Across the South: The origins and development of the steel guitar in western swing

by

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This thesis is dedicated to the memory of Stacy Phillips
(29 September 1944 – 5 June 2018)

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I. 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 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.

I acknowledge the support I have received for my research through the provision of an Australian Government Research Training Program Scholarship.

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II. Abstract

In the early 1930s, the steel guitar, a Hawaiian invention of the late 19th century, was adopted by musicians in an emerging form of dance music known as western swing, a subgenre of country music. The design of the newly amplified instrument and the style of its players underwent continual change as the music of the genre evolved. However, in the 1950s, as the popularity of western swing declined, the steel guitar was completely supplanted by the pedal steel guitar and a new stylistic approach that it enabled. Through transcription and analysis the study offers new perspectives on what have been anecdotal observations surrounding the various stages in development of the steel guitar between 1935 and 1955.

III. Acknowledgements

The seeds of this study germinated ten years ago when I joined Bobby Lee's online Steel Guitar Forum. The Forum opened a window to a musical culture of great depth and fanned an interest that continued to grow as I learned more about the instrument and its music. Without Bobby's structure, and the diverse contributions of the steel guitar community, this study would not have been made.

I am indebted to Professor Mark Carroll for his supervision of this project and wish to thank the University of Adelaide, the Elder Conservatorium of Music and Associate Professor Kimi Coaldrake, for their support.

In the course of the study, I have benefited from the assistance of many individuals. I enjoyed a long discourse with Stacy Phillips, to whom this work is dedicated. He first assisted my Master's research and his help in developing the chapter on Bob Dunn, a pet topic of his, was invaluable. I was looking forward to sharing a conference presentation on the subject with him, confident that he would approve of my summations, but his tragic and untimely death intervened. He was a most knowledgeable and generous man and his passing is a great loss to the steel guitar community. I am also indebted to the assistance of Kevin Coffey, who freely shared his encyclopedic knowledge of western swing and provided me with a sounding board, as well as many precious resources. I also wish thank Mitch Drum for his help in assembling and sorting a large catalogue of the scattered recordings of Noel Boggs and Joaquin Murphey. Additionally, I would like to thank both Les Cook and Lucky Oceans for their criticism and encouragement, and Professor Tom Smith for his analysis of the trombone positions used by Jack Teagarden.

I have also been greatly assisted by the collections and the staff of a number of American archives. My thanks go to Greg Reish's team at the Center for Popular Music at Middle Tennessee State University, especially Olivia Beaudry. My appreciation also goes to Aaron Smithers and the staff at the Southern Folklife Collection at the University of North Carolina, Chapel Hill, and to Scott Schwartz at the Souza Archives and Center for America Music at the University of Illinois, Urbana-Champagne. I would also like to thank John Rumble at the Country Music Hall of Fame and the staff of the Performing Arts Reading Room of the Library of Congress, Washington, DC.

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Finally, I would like to thank my family, Jane Rowland and Jasper Cundell, for accommodating me in this endeavor, and I wish to show appreciation to teachers who equipped me with the core skills required for the task; David Merchant and John Terry who helped me establish listening skills, and my writing coach, Cally Guerin.

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VI. Notes on Recordings

The recordings examined for this study fall into three categories: studio recordings made for commercial release; radio transcriptions recorded for broadcast; and extracts from movie sound tracks. The sources have been manifold and include commercial CD rereleases of studio recordings and radio transcription, YouTube videos, and private collections.

Compilations of western swing recordings were important in the initial stages of investigation. The most significant of these were three collections released by Proper Records.[1] An additional compilation, *Steelin' It*, provides an invaluable overview of steel guitar history.[2] Of the recordings of the four primary subjects of this study, comprehensive commercial compilations of performances by Bob Dunn[3] and Leon McAuliffe[4] were available. Recordings for study of Noel Boggs and Joaquin Murphey were assembled from both the range of sources mentioned above. Commercial rereleases of Hawaiian music also were consulted. Particularly valuable were high quality restorations released by Grass Skirt Records.[5] Additionally, the complete catalogue of Hawaiian recordings released by the now defunct Australian record label, Cumquat, was obtained for this study. Consisting of seventy six CDs, the collection, which is now in the archive of the Centre for Popular Music at the Middle Tennessee State University, offered an extensive sampling of Hawaiian recordings of the 1930s.

