

Across the Pacific: The transformation of the steel guitar from Hawaiian folk
instrument to popular music mainstay

by

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II. Abstract

This project examines the transformation in the early 20th century of the steel guitar from a Hawaiian folk instrument to a mainstay of American popular music. The steel guitar – here characterised as a prepared instrument and a performance style whereby a guitar is positioned face up on the lap of a seated player who stops the strings by means of a steel bar – is a late 19th century Hawaiian adaption of the Spanish guitar. Its original role was that of a solo and accompanying instrument in the performance of Hawaiian music, which was itself an ethnic music tradition that had developed under American and European colonial influences. Once Hawaiian music was exposed to Western audiences in the early 20th century, its popularity grew rapidly and it evolved from an ethnic curiosity to a global popular music phenomenon. The steel guitar was at first synonymous with Hawaiian music, but just as the music became more global in its outreach, so too did the instrument itself. The steel guitar came to be gradually divorced from its original, ethnic Hawaiian context, and was incorporated steadily into a range of mainland American popular music stylings. This study examines the origins of the steel guitar, the evolution of early steel guitar style and the context in which the evolution occurred.

III. Declaration

I certify that this work contains no material which has been accepted for the award of any other degree or diploma in my name, in any university or other tertiary institution and, to the best of my knowledge and belief, contains no material previously published or written by another person, except where due reference has been made in the text. In addition, I certify that no part of this work will, in the future, be used in a submission in my name, for any other degree or diploma in any university or other tertiary institution without the prior approval of the University of Adelaide and where applicable, any partner institution responsible for the joint award of this degree.

I give consent to this copy of my thesis, when deposited in the University Library, being made available for loan and photocopying, subject to the provisions of the Copyright Act 1968. I also give permission for the digital version of my thesis to be made available on the web, via the University's digital research repository, the Library Search and also through web search engines, unless permission has been granted by the University to restrict access for a period of time.

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This study would not have been possible without the support of my dear wife, Jane.

V. Notes on Transcriptions and Tablature

- All transcriptions of standard notation and tablature within this study are the work of the author unless otherwise designated.
- All transcriptions of steel guitar or Spanish guitar are notated an octave above actual pitch.

In the transcriptions that are designated as ‘swing’, the jazz convention of notating swung quavers as even quavers has been adopted for clarity and simplicity. In these cases the following applies.



Tablature is provided for selected transcribed examples throughout this study. It is used to identify and evaluate the style of performances. The determination of the tuning configuration is essential to the task of transcribing tablature. The tunings are also significant in their own right, as this study will show, and have a bearing on the origins of the instrument and also on the eventual decline of its popularity.

The process of determining tunings is a difficult one of trial and error. It is achieved through speculation as to the tuning in combination with close examination of given musical passages. The process of identification is complicated by a number of variables. These include the tuning itself, the possible use of reverse and/or forward bar slants, the combining of open and stopped strings and the identification of the steel guitar within ensembles of similar sounding instruments. The identification of a tuning from the analysis of single note melodies is the most difficult. A consideration of phrasing, bar movement, note timbre and volume provides indications though complete certainty is seldom possible. Where melodies are harmonised with dyads, the use of bar slants makes various tunings possible but, with careful consideration, assessment can be often made with some confidence. Where a performance employs full triads and bass notes, or five or six note chords, the tuning can be identified with much confidence. This study has benefited from the availability of digital

processing software created for the purpose of transcription that allows radical slowing of sound recordings that have been converted to the digital domain.¹

¹ 'Transcribe Software' 2012. <http://www.seventhstring.com/xscribe/overview.html> (accessed 15 January 2013).

Introduction

The steel guitar is a curiosity in 21st century popular music. An invention of late 19th century Hawai'i, the instrument has undergone such extreme organological and stylistic evolution, as manifest in the pedal steel guitar and the dobro, that its origins have become obscured. And yet, as a fashionable instrument of popular music in the early 20th century, the steel guitar was prominent in the vanguard of the phenomenon of guitar culture that dominated popular music after the 1950s. To the casual listener, it is not easily discernible within swing and proto rock ensembles of the 1930s and 1940s, such as rockabilly or western swing. But those exploring the roots of rock music may be fascinated by its sound and its configuration and wish to know more about its origins. This study seeks to assist that enquiry.

The aim of this thesis is to construct an account of the performance culture of the steel guitar in the years in which it was transformed from a Hawaiian folk instrument to a mainstay of American popular music.² The steel guitar is a late 19th century Hawaiian adaption of the Spanish guitar. Its original role was that of a solo and accompanying instrument in the performance of Hawaiian music, which was itself an ethnic music tradition that had developed under American and European colonial influences. Once Hawaiian music was exposed to Western audiences in the early 20th century, its popularity grew rapidly and it evolved from an ethnic curiosity to a global popular music phenomenon, one that lasted for over thirty years. At first steel guitar was synonymous with Hawaiian music, but as the music became more global in its outreach so, too, did the instrument itself. This study examines the steel guitar, first in its original, ethnic Hawaiian context, and then its steady incorporation into a range of mainland American popular music stylings at the hands of both Hawaiian and American musicians. In stages, this study describes the origins of the instrument and its establishment as a primary voice in Hawaiian music, the means and circumstances of its emigration to the American mainland, and the evolution of steel guitar performance culture as Hawaiian music rose to popularity

² In this study the term 'performance culture' encompasses style, technique and organology as well as the culture surrounding the media of transmission, dissemination and reception of the instrument and its music.

with Western audiences and the instrument became adopted by performers of Western popular music.

The span of this study encompasses the instrument's initial acoustic era, which began with its emergence in the late 19th century and continued until the early 1930s when newly invented, electrically amplified instruments displaced acoustic instruments in professional practice. Though restricted, the scope of this project has provided a challenge in following the evolution of an instrument that was so closely connected with popular music. This period of popular music was marked by monumental changes in both music styles and agencies by which they were disseminated. Stylistically, the period saw the rise of ragtime in the first two decades of the 20th century, which then gave way to jazz in the 1920s. Massive technological developments were made in the recording industry in this period, and radio became accordingly a significant medium of publicizing popular music. The period was also marked by developments in the business of music. In addition to the recording and broadcasting industries, these were evidenced in the publishing industry with the rise of Tin Pan Alley and in live performance with the evolution of a broad vaudeville circuit. As will be shown, the steel guitar had emerged at a perfect time to benefit from these developments and the role of commercialism and commodification in its global success is a salient issue within this study.

The methodology employed in this study is that of historical narrative, transcription and musical analysis. Secondary sources have been essential in building a picture of the emergence of the steel guitar in the late 19th century and its context. Likewise, secondary sources dominate the discourse concerning the emigration of the steel guitar to America and its reception by Western audiences. In contrast, the methodology employed in examining the development of the performance culture of the steel guitar in America relies more on the primary sources of sound recordings and scores. Musical analysis is the tool by which the evolution of steel guitar style is analysed and categorized.

This study comprises four chapters that follow the progress of the steel guitar chronologically from its appearance in the Hawaiian Islands in the late 19th century until the early 1930s, when the acoustic steel guitar gave way to electrically amplified instruments. Chapter One examines the origins of the steel guitar in Hawai'i. The relationship between the steel guitar and slack key guitar is investigated with similarities

identified affirming the theory that slack key guitar was the antecedent of steel guitar. Various claims as to the invention of the steel guitar are then considered with the possibility arising that its utilization was more a pragmatic restoration of decaying instruments than an inspired contrivance.

Chapter Two examines the means by which the steel guitar received acceptance on mainland America at the beginning of the 20th century. Commercial motives are shown to have provided an impetus for initial expeditions of Hawaiian steel guitarists to the mainland and subsequent commercial success is shown to have cemented the instrument's place within popular music. The musical context of a hybrid style called *hapa haole*, crucial to the positive reception of the steel guitar, is discussed along with the methods by which the steel guitar found an appreciative audience. Live performance, publishing and recording are all identified as vehicles of dissemination and transmission. Commercialisation and commodification emerge as significant factors in the separation of the steel guitar from its Hawaiian context in both professional and amateur performance.

The final two chapters are concerned primarily with an examination of the development of steel guitar performance practice in the early 20th century. The discussion employs the commonly asserted hierarchy of two generations of performers, the first generation discussed in Chapter Three and the second in Chapter Four. Chapter Three examines the musical context in which the steel guitar emerged as a primary voice in popular music. The elements of style that comprise early performance practice are then dissected. Within the span of the first generation, nominally from the late 19th century to the early 1920s, a distinction is drawn between the melodic style of professional performance and the accompanied melody style promoted to amateurs through pedagogical publications.

Finally, Chapter Four examines the style of the generation of steel guitarists that emerged within the jazz-influenced environment of the 1920s. In this and the previous chapter, a culture of lead melody playing is clearly demonstrated that is deduced to be a progenitor of the ubiquitous guitar solos of popular music of the 20th century. The cross-fertilisation of steel guitar with emerging blues genre is considered as well as the extent of the assimilation of jazz stylings. The chapter concludes with speculation that the diversity of style and practice required to adapt the steel guitar to the growing complexities of popular music held within itself the seeds of the instruments eventual decline.

In the examination of the early history of the steel guitar, this study has unearthed a diverse set of findings. Firstly, the theory that the steel guitar evolved from Hawaiian slack key guitar is affirmed. This finding then gives rise to an original theory of the origin of the steel guitar. This study postulates that the steel guitar may have evolved in response to the need for Hawaiian guitarists to prolong the life of instruments decaying through the ravages of climate or through unnatural stress of steel strings for which they were not constructed. An examination of early years of the instrument also reveals that the initial broad and rapid dissemination of the steel guitar on mainland America occurred as a result of commercialisation and commodification, firstly of Hawaiian music and then of the instrument itself. Subsequently, this study demonstrates that the steel guitar achieved autonomy from its Hawaiian musical context soon after being introduced to the mainland. Evidence presented suggests that commercialisation was a major factor in the establishment of autonomy.

Through analysis of style, this study reinforces the concept of two distinct generations of early steel guitarists. In a close examination of the style of the first generation, two distinct approaches, melodic and accompanied melody, are identified. The former dominated professional performance while the latter is found throughout printed pedagogical material. An examination of the extent and complexity of the melodic role that dominated early steel guitar performance shows a tradition that provided a model of 'lead' playing that was emulated and exploited to its zenith as the Spanish guitar became the primary instrumental voice in popular music in the 20th century. Finally it is argued that the complexity of performance practice that placed steel guitar in the vanguard of popular music performance in the jazz age contained the seeds of the instrument's decline. The diversity of performance practice in the late 1920s and 1930s contributed to the eventual dissipation of its considerable early following.

Literature Review

The purpose of this study is to construct a history of the early years of the steel guitar and, in doing so, add to a very small body of existing literature on the subject. The reason for the paucity of writing is puzzling when one considers the worldwide popularity that the instrument once attracted in the early 20th century. Contemporary texts that examine the diverse multicultural origins of the guitar, such as *Guitar Cultures*³ and *The Cambridge Companion to the Guitar*⁴ contain only passing references to the instrument within the context of other guitar traditions. One reason for this neglect may be the strong association of the instrument with the Hawaiian musical genre, a field that has attracted limited scholarly attention and in which vocal music demands the greatest focus. The few scholarly accounts that exist locate the steel guitar firmly within Hawaiian musical culture. The first to be published was an article within Dr George Kanahale's influential compendium *Hawaiian Music and Musicians*.⁵ This text provides an invaluable outline of the steel guitar within the context of Hawaiian music. It canvasses a number of theories as to the origin of the instrument and follows the rise of its popularity with Western audiences to its decline in the 1950s within Hawaiian music. The article does not attempt to explore the cross-cultural nature of the dissemination of the steel guitar. While acknowledging the adoption of the steel guitar within country music, the authors see the fortunes of the steel guitar as having receded with those of Hawaiian music.

There followed an article in 1983 by eminent musicologist, Mantle Hood that contains some historical background to the origins of ancient Hawaiian culture, further consideration of the origins of the steel guitar and an account of its physical development.⁶ A primary assertion of the article is the existence of a close relationship between Hawaiian vocal performance and steel guitar performance. Hood notes a similarity in 'manner' of steel guitar and vocal performance and deduces that, as the voice predated the arrival of the

³ Andy Bennett and Kevin Dawe, ed., *Guitar Cultures* (Oxford: Berg, 2001).

⁴ Victor Coelho, ed., *The Cambridge Companion to the Guitar* (Cambridge: Cambridge University Press, 2001).

⁵ Donald Mitchell and George S. Kanahale, 'Steel Guitar', in George S. Kanahale (ed.), *Hawaiian Music and Musicians* (Honolulu: University Press of Hawaii, 1979), 365-79.

⁶ Mantle Hood, 'Musical Ornamentation as History: The Hawaiian Steel Guitar', *Yearbook for Traditional Music* 15/ (1983).

steel guitar, the steel guitar must be imitating the voice. The relationship between the human voice and the steel guitar is explored in the article through comparison of the ‘talkable’ or measurable features. Hood lists three similarities of performance techniques: firstly, the prevalent use and deliberate non-use of vibrato, secondly, the use of pitch glide or portamento, thirdly he equates the use of harmonics on the steel guitar with the vocal technique of falsetto. Given Hood’s championing of objective scientific measurement, it is surprising to find that his assertions are supported only by his aural perceptions, without further evidence.

Subsequently Frank Vice, supervised by Hood, produced a Master’s thesis in 1991 with the aim of investigating the tradition of the Hawaiian steel guitar through the work of the Hawaiian master guitarist, Sol Hoopii.⁷ Vice’s thesis was that ‘Sol Hoopii was the principal figure who impelled and redirected the evolution of the Hawaiian steel guitar for the next generation of players.’⁸ The study consists primarily of analyses of fifteen examples of Hoopii’s recordings. The analyses consist of descriptive text supported only by tablature. Standard notation may have been omitted from the study in deference to his supervisor. Vice’s choice of subject is logical as Hoopii looms large amongst Hawaiian steel guitarists, but his homage to Hoopii doesn’t succeed in proving his thesis. The work provides a snapshot of various Hoopii performances but offers little evidence as to Hoopii’s influence on other players. It also fails as an investigation of the tradition of the steel guitar, as Vice largely ignores the first generation of Hawaiian players and their influence on Hoopii. Furthermore the context of the study that Vice establishes is built primarily around 19th century Hawaiian music with no effort to investigate the cross-cultural, cross-genre influences that were obvious within much of Hoopii’s work. Vice’s inability to create anything more than a static picture of Hoopii’s performances can be attributed as much to his methodology as it can be to the lack of scope of his investigation. The lack of standard notation impaired both internal and external comparisons of Hoopii’s work. Given the depth of textual music analysis provided, it is hard to imagine that this omission came from lack of skill and so it could be that ideology was at the heart of the decision not to include notation. His supervisor may have hoped that Vice’s use of graphic

⁷ Frank L. Vice, 'Sol Hoopii and the Hawaiian Steel Guitar', University of Maryland (1991). Unpublished dissertation.

⁸ Vice, 'Sol Hoopii and the Hawaiian Steel Guitar', 4.

analysis would result in useful conclusions. However, the scientific graphic notation, to which a chapter is devoted, is not successfully integrated into Vice's discussion and adds little to his argument. The overall result of Vice's methodology is that the great effort that he expended in transcription has provided little usable information for scholars pursuing his topic.

Scholarly recognition of the steel guitar beyond its Hawaiian context is rare. Jazz and blues scholars largely ignore the instrument. However, a recent text that begins to explore the wider influence of the instrument is John Troutman's 'Steelin' the Slide: Hawai'i and the Birth of Blues Guitar'.⁹ In this article Troutman summarizes the development of the steel guitar and documents its early use in live performance in southern America in the early 19th century. Using specific examples, he postulates that the extent of the exposure of steel guitar to African Americans in the South provided ample opportunity for the adoption of the technique by blues players. This important observation invites questions of further cultural cross-fertilisation that this investigation will advance.

Other secondary sources that have proved significant to this study include Dr Kanahale's previously mentioned compendium that was assembled in 1979.¹⁰ Beyond the steel guitar entry, relevant articles on performers and relevant ancillary topics are included. The book was revised and edited by John Berger in 2012 in the absence of the deceased Dr. Kanahale.¹¹ While many excellent additions have been made in the updated version, care needs to be taken as some of the original articles have suffered in the editing process.

A book that greatly informed the first chapters of this study was George Noe and Daniel Most's *Chris Knutsen: From Harp Guitars to the New Hawaiian Family*.¹² This study of an early luthier provided invaluable insight into a mainlander's perspective of the arrival of the steel guitar to America. Lorene Ruymar's book *The Hawaiian Steel Guitar and Its Great Hawaiian Musicians* was also a useful amalgam of articles and essays that

⁹ John W. Troutman, 'Steelin' the Slide: Hawai'i and the Birth of the Blues Guitar', *Southern Cultures* Spring (2013), 26-52.

¹⁰ George S. Kanahale, *Hawaiian Music and Musicians : An Illustrated History* (Honolulu: University Press of Hawaii, 1979).

¹¹ George S. Kanahale and John Berger, *Hawaiian Music and Musicians* (Honolulu, Hawaii: Mutual Publishing, 2012).

¹² George Noe and Daniel Most, *Chris J. Knutsen: From Harp Guitars to the New Hawaiian Family* (Everett, Washington: Noe Enterprises, 1999).

follow the progress of the steel guitar in Hawaiian music.¹³ A secondary resource, invaluable in assessing primary sources, has been Malcolm T. Rockwell's discography *Hawaiian and Hawaiian Guitar Records, 1891-1960*.¹⁴

Primary resources essential for this study exist in the form of recordings and scores. The growth of the internet has opened a pathway to many primary resources that would have been otherwise difficult to unearth. International market places for second hand printed material, such as eBay, have facilitated the collection of many original scores and method books. Additionally, internet usage has revealed many original sound recordings, once locked away in private collections but now available through digital archives such as the Victor collection¹⁵ or through digital transfers made available on YouTube by collectors.¹⁶ Sound recordings, vital to this project, have also been sourced in the form of commercial reissues of original recordings on compact disc. These have become more readily available over the past twenty years, with an appreciable improvement in accompanying notes. Collections of reissues can be seen to fall into three distinct categories. Firstly, budget collections assemble many recordings in no apparent order and without accompanying notes. Secondly, intermediate offerings by companies such as Arhooliie, Rounder Records and Yazoo consist of thematic collections accompanied by sketchy notes of sometimes-dubious quality. Finally, in the last fifteen years, well-researched collections that include comprehensive and detailed notes have been published by companies such as Grass Skirt Records, Cord International and Origin Jazz Library. The availability of these sound resources has contributed greatly to the viability of this project.

¹³ Lorene Ruymar, *The Hawaiian Steel Guitar and Its Great Hawaiian Musicians*, (Anaheim Hills, California: Centerstream Publishing, 1996).

¹⁴ T. Malcolm Rockwell, *Hawaiian & Hawaiian Guitar Records, 1891-1960* (Kula, Hawaii: Mahina Piha Press, 2007).

¹⁵ 'Encyclopedic Discography of Victor Recordings'. <http://victor.library.ucsb.edu/index.php> (accessed 10 December 2013).

¹⁶ 'Cliff's Vintage Music Shop'. <http://www.youtube.com/user/cdbpdx?feature=watch> (accessed 10 December 2013).

Chapter 1: Origins of the Steel Guitar

The steel guitar was invented in the late 19th century in Hawai'i. Remarkably, by 1920 it had achieved a widespread popularity in mainland America and was becoming an accepted voice in popular music throughout the world. The chronology of this transformation placed the steel guitar in the vanguard of a wave of popularity that saw the guitar become the most visible icon of popular music in the 20th century. This chapter examines the ethnic origins of the steel guitar and lays a basis for an understanding of the development and popularisation of the instrument. Initially the mode of performance of steel guitar is defined and its physical properties, required ancillary equipment and sonic properties are discussed. Then various aspects of the context of its invention are explored. Following a brief outline of the political history of Hawai'i, the development of the musical environment from which the steel guitar emerged is sketched, covering periods before and European contact. The history of modern Hawaiian music and the acculturation that occurred after European contact is then traced to reveal the musical context at the time of the emergence of the steel guitar. Next, an assessment of the history of the guitar in Hawai'i is made and the significance of Hawaiian slack key guitar style to the steel guitar is assessed. The similarities between aspects of slack key and steel guitar help affirm the contention that slack key guitar provided the base from which steel guitar developed. With the precedence of the slack key guitar affirmed, it is theorized that steel strings, fitted to guitars designed for gut strings, may have precipitated the steel guitar. Finally the chapter examines three prominent claims to the invention of the steel guitar in light of previous claim.

1.1 A Mode of Performance

'Steel guitar' describes both a mode of performance and a guitar prepared for that performance. The performance mode arose in late 19th century Hawai'i. There are three fundamental variants between steel guitar and Spanish guitar performance. Steel guitar performance employs different positioning and a physical modification of the instrument, and the use of ancillary equipment in the form of a steel bar and finger picks.

The steel guitar is held across the lap of a seated player with the face of the guitar directed upwards. This position gives rise to an alternative label of ‘lap steel’ guitar. The instrument can be also positioned on a stand or suspended from the shoulders by a strap. The strings are plucked with the right hand while the left hand holds a bar that is used to stop the strings. The strings of a steel guitar sit far enough above the fret board that in performance they make no contact with the neck other than at the nut. To achieve this, a Spanish guitar can be prepared for steel guitar performance with minor adjustment. An object is inserted across the neck at the nut to raise the strings. This simple modification renders a Spanish guitar unplayable in the traditional manner, as it can no longer be fretted with fingers. While the first Hawaiian steel guitarists improvised objects for this purpose, music publisher W H Smith patented a pressed metal sleeve that could be easily inserted over the nut of a standard guitar in 1915.¹⁷ The simplicity of the process of modification ensured that, as the instrument gained exposure and popularity with Western audiences, existing Spanish guitars could be easily converted. Thus, crucially, the availability of instruments was not an impediment as the instrument grew in popularity. Purpose-built instruments were later the norm and appeared commercially in America as early as 1908 when Chris Knutsen, an American luthier, manufactured instruments with square necks for steel guitar performance alone.¹⁸

The name ‘steel guitar’ is derived from the steel bar used to stop the strings. The bar is typically made of metal and has either a circular or rectangular profile.¹⁹ The bar is held between the first and third fingers of the left hand, with the second finger laid across the top to support and to guide movement. Frets or markings on the neck give a guide to pitch and the bar is repositioned by either lifting and placing it at the next position or by sliding it across the strings. Multiple strings can be simultaneously stopped or, alternatively, the heel of the bar can be raised so that only the tip of the bar meets an individual string in order to sound single notes without extraneous noise being generated.

¹⁷ Noe and Most, *Chris J. Knutsen: From Harp Guitars to the New Hawaiian Family*, 161.

¹⁸ Knutsen’s early output also included guitars with an adjustable neck, the angle of which could be changed to vary the height of the strings above the fretboard and so accommodate either steel guitar or standard guitar performance. Needless to say, a removable steel insert was a much cheaper option and few convertible guitars were built.

¹⁹ While glass or ceramic bars can be used, the weight associated with a steel bar is preferred by most contemporary players as it allows the vibrations of the string to be sustained for longer.

The portamento effect that has become synonymous with Hawaiian music is dependent on a smooth radius of the cylindrical bar. This permits the steel to glide the length of vibrating strings without generating superfluous noise as the pitch changes. The gliding property afforded by the radiused bar also permits vibrato, a technique ubiquitous in steel guitar performance. Vibrato is achieved by rolling or sliding the bar by hand with variation to speed and width easily controlled by the wrist.

Strings can be plucked individually, in groups, or strummed in either direction across the neck. While it is possible to pluck strings with bare fingers, the practice of using metal picks on the first and second finger and the thumb was adopted in the earliest stage of the instrument's development. While not essential for the parlour, finger picks have been a necessary feature of professional performance on acoustic instruments and continued to be used even after the introduction of electronically amplified instruments had radically increased the dynamic range of the instrument. They allow more volume, stronger and more percussive attack and extra control over tone, thus affording performers a greater range of timbral and dynamic options than bare fingers.

A crucial aspect of performance is the curtailment of extraneous string noise through a process known as 'dampening' or 'string blocking'. This technique is achieved using each hand in a different manner. The left hand employs fingers lowered onto the strings on either side of the bar to remove unwanted vibrations. This function can also be achieved with the edge of the right pick bearing hand. The picking fingers of the right hand can also be used to stop notes within the picking action in a process known as 'pick blocking'. This process is used not only to remove unwanted sound but as a tool of articulation.

A further physical requirement of steel guitar configuration is steel strings. They are essential for the volume needed to equip the instrument to take its place in ensembles. Spanish guitars of the 17th and 18th century were strung with gut or silk strings. While these strings can be stopped effectively with a steel bar, the resulting tone is quiet and dull in comparison with that generated on a comparable instrument equipped with steel strings. Additionally, gut strings are not capable of producing the same percussive attack or sustain. Through these qualities, steel strings enhance the distinct vocal-like qualities of the steel guitar.

The steel guitar is a polyphonic instrument capable of monophony, homophony and accompanied melody. In forming single note melodies, its microtonal capacity fosters idiosyncratic phrasing and expression. Block chords can be strummed or arpeggios can be picked with individual fingers. Texture of melody with bass line can be achieved by using picking patterns of thumb and fingers. The following example (Ex 1.1), one of the earliest published scores, shows a texture of accompanied melody, typical of the collection from which it has been taken.²⁰ A harmonised melody is played with the fingers and the bass line with the thumb. A single digit is used to pluck each note except the D major chord in the second measure which requires a sweep of the thumb across strings three, four and five at the fifth fret.

Ex 1.1 Akai: 'Ua Like No A Like' (1917)

The complexity and variety of available chords is limited by the fixed tuning and the bar used to stop the strings. Stopped notes can be combined with open strings if the bar covers only a portion of the strings. More note combinations are available by slanting the bar to combine two or three notes from adjacent frets. Despite this technique, a great limitation of the instrument is the restricted harmonic palate available to the steel guitarist. The chord vocabulary available is miniscule when compared with that available to a Spanish guitarist using fingers freely placed to fret notes. A slanted bar position is demonstrated in the first and third full measure of Ex 1.2 below.²¹ The third measure is unusual in that it requires the bar to be alternated between a forward and backward slant, a manoeuvre that requires great dexterity.

²⁰ Keoki E. Awai, *The Superior Collection of Steel Guitar Solos Vol. 1* (San Francisco: Sherman Clay and Co., 1917), 40.

²¹ N. B. Bailey, *The Peterson System of Playing the Guitar with Steel in the Hawaiian Manner* (San Francisco: Sherman, Clay and Co., 1916), 30.

Ex 1.2 Peterson: 'Home Sweet Home' (1916)

In summary, the performance mode of steel guitar can be seen to coalesce from six essential elements of technique, instrument configuration and ancillary equipment. These elements are, a horizontal positioning of the instrument, a raised nut, steel strings, functional tunings, a steel bar and finger picks. It is unlikely that the confluence of these elements occurred simultaneously and it is conceivable that the 'invention' of the steel guitar was a process of accumulation of elements that occurred over time. The origins of the instrument will be considered in depth later in this chapter.

1.2 Historical Context

The steel guitar is a cultural hybrid, forged in the collision of indigenous Hawaiian and Western cultures. It emerged at a time in which Hawaiians struggled to assert elements of their ancient culture in the face of growing cultural and economic domination by colonial forces. The Hawaiian archipelago is believed to have been first settled by Polynesians in two waves of migration, firstly between 300 and 600 A.D. and then again between 1100 and 1250 A.D. A tribal society, which was highly organised and stratified, evolved before European contact. First contact with Western society was made when a British expedition led by Captain James Cook 'discovered' the islands in 1788. There followed a constant stream of foreign visitors in the form of traders, whalers and military missions. With foreign help, the divided tribal society was united by conquest after Kamehameha I (ca 1758-1819) conquered the archipelago and established rule in 1810. Thereafter Hawaiians suffered under mounting colonial pressures as foreign powers sought to exploit Hawai'i for commercial, military and political purposes. Additionally Protestant missionaries arrived from New England in 1820 and, with royal assent, the influence of the church grew rapidly throughout the islands. Diseases that accompanied the new arrivals decimated the

indigenous population. Estimated to be around three hundred thousand when Cook arrived, the native population diminished to around fifty thousand by 1850. The numerical superiority of native population was further diluted by a flow of immigrant workers into Hawaii, imported to service the needs of new industries.

In 1848 native Hawaiians were disenfranchised by new land ownership legislation and much land was sold or leased to foreigners. The Reciprocity Treaty of 1875 between Hawai'i and its nearest powerful neighbour, the United States, granted duty free importation for Hawaiian agricultural products to America in return for the Pearl Harbor military base. This led to the growth of agricultural production and the expansion of predominately American commercial interests. As economic power of foreign interests grew, so did their will to assert political power. King Kalakaua (1836-1891), who ascended to the throne in 1874, was forced to sign a new constitution that greatly diminished his executive power in what became known as 'the Bayonet Revolution' of 1887. On his death Kalakaua was succeeded by his sister Liliuokalani (1838-1917). She abdicated her throne in 1893 under pressure from an organisation of European and American residents known as the Committee of Safety, which was backed by American military force. Political power moved irreversibly to the colonists as Hawai'i was annexed by the United States in 1898.

1.3 Hawaiian Music

The steel guitar emerged about one hundred years after Cook's 'discovery' of Hawai'i. It appeared at a time of rapid assimilation of European musical influences by Hawaiian composers and performers. Two eras of music, 'ancient' and 'modern', are identified in Helen Roberts' and Elizabeth Tartar's landmark musicological studies addressing Hawaiian musical culture.²² Unsurprisingly, these periods fall before and after European contact. While the process of assimilation of Western musical culture by Hawaiians may have begun on a modest scale with the gradual arrival of travellers and mariners following Cook's visit, both Roberts and Tartar delineate the eras by the arrival of American missionaries in 1820.

²² Helen Roberts, *Ancient Hawaiian Music* (Ann Arbor: University of Michigan, 1926), Elizabeth Tartar, *Nineteenth Century Hawaiian Chant* (Honolulu: Bernice P. Bishop Museum, 1982).

1.3.1 Ancient Hawaiian Music

The musical environment in which the steel guitar originated was unrecognizable from that of the pre-European era. However, close examination of ancient Hawaiian music reveals musical characteristics that have survived within steel guitar performance and which may have helped foster its invention and partially explains its popularity with Hawaiians.

In the era before European settlement, no word for music existed. Musical expression was inextricably linked to poetry in a form of chant known as *mele*. *Mele* was central to Hawaiian culture and was the most significant form of Hawaiian cultural expression. In the words of Tartar:

In function and interpretation it represents the inextricable mysteries of the deepest levels of physical and spiritual union in humankind and our relationship to nature. It represents the pre-historical and historical events linking past with present and it represents the spontaneous emotional response of an individual to a specific instance of a physical or spiritual experience.²³

Two forms of chant existed: *mele oli* and *mele hula*. *Mele oli* was unaccompanied chant that lacked regular pulse and was usually performed by an individual. *Mele hula* was chant performed with dance and, at times, accompanied with unpitched percussion instruments. The few pitched Hawaiian instruments included only one chordophone. This was a bow-like instrument called an ukeke that was played in the manner of a Jew's harp.²⁴

Chant was a highly organised system of music and poetry with the human voice at its centre. Its practice was ordered by elaborate rules that determined the vocabulary of the text and the musical elements of its performance. Dominant characteristics were its monophony, microtonal inflection and irregular rhythm. Generalisations of ancient Hawaiian musical style in Western theoretical terms can be drawn from Roberts' and Tartar's work. Tonal organization was modal, of limited range and employed microtonal inflection. Melodies were based around a central tone. Both the number and range of pitches employed was small.

²³ Elizabeth Tartar, 'Chant', in George S. Kanahale (ed.), *Hawaiian Music and Musicians* (Honolulu: University Press of Hawaii, 1979), 53.

²⁴ Orme Johnson, 'Musical Instruments of Ancient Hawaii', *The Musical Quarterly* 25/4 (1939), 499.

Tartar observed that, ‘the most outstanding and unique musical feature of Hawaiian chant is neither melody nor rhythm but the voice qualities of the chanter’.²⁵ Tartar’s discussion of vocal qualities encompasses the interrelationship of vocal timbre and technique with ornamentation. Voice qualities listed include tremors or quavering, named *i’i* or *kuolo* and pulses of unstable pitch called *ho’anu’unu’u*.²⁶ Ornaments listed include voice breaks created by transition from one vocal register to another, vibrato of varying speeds and depth, and glides, or portamenti that varied in speed and direction.

A connection to ancient Hawaiian music can be identified in the ‘singing’ qualities of Hawaiian steel guitar. Mantle Hood, in recognizing the similarities between voice and steel guitar asserted that the instrument was imitating the voice.²⁷ The substitution of a steel bar for fingers places many vocal devices and effects common to ancient chant at the disposal of a steel guitarist. Portamento with the bar frees the performer from the pitch constraint of frets. The speed and control of the hand held bar can match the range of micro-tonal inflections and oscillations of Hawaiian vocal performance as well as the breadth of portamenti employed. Vocal breaks can be imitated by cross string picking and use of harmonics. An infusion of vocal characteristics within steel guitar performance imbues it not only with intrinsic aesthetic properties, but also with a cultural identity that may have assisted in its adoption by Hawaiians in the late 19th century.

1.3.2 Hawaiian Music in the 19th Century

In the era following European contact, Hawaiian music was completely transformed by the influences of foreign culture. Three distinct patterns of cultural interaction, those of cultural domination, cultural exchange and cultural imperialism, can be identified, occurring both concurrently and across time.²⁸ Cultural domination was evident as ancient Hawaiian music was supplanted and suppressed in a process initiated by missionaries in 1820. Cultural exchange laid the foundations on which the steel guitar was founded. One example was the adoption of the guitar by Hawaiian cowboys who had been introduced to the instrument by imported Mexican and Spanish labour. Cultural imperialism was

²⁵ Tartar, 'Chant', 62.

²⁶ Elizabeth Tartar, 'Two Feathers in the Cloak', *Ha'ilono Mele* 1/7 (1975), 3.

²⁷ Hood, 'Musical Ornamentation as History: The Hawaiian Steel Guitar', 142.

²⁸ Elizabeth Buck, *Paradise Remade: The Politics of Culture and History in Hawai'i* (Philadelphia: Temple University Press, 1993), 102.

demonstrated in the process of commodification whereby acculturated music, first provided as part of a Hawaiian tourist experience, was successfully marketed internationally.

Tartar categorised phases of development of the modern Hawaiian music in the 19th century in two ways.²⁹ The first period, from 1820 to 1872, was described as one of transition in which the dominance of indigenous chant gave way to forms of Western music practice. The second period, in which the steel guitar appeared, was one of acculturation when Hawaiians combined Western and Hawaiian musical practice into contemporary forms.

