resolve to G major. In addition, the B section contains space for improvised solos by the guitar and Dobro.

-Hang on JJ: this composition was originally recorded as a guitar duet by James Birkett and Rod Sinclair as part of 'The Suite For Two Guitars' on the album The Jazz Guitar Duo and I have always wanted to try a new arrangement with a different rhythmic feel. The title refers to JJ Cale who is a leading exponent of American country blues music and is renowned for his 'laid back' laconic grooves, therefore this composition seemed ideally suited to a laid back rhythmic treatment. The composition consists of a simple 'head', which was taughtaurally, and substantial space for interpretation, improvisation, and interactivity.

Two pieces were composed for Andy Lawrenson: 'The Black Isle' and 'The Darkest Hour'.

-The Black Isle: a composition in a Celtic style, which was influenced by images of the Black Isle (Scotland), this island, although more accurately an extended peninsular, combines a rugged Highland landscape with beautiful seascapes, and is home to both a thriving agricultural and modern technological community. This piece has at its essence many characteristics of Scottish music the ballad, the dance, and the use of drones, but to reflect the modernization of the Scottish highlands is more cosmopolitan in form and instrumentation. The piece is comprised of three main themes: section A, a simple melodic ballad which is harmonized with diatonic chords and drones, B an interlude in B minor, with some chromaticism in the melody and 'C' a rhythmic variation starting with a unison melody in a 9/8 rhythm moving into an improvisation section in an alternating three
bar sequence consisting of two bars of 6/8 followed by a bar of 9/8, after a climatic point the fiddle returns us to a reprise of the introductory ballad. This composition requires the fiddle player to express the Celtic influence of the music in playing a counter melody to the guitar, the lyrical main theme, cadenzas and more challengingly an extended improvisation in part C. The tune could be described as a small piece of programme music that could be developed into a more extensive piece. Each section is representative of a characteristic of the island, section A; tradition and lyrical melody, section B; reflection and contemplation and C; dance and rhythmic excitement.

- The Darkest Hour: it is a common perception that the darkest hour is the one before dawn, a time of night noises and for some night terrors. This simple blues is intended as an evocation of the darkness of this hour and is comprised of a dissonant and micro-tonal melody that is set against a repetitive walking bass line and fractured rhythmic palette provided by the drum-kit. The composition is written in D minor but both the melody and harmony are ambiguous as the microtonal slurs produce pitches that lie between the major and minor third intervals. As the fiddle and Dobro can produce microtonal slurs and drones, this is a perfect choice to provide an underscore of unsettling glissandos, drones, and dissonant sounds. After the melody is introduced, there are four repetitions of the 12 bar sequence increasing in intensity before the theme returns.

Session #2:
Each of the players in this second line up are enthusiastic improvisers who are eager to tackle new material, therefore the composition is structures to encourage both individual and collective improvisation.
Mmm Interesting: a samba arranged for drum-kit, double bass, nylon-strung acoustic guitar, and steel-strung acoustic guitar The title echoes the response of a particular listener’s first hearing of the piece. This composition was intended as a vehicle for improvisation and to draw out the complementary but contrasting timbres of combining two guitars; the combination of nylon and steel strung guitars and two players with different individual styles creates many opportunities for interplay and the contrasting of timbre. The composition is in a samba style and the arrangement contains several variations in texture. The melodic theme is played on the steel-strung guitar with the nylon-strung guitar playing an accompanying rhythm pattern, this develops through into a series of improvisations, connected by bridging sections, where each instrument has the opportunity to improvise and interact with the rhythm section. The bridging sections are all rhythmically varied and include ‘faux’ Flamenco inflections (bars 75-78), unison lines, and polyrhythms.