Transcribed examples are captioned with recording matrix numbers and the date on which the recording was made. In the case of radio transcription, the identifying number of the disc is provided, where known. While mindful of alternate numeric systems of identifying dates, the British system is used in captions. The first figure represents the day, the second represents the month and the third represents the year.

To manage the confusion of publication by multiple record labels, as well as CD restorations, studio recordings are cited in this study with reference to the initial commercial publisher. Where recordings were not originally released, the contemporary publisher is cited.

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[1] Various artists, *Doughboys, Playboys and Cowboys: The Golden Years of Western Swing,* (Proper Records Properbox 6), 2005, Various artists, *Stompin Singers and Western Swingers,* (Proper Records Properbox 83), 2004, Various artists, *Swinging Hollywood Hillbilly Cowboys,* (Proper Records Properbox 75), 2004.
[2] *Steelin' It : The Steel Guitar Story,* (Proper Records Properbox 142), 2008.
[3] Milton Brown, *Milton Brown & his Musical Brownies: Daddy of Western Swing,* CD (Proper Records Properbox 59), 2003, Bob Dunn, *Bob Dunn: Master of the Electric Steel Guitar 1935-1950,* (Origin Jazz Library OJL-1004), 2010, Bob Dunn, *Wizards of Country Guitar featuring:Bob Dunn,* (JSP Records JSP 77144A), 2011, Various artists, *Wizards of Country Guitar: selected sides 1935 - 1955,* (JSP Records JSP 77144A), 2011.
[4] Bob Wills, *San Antonio Rose: Bob Wills and His Texas Playboys*, Bear Family Records, Hambergen, 2000.
[5] *Genial Hawaiians Jim and Bob', George Ku and His Paradise Islanders,* (Grass Skirt Records GSK 1005), 2012, *Eddie Bush and the Biltmore Trio,* (Grass Skirt Records SM 2002), 2014.

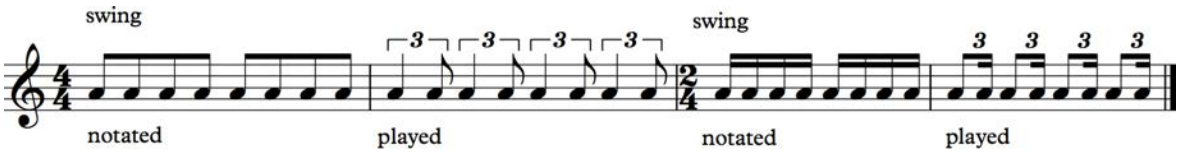
In the case of radio transcriptions, the transcription company and disc number are cited where known.

The identification of recordings has been verified using three crucial discographies. Firstly, Tony Russell's *Country Music Records; A Discography, 1921-1942* is a vast printed resource that has been invaluable but its scope does not extend across the period under consideration here.[6] In the absence of an alternative, two online resources have been invaluable. Firstly, a web-based discography called *Praguefrank's Country Music Discographies* provides a remarkably extensive catalogue of country music recordings.[7] Based in Czechoslovakia, the discography is a communal enterprise of vast proportion and its well-credentialed contributors include Tony Russell, Michel Ruppli and Kevin Coffey. A second online community at Discogs has provided valuable publication details for recordings for this study.[8]

[6] Tony Russell, *Country Music Records, a Discography, 1921-1942* (New York: Oxford University Press, 2004).
[7] 'Praguefrank's Country Music Discography' 2013. http://countrydiscography.blogspot.com/ (accessed March 3rd 2016).
[8] 'Discogs' 2016. https://www.discogs.com/search/ (accessed March 3rd 2016).

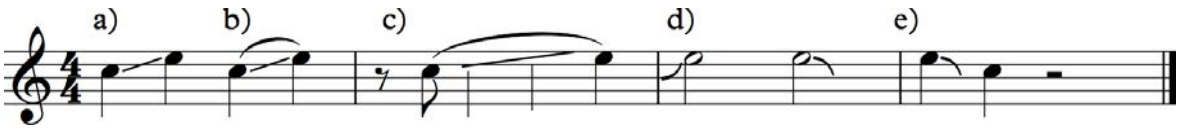
VII. Notes on Transcriptions

- All transcriptions of standard notation and tablature within this study are the work of the author unless otherwise designated.
- All transcriptions are notated at concert pitch.
- Examples of tunings are at concert pitch but notated using a suboctave treble clef.
- Chord symbols are a basic representation of the accompanying harmony and are not intended as harmonic analysis of the transcribed passages.
- A boxed time label, at the beginning of each example, indicates its position in the parent recording in minutes and seconds.
- The jazz convention of notating swung quavers in 4/4 and swung sixteenths in 2/4 has been adopted for clarity and simplicity, as shown in Ex VVV.1 below. All transcriptions are swung unless designated otherwise. While this convention greatly simplifies notation, it only provides a general principal for rhythmic interpretation and the ratio of the durations of notes varies at different tempi and also between different performers.