The period of transition was one of both cultural domination and cultural exchange. Powerful drivers of the transition were missionaries who introduced Western hymnody. The process was led by Reverend Hiram Bishop who arrived in 1820. Having created a written form of Hawaiian language, missionaries translated hymn texts to Hawaiian and taught Hawaiians to sing them to standard English and American hymn tunes. In Hawaiian language the hymns were known as *himeni*. The proselytizing missionaries discouraged ancient Hawaiian religion and thus, chant. While chant persisted in some rural areas, it declined overall, particularly in those areas dominated by missionaries. For a time hula and its accompanying chant were even banned by law by a fervently Christian ruler, Ka'ahumanu. Despite a few periods of revival of chant, *himeni* became the dominant form of Hawaiian musical expression of the 19th century.³⁰ Initially *himeni* employed metric hymn tunes in common use in 19th century Great Britain. Later, American gospel tunes were included. The tunes, employing simple diatonic harmony, were independent entities and were interchangeable with various texts.³¹ The first *himeni* were sung in unison but hymn books published in 1834 contained three and four part vocal harmonisation, indicating a significant advancement in musicianship.³²

Secular Hawaiian songs appeared in the mid 19th century. Some of these were modelled on *himeni*, employing the same duple meter, strophic or verse and chorus forms, and

²⁹ Tartar, *Nineteenth Century Hawaiian Chant*, 26.

³⁰ Tartar, *Nineteenth Century Hawaiian Chant*, 28.

³¹ Amy K. Stillman, 'Beyond Bibliography: Interpreting Hawaiian-Language Protestant Hymn Imprints', *Ethnomusicology* 40/3 (1996), 475.

³² Kanahele, *Hawaiian Music and Musicians : An Illustrated History*, 133.

varying only in text.³³ Hawaiian appropriation of Western musical forms was not confined to hymns. Secular music of foreign settlers also provided other models such as parlour tunes and marches that were imitated by Hawaiian composers. These compositions were highly regarded and endured in collections of published Hawaiian music well into the 20th century.³⁴

As wholesale appropriation of Western musical styles continued in Hawaii, a melding of Western and Hawaiian musical styles began to occur. This process may have begun in the 1860s³⁵ and was openly promoted by King David Kalakaua in the 1880s, despite active opposition from those sections of the population that were influenced by missionaries.³⁶ Kalakaua admired and promoted Western music while also desiring to reinvigorate an indigenous Hawaiian culture that was flagging under colonial pressure. In Kalakaua's upbringing, he had been exposed to a combination of European and Hawaiian cultures. He was a talented musician who was versed in Hawaiian chant as well as Western music. He studied under Prussian musician, Henry Berger who he later employed to direct the Royal Hawaiian Band and who became his musical mentor.³⁷ Kalakaua's support for ancient culture was demonstrated by the inclusion of *mele oli* and hula at both his coronation in 1883 and jubilee ceremony in 1886.

Under Kalakaua, the combination of Hawaiian and Western musical styles was embodied in songs designed to accompany hula known as *hula ku'i* or hula songs. *Hula ku'i* was a conscious synthesis of Hawaiian and Western styles. Western traditions of melody and diatonic harmony were combined with ancient Hawaiian texts and vocal techniques. These Hawaiian elements had previously been subjugated by the missionaries' regimen of *himeni*. The songs were strophic settings of Hawaiian poetry. The strophes consisted of couplets of uniform beats, each of which was sung to the same basic melody. While the scope of melody of *hula ku'i* was restricted by repetition of the tiny forms,

³³ Stillman, 'Beyond Bibliography: Interpreting Hawaiian-Language Protestant Hymn Imprints', 480.

³⁴ Amy K. Stillman, 'Published Hawaiian Songbooks', *Notes* 44/2 (1987), 224.

³⁵ Amy K. Stillman, 'Textualizing Hawaiian Music', *American Music* 23/1 (2005), 85.

³⁶ Kanahale, *Hawaiian Music and Musicians : An Illustrated History*, 200.

³⁷ Berger arrived on loan from the German Army in 1872 and assumed full control of the Royal Hawaiian Band in 1877. He was the first to notate any Hawaiian music other than *himeni*. As the conductor of the band for 43 years and as an arranger, composer and teacher, his influence on Hawaiian music was immense. A preponderance of enduring marches within late 19th century Hawaiian music can be attributed, at least in part, to his influence. John Ely, 'Henri Berger'. <http://www.hawaiimusicmuseum.org/honorees/1995/berger.html> (accessed 21 November 2012).

interest was maintained through the practice of variation and embellishment of the melodies. The harmonic vocabulary of the songs was initially restricted to tonic and dominant chords but expanded to include subdominant and secondary dominants with time.³⁸ Accompaniment was provided by stringed instruments: the guitar, the violin and the ukulele.³⁹

In discussing the first published *hula ku'i* songs that were produced at the end of the 19th century, Amy Stillman posits that before publication they had been circulating orally. Additionally she observes the practice of melodic variability in *hula ku'i* songs in contemporary practice stretches back through available historical recordings. The reinstatement of melodic variability and extended vocal techniques after a period of suppression contributed to the creation of a form of music that was identifiably Hawaiian. It became important as a vehicle of Hawaiian nationalism.⁴⁰ Tartar suggests that this was the period in which 'the seed of today's Hawaiian folk music took root'.⁴¹ It was also the period in which the steel guitar arose.

1.4 The Guitar in Hawai'i

By the time the steel guitar emerged at the end of the 19th century, the Spanish guitar had become integral to Hawaiian musical culture. It was a favoured instrument for the accompaniment of songs, the mainstay of Hawaiian musical expression. The popularity of the guitar extended across Hawaiian society, from rural districts to the royal court. King Kalakaua and his sister, Lili'oukalani, numbered it amongst the instruments that they played and it was employed by their brother, Prince Leleiohoku, in a singing club that he formed.⁴² The guitar served an important function as accompaniment for *hula ku'i* in the cultural renaissance instigated by Kalakaua, and, in this service, secured a prominent and enduring role within Hawaiian folk music.

³⁸ Amy K. Stillman, 'Not All Hula Songs Are Created Equal: Reading the Historical Nature of Repertoire in Polynesia', *Yearbook for Traditional Music* 27/ (1995), 7.

³⁹ A Hawaiian adaptation of the Portuguese *braguinha*, introduced to Hawai'i in 1878 and actively promoted by Kalakaua.

⁴⁰ Buck, *Paradise Remade: The Politics of Culture and History in Hawai'i*, 113.

⁴¹ Tartar, *Nineteenth Century Hawaiian Chant*, 29.

⁴² S. E. Solberg, 'Hawaiian Music, Poetry and Dance: Reflections on Protection, Preservation and Pride', *MELUS* 10/1 (1983), 52.

The means by which the guitar found its way to Hawai'i is a matter for conjecture. The variety of traffic to and from Hawai'i in the 19th century provided many opportunities so it may have arrived from multiple sources. The journey of eighty Hawaiians to California for a month in 1818 at the behest of King Kamehameha to fight amongst Spanish soldiers provided one such opportunity. The often-cited visit of Mexican cowboys in 1832 was another.⁴³ A further possibility was its importation by the American missionaries. The guitar had enjoyed popularity at the end of the 18th century in New England from where Reverend Bingham and other missionaries came in 1820. Whatever the effectiveness of these and other exchanges, the guitar had become very popular in Honolulu by the 1860s.⁴⁴

A distinctive style of performance of the guitar known as *ki ho'alu* or slack key, which shares characteristics with the steel guitar, arose in Hawai'i in the 19th century.⁴⁵ It developed in an aural tradition that remained undocumented in any form until the 20th century. When mounting a concert of slack key guitar in the early 1970s, George Kanahahele was shocked to find that no literature existed.⁴⁶ The style had been perpetuated within families, with tunings and techniques guarded as family secrets. However it became a widespread and freely transmitted tradition as families intermarried and spread through the islands.⁴⁷ Keola Beamer's publication of 1973, *The First Method for Hawaiian Slack Key Guitar* provided the first notated representation of the style. While Elizabeth Tartar has identified a few slack key performances within Hawaiian recordings of the 1920s,⁴⁸ commercial recordings that featured slack key guitar were not made until the late 1940s.⁴⁹

Ki ho'alu means 'loosen the key'. For slack key performance, strings are slackened or raised to adjust the standard tuning of Spanish guitar so that the open strings sound a chord. In many slack key tunings, the top strings outline a triad while the bass strings are tuned at intervals of a perfect fourth or fifth. The instrument may be retuned for the demands of individual songs within the course of a performance. Melodies are played on

⁴³ Elizabeth Tartar, 'Slack Key Guitar', in George S. Kanahahele (ed.), *Hawaiian Music and Musicians* (Honolulu: University of Hawai'i Press, 1979), 352.

⁴⁴ Tartar, 'Slack Key Guitar', 352.

⁴⁵ George Winston, 'A Brief History of the Slack Key Guitar'. <http://dancingcat.com/skb/HSK%20Book%20-%20Book1.pdf> (accessed July 28 2013).

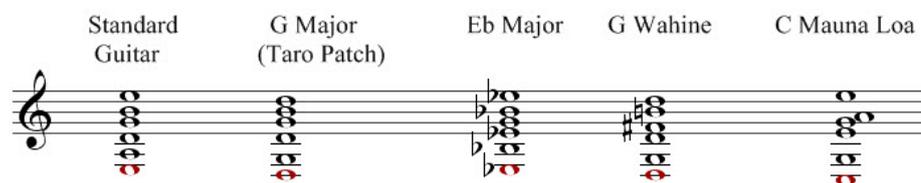
⁴⁶ George S. Kanahahele, 'Hana Hmf', *Ha'ilono Mele* 6/2 (1975).

⁴⁷ Keola Beamer, *Hawaiian Slack Key Guitar* (New York: Oak Publications, 1977), 5.

⁴⁸ Tartar, 'Slack Key Guitar', 359.

⁴⁹ Jay Junker, Harry Soria and George Winston, Notes to *History of Slack Key Guitar*. CD (Cord International), 1995.

the top strings and accompanied by simple bass lines of alternating root and fifths on the bass strings. A preponderance of sustained notes played on open bass strings adds to the resonance of a performance. The strings are mainly plucked individually, the melody with the fingers and the bass with the thumb. The style is characterized by repetition of short melodic and rhythmic figures. Syncopation is a characteristic of the interaction between the melody and the bass line. Techniques such as hammering-on, harmonics and the sliding of one or more fretting fingers along the neck to produce glissandi can be observed in contemporary performances. Performance of slack key guitar is marked by flexibility. Improvisation and variation are hallmarks of the style.



Ex 1.3 Typical Slack Key Guitar Tunings

Within the constraints of string gauge, countless sonorous tunings are possible. Two salient qualities of tunings sought are resonance and utility. While a small core of tunings predominates, many variations are used. Each tuning requires a separate approach to fingering and offers its own possibilities of open and fretted note sonorities, hammer-ons and natural harmonics. Many tunings are derived as a result of an individualistic approach by players. This is in evidence within contemporary performance practice where performers develop tunings around which they create individual styles. Some tunings have become known by the names of prominent players associated with them.⁵⁰ Three main categories of tuning exist. The first is Major in which different inversions of a major triad occur on the top strings. The most famous of these is the Taro Patch tuning in G major. The second category, Wahine, incorporates major triads with additional major sevenths or major sixths. The third group, Mauna Loa, is characterized by the interval of a perfect fifth

⁵⁰ Junker, Soria and Winston, Notes to *History of Slack Key Guitar*.

on the two top strings, which facilitates the use of the top string as a high pedal tone. It is hypothesised that this tuning may have evolved from violin or mandolin tuning.⁵¹

The transcription in Ex 1.4 below is an example of an early commercial recording of slack key guitar. It is an excerpt from a medley entitled 'Hula Medley' performed as a solo by renowned slack key guitarist, Gabby Pahinui, and was recorded in 1947.⁵² The excerpt is an arrangement of a tune written by Prince Leleiohoku and King Kakakau. An arrangement of the melody of the example in four-part harmonisation by Charles King appears in his enduring book of Hawaiian melodies which was first published in 1916, the melody of which appears below.⁵³



Ex 1.4 King: 'Nani Wale Lihue' theme (1925)

In his recording, Panahui first presents the melody in a languid rubato in keeping with King's arrangement. It is then transformed into a brisk march, which is propelled by a strong bass line. The form of the song is strophic, consisting of two line stanzas with identical melodies. A simple harmony of tonic and dominant of King's arrangement, typical of hula songs, is replicated by Panahui. King's harmonisation of the top two voices in sixths is retained for the majority of Panahui's piece but the accompanied melody contrasts with King's SATB homophonic texture. An excerpt of Panahui's performance is transcribed below (Ex 1.5) consisting of two stanzas of 16 bars each. In the excerpt Panahui's simple bass line of tonic and the dominant is plucked with the thumb on two adjacent bass strings while the harmonised melody is played with the fingers. In addition to the texture, other prominent characteristics of slack key style evident in this example are syncopation, ornamentation and improvisation. Syncopations are created through delay of

⁵¹ George Winston, 'A Brief History of Hawaiian Slack Key Guitar (Ki Ho'alu)' 2013.

<http://dancingcat.com/skb/HSK%20Book%20-%20Book1.pdf> (accessed 07/05/2013 2013).

⁵² Gabby Pahinui, 'Hula Medley', in *The History of Slack Key Guitar*, CD (Cord International), 1995.

⁵³ Charles Edward King, *King's Book of Hawaiian Melodies* (Honolulu: Charles E. King, 1925).

notes, as at bar 5, and through the use of dynamic and agogic accents and rhythmic variation. Elaborate ornamentation is evident throughout both of Pahahui's iterations of the melody. The variations from King's original melody demonstrate an overriding improvisatory approach which became an important characteristic of steel guitar performance as will be demonstrated in Chapter Four of this study.

♩ = 120

6

12

18

23

28

Ex 1.5 Panihui: 'Nani Wale Lihue' excerpt from 'Hula Medley' (circa 1947) [CD track 1]

The guitar was used to accompany *hula ku'i* in the 1880s⁵⁴ and it is claimed that slack key guitar style had evolved by that time.⁵⁵ The attributes of slack key style suggest that it would have been well suited to the task. The bass line of slack key provides a simple, strong, metered rhythm similar to that of *hula ku'i* accompaniment. Additionally, the harmony typical of slack key is of sufficient complexity to meet the demands of *hula ku'i*. A strong relationship between the two was identified by Tartar, who stated, 'Both the rhythms and the melody of slack key are distinctive because they clearly reflect traditional hula rhythms and the melodic ornamental and vocal qualities of the chanter.'⁵⁶

If it is assumed that slack key dates back to at least the 1880s, then it is likely to have contributed to the development of the steel guitar. This can be inferred by the shared characteristics of slack key and steel guitar in both the configuration of the instruments, tunings and in right hand performance technique. Chordal tuning is a vital prerequisite of slack key guitar and the application of a steel bar to a guitar tuned in this way is only a short experimental step. The finger picking technique of slack key guitarists is evident in the style of early steel guitarists. While the instrument's positioning requires contrasting left wrist positions, the action of the picking fingers on the right hand is similar. A similarity of texture of melody and accompaniment characteristic of both styles is generated by the similar picking technique. A comparison of Exs 1.1 and 1.5 confirms this observation. Furthermore, such a correlation would be unsurprising if early steel guitarists emerged from the existing ranks of slack key players.

A further shared physical characteristic of slack key and steel guitar is the use of steel strings. Slack key may have been developed on gut stringed guitars but evidence suggests that from an early stage, steel strings were preferred. A much-cited reference to the introduction of steel stringed guitars to Hawai'i was made in a newspaper article by a famous Hawaiian politician in 1939.⁵⁷ He stated that Portuguese sailors had brought steel stringed guitars to Hawai'i in the mid 1860s, they had been greatly admired by Hawaiians and they "took like wildfire." While this date has been commonly used to identify the time at which steel string usage began on Hawaiian guitars, it is by no means definitive.

⁵⁴ Tartar, 'Slack Key Guitar', 353.

⁵⁵ Winston, 'A Brief History of the Slack Key Guitar'.

⁵⁶ Tartar, 'Slack Key Guitar', 354.

⁵⁷ Curtis P. Iaukea in *Honolulu Advertiser*, May 7, 1939 quoted in Tartar, 'Slack Key Guitar', 352.

That steel strings cannot simply be substituted for gut strings without further possible consequence may have been influential in the development of the steel guitar. Steel strings require more tension to reach the same pitch as gut or silk strings, thus placing far more stress on the neck and body to achieve the same tuning.⁵⁸ The join between the neck and the body requires bracing in some way.⁵⁹ While unreinforced guitars may be effective in the short term, the neck of the instrument could bend with the pressure over time under the extra stress. This problem was further addressed in the mid 1920s when lateral truss rods were inserted in necks.⁶⁰ Steel strings were not widely used on guitars in America in the 19th century. American instrument builders gradually introduced guitars with X bracing or fan bracing designed to withstand the strain of steel strings towards the end of the 19th century. The first to do so were the Larson brothers in the 1880s, followed by Orville Gibson in the 1890s. Prominent guitar builder C.F. Martin and Company, who began guitar manufacture in 1833, did not commercially release a steel stringed guitar until 1915. The design modifications of additional bracing were required in order to strengthen the guitar sufficiently to take the extra stress of steel strings.

In order to acquire steel stringed guitars, at least three courses of action were open to Hawaiians. They would have needed either to find a foreign source of stronger instruments, find a way of employing steel strings under less tension, or design and build stronger instruments themselves. While first suggestion is possible, it is both undocumented and unlikely on a broad scale. With regard to the second alternative, as the name suggests, slack key required that the strings on guitar were looser than that of a guitar in standard tuning. In turn, this would have exerted less stress on the neck. Slack key tunings, therefore, may well have served a dual purpose of providing a chordal tuning for performance while enabling the use of steel strings on gut string guitars unsuited for the higher tension of steel strings. Speculation on the third alternative is made later in this chapter.

⁵⁸ Nylon strings, a modern day equivalent of gut strings, require tensions of between 50 to 80N while steel strings require tensions of 100 to 180N. Neville Fletcher and Thomas Rossing, *The Physics of Musical Instruments* (New York: Springer-Verlag, 1998), 245.

⁵⁹ Tony Bacon, 'Guitar; Classical Variants', in Stanley Sadie (ed.), *Grove Dictionary of Musical Instruments*, vol. 2 (New York: McMillan Press, 1984), 103.

⁶⁰ Bacon, 'Guitar; Classical Variants', 104

The issue of steel string tension invites further speculation as to the genealogical relationship of slack key and steel guitar. It is possible that the long-term effect of extra tension caused by steel strings on guitars, not designed to resist the attendant forces, was a gradual bowing of the neck. As the neck bowed, the strings would have gradually risen above the neck requiring increasing effort to fret the strings and making performance at first more difficult and eventually impossible. With severe bowing of the neck the only way that the strings of the instrument could be stopped was with some hard flat object like a bar. It is quite possible that, in the pragmatic process of extending the life of an instrument deteriorating from the stress of steel strings, or perhaps from the extremes of a tropical climate, the steel guitar was invented.

1.5 'Inventors' of the Steel Guitar

The origin of the steel guitar, like that of slack key, is unclear. But unlike slack key, which has remained a relatively unknown beyond Hawaii, the steel guitar achieved international prominence. Perhaps precipitated by the prominence of the steel guitar, a number of claims to its invention have circulated. Amongst these, three claims are prominent, those of James Hoa, Gabriel Davian and Joseph Kekuku. It is valuable for this study to examine the conflicting claims to assess how they might be seen in relation to the hypothesis above.

The earliest and least supported claim of the three is that of James Hoa. In a newspaper article of 1932 David Kupihea, a prominent resident of Honolulu, asserted that Hoa had invented the steel guitar in 1876.⁶¹ Kupihea maintained that Hoa had chanced on a method of stopping strings with the back of a metal comb while attempting to play harmonics. He stated that Hoa developed the style through experimentation and that his invention was used at King Kaikakaua's Jubilee in 1886. The absence of any independent confirmation and the fact that the steel guitar was not widely popularised until fifteen years later significantly detracts from the claim.⁶²

⁶¹ Doc Adams, 'Old Fisherman Tells How Steel Guitar Originated; Also How Ukelele Got Name', *Hai'lono Mela* 1/7 (1975). (Article reprinted from Honolulu Advertiser, 1932)

⁶² Kanahale, *Hawaiian Music and Musicians : An Illustrated History*, 366.

A second claim was made in a radio broadcast by Charles King, renowned Hawaiian musician and composer.⁶³ He claimed that in 1884 he had seen an Indian immigrant, Gabriel Davian, using a bar in the form of a comb or a knife to play guitar. Mantle Hood believed the technique employed by Davian was of Indian origin, learned in his homeland.⁶⁴ Later Hood cited the use of a glass or ebony slider performance of Indian instruments such as the *gottuvadyam* as the source of Davian's technique. In this way, Hood asserts that an ancient principle of performance, developed in Asia, may have been the basis of steel guitar performance. However, any possible role of Davian in the invention of the steel guitar need not follow from his Indian heritage. The principle is not unique to Indian music. The use of knife blades as sliders by European sailors was already known, and Davian, who came to Hawai'i as a deckhand, may have noticed and adopted the technique at sea. More broadly, the principle of glissando or portamento does not, in itself, constitute the style of steel guitar. Elements of tuning, picking technique and instrument configuration are all essential to the style. In his observation of Davian, King states that 'All playing was done on one string, and the strings were not elevated by a bar'.⁶⁵ From King's observation, Davian demonstrated only one requisite element of steel guitar performance and could not be said to have conceived the mature style that was later exported around the world. Nevertheless, King's observation may accurately represent part of a process of development that occurred across a period of years.

The most commonly cited account of the origin of the steel guitar is that of its invention by Joseph Kekaku. Kekaku's own account is of having accidentally discovered the portamento effect with a steel bolt and being so drawn to the sound that he experimented with other objects to duplicate it.⁶⁶ Kekaku's use of the bar in 1889 was corroborated by accounts of fellow students at the Kamehameha School for Boys. In the school workshop he designed a cylindrical bar to slide easily on the strings. He raised the strings of the guitar with an insert at the nut in order to assist the glide of the bar. Kekaku also decided that steel strings were better suited than gut strings.

⁶³ Kanahale, *Hawaiian Music and Musicians*, 366.

⁶⁴ Hood, 'Musical Ornamentation as History: The Hawaiian Steel Guitar', 144

⁶⁵ Kanahale, *Hawaiian Music and Musicians : An Illustrated History*, 367.

⁶⁶ Kanahale, *Hawaiian Music and Musicians*, 367.

No matter from where the principle had been derived, Kekuku's account of process of experimentation and improvement is feasible and explains the confluence of elements into a mature style. Kekuku is credited with having developed the style to such a level that his efforts to popularise it, through demonstrations within his school and concerts in Honolulu, led to the instrument being rapidly embraced throughout Hawaii. On leaving school, Kekuku became a musician and in 1904, he left Hawai'i continued to popularise the instrument through performance and teaching at first in mainland United States and then in Europe.⁶⁷

Kekuku's seminal role is rarely challenged. However, Kanahale's account of Kekuku's development of the steel guitar is sketchy and not totally satisfactory, particularly with respect to the addition of steel strings.⁶⁸ As stated previously, a guitar requires sufficient bracing to withstand the increased tension that steel strings exert on the neck. Such guitars were scarce at the time of Kekuku's experimentation in the 1880s. At this time commercial production of steel stringed guitars was only just beginning in America. It is possible that Kekuku had such an instrument for his own use but the popularisation of the instrument would have been severely hampered by lack of suitable commercially built instruments. For a broad dissemination of the instrument to take place in Hawai'i before the end of the century, an extra step in process of instrument design may have been required.

An answer to this puzzle, as yet unproven, may lie in Hawaiian ingenuity in instrument design. The guitar is a composite chordophone. It is composed of two elements, the string bearer, or neck, and the resonator, or body. The strength with which the two elements are joined is a determining factor in how much tension can be applied by the strings. The application of additional tension through the fitting of steel strings must be attended by extra strength of the join through bracing. Zithers, on the other hand, are simple chordophones that consist of a single box serving both as string bearer and resonator. The combination of these two functions within the same structure means that the instrument, unlike the guitar, has no weak point. This strong, simple construction allows for steel strings to be fitted under much tension. An account of the invention of the steel guitar by English musician and historian, Kealoha Life, makes mention of a demonstration of the

⁶⁷ Kanahale, *Hawaiian Music and Musicians: An Illustrated History*, 368.

⁶⁸ Kanahale, *Hawaiian Music and Musicians*, 368.

zither by a German musician at the court King Kalakaua.⁶⁹ Life suggests that the construction of the zither influenced construction of hollow necked steel guitars sold in the 1930s. While the timeline makes Life's claim tenuous, his suggestion may have merit, both in theory and in the light of evidence that has since emerged. Hollow necked steel guitars were popularised by Herman Weissenborn in the 1920s and 1930s and the style of construction is well known today. The neck of the instrument is square and of similar depth to the body, making the instrument fit only for steel guitar performance across the lap. The neck and the body are one piece and comprise a single resonating cavity. The design was first commercially realised in America by Chris J. Knutsen. Examples of his work demonstrating this style of design date back to 1909 but it is thought that he may have begun making them as early as 1907.⁷⁰ Knutsen may have been exposed to Hawaiian music and musicians as early as 1905 when visiting his daughter in Portland, Oregon where Hawaiian musicians performed at the Lewis and Clark Exposition. Also, Knutsen was living in Seattle, Washington in 1909 when it was the site of the Alaska-Yukon-Pacific Exposition, which featured continuous performances by Hawaiian musicians. While some of the steel guitars that the Hawaiians used were adapted Spanish guitars, they also made their own instruments.⁷¹ This suggests that Hawaiians may have been constructing square necked, zither-like guitars in the late 19th century and that this form of construction may well have originated from a need to construct instruments strong enough to accommodate steel strings.

This chapter has offered an account of the steel guitar as it existed in Hawai'i before its meteoric rise to popularity in the early 20th century. The musical context of its development has been outlined and its physical and sonic properties have been established. A comparison of the attributes of the steel guitar and slack key guitar style reveal significant similarities, which affirm a strong connection between the two. Despite limited direct evidence, it is likely that slack key style gave rise to the steel guitar. While this relationship is clear, the process of invention of the steel guitar remains in contention.

⁶⁹ Kalakaua reigned from 1874 to 1891. Kealoha Life, 'The Inventor of the Steel Guitar', *Steel Guitarist* 1/6 & 7 (1981), 17.

⁷⁰ Noe and Most, *Chris J. Knutsen: From Harp Guitars to the New Hawaiian Family*, 51.

⁷¹ Noe and Most, *Chris J. Knutsen: From Harp Guitars to the New Hawaiian Family*, 45.

Though various claims to the invention compete, it is possible that the origin of the instrument was precipitated simply by a desire to elongate the lifespan of a wooden instrument, decaying under stress from steel strings for which it was not designed or as a result of the tropical climate.

The next step in the instrument's journey was to find favour beyond the shores of Hawaii. The following chapter will discuss how this occurred, as the steel guitar became a beneficiary of a process of commodification, with Hawaiian music being exported to mainland America and around the globe. That process began with the marketing of hula to foreign tourists and continued with the emergence of touring parties of Hawaiian dancers and musicians that traversed America and the world. The steel guitar became a prominent voice in these ensembles and became recognised, admired and adopted by foreign audiences and musicians.

Chapter 2: Crossing the Pacific

At the beginning of the 20th century, the steel guitar was virtually unknown outside Hawaii. Like the slack key guitar, it could have remained so, but instead the steel guitar made a spectacular transition in the first decades of 20th century from its ethnic context to a prominent position within Western popular music.⁷²

This chapter discusses factors that initiated the global dissemination of the instrument and its progress in the early 20th century. The discussion will encompass the musical context in which the instrument was presented to American audiences and will emphasize the assimilation of popular music stylings within Hawaiian music. The means by which live performances of Hawaiian music reached wide audiences will then be discussed. The chapter also examines the dissemination of Hawaiian music through the agencies of print and recordings. In achieving a broad and enduring popularity, the steel guitar was employed within musical genres that in which it first appeared. As it became incorporated in new musical settings, in some instances it became detached from the Hawaiian genre. Thus, after physically leaving Hawaii, the adoption of the instrument within new genres would become, in a sense, a further severance from its cultural origins. Early recorded and published steel guitar music examined in this chapter reveal how early the process of detachment began.

The popularisation and subsequent assimilation of the steel guitar can be attributed, in large part, to its exposure to the public through Hawaiian music. The popularisation of Hawaiian music occurred through a process of commodification that enveloped Hawaiian music exported to the West. This initially occurred as the same process engulfed hula, in which acculturated Hawaiian music was an essential ingredient.⁷³ Commodification is a hallmark of popular music and was the process through which the rapid transmission and dissemination of Hawaiian music was achieved. The music was exploited for its

⁷² The slack key guitar was little known to Western audiences before the 1970s. George Kanahale claimed that no written record of slack key guitar existed before the Hawaiian Music Foundation published an essay on the subject in liner notes to a concert in Hawai'i in 1974. The concert took place in the context of a Hawaiian cultural revival to which the Hawaiian Music Foundation was a significant contributor. Kanahale, 'Hana Hmf'.

⁷³ Adria Imada, *Aloha America: Hula Circuits through the U.S. Empire* (Durham: Duke University Press, 2012), 5, 71.

commercial value through many means. The process was initiated in mainland performances at public exhibitions and accelerated as the Western popular music industry absorbed and utilised Hawaiian music, thus providing a platform for the popularisation of the steel guitar.

The successful commodification and dissemination of Hawaiian music relied on a confluence of elements. Firstly, the aesthetic of Hawaiian music needed to find favour with Western ears beyond that of an ephemeral, exotic curiosity. An important factor in this process would be the emergence of a hybrid of Hawaiian and Western popular music known as *hapa haole*, discussed later in this chapter. Secondly, the music required exposure to a large audience to foster demand. Thirdly, as demand grew, capacity to meet it with musical products with live performance, print or recordings, needed to be developed on a broad scale. As shown in this chapter, each of these conditions was met as popularity of Hawaiian and Hawaiian-styled music escalated in America in the 1910s, 1920s and into the 1930s. In the vanguard of Hawaiian music, the steel guitar was forcefully propelled to the forefront of popular music by the 1920s. From this peak of popularity and exposure, the assimilation of the instrument into new genres was inevitable.

2.1 *Hapa Haole*: Exotic Yet Familiar

Broad scale enculturation had begun in Hawaiian music with the imposition of *himeni* by missionaries in the early 19th century. Assimilation of Western influences continued by way of cultural negotiation in the creation of *hula ku'i* towards the end of the 19th century. *Hula ku'i* was the result of a conscious process by Hawaiians of combining Western and Hawaiian musical cultures. Western systems of harmony and melody, the basis of *himeni*, were further augmented by current, popular, Western music styles, providing a framework within which ancient and contemporary Hawaiian poetry was set. Employing Hawaiian texts and using Hawaiian vocal techniques influenced by ancient chants, *hula ku'i* was considered to be exotic and evocative and yet the musical framework in which it was presented was familiar to Western ears. Its potential as a marketable commodity was

apparent in the positive reactions of tourists who encountered it in Hawai'i in the late 19th century.⁷⁴

The next significant development in Hawaiian music saw a further inculcation of Western influences. A musical style emerged called *hapa haole*. *Hapa haole* or “half foreign” songs began to be composed at the beginning of the 20th century by Hawaiian musicians performing in Hawai'i for tourists. The style evolved as Hawaiian musicians based their compositions firmly on Western popular music and abandoned Hawaiian poetic texts for English song lyrics. The popular stylings rendered *Hapa haole* even more familiar to Western audiences than *himeni* or hula songs. This development had strong ramifications for the future commodification of Hawaiian music on the mainland.

Hapa haole was initially defined as being any Hawaiian song with English lyrics.⁷⁵ The simplicity of this first analysis is understandable as the harmonic framework of Western music was common to *hapa haole*, *himeni* and *hula ku'i* and the linguistic distinction was the most obvious contrast between *hapa haole* and earlier genres. However, in the blending of Hawaiian and Western musical influences, songs could vary in the proportions in which the elements were combined. Kanahale proposes five basic criteria for *hapa haole* songs. These are that, firstly, the composer, Hawaiian or non-Hawaiian, should be aware of the general structure of traditional Hawaiian music. Secondly, an English text that refers either directly or indirectly to Hawai'i is used. Thirdly, the style of the song should correspond to that of an American popular music. Fourthly, the music should reflect Hawaiian characteristics of large intervallic leaps, repeated melodic and rhythmic statements and melodic contours outlining triad and dominant-tonic harmonies. And finally, Hawaiian vocal ornamentation should be employed to impart Hawaiian character to the song.

However, as the genre matured and the songs began to be composed by non-Hawaiian composers, some of the criteria identified by Kanahale can be seen to diminish or vanish entirely. Such variability is recognised in a later edition of *Hawaiian Music and Musicians*

⁷⁴ These developments are outlined by Buck, *Paradise Remade: The Politics of Culture and History in Hawai'i*, 106.

⁷⁵ Kanahale, *Hawaiian Music and Musicians : An Illustrated History*, 106.

in which Kanahēle's earlier entry is appended with 'A general category of Hawaiian songs ... subject to varying definitions'.⁷⁶

The uneven process by which popular music elements were adopted by pioneering Hawaiian composers is evident in early *hapa haole* compositions. Along with language, form is an element by which often distinguishes *hapa haole* songs from other Hawaiian songs.⁷⁷ The 32 bar AABA form which became common within *hapa haole* songs by the 1920s stands in sharp contrast to the strophic form of hula and the verse chorus form of *himeni*. However, great variation in form in *hapa haole* can be observed in its early development, as popular music stylings were increasingly incorporated. One of the first *hapa haole* songs that can be identified was 'My Waikiki Mermaid', written by Sonny Cunha in 1903.⁷⁸ The song was innovative not only for its use of English text, but also for its abandonment of the strophic form of *hula ku'i*. The form incorporates verses and choruses of identical length in an A, A1, B phrase structure where the A phrases are consequent and antecedent melodies with the B phrase providing a refrain. In contrast, two years later in 'My Honolulu Tom Boy', while retaining English lyrics, the same composer reverted to the couplet form of *hula ku'i* and with the annotation 'Tempo di Hula'.⁷⁹ Cunha reversed this reversion to more Hawaiian styled music in 1909 in his composition 'My Honolulu Hula Girl', written after touring America for two years.⁸⁰ The form he then employed was far more sophisticated. The song has a verse chorus form, each of 16 bars. The two components both have four 4 bar phrases that have the same ABAC configuration. The style indication 'Slow Drag' and the incorporation of syncopated rhythmic motives demonstrate the incorporation of ragtime stylings.