The intention of this mode was to create a portfolio of music through a process of interaction and improvisation and is in direct contrast to mode #1 (multi-track recording). Increasingly, ‘live’ recording, where all musicians are present in the same space and recording takes place in real time, is become a rarefied experience. This mode of recording, which entered a modern age of sophistication when ‘electrical’ recording emerged, attempted to capture a ‘live’ music performance, but when multi-track recording became possible, it correspondingly diminished. Although some listeners place great value on the notion of the unadorned live experience, with the exception of the recording of a live stage performance, it has become increasingly rare as the demands for accurate performance, and the financial constraints of musicians and the music industry demand a flexible recording process.
Live recording relies upon the availability of all of the musicians at a specific time, a process of rehearsal, and an appropriate space both in acoustic resonance and size. All of these factors have an impact on the finished process. The time demands of this process can vary greatly depending upon the skill base of the musicians: musicians with highly developed reading and interpretative skill are in great demand as session and commercial band musicians, where they are expected to work quickly and accurately in a range of differing styles, conversely, many musicians are in demand for their specific performance skills, which are often by their very nature idiosyncratic, highly specialised and individually styled. With the latter type of musician, the working process is usually aural and rehearsal is an intrinsic part of the learning process — the musicians learn by doing. Because the first band consisted of two session musicians and two vernacular musicians (I count myself as having qualities of both), the preparation for the recording session was different for both, scores and parts were available for all, but in addition, demo tracks were recorded for the ‘aural’ players. The ‘aural’ players were sent parts (including tablature parts for the Dobro player — see section on tablature) and audio recordings two weeks before the recording session and the ‘session’ players received their parts on the day. This arrangement was agreed to by all of the parties, but the outcome was not as expected. The fiddle and Dobro player telephoned two days before the session to declare that they were going to have difficulties with the parts. This in both cases was due to the fact that both had allowed insufficient time to prepare and, I assume, that they considered that their performance, aural, and improvising skills would be sufficient to carry them through on the day. This was an interesting if not irritating scenario, as I had explained to them both that at least one composition had been written to challenge their expectations, not in an unachievable way, but to stretch
their performance boundaries. Both had failed to appreciate the extent to which this
would require preparation. Because of the difficulties in getting everyone together at
the same time, I decided to conduct the session as arranged and to record everything
live, but, with sufficient sound separation to allow any repairs to recorded
performances to take place at a later date.

The recording session took place over a five hour period and involved playing
each composition several times until an agreed final take of each piece was
achieved. The results were as expected, the musicians performed well with a high
level of interaction and improvisation taking place, however, both the fiddle and
dobro player performed at their best in their musical 'comfort zone', adding a great
sense of musical character and interpretive musicality to each piece, but failed to
perform adequately during the more challenging sections. However, stimulated by
the process of being challenged, they both opted to return a week later to 'overdub'
the weaker musical sections; this was generally successful but it was decided later to
replace the fiddle parts on 'The Black Isle' and 'Hang on JJ' with those of another
performer.

In contrast, session #2 was conducted in a very different manner as all of the
musicians could sight-read to a high standard and possessed highly developed
interpretive and reading skills. The composition was rehearsed then played several
times until a finished 'take' was achieved. In comparing the two sessions the
contrast between the differing musicians was quite striking, and although I was
aware of the potential difficulties in running session #1, I thought that with sufficient
organization and appropriate modes of communication (tab notation and aural
recordings) that any difficulties would be overcome, what I didn't consider was that
the aural musicians, so accustomed to a particular mode of working and musical

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idiom, would fail to appreciate the amount of work necessary to function in this modality.

6.0 SUMMARY

In the introduction to this thesis, I suggested that I intended to establish modalities of contemporary acoustic guitar practice, though a process of research, composition, and performance. Three modalities have been posited and presented as a portfolio of recordings on 3CDs and on each the character and content of the modality is defined by a particular creative approach, working methodology and method of recording. In addition, as all of the creative work is intended to elucidate the acoustic nature of the instrument, the concepts of 'guitaristic practice' and 'acousticity', are central to the creative work, and provide the pivotal points around which the portfolio has been developed and the modalities of practice defined. Acousticity, has been defined in early chapters as, 'a conceptual signifier and product of sonic qualities and cultural values', and consideration has been given to the expression of these sonic qualities, and the way in which cultural signifiers reveal themselves in the practice.

As it is the acoustic sound qualities of the instrument that are being expressed, great care has been taken with the choice of instruments, the recording space and the recording medium. The instruments have been recorded in naturally resonant acoustic spaces and a great deal of consideration has been given to the choice of microphones and their position relative to the instrument. In most cases the recorded signal has then been treated with only a small amount of corrective equalisation (in order to remove undesirable resonances) and the addition of reverberation to enhance or recreate a particular type of acoustic space —'Dark' is a good example of this where a long reverberation time has been used to create the effect of a large

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resonant space. By contrast, in order to achieve a particular effect and to elucidate some of the techniques of sonic manipulation made possible by digital recording and audio processing, the original acoustic signal has been altered to such a degree that it is almost devoid of its original acoustic characteristics, or, the acoustic signal is enhanced with an additional midi-triggered sound sample — the former is demonstrated in the slide guitar solo in 'It's Not My Fault' and the latter in 'Songs of Summer Past'.