Ex. VII.1 Interpretation of swing rhythm

- Glissandi are employed throughout steel guitar performance and their wide range of applications has necessitated some abbreviation in notation. Where the start point and endpoint is clear, as in Examples A, B and C below, glissandi are indicated with a straight line between note heads. In Example A, the endpoint is rearticulated, while in Example B, it is not. The durations of long glissandi are indicated using headless note stems as shown in Example C. Where the start or endpoint of a glissando is not clear, an indication of generalized bar movement as shown in Example D is provided. Example E shows a descending glissando that does not extend fully to the pitch of the following note.



Ex VII.2 Glissando notation

Introduction

To a curious contemporary observer, the development of the steel guitar is an enigma. On one hand, the Hawaiian origins of the instrument are well known and its idiosyncratic sounds are employed in popular culture to conjure images of palm trees and tropical island beaches. Alternatively, in contemporary country music, the term steel guitar is synonymous with pedal steel guitar, a multi-necked console equipped with mechanical pedals that are used to generate ethereal melodies that, in turn, have been a marker of country music since the late 1950s. Between the two is a stylistic chasm with no clear indication of how the two approaches were bridged. A period of development that links the two exists but has become largely hidden as musical tastes change and styles fall from favor. The location in which this dissertation examines the enigmatic development is western swing, and this study will investigate the blossoming of the steel guitar that occurred within this now obscure genre.

This thesis centers on the performance culture of the amplified non-pedal steel guitar in the genre of western swing, from its inception, when electronic amplification transformed the style and function of the instrument, to its supersession and abandonment in the face of its pedaled successor. Performance culture encompasses style, technique and organology of the instrument as it developed within the genre. The study seeks to identify evolution in the performance culture and to determine the origins of style and technique, both within and beyond the genre's boundaries. The resulting text shows the complexities of how an instrument, with clear ethnic origins, was assimilated by a host culture and adapted to serve in a new musical context. An evaluation of the process will also show how elements of the original Hawaiian performance culture accompanied the instrument in its journey and became embedded in the host culture, with acknowledgement of origin dissipating and eventually disappearing. What follows now is an overview of historical considerations, and the intellectual rationale and approach taken to the research.

The steel guitar is a late 19th century Hawaiian adaptation of the Spanish guitar. With strings raised at the nut, the instrument was played on the lap of the performer and fretted with a steel bar from which name of the instrument and performance style was derived. From its origins in the Hawaiian Islands, it was introduced to America in the early 20th century by Hawaiian musicians. The novelty of the exotic instrument found favour with both audiences and western musicians, and a rising enthusiasm for Hawaiian culture saw the instrument catapulted to popularity in professional and amateur music making in the late 1910s and 1920s. Within small Hawaiian string ensembles, the instrument served primarily to provide melodies, both as a lead instrument and in support of vocalists. The versatility of the

instrument was demonstrated within repertoires of Hawaiian ensembles that included traditional Hawaiian tunes, Hapa Haole melodies that were influenced by western popular music, along with a range of material of western origin, from popular music to classical airs. A huge culture of pedagogy arose around the instrument, one that cemented its wide scale popularity, and also provided an avenue for the instrument to escape from its specifically Hawaiian context into popular music more broadly.

A second stage of development began in the middle of the 1920s when the following generation of Hawaiian musicians employed enhanced techniques to demonstrate that the instrument was suitable as a vehicle for emerging jazz styles. Concurrent design innovation gave rise to a resonating mechanism employed in the National Tricone guitar. Using the principles of nonelectric phonographs, the new design employed metal cones to amplify the instrument and increase its property of note sustain, and it was widely adopted by steel players.