As Hawaiian musicians toured the mainland to great acclaim in the early 20th century, *hapa haole* came to the attention of commercial songwriters of Tin Pan Alley who, recognizing its commercial potential, swiftly appropriated the genre.⁸¹ This process is

⁷⁶ Kanahēle and Berger, *Hawaiian Music and Musicians*, 244.

⁷⁷ Stillman, 'Published Hawaiian Songbooks', 226.

⁷⁸ A. R. Cunha, 'My Waikiki Mermaid', in (Sonny) A.R. Cunha (ed.), *Famous Hawaiian Songs* (Honolulu: Bergstrom Music Co, 1914).

⁷⁹ A.R. Cunha, 'My Honolulu Tom Boy', in (Sonny) A.R. Cunha (ed.), *Famous Hawaiian Melodies* (Honolulu: Bergstrom Music, 1914).

⁸⁰ A.R. Cunha, 'My Honolulu Hula Girl', in (Sonny) A.R. Cunha (ed.), *Famous Hawaiian Songs* (Honolulu: Bergstrom Music, 1914).

⁸¹ Kanahēle, *Hawaiian Music and Musicians : An Illustrated History*, 386.

discussed further below. Over the next two decades vast numbers of *hapa haole* songs were composed by non-Hawaiian composers. Many of these songs were indistinguishable from other popular music of the time by anything other than their subject matter, which could amount to something as slight as a reference to beaches or palm trees. In considering the success of these American composed songs, Kanahale's basic criteria can be seen to contain some aspects that appear more important than others. A Hawaiian theme, English lyrics and popular music stylings seem to be immutable criteria. On the other hand, knowledge of the general structure of Hawaiian music cannot be assumed in the large number of American composers who wrote such works. It is, thus, unsurprising that many of the songs that these composers wrote contained none of the discernible Hawaiian music characteristics listed by Kanahale. Furthermore, American performers of these songs needed no knowledge of Hawaiian vocal traits to perform them.

2.1.1 Hapa Haole and Tin Pan Alley

Tin Pan Alley was the industry of commercial song writing that emerged in the late 19th century. The development of *hapa haole* and the popularisation of the steel guitar coincided with its rise of Tin Pan Alley and it contributed greatly to the initial ascent of the steel guitar through its wide dissemination of *hapa haole*.⁸² In his landmark study of American popular music, Charles Hamm identifies two distinct generations of Tin Pan Alley compositions.⁸³ The first spanned the end of the 19th century to around 1920 and the second, described as the 'golden age of Tin Pan Alley', extended from the early 1920s to the 1940s. The duration of first generation of Tin Pan Alley compositions can be seen to coincide with early *hapa haole* and also with the first generation of Hawaiian steel guitar players whose style will be examined in the next chapter. As *hapa haole* developed, the popular music styles that inspired its composers were those of Tin Pan Alley, which, in turn, influenced the style and practice of the first generation of steel guitarists. In providing a musical framework for *hapa haole*, Tin Pan Alley defined a musical landscape that early steel guitarists had to traverse.

⁸² The term 'Tin Pan Alley' differentiates the publishing industry centered in New York, concerned solely with the creation of popular song, from that of an older established publishing industry that maintained a broad scope of instrumental and vocal music of classical, semi-classical and popular genres. Charles Hamm, *Yesterdays: Popular Song in America* (New York: W.W. Norton & Company, 1979), 287.

⁸³ Hamm, *Yesterdays: Popular Song in America*, 329.

Tin Pan Alley compositions were characterized by homogeneity of style.⁸⁴ This was brought about by the dominating influence of publishers who concluded that the public taste in songs was for familiarity, enlivened by melodic invention of new songs. The homogeneity extended to form, harmony and rhythm. American popular songs of the 19th century were generally strophic until around 1840. Thereafter they were contained verse and chorus.⁸⁵ The form of early Tin Pan Alley songs became more elaborate and was characterized by a brief introduction followed by verse and chorus of equal length with the chief melodic material residing in the chorus. 'My Honolulu Hula Girl' shows how a Hawaiian composer adopted this model.⁸⁶ The harmony of early Tin Pan Alley songs was usually simple, diatonic and often consisted of no more than three chords. This continued a tradition of simplified harmony that had begun with songwriters of the mid-19th century, who turned their back on the growing harmonic complexity that was developing within classical music. By the time of the emergence of Tin Pan Alley, there was little common ground between art and popular music. Harmonic mannerisms of Tin Pan Alley compositions did include the secondary dominant, V/V, before final cadences. Progressively, more extensive circular, cadential progressions of V/II, V/V, V, I became common.⁸⁷ One of the most famous early *hapa haole* songs, 'On The Beach At Waikiki' has harmonic scope of three chords and includes the conspicuous use of a V/V in addition to the tonic and dominant.⁸⁸ This song endured as a standard of the Hawaiian popular repertoire. As such it provided a harmonic model that accompanied the steel guitar into the genre of country music, as evidenced by legendary country steel guitarist Jerry Byrd's 1939 performance of the tune as an instrumental on the Renfro Valley Radio Show.⁸⁹

2.1.2 Ragtime and *Hapa Haole*

The first two decades of Tin Pan Alley and *hapa haole* also coincided with the ragtime era, the first music of African-American origin to achieve widespread commercial success. Ragtime came to dominate popular culture in America and was strongly represented within

⁸⁴ Hamm, *Yesterdays: Popular Song in America*, 290.

⁸⁵ Hamm, *Yesterdays: Popular Song in America*, 293.

⁸⁶ Cunha, 'My Honolulu Hula Girl'.

⁸⁷ Hamm, *Yesterdays: Popular Song in America*, 294.

⁸⁸ Henry Kailimai, 'On the Beach at Waikiki' (Honolulu: Bergstrom Music Co., 1915).

⁸⁹ Jerry Byrd, 'Beach at Waikiki' 1939. dla.acaweb.org/cdm/singleitem/collection/berea/id/2269/rec/2 (accessed February 10 2014).

the output of Tin Pan Alley composers by songs coloured, in varying degrees, with elements of ragtime. Following popular trends, many *hapa haole* compositions incorporated a ragtime flavour.

The defining characteristic of ragtime was the layering of a fast-moving, syncopated treble melody over a strong non-syncopated bass line.⁹⁰ Though the term ‘ragtime’ was arbitrarily applied throughout popular music of the day, it can be identified within three distinct areas of musical activity. These were, firstly, the composed piano music of Scott Joplin and others.⁹¹ Second, ragtime songs were written by Tin Pan Alley composers who incorporated ragtime rhythms to varying degrees. The variation in extent of ragtime influences mirrored the uneven manner in which Hawaiian musical elements were incorporated in *hapa haole*. The third area was that of ‘ragging,’ in which ragtime rhythms were applied in improvisatory fashion to standard songs as they were performed.⁹²

A juxtaposition of syncopated melody over strong simple bass lines was at the core of all ragtime. Hawaiian composers were initially able to adopt ragtime styling through rhythm without extending the harmonic complexity of their compositions beyond that of *hula ku'i*. The military marches that infused late-19th century Hawaiian repertoire, through the influence of German bandmaster Henri Berger, provided Hawaiian musicians with a good grounding in the fast, regular bass lines of ragtime. The assimilation of ragtime rhythmic motifs by Hawaiian composers was common and is demonstrated in Cunha’s composition ‘My Honolulu Hula Girl’ (1909).⁹³ (Ex 2.1 below) In contrast, a composition such as ‘Kawaihau’ (1906), subtitled ‘Hawaiian Ragtime’, acknowledged the genre in name though not in any identifiably ragtime rhythms.⁹⁴

⁹⁰ Frank Tirro, *Jazz; a History* (New York: W.W. Norton and Company, 1977), 89.

⁹¹ Edward Berlin, *Ragtime: A Musical and Cultural History* (Berkeley: University of California Press, 1980), 71.

⁹² Berlin, *Ragtime: A Musical and Cultural History*, 9.

⁹³ Awai, *The Superior Collection of Steel Guitar Solos Vol. 1*.

⁹⁴ Mekia Kealakai, 'Kawaihau', in (Sonny) A.R. Cunha (ed.), *Famous Hawaiian Songs* (Honolulu: Bergstrom Music Co., 1914).



Ex 2.1 Awai: 'My Honolulu Girl' (1917)

The willingness of Hawaiian composers to embrace ragtime placed their output at the forefront of modern popular music of the day. This may have encouraged Tin Pan Alley composers to take up and exploit the new genre. As modern Hawaiian music merged with the mainstream of commercial pop music, its attendant instruments, the steel guitar and the ukulele, were brought to the attention of a wide audience.

2.2 Reaching an Audience

The journey of the steel guitar from its ethnic origins to the centre of the world stage in just a few years seems unlikely given the remoteness of its base in Hawai'i and its relatively small number of practitioners. However, propelled by the vigour of the American music industry, a miraculous transformation occurred through the agency of live performance, printed music and record sales. The popularity of Hawaiian and Hawaiian-flavoured music, and the pervasive sound of the steel guitar, rose gradually until, by 1916, a tipping point had been reached. By this time the American public had become so obsessed with Hawaiian music that it had become the highest selling category of recorded music. The meteoric rise was noted in *The Edison Phonograph Monthly* of September 1916 by the following entry.

Two years ago what did the public know about Hawaiian Music, Ukeleles, Hula Hula Dances? Since then Hawaiian music and American versions of it have taken the United States by storm. Many New York restaurants have Ukelele players to entertain their guests, theatre orchestra leaders are programming Hawaiian music, vaudeville artists are programming it into their performances, and even motion picture producers are reflecting the music and customs of Hawaii by filming stories of this Pacific island that has been

brought into such prominence by the originality and fascination of its music and the instrument on which it is played ... The biggest popular hits of this season are all Hawaiian songs and the demand for records of these is widespread and insistent.⁹⁵

Hawaiian music reached new audiences through three main avenues, those of live performance, print and audio recordings. Through these means music was either disseminated or transmitted.⁹⁶ Thus the limitation of live performance, requiring the presence of both performer and audience, can be recognised and differentiated from either the printed medium of scores and method books or audio recordings, which can all be commercially duplicated and distributed in unlimited volume. While live performance provided Western audiences with the first and most immediate experience of Hawaiian music and the steel guitar, its reach was restricted by the number of Hawaiian performers who were prepared to travel. Mainland performances by Hawaiian touring parties began in the late 19th century and increased throughout the first decades of the next century. The performance opportunities that opened up for Hawaiian musicians in America are discussed below. With initial public interest established through live performance, other sectors of the music industry reaped a reward. Sales of printed music were achieved by an American music publishing industry revitalized by Tin Pan Alley and the emerging recording industry also indulged the public's fancy. Through these agencies, and as Hawaiian music flourished, the reach of steel guitar was greatly extended.

2.2.1 Live Performance

Live performances of Hawaiian music on the American mainland that led to the Hawaiian craze occurred primarily in three ways, each impelled by commercialism. The three areas were trade and cultural expositions, the stages of vaudeville and other peripatetic forms of entertainment, and within an internationally successful and long running stage production called *The Bird of Paradise*.

⁹⁵ 'Hawaiian Music Universally Popular', *The Edison Phonograph Monthly* 14/9 (1916). It is evident from the article that the author of this piece confused the Ukulele with the steel guitar. The article describes how the ukulele is played across the knees with a piece of steel in one hand.

⁹⁶ This distinction is recognised by Amy Stillman, who observes that 'Transmission involves a transmitter and receiver, whereas dissemination is open-ended.' Amy K. Stillman, 'Of What Use Are Hawaiian Songbooks?', *Perfect Beat* 2/2 (1995), 65.

The promotion of Hawai'i at World's Fairs and expositions provided the first extended employment opportunity for Hawaiian musicians and dancers on the mainland.⁹⁷ This was initiated by the popularity of hula with tourists to Hawaii. In these performances, *hula ku'i* and *hapa haole* had been adapted by Hawaiian musicians for the tourist trade and was enthusiastically received by Western tourists.⁹⁸ Impelled by this success, the music and dance was employed at Hawaiian exhibits at major expositions on the mainland. Staged by Hawaiian commercial and government interests, the exhibits displayed Hawaiian products and promoted of Hawai'i as a destination for investment and migration. They also demonstrated Hawaiian handiwork as evidence of the progress of the Hawaiian people.⁹⁹ The role of hula and music performances was that of a cultural envoy that enhanced all aspects of the exhibits.

Hawai'i was represented at ten major expositions on the American mainland between 1894 and 1915, with Hawaiian performers being present at five of them.¹⁰⁰ The largest of these, San Francisco's Pan Pacific Exposition of 1915, is commonly cited as being the catalyst for the explosion of interest in Hawaiian music. While it was most significant, the process of popularizing Hawaiian music in this way had begun much earlier. The first exhibition at which Hawaiian music was represented occurred in 1893 at the World's Columbian Exposition in Chicago, only months after the overthrow of the Hawaiian monarchy and well before the 1898 annexation. Hawaiian music was also represented by an eighteen-piece ensemble at the Pan American Exposition of 1901 in Buffalo, New York. The band was amongst many ethnic ensembles and consisted of guitars, ukuleles, mandolins, violins and two flutes though, at this time, included no steel guitars.¹⁰¹ The first Hawaiian exhibit at which a Hawaiian musical contingent included steel guitarists was at the Lewis and Clark Centennial and American Pacific Exposition and Oriental Fair in Portland, Oregon in 1905. It is speculated that at this trade fair, American luthier, Chris Knutsen, observed the steel guitar played by Hawaiians, recognised the potential of the

⁹⁷ Adria Imada, 'Hawaiians on Tour: Hula Circuits through the American Empire', *American Quarterly* 56/1 (2004), 116.

⁹⁸ Buck, *Paradise Remade: The Politics of Culture and History in Hawai'i*, 106.

⁹⁹ Imada, *Aloha America: Hula Circuits through the U.S. Empire*, 110.

¹⁰⁰ Imada, *Aloha America*, 269.

¹⁰¹ Peter Blecha, 'Hawaiian Music and Its Historic Seattle Connection' 2008.

http://www.historylink.org/index.cfm?DisplayPage=output.cfm&file_id=8831 (accessed 12 February 2013).

instrument and began designing similar instruments.¹⁰² The Alaska Yukon Pacific Exposition of 1909 in Seattle presented a similar opportunity for the promotion of Hawaiian products and services but on a larger scale. More than three million people attended the exhibition in the three months that it was open. Hawaiian music was presented at the Hawaiian pavilion by music director Ernest Kaai. Joseph Kekuku, the key developer of the steel guitar, performed during the exhibition and remained in Seattle for some time after the event to teach the instrument to local residents.¹⁰³

The Pan Pacific Exposition of 1915 dwarfed the previous events on the West coast and was one of the largest events of its type ever mounted in America. It lasted for seven months and the Hawaiian pavilion was visited by as many as thirty four thousand people a day.¹⁰⁴ Hawaiian music was performed several times a day by the Royal Hawaiian Quartette. The ensemble was equipped with ukuleles, guitars and a steel guitar played by George (Keoki) Awai.¹⁰⁵ The group functioned as a house band and many other Hawaiian musicians performed with them, including prominent steel guitarists Joseph Kekaku, Frank Ferera and Pale K. Lau. Given the scale of the event, number of attendees and the distances from where they were attracted, it is understandable that many authors cite this single event as the beginning of the Hawaiian music craze.¹⁰⁶ However, it is apparent that the event's influence was part of a wider process of popularisation involving other exhibitions and other modes of musical performance and had begun years earlier.

Variety stage productions of various types provided a second avenue through which Hawaiian music and the steel guitar were first popularised. With the commodification of Hawaiian music and dance proven successful at home and abroad, the opportunity to earn a living through performance on mainland America beckoned to those Hawaiian entertainers willing to endure the rigors of touring. Various peripatetic forms of entertainment offered opportunities for employment. These included medicine shows, the educational

¹⁰² Noe and Most, *Chris J. Knutsen: From Harp Guitars to the New Hawaiian Family*, 45.

¹⁰³ Blecha, 'Hawaiian Music and Its Historic Seattle Connection'.

¹⁰⁴ Tim Brookes, 'The Hawaiian Invasion', *American History* 39/5 (2004), 53.

¹⁰⁵ Subsequently Awai published a collection of solo arrangements that became one of the first published scores of steel guitar music. Awai, *The Superior Collection of Steel Guitar Solos Vol. 1*.

¹⁰⁶ Many attendees travelled from the East coast of America by ship through the Panama Canal, the recent opening of which was the primary reason for the exhibition.

Chautauqua circuit and most significantly, the vaudeville circuit.¹⁰⁷ Many musicians left Hawai'i for extended periods to tour North America and other continents. Some, like guitarist Frank Ferena, migrated to mainland America permanently. Troupes of Hawaiian musicians and dancers were formed both in Hawai'i and on mainland. One of the first and most famous troupes, Toots Paka's Hawaiians, was formed around 1900 by Hawaiian musician, July Paka and his new wife Toots, an American dancer who he had met while recording in San Francisco. The troupe was the first Hawaiian act to achieve significant success on the vaudeville circuit. Their achievement was demonstrated by the fact that in 1902, the top theatrical agent in New York was representing them.¹⁰⁸ The group consisted of eleven musicians and dancers with Toots starring as a dancer and flautist. The authenticity of the troupe's performance is open to question, as Toot's ancestry was part Caucasian and Indian.¹⁰⁹ An astute performer with an eye for commercial potential, she had observed the interest that Hawaiian performance generated. To pass as a Hawaiian, she familiarised herself with the performance as well as with various questions of origin. The success of this group encouraged a procession of groups of musicians and dancers from Hawai'i who toured Hawaiian shows across America and around the globe for over thirty years. Hawaiian performance also became a bandwagon that non-Hawaiian performers could join. The exoticness established by Hawaiian music and its lead instrument, the steel guitar, could provide a veil of authenticity to screen other failings that the shows may have had.

American vaudeville of the early 20th century proved to be a perfect platform for the popularisation and commercial exploitation of Hawaiian music. As such it provided employment for countless Hawaiian steel guitarists. Many prominent Hawaiian players such as Herman Bishaw, David Kalili, Ben Hokea, George Awai and Walter Kolomoku, along with the originator of the instrument, Joseph Kekuku, undertook long tours of America through the network of vaudeville theatres.¹¹⁰ Not only did the theatre network widely transmit Hawaiian music, it provided a perfect environment to showcase the steel guitar. Vaudeville provided a variety of entertainments in programs of short items

¹⁰⁷ Chautauqua was an adult education movement popular in the United States in the early 20th century. It brought entertainment and culture to the community.

¹⁰⁸ Brookes, 'The Hawaiian Invasion', 51.

¹⁰⁹ Kanahele and Berger, *Hawaiian Music and Musicians*, 825.

¹¹⁰ Kanahele, *Hawaiian Music and Musicians: An Illustrated History*, 375.

presented by separate performers or acts. Before 1870, variety entertainments in America were found in two classes of venue: saloons identified with the sale of alcohol and cheap theatres that attracted working class audiences.¹¹¹ To broaden the appeal of variety entertainment and attract middle class audiences, the vaudeville circuits of the early 20th century placed their shows in respectable theatres, away from the rowdy alcohol-fuelled crowds and within the decorum of polite theatre etiquette. This development proved advantageous to the fortunes of the steel guitar. As an acoustic instrument whose volume could barely rise above a typical ensemble of ukuleles and guitars, the steel guitar benefited from the quiet attention that could be afforded by a theatre audience. At first encounter, this setting allowed the audience to appreciate the novelty of steel guitar performance. It then allowed the subtleties and nuances of steel guitar music to be appreciated. In this environment, a culture of virtuosity was fostered that continued to develop over the period of the steel guitar's engagement in vaudeville.

While vaudeville provided an opportunity for Hawaiian music to be popularised, it was also a site where commercial pressures further diluted its ethnic components. The process occurred through the cooperation of vaudeville and Tin Pan Alley, between which a strong commercial relationship existed. By the end of the 19th century vaudeville was the most popular format of live entertainment. It also proved to be the most effective arena for composers to popularise commercial songs and subsequently sell sheet music to the public.¹¹² Having observed the commercial potential of *hapa haole* in Hawaiian performances, Tin Pan Alley composers experimented with the genre. Any vaudeville performer that could be persuaded was enlisted to sing the new songs by song hawkers. The success of the collaboration was demonstrated by vast numbers of pseudo Hawaiian songs, composed and performed by non-Hawaiians, flooding the stage and the publishing market. Hawaiian composers had been complicit in this process. By thoroughly infusing their compositions with Western elements, Hawaiian composers had ensured that imitators need only vary their existing compositional practices by employing a Hawaiian subject or few Hawaiian words to benefit from the craze. It is ironic that many Tin Pan Alley compositions of the era became so well known and accepted that they entered the

¹¹¹ Richard Waterhouse, *From Minstrel Show to Vaudeville* (Kensington, NSW: New South Wales University Press, 1990), 117.

¹¹² Hamm, *Yesterdays: Popular Song in America*, 287.

repertoires of Hawaiian musicians and over time became generally accepted as authentic Hawaiian tunes.¹¹³

The adoption of the steel guitar by Western performers proceeded in parallel with the success of *hapa haole*. Vaudeville musicians were fascinated by the idiosyncratic sounds that were generated by the steel bar and once the secret to the sound's origin was revealed, some non-Hawaiian musicians were quick to incorporate the novel sound within their acts. In his memoirs, vaudevillian Joe Laurie wrote of an encounter with a troupe of Hawaiians and the speed at which the steel guitar was subsequently adopted.

The Hawaiian Trio (Toots Papka)[sic] were the first to bring the steel guitar around, and they were a sensation. Everybody on the bill and in the pit tried to find out how the guy got that wonderful tone on the guitar, but he would never tell, until one night an actor got the guy plenty drunkee and out came the secret. He showed him the small piece of steel he held in his hand when playing. That's all, brother! In a few months vaude was lousy with lousy steel-guitar players!¹¹⁴

There is little doubt that Laurie was referring to Toots Paka's troupe but the precise date of the encounter is not specified. No steel guitar was used when Paka's troupe was formed in 1902 but in 1909 Toot's husband, July, used it with Toots on a recording for Edison, suggesting the encounter related by Laurie may have occurred within the first decade of the 20th century.¹¹⁵

Novelty also prompted the adoption of the steel guitar within non-Hawaiian musical acts in vaudeville. Musical acts were one of the mainstays of the vaudeville stage. Many were 'legitimate' acts that relied on a good quality of musicianship, but as Laurie observed, 'The ones who couldn't play well enough did novelty acts, which meant they went in for "gimmicks".'¹¹⁶ Novelty was employed to keep the audience's attention and to stand out from a myriad of competing acts. American audiences were undoubtedly intrigued by the novelty of the sliding bar and its characteristic portamento. While the portamento of single note is not unique to the steel guitar, the smooth sliding of a chord,

¹¹³ Some examples are 'Sweet Leilani' by Harry Owens, 'Hawaiian Chimes' by Eva Applefield and 'Beyond the Reef' by Jack Pitman.

¹¹⁴ Joe Laurie, *Vaudeville: From the Honky-Tonks to the Palace* (New York: Henry Holt and Company, 1953), 70.

¹¹⁵ Rockwell, *Hawaiian & Hawaiian Guitar Records, 1891-1960*, xi.

¹¹⁶ Laurie, *Vaudeville: From the Honky-Tonks to the Palace*, 64.

maintaining its intervallic relationships, could not be generated by any other instrument. To Western ears, this sonic curiosity provided much of the instrument's initial attraction. Portamento, in combination with various picking styles, string skipping and hand muting, could be used to produce a range of interesting and novel effects.

While no recordings of steel guitar in early vaudeville survive, examples of novelty effects by vaudeville performers exist on later recordings, such as those by American performers Jack Penewell and Roy Smeck. On Penewell's 'Henhouse Blues'¹¹⁷, a solo for steel guitar recorded around 1925, is based on the imitation of both hen and rooster, produced by short accented notes and portamenti. Novelty is apparent on Roy Smeck's recording 'Laughing Rag' of 1928.¹¹⁸ In this instrumental, fast glisses on the steel guitar are used to imitate human laughter. The unique chordal portamento of steel guitar continued to be used to comic effect in Carl Stalling's sound tracks to Warner Brother's *Looney Tunes* animations from the 1930s to the 1950s. This practice became a tradition that is continued in the soundtracks to the contemporary animation television series, *SpongeBob SquarePants*.

Beyond superficial gimmickry, the novelty of the steel guitar also provided an opportunity for skilled instrumentalists to broaden the interest of their act. Both Smeck and Penewell were accomplished guitarists who added the steel guitar to their vaudeville acts. Smeck, born in 1900, became a renowned multi instrumentalist and is credited with over 500 recordings made across a 75-year career. As a guitarist, Smeck has been considered as being one of the first generation of non-classical guitar virtuosos along with Eddie Lang and Lonnie Johnson. Proficient on banjo and ukulele, Smeck believed that as a non-singing act, he needed to include novelties to entertain the audience.¹¹⁹ To this end his act included playing instruments held upside down, performing with a harmonica held in his mouth without a brace and a performance on the ukulele whereby his fingers imitated a tap dancer's legs. Stephen Calt suggests that Smeck became interested in the steel guitar when he saw a performance of Hawaiian master, Sol Hoopii, in a travelling show and added the

¹¹⁷ Jack Penewell, 'Henhouse Blues', 78 (Marsh Laboratories Autograph 608), c1925.

¹¹⁸ Roy Smeck, 'Laughing Rag', CD (Banner Ba 7071), 1928.

¹¹⁹ Stephen Calt, Notes to *Roy Smeck Plays Hawaiian Guitar, Banjo, Ukulele and Guitar*. CD (Yazoo 1052), 1992.

instrument to his repertory.¹²⁰ The date of this encounter is not noted, but with Hoopii beginning his career in Los Angeles in the early 1920s, it is unlikely that the encounter occurred before the 1923 recording session when Smeck accompanied vaudevillian and steel guitarist, Sam Moore. Moore performed on the handsaw on this recording but was famous for his eight-string steel guitar known as an octochorda, built especially for him by Lyons and Healy of Chicago.¹²¹ It is likely that Smeck became acquainted with the instrument through Moore, and Smeck later recorded on the octo-chorda in 1926. Subsequently steel guitar became a bastion of his performances and over the years he published many volumes of scores and method books for the instrument.

Penewell was born in Massachusetts in 1897 to a Hawaiian mother, and entered vaudeville in 1919. He toured America as a featured guitarist, once billed with vaudevillian hyperbole as “the world’s greatest guitarist”.¹²² The novelty of the steel guitar within Penewell’s act was enhanced by special instruments that were built for him. In 1922 he began using a double necked steel guitar known as a ‘double six’ which had a single body from which two six stringed necks protruded in the fashion of earlier harp guitars. Penewell gave the reason for the extra neck as being to extend the range of harmony available.¹²³ In 1924, harp manufacturer Lyon and Healy, the maker of Moore’s octo-chorda, built a four ‘necked’ instrument for him to extend harmonic possibilities even further. Rather than being a four-necked guitar, as Penewell described it, the instrument was a large zither on which were mounted four separate courses of six strings, each of which served as a neck. These extraordinary instruments enhanced Penewell’s musical performance while adding visual interest to his act.

The third means of popularisation through live performance that is commonly cited as having precipitated a craze for Hawaiian music, was a stage production called *The Bird of Paradise* in which a Hawaiian ensemble provided incidental music. Largely forgotten today, the play, a Polynesian version of *Madam Butterfly*, had considerable impact within North America and Europe in the 1920s. Producers of the play employed Hawaiian music to lend authenticity to its theme of Orientalism and to heighten a romantically idealized

¹²⁰ Calt, Notes to *Roy Smeck Plays Hawaiian Guitar, Banjo, Ukulele and Guitar*.

¹²¹ Sam Moore, 'Dear Old Pal of Mine', (Vocalion 5133), 1923.

¹²² James Leary, *Polkabilly: How the Goose Island Ramblers Redefined American Folk Music* (New York: Oxford University Press, 2006), 85.

¹²³ Jack Penewell, 'Steel Guitar Design Changes', *Music Studio News* 14/1 (1956).

view of Hawai'i that the play portrayed. The playwright, Richard Walton Tully, imported five Hawaiian musicians for the production. Authentic Hawaiian tunes were used to add to the realism of the cultural and scenographic detail typical of early 20th century theatre.¹²⁴ After premiering in Los Angeles with a five-week season in late 1911, it was moved to New York. Despite only running for a modest 112 performances on Broadway, the subsequent reach of the play was immense. Not only did the Broadway production tour extensively; many stock company productions were later mounted and the play was seen across North America for twelve years. Tully remained in control of the subsequent productions of the play and by the mid 1920s he had overseen twenty productions. His insistence on authentic music played a considerable role in the promotion of the steel guitar by ensuring that audiences across America and in Europe experienced performances by skilled Hawaiians.

The music employed in *The Bird of Paradise* was not composed for the play. The production made provision for songs at plausible moments for singing and existing Hawaiian songs were used. In subsequent productions, as Hawaiian music became more popular, popular hits could be inserted and more songs added. In this way it provided a showcase for contemporary Hawaiian compositions. The musicians, who had performed in the first production, supplemented by singer, Edwin K. Rose, recorded songs from the first production, for Victor in 1913. The band, named 'The Hawaiian Quintette', recorded fifteen titles in three recording sessions within a week.¹²⁵ These recordings provide evidence of the music of the first production and consist of hula and *himeni*-styled songs and just two *hapa haole* songs, one of which was Sony Cunha's 'My Honolulu Tom Boy'. The songs were performed by a soloist or vocal quartet with ukulele, guitar and steel guitar accompaniment. The steel guitar's use is prominent throughout the recordings, providing melodic introductions and interludes within the songs. The recordings represent some of the earliest examples of steel guitar performances that survive today.

¹²⁴ Christopher Balme, 'Selling the Bird: Richard Walton Tully's the Bird of Paradise and the Dynamics of Theatrical Commodification', *Theatre Journal* 57/1 (2005).

¹²⁵ Rockwell, *Hawaiian & Hawaiian Guitar Records, 1891-1960*, 452.

2.2.2 Reaching a Mass Audience: Publishing and Recording

Despite commercial promise swelling the ranks, the reach of Hawaiian music through performance was limited by number of performers and venues. While attracting significant public attention, the transmission of Hawaiian music solely by live performance could not reach a mass audience to the extent possible through print or recordings. Commercial dissemination of Hawaiian music through these media had an immediate and extensive influence on the popularity of the steel guitar. An increasing popularity of printed publications in the early 20th century benefited the steel guitar through the popularisation of repertoire and by fostering a following of both professional and amateur players through the production of pedagogical material.

Hawaiian music publishing had begun as early as 1823 with the production of *himeni* songbooks of lyrics.¹²⁶ The first hymnbooks with music appeared in 1834. Secular songs were first published in Hawai'i around 1870. The first Hawaiian songs may have also been published on mainland America around this time but mainland publishers were not greatly concerned with Hawaiian music until the early 20th century. The first music publishing company in Hawaii, the Wall, Nichols Company, published the first major anthology of Hawaiian songs in 1899. The Bergstrom Music Company, who subsequently became the largest Hawaiian music publisher, produced an anthology of Hawaiian songs in 1902, arranged by composer Sonny Cunha. In 1914 another collection, *Famous Hawaiian Songs*, also arranged by Cunha, was published. The first edition of the enduring King's Book of Hawaiian Melodies appeared in 1916. In all, six anthologies of Hawaiian songs had been published by 1916. The overwhelming majority of songs included were of *himeni*-type, but this dominance was challenged by an increasing number of *hula ku'i* songs in the last two volumes published in 1914 and 1916. A few *hapa haole* tunes were included in the collections with Cunha's 1914 collection.¹²⁷

The publishing of seven subsequent editions of King's anthology before 1930 attests to the broad manner in which the Hawaiian commercial publishing industry disseminated Hawaiian music. The actions of the popular music composers of Tin Pan Alley were of

¹²⁶ Kanahale, *Hawaiian Music and Musicians : An Illustrated History*, 308.

¹²⁷ A table of all major Hawaiian songbooks published between 1898 and 1885 with a categorisation of their contents is included in an article by Amy Stillman. See Stillman, 'Published Hawaiian Songbooks', 232.

even wider significance. As the “Hawaiian craze” arose in America, commercial songwriters were quick to seize a commercial advantage and began to compose and publish *hapa haole* songs. As Kanahale puts it, American music publishers were prepared to give the public ‘as much Hawaiian music as it could stand’.¹²⁸ Music templates were available to American composers in the form of published pieces by Sonny Cunha or recordings by the first generation of Hawaiian guitarists that were beginning to come to prominence. It is estimated that between 1916 and 1926, millions of copies of printed Hawaiian music were sold.¹²⁹ The reach afforded by these publications far outstripped that of live performance. The Hawaiian song anthologies and Tin Pan Alley publications were usually arranged for piano and sometimes included chord symbols or ukulele chord diagrams for accompaniment.

Literature for steel guitar was also published, in the form of scores and method books. Early major publishers were Sherman, Clay & Co in San Francisco, C. S. Delano in Los Angeles and William Smith in New York. Method books began to appear in 1915 and increased in numbers in the face of a rising demand in the latter 1910s and 1920s. While these books could have been used by teachers in the transmission of steel guitar performance, most of the books were designed to serve as manuals for self instruction and, as such, were tools of dissemination. The books generally included music theory rudiments, pictures of required accessories, tuning instructions and pictorial representations of technique. Typically the books were either described as being a ‘complete’ course of instruction¹³⁰ or were actually designated to be for self-study.¹³¹ The decision to market these books in this way may have been influenced by the lack of teachers at this early stage of the popularisation. Alternatively it may have been as a commercial strategy to encompass as wider a clientele as possible.

¹²⁸ Kanahale, *Hawaiian Music and Musicians : An Illustrated History*, 309.

¹²⁹ Kanahale, *Hawaiian Music and Musicians*, 309.

¹³⁰ Leon Coleman, *The Steel Guitar and How to Play It* (New York: Carl Fisher, 1917)., C. S. De Lano, *The Hawaiian Steel Guitar: Complete Instruction for Its Artistic Study* (Los Angeles: C. S. De Lano, 1927)., W. O. Brache, *The Hawaiian Steel Guitar* (Melbourne: Allan & Co, 1924)., Henry A Peelua Bishaw, *The Albert Hawaiian Steel Guitar: Complete Instruction for Accompaniment and Solo Work* (Sydney: J. Albert and Son, 1920).