It has been argued, that the cultural location of the acoustic guitar is a direct result of the development of the electric guitar and the resultant binary opposition of the 'natural' acoustic guitar and the 'technologically' defined electric guitar, as suggested earlier:

If the electric guitar signified modernity then the acoustic guitar signified tradition and authenticity; it functioned as a signifier for the organic community, the natural world and anti-modernism.

However, even though such a hard distinction between the electric guitar and acoustic-guitar has to some degree diminished with guitar manufacturers such as Godin Guitars producing instruments that can simulate acoustic and/or electric qualities in one instrument, acousticity remains a potent signifier of a musical language and cultural practice. In the portfolio there are many examples which draw musical references from vernacular music traditions, within which acousticity continues to function as a signifier of tradition and the continuity of a musical language, for example, Celtic music ‘The Black Isle’, folk and blues ‘Hats off to Davey’, African guitar ‘Afro-Diz’ country music ‘Hang on JJ’ and bossa-nova ‘Sorry to See You Go'.
The two neologisms acousticity and guitaristic are interlinked, as it is the acoustic nature of the instrument that encourages particular performance practice and techniques, which in turn highlight its sound characteristics — a relatively quiet intimate sound, percussive nature and a relatively short sustain which favours the repetition of single-notes and chords. Also of importance are its flexible musical characteristics; the ability to play single lines, chords, drones, combinations of all three, and to be tuned to different tunings. When used in combination, as in the guitar duo, the potential musical options increase exponentially, offering the ability to play extended chord voicings, contrapuntal lines and the division of musical roles between accompaniment and melody. All of these characteristics have been expressed in the portfolio: variation in tuning systems in ‘The Black Isle’, ‘Afro-Diz’, ‘Hang on JJ’ and ‘Dark; the combination of two guitars in ‘Sorry To See You Go’ and ‘A Long Way Home’; the percussive qualities in ‘Hats off to Davey’, ‘Afro-Diz’, ‘Mmm Interesting’; extended chordal voicings and the combining of several guitars in ‘Lydian Dance’ and Songs of Summer Past; the extensive use of open strings as drones in ‘The Black Isle’, ‘Hats off to Davey’, ‘Afro-Diz’ and ‘Dark’; the use of open strings to produce special effects, for example harping, in ‘Hang on JJ’, ‘Hats off to Davey’; finger picking styles in ‘The Black Isle’, ‘Hats off to Davey’, ‘Afro-Diz’, ‘Hang on JJ’, ‘A Long Way Home’; plectrum styles in ‘Mmm Interesting’, ‘Lydian Dance’, ‘It’s Not My Fault’ and ‘Put It In the Pocket’; slide guitar in ‘It’s Not My Fault’ and Dobro guitar in ‘The Black Isle’, ‘Hang on JJ’.

The expression of particular performance style and idiolect has been encouraged through the composition of particular pieces which are intended to express the particular performance characteristics of chosen instrumentalists, for example in ‘Hang on JJ’, ‘You Cooda’ Told Me’, ‘The Black Isle’, ‘Dark’ and
'Mmm Interesting', and some to express the very particular performance characteristics of individual interpretation in 'Afro-Diz' and 'Hats off To Davey'. In the former, the compositions are shaped by a pre-knowledge of the performer(s) ability and style and are intended to allow for the performance idiolect to be expressed, in the latter the pieces have been developed through improvisation, and are therefore, to an even greater degree, intended to express the performance subjectivities of the performer. In all cases, a certain level of virtuosity is expected as the material is constructed as a showcase for the performer's ability.

It has been argued that, since the mid 1950s, it is has been the solid-bodied electric guitar that has dominated Western popular music and functioning as a potent signifier of youth, commercialism and a particularly overt sexuality, whereas the acoustic guitar, if it does signify the opposite pole in a binary opposition, has functioned to signify intimacy, tradition and, perhaps, artistry, maturity and reflection. The role of the electric guitar and its pre-eminence in rock forms of music signifies a powerful articulation of dynamism and energy, but it is often the acoustic instrument (or semi-acoustic) which is evident in forms of music more traditionally associated with artistry and maturity — Western art music, and some forms of jazz, blues, country and folk music; this suggests more than a casual association between acoustic, artistry and maturity. Several pieces in the portfolio allude to this sense of tradition and perhaps artistry, 'For You' sets the acoustic guitar with a string quartet and 'Dark' adopts some of the techniques of other more traditional solo guitar forms by drawing upon inflections of Flamenco music and the Spanish and classical guitar musical traditions.