¹³¹ Bailey, *The Peterson System of Playing the Guitar with Steel in the Hawaiian Manner.*, George Roberts, *Paramount Method for Hawaiian Guitar: A Complete and Easily Understood Method for Self Instruction Showing How to Play Ragtime and Jazz* (New York: Wm. J. Smith Music Co., 1924).

The proliferation of method books made available well-organised, coherent tuition to whoever was interested in the steel guitar. The continued proliferation of these manuals over the next twenty years suggests that many were. It allowed students, entranced by the sounds of live performance, recordings or later, radio, to immediately pursue the instrument. The books provided details to Spanish guitarists on the conversion their instruments for the new style. Significantly, it placed the Hawaiian method at the disposal of non-Hawaiian players. The placing of the instrument in the hands of musicians, not steeped in Hawaiian music, helped to facilitate the passing of the instrument from its Hawaiian context into the wider world of Western popular music.

In the early 20th century, the expanding recording industry became a powerful agency through which the steel guitar was popularised. As the recording playback equipment became more affordable and durable, audio recordings could extend the instrument's reach well beyond that possible by live performance. The rise of audio recording to commercial prominence in the early 20th century coincided with that of Hawaiian music. The recording industry's timely emergence and its commercial exploitation of Hawaiian music served the steel guitar well.

The recording industry grew inexorably between 1900 and 1920. During this period three American companies, Victor, Columbia and Edison, dominated the industry globally through the ownership of recording and pressing patents.¹³² In addition to domestic releases, the major companies recorded foreign records and released them to ethnic markets both on American soil and abroad. These recordings were considered as separate from the mainstream of popular and art music and this was reflected in separate catalogues for these recordings. Initially the record industry, like the mainland publishing industry, paid little heed to authentic Hawaiian music.¹³³ The first verified recordings of Hawaiian music were made in San Francisco by an Edison dealer in 1899.¹³⁴ Recordings of over fifty sides were made by the Zonophone Record Company, probably in Hawaii, in 1905 and

¹³² Pekka Gronow, 'Ethnic Recordings: An Introduction', in, *Ethnic Recordings in America : A Neglected Heritage* (Washington: American Folklife Center, Library of Congress, 1982), 4.

¹³³ L.E. Andersen, 'Hawaiian Recordings, the Early Years', *Victrola and 78 Journal* 7/Winter (1996).

¹³⁴ Rockwell, *Hawaiian & Hawaiian Guitar Records, 1891-1960*, ix.

released by Victor for a Hawaiian market. Toots Paka's troupe was recorded by Edison in 1909, which is believed to be the earliest appearance of the steel guitar on a recording.¹³⁵

A breakthrough for Hawaiian music can be traced with the appearance of Hawaiian records in the popular music catalogues of the record companies in the 1910s. The change in the treatment of Hawaiian music, from that of ethnic material to mainstream popular music, began to occur in the light of the successes of Hawaiian music in *The Bird of Paradise* and at the Pan-Pacific Exhibition.¹³⁶ It also coincided with the uptake of *hapa haole* by Tin Pan Alley composers. By late 1915 Victor had begun issuing Hawaiian recordings every month and by 1916 all major companies were releasing Hawaiian or pseudo Hawaiian recordings.¹³⁷ The speed with which Hawaiian music took the imagination of the public is remarkable. While claims of precise sales figures for early recordings cannot be verified due to the absence of records, an article in Thrum's *Hawaiian Annual for 1917*¹³⁸ asserted that Hawaiian music was the most popular genre of Victor's output of 1916.¹³⁹ In this article salesmen for Victor reported Hawaiian music to be the most popular category of music that they were wholesaling to dealers that year.

Hawaiian music continued to be popular throughout the latter 1910s and 1920s. The domination of the industry by the three major companies continued until the patents that they held to the original mechanical process of capturing sound was made irrelevant by the technological development of electronic microphones. At this time competition from many smaller companies expanded rapidly to the benefit of Hawaiian music, which continued to be in demand. Malcolm Rockwell observes the listing of Hawaiian flavoured recordings in the catalogues of over one hundred and fifty American recording labels and on more than 200 foreign labels between 1891 and 1960.¹⁴⁰

2.3 Crossover: Separation from Hawaiian Music

Within the process of attracting popularity, the steel guitar extended beyond the scope of traditional Hawaiian music. Evidence of this move can be found within the three modes

¹³⁵ Andersen, 'Hawaiian Recordings, the Early Years', 3.

¹³⁶ Gronow, 'Ethnic Recordings: An Introduction', 14.

¹³⁷ Tim Gracyk, *Popular American Recording Pioneers, 1895-1925* (New York: Haworth Press, 2000), 8.

¹³⁸ 'Hawaiian Music Universally Popular'.

¹³⁹ Kanahele, *Hawaiian Music and Musicians : An Illustrated History*, 326.

¹⁴⁰ Rockwell, *Hawaiian & Hawaiian Guitar Records, 1891-1960*, xiii.

of activity through which it was presented, those being live performance, print and recordings. The genesis of the expansion of scope lay, initially, with the rise of *hapa haole*. The genre was modelled on, and often indistinguishable from, prevailing popular music styles. It was in this genre that the credentials of the steel guitar as an instrument suitable for popular styles were established. A bias in favour of *hapa haole* can be identified in the explosion of Hawaiian music in print and recordings in the early 20th century. Tim Gracyk argues that ‘there was no special demand for songs that originated in Hawai’i or songs performed in an authentic Hawaiian manner,’¹⁴¹ and that it was the novelty of the steel guitar that first excited audiences.¹⁴² This argument is affirmed by opinion expressed in The Edison Phonograph of 1916 which states that Hawaiian-American ragtime was the medium through which steel guitar had sprung to ‘universal popularity’.¹⁴³ Furthermore, as has been argued above, it was the idiosyncratic sounds of the steel guitar that drew many non-Hawaiian performers to introduce it into their acts, rather than the attraction of its musical context. As will be shown in following chapters, the growing interest in the steel guitar, per se, was readily translated to other popular repertoire by interested Americans and by the Hawaiian guitarists themselves.

Significantly, the steel guitar was presented in non-Hawaiian contexts from the very beginning of its ascent. Western popular tunes appeared in the repertoires and recordings of early Hawaiian performers, and in scores and method books. Of the three domains, scant records make the contents of the repertoires of Hawaiian performers the most elusive. It is likely that Hawaiian vaudevillians, performing across America for a broad cross section of the populace, included Western popular music in their repertoires in the interest of providing at least some material familiar to their audiences. Evidence of this is contained in a pamphlet advertising Joseph Kekuku’s travelling troupe states that in addition to Hawaiian songs in native language his repertoire included ‘popular airs of this country and classical and operatic numbers’.¹⁴⁴

¹⁴¹ Gracyk, *Popular American Recording Pioneers, 1895-1925*, 121.

¹⁴² This is not to deny the obvious success of touring Hawaiian troupes who exposed Hawaiian music to a broad audience. However, vaudeville provided variety entertainment in which Hawaiian acts were just one of many forms of entertainment, all competing for attention. Hawaiian music, though distinctive and exotic, was just one of many musical genres presented.

¹⁴³ 'Hawaiian Music Universally Popular'.

¹⁴⁴ The Affiliated Lyceum Bureaus, 'Kekuku's Hawaiian Quintet' 1904.

<http://digital.lib.uiowa.edu/cdm/compoundobject/collection/tc/id/54995/rec/70> (accessed 12 April 2013).

Evidence of non-Hawaiian repertoire is much easier to identify within commercial sound recordings. Significantly, popular melodies found a prominent place in the recordings of the most prolific of the first generation of Hawaiian steel guitarists, Frank Ferena. In his very first recording session, on 29/6/1915, he recorded two contrasting tracks. One was Queen Lili'uokalani's famous Hawaiian anthem, 'Aloha Oe', and the other was a medley of Stephen Foster's 'Old Kentucky Home' and 'Annie Laurie', a 19th century Scottish song. In addition to Hawaiian songs and *hapa haole* pieces, arrangements of popular hits abound throughout his vast recorded output. The early recording output of the most renowned of Hawaiian steel guitarists, Sol Hoopii, was also dominated by non-Hawaiian popular tunes.¹⁴⁵ In both cases, the musicians' efforts showed the steel guitar as an instrument for the most modern popular repertoire.

In the domain of print, a widening of scope can be seen in the choice of material by Keoki Awai in his famous first book of steel guitar arrangements.¹⁴⁶ Many popular favourites are provided including folk songs such as 'My Old Kentucky Home', hymns such as 'Nearer My God To Thee' and light classics such as 'Traumer'. In all, of fifty-three items presented, one quarter have no Hawaiian connection. Popular music was also strongly represented within the pieces offered in most early steel guitar method books. Within the four typical early method books canvassed by American authors Stumpf¹⁴⁷ and Coleman¹⁴⁸, and Hawaiian authors, Bailey¹⁴⁹ and Bishaw¹⁵⁰, non-Hawaiian pieces are in the majority in the repertoire provided in three of the publications. There is no great difference in the bias of material provided between the American authors and the Hawaiian authors. Stumpf offers three Hawaiian pieces within twelve items. Coleman offers eight Hawaiian items within seventeen items. Bailey offers three Hawaiian items within eleven items and Bishaw offers three Hawaiian pieces within six items. Amy Stillman observed in respect of this type of publication that 'this mix of content can be explained in part by growing separation of these instruments [steel guitar and ukulele] from the Hawaiian

¹⁴⁵ (1925-1927) Rockwell, *Hawaiian & Hawaiian Guitar Records, 1891-1960*, 496-98.

¹⁴⁶ Awai, *The Superior Collection of Steel Guitar Solos Vol. 1*.

¹⁴⁷ Myrtle Stumpf, *Original Hawaiian Method for Steel Guitar* (Los Angeles: Southern California Music Co., 1915).

¹⁴⁸ Coleman, *The Steel Guitar and How to Play It*.

¹⁴⁹ Bailey, *The Peterson System of Playing the Guitar with Steel in the Hawaiian Manner*.

¹⁵⁰ Bishaw, *The Albert Hawaiian Steel Guitar: Complete Instruction for Accompaniment and Solo Work*.

music tradition'¹⁵¹. Her observation is borne out by the evidence and, if anything, seems understated, as the bias of material suggests that the separation was well advanced even at the early stage at which these publications appeared. Not only would these books have opened the door of steel guitar performance to non-Hawaiian clientele; the provision of popular music exemplars within these publications would have given new players cause to consider how the instrument might be applied to all manner of repertoire.

In summary, it is evident that commercialisation and commodification were at the heart of the popularisation of the steel guitar and its crossover into popular music. The commercial success of acculturated Hawaiian music, at international exhibitions and on the stages of vaudeville, provided a conduit through which the instrument appeared before Western audiences. Favourable conditions had been established earlier as, in the quest for commercial success, Hawaiian composers had developed the hybrid style of *hapa haole* for tourists to Hawaii. The subsequent successful adoption and exploitation of Hawaiian music by Tin Pan Alley composers were assisted by the actions of Hawaiian composers in adopting popular music stylings so closely. The positive response of visiting audiences received in Hawai'i was greatly amplified on mainland America as live performances, printed publications and recordings broadly dispersed Hawaiian music. The commercial success of Hawaiian and Hawaiian-flavoured music provided momentum for the steel guitar. The instrument was widely publicized through live and recorded performance by Hawaiian performers. In a largely commercial decision, non-Hawaiian vaudeville performers adopted the steel guitar and further popularised the instrument.

The growing use of the steel guitar outside the confines of Hawaiian music would prove to be an essential ingredient of its success. The genesis of this trend could be attributed to commercial pressures on Hawaiian musicians in America to fulfil the expectations of their audiences. As a result, performers expanded their repertoires and recording choices beyond Hawaiian music. In this way the new exotic steel guitar was seen as a modern instrument, effective in contemporary styles well removed from its origins. The instrument's versatility was also promoted by publishers of steel guitar scores and method books who assigned it a broad range of repertoire. As a result of these various stimuli, the public's taste for the instrument grew, providing an expanding market for

¹⁵¹ Stillman, 'Published Hawaiian Songbooks', 230.

composers, teachers, publishers and instrument makers and an industry based around the steel guitar was born. The music of Hawaiian steel guitarists continued to evolve in the face of changing popular music trends and the instrument began to appear in a variety of genres. The following chapters will trace the evolution of steel guitar performance practice as the instrument was adapted by successive generations of Hawaiian and non-Hawaiian players to suit new and evolving musical environments.

Chapter 3: Early Steel Guitar on the Mainland: The First Generation

This chapter considers the context and style of the steel guitar as it made its initial rise to prominence and popularity on the American mainland in the 1910s and early 1920s. The performance settings in which the steel guitar made its first strong impression on the public will be examined. Two significant aspects of context to be considered are the Hawaiian ensemble in which it was initially presented, and the primitive early recording environment in which it found favour. The remainder of the chapter will be devoted to the performance style of the first generation steel guitarists. The chapter will define and differentiate between two distinct modes of performance that evolved in this period and will consider influential factors in the evolution of each style.

Reference to two distinct generations of Hawaiian steel guitarists has been made in various accounts of the early development of the steel guitar.¹⁵² This differentiation has proved to be a useful tool in the analysis of style development and will be employed in this study. While progress in style and technique of steel guitar performance may have occurred incrementally from the instrument's invention in the late 19th century to the peak of its popularity in the 1930s, two main periods of development can be readily identified and, in turn, can be linked to two generations of performers. The first generation of players, as discussed in this chapter, developed a performance style that was attuned to the genres of Hawaiian music in which it arose, those being *himeni*, *hula ku'i* and *hapa haole*. Early style was also influenced by tuning configurations and picking techniques that were a legacy of slack key guitar and by the narrow harmonic demands of the repertoire. Then, as popular music entered the jazz age, the pace of evolution of steel guitar style increased. The rise of a second generation of players became evident, identified by the emergence of

¹⁵² Kanahale and Berger, *Hawaiian Music and Musicians*, 796, Troutman, 'Steelin' the Slide: Hawai'i and the Birth of the Blues Guitar', 33, Adam Komorowski, *Steeling It : Accompanying Liner Notes to Cd Compilation* (London: Proper Records, 2008), Rockwell, *Hawaiian & Hawaiian Guitar Records, 1891-1960*, xiii., Gracyk, *Popular American Recording Pioneers, 1895-1925*, 127, Bob Brozman and Richard Smith, 'The Early History of the National', in Bob Brozman (ed.), *The History and Artistry of National Resonator Instruments* (Anaheim Hills, CA: Centerstream Publishing, 1998), 115.

an elevated standard of virtuosity demanded by evolving musical genres. The evolution of the style employed by the second generation will be discussed in the final chapter.

3.1 Steel Guitar in the Hawaiian Ensemble

In Hawai'i the steel guitar originally functioned as an accompanying instrument within a communal music setting.¹⁵³ However, it emerged in America within ensembles of Hawaiian musicians bent on commercial music enterprise. The Hawaiian ensembles that appeared in America in the early 20th century consisted primarily of singers accompanied by stringed instruments. Although Hawaiian music, both ancient and modern, was predominately focused on singing or chanting, the performance of *hula ku'i* and *hapa haole* song forms had been shaped by the accompanying instruments, the guitar and the ukulele.¹⁵⁴ The guitar and ukulele had grown so prevalent that by 1915 they had become, in combination, 'a stereotyped component of Hawaiian music performance of secular songs'.¹⁵⁵ While both instruments supplied chordal accompaniment, they also provided complementary extended functions. The lower range of guitar was commonly used for bass lines and retained that role until the adoption of the double bass, which occurred in the late 1920s in imitation of American jazz bands.¹⁵⁶ The sharp percussive nature of the strummed ukulele provided driving rhythm in a manner similar to that of the banjo in early jazz and dance music. At the outset the steel guitar was an auxiliary instrument in Hawaiian ensembles, providing an alternative to the favoured melody instruments of violin and flute.¹⁵⁷ The flute and violin had been predominant in the late 19th century but their use diminished as the steel guitar assumed the central melodic in the 1910s.

Ex 3.1 below, illustrates one of the earliest examples of recorded steel guitar. The instrument appears within an ensemble of solo vocalist, vocal quartet, flute, guitar and at least two ukuleles. The instrumentation represents a transitional phase within the history of Hawaiian ensembles with the flute and steel guitar vying for the melodic foreground in the instrumental interludes between verses. The dense and at times cacophonous texture of the piece is at odds with more transparent orchestrations that follow as recordings of the genre

¹⁵³ Stillman, 'Textualizing Hawaiian Music', 78.

¹⁵⁴ Buck, *Paradise Remade: The Politics of Culture and History in Hawai'i*, 116.

¹⁵⁵ Stillman, 'Beyond Bibliography: Interpreting Hawaiian-Language Protestant Hymn Imprints', 482.

¹⁵⁶ Kanahele, *Hawaiian Music and Musicians: An Illustrated History*, 26.

¹⁵⁷ Tartar, 'Hawaiian Orchestra', 274.

began to proliferate. The transcribed melody was played by the steel guitar as an introduction to ‘My Honolulu Tom Boy’ recorded by Toots Paka’s Hawaiians in 1909.¹⁵⁸ The melody, played by the steel guitar, is doubled in unison by the flute. The timbre and attack of the steel guitar suggests that it was played entirely on the top string in an attempt to maximize the volume. The recording demonstrates a central problem that volume posed for the steel guitar within ensembles, whether in live or recorded performance. Despite the persistent use of the top string, the recording shows the steel guitar struggling to match the volume of the flute as the phrase progresses. The intonation can also be heard to deteriorate in the final three bars. This could be attributed to the distance that the bar needed to quickly travel to negotiate the melody on a single string as the player sacrificed accuracy for volume. The alternative for the performer would have been to play the phrase horizontally across the strings, which, while requiring less motion and improving intonation, would not generate as much sound. Volume and dynamic balance continues to be problematic in the remainder of the track with the steel guitar only faintly detectable in the interludes while continuing to double the flute.

♩ = 100



Ex 3.1 Toots Paka's Hawaiians: ‘Honolulu Tom Boy’ (1909) [CD Track 2]

3.2 Steel Guitar in Early Recordings

The rising ascendance of the steel guitar within the Hawaiian ensemble is evidenced in recordings of Hawaiian music of the early 20th century. Beginning as a supplementary melodic instrument, its role progressed to that of soloist providing interludes within vocal accompaniments and further to that of the lead instrument of instrumental pieces. Recordings on disc and cylinder provide an authentic source from which the performances of the first generation of steel players can be appraised. In abundance in the wake of the

¹⁵⁸ Toots Paka's Hawaiians, 'Honolulu Tom Boy', New York. Cylinder (Edison 20713), 1909.

Hawaiian craze that began in 1915, recordings demonstrate the instrument in the hands of professional musicians, many of whom had honed their craft on the stages of vaudeville. As such, recordings provide insight into the standard and the style of performance in vaudeville at that time, though some adjustments in arrangement and instrumentation may have been made to accommodate the recording process. The recording environment would have been at odds, to some extent, with the experience of steel guitarists on stage. As Gracyk puts it, ‘Hawaiian guitarists accustomed to performing for large audiences before the days of microphones had to forfeit all subtlety and delicate nuances’.¹⁵⁹ In contrast, recordings of duets and trios in the 1910s and 1920s provided the opportunity for the elegant and eloquent voice of the steel guitar to be heard. Within small ensembles, without competition from other melodic instruments and within the intimate setting of the recording studio, the properties of the steel guitar as a lead instrument could become fully exploited.

The difficult process of recording at an early stage of development may have itself contributed to the elevation of the steel guitar. The constraints of the emerging recording technology posed problems for the recording of both vocalists and instrumentalists of every genre. In the early years of the recording industry, known as the acoustic era, recordings were made by collecting sound by means of a horn.¹⁶⁰ This was a mechanical process whereby sound was projected through the horn into a recording machine, and the energy of the sound waves etched patterns of vibrations on a flat disc or a cylinder. The recording process was greatly improved in 1925 when the mechanical acoustic process was superseded by an electrical one with the invention of the microphone. Fundamental problems for early recording engineers included difficulty in recording extremities of dynamic and of frequency.¹⁶¹ The issue of excessive volume demanded the use of reduced ensembles to curtail volume levels in order to record orchestral and dance band music. Some instruments in the bass range, such double bass or bass drum, were impossible to record effectively. Additionally, achieving a balance of instruments, particularly in larger ensembles, was difficult. The larger the ensemble, the less the proportional volume of each

¹⁵⁹ Gracyk, *Popular American Recording Pioneers, 1895-1925*, 121.

¹⁶⁰ Gracyk, *Popular American Recording Pioneers, 1895-1925*, 1.

¹⁶¹ Pekka Gronow and Ilpo Saunio, *An International History of the Recording Industry* (London ; New York: Cassell, 1998), 23.

instrument became, with those furthest from the horn most affected.¹⁶² To achieve a balance, placement of instruments in relationship to the horn was crucial. Instrumental combinations had to be carefully handled as certain instruments dominated and others were easily masked. The process was one of compromise, which yielded mixed results throughout the era. In contrast with orchestras, dance bands and wind ensembles, the instruments of Hawaiian ensembles were relatively quiet. Additionally, ensembles of guitar, ukulele and steel guitar were well matched in both dynamic range and timbre. Without the problems associated with a bass instrument, early Hawaiian ensembles of guitars and ukuleles could provide a rich accompaniment of varying textures to vocal or steel guitar melodies. This ready-made instrumental combination would have presented many fewer problems than larger, more diverse ensembles in the recording process.

Ease of recording may also have contributed to the sizable proportion of instrumental music that was released amongst the vocally oriented Hawaiian genre of recordings that made its way into the catalogues of the major recording companies. Recording problems associated with larger ensembles may have been responsible for the productivity of Irene West's sextet, Royal Hawaiians, who recorded in New York for Victor in December of 1914. Of eight sides recorded in two sessions, only four sides were deemed suitable for release.¹⁶³ In contrast, two representatives of the band, steel guitarist Pake Lua and guitarist David Kaili, recorded eighteen instrumental sides in the same month, consisting of seventeen duets and one steel guitar solo. Eleven of these were released by Victor, crediting the performers as belonging to West's band. More generally, the dominance of instrumental duets and trios can be seen in the early recorded output of most prolific Hawaiian musician of the era, Frank Ferera.¹⁶⁴ His first recordings made with his wife Helen Greenus between 1915 and 1919, number around thirty. Of these all but a few are duets of steel guitar and Spanish guitar. After Helen was lost in an accident at sea in 1919, Ferera resumed his recording career with guitarist Anthony Franchini. Ferera's popularity exploded in 1920 and in the first half of the year he recorded over seventy tracks, almost all of them duets. Whatever the cause of the increasing representation of instrumental

¹⁶² Walter Welch and Leah Burt, *From Tinfoil to Stereo: The Acoustic Years of the Recording Industry* (Gainesville, Fl.: University Press of Florida, 1994), 153.

¹⁶³ Rockwell, *Hawaiian & Hawaiian Guitar Records, 1891-1960*, 1223.

¹⁶⁴ Collector Malcolm Rockwell states that Ferera appears on an eighth of his extensive collection of Hawaiian records. Rockwell, *Hawaiian & Hawaiian Guitar Records, 1891-1960*, xiii.

music within the popular Hawaiian genre, an indisputable result was a wide spread exposure and popularisation for its lead instrument, the steel guitar.

3.3 Elements of Early Steel Guitar Style

Evidence of early steel guitar style and performance practice exists in both written and recorded form. Recordings that date from 1909 and publications of scores and method books that began to appear from the mid 1910s provide a broad impression of style, technique and repertoire. Within this evidence, two distinct styles, incorporating contrasting textures, can be identified. One style was dominant within recordings and the other within printed media.

Early recordings show the steel guitar employed primarily within ensembles. Solo recordings are rare. The steel guitar provided a prominent voice within ensembles of singers and stringed instruments, and was used primarily to provide single note and harmonised melodies. This melodic style stands in contrast with accompanied melody that can be found in early written media and within the few solo recordings that were made. In scores and teaching manuals originating in the 1910s, arrangements of accompanied melody are predominant. These items are designated, for the most part, as solo pieces.

The two divergent styles, while not confined entirely to one media domain or the other, demonstrate the versatility of the instrument, a factor that ultimately worked in its favour as it was adopted by Western musicians. The reason for the bifurcation of styles as represented in the different media can be attributed to a complex mix of aesthetic, commercial, technical and social demands. The steel guitar style of early recordings was shaped by the constraints of available technology, the demands of the ensemble and the skill of professional musicians. On the other hand, scores and pedagogical material were fashioned to be acceptable to an amateur market in which the steel guitar was a source of musical recreation. An exception can be found in some of the pieces within Keoki Awai's *Superior Collection of Steel Guitar Solos* which provides insight into a more demanding guitar solo style that existed within live performance, but was seldom recorded.¹⁶⁵ Pedagogical publications will be discussed more fully later in this chapter.

¹⁶⁵ Awai, *The Superior Collection of Steel Guitar Solos Vol. 1*.

3.3.1 Improvisation

Improvisation was an aspect of performance practice that spanned the styles of both the first and second generations of steel guitarists. Improvisation became a key ingredient of popular music in the early 20th century with the rise of ragtime and its consequent, jazz. It appeared within ragtime as a widespread performance strategy called ‘ragging’ whereby standard tunes were adapted to ragtime style through rhythmic embellishment. Also, in performance, composers of classic ragtime such as Scott Joplin were known to embellish and improvise around their written pieces.¹⁶⁶ The assimilation of ragtime within *hapa haole* gave steel guitarists both an opportunity and an imperative to develop and display improvisational practices in keeping with the modern style. The resulting improvisation skills, in evidence in recordings and, presumably within live performance, would have positioned them at the forefront of modern popular music stylists. Displaying the ability to follow this musical fashion would have imparted currency to their instrument, a factor that, in addition to its exoticism and novelty, assisted in growing its popularity.

Hawaiians held an advantage with respect to improvisation. Improvisation was a concept that was already a part of their musical culture. Its roots were deeply imbedded in ancient Hawaiian musical heritage. Within *hula ku’i*, which drew on the ancient oral culture, the melody of the songs was not fixed.¹⁶⁷ Melodic embellishment and variation were the norm within performance. In its melodic role, steel guitar style had developed in imitation of the singing voice¹⁶⁸ and it is therefore unsurprising that instrumental performances by steel guitarists should employ variations consistent with that of Hawaiian vocal practice. It can be argued, therefore, that steel guitarists were simultaneously influenced both by traditional Hawaiian vocal stylings and ragtime practice of syncopated rhythmic variation. Clear examples of such improvisation can be found in early steel guitar recorded performances. In the main, improvisations were restricted to rhythmic embellishments and melodic ornamentations that do not obscure the original melody. Two examples occur in instrumental medleys that featured prominent first generation guitarists Pale K. Lua and Frank Ferena. ‘Hilo – Hawaiian March’ [See Ex 3.6] was an instrumental that featured steel recorded in 1914 by Irene West Royal Hawaiians with Lua on steel

¹⁶⁶ Tirro, *Jazz; a History*, 70.

¹⁶⁷ Stillman, 'Of What Use Are Hawaiian Songbooks?', 67.

¹⁶⁸ Hood, 'Musical Ornamentation as History: The Hawaiian Steel Guitar'.

guitar.¹⁶⁹ 'On the Beach At Waikiki' (Ex 3.2, below) by Ferena and Helen Louse was a medley of six Hawaiian tunes recorded in 1915.¹⁷⁰ In both examples, variation and embellishment are employed extensively by the soloists to provide contrast and development in the repetition of short melodies that comprise the recordings. The improvisational style of these early recordings is replicated within recordings throughout the era.

3.3.2 Technical Limitations

While the human singing voice may have provided inspiration for Hawaiian steel guitarists, the idiosyncrasies of early steel guitar performance style developed around the characteristics of the acoustic guitar and the mechanical innovations required by the style: the bar, a raised nut and finger picks.¹⁷¹ While the bar and raised nut allow the creation of glissandi and vibrato that can be used to simulate vocal inflection, the limited sustain of the acoustic guitar is a restricting factor in the quest of vocal imitation. Sustained notes were important in achieving legato articulation to this end. The application of fast tremolo and vibrato were used to extend note length in combination with maximum velocity of picking stroke though, ultimately, the sustaining characteristics of the wooden acoustic guitar prevailed. While not as great a problem in solo performance, the properties of sustain placed the acoustic steel guitar at a disadvantage within an ensemble. The problem is highlighted in 'My Hawaiian Tom Boy' (Ex 3.1) where the steel guitar is found wanting when competing with a wind instrument capable of copious sustain.

While alleviated to some degree by the string-dominated instrumentation of early 20th century Hawaiian ensembles, its characteristic of sustain influenced steel guitar styles until the basic instrument was improved through design. The first improvements occurred with the invention of the resonator guitar in 1926, which was eagerly adopted by professional Hawaiian players. The primary motivation for the invention of the resonator guitar was George Beauchamp's effort to create a louder guitar.¹⁷² Attendant to the increase in volume achieved was a considerable improvement in sustain. The emerging second

¹⁶⁹ Irene West Royal Hawaiians, 'Hilo - Hawaiian March', 78 (Victor 17767-A), 1914.

¹⁷⁰ Frank Ferera and Helen Louise, 'On the Beach at Waikiki-Medley', 78 (Victor 17880-A), 1915.

¹⁷¹ Hood, 'Musical Ornamentation as History: The Hawaiian Steel Guitar'.

¹⁷² Brozman and Smith, 'The Early History of the National', 20.

generation of steel guitarists was the beneficiary of the new technology, which helped in the formation of new techniques and styles.

3.3.3 Picking Technique

Rapid staccato picking is a feature of the style of first generation Hawaiian players. Methods of picking that evolved were influenced by Kekuku's design of finger picks. The design was universally adopted by steel guitarists and can be seen illustrated in early instruction manuals.¹⁷³ The curvature and shape of the rigid finger picks allowed for only one direction of stroke of each digit. That is, the thumb would normally strike downwards while the first and second fingers could only strike upwards, in opposition. Rapid passages required alternations of thumb and finger strokes. These could be achieved utilising either alternation of a single finger and thumb or a combination of both fingers and thumb. Notes of duration beyond a semibreve were by no means impossible, but the decay of notes could present a problem despite the application of twin techniques of maximum picking velocity by the left hand and vibrato applied to the bar by the right hand. Kanahale suggests that rapid staccato picking is a strategy developed to compensate for the inadequacy of sustain.¹⁷⁴ His proposition is that sustain could be simulated by a rapid repetition of a tone within its intended duration, using fingers and thumb in a picking pattern that can be described as a roll.

Whether this technique was developed initially as compensation for lack of sustain or as a form of rhythmic embellishment is a matter for conjecture, as it was employed in both functions. However, an examination of recordings of early first generation players reveals that the technique is not as prevalent as Kanahale's assertion would suggest that it might be had it been employed extensively to address an inherent underlying deficiency of the instrument.¹⁷⁵ On the other hand, examples of rhythmic embellishment as stylistic ornamentation abound in early recordings. The following example, recorded by Frank Ferera in 1915, clearly shows the staccato picking technique used as a rhythmic

¹⁷³ Stumpf, *Original Hawaiian Method for Steel Guitar.*, Coleman, *The Steel Guitar and How to Play It.*

¹⁷⁴ Kanahale and Berger, *Hawaiian Music and Musicians*, 792.

¹⁷⁵ On the other hand, the concert hall may have been a more demanding and acoustically competitive environment in which the technique proved crucial, though no recorded evidence of performances before live audiences exist. If this was the case, the technique may be less prevalent in recordings because the environment did not require it.

embellishment.¹⁷⁶ Ex 3.2, below, compares the first and second iteration of the melody in Ferera’s recorded performance with the published melody of the song that appeared in the same year.¹⁷⁷ Ferera’s opening melody closely adheres to the published melody with the minim of bar seven played with full value. In the varied second pass, Ferera uses staccato picking rhythmic embellishment as a decoration, rather than by necessity, in bars seven and eight as the sustain of his first pass proves. However, repetition of pitches in bars three, thirteen and sixteen can be interpreted as additional pick strokes added by the player in compensation for note decay.

The image displays a musical score for the song 'On the Beach at Waikiki' (1915). It consists of three staves of music, all in 2/4 time and B-flat major. The first staff, labeled 'Published melody', shows a sequence of notes: G4, A4, Bb4, C5, Bb4, A4, G4, F4, E4, D4, C4. The second staff, 'Steel guitar melody', follows the same sequence but includes a staccato pick stroke on the eighth note (F4) and a repeat of the eighth note (F4) on the sixteenth note. The third staff, 'Steel guitar variation', shows a more complex rhythmic pattern with staccato pick strokes and repeated notes, including a triplet of eighth notes in the final measure.

Ex 3.2 Ferera and Louise: ‘On the Beach at Waikiki’ (1915) [CD Track 3]

The use of staccato picking as embellishment extended beyond the syncopated, ragtime-influenced example above. The following example (Ex 3.3) is found within a military styled march that bears the hallmark of Henry Berger, the Prussian bandmaster

¹⁷⁶ Ferera and Louise, 'On the Beach at Waikiki-Medley'.

¹⁷⁷ Kailimai, 'On the Beach at Waikiki'

whose influence on Hawaiian music was felt in the late 19th century. The excerpt below is taken from the third strain of ‘Indiana March’, a tune that became a standard of the steel guitar repertoire. The recording was made in New York in 1914 by steel guitarist Pale K. Lua with accompaniment from guitarist David Kaili, both of Irene West’s Royal Hawaiians. In this case, rapid staccato picking is used in the ninth and tenth bars, where rolls articulate the notes in the fashion of a military drum in keeping with the style of the piece. A similar stylistic effect created in the same manner is also apparent in the grace notes of the opening bars.



Ex 3.3 Lua: ‘Indiana March’ (1914) [CD Track 4]

The technique of staccato picking grew in popularity throughout first generation of players and was further developed by players of the second generation. It became signature of the style of the most renowned Hawaiian player, Sol Hoopii and is in evidence in his first recordings, which appeared in 1925. Hoopii began his career playing acoustic guitar and, although he was an early adopter of the new resonator technology in 1927, the technique continued to be a salient feature of his style. However, as the era of the acoustic steel guitar came to an end, the broader use of staccato style diminished. To attribute this demise to its redundancy as a result of superior instruments would add weight to Kanahale’s assertion that it was developed primarily to compensate for lack of sustain. Alternatively, changing repertoire and musical styles may have been as much, if not more, the cause.

3.3.4 A Vertical Melodic Approach

The use of a vertical approach, whereby the entire length of the neck of the guitar was used to execute melodies, was a characteristic of early Hawaiian performance. This linear style entailed utilising the length of the strings to affect melodies in preference to playing the same notes across the neck in the same position on different strings. It was a characteristic of both the first and second generation of Hawaiian performers and is associated with the acoustic instruments that they used. Its genesis can be attributed to the development of techniques that extracted the strongest and richest sounds from the relatively weak acoustic guitar required for its use as a lead instrument within ensembles. The predominant use of the top string in this way was a technique employed to achieve the maximum volume. The absence of an adjacent string above allows a player to apply maximum force to the down stroke with no danger that the follow-through will be impeded, thus accuracy can be waived to the benefit of extra velocity and thus extra volume. An upstroke was likewise less restricted. For this reason staccato picking technique is much easier to achieve on the top string which, as a result, was favoured by early players. It can also be observed that more accuracy in picking was required to extract a melody from various strings across the neck, making a linear single string approach an easier option in the first instance. However, in the style of solo accompanied melody in evidence in early published music, the necessity to employ the vertical approach did not have the same imperative, as will be seen later in this chapter. The advent of the acoustic resonator, and later electric amplification, placed greater volume and sustain on all strings at the hands of the next generation of performers. In their more intricate style, the practice picking across the neck became more prevalent.

3.3.5 Harmonisation and Tuning

Dyadic harmonisation is a feature of the steel guitar style of the first generation of players. In melodic style, harmonised melodies were commonly employed and provided contrast to single note melodies. In solo pieces, fragments of harmonised melodies occurred within polyphonic textures or as momentary transitions between melodic and accompanied melody styles. Diatonic harmony, developed within the genre of *himeni*, is central to Hawaiian music. The tradition was a characteristic of much early recorded Hawaiian vocal music. The simple diatonic harmony of this tradition is reflected in steel guitar stylings

through the use of parallel thirds and sixths to harmonise melodies. This approach is easily recognised in early steel guitar recordings and is documented in most early method books. The style is fundamental to Hawaiian steel guitar performance and may have been developed by the earliest players. This style of intervallic harmonisation is not only prevalent in early performances but has been employed through the history of steel guitar performance. It became a performance characteristic that survived as the instrument was assimilated into new genres such as country music where, in conjunction with portamento, harmonised melodies became a prevalent, almost defining sound.

An early example of harmonised melody (transcribed in Ex 3.4, below) can be found in the introduction to ‘Ua Like Noa Like’ from a recording session by the Hawaiian Quintette made on 18/04/1913.¹⁷⁸ This group had been employed to provide music for a production of *The Bird Of Paradise* in New York in 1912. The recording session was the last of three at which the group recorded tunes from the previous year’s successful play. The song, an enduring Hawaiian standard, was published in 1882 by Wall Nichols Company.¹⁷⁹ Juxtaposed against a solid accompaniment in quavers from a guitar and ukulele, the harmonised melody is performed mainly on the top two strings. While the performance does not appear to be confident, with minor inconsistencies in both rhythm and intonation apparent, it nevertheless achieves a dreamy atmosphere for the song through the contrast of the imprecise rhythm of the triplet figures applied above a steady pulse.



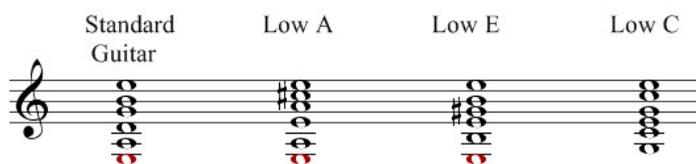
Ex 3.4 Hawaiian Quintette: ‘Ua Like Noa Like’ (1913) [CD Track 5]

¹⁷⁸ Hawaiian Quintette, 'Ua Like Noa Like', 78 (Victor 18571-B), 1913.

¹⁷⁹ Kanahale, *Hawaiian Music and Musicians: An Illustrated History*, 391.

The idiosyncrasies of the steel guitar placed great restriction on harmonic potential available to performers. Even in a simple harmonisation like example above, the alternating scalar major and minor thirds pose a problem on an instrument that employs both a straight bar and a fixed tuning. The problem can be solved by alternating the angle of the bar from the natural perpendicular position across the neck to a slanted position as the passage progresses. This can be done either by bending the right wrist or by repositioning the bar in the fingers. In the standard tuning of Low A major, the bar was kept parallel to the neck for minor thirds while for the major third intervals it was slanted forward, increasing the interval size by accessing notes at two adjacent frets. In early published scores and method books, examples of both forward and reverse slants can be found. However, forward slants are greatly in the majority. This may be because reverse slants require the bar to be repositioned in the hand, a manoeuvre that is difficult to execute.

The tuning of the instrument determines available harmonies, both those that fall beneath a perpendicular bar and those available to a slanted bar. With major tonality dominating Hawaiian music, few instances of alternative tonalities can be found in steel guitar tunings before the middle of the 1920s. The following tunings (Ex 3.5) demonstrate three possible close-voiced inversions of major triads available within the constraints of standard Spanish guitar string gauges.¹⁸⁰ Alternating between these configurations is a matter of retuning. Each tuning employs relevant tonic and dominant bass strings in the manner of slack key guitar, though in varying configurations.



Ex 3.5 Six String Steel Guitar Tunings employing triad inversions

¹⁸⁰ Only Low A and Low E are common tunings. No early examples of Low C are known to the author.

Low C and Low A both have an interval of a third between the first and second strings. In Low E tuning, the third intervals only exist between inside combinations of second and third, and third and fourth strings. However, the appearance of the root note on the top string of the tuning provides a useful utility for single note melodies. In the published literature of the 1910s, Low A tuning was used almost exclusively. The Low A tuning continued to dominate the literature of the 1920s to such a degree that some publications did not bother to inform the reader of the tuning, assuming that Low A would be understood. While this standardisation proved a great advantage to the commodification and dissemination of the instrument, professional players employed various tunings. This may have been a measure to alleviate the harmonic restrictions of a single tuning in the face of more complex repertoire or a legacy of slack key guitar style from which early Hawaiian players had migrated where the use of many tunings was normal practice. While the steel guitar could be retuned between songs, some guitarists such as Sam Ku West, performed with extra alternatively tuned guitars on hand.¹⁸¹ Jack Penewell's invention of the double neck guitar in the early 1920s was a similar response to the problem which, he claimed, increased his harmonic options.¹⁸²

The following example, Ex 3.6, demonstrates why the Low A tuning proved a popular choice of early steel players and guitar method books. The example shows the possible execution of a passage on three different tunings. These tunings employ the three triadic inversions possible. The melodic transcription is taken from the second section of 'Hilo March', a Hawaiian song composed in the 19th century. The performance, by Pale K. Lua with guitar accompaniment, was recorded in 1914.¹⁸³ The chosen passage is a harmonised melody in thirds, typical of the genre. The transcription is taken from the second section of the tune which provides a contrast to the preceding single note melody through its harmonisation coupled with a modulation to the subdominant.

¹⁸¹ Les Cook, Notes to *Sam Ku West Hawaiian Hula Blues*. (Grass Skirt Records), 2005.

¹⁸² Penewell, 'Steel Guitar Design Changes'.

¹⁸³ Irene West Royal Hawaiians, 'Hilo -Hawaiian March', 78 (Victor 17767-A), 1914.

♩ = 140

Low A

T	E	12	12	12	11	12	12	9	9	9	10	12	14	17	16	14	12	12
A	C#	12	12	12	11	12	12	8	8	8	10	12	13	17	15	13	12	12
E																		
B																		

Low C

T	E	12	12	12	11	12	12	9	9	9	9	10	12	14	17	16	14	12	12
C	C	13	13	13	12	13	13	9	9	9	9	11	13	14	18	16	14	13	13
G																			
B																			

Low E

T	E	12	12	12	11	12	12	9	9	9	9	10	12	14	17	16	14	12	12
B	B	14	14	14	13	14	14	10	10	10	10	12	14	16	19	17	16	14	14
G#																			
A																			

Ex 3.6 Lua: 'Hilo March' (1914) Transcription with tablature in alternative tunings [CD Track 6]

A primary consideration for the performer would have been to ensure the strength and clarity of the melody over an accompaniment that subsequently increases dramatically in volume as ukuleles are added to the texture. To achieve this, the top strings would have been preferable over inside strings. This would exclude a tuning that employed the inversion of Low E, as the required major third interval is not practical on the top two strings. The problem is that in Low E the required slant required would encompass two frets on adjacent strings. While two fret slants are possible, intonation difficulties ensure they are only effective across strings more widely spaced. With a lesser angle of slant required, accurate intonation becomes possible. While it is possible to perform the piece on the Low C tuning, to achieve the minor third intervals, a backward slant is required. This is not impossible to execute but the forward slants demanded by the Low A tuning are easier to perform and thus preferable, particularly for beginners. To maximize volume and clarity while maintaining ease of stopping, Low A tuning would have been the logical choice in this case. The ease of the harmonisation of thirds in Low A in this tuning may explain the almost exclusive use of Low A tuning in scores and method books aimed at amateurs, while professional players experimented with other options.

3.3.6 Accompanied Melody

The polyphonic characteristics of the steel guitar allow the performer to create music with a texture of accompanied melody. Such a texture provided the basis for a solo performance style that contrasted greatly with melodic style that dominated early recordings. Textures of accompanied melody can be observed in most early written sources and occasionally within recordings. Typically in a solo piece, the melody was performed mainly on the top strings, as in the melodic style of recordings. The difference lay in the addition of a bass line, performed on the lower strings, and chordal elements that were interspersed through pieces. Similarities between the texture of this style and that of slack key guitar are strong. The complexity of the texture is achieved similarly on each instrument by combining a picking style with suitable tuning configurations. Kanahele acknowledges the similarities but contrasts the styles of the two instruments with reference to 'short melodic motifs interwoven into a rhythmic bass of slack key with the extended melodic function of the steel guitar.'¹⁸⁴ The appearance of this style in early steel repertoire gives weight to the widely held opinion that slack key preceded steel guitar, and that it is in a sense its ancestor.

It is not clear as to how prevalent the solo accompanied melody style was within the repertoires of professionals performing for large audiences on the stages of vaudeville. It is possible that the limited volume of the instrument defeated solo performers in such circumstances and that as a result it was not widely employed. A solo performance of delicacy and nuance, in practice much quieter and less penetrating than the prevailing melodic practice, would have required attentive silence from a large audience. Furthermore, the function of the style as accompaniment would have been clearly redundant within the context of the Hawaiian ensemble, where bass lines and chords were forcefully provided by guitar and ukulele. Clearly, the subtleties of steel guitar polyphony would have been masked by the ensemble. However evidence suggests that it was not unknown on the stage. In a pamphlet advertising Joseph Kekuku's Hawaiian Quintet for the Chautauqua circuit, mention is made of Kekuku's wonderful guitar solos.¹⁸⁵ Also, within the thirty one sides of music from *The Bird of Paradise* recorded by the Hawaiian

¹⁸⁴ Kanahele, *Hawaiian Music and Musicians : An Illustrated History*, 371.

¹⁸⁵ Bureaus, 'Kekuku's Hawaiian Quintet'.

Quintette in 1913, one solo steel guitar piece is included, indicating that it probably played a part in the stage production. The solo piece, entitled ‘Hawaiian Melodies’, is a medley of two tunes performed by Joseph Kolomoku.¹⁸⁶ The three minute piece was performed in Low A type tuning, tuned up a semitone to B flat. It begins with a languid performance of ‘Ua Like No A Like’ in rubato time. This section contrasts with the following melody, Cunha’s ‘My Honolulu Tom Boy’, played at a medium tempo, an excerpt of which appears in Ex 3.7, below. Two eight bar passages of harmonics, a technique that would have been difficult to project across the footlights within ensemble performance, are a feature of the coda.

♩ = 100

Ex 3.7 Kolomoku: ‘My Honolulu Tom Boy’ (1913) [CD Track 7]

¹⁸⁶ Walter Kolomoku, 'Hawaiian Melodies', (Victor B-13146), 1913.

12

My Honolulu Tom Boy

SONNY CUNHA
Arr. by KEOKI E. AWAI

Tempo di Hula

Ex 3.8 Awai: 'My Honolulu Tom Boy' (1917)¹⁸⁴

Keoki Awai's published arrangements of 1917 support the proposition that professional players developed style of accompanied melody to a very sophisticated level.¹⁸⁷ A texture of accompanied melody is employed throughout Awai's collection of fifty one pieces though the published tempos are not demanding. On one hand it could be argued that these arrangements were tailored to meet the demands of an amateur market in which the publisher hoped the collection would sell successfully and are not necessarily an indication of the complexity of professional performance. On the other hand, the level of complexity of Awai's solo arrangement of 'My Honolulu Tom Boy' (Ex 3.8, above) is on a par, if not more intricate in some regards, than Kolomoku's performance on the 1913 recording (Ex 3.7). Awai's rhythms are more detailed than Kolomoku's and the passing secondary dominant of Awai's fifth bar, a partial F[#]7 chord, represents a harmonic complexity that exceeds that of Kolomoku's interpretation. On the other hand, Kolomoku's bass line is

¹⁸⁷ Awai, *The Superior Collection of Steel Guitar Solos Vol. 1*, 12.

more defined and would have been a stronger element within the texture than Awai's and possibly more suitable for performance to a large audience.

'Stars and Stripes' [Appendix A] is a rare recording of accompanied melody performed at a high standard by a professional player. It was recorded in 1925 in Los Angeles by Charles Diamond [Kaimana] for a small record company, Hollywood Records, and is one of four known recordings by the artist. Diamond is a little known figure who was born in Hawai'i in 1894. He lived in Portland, Oregon for some time and was known to teach guitar, tour America performing and give radio performances. 'Stars and Stripes' is an energetic and virtuosic piece that was a centrepiece of his radio performances.¹⁸⁸ While marches were not uncommon within Hawaiian music, a solo rendition of a piece of this dimension is an unlikely choice for steel guitar and its novelty may have served the artist within his vaudeville repertoire. While Diamond's rendition includes some characteristic glissandi and fast melodic passages, its virtuosity lies in its texture and speed. The tuning used is Low G, which is one of the most common slack key tunings, in which genre it is known as 'Taro Patch'. As such, it is a transposed version of the most common early tuning, Low A. The lower strings, in tonic and dominant configuration, are used extensively throughout the piece to provide a bass line. The recording was rereleased by Grass Skirt Records in 2007 as an adjunct to the rerelease of the first recordings of Sol Hoopii which were made in the same year, in the same city of Los Angeles, and also by a small independent record company. The decision by Grass Skirt to include this track on an album of the early work of Sol Hoopii is apt, not only for reasons of the time and place of its creation. The juxtaposition cleverly represents a crossroad of steel guitar style at a time when the archaic yet virtuosic style of Diamond was giving way to the new dynamic approach of Hoopii, who would become the leader of the next generation of steel guitar performers.

Representation of accompanied melody style is prevalent within early publications of scores and dominates arrangements of student-oriented pieces in method books. In Awai's 1917 publication all fifty one arrangements employed the style.¹⁸⁹ *Smith's Hawaiian Melodies* of 1920 provided 20 arrangements for steel guitar, half as accompanied melody

¹⁸⁸ Les Cook, Notes to *Sol Hoopii in Hollywood*. (Grass Skirt Records), 2007.

¹⁸⁹ Awai, *The Superior Collection of Steel Guitar Solos Vol. 1*.

and half in melodic style.¹⁹⁰ A sample of early steel guitar method books illustrates an almost exclusive use of accompanied melody to introduce learners to the instrument. All of the pieces presented in four early method books examined, published in Los Angeles in 1915¹⁹¹, San Francisco in 1916¹⁹², New York in 1917¹⁹³ and Sydney in 1920¹⁹⁴, were accompanied melody and employed Low A tuning. For pedagogical reasons, published pieces were generally short and of limited complexity. Although single string and harmonised melody exercises are explored in all but Bishaw's book, it is curious that no purely melodic pieces are provided. It may have been that as a purely melodic style required accompaniment, the publishers felt that avoiding the necessity for accompaniment broadened the reach of their publications. It is likely that the promotion of the steel guitar as a solo instrument may have increased its appeal to a potential amateur clientele. Bailey's book is denoted as being 'designed for self study' which was, perhaps, an attempt to broaden even further its appeal, averting the problems associated with a shortage of teachers for the new instrument at that early stage. Whatever the reason, early pedagogical publications presented the steel guitar as primarily a solo instrument through examples of accompanied melody.

This chapter has provided an overview of the first generation of steel guitarists as they were embraced by the audiences of North America in the early 20th century. The context of their success has been considered, and has led to the conclusion that the cohesion and sonority of stringed Hawaiian ensembles played an important part in the dissemination of the steel guitar through recordings. An investigation of the performance style of the early players has been conducted, dissecting performance practices and identifying factors that influenced their development. Furthermore, two distinct styles of performance, melodic and accompanied melody, have been identified within the body of performance practice of the first generation. In the middle of the 1920s a new style of playing began to emerge, heralded by the first recordings of Sol Hoopii in 1925. The new style grew out of increasing demands of evolving popular music genres of the 1920s and is evident in the

¹⁹⁰ William J. Smith, *Smith's Hawaiian Melodies #1* (New York: Wm. J Smith Music Co, 1920).

¹⁹¹ Stumpf, *Original Hawaiian Method for Steel Guitar*.

¹⁹² Bailey, *The Peterson System of Playing the Guitar with Steel in the Hawaiian Manner*.

¹⁹³ Coleman, *The Steel Guitar and How to Play It*.

¹⁹⁴ Bishaw, *The Albert Hawaiian Steel Guitar: Complete Instruction for Accompaniment and Solo Work*.

recorded performances of Hawaiians such as Hoopii, Bennie Nawahi and Sam Ku West, and American vaudeville performers such as Roy Smeck. The style was characterised by increasing rhythmic and harmonic complexity. Discussed at length in the next chapter, that style represented both the accommodation of new musical trends along with the development of some aspects of the style of the first generation. Other aspects of the style of the first generation, such as the extensive use of ragtime rhythmic clichés and staccato picking, receded in the face of changes in public appetites and technological developments of instrument design.

Chapter 4: Steel Guitar in the Jazz Age

This chapter examines the progress of the steel guitar within popular music in America in the 1920s. The rise of the steel guitar in the 1910s and early 1920s held promise of the instrument maintaining a significant voice in contemporary popular music. While this potential was fulfilled in the 1920s, the story of the instrument, as reflected in this chapter, is one in which a growing complexity of popular music placed demands on the instrument that were increasingly difficult to meet. The chapter begins with a discussion of the popularity of the steel guitar within amateur and professional music making in America in the 1920s. The remainder of the chapter comprises an analysis of the style of the steel guitarists as they adapted their performance to accommodate new musical trends of the decade. A heightened level of skill evolved in response to technical challenges as ragtime gave way to jazz. The new generation merged innovative techniques and instrument configurations with the idiosyncrasies of the earlier generation to create a distinct and recognisable style. Prominent within this discussion is the work of Sol Hoopii, the most influential Hawaiian steel guitarist. In common with the earlier generation, steel guitar of the 1920s was predominately a melodic instrument, employed as a solo instrument as a provider of melodic interludes within songs. Three distinct approaches to melodic playing will be discussed and referenced in this chapter. New tunings that evolved in response to increasing harmonic complexity are then discussed. The appraisal of the instrument in the 1920s is then broadened by a discussion of the interrelationship between the steel guitar and the genres of blues and jazz. The relationship of the steel guitar to blues is considered, both from the viewpoint of the instrument's influence on blues guitarists and, conversely, the assimilation of blues stylings by steel guitarists. The jazz stylings of prominent steel guitarists are then appraised with a question as to their broader influence in early jazz. Finally, it is argued that the eventual demise of the steel guitar can be attributed, at least in part, to the complexity of style and configuration of the steel guitar that had its origins in the 1920s. While it is commonly held that the demise of the steel guitar in the 1950s was as a result of both of a decline in the popularity of Hawaiian music and the invention of the pedal steel guitar, it will be argued here that the diversity of style and configuration that arose in the 1920s was as much to blame.

Within the global culture of the guitar in the 20th century, the steel guitar is generally reduced to little more than a footnote. However, in the 1920s, when the steel guitar was in ascendance, the meteoric rise of the conventional guitar had only just begun, a circumstance largely ignored by contemporary guitar historians. The soloist's role of early steel guitarists, outlined in this and the previous chapter, helped to establish the guitar as a soloist's instrument, a practice later mirrored on a grand scale by conventional guitarists. The relative standing of the Spanish guitar in this period is reviewed in Appendix D.

4.1 Popularity Builds

As discussed in the previous chapter, the steel guitar was embraced in the 1910s by both professional and amateur musicians. This relationship continued to prosper in both domains in the following decade. An increasing amateur interest in the instrument perpetuated a constant stream of scores and method books. Low A emerged as a standard of tuning to such a degree that publishing houses produced collections of scores without accompanying tablature and without the need to even identify the tuning.¹⁹⁵ Method books that employed Low A continued to be produced in the 1920s adding to the many publications already available.¹⁹⁶ This tuning standard for amateur performance and pedagogy persisted into the next decade. Method books that employed alternative tunings did not become widely available before the middle of the 1930s.¹⁹⁷ The commercial potential of the steel guitar was harnessed on a broad scale by the Oahu Publishing Company of Cleveland that was established in 1926. Working on a franchise model, pedagogy was the primary activity of the company. The company generated printed steel guitar courses and scores and marketed these along with a range of instruments and accessories through its teaching studios. The teaching materials that it created were geared

¹⁹⁵ Herbert Boot, *Aloha Folio: Hawaiian Guitar Solos* (Rochester: Don Santos, 1928), *Schurman's Folio of Hawaiian Guitar Solos* (Chicago: Cgart Music Publishing House, 1930), W.D. Moyer, *Twelve Popular Solos for Hawaiian Guitar* (Milwaukee, Wis.: Wm. C. Stahl, 1927), William J. Smith, *Favorite Hymn's Arranged as Solos for Hawaiian Guitar* (New York: Wm. J. Smith Music Co., c 1926), William J. Smith, *Smith's Hawaiian Guitar Duets* (New York: William J. Smith Music Co., Inc., 1925), Smith, *Smith's Hawaiian Melodies #1*.

¹⁹⁶ W. J. Smith and Co., *The Improved Kamiki Method for Hawaiian Guitar* (New York: WM Smith, 1928, revised 1938), De Lano, *The Hawaiian Steel Guitar: Complete Instruction for Its Artistic Study*, Roberts, *Paramount Method for Hawaiian Guitar: A Complete and Easily Understood Method for Self Instruction Showing How to Play Ragtime and Jazz*.

¹⁹⁷ Alvino Rey, *Modern Guitar Method, Hawaiian Style* (New York: Robbins Music Corporation, 1937), John Martell, *Play-Easy System for Hawaiian Steel Guitar* (New York: Wm. J. Smith Music Co. Inc, 1936), Pasco Roberts, *Master Lessons for Hawaiian Guitar*, vol. 2, 2 vols. (Chicago: Foster Music, 1937).

to sequential tuition and could be delivered using a standardised method. The company fostered the popularity of the instrument by providing extensive entry-level courses, simple arrangements and by marketing a business model to potential franchisees. The breadth of its reach can be measured by the twelve hundred studios across America that it supplied. It is estimated that two hundred thousand students graduated from these schools over their lifespan, which ended in 1986.¹⁹⁸ While the company's courses did expand to cater for different tunings in the 1930s, the standardisation of tuning in the 1920s would have simplified its initial success.

Appreciation of the steel guitar was generated within popular music by professional players who reached wide audiences through recordings, radio and stage performances. While Hawaiian ensembles performing traditional Hawaiian, *hapa haole* and popular tunes remained a primary performance vehicle of the steel guitar gained in the acoustic era, it was also increasingly employed in other genres, notably that of country music where it was readily accommodated within small string bands.¹⁹⁹ The volume of the steel guitar limited its suitability within the wind dominated dance bands of the 1920s. This problem disappeared in the early 1930s with the invention of electric amplification. However, in the meantime, the acoustic steel guitar did appear on some recordings of dance bands. This would have been possible through tailored arrangements and careful placement of microphones and instruments within the recording studio. Examples are recordings made by Andy Sanella with the Cosmopolitan Dance Orchestra²⁰⁰ in 1927 and Ceele Burke with Louis Armstrong and his Orchestra in 1930.²⁰¹ However, these were exceptions and, in the main, the acoustic steel guitar continued to be employed as a solo instrument and within small ensembles throughout the 1920s.

As argued in the previous chapter, the initial popularity of the steel guitar can be attributed, in large part, to novelty which continued to play a role in its identity and popularity in the 1920s. Brian Harker suggests that 1920s audiences carried an expectation

¹⁹⁸ Ruymar, *The Hawaiian Steel Guitar and Its Great Hawaiian Musicians*, , 70.

¹⁹⁹ In a series of articles in *Aloha Dreams* commencing in December 2007, Anthony Lis outlines the early use of Hawaiian steel guitar players in country music. In his first article Lis observes that hillbilly steel guitar recordings began after 1925. In later articles he details the employment by famed country artist Jimmie Rodgers of Hawaiian steel players between 1928 and 1933. Anthony Lis, "'Not from the American South, but from the Blue Pacific": The Steel Guitar in Early Country Music, Part One: The Earliest "Hillbilly" Steel-Guitar Recordings', *Aloha Dreams* 5/4 (2007).

²⁰⁰ Rockwell, *Hawaiian & Hawaiian Guitar Records, 1891-1960*, 1021.

²⁰¹ Rockwell, *Hawaiian & Hawaiian Guitar Records, 1891-1960*, 51.

of novelty, as ‘innovation was par for the course in a world in which the outlandishly new was expected as a starting point for success’.²⁰² This broad expectation may well have had its origins in the constant variety and innovation of vaudeville acts. Novelty continued to be exploited by the second generation of steel guitarists. The characteristic glissando effect was augmented by various techniques including percussion solos, performed by tapping on the instrument with finger picks, and imitations of various sounds as diverse as trains and chickens. While the steel guitar may not have been suitable for the dance orchestras of the period, an indication of breadth of its appeal can be deduced from the referencing of its novel sound by dance band arrangers, despite its unsuitability for their orchestras. This is clearly demonstrated in the first influential manual of dance band arranging written by Arthur Lange which appeared serialized in *Metronome* magazine in 1925 and as a book in 1926.²⁰³ While Lange did not recognise the instrument as a potential member of the band, he provided instructions as to how to direct banjo players to create steel guitar-like glissandi.

4.2 Sol Hoopii: The Vanguard of the Second Generation

Sol Hoopii is widely recognised as the most significant steel guitarist of his era, and his style provided a model for his generation. Fortunately, a body of his recordings spanning most of his commercial career (1925-38), survives. The catalogue of his recordings is much more extensive than those of his peers, such as Sam Ku West, whose recordings were limited to an eighteen month period, or Bennie Nawahi, whose recording career began in the late 1920s. These recordings provide a frame of reference for the examination of the second generation of steel guitarists as a whole. Whether Hoopii was superior to his contemporaries is a matter for debate, but he is the only player whose work across the era is preserved in recordings.

Born in 1903, Hoopii immigrated to the mainland in 1919. After a brief period in San Francisco he moved to Los Angeles chasing work and was rewarded with regular live and radio engagements. He then achieved acclaim through the rapidly developing recording

²⁰² Brian Harker, *Louis Armstrong's Hot Five and Hot Seven Recordings* (New York: Oxford University Press, 2011), 7.

²⁰³ Arthur Lange, *Arranging for the Modern Dance Orchestra* (New York: Robbins Music Corporation, 1926), 36.

industry and in an emerging motion picture industry, newly invigorated by sound. He recorded regularly until 1938 at which time he retired from secular performance and joined the ministry of evangelist Aimee Semple McPherson, whose International Church of the Foursquare Gospel was based in Los Angeles.

While he recorded for the church, his secular output is much better known and was, at times, nationally distributed. Malcolm Rockwell's discography lists two hundred and four sides recorded by Hoopii with various small ensembles between mid 1925 and December 1938.²⁰⁴ These recordings were made for four recording companies. His first fourteen sides were recorded for an obscure Hollywood label, Sunset Records and are rare due to their limited local release. He then recorded one hundred and eighteen sides for Columbia records, the earlier series of which received national release. After a hiatus of two and a half years between 1931 and late 1933, presumably due to the grave economic conditions inflicted on the recording industry by the Great Depression, he again began recording for Brunswick for whom he cut sixty two sides. His final ten commercial sides were recorded for Decca. While he recorded a mixture of traditional Hawaiian, *hapa haole* and popular tunes throughout his career, it is notable that popular tunes dominated the beginning and end of his commercial output while, for a period of two years at the end of his Columbia tenure, his recordings were dominated by sedate Hawaiian songs in which he took the lead vocal part in addition to his steel guitar duties.

With popular repertoire salient within his first recordings, Hoopii's style was heavily influenced by the emergence of jazz, a dominant popular style of the period, just as Ferera had been influenced by ragtime in the previous decade. However, if the jazz pioneers of the period, Louis Armstrong, Fletcher Henderson, and Duke Ellington, were engaged in the reconciliation of hot and sweet jazz, as suggested by Brian Harker, Hoopii's efforts might be seen as a similar endeavour but in mirror image.²⁰⁵ While Armstrong, Henderson and Ellington seem engaged in taming the wild excesses of group improvisation into an ordered textural construction within which harmonic complexity could develop, Hoopii was engaged in energising placid Hawaiian steel guitar stylings through the injection of new harmonic and melodic attributes of the jazz era. The end point of both approaches

²⁰⁴ Rockwell, *Hawaiian & Hawaiian Guitar Records, 1891-1960*, 496-505.

²⁰⁵ Harker, *Louis Armstrong's Hot Five and Hot Seven Recordings*, 7.

achieved a similar reconciliation of hot and sweet at a time when the jazz idiom was evolving into a soloist's art. Hoopii's successful pioneering of this model was widely transmitted through the massed media vehicles of radio and recordings. In this way his contribution to the popularisation of jazz was significant and yet it has received scant recognition within jazz scholarship.

Hoopii's first recordings for Sunset in 1925 and 1926 show a mature style replete with all of the mannerisms and devices that he was to make famous across the following fifteen years of his commercial career. While the first recordings could be criticized as a little tentative in comparison to later work, his early performances were nevertheless energetic and filled with variation. His first recordings were hampered by a primitive acoustic recording process along with his use of a flat-top acoustic guitar, but close examination reveals a style that was highly developed even at this early stage. Later recordings employed electronic recording processes, and Hoopii's instrument was replaced by a National Tricone resonating guitar in 1926.²⁰⁶ Hoopii recorded with three types of instrument through his career, the acoustic guitar of his first Sunset recordings, National resonators between 1926 and late 1934, and then, finally, a Rickenbacker Bakelite electric guitar on his last Brunswick and Decca sides. A broad appraisal of his recorded performances reveals that his melodic stylings did not vary greatly despite the different properties of each instrument except for a few tentative early performances on the electric instrument. This is not to suggest that he did not exploit the enhanced sustain and volume of the resonator and then the electric instrument – which he certainly did – but it is also clear that the melodic techniques that he developed on his first acoustic instruments continued to serve him well throughout his career. His approach to harmony was a different matter and its development will be addressed later in this chapter.

²⁰⁶ The resonating guitar was an invention of John Dopyera for which he filed a patent in 1926. Utilising a reverberating aluminium cone, the design was an attempt to raise the volume of the acoustic guitar, which it did with an added advantage of increased sustain. The National String Instrument Company began manufacture of the design in a square-necked configuration of guitar specifically for Hawaiian steel performance. A full account can be found in Peter T. Veru, 'The National-Dobro Guitar Company: How the Resonator Guitar Survived the Age of Electric Amplification', The George Washington University (2009). Sol Hoopii was engaged by the manufacturer to undertake promotion of the instrument in late 1926 at a private party for a prospective financial backer. Hoopii appears to have used the instrument exclusively for recordings from that time until it was replaced by an electrically amplified instrument in 1934. Brozman and Smith, 'The Early History of the National', 27, 115.

Hoopii's elevated skills are apparent in his first known recording, 'Come on Nancy'.²⁰⁷ In this recording he demonstrated a secure rhythmic conception laced with intricate syncopations. His confident approach to syncopation can be attributed to an affinity with the rhythm conception of the jazz idiom combined with a picking technique sufficient advanced for him to express it in his own performance. The following example (Ex 4.1) shows the first two choruses of his performance. A comparison of the two iterations of the melody reveals a variety of rhythmic devices being employed to vary and energise the melody. Syncopated figures of quavers and semiquavers abound. Hoopii embellishes the rhythm extensively with repeated notes and semiquaver triplet rolls. He also anticipates or delays accented notes at will.

♩ = 110

Ex 4.1 Waikiki Hawaiian Trio: 'Come on Nancy' (1925) [CD Track 8]

Another recording for Sunset, Gershwin's 'Oh! Lady Be Good', illustrates a number of Sol's trademark techniques that can be found in the subsequent work of his contemporaries.²⁰⁸ The recording consists of three choruses performed by a vocal trio with steel guitar, Spanish guitar and ukulele. In the first chorus Hoopii performs the melody on the steel guitar with little embellishment in 4/4 at fifty eight beats per minute. This is

²⁰⁷ Waikiki Hawaiian Trio, 'Come on Nancy', 78 (Sunset Suns 1053), 1925.

²⁰⁸ Waikiki Hawaiian Trio, 'Oh! Lady Be Good', 78 (Sunset Suns1085), 1925.

followed by vocal chorus harmonised in trio with instrumental accompaniment at the same tempo. Ex 4.2 below shows the last instrumental chorus of the recording. As the tempo increases to eighty beats per minute, the metre becomes 2/4. Syncopated variations of the melody are used freely in the A sections while improvised extensions to the melody create forward motion in parts that were vacant in the original melody. The sharp rake across muted strings, accentuating the melody note in bars three and ten was a rhythmic device that Hoopii later often used and which became commonly employed by other second-generation players.

In the B section Hoopii demonstrates techniques that would become ubiquitous in steel guitar style of the era. The first two bars feature a trill between notes on two adjacent strings. The rhythm is fast and its variability makes the effect appear temporally elastic. This technique, when combined with portamento, as used in 'All Alone' from the same session, became an expressive device used by most Hawaiian players and it was used to great effect, particularly at slower tempos.²⁰⁹ The fifth and sixth bars of the B section contain minor second intervals created by the simultaneous use of open and fretted notes. This device became common within the styles of the second generation as a means of accentuation. The third technique on show in the B section is the rhythmically abandoned unpitched phrase that extends across the last few bars of the section. It exemplifies one application of the virtuosic picking technique that Hoopii had developed and which he used as a novelty throughout his career.

²⁰⁹ Waikiki Hawaiian Trio, 'All Alone', 78 (Sunset Suns 1054), 1925.