The global distribution of the guitar and its appropriation into local and global forms of music, have resulted in an eclectic range of music and esoteric modes of
practice and this to some degree is reflected in the portfolio. It must be recognised however, that any portfolio of this size, and the creative work of one individual, could only possibly represent a small area of practice. The portfolio does however, illustrate an assimilation of differing cultural and music practices: funk ‘Put It in The Pocket; jazz ballad ‘For You’; bossa-nova ‘Sorry To See You Go’; samba ‘Lydian Dance’ and ‘Mmm Interesting’; country music ‘Hang on JJ’ and “You Cooda Told Me’; Celtic ‘The Black Isle’; folk ‘Hats off to Davey’; blues ‘The Darkest Hour’; African music ‘Afro-Diz’; Latin ‘Songs of Summer Past’; classical/flamenco ‘Dark’; jazz/rock/fusions ‘It’s Not My Fault’.

A diversity of social and cultural practises has been reflected in the use of aural and notated music traditions and they are represented in the modalities of creative practice; aural traditions of composition (‘Afro-Diz’ and ‘Hats off To Davey’) and notated traditions have been used (‘For You’ and ‘Lydian Dance’). Where notated music has been produced (examples exist in all modalities), its form and purpose differs. In modality #1, the score functions as a compositional format into which material can be directly written and then used to produce parts for performing musicians, when produced in software score writing packages it can also be exported as a midi-file and used to produce an audio template for the overdubbing of acoustic instruments, or, for the triggering of midi sounds. In modality #2, notated material has been produced as appropriate to the musical style and arranging format: it is necessary when arranging guitar duets and some solo material, but in other cases, compositional development has been through an aural process, therefore is not notated. In modality #3, the score provides working parts for reading musicians and because of the interactive nature of the process, is less detailed than in modality #1. At all times the notated material is intended to
communicate and develop musical material rather than to be a finished entity in itself.

It has been argued that technological developments have had a profound effect on the practice of acoustic guitar music and that any recorded performance is, by its very nature, mediated by the technological processes of recording, the effect of this mediation is evident in the portfolio and in all three posited modalities. What differs, however, is the degree to which this technological mediation has an overt or covert effect on the recorded product and the degree to which this mediation is intentionally expressed, or merely a functional method of capturing the performance. The degree to which this mediation by technology is expressed in the portfolio spans from the covert recording of the solo guitar compositions, ‘Hats Off to Davey’ and ‘Afro-Diz’ (modality #2), to the overt sonic manipulation of the acoustic guitar in ‘It’s Not My Fault’ and ‘Songs of Summer Past’ (modality #3). Once digitized, sonic manipulation is possible with all recorded material (assuming that there is sufficient separation between each of the recorded instruments), for example, in ‘Songs of Summer Past’ (modality #1), the audio signal of the nylon-acoustic guitar was converted into midi data and used to trigger sampled and synthesised sounds, whereas the ‘live’ acoustic guitar in ‘The Darkest Hour’ (modality #3) was sound processed after the recording. In modality #2, digital reverb is used to simulate or accentuate real environments and is used most elaborately in ‘Dark’.

A fundamental difference in the production of the portfolio is in the working methods of recording the music. It has been argued earlier, that it was the development of electrical recording and later multi-track recording that changed forever the practice of musicians, and that it is currently the effect of digital recording practice that is shaping these changes once again. It seems that the concept
of 'live' recording is becoming less easy to distinguish, as most 'live' recording takes place on multi-track recording equipment and the 'live' take is in effect a series of separated tracks, which, depending upon the level of acoustic separation between the instruments, can be edited and sometimes re-recorded. Can anyone except those present at the recording of a particular event determine, after the event, which parts of a recording were live, or, a simulacra? It is also doubtful whether those in attendance at a live stage performance could distinguish whether any post-production editing of the 'live' recording has taken place or any additional material has been added — unless strikingly different. Furthermore, is it of importance to the listener? In the portfolio, the differences between modalities #1 and #3 are self-evident, as the natural variation of tempo in the latter is a product of the recording methodology. It is useful to compare two similar tracks in similar idioms, 'Lydian Dance' and 'Mmm Interesting', the first was multi-track recorded to a click track, and the latter recorded live with no overdubs. The differences between modes #1 and #3 are self-evident, as the natural variation of tempo in the latter is more appropriate to the musical idiom and where the former contains a high degree of detail with multiple overlaid guitar parts, the latter is more spontaneous, and rhythmically and dynamic varied. To many people I suspect these differences would be indistinguishable and therefore unimportant, to others, the knowledge that one is a 'live' performance and the other constructed through a process of multi-track recording would signify an authenticity and perhaps artistry in the former; for we know that the performers can indeed perform.