Oh Lady Be Good

Steel guitar solo: Sol Hoopii
Final chorus

Swung 16ths

$\text{♩} = 88$

The musical score is written for a steel guitar solo in 2/4 time, featuring a key signature of three sharps (F#, C#, G#). The tempo is marked as 'Swung 16ths' with a quarter note equal to 88 beats per minute. The score is divided into two sections, A and B. Section A (measures 1-4) begins with a melodic line of eighth notes, followed by a triplet of eighth notes. Section B (measures 5-8) is more rhythmically complex, featuring a series of triplets and sixteenth notes. The final chorus (measures 9-12) returns to a simpler melodic line of eighth notes, concluding with a final melodic phrase and a double bar line.

Ex 4.2 Waikiki Hawaiian Trio: 'Oh Lady Be Good' (1925) [CD Track 9]

4.3 Three Melodic Approaches

While Hoopii demonstrated both picking virtuosity and a host of new melodic and rhythmic devices, a broad analysis of style in these terms alone would be complicated and not necessarily fruitful. More beneficial is an analysis of the way that Hoopii and his peers approached their primary role of presenting melodic material. Three distinct approaches can be identified employed within their performances which are either predominantly single note, dyadic or chordal melodies. These methods were used both in isolation and in combination, either within phrases, sections or whole pieces. While some instrumental

pieces have been recorded using just a single notes²¹⁰ or dyads,²¹¹ a combination of two or three approaches within an instrumental piece is more common. Alternation between approaches can also occur within individual phrases. The methods are constrained by the configuration of the instrument in different ways and offer the player varying advantages and disadvantages.

4.3.1 Single Note Melody

In the construction of single note melodies, any sequence of notes within the range of the instrument is possible but speed, articulation and intonation are constrained by the ability of the player to move and accurately position the bar. The portamento effect of the bar sliding to the required note is an idiosyncratic sound that is often used, but its constant presence may become irritating to the listener and can be a sign immature development. Precision and speed of bar placement comes with much practice. The melodic velocity that characterised 'hot' jazz presented a problem for early steel guitarists. The skill of those who achieved such speed, such as Sol Hoopii, Bennie Nawahi and Roy Smeck, can be assessed as significantly greater than that of the previous generation.

In addition to rapid and accurate bar movement, the second-generation players employed a number of techniques to achieve rapid melodic passages. Three salient techniques were, the use of alternate stopped and open notes, arpeggios, and chromatic runs, all of which required enhanced accuracy and control of picking. The following example 'Honolulu Bound' (Ex 4.3) shows how Bennie Nawahi employed each of these techniques within the same passage to achieve an impressive velocity.²¹² The primary method Nawahi used was the alternation of stopped and fretted notes. This method reduces the required number of bar movements and can be seen in bars one, two, three, nine, ten and eleven. The technique of alternating open and fretted notes in scalar passages is made more difficult by the reversal of the pitch relationship of the strings as the pitch ascends or descends.²¹³ Secondly, speed is achieved in bar four by picking an arpeggio across the neck. This technique is dependent on the tuning and may also be affected using specific

²¹⁰Sol Hoopii and his Novelty Trio, 'Tin Roof Blues', (Columbia Co1022-D), 1926.

²¹¹ Waikiki Hawaiian Trio, 'All Alone'.

²¹² The Hawaiian Beachcombers, 'Honolulu Bound', 78 (Grey Gull 4297#1), 1930.

²¹³ The invention of this technique in popular music is commonly attributed to banjoist, Bill Keith (1939-), who developed it while playing in the genre of bluegrass. Fig 4.3 shows that Nawahi had pioneered the technique ten years before Keith was born.

slanted bar positions. The final technique, chromatic movement, can be seen in bar eleven. To perform this piece in the desired key, Nawahi has placed a capo at the third fret. The use of a capo within early steel guitar performance is a practice that has only recently been identified by Mike Neer.²¹⁴ With the use of a capo for this performance recognised, an analysis through tablature clearly shows how Nawahi combined the three techniques to achieve the speed and agility required in hot jazz playing.

♩ = 108

Capo at 3rd fret or alternatively 5th fret for High A tuning

²¹⁴ Textual or pictorial evidence of this practice by steel guitarists in this era has not come to light, but detailed aural analysis has uncovered its use. Neer's investigation, using digital transcription software, determined that Nawahi's phrasing was dependent on the use of open strings. These open strings could only have been available had a capo been utilised. Michael J. Neer, 'Tickling the Strings Discussion (King Nawahi) 2013. <http://bb.steelguitarforum.com/viewtopic.php?t=248896&start=0> (accessed 13 October 2013).

Ex 4.3 Hawaiian Beachcombers: 'Honolulu Bound' (1930) [CD Track 10]

The introduction of resonator guitars in 1926 increased the utility of the instrument in a number of ways. While the inventor's claim that the Tricone increased the volume of the steel guitar by sevenfold was optimistic, there is no doubt that increased volume and sustain of the new instruments were appreciated by performers.²¹⁵ Tricones are ubiquitous in photographs and sketched of steel guitarists of the late 1920s. In effect, the increased volume gave players freedom to employ inner strings more readily than the earlier generation, who were compelled to seek maximum volume on the top strings of standard guitars. For example, the first few bars of Ex 4.3 show Nawahi, whose favoured instrument was a National Triolian resonator, using inside strings from the outset of the piece. Ex 4.4 below, 'The Hula Blues' by the Genial Hawaiians, demonstrates a passage made more practical by the amplification of a resonator.²¹⁶ It employs the relatively new tuning of High A. The tuning, derived from Low A, substitutes a major triad on the bottom strings for the dominant and tonic configuration of the earlier tuning. The third and fourth bars show a fast arpeggiated passage. The combination of the increased volume of the resonator with the new tuning allowed the passage to be performed quickly and accurately in one position. The width of the neck could be employed in preference to its length thus reducing the required vertical travel of the bar.

♩ = 80 Swing

T E 8 6
A C# 7 7 5 5
B A 8 8 7 6
A A 8 8 8 8

Ex 4.4 Genial Hawaiians: 'The Hula Blues' (1933) [CD Track 11]

²¹⁵ Kanahale and Berger, *Hawaiian Music and Musicians*, 792.

²¹⁶ The Genial Hawaiians, 'The Hula Blues', (Bluebird BB-5047), 1933.

In single note melodies, second generation players also routinely exploited the diatonic intervals of tertian tunings. In the following example (Ex 4.5), ‘The Hula Blues’, Sol Hoopii used the interval of a sixth achieved on strings one and three, to create a single note melody.²¹⁷ Slurring between notes on alternate strings, achieved by dampening the first note of the interval as the second is sounded, achieves an effect similar to the human voice crossing the break between chest voice and falsetto.²¹⁸

Ex 4.5 Hoopii: ‘The Hula Blues’ (1927) [CD Track 12]

4.3.2 Dyadic Melody

It is a short step from the slurred intervallic passages performed on separate strings, such as that of ‘Hula Blues’ in Fig 4.5 above or the two string trills of Ex 4.2, to extended dyadic melodies. However, parallel dyadic harmonisations, as exemplified in ‘Hilo March’ in Ex 3.6, were widely employed by players of the first generation, and thus the techniques of Ex 4.2 and 4.5 can be seen as a continuation earlier practice. Dyadic melodies continued to be a common textural variation in the 1920s. A further example can be seen in Ex 4.1, whereby the second iteration of the sixteen bar melody employs intervals of both thirds and sixths.

Dyads proved to be a flexible device employed in the face of increased harmonic demands of the repertoire. Major or minor thirds or sixths on the predominant E or Low A

²¹⁷ Sol Hoopii and his Novelty Trio, 'Hula Blues', Los Angeles. 78 (Columbia Co 1022-D), 1927.

²¹⁸ Tablature figures A, B and C demonstrate three different ways that the three note figure could have been performed. In itself, this is a demonstration of the flexibility that the steel guitar affords the performer in phrasing.

tunings, or on the new High A tuning, was easily achievable on adjacent strings. The use of forward or backward slant technique allowed these intervals to be achieved in sequence with relative ease. This technique, in addition to sliding portamento, allowed the player to achieve smooth voice leading between chords. As Tin Pan Alley composers dictated increased harmonic content, more dominant seventh chords were employed, often in cyclic progression.²¹⁹ Dyads could be used to express harmony within melodic performance to a certain degree as partial expression of chords. The following example (Ex 4.6) of ‘The Four Islands’ from Hoopii’s early output is based on a harmonic framework that passed beyond the simple triadic harmony of traditional Hawaiian repertoire.²²⁰ The harmonic progression of this *hapa haole* song, in the key of A major, incorporates three secondary dominants in its circular passage. Hoopii’s introduction, transcribed below, employs dyads to add a harmonic outline to the melody achieving smooth voice leading. While dyads, by definition, can only provide partial harmonic information, Hoopii’s choices provide a passage that could stand alone, adequately representing both melody and harmony.

Ex 4.6 Waikiki Hawaiian Trio: ‘Four Islands’ (1925) [CD Track 13]

The dyadic facility of the steel guitar proved attractive to performers in other genres, particularly in country music. As the instrument was gradually adopted in the genre in the 1920s, the practice of employing dyadic melodies became common in country music. A number of factors may have contributed to the instrument’s continued use to this end. First, the power of dyadic melody, particularly at slow or medium tempos, commanded more attention than that of a single note melody, particularly as a contrast within popular songs.

²¹⁹ Hamm, *Yesterdays: Popular Song in America*, 364.

²²⁰ Waikiki Hawaiian Trio, ‘The Four Islands’, 78 (Sunset Suns 1053), 1925.

Second, the technical demands of the technique were not excessive and could be readily developed by ear. This may have helped it find favour in a genre within which folk musicians dominated. Lastly, with the advent of electric amplification in the 1930s, the sustain of amplified notes further enhanced the effect and power of dyads. As a result, moving dyadic lines created through portamento stood out as powerfully expressive and have been a constant presence within country music since the middle of the 20th century.²²¹

4.3.3 Chord Melody

The vanguard of harmonic development in popular music of the 1920s can be seen in the work of jazz pianists such as Jelly Roll Morton. Piano recordings and scores demonstrated harmonic complexity that was reflected in the arrangements of jazz bands and dance orchestras. Such intricate harmony was not achievable on the steel guitar. While dyads provided some satisfaction in the quest to represent chordal melody on the steel guitar, the configuration and attributes of the instrument proved frustrating to those who wished to expand its harmonic palette. In contrast, conventional guitar players of the era could duplicate the more complex sonorities through the advantages afforded by the independence of the fingers of their left hand in forming chords as in the following example.²²²



Ex 4.7 Lang: 'Add a Little Wiggle' (1928) [CD Track 14]

The use of dyads afforded steel guitarists some litheness in forming chords but it was limited. A straight bar ensured that chords of three or more notes were dependent on the fixed tuning until the invention of the pedal steel guitar. On this new design, pedals and levers could be configured to raise or lower string pitches by increasing or lowering string tensions. As these pedals and levers worked on individual strings, harmony with three or

²²¹ The addition of pedals to the instrument in the 1950s provided a means whereby the technique was simplified in as far as the slanting technique was no longer mandatory to achieve smooth movement.

²²² Eddie Lang, 'Add a Little Wiggle', 78 (OKeh 41134), 1928.

more independent voices could be created. An example [Ex 4.8], performed by pedal steel luminary Buddy Emmons, appears below.²²³



Ex 4.8 Emmons: 'Oh Shenandoah' (2007) [CD Track 15]

Sol Hoopii was well aware of voice leading practice in harmony. His earliest recordings document such expertise in the arrangements of vocal trios and quartets which Hoopii himself led. The vocal arrangements utilised standard choral voice leading practice with each voice independent and able to incorporate parallel or contrary motion. With this expertise in mind, Hoopii's frustration with the limitations of his instrument can be deduced from the following two examples of his early use of chord solos in a 1926 recording of 'Stack O'lee Blues'.²²⁴ In Ex 4.9 below, Hoopii confines the chordal melody to close voiced triads with the exception of an E7 chord in bar four. The E7 is achieved by sliding to a reverse slant at the tenth fret and picking the chord with a 'grip' of two fingers and thumb on the second, third and fifth strings. The grip, a simultaneous plucking of three strings, was an alternative to strumming and became commonly used by electric steel guitarists. In applying a grip, three notes could be extracted from those stopped by the bar, creating new voicings by leaving redundant or unwanted notes unplayed.²²⁵

²²³ Buddy Emmons, 'Shenandoah' 2007. <http://www.youtube.com/watch?v=9GIlXOgF4DY> (accessed October 24 1012).

²²⁴ Sol Hoopii and his Novelty Trio, 'Stack O'lee Blues', Los Angeles. 78 (Columbia Co 797-D), 1926.

²²⁵ The value of this technique to extract more complex sonorities from eight stringed instruments became paramount within the genre of western swing.

The image displays three systems of musical notation for guitar. Each system consists of a standard musical staff with a treble clef and a key signature of two sharps (F# and C#), and a corresponding guitar tablature line below it. The tablature line is divided into three staves labeled T, A, and B, representing the top, middle, and bottom strings respectively. The first system shows a melody starting with a trill on E4, followed by a C# triad in second inversion. The second system shows a trill on E4, followed by a C triad in root position. The third system shows a trill on E4, followed by a C triad in root position. The tablature lines include fret numbers and string numbers, indicating the specific frets and strings to be played.

Ex 4.9 Hoopii: 'Stack O'lee Blues' (1926) excerpt 1 [CD Track 16]

A second example from the same recording (Ex 4.10) provides an even clearer example of Hoopii's dilemma and the compromises that he was willing to make to achieve his harmonic goals.²²⁶ In this example Hoopii uses imprecise intonation to imply (or 'fudge') a sonority. The excerpt is taken from the opening of the fourth chorus of the twelve bar blues form. The opening two bars employ a trill that is performed by between thumb and two fingers opposed. The bar starts on a forward slant, forming an E triad in second inversion. Straightening the bar at the fifteenth fret then creates a C triad in root position through the contrary motion of the top and bottom notes. In the final two bars, Hoopii rotates the bar from forward slant to reverse slant, utilising the horizontal position on the way. The position in the last bar is one in which the bar covers three strings but between two frets. This last position can be described as a 'fudge'. While the strings at each end of the voicing may be in tune, the string in the middle must be out of tune. Nevertheless, the chord that Hoopii forms in this way seems to function adequately as a diminished triad.

²²⁶ This extreme example was first identified in tablature by Stacey Phillips. Phillips, *The Art of Hawaiian Guitar Volume 2*.

The technique of covering two strings on one fret with the tip or heel of the bar while covering another at a different fret also became a widespread technique of the 1930s and 1940s. However, where an unsounded string falls between the pair and single strings, the intonation is improved. In the transcription below, the actual microtonal values of the ‘fudged’ strings are notated rather than the perceived pitches Hoopii intended.

The image displays two systems of musical notation for guitar. Each system consists of a melodic line in treble clef and a corresponding fretboard diagram below it. The fretboard diagrams show the strings (T, A, B) and fret numbers, with some values being microtonal (e.g., 14.5, 13.5, 12.5, 11.5, 10.5, 9.5, 8.5).

System 1:

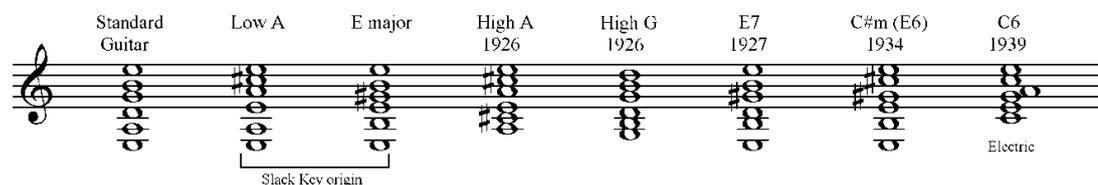
- Chords:** E, C7
- Microtonal values (Fretboard):**
 - String T: 16, 16, 16, 15, 15, 15
 - String A: 14, 14, 14, 15, 15, 15
 - String B: 14, 15, 15, 15, 15

System 2:

- Chords:** E, E7
- Microtonal values (Fretboard):**
 - String T: 16, 15, 14, 13, 12, 11, 10, 9, 8, 7
 - String A: 15, 14.5, 14, 13.5, 12.5, 11.5, 10.5, 9.5, 8.5, 7
 - String B: 14, 14, 14, 14, 13, 12, 11, 10, 9, 7

Ex 4.10 Hoopii: ‘Stack O’lee Blues’ (1926) excerpt 2 [CD Track 17]

4.4 New Tunings



Ex 4.11 Popular Steel Guitar Tunings of the 1920s

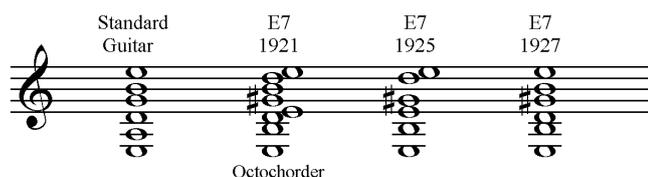
The practice of customising a tuning to suit a particular song was common within the slack key guitar tradition.²²⁷ It was a practice that was continued by steel guitarists, although the widespread adoption of Low A established a standard tuning in the 1910s and early 1920s. It was always possible for players to invent their own tunings and so it is unsurprising that various tunings were invented to accommodate more complex harmonic demands. Some tunings became widely known and employed in the 1920s and early 1930s and, as this study is concerned with the journey of the instrument to the mainstream of popular music, the most widely used tunings will be considered. Significantly, the common tunings can all be derived from strings used for standard Spanish guitar tuning. The availability of standardised string sets was essential for a broad dissemination of the instrument. Furthermore, any standard guitar fitted with these strings could be converted for use in any of the tunings with no substitution of strings required. In contrast, Jerry Byrd's C6 tuning of 1939 required string sets customised with lighter bottom strings.

The dates that accompany the tunings above indicate their first appearance on record as determined by the author. Recordings on which their appearance has been noted appear in the following discussion. These determinations of date are subject to amendment as they have been arrived through analysis of recordings that were available while this study was undertaken. While some recordings have been supplied from private collections, most of the material was sourced from commercial reissues that appear in the discography. The material assessed is only a small portion of the steel guitar recordings of the era but represents highlights reproduced and reissued by aficionados and musicologists. Thus the

²²⁷ Tartar, 'Slack Key Guitar'.

evidence on which determinations have been made is limited and these dates may well be amended with the discovery of further evidence. It is likely that in an era of novelty and innovation many more tunings existed and further study may reveal their existence. However, the enduring tunings of the era are the subject of the following discussion.

4.4.1 E7



Ex 4.12 E7 Tunings of the 1920s

The extensive use of secondary dominants in popular music in the 1920s clearly made life difficult for steel guitar players. With the existing tunings of Low A and E providing few options for forming dominant seventh chords, players had little choice but to alter their tunings to achieve them. The earliest example of a dominant seventh tuning identified by the author can be found on the 1921 recording of ‘Laughing Rag’.²²⁸ It was recorded by Sam Moore using an eight-string instrument known as an octo-chorder. The rare and exotic instrument would have provided fitting novelty for Moore’s vaudeville act.²²⁹ Like Jack Penewell’s experimental four neck instrument of 1924, it was built by Chicago harp makers, Lyons and Healy. A successful record, the performance may have provided a model of tuning to Moore’s contemporaries and of design to players of subsequent eras when eight string instruments became commonplace.²³⁰ While the lower strings of Moore’s tuning are difficult to identify from the recording, the configuration of the top six strings is clearly an E7 chord derived by raising the second string of the common E major

²²⁸ Sam Moore, 'Laughing Rag', 78 (Victor B-25543), 1921.

²²⁹ Allan Sutton, 'Rediscovering Sam Moore' 2011. <http://www.mainspringpress.com/moore.html> (accessed 14 October 2013).

²³⁰ In the history of the steel guitar the instrument appears to be a cul de sac although Moore recorded twelve sides with it for Victor in 1921. Some further use of the instrument is documented when Roy Smeck, introduced to the instrument in 1923, recorded with it in 1926. However, after personal financial difficulties whereby he was deprived of most of his instrument collection, Smeck appears not to have persisted with the instrument.

tuning. This tuning was utilised in six string steel guitar performance as early as 1925 in a recording by Charles Diamond entitled 'Sleep'.²³¹ (see Appendix B)

Diamond's performance stands on the cusp of the first and second generations. He has used the new tuning to good effect in the seven bar cyclic introduction, utilizing the dominant function of the tuning to its fullest. The rest of the piece has a skilfully assembled polyphonic texture in which the melody assumes so much independence from the accompaniment as to create the illusion of two instruments. The bass line utilises the dominant/tonic opposition of the bottom strings and is characteristic of the repertoire of the earlier generation. There are notably few bar slants employed throughout the piece, possibly because the tuning has obviated their use. Before this current study Stacey Phillips detected the tuning in the 1928 recording of 'Palolo Medley' by Charlie Wilson.²³² Since identifying Diamond's use of the tuning in his 1925 Californian recording, the current author has found examples in the work of other artists in the same period. Recordings were made in a variety of locations, in New York²³³ and Chicago in 1926,²³⁴ San Francisco in 1927,²³⁵ and in Dallas in 1928.²³⁶ Other than in Phillips' publication, this tuning remained unrecognised.²³⁷ From the evidence assembled, it is clear that the strategy of altering tunings to increase harmonic options dates from early in the 1920s and was widespread by the end of the decade.

A second dominant seventh tuning, also derived from the early E major tuning, was used in the late 1920s. It is not clear how early this tuning was devised but it may have been first used by Sol Hoopii in 1927 in his recording of 'I Ain't Got Nobody'.²³⁸ The tuning was subsequently widely adopted and appeared in method books of the 1930s.²³⁹ Rather than raising the second string of the E major tuning from B to D, in this tuning the fourth string E is lowered to D placing the minor seventh of the chord in the middle of the voicing. An example can be found in the recording of 'Sliding on the Frets' by Andy

²³¹ Charlie Diamond, 'Sleep', 78 (Hollywood Record Company 1353), 1925.

²³² Stacy Phillips, *The Art of Hawaiian Guitar Volume 2*, vol. 2 (Pacific: Mel Bay Publications, 2005), 62.

²³³ Prince Wong, 'Wong Wong Blues', New York. 78 (Pahthe-Actuelle PA21170), 1926.

²³⁴ Kaai Serenaders, 'Hula Mama Blues', Chicago. 78 (Paramount PM12433), 1926.

²³⁵ Kane's Hawaiians, 'Kane's Blues', San Francisco. 78 (Victor Vi20701), 1927.

²³⁶ Hawaiian Serenaders, 'Happy Hawaiian Blues', Dallas, Texas. 78 (Brunswick Br 4164), 1928.

²³⁷ Phillips, *The Art of Hawaiian Guitar Volume 2*, 62.

²³⁸ Sol Hoopii's Novelty Trio, 'I Ain't Got Nobody', 78 (Columbia Co-1384-D), 1928.

²³⁹ Martell, *Play-Easy System for Hawaiian Steel Guitar*, Rey, *Modern Guitar Method, Hawaiian Style*, Roberts, *Master Lessons for Hawaiian Guitar*.

Sannella, a transcription of which appears as Appendix C.²⁴⁰ This solo uses a fast swing rhythm and is filled with jazz syncopations. Notably, it also employs the dominant seventh sonority as a tonic in the convention of blues harmony. While it differs in many respects from Diamond's 'Sleep', both pieces largely avoid the use of bar slants. An exception to this within Sannella's piece occurs in the remarkable introduction in which he uses a double 'fudge' in bars five and six to obtain descending half diminished sonorities.²⁴¹ His method is to stop two strings on a single fret with each end of the bar. As in Hoopii's example (Ex 4.10) the intonation of the inner notes cannot be accurate; nevertheless the recording demonstrates that intent of the performer is achieved with remarkable clarity.

4.4.2 High A

High A tuning was a popular and pervasive tuning in the late 1920s and 1930s. It is described by Kanahele as a variation of Low A tuning and is achieved by tuning the bass strings up to form an A triad in root position below the existing A triad on the top strings.²⁴² Other configurations used were based on an A flat or G triads. High A is said to have been the standard and was often used by Sol Hoopii, but many of Sam Ku West's recordings were achieved with a High A flat tuning. The increased tension on the instrument of the tighter bass strings provides good reason to opt for lower pitch of A flat or G if a standard set of guitar strings is used. The first recorded instance of the tuning, though based on G, may be Sol Hoopii's 1926 recording of 'Farewell Blues'.²⁴³ The tuning is not easily differentiated from Low A on recordings where the lower strings are not used, as was often the case, and other earlier examples may well exist.

The tuning provides a number of melodic and harmonic advantages over its Low A antecedent, any one of which may have motivated its inventor. Hoopii's use of the tuning in 'Farewell Blues' was primarily melodic, in keeping with Ex 4.4 in which the Genial Hawaiians utilise width of the neck for faster melodic lines. Significantly, High A tuning may have appeared at about the same time as the advent of the National resonator guitar in 1926. This concurrence could support an argument that the tuning went hand in hand with increased melodic activity on the lower strings, a facility enhanced by the resonator. As a

²⁴⁰ Andy Sannella, 'Sliding on the Frets', New York. 78 (Brunswick BR 4484), 1929.

²⁴¹ These chords can also be seen as incomplete dominant ninth chords.

²⁴² Kanahele, *Hawaiian Music and Musicians : An Illustrated History*, 370.

²⁴³ Sol Hoopii and his Novelty Trio, 'Farewell Blues', 78 (Columbia Co 797D), 1926.

step toward greater harmonic complexity, the tuning does not immediately appear to yield greater complexity in the direct manner of the E7 tunings. However, while no complex sonorities are on offer from a horizontal bar, the tuning presents increased capacity for dominant seventh chords using bar slants. The fourth bar of 'Stack O'Lee Blues' (Ex 4.9) shows that Hoopii was alert to the possibility from an early stage. The following illustration (Ex 4.13) shows a page from a steel guitar method book published in 1937 by Gibson Guitar Company in which a variety of dominant seventh chords derived from the tuning are demonstrated.

TABLE OF NOTES IN EACH SEVENTH CHORD

	Root	third	fifth	seventh
C7	contains C	E	G	B \flat
{C \sharp 7	contains C \sharp	E \sharp	G \sharp	B
{D \flat 7	contains D \flat	F	A \flat	C \flat
D7	contains D	F \sharp	A	C
{D \sharp 7	contains D \sharp	F \times	A \sharp	C \sharp
{E \flat 7	contains E \flat	G	B \flat	D \flat
E7	contains E	G \sharp	B	D
F7	contains F	A	C	E \flat
{F \sharp 7	contains F \sharp	A \sharp	C \sharp	E
{G \flat 7	contains G \flat	B \flat	D \flat	F \flat
G7	contains G	B	D	F
{G \sharp 7	contains G \sharp	B \sharp	D \sharp	F \sharp
{A \flat 7	contains A \flat	C	E \flat	G \flat
A7	contains A	C \sharp	E	G
{A \sharp 7	contains A \sharp	C \times	E \sharp	G \sharp
{B \flat 7	contains B \flat	D	F	A \flat
B7	contains B	D \sharp	F \sharp	A

The table at the left shows the names of the notes that comprise each seventh chord. Notice that the first three notes of the chord are the same as the major chord of the same name — the fourth note is two half tones or frets lower than the octave of the root or name of the chord.

The chords bracketed together are played in the same manner and contain exactly the same notes, but they are written differently.

Chords and notes that are played and sound alike, but which are printed differently are referred to as ENHARMONIC notes and chords — thus G \sharp is the enharmonic of A \flat , G \sharp chord is the enharmonic of the A \flat chord, and G \sharp 7 chord is the enharmonic of A \flat 7 chord.

HOW TO HARMONIZE NOTES OF THE SEVENTH CHORD

Inasmuch as the first three notes of a seventh chord are also found in the major chord of the same name, the root, third, and fifth of the seventh chord may be harmonized exactly the same as the root, third, and fifth of the major chord as explained under major chord construction. The chart at the left shows additional ways of harmonizing notes of a seventh chord.

With the exception of a few formations that make use of the open strings, it is, of course, impossible to play all four notes of a seventh chord on the Hawaiian guitar unless a seventh tuning is used. You can, however, get the effect of the seventh chord by playing two and on some positions three notes that are contained in the seventh chord. One of these notes is the seventh of the root which may be played together with any of the other intervals of the seventh chord.

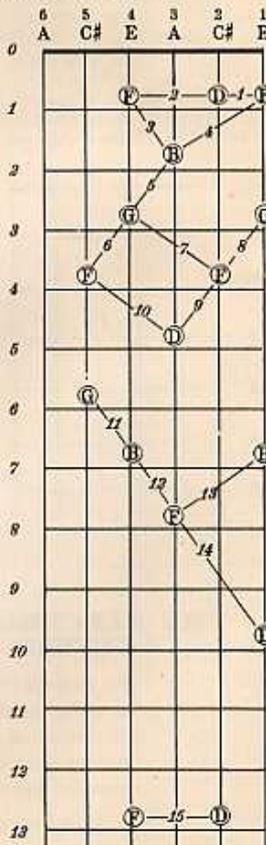
The example at the right shows several positions which may be played together and produce the effect of a G7 chord. The notes in the G7 chord are G B D F — G is the root, B is the third, D is the fifth, and F is the seventh.

When the seventh of the root is played on the first string, it may be harmonized by adding the fifth on the second string as in No. 1 — by adding the fifth on the second string and an extra seventh on the fourth string by combining No. 1 and No. 2 — or by adding the third one fret higher on the third string as in No. 4. When the root of the chord is played on the second string as in No. 8 or the first, second, and third strings may be played together by combining No. 8 and No. 9. When the third of the chord is played on the first string, it may be harmonized by adding the seventh one fret higher on the third string as in No. 13. When the fifth of the chord is played on the first string, it may be harmonized by adding the seventh two frets lower on the third string as in No. 14 — this formation contains the same notes as No. 15 played on the second and fourth strings.

When the fifth of the chord is played on the second string, the seventh may be added on the fourth string as in No. 2. When the seventh of the chord is played on the second string, the root may be added one fret lower on the fourth string as in No. 7 or the fifth may be added one fret higher on the third string as in No. 9.

When the third of the chord is played on the third string, the seventh may be added one fret lower on the fourth string as in No. 3 or the fifth and seventh may be added by combining No. 5 and No. 6. When the fifth of the chord is played on the third string the seventh may be added one fret lower on the fifth string as in No. 10. When the seventh of the chord is played on the third string the third and root may be added by combining No. 11 and No. 12 — this formation is used quite frequently.

When harmonizing a melody note with a seventh chord, any note of the seventh chord may be added — the two most important notes being the third and seventh.



GIBSON SYSTEM FOR HAWAIIAN GUITAR
 COPYRIGHT 1937 BY GIBSON, INC., KALAMAZOO, MICH.

Ex 4.13 Gibson instructional publication (1937)²⁴⁴

²⁴⁴ Gibson System for Hawaiian Guitar (Kalamazoo, Michigan: Gibson Inc, 1937), 138.

While superficially High A may not seem to offer a harmonic advantage, the tuning proved to be more flexible than either of the E7 tunings. With the bar horizontal, the dominant seventh sonority of the E7 tunings was difficult to avoid and, even when bar slants were incorporated, the tunings did not provide the wealth of chords and voicings afforded by the use of High A. While an increased harmonic palette may not have provided the initial impetus for the High A tuning, its harmonic range, achieved with slants and grips, were a great improvement on all earlier tunings.

A third possible motivation for its invention may lie in the configuration of natural harmonics that can be generated from the tuning, an effect commonly employed by first generation players. The facility of this style of performance illustrated in M.K. Moke's 'Moana Chimes', a performance in High A primarily constructed from harmonics, raises this question.²⁴⁵ It is possible that a performer, developing melodies from harmonics on the top four strings of Low A tuning, experimented by retuning the bottom strings to match the upper triad, thereby extending the range of chord tone harmonics and enhancing performance. The High A configuration has become the most influential and enduring of the early steel guitar tunings though usually tuned to G. This has occurred through the agency of the resonator guitar and its adoption in the genre of country music and bluegrass.

4.4.3 C[#] minor

Another influential tuning that was a product of the second generation of steel guitar players was a modified E tuning known as C[#] minor. Its invention is widely attributed to Sol Hoopii who used it, possibly for the first time, in his 1934 recording of 'The Hula Blues'.²⁴⁶ This was one of the last secular recordings that he made using an acoustic resonating guitar. Subsequently he used the tuning on most of his final electrically amplified recordings. Through these widely distributed recordings, the attributes of the new tuning were amply demonstrated and, subsequently, widely adopted. The tuning is easily reached from the standard E major tuning by raising the second string from B to C[#]. (see Ex 4.11) The name of the tuning is misleading. While C[#] minor accurately describes the resulting second inversion triad of the top three strings, the open string sonority is clearly E major add 6 chord in root position. This sonority is employed in Jerry Byrd's

²⁴⁵ M.K. Moke, 'Moana Chimes', 78 (Brunswick Br55012), 1927.

²⁴⁶ Kalua Hawaiian Players, 'Hula Blues', Los Angeles. 78 (Brunswick Br 55075), 1934.

famous C6 tuning (see Ex 4.11), which was widely adopted both in Hawaiian and country music and later formed the basis for one of the two predominate pedal steel guitar tunings. The major sixth sonority became pervasive within Hawaiian music of the 1930s, 1940s and 1950s due to Hoopii's and Byrd's tunings and became a relentless and identifying harmonic feature. As a major sixth sonority can function as the tonic, subdominant or dominant of a major key and the ease with which it is formed on a steel guitar with a suitable tuning has led to its frequent use as all three. The persistent sonority has become identifiably Hawaiian in modern times, attractive to some, but cloy and inexorable to others.

The use of the major sixth sonority for harmonic accompaniment was not common within popular music of the early 1920s. Arthur Lange's arranging texts make no mention of its suitability within the dance band orchestrations.²⁴⁷ While the chord later became de rigueur within the harmonic language of the dance orchestras of the 1930s, it does not seem to have readily merged with the harmonic landscape of 1920s popular music. Count Basie recalls that even in the late 1920s, the sixth was not a readily accepted chord tone.²⁴⁸ Its later wide acceptance stemmed from familiarity developed in dance orchestras. This occurred in the construction of the distinctive chord melody of the expanded saxophone section described by William Russo as 'the thickened line'.²⁴⁹ In the 1920s, however, the sonority was harder to find. It is not a common feature of ragtime or the early recordings of harmonic pioneers of jazz piano such as Jelly Roll Morton or James P. Johnson. However, it can be heard occasionally in the chord repertoire of guitarist Eddie Lang. The earlier example (see Ex 5.7) demonstrates Lang employing the sonority as a sustained supporting harmony within a chord solo in 1928.²⁵⁰ By embedding the sonority in a tuning, Hoopii made a strong contribution to harmonic development within popular music.

There is a view that Hoopii's invention of the C[#] minor tuning came about in a search for voicings of a dominant ninth chord which can be easily derived from this tuning using a

²⁴⁷ Lange, *Arranging for the Modern Dance Orchestra*.

²⁴⁸ Count Basie and Arthur Murray, *Good Morning Blues: The Autobiography of Count Basie* (Da Capo Press, 2002), 158.

²⁴⁹ The use of the saxophone section to perform a close voiced harmonisation of the melody became a standard of big band arranging in the 1930s. A tonic or subdominant major chord required the use of the sixth to maintain voice leading in a voicing that spanned an octave. William Russo, *Jazz Composition and Orchestration* (Chicago: University of Chicago Press, 1968), 400.

²⁵⁰ Lang, 'Add a Little Wiggle'.

forward bar slant. The common use of this chord in the 1920s is confirmed by its inclusion within common chord voicings in Lange's instructional text.²⁵¹ Hoopii's subsequent use of the tuning to voice this chord is a salient feature of his late secular recordings. However, evidence suggests that his search for new harmonic possibilities for the steel guitar was prompted initially by his appreciation of the major sixth sonority. Evidence for this theory is twofold. Firstly, Hoopii demonstrates a familiarity and comfort with the sixth tone vocally in the final cadence of his 1925 recording 'Lady of the Nile'.²⁵² As lead vocalist in this recording of vocal trio with Hawaiian ensemble, Sol's choice of a sustained C within the final E flat major cadence is a salient sonority within his early recordings. Second, the function for which Hoopii first employs the tuning is telling. In 'The Hula Blues', only the major sixth sonority of the tuning is used as a harmonic foundation.²⁵³ Hoopii appears to avoid the second string in the execution of the melody of the song, a tune which he had recorded earlier using a standard E major tuning.²⁵⁴ The new tuning is only apparent in the syncopated F6 chordal figures behind the vocal trio. In the tonic chords of the introduction, F major triads, the second string is avoided. Even in the short chord solos the tuning is still only exploited in terms of major sixth sonorities, suggesting that it was this chord and not the dominant ninth that provided the motivation for the tuning.

The extent to which Hoopii subsequently exploited his new tuning in the pursuit of more complex chord melodies can be found in his 1938 recording of 'Fascinating Rhythm', transcribed in Ex 4.14 below.²⁵⁵ The piece is an instrumental that features Sol's electric steel guitar on all four choruses. The transcription details the second of four choruses, which consists entirely of chord melody. From the first bar, Hoopii's use of the dominant ninth chord is prominent, both in the opening chord, consisting of the third, seventh and ninth (E, B flat and D) and in an incomplete voicing in the following bar consisting of the seventh, ninth and fifth (B flat, D and G). The major sixth chord is also present in the second bar, but in context the voicing gives a thirteenth flavour to the overpowering dominant sonority of the first four bars. A third incomplete dominant ninth chord voicing is used in bar fourteen where the major ninth, fifth and minor seventh of G

²⁵¹ Lange, *Arranging for the Modern Dance Orchestra*, 21.

²⁵² Waikiki Hawaiian Trio, 'Lady of the Nile', 78 (Sunset Suns 1096), 1925.

²⁵³ Kalua Hawaiian Players, 'Hula Blues'.

²⁵⁴ Hoopii and Trio, 'Hula Blues'.

²⁵⁵ Sol Hoopii's Novelty Five, 'Fascinating Rhythm', Los Angeles. 78 (Decca De 2280), 1938.

are combined using a straight bar. The tuning is used briefly as a minor chord in bars ten and twenty six but overall the chords are mostly major sixth or dominant ninth in nature. Hoopii's struggle to wrestle extra voicings from the tuning where none naturally occur can be seen to continue in various micro-tonal 'fudges' in bars fourteen, eighteen, twenty-two and twenty-three.

Swing
 ♩ = 172

The image shows a guitar score for the piece 'Fascinating Rhythm' (1938) by Duke Ellington and John Mitchell. The score is in 4/4 time with a swing feel and a tempo of 172 bpm. It features a complex rhythmic pattern with frequent changes in chord voicings. The score is divided into six systems, each with a treble clef staff and a guitar staff showing fret numbers for the Treble (T), A, and Bass (B) strings. Chord symbols are placed above the staff to indicate the harmonic structure.

System 1 (Measures 7-12): Chords include C7, F7, and F7. Fret numbers range from 7 to 15.

System 2 (Measures 13-17): Chords include G7, C7, and C7. Fret numbers range from 3 to 17.

System 3 (Measures 18-21): Chords include Bb6, Bbm, F6, and D9. Fret numbers range from 6 to 15.

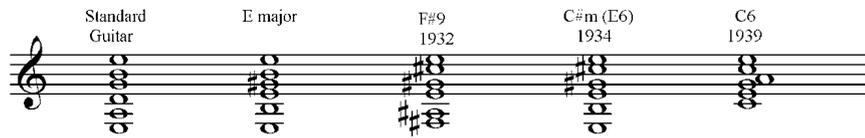
System 4 (Measures 22-24): Chords include Bb6, Bbm, F, and D7. Fret numbers range from 6 to 13.

System 5 (Measures 25-28): Chords include G7, C7, and F. Fret numbers range from 6 to 13.

System 6 (Measures 29-32): Chords include G7, C7, and F. Fret numbers range from 6 to 13.

Ex 4.14 Hoopii: 'Fascinating Rhythm' (1938) [CD Track 18]

4.4.4 F#9



Ex 4.15 F#9 and associated tunings

A distinctive F#9 tuning was used by Charles Opunui in 1932 in recordings made with a Hawaiian trio, the Paradise Islanders in New Jersey. While this was an uncommon tuning, the chronology of its appearance clouds the origins of Hoopii's 1934 C# minor tuning. The dozen songs recorded in the Paradise Islanders' 1932 session consisted of simple Hawaiian *hula ku'i* and *himeni* songs and more harmonically complex contemporary popular tunes. The F#9 tuning is not obvious on many of the tracks due to a preponderance of single note and dyadic playing, but it comes into its own in the chord melody of 'Then Someone's in Love'.²⁵⁶ The tuning is closely related to Hoopii's C# minor tuning. The upper four strings of C# minor are retained while the two retuned bottom strings expand the available harmonic palette. Open strings generate the E major, E6 and Am chords of Hoopii's tuning as well as a root position F#9th chord and an A# diminished triad. The appearance of the F#9 tuning in 1932, before Hoopii's tuning, poses a question within this study. C# minor appears to be a refinement of E major through the raising of just one string. However, F#9 seems to be a further refinement of C# minor through the retuning of the bottom strings. Thus, it follows that the appearance of F#9 could be expected after that of C# minor and not the other way around. There are several possible reasons for this anomaly. Firstly, Hoopii may have developed his tuning earlier and its existence may have influenced Opunui. Second, the tunings may have been developed independently. Third, Opunui's tuning may have provided inspiration for Hoopii. It is interesting to note that the appearance of the tunings occurred after a period of recording silence imposed by the financial conditions so

²⁵⁶ The Paradise Islanders, 'Then Someone's in Love.', New Jersey. 78 (Victor Vi 23687), 1932.

the recorded evidence may not accurately represent the chronology of invention. Hopefully further evidence will come to light.

4.5 Steel Guitar and the Blues

The rise of the steel guitar in America coincided with the emergence of the blues as popular and folk music. The relationship that developed between the two by the 1920s can be viewed from two sides. One aspect is the influence of the steel guitar on early blues players and the other is the assimilation of blues stylings by steel guitarists. While this is a field ripe for concerted investigation, this study can only make a limited survey of the area and attempt to define some regions for future investigation.

The influence of Hawaiian steel guitarists on blues slide guitar has been suspected by some blues aficionados.²⁵⁷ An intriguing clue of an early relationship can be found in W. C. Handy's biography.²⁵⁸ In what may be the first written record of the blues, Handy relates his first encounter with the genre in 1903, in the form of a guitarist playing slide across his lap in what Handy describes as 'the Hawaiian manner'. Significant steps in exploring this relationship have recently been made by John Troutman in his essay 'Steelin' the Slide' in which he explores the extent to which African Americans were exposed to Hawaiian steel guitar performances in the southern America, the cradle of the blues, in the early 20th century.²⁵⁹

However, a cursory comparison of the approach of blues slide guitarists with that of Hawaiian players suggests they have entirely different origins. Glaring differences in both the technique and musical style are easily identified. The upright positioning of the slide guitar is in contrast to the lap position of steel guitar. There is a marked contrast in appearance and manipulation between the 'bottleneck' slide that encases a finger and a hand-held steel. Musically, blues slide players employ a modal tonality common to all folk blues, which is in stark contrast to the diatonic Hawaiian and *hapa haole* music that

²⁵⁷ Stephen Calt, Nick Perls and Mike Stewart, Notes to *Country Blues Bottleneck Guitar Classics 1926-1937*. (Yazoo 1026), 1991.

²⁵⁸ W. C. Handy, *Father of the Blues* (London: Sidgwick and Jackson, 1957), 74.

²⁵⁹ Troutman argues that Southern musicians, both black and white, were exposed to Hawaiian steel guitarists in the early 20th century by a vast number of Hawaiian vaudeville touring parties. His research reveals a vast network of routes and performance venues in the South. Additionally, he presents a wealth of evidence that clearly demonstrates that many early blues guitar players who adopted Hawaiian steel guitar technique were aware of its origin. Troutman, 'Steelin' the Slide: Hawai'i and the Birth of the Blues Guitar'.

dominates the repertoire of steel guitarists. Unifying factors are not as obvious. The use of the bar to generate portamento is an important element of both styles, although it is used to a markedly different tonal effect in blues inflection. On the other hand, both styles employ portamento in imitation of vocal technique. Another less obvious common feature is the tunings. The two most common early blues tunings are known as *Spanish* and *Vestapol*.²⁶⁰ Spanish has the identical configuration of Low A and is also sometimes pitched at G while Vestapol has the same configuration as the Hawaiian E major tuning, although in its blues iteration it is usually used pitched a tone lower at D.

Early blues slide playing was often effected with a knife blade or other steel object such as was the case with Sylvester Weaver, whose 1923 sides²⁶¹ represent the first blues slide on record. Over time horizontal positioning for blues slide became much less prevalent than upright bottleneck style. The emergence of bottleneck as the preferred technique may have occurred because lap style was technically redundant and horizontal style held an advantage. Technically, single string melody, as is prevalent in modally flavoured blues slide, doesn't require a lap position. In a modal approach that uses the top strings for melody, players can comfortably use either position. Furthermore, bar slants required for diatonic harmonisation in Hawaiian and popular music are generally not required in the blues. Blues slide players often use dyadic melodies, but in their execution parallel intervals are exclusively employed.²⁶² An upright position brings an immediate advantage in that, with the slide on the little or ring finger, the first and second fingers become free to fret the strings in the normal manner provided that the strings are not too high. The hybrid style of slide and fretted playing evolved to a pinnacle that can be heard in the recordings of Robert Johnson in the late 1930s.

4.5.1 Hawaiian Blues

Another side of the relationship between the steel guitar and the blues is the extent to which elements of the blues were assimilated into the performances of steel guitarists. In assessing the extent to which this occurred, it is helpful to differentiate between the streams of folk and popular blues that existed in the 1910s and 1920s. Peter Muir has

²⁶⁰ Calt, Perls and Stewart, Notes to *Country Blues Bottleneck Guitar Classics 1926-1937*.

²⁶¹ Sylvester Weaver, 'Guitar Blues', (Okeh 8109A), 1923 and 'Guitar Rag', (Okeh 8109B), 1923.

²⁶² Dyads that are common in blues slide melodies are those of a perfect fourth, which is found on the top strings of Vasterpol tuning, and a minor third, found on the top strings of Spanish tuning.

undertaken this task in his book *Long Lost Blues*.²⁶³ Muir differentiates clearly between the composed blues of Tin Pan Alley, the main subject of his book, and the music of blues folk musicians while acknowledging an overlap of these genres through detailed style analysis. The early recordings of steel guitarists demonstrate an influence from both the popular and folk streams of blues. Tunes like ‘The Hula Blues’²⁶⁴ or ‘Waikiki Blues’²⁶⁵ are examples of *hapa haole* songs that can also be identified as popular blues through their title. In fact, the practice of creating ‘titular blues’, as Muir puts it, mirrors the *hapa haole* practice of inferring Hawaiian links merely through a title and without obviously Hawaiian musical elements. Many similar examples of popular blues permeated the *hapa haole* genre in the 1920s and 1930s.²⁶⁶

Of greater stylistic significance is the way in which folk blues stylings were incorporated by steel guitarists, a practice that can be seen throughout recordings of the 1920s. Whether these influences were received directly from folk blues musicians or whether they were gained secondhand through blues stylings within jazz is not clear. In either case, strong elements of blues can be identified in the modal and microtonal inflections of many steel guitar solos. They can be found in the accentuation of modal harmony by the use of a non-resolving dominant seventh chords standing for tonic and subdominant. This is a common feature of pieces that employ E7 tunings.²⁶⁷ While the phenomenon might be seen as an undesirable by-product of the tuning, the vigour with which the I⁷ and IV⁷ chords are used suggests that the blues tonality that they imply is well understood and intended by the players.

Blues stylings in the form of microtonal inflection and use of ‘blue notes’ can be found in many early steel guitar recordings. The performers’ understanding of the significance of these devices within the blues idiom is demonstrated in how they are employed. Far from an indiscriminate use, the inflections and blue notes are used to colour melodies within specific tunes and choruses within tunes. For example, Hoopii’s rendition of the standard, ‘St Louis Blues’, is laced with blues inflections throughout the piece,

²⁶³ Peter C. Muir, *Long Lost Blues : Popular Blues in America, 1850-1920* (Urbana: University of Illinois Press, 2010).

²⁶⁴ John Noble and Sonny Cunha, *The Hula Blues* (Chicago: Forster Music Publisher, 1920).

²⁶⁵ John Noble, *The Waikiki Blues*, vol. Miller Music Corporation (New York: 1923).

²⁶⁶ Muir, *Long Lost Blues : Popular Blues in America, 1850-1920*, 2.

²⁶⁷ Hawaiian Serenaders, 'Happy Hawaiian Blues', Sannella, 'Sliding on the Frets'.

relentlessly asserting a blues tonality.²⁶⁸ He also uses minor second dyads in the manner of blues pianists whose instrument precludes them from microtonal inflection, but who approximate the effect with the dissonant clusters. In contrast, similar blues phrasing is absent from much of Hoopii's traditional Hawaiian repertoire. His recording of 'The Hula Blues'²⁶⁹, a titular blues composition with no folk blues elements, has remarkably few blues inflections or blue notes before the final chorus. Hoopii's last chorus is a marked departure from the rest of the recording. In it he evokes folk blues by incorporating a myriad of inflections and bends into his phrases, demonstrating a complete control of the style. Likewise, Sam Ku West's recordings of 'Hue Hue' demonstrate the same restraint and control as he delineates individual choruses with the absence or presence of blues inflections and phrasing.²⁷⁰ While performers like Hoopii and West incorporated blues stylings, few recorded Hawaiian steel performances match the abandonment of the early blues slide players such as Tampa Red or Tommy Johnson. One notable exception can be found in 'Happy Hawaiian Blues' by the Hawaiian Songbirds, which could be mistaken for folk blues.²⁷¹

4.6 Jazz Stylings

Jazz stylings are considered to be a defining characteristic of the second generation of steel guitarists, but within jazz scholarship their significance has been overlooked. The emergence of the second generation coincided with the period in which jazz style was morphing from polyphonic group improvisations of the 1910s to a form in which an individual soloist's art was paramount. Virtuoso instrumentalists of the 1920s such as Louis Armstrong and Bix Beiderbecke came to the fore through a demonstrated mastery of improvisation in extended solos, which stood in contrast to the layered texture and defined improvisatory roles of the frontline of early jazz bands. Notably, Armstrong began his benchmark Hot Five and Hot Seven recordings in 1926, shortly after the first recordings of Sol Hoopii. It is illuminating to measure the performance style and practice of the steel guitarists of the 1920s against the musical principles of jazz, as espoused by Brian Harker

²⁶⁸ Sol Hoopii and his Novelty Trio, 'St Louis Blues', Los Angeles. 78 (Columbia Co 1155-D), 1927.

²⁶⁹ Hoopii and Trio, 'Hula Blues'.

²⁷⁰ Sam Ku West, 'Hawaiian Hula Blues', New York. 78 (Banner Ba 2161), 1927, Sam Ku West, 'Huehue, Huehue', 78 (Victor Vi21415), 1928, Sam Ku West, 'Hawaiian Hula (Huehue)', Chicago. 78 (Vocalian Vo 15645), 1928.

²⁷¹ Hawaiian Serenaders, 'Happy Hawaiian Blues'.

in his detailed assessment of Armstrong's Hot Five and Hot Seven recordings.²⁷² Harker sums up Armstrong's weighty contribution to jazz through four main principles: those of virtuosity, improvisational style, the extension of the capabilities of his instrument and incorporation of blues tonality. Recognition of the extent to which jazz stylings were incorporated by the steel guitarists of 1920s should ensure that their contribution to the popularisation of jazz is better understood.

While the metamorphosis of jazz in wind bands required a radical change in texture, a tradition that incorporated a principle improviser already existed in Hawaiian ensembles. Virtuosity, extension of the instrument, and blues tonality have all been considered earlier in this chapter. The main figures of the second generation, Hoopii, Nawahi, Ku West and Smeck, were all capable of producing performances that measured favorably against many or all of Harker's principles. Virtuoso playing was displayed by all the steel players mentioned above, this despite the limitations of their instrument. Examples such as Hoopii's widely adopted picking technique and Nawahi's use of open and stopped notes in 'Honolulu Bound' (Ex 4.4) show how melodic velocity was greatly increased. The development of new tunings extended melodic facility and pushed back harmonic boundaries of the instrument. Blues tonality has been shown to have formed part of the tonal vocabulary of many of the second generation players.

The extent and nature of improvisation within practice of the second generation of steel guitarists is more difficult to assess as aural evidence is contained only in static snapshots that comprise recordings of the era. A few alternative takes do exist that provide undisputable evidence of Hoopii's improvisatory skills.²⁷³ Additionally a number of versions of Sam Ku West's 'Huehue' recorded within a short time span demonstrate the depth of his improvisatory skill.²⁷⁴ Beyond these examples, the improvisation in soloist's recorded performances can only be deduced from the nature and extent of the variations that exist on individual recordings. Harker's assessment of Armstrong's extended solos encompasses attributes of coherence, connection, unification and harmonic

²⁷² Harker, *Louis Armstrong's Hot Five and Hot Seven Recordings*, 10-13.

²⁷³ Hollywood Trio, 'You Told Me to Go', 78 (Sunset Suns 1122 A & B), 1926., Kalua Hawaiian Players, 'King Kamehameha', 78 (Brunswick LA 160-A & B), 1934.

²⁷⁴ West, 'Hawaiian Hula Blues', West, 'Huehue, Huehue', West, 'Hawaiian Hula (Huehue)'.

improvisation.²⁷⁵ A close examination to reveal the extent of these properties within recorded steel guitar solos is beyond the scope of this study, but general observations can be made. Extended and coherent solos are in evidence within the recordings of Hoopii, Nawahi, Ku West and Smeck, who recorded instrumentals in which the steel guitar maintained the melodic focus throughout.

Two notable examples by Nawahi are 'Honolulu Bound'²⁷⁶ and 'Tickling the Strings'.²⁷⁷ 'Honolulu Bound' consists of three 45 bar choruses. Nawahi breaks into harmonic improvisations at the beginning of the second and third choruses but to variation and reiteration for the remainder of the choruses. 'Tickling the Strings' consists of an A and B section configured in AABBABBBBB form. Nawahi's performance varies from the extremes of harmonic improvisation in the second and third A section and the wild rhythmic excursion of the final two B sections to mere variations within the other B sections. His varied approaches are clearly delineated by the form between which he transitions smoothly.

In Hoopii's early instrumental recordings, such as 'The Hula Blues' (1927), he rarely strays far from the melody while displaying the ability to make constant minor variations.²⁷⁸ In contrast, in his performance on 'Stack o'Lee Blues'(1926) Hoopii adds variations of texture and tessitura in the inclusion of chord melody and a chorus devoted to the lower strings²⁷⁹ His improvising skills appear to have accumulated through his career and can be seen to culminate in his recording of 'Fascinating Rhythm'.²⁸⁰ The performance consists of four thirty two bar choruses, the first of which is a statement of the melody. The following three choruses consist of a chord melody (Ex 4.14), an improvisation using lower strings and a final higher pitched section, each consisting of a chorus and each pursuing harmonic improvisation without reference to the original melody.

Examples of a high degree of variation and harmonic improvisation by Sam Ku West can be found on three versions of 'Huehue' recorded in 1927 and 1928. Like Hoopii, West

²⁷⁵ Harmonic improvisation is a concept of improvisation on abstract material. Scott DeVeaux, *The Birth of Bebop: A Social and Musical History* (Berkeley: University Of California Press, 1997), 78.

²⁷⁶ Hawaiian Beachcombers, 'Honolulu Bound'.

²⁷⁷ King Nawahi's Hawaiians, 'Tickling the Strings', New York. 78 (Columbia Co 2138-D), 1930.

²⁷⁸ Hoopii and Trio, 'Hula Blues'.

²⁷⁹ Hoopii and Trio, 'Stack O'lee Blues'.

²⁸⁰ Sol Hoopii's Novelty Five, 'Fascinating Rhythm'.

differentiates different choruses in each recording through the concerted use of specific devices of harmonics, blues inflection, texture and tessitura. While a clear formula for his application of the devices within the form is apparent, West's improvisations can be seen to range between variations on the melody and harmonic improvisation, with great control.

The incorporation of jazz stylings by second generation of steel guitar players indicates that closer attention to their achievements may yield benefit to scholars of early jazz. While the improvisational capacity displayed may not have reached the heights of Louis Armstrong's craft, the craft of improvisation can be seen to develop within an existing soloist's tradition outside the currently accepted mainstream as the jazz age unfolded. Furthermore, it was transmitted through commercial media of recording and radio using connections already established by Hawaiian musicians.

4.7 The Seeds of Decline

Energised by the evolution of steel guitar performance practice in the 1920s, the popularity of the steel guitar continued to expand in subsequent decades, reaching into the genres of country music and western swing. The utility and versatility of the instrument had increased with the development of the resonator. Not long after, electric amplification allowed the steel guitar to take its place in orchestras and dance bands. Innovations of instrument design that were curiosities of the 1920s, increased number of strings and multiple necks, became common in proprietary models of major instrument builders in the 1930s. Jazz flavoured repertoire demanded increasing technical skills of professional players. Harmonic complexity continued to challenge performers resulting in new innovative tunings. In some cases the tunings were widely disseminated, but in others they were carefully guarded secrets. In either case the tunings became an important element of style through which personal idiosyncrasies of performance emerged.

The stylistic evolution of the 1920s can be seen as a transition from relative simplicity and standardisation to complexity and diversification. In this diversity, though its popularity continued to increase, seeds of the instrument's decline were sewn.

It is a common view that the decline of the steel guitar in the 1950s was a consequence of two factors. First, interest in Hawaiian music diminished and second, in country music, steel players became obsessed with the pedal steel guitar and abandoned the non-pedal

instrument in droves. Non-pedal instruments became viewed as obsolete and celebrated practitioners, such as Jerry Byrd and Joaquin Murphey, failed to attract the employment that they had previously commanded. However, I would argue that diversity of practice that gained momentum in the 1920s and 1930s had an even more corrosive effect on the future of the instrument. While the multiple configurations of tunings and strings provided a myriad of pathways for professional players, this diversity provided a barrier to dissemination and transmission of performance practice at grass roots level. Without a groundswell of amateur support, there would be no growing pool of players from which following generations would emerge.

A variety of limiting problems accompanied the diversification of instrument configuration. Originally a steel guitar could be converted from standard Spanish configuration with just a raised nut and a bar. All the main acoustic tunings could be reached using a standard set of steel strings. This put the instrumental style within reach of anyone who owned a guitar. Any Spanish guitar could be simply converted for steel guitar performance. New configurations of seven, eight or even ten strings, however, required purpose-built instruments and specialised string sets. Diversity of tuning also meant that dissemination and cross-fertilisation of repertoire and style became much more difficult. The practice of learning material by ear would become a frustrating task if the tuning was not known.

The effect on written music and pedagogy was also far reaching. Music reading for different tuning configurations was difficult and a daunting prospect for any beginner. As a result, music notation lost the utility that it had when Low A was the standard tuning. Music needed to be prepared for specific tunings. As a result, the use of music notation receded and the use of tablature became more widespread. The effect on music literacy was deleterious. Pedagogically, materials prepared for individual tunings had much lesser reach than had one tuning been dominant, as in the past. Teachers and performers might only specialise in one or a two tunings. The result was that each tuning, with its idiosyncrasies and virtuosos, developed its own performance culture, thus further fragmenting and diluting the overall culture of the instrument. Despite a period of popularity in the 1930s and 1940s, it can be argued that diversity stifled transmission and dissemination, eventually forcing the steel guitar back the status of a folk instrument.

While diversity outwardly appeared to be a rich garden of opportunity for the steel guitar, in practice it inhibited cross-fertilisation and spread development. While its popularity may have equalled or even excelled that of the Spanish guitar in the acoustic era of the early 1920s, this diversity contributed significantly to its eventual diminution. In contrast, the Spanish guitar flourished, unhampered by the disruption of varied configurations, and forged a path to the zenith of popular music by the end of the century.²⁸¹

This chapter has discussed the evolution of the steel guitar in what can be described as a golden era. It shows how steel guitarists of the 1920s further exploited the prominent standing that the first generation of Hawaiian musicians had established for the instrument. This task was not easily achieved in the face of the increasing demands of jazz. The constrictive regimen of a straight bar applied to a fixed tuning proved a configuration at odds with demands of the new music. The process of evolution documented in this chapter was one of a struggle to expand the instrument's capabilities. It was achieved through the development of new techniques, the adoption of a technological advance in the form of the resonator and, significantly, in the invention of new tunings. The soloist's role, established in the 1910s and continued in the 1920s, as detailed in this chapter, provided a model to guitarists, both steel and Spanish, in the decades to come. On a broader question of cross-genre influence, it has been noted that the relationship of the steel guitar to blues is one of mutual influence, with steel guitar providing a model of technique for blues guitar players while steel guitarists borrowed stylings from the blues. The question of the unrecognised influence of the steel guitar within jazz has been raised with the observation that steel guitarists performed extended jazz solos as early as the middle of the 1920s. This demonstrates their adoption of the idiom as a single improviser's art at a time when the collective improvisation of early jazz ensembles was coalescing to a similar texture. The role of the steel guitar in popularizing this trend through its broad dissemination in the popular media of radio and recordings may provide a subject for further investigation. Finally, the realisation is made that within the myriad of stylistic advances made by the second generation lay a complexity that would eventually work against the continued

²⁸¹ See Appendix D

acceptance of the instrument. It is postulated that, at least in part, the cause of the instrument's decline can ultimately be traced to this innovative and productive period.

Conclusion

The purpose of this study has been to construct a history of the early years of the steel guitar in a desire to uncover the extent and significance of instrument's role in the early 20th century. The scant literature that exists positions the steel guitar primarily as an ethnic instrument and a totem through which Hawaiian culture was transmitted to the world. What has been largely ignored is the place of the steel guitar within popular music. As revealed by its title, the mission of this thesis has been to assemble an early history of steel guitar which gives consideration to the context in which it emerged and the way in which this context shaped the performance culture of the instrument, thus broadening the scope of existing literature. In this thesis the early history of the instrument has been re-evaluated using existing studies and source materials. The context of popular music which has been established has facilitated an evaluation of the instrument's significance within jazz and blues and more generally within the culture of the guitar in the 20th century. By balancing ethnic and popular determinants of the instrument's development, this study of the instrument's early years provides a platform that will aid investigation of the instrument's progress in subsequent eras.

The examination of the origins of the steel guitar with which the study begins affirms the widely held assertion that the Hawaiian tradition of slack key guitar preceded and influenced the steel guitar. The confirmation of chronology gives rise to the unique proposal that the use of steel strings by slack key guitarists may have been an influential factor in the invention of the steel guitar. Following the observation that the increased tension of steel strings may have eventually rendered slack key guitars unplayable, it is posited that the use of a bar to fret the instrument may have been a pragmatic technique adopted by Hawaiians to extend the life of their instruments.

In Chapter Two, the study deviates from the orthodox view of the steel guitar as primarily an ethnic Hawaiian instrument. It does so by examining the factors surrounding the emigration of the steel guitar and its reception on the American mainland. The instrument's passage into the realm of popular music looms large in this investigation from the outset. In the exploitation and assimilation of Hawaiian music and the steel guitar on

the mainland, commercialism and commodification emerge as primary forces. Within the American music industry, as represented by the arms of publishing, recording and live performance, these forces are seen to propel the steel guitar to international acclaim. Additionally, a process of separation of the steel guitar from its ethnic context is observed in early source material. From this observation it is concluded that commercialism provided an impetus for the appearance of a wide array of non-Hawaiian repertoire in professional repertoires, recordings and within pedagogical publications, thus greatly broadening the reach of the instrument.

The remainder of the thesis follows the evolution of the performance culture of the steel guitar in the 1910s and 1920s. The challenges posed by evolving popular musical styles and the solutions found by steel guitarists are documented, firstly in the era of ragtime and then under the influence of jazz. In Chapter Three, the coalescence of the Hawaiian ensemble at the beginning of the 20th century is seen to have favoured the popularisation of the steel guitar. It is proposed that the relative ease of recording ensembles of steel guitar, Spanish guitar and ukulele, contributed significantly to a frequency of commercial record releases. Within the chapter a profile of performance style of the first generation is developed that encompasses picking techniques, the use of bar slants and their relationship to tuning and improvisatory practices. Together with this analysis, two distinct modes of performance are identified. A melodic, or lead approach used by professionals on recordings is described, which contrasts with a solo style of melody and accompaniment that featured prominently in published scores and method books, predominantly for an amateur market.

Chapter Four examines the performance culture of steel guitarists in the 1920s, when the rhythmic and harmonic complexities of early jazz entered the popular music idiom. The investigation is pursued through an examination of the style of virtuoso, Sol Hoopii and his contemporaries, beginning with some of Hoopii's earliest recordings for Sunset Records in 1925. The analysis is clarified through the identification and scrutiny of three styles of performance: single note, dyadic and chord melody. At the core of the analysis of style is the identification of steel guitar tunings. This key issue has been subject to broad claims as to the earliest appearance of particular tunings in the literature but few specific assertions are published. A chronology of steel guitar tunings is incorporated in this study

with details of recordings on which the earliest have been identified. These observations are proffered as an initial contribution towards a more comprehensive investigation that may follow. It is hoped that the findings, limited by the relatively small number of sources available to the researcher, will provide a useful starting point for subsequent investigations.

The inaugural date of two tunings may immediately spark further study. Firstly, the appearance of a dominant seventh tuning identified in 1921 is surprisingly early and may cause scholars to reappraise other contemporaneous recordings. Second, Hoopii's invention of the C[#] minor tuning in 1934²⁸² and the earlier appearance of an even more harmonically complex F[#]9 tuning²⁸³ raises a question of origin. With a wealth of original recordings of the era still in existence in the hands of collectors, it is hoped that future investigation will define more sharply the chronology provided here.

The investigation of the cross-fertilization of Hawaiian steel guitar style with elements of blues and jazz in Chapter Four may prompt more investigation of the instrument by scholars of these genres. While the assimilation of blues stylings by steel guitarists identified in this chapter helps build a picture of their performance culture, the influence of the steel guitar on blues guitarists is shown to be of even greater significance. The similarities in tunings identified in this study support John Troutman's contention that blues slide guitar was derived from Hawaiian steel guitar style.²⁸⁴ Future musicological investigation into the correlation of the two styles may be enhanced by investigation of the dominant seventh steel guitar tunings that appeared across America from the early 1920s, as detailed in Chapter Four, and the style of blues slide players.

While the jazz stylings of the second generation of steel guitarists are well recognised by students of the instrument, a contribution of the steel guitar to the jazz canon has not been acknowledged by scholars. As the scope of early jazz scholarship begins to encompass previously abhorred commercial music such as that of Paul Whiteman, the steel guitarists of the 1920s may appear on academic radars.²⁸⁵ While a detailed discussion of the significance of the steel guitar to jazz is beyond the scope of this study, evidence has

²⁸² Kaula Hawaiian Players, 'Hula Blues'.

²⁸³ Paradise Islanders, 'Then Someone's in Love!'.

²⁸⁴ Troutman, 'Steelin' the Slide: Hawai'i and the Birth of the Blues Guitar'.

²⁸⁵ Paul Rayno, *Paul Whiteman: Pioneer in American Music* (Lanham, Md: Scarecrow Press, 2003).

been presented here of an ongoing tradition of solo improvisation which garnered jazz stylings at the same time that Louis Armstrong was demonstrating the ascendance of the soloist art form over group improvisation. The wide commercial reach of steel guitar stylings, thus acculturated, may warrant further investigation and, thereby, further recognition of the steel guitar's contribution to early jazz may be determined.

An important finding of this study falls beyond the ambit of steel guitar scholarship and lies within the historiography of the guitar more broadly. Within the vast culture that has arisen around the guitar in the late 20th century, a suspicion that the steel guitar may be of significance is beginning to arise. As the first electric guitar, the steel guitar is a curiosity to Spanish guitarists, but a casual observation by Tim Brooks opens a pathway to more serious consideration.

The Hawaiian groups not only introduced the concept that we now call 'lead guitar' – that is, the guitar as featured instrument, with its own voice and a prominent place in both songs and instrumentals – but also the combination of lead and rhythm guitars in the same ensemble.²⁸⁶

This study has clearly documented the rise of a tradition of 'lead guitar' within performance culture of the steel guitar, beginning with the earliest surviving recordings. The study has shown how the tradition developed and diversified, shaped by evolving genres of ragtime and jazz. Meanwhile, as lead guitar blossomed within steel guitar culture, the unamplified Spanish guitar failed to prosper in dance bands, its progress effectively blocked by its deficiencies until the invention of electric amplification. It is hoped that this study may motivate inquisitive lead guitarists, seeking the genesis of their style, to investigate and discover for themselves the clear and confident musical voice of first generation players like Pale K. Lua, or the exciting and experimental hot jazz style of Sol Hoopii or Bennie Nawahi. If such awareness can be raised, eventually the steel guitar may achieve broad recognition as the progenitor of contemporary lead guitar style.

²⁸⁶ Tim Brookes, *Guitar: An American Life* (New York: Grove Press, 2005), 57.