The decision to produce a live or multi-tracked recording also affects the compositional process, in modality #1, the compositional process is fluid as all material can be altered and manipulated at any part of the process, and although this
is to some extent true of modalities #3, it is less so, as no ‘click track’ has been used. For example, the drum kit in ‘It’s Not My Fault’ (modality #1) could be replaced at any point, but this would be very difficult in ‘The Darkest Hour’, or impossible in ‘Mmm Interesting’ (modality #3) because of the sound leakage between instruments. Where a click track is used, sections of the composition can be, through a process of cut and paste, freely reorganized and reordered in dramatic ways, for example in ‘It’s Not My Fault’, substantial parts of the drum-kit and guitar have been copied and reused—this fragmented mode of reworking is reflective of the postmodern ethos of this composition. Multi-tracking could also be seen as reflecting a new aesthetic where the metronomic pulse is a central feature of the music for example in ‘Put It In the Pocket’. Although cut and paste techniques can be applied to modes #2 and #3, this is greatly restricted by the more natural and less metric rhythmic flow of this recording method. Katz remarks on the ‘tightening’ effect of recording and that:

Over the course of a century, there has been a noticeable move in classical performance towards steadier tempos, with fewer and less marked tempo fluctuations.\(^\text{232}\)

If this is true in classical music, it is certainly true in other forms of music that owe their nature to the recording process.

My own working preference is to record as much of the track as possible without a click track, in real time, to a multi-track recording system, while preserving as much sound isolation between the instruments as possible. This retains the option to overdub additional tracks and repair/replace parts of the original live tracks, but importantly retains the spirit and energy of live performance. This most closely describes the working practice of modality #3, where all tracks where

recorded live, but overdubs have taken place later, the most notable being 'The Black Isle'. This choice is however tempered by the pressures and demands of contemporary life, where the impact of technology has shaped the very way in which musicians work, communicate and ultimately perform. As the ability exists to 'construct' a finished composition from performances often separated in time and locality (fuelled by developments in communication and recording technologies) the modality of practice is to a large extent determined by financial pressures and the availability of particular performers. This does not imply a crude technological determinism, but reflects that fact that the availability of particular technologies does affect practice.

Katz again suggests that 'we must remember that in the end, recording’s influence manifest’s itself in human actions', it is we as human beings and practitioners, albeit often within confines, who decide the extent to which we engage with technology.

7.0 TUNINGS

Many tuning variations exist, some are alterations to standard tunings and others are referred to as open tunings. An 'open' tuning describes a tuning that produces a chord when the open (unfretted) strings are played, the chord is generally major but

some minor tunings exist. The other term used in relation to tuning is ‘slack key’ or ‘slack tuning’, this refers to the common practice of tuning strings down in pitch, rather than up, to produce an open tuning and results in a decrease in the tension in the string and the structure of the guitar.

Tunings used in the portfolio:

Altered tunings:

D-A-D-G-B-E  
Dropped ‘D’ tuning — standard tuning with the bottom string dropped to D. Used in ‘Afro-Diz’ and ‘The Darkest Hour’.

E-A-D-G-B-E  
Nashville tuning — the bottom three strings are tuned an octave higher than standard tuning. Nashville system uses a modified standard tuning where the bottom three strings E, A and D are replaced by lighter gauge strings and tuned an octave higher, the result is an instrument that has fewer lower resonances and makes it particularly suitable as a rhythm guitar — the lack of lower frequencies makes the guitar stand out in a recording mix. This tuning is used in ‘Songs of Summer Past’ and ‘The Black Isle’.

Open tunings:

D-G-D-G-B-D  
Open ‘G’ or Sebastopol tuning. Used for the rhythm guitar in ‘Hang on JJ’.

D-A-D-G-A-D  
Developed by British guitarist Davy Graham in the late 1950s, in an attempt to emulate the sound of the oud. This tuning has neither a major or minor tonality, as there is no 3rd, but possesses strong drones and a pronounced suspended fourth (D-G). This tuning is used in ‘The Black Isle’.