Bibliography

- 'Cliff's Vintage Music Shop'. <http://www.youtube.com/user/cdbpdx?feature=watch> (accessed 10 December 2013).
- 'Encyclopedic Discography of Victor Recordings'. <http://victor.library.ucsb.edu/index.php> (accessed 10 December 2013).
- Gibson System for Hawaiian Guitar*. Kalamazoo, Michigan: Gibson Inc, 1937.
- 'Hawaiian Music Universally Popular', *The Edison Phonograph Monthly* 14/9 (1916), 2.
- Schurman's Folio of Hawaiian Guitar Solos*. Chicago: Cgart Music Publishing House, 1930.
- 'Transcribe Software'. 2012. <http://www.seventhstring.com/xscribe/overview.html> (accessed 15 January 2013).
- Adams, Doc. 'Old Fisherman Tells How Steel Guitar Originated; Also How Ukelele Got Name', *Hai'lono Mela* 1/7 (1975).
- Andersen, L.E. 'Hawaiian Recordings, the Early Years', *Victrola and 78 Journal* 7/Winter (1996), 4.
- Armstrong, Louis. *The Complete Hot Five & Hot Seven Recordings* CD. Columbia C4K63527000, 2000.
- Awai, Keoki E. *The Superior Collection of Steel Guitar Solos Vol. 1*. San Francisco: Sherman Clay and Co., 1917.
- Bacon, Tony. 'Guitar; Classical Variants'. In *Grove Dictionary of Musical Instruments*, Stanley Sadie, ed. Vol. 2. New York: MacMillan Press, 1984.
- Bailey, N. B. *The Peterson System of Playing the Guitar with Steel in the Hawaiian Manner*. San Francisco: Sherman, Clay and Co., 1916.
- Balme, Christopher. 'Selling the Bird: Richard Walton Tully's the Bird of Paradise and the Dynamics of Theatrical Commodification', *Theatre Journal* 57/1 (2005), 20.
- Basie, Count, and Arthur Murray. *Good Morning Blues: The Autobiography of Count Basie*. Da Capo Press, 2002.
- Beamer, Keola. *Hawaiian Slack Key Guitar*. New York: Oak Publications, 1977.
- Bennett, Andy, and Kevin Dawe, ed., *Guitar Cultures*. Oxford: Berg, 2001.
- Berlin, Edward. *Ragtime: A Musical and Cultural History*. Berkley: University of California Press, 1980.
- Bishaw, Henry A Peelua. *The Albert Hawaiian Steel Guitar: Complete Instruction for Accompaniment and Solo Work*. Sydney: J. Albert and Son, 1920.
- Blecha, Peter. 'Hawaiian Music and Its Historic Seattle Connection'. 2008. http://www.historylink.org/index.cfm?DisplayPage=output.cfm&file_id=8831 (accessed 12 February 2013).
- Boot, Herbert. *Aloha Folio: Hawaiian Guitar Solos*. Rochester: Don Santos, 1928.
- Brache, W. O. *The Hawaiian Steel Guitar*. Melbourne: Allan & Co, 1924.
- Brookes, Tim. *Guitar: An American Life*. New York: Grove Press, 2005.
- . 'The Hawaiian Invasion', *American History* 39/5 (2004), 13.
- Brozman, Bob, and Richard Smith. 'The Early History of the National'. In *The History and Artistry of National Resonator Instruments*, Bob Brozman, ed. Anaheim Hills, CA: Centerstream Publishing, 1998.

- Buck, Elizabeth. *Paradise Remade: The Politics of Culture and History in Hawai'i*. Philadelphia: Temple University Press, 1993.
- Bureaus, The Affiliated Lyceum. 'Kekuku's Hawaiian Quintet'. 1904. <http://digital.lib.uiowa.edu/cdm/compoundobject/collection/tc/id/54995/rec/70> (accessed 12 April, 2013).
- Byrd, Jerry. 'Beach at Waikiki'. 1939. dla.acaweb.org/cdm/singleitem/collection/berea/id/2269/rec/2 (accessed February 10, 2014).
- Calt, Stephen. Notes to *Roy Smeck Plays Hawaiian Guitar, Banjo, Ukulele and Guitar*. CD. Yazoo 1052, 1992.
- Calt, Stephen, Nick Perls, and Mike Stewart. Notes to *Country Blues Bottleneck Guitar Classics 1926-1937*. Yazoo 1026, 1991.
- Coelho, Victor, ed. *The Cambridge Companion to the Guitar*. Cambridge: Cambridge University Press.
- Coleman, Leon. *The Steel Guitar and How to Play It*. New York: Carl Fisher, 1917.
- Cook, Les. Notes to *Sam Ku West Hawaiian Hula Blues*. Grass Skirt Records 2005.
- . Notes to *Sol Hoopii in Hollywood*. Grass Skirt Records 2007.
- Cunha, A. R. 'My Waikiki Mermaid'. In *Famous Hawaiian Songs*, (Sonny) A.R. Cunha, ed. Honolulu: Bergstrom Music Co, 1914.
- Cunha, A.R. 'My Honolulu Hula Girl'. In *Famous Hawaiian Songs*, (Sonny) A.R. Cunha, ed. Honolulu: Bergstrom Music, 1914.
- . 'My Honolulu Tom Boy'. In *Famous Hawaiian Melodies*, (Sonny) A.R. Cunha, ed. Honolulu: Bergstrom Music, 1914.
- De Lano, C. S. *The Hawaiian Steel Guitar: Complete Instruction for Its Artistic Study*. Los Angeles: C. S. De Lano, 1927.
- DeVeaux, Scott. *The Birth of Bebop: A Social and Musical History*. Berkley: University Of California Press, 1997.
- Diamond, Charlie. 'Sleep'. 78. Hollywood Record Company 1353, 1925.
- Ely, John. 'Henri Berger'. <http://www.hawaiimusicmuseum.org/honorees/1995/berger.html> (accessed 21 November 2012).
- Emmons, Buddy. 'Shenandoah'. 2007. <http://www.youtube.com/watch?v=9GllXOgF4DY> (accessed October 24 1012).
- Ferera, Frank, and Helen Louise. 'On the Beach at Waikiki-Medley'. 78. Victor 17880-A, 1915.
- Fletcher, Neville, and Thomas Rossing. *The Physics of Musical Instruments*. New York: Springer-Verlag, 1998.
- Genial Hawaiians, The. 'The Hula Blues'. Bluebird BB-5047, 1933.
- Gracyk, Tim. 'Paul Whiteman'. 2011. <http://www.gracyk.com/whiteman.shtml> (accessed 2 September, 2013).
- . *Popular American Recording Pioneers, 1895-1925*. New York: Haworth Press, 2000.
- Grayck, Tim. 'Art Hickman and His Orchestra'. 2011. <http://www.gracyk.com/hickman.shtml> (accessed 2 September, 2013).
- Gronow, Pekka. 'Ethnic Recordings: An Introduction'. In *Ethnic Recordings in America : A Neglected Heritage*. Washington: American Folklife Center, Library of Congress, 1982.
- Gronow, Pekka, and Ilpo Saunio. *An International History of the Recording Industry*. London ; New York: Cassell, 1998.

- Hamm, Charles. *Yesterdays: Popular Song in America*. New York: W.W. Norton & Company, 1979.
- Handy, W. C. *Father of the Blues*. London: Sidgwick and Jackson, 1957.
- Harker, Brian. *Louis Armstrong's Hot Five and Hot Seven Recordings*. New York: Oxford University Press, 2011.
- Hawaiian Beachcombers, The. 'Honolulu Bound'. 78. Grey Gull 4297#1, 1930.
- Hawaiian Drum Dance Chants, Sounds of Power in Time*. CD. Folkways Records 1989.
- Hawaiian Quintette. 'Ua Like Noa Like'. 78. Victor 18571-B, 1913.
- Hawaiian Serenaders. 'Happy Hawaiian Blues'. Dallas, Texas. 78. Brunswick Br 4164, 1928.
- Hollywood Trio, The. 'You Told Me to Go'. 78. Sunset Suns 1122 A & B, 1926.
- Hood, Mantle. 'Musical Ornamentation as History: The Hawaiian Steel Guitar', *Yearbook for Traditional Music* 15/ (1983), 141-48.
- Sol Hoopii and his Novelty Trio. 'Farewell Blues'. 78. Columbia Co 797D, 1926.
- . 'Hula Blues'. Los Angeles. 78. Columbia Co 1022-D, 1927.
- . 'St Louis Blues'. Los Angeles. 78. Columbia Co 1155-D, 1927.
- . 'Stack O'lee Blues'. Los Angeles. 78. Columbia Co 797-D, 1926.
- . 'Tin Roof Blues'. Columbia Co1022-D, 1926.
- Sol Hoopii's Novelty Five. 'Fascinating Rhythm'. Los Angeles. 78. Decca De 2280, 1938.
- Sol Hoopii's Novelty Trio. 'I Ain't Got Nobody'. 78. Columbia Co-1384-D, 1928.
- Imada, Adria. *Aloha America: Hula Circuits through the U.S. Empire*. Durham: Duke University Press, 2012.
- . 'Hawaiians on Tour: Hula Circuits through the American Empire', *American Quarterly* 56/1 (2004), 38.
- Johnson, Orme. 'Musical Instruments of Ancient Hawaii', *The Musical Quarterly* 25/4 (1939), 498-506.
- Junker, Jay, Harry Soria, and George Winston. Notes to *History of Slack Key Guitar*. CD. Cord International 1995.
- Kaai Serenaders, The. 'Hula Mama Blues'. Chicago. 78. Paramount PM12433, 1926.
- Kailimai, Henry. *On the Beach at Waikiki*. Honolulu: Bergstrom Music Co., 1915.
- Kalua Hawaiian Players. 'Hula Blues'. Los Angeles. 78. Brunswick Br 55075, 1934.
- . 'King Kamehameha'. 78. Brunswick LA 160-A & B, 1934.
- Kanahele, George S. 'Hana Hmf', *Ha'ilono Mele* 6/2 (1975), 1.
- . *Hawaiian Music and Musicians : An Illustrated History*. Honolulu: University Press of Hawaii, 1979.
- Kanahele, George S., and John Berger. *Hawaiian Music and Musicians*. Honolulu, Hawaii: Mutual Publishing, 2012.
- Kane's Hawaiians. 'Kane's Blues'. San Francisco. 78. Victor Vi20701, 1927.
- Kealakai, Mekia. 'Kawaihau'. In *Famous Hawaiian Songs*, (Sonny) A.R. Cunha, ed. Honolulu: Bergstrom Music Co., 1914.
- King, Charles Edward. *King's Book of Hawaiian Melodies*. Honolulu: Charles E. King, 1925.
- Kolomoku, Walter. 'Hawaiian Melodies'. Victor B-13146, 1913.
- Komorowski, Adam. *Stealing It : Accompanying Liner Notes to Cd Compliation*. London: Proper Records, 2008.
- Lang, Eddie 'Add a Little Wiggle'. 78. OKeh 41134, 1928.

- Lange, Arthur. *Arranging for the Modern Dance Orchestra*. New York: Robbins Music Corporation, 1926.
- Laurie, Joe. *Vaudeville: From the Honky-Tonks to the Palace*. New York: Henry Holt and Company, 1953.
- Leary, James. *Polkabilly: How the Goose Island Ramblers Redefined American Folk Music*. New York: Oxford University Press, 2006.
- Life, Kealoha. 'The Inventor of the Steel Guitar', *Steel Guitarist* 1/6 & 7 (1981), 2.
- Lis, Anthony. "'Not from the American South, but from the Blue Pacific": The Steel Guitar in Early Country Music, Part One: The Earliest "Hillbilly" Steel-Guitar Recordings', *Aloha Dreams* 5/4 (2007), 4.
- Martell, John. *Play-Easy System for Hawaiian Steel Guitar*. New York: Wm. J. Smith Music Co. Inc, 1936.
- Mitchell, Donald, and George S. Kanahale. 'Steel Guitar'. In *Hawaiian Music and Musicians*, George S. Kanahale, ed. Honolulu: University Press of Hawaii, 1979.
- Moke, M.K. 'Moana Chimes'. 78. Brunswick Br55012, 1927.
- Moore, Sam. 'Laughing Rag'. 78. Victor B-25543, 1921.
- . 'Dear Old Pal of Mine'. Vocalion 5133, 1923.
- Moyer, W.D. *Twelve Popular Solos for Hawaiian Guitar*. Milwaukee, Wis.: Wm. C. Stahl, 1927.
- Muir, Peter C. *Long Lost Blues : Popular Blues in America, 1850-1920*. Urbana: University of Illinois Press, 2010.
- King Nawahi's Hawaiians. 'Tickling the Strings'. New York. 78. Columbia Co 2138-D, 1930.
- Neer, Michael J. 'Tickling the Strings Discussion (King Nawahi)'. 2013. <http://bb.steelguitarforum.com/viewtopic.php?t=248896&start=0> (accessed 13 October 2013).
- Noble, John. *The Waikiki Blues*. Vol. Miller Music Corporation. New York 1923.
- Noble, John, and Sonny Cunha. *The Hula Blues*. Chicago: Forster Music Publisher, 1920.
- Noe, George, and Daniel Most. *Chris J. Knutsen: From Harp Guitars to the New Hawaiian Family*. Everett, Washington: Noe Enterprises, 1999.
- Noonan, Jeffrey. *The Guitar in America: Victorian Era to Jazz Age*. Jackson: University of Mississippi, 2007.
- Obrecht, Jas. 'Pioneers & Prime Movers: The Blues before Robert Johnson ', *Guitar Player* 28/1 (1994).
- Toots Paka's Hawaiians. 'Honolulu Tom Boy'. New York. Cylinder. Edison 20713, 1909.
- Pahinui, Gabby. 'Hula Medley'. In *The History of Slack Key Guitar*. CD. Cord International 1995.
- Paradise Islanders, The. 'Then Someone's in Love'. New Jersey. 78. Victor Vi 23687, 1932.
- Penewell, Jack. 'Henhouse Blues'. 78. Marsh Laboratories Autograph 608, c1925.
- . 'Steel Guitar Design Changes', *Music Studio News* 14/1 (1956), 2.
- Phillips, Stacy. *The Art of Hawaiian Guitar Volume 2*. Vol. 2. Pacific: Mel Bay Publications, 2005.
- Rayno, Paul. *Paul Whiteman : Pioneer in American Music*. Lanham, Md: Scarecrow Press, 2003.
- Rey, Alvino. *Modern Guitar Method, Hawaiian Style*. New York: Robbins Music Corporation, 1937.

- Roberts, George. *Paramount Method for Hawaiian Guitar: A Complete and Easily Understood Method for Self Instruction Showing How to Play Ragtime and Jazz*. New York: Wm. J. Smith Music Co., 1924.
- Roberts, Helen. *Ancient Hawaiian Music*. Ann Arbor: University of Michigan, 1926.
- Roberts, Pasco. *Master Lessons for Hawaiian Guitar*. Vol. 2. 2 vols. Chicago: Foster Music, 1937.
- Rockwell, T. Malcolm. *Hawaiian & Hawaiian Guitar Records, 1891-1960*. Kula, Hawaii: Mahina Piha Press, 2007.
- Russo, William. *Jazz Composition and Orchestration*. Chicago: University of Chicago Press, 1968.
- Ruymar, Lorene. *The Hawaiian Steel Guitar and Its Great Hawaiian Musicians*, . Anaheim Hills, California: Centerstream Publishing, 1996.
- Sannella, Andy. 'Sliding on the Frets'. New York. 78. Brunswick BR 4484, 1929.
- Smeck, Roy. 'Laughing Rag'. CD. Banner Ba 7071, 1928.
- Smith, William J. *Favorite Hymn's Arranged as Solos for Hawaiian Guitar*. New York: Wm. J Smith Music Co. , c 1926.
- . *Smith's Hawaiian Guitar Duets*. New York: William J. Smith Music Co., Inc., 1925.
- . *Smith's Hawaiian Melodies #1*. New York: Wm. J Smith Music Co, 1920.
- . *The Improved Kamiki Method for Hawaiian Guitar*. 1928. New York: WM Smith, 1928, revised 1938.
- Solberg, S. E. 'Hawaiian Music, Poetry and Dance: Reflections on Protection, Preservation and Pride', *MELUS* 10/1 (1983), 39-63.
- Stillman, Amy K. 'Beyond Bibliography: Interpreting Hawaiian-Language Protestant Hymn Imprints', *Ethnomusicology* 40/3 (1996), 20.
- . 'Not All Hula Songs Are Created Equal: Reading the Historical Nature of Repertoire in Polynesia', *Yearbook for Traditional Music* 27/ (1995), 1-12.
- . 'Of What Use Are Hawaiian Songbooks?', *Perfect Beat* 2/2 (1995), 18.
- . 'Published Hawaiian Songbooks', *Notes* 44/2 (1987), 221-39.
- . 'Textualizing Hawaiian Music', *American Music* 23/1 (2005), 69-94.
- Stumpf, Myrtle. *Original Hawaiian Method for Steel Guitar*. Los Angeles: Southern California Music Co., 1915.
- Sudhalter, Richard M. *Lost Chords: White Musicians and Their Contribution to Jazz 1915 -1945*. New York: Oxford University Press, 1999.
- Sutton, Allan. 'Rediscovering Sam Moore'. 2011.
<http://www.mainspringpress.com/moore.html> (accessed 14 October 2013).
- Tartar, Elizabeth. 'Chant'. In *Hawaiian Music and Musicians*, George S. Kanahale, ed. Honolulu: University Press of Hawaii, 1979.
- . 'Hawaiian Orchestra'. In *Hawaiian Music and Musicians*, George S. Kanahale, ed. Honolulu: University Press of Hawaii, 1979.
- . *Nineteenth Century Hawaiian Chant*. Honolulu: Bernice P. Bishop Museum, 1982.
- . 'Slack Key Guitar'. In *Hawaiian Music and Musicians*, George S. Kanahale, ed. Honolulu: University of Hawaii Press, 1979.
- . 'Two Feathers in the Cloak', *Ha'ilono Mele* 1/7 (1975), 4.
- Tirro, Frank. *Jazz; a History*. New York: W.W. Norton and Company, 1977.
- Troutman, John W. 'Steelin' the Slide: Hawai'i and the Birth of the Blues Guitar', *Southern Cultures* Spring (2013), 26.

- Veru, Peter T. 'The National-Dobro Guitar Company: How the Resonator Guitar Survived the Age of Electric Amplification'. The George Washington University, 2009.
- Vice, Frank L. 'Sol Hoopii and the Hawaiian Steel Guitar'. University of Maryland, 1991.
- Waikiki Hawaiian Trio. 'All Alone'. 78. Sunset Suns 1054, 1925.
- . 'Come on Nancy'. 78. Sunset Suns 1053, 1925.
- . 'The Four Islands'. 78. Sunset Suns 1053, 1925.
- . 'Lady of the Nile'. 78. Sunset Suns 1096, 1925.
- . 'Oh! Lady Be Good'. 78. Sunset Suns 1085, 1925.
- Waterhouse, Richard. *From Minstrel Show to Vaudeville*. Kensington, NSW: New South Wales University Press, 1990.
- Weaver, Sylvester. 'Guitar Blues'. Okeh 8109A, 1923.
- . 'Guitar Rag'. Okeh 8109B, 1923.
- Welch, Walter, and Leah Burt. *From Tinfoil to Stereo: The Acoustic Years of the Recording Industry*. Gainesville, Fl.: University Press of Florida, 1994.
- Irene West's Royal Hawaiians. 'Hilo - Hawaiian March'. 78. Victor 17767-A, 1914.
- . 'Hilo -Hawaiian March'. 78. Victor 17767-A, 1914.
- West, Sam Ku. 'Hawaiian Hula (Huehue)'. Chicago. 78. Vocalian Vo 15645, 1928.
- . 'Hawaiian Hula Blues'. New York. 78. Banner Ba 2161, 1927.
- . 'Huehue, Huehue'. 78. Victor Vi21415, 1928.
- Winston, George. 'A Brief History of Hawaiian Slack Key Guitar (Ki Ho'alu)'. 2013. <http://dancingcat.com/skb/HSK%20Book%20-%20Book1.pdf> (accessed 07/05/2013 2013).
- . 'A Brief History of the Slack Key Guitar'. <http://dancingcat.com/skb/HSK%20Book%20-%20Book1.pdf> (accessed July 28 2013).
- Wong, Prince. 'Wong Wong Blues'. New York. 78. Pathe-Actuelle PA21170, 1926.

Appendix A: 'Stars and Stripes'

Stars and Stripes Forever

Perf and arr. Charles Diamond

Hollywood 20100

Circa 1925

♩ = 140

Solo Steel Guitar

Transcribed: Guy Cundell

The musical score is presented in five systems, each consisting of a treble clef staff and a guitar staff with six lines. The guitar staff contains fret numbers and 'x' marks for muted strings. The first system starts with a treble clef, a key signature of one sharp (F#), and a 2/4 time signature. The second system begins with a measure rest of 7 measures. The third system begins with a measure rest of 14 measures. The fourth system begins with a measure rest of 21 measures and includes a first ending bracket. The fifth system begins with a measure rest of 29 measures and includes a second ending bracket. The score concludes with a final double bar line.

37

T
A
B

45

T
A
B

52

T
A
B

59

T
A
B

Appendix B: 'Sleep'

Sleep

Steel Guitar Solo: Charles Diamond

Hollywood 20100
©1925

Transcribed: Guy Cundell

♩ = 132

The first system of music covers measures 1 through 4. It features a treble clef with a key signature of two sharps (F# and C#) and a 2/4 time signature. The melody is written in eighth notes, often beamed in pairs. The guitar accompaniment is shown on a six-string staff with a standard EADBEA tuning. Fingering numbers (1-4) are indicated below the notes. Measure 4 includes a circled '1' above the final note.

The second system covers measures 5 through 8. The melody continues with eighth-note patterns. The guitar accompaniment includes some chords with 'x' marks, indicating muted strings. Measure 8 ends with a double bar line and repeat dots.

♩ = 108

The third system covers measures 9 through 14. The tempo is marked as ♩ = 108. The melody is written in a 3/4 time signature. The guitar accompaniment features a steady eighth-note bass line. Measure 9 has an asterisk (*) above it. Measure 14 ends with a double bar line and repeat dots.

The fourth system covers measures 15 through 23. The melody continues with eighth-note patterns. The guitar accompaniment includes some chords with 'x' marks. Measure 23 ends with a double bar line and repeat dots.

The fifth system covers measures 24 through 28. The melody continues with eighth-note patterns. The guitar accompaniment includes some chords with 'x' marks. Measure 28 ends with a double bar line and repeat dots.

31 Fine

T
A
B

40

T
A
B

49

T
A
B

58

T
A
B

65 D.S. al Fine

T
A
B

Charles Diamond
Sleep

Appendix C: 'Sliding On the Frets'

Sliding On The Frets

Steel Guitar Solo: Andy Sannella

Brunswick Br 4484
late 05/1929

Transcribed by Guy Cundell

Maestoso
Freely

The first system of music is in 4/4 time with a key signature of three sharps (F#, C#, G#). It features a melody in the treble clef and guitar tablature in the bass clef. The tablature shows fret numbers 0, 1, 3, 1, 0, 12, 12, 13, 12, 15, 13, 12, 12, 12, 12. The melody consists of chords and single notes, with some slurs and accents.

The second system continues the piece with a 'rit.' (ritardando) marking. The melody features a prominent sliding sequence on the treble staff, indicated by a slur and a '5' below it. The tablature shows fret numbers 13, 13, 14, 12, 12, 13, 11, 11, 12, 10, 10, 11, 9, 9, 10, 8, 8, 9, 8, 8, 8, 8, 7, 7, 7, 7.

The third system is marked 'Swing' with a tempo of quarter note = 140. It includes a section labeled 'A' with a repeat sign. The melody is in the treble clef, and the tablature shows fret numbers 12, 0, 0, 12, 0, 0, 12, 0, 11, 0, 0, 11, 0, 0, 11, 0, 10, 0, 0, 10, 0, 0, 10, 12, 11, 10, 9, 9, 12, 11, 10, 9, 9, 9, 9.

The fourth system features a first ending (1.) and a second ending (2.) leading to a 'To Coda' section. The melody in the treble clef includes slurs and accents. The tablature shows fret numbers 2, 2, 2, 7, 7, 7, 7, 8, 8, 8, 8, 7, 7, 7, 7, 7, 7, 7, 12, 12, 12, 12, 12, 12, 7, 8, 7, 12, 7, 8, 7.

The fifth system includes a section labeled 'A1'. The melody in the treble clef has slurs and accents. The tablature shows fret numbers 12, 0, 12, 0, 12, 11, 0, 11, 0, 11, 10, 0, 10, 0, 10, 12, 11, 10, 9, 9, 2, 14, 14, 14, 14, 7, 7, 7, 7, 7, 7, 9, 9.

The sixth system features a first ending (1.) and a second ending (2.). The melody in the treble clef includes slurs and accents. The tablature shows fret numbers 8, 8, 8, 8, 8, 8, 7, 7, 7, 7, 7, 7, 0, 0, 0, 4, 0, 2, 0, 0, 7, 12, 7, 12.

The seventh system includes a section labeled 'B'. The melody in the treble clef has slurs and accents. The tablature shows fret numbers 4, 4, 4, 4, 4, 4, 4, 4, 4, 4, 9, 9, 9.

31

1.

35

D.S. al Coda

C

rit. ♩ = 140

D.S. al Coda

1.

Maestoso rit. A tempo rit. slow gliss

Sliding on the Frets

Appendix D: The Spanish Guitar in the 1920s

To recognise the significance of the steel guitar in popular music and the leading role that it once played, an assessment of the Spanish guitar in popular music in the early 20th century is necessary. Today's dominance of the Spanish guitar contrasts with the relative invisibility of the steel guitar. In the 1920s, this was far from the case. The acceleration of the Spanish guitar to its iconic status within contemporary popular music began with the invention of electronic pickups in the early 1930s, at which time the acoustic steel guitar had already achieved wide recognition. The increased volume that amplification provided allowed Spanish guitarists the ability to assert themselves as soloists above the loudest of ensembles. The tradition of lead guitar developed from this time on the electric instrument and was developed in a myriad of genres and styles throughout the remainder of the 20th century. Before this invention the Spanish guitar was a subservient instrument within popular music. A parlour instrument of 18th century Europe, the guitar was little more than an instrument of accompaniment in the 19th century, eclipsed in the mainstream of popular music by minstrel banjos and mass produced pianos.²⁸⁷ Beyond accompaniment duties, it found a place within the BMG (banjo, guitar and mandolin) movement of plectra orchestras in America in the late 19th and early 20th centuries.

The rise of the wind-dominated dance orchestra of the 1920s provided scant opportunities for acoustic guitarists. In the early 1920s Paul Whiteman developed Art Hickman's model of an ensemble of wind instruments and rhythm section that, while mimicking Southern jazz ensembles, domesticated the wild polyphonic improvisations through disciplined arranging. This technique of popular music arranging was developed by Whiteman's arranger, Ferde Grofe, and others such as Don Redmond and Duke Ellington, into the technical and artistic basis for the enduring tradition of big band jazz.²⁸⁸ In the acoustic era the guitar was at a great disadvantage in comparison to the banjo in ensembles that provided music for dancing, whether they were untrammelled, 'authentic'

²⁸⁷ Jeffrey Noonan, *The Guitar in America: Victorian Era to Jazz Age* (Jackson: University of Mississippi, 2007), 5.

²⁸⁸ Tim Grayck, 'Art Hickman and His Orchestra' 2011. <http://www.gracyk.com/hickman.shtml> (accessed 2 September 2013), Tim Gracyk, 'Paul Whiteman' 2011. <http://www.gracyk.com/whiteman.shtml> (accessed 2 September 2013).

jazz bands or Whiteman-styled orchestras. The banjo's crisp and percussive sound, though lacking in sustain, provided a rhythmic and harmonic accompaniment that could carry bands that included large wind sections or featured the dense group improvisations of early jazz. The domination of the banjo is illustrated in the way in which Arthur Lange's seminal authority devotes much attention to it as a significant member of the rhythm section while making no mention at all of the guitar.²⁸⁹ Some performers had 'a foot in each camp'. Johnny St Cyr, who performed on Louis Armstrong's landmark Hot Five and Hot Seven recordings between 1925 and 1928, was proficient on both instruments.²⁹⁰ However even in the recording studio, where recording levels could be balanced more readily, Armstrong only utilised the guitar a handful of times within these small group recordings. A soloist's role was impractical for the acoustic guitar in such circumstances as single note melodies could hardly be heard above a piano let alone the wind instruments, drums and a bass instrument that comprised a dance band. The acoustic guitar as a solo instrument, like the steel guitar, was best confined to small ensembles of compatible instruments, with care taken to limit the level of accompaniment. In contrast, in this era steel guitarists had already carved out a leading role for their instrument within Hawaiian musical stylings. The success and reach of Hawaiian ensembles and the breadth of their repertoire had assured a prominence and popularity of the instrument before the explosion of interest in the Spanish guitar.

In the following decade, electric guitarists such as Eddie Durham and Charlie Christian brought their instrument to prominence through dazzling displays of improvisation within the idioms of blues and jazz. The evidence of a tradition of guitar improvisation in America within the earlier acoustic era can also be found in these genres and is exemplified in some recordings of small ensemble or solo settings made in the 1920s. From this evidence, pioneers of the tradition have been identified and lauded for their efforts and for having established a basis on which the following electric tradition could build. Sylvester Weaver's 1923 recordings have been identified as the first blues guitar performances on record, but Jas Obrecht holds that it is not until 1926 that

²⁸⁹ Lange, *Arranging for the Modern Dance Orchestra*.

²⁹⁰ Louis Armstrong, *The Complete Hot Five & Hot Seven Recordings* CD (Columbia C4K63527000), 2000.

significant blues exponents such as Blind Lemon Jefferson, Lonnie Johnson and Blind Blake appeared on recordings.²⁹¹

The most prominent early acoustic jazz guitarist and improviser was Eddie Lang. Born Salvatore Massaro in Philadelphia, Lang began his performing career in the late 1910s on banjo. His recording career began in 1925 with The Mound City Blue Blowers and he recorded often through the 1920s. At the time of his death in 1933, after complications of a tonsillectomy, he was well established as a recording sideman, accompanist and soloist. In a series of duo recordings with his friend, violinist Joe Venuti, he displayed a growing confidence and facility in single note improvised solos. Further noteworthy duets, in which his improvisatory skills were at the fore, were recorded with guitarist Lonnie Johnson. His rhythm playing was also strong and he was recorded many times in that primary role, notably with Paul Whiteman's orchestra. One of his most famous contributions to jazz can be found on the 1927 landmark recording of 'Singing the Blues' by Trumbauer and Bix Beiderbeck. In this small group recording without a dedicated bass instrument, Lang provides the rhythmic and harmonic backbone for the track through his chordal and single note playing, while occasionally providing interpolations that lift the group's performance. Lang's single note plectrum-style playing has been explained as an outgrowth of the tradition of mandolin playing attributed to his Italian heritage which he shared with other American guitar.²⁹² Furthermore, the arch-top design of his favoured Gibson L5 guitar and its steel strings can be seen as having been influenced by the mandolin, a mainstay of Gibson's output from the birth of the company.²⁹³ The design and heavy steel strings that Lang used were required to assist with the instrument's volume deficiency. The strings were influential in the development of his style in that while they assisted the instrument's volume, they diminished microtonal inflection available through the standard guitaristic device of string bending.

The significance of the contribution of early jazz and blues guitarists to the rise in popularity of their instrument is unquestioned and they are widely lauded as pioneers of the most dominant instrumental force in popular music of the 1920s. The issue that this study of steel guitar raises is, in light of the existence of Hawaiian guitar soloists dating

²⁹¹ Jas Obrecht, 'Pioneers & Prime Movers: The Blues before Robert Johnson', *Guitar Player* 28/1 (1994).

²⁹² Noonan, *The Guitar in America: Victorian Era to Jazz Age*, 126.

²⁹³ Noonan, *The Guitar in America: Victorian Era to Jazz Age*, 128.

from the middle of the 1910s, is this: can these jazz and blues players be seen as outliers, forging a new tradition, or can their contribution be seen as a continuation of the practice already well established by Hawaiian steel players? While commentators like Sudhalter can suggest that Lang and Venuti drew freely on what Richard Sudhalter describes as ‘the rich and varied string tradition brought to this country in the great-turn-of the-century waves of Italian immigration’, it is true that around them existed a community of Hawaiian steel players whose recordings and performances in New York (Lang’s base) were plentiful and provided a rich model of guitar improvisation on which they could also draw.

Appendix E: Track Listing of Examples on Audio CD

- 1..... Ex 1.5 'Nani Wale Lihue' (excerpt from 'Hula Medley'), Gabi Pahinui, 1947.
- 2..... Ex 3.1 'Honolulu Tom Boy'. Toots Paka's Hawaiians, 1909.
- 3..... Ex 3.2 'On the Beach at Waikiki', Ferera and Louise, 1925.
- 4..... Ex 3.3 'Indiana March', Pale K. Lua, 1914.
- 5..... Ex 3.4 'Ua Like No Alike', Hawaiian Quintette, 1913.
- 6..... Ex 3.6 'Hilo March', Pale K. Lua, 1914.
- 7..... Ex 3.8 'My Honolulu Tom Boy', Joseph Kolomoku, 1913.
- 8..... Ex 4.1 'Come on Nancy', Waikiki Hawaiian Trio, 1925.
- 9..... Ex 4.1 'Oh! Lady Be Good', Waikiki Hawaiian Trio, 1925.
- 10..... Ex 4.2 'Honolulu Bound', The Hawaiian Beachcombers, 1930.
- 11..... Ex 4.4 'Hula Blues', The Genial Hawaiians, 1933.
- 12..... Ex 4.3 'Hula Blues', Sol Hoopii and his Novelty Trio, 1927.
- 13..... Ex 4.4 'Four Islands', Waikiki Hawaiian Trio, 1925.
- 14..... Ex 4.5 'Add A Little', Wiggle Eddie Lang, 1928.
- 15..... Ex 4.6 'Oh Shenandoah', Buddy Emmons, 2007.
- 16..... Ex 4.7 'Stack O'Lee Blues', excerpt 1, Sol Hoopii and his Novelty Trio, 1926.
- 17..... Ex 4.8 'Stack O'Lee Blues', excerpt 2, Sol Hoopii and his Novelty Trio, 1926.
- 18..... Ex 4.9 'Fascinating Rhythm', Sol Hoopii's Novelty Five, 1938.
- 19..... Appendix A 'Stars and Stripes', Charles Diamond, 1925.
- 20..... Appendix B 'Sleep', Charles Diamond, 1925.
- 21..... Appendix C 'Sliding on the Frets', Andy Sannella, 1929

NOTE:

1 CD containing examples is included with
the print copy of the thesis held in the
University of Adelaide Library.

The CD must be listened to in the Music Library.