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G-B-D-G-B-D Dobro tuning used in ‘You Cooda’ Told Me’.

Examples of other tunings:

D-A-D-F#-A-D Open ‘D’ Spanish tuning predates the American Civil War and its name is derived from the popular song Spanish Fandango.

E-B-E-G#-B-E ‘Cross-Spanish’ tuning used by blues player Son House — the same as Spanish but not slack tuned i.e. tuned up in pitch.

E-B-E-G-B-E Used by blues player Skip James — a minor key variant of cross-Spanish tuning.


C-G-D-G-C-D derived from a CDGCD Banjo tuning.²³⁴


8.0 GLOSSARY

Capo: a movable mechanical device that clamps over the guitar neck and makes it possible to retain the use open-strings and fingerings whilst playing in different keys.

Chord box: a graphic display of a chord shape as it would appear on the guitar fretboard.

Comping: a jazz guitar terminology for playing chords in an even rhythmic style.

Cross-picking: requires the player to accurately pick non-adjacent strings.

Digital audio converter: converts an audio signal into a digital code.

Falsettas - flourishes between vocal – strophes

Finger picks: picks made out of plastic or metal and which fit onto the fingers and thumb.

Fretboard: the playing surface of the guitar neck on which frets are fixed.

Golpes - blows or fingernail strokes on the instrument.

Guitar bridge: a wooden or metal bridge on which the strings are supported above the guitar body.

Guitaristic: a neologism that is intended to describe a practice that is functionally located on the instrument.

Hammer ons and hammering: a technique in which a finger is placed on the fretboard and another finger ‘hammers’ another higher note onto the fretboard to produce a smooth (legato) rather than a picked (staccato) note.

Isorhythmic: a repeated rhythmic and/or harmonic scheme to which improvised episodes, flourishes and adornments are added.

Lead sheet: A simplified music score containing the minimum of compositional material the melody, harmony, a suggested rhythmic style and sometimes bass line.

Luthier: a maker of stringed instruments such as guitar or violin.

Machine-heads: (tuning pegs) a mechanical device to which the strings are attached and tightened or slackened to raise or lower the string tension.
Midi pad: a sustained chordal accompaniment, which is ‘triggered’ from a midisignal.

Plectrum: an implement made from various materials, including plastic and metal, which is held between the thumb and fore finger and used to pluck the guitar strings.

Picado: single note runs.

Pick: refers to a method of picking guitar strings and to the plectrum with which the strings are picked.

Punteado: the playing of single string lines.

Rasgado/rasqueado: a rhythmic strumming style incorporating the four fingers and thumb of the strumming hand.

Saddle: A plastic or metal attachment set into the guitar bridge on which the strings rest.

Soundboard: the resonant surface of the guitar onto which the bridge supporting the strings is fixed.

Slide: a tube, usually made out of glass or metal, which is pressed against the guitar string and moved up and down the guitar neck to produce a range of varying pitches and glissandos.

Tailpiece: a metal anchor to which the strings are attached.

Tone-woods: wood that is used in guitar making which is particularly suited to producing a pleasing resonance in an acoustic guitar.

Tremolando: the rapid repetition of a note or notes.

Trigger (midi): a midi device used to send information (trigger) to a midi sound device.
9.0 REFERENCES

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10. CD CONTENTS

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1. Lydian Dance
2. For You
3. It's Not My Fault
4. Songs of Summer Past
5. Put It In the Pocket

CD #2

Track list:
1. A Long Way Home
2. Dark
3. Afro-Diz
4. Sorry To See You Go
5. Hats Off To Davey

CD #3

Track list:
1. Mmm Interesting
2. Hang On JJ
3. The Black Isle
4. The Darkest Hour
5. You Cooda' Told Me

CD #4: Additional recordings.

Track list:
1. Blue Day
2. Riff-Raff
CD #5: Reference recordings.

Track list:
1. Stagefright - The Jazz Guitar Duo
2. Stagefright - Dick McDonough and Carl Kress
3-8 Compositional material: 2min exercise.

CD #6: Interviews.

Track list:
1. Interview with James Birkett.

CD #7: The Jazz Guitar Duo: James Birkett and Rod Sinclair

11. APPENDICES

Email correspondence:
1. Email from Stefan Grossman
2. Email from Tim Brookes (author of Guitar: an American Life)