A third stage of development, the subject of this study, began in 1932 when electronic amplification rendered the National Tricone obsolete. This development heralded a massive change in the instrument's voice and its fortunes. The increase in volume that amplification provided freed the instrument from its previous confinement to small string ensembles or solo performance, where its voice dominated, and allowed steel guitarists to take leading roles in dance bands or orchestras. The period was also one of prodigious advances in instrument design. The new technology allowed luthiers to add extra strings and multiple necks. The technology also provided electronic control over both volume and timbre. Accordingly, an explosion of development in style and technique that exploited the new designs occurred.

A fourth stage of development began in the mid 1950s when mechanical pedals were widely adopted to change the pitch of individual strings within performance. While systems to change tuning by mechanical means had existed since the late 1930s, the integration of mechanical pitch change in articulation was ground breaking. At an astonishing pace, the instrument design was adopted by an overwhelming majority of steel players and a new distinctive style arose that became a marker of country music for many decades to come. The non-pedal instrument became largely obsolete with a pocket of adherents within Hawaiian music and few devotees remaining in country music.

The scope of this study is confined to the genre of western swing chiefly because it played such a pivotal role in facilitating the development of an instrument that had found wide acceptance in popular music. Western swing, a sub genre of country music, provides a bounded musical territory in which extensive and continuous development of style and technique occurred. The refinement of style and technique achieved by western swing steel

players was both remarkable and influential, and the prominence they achieved was mirrored in country music more broadly.

Western swing also provides a unique temporal framework for examination of the steel guitar. Delineating this study are two watershed events in the development of instrument that coincided with significant milestones in western swing. The first event, the commercial application of electric amplification in the early 1930s marked the rise of the instrument's influence in dance music, and provided the instrument with a technical advantage on which western swing performers built a new style. The second event, a wide-scale adoption of mechanical pedals in the mid 1950s, signaled the end of the non-pedal instrument's reign and dawn of a new stylistic approach. Fortuitously, these two landmarks circumscribe western swing, coinciding with the span of popularity that was enjoyed by the genre in America from its inception in Southwestern states in the 1930s to its decline in the 1950s. The coincidence of the rise and decline of both western swing and the amplified lap steel guitar provides a clear boundary for this project.

From a historical perspective, the span of the western swing's popularity is generally agreed by commentators to be from the early 1930s to the mid 1950s. The locale in which the music coalesced into a distinctive style was Ft Worth, Texas.[9] It was there that, in 1931, the two most important early figures, Bob Wills and Milton Brown, collaborated in an ensemble known as the Light Crust Doughboys. Not long after, they separated and formed their own ensembles; Brown's ground breaking Musical Brownies and Wills' enduring Texas Playboys. Although Brown died in a motor vehicle accident in April 1936, his successful band had been a regional phenomenon that spawned many imitators and secured longevity for the genre that he pioneered. Wills, after moving to Tulsa, enjoyed national success with his composition 'San Antonio Rose' that was amplified greatly when it was recorded by Bing Crosby in 1941. Subsequently, Wills was invited to make movies in Hollywood.

While in California, Wills' band performed in large dancehalls that were patronized by a workforce of immigrants who had arrived from southern and mid western states in search of work provided by rapidly expanding defense industries. The commercial potential of the new dance music was obvious to the promoter Foreman Phillips who became a supporter of the music and provided the opportunity for the rise of another influential western swing bandleader, Oklahoman Spade Cooley.[10] Initially, large ensembles were a characteristic of western swing bands on the West Coast, with Wills' ensembles including a horn section of

[9] Cary Ginell and Kevin Coffey, *Discography of Western Swing and Hot String Bands, 1928-1942* (Westport, Connecticut: Greenwood Press, 2001), vii.
[10] Jeffrey Lange, *Smile When You Call Me a Hillbilly: Country Music's Struggle for Respectability 1939-1954* (Athens, GA: University of Georgia Press, 2004), 106-08.

three or more and Cooley's ensemble with multiple fiddlers, guitarists and even a harpist. Soon, the excessive size of the ensembles became an insurmountable financial burden, just as it did for big jazz bands, and smaller ensembles consisting of a rhythm section with an extra soloist or two became the norm in the mid to late 1940s.

The demise of western swing came in the 1950s, replaced by alternative musical styles, and with alternative entertainment, in the form of television, diverting audiences. The advent of rock and roll in the early 1950s also contributed significantly to the demise of western swing, by both revolutionising social dancing and fracturing what had been a consolidated audience into one divided by age.[11] Although Western swing was a spent force, at least one bandleader, Bill Haley, was able to bridge the gap from western swing to rock and roll, but his was the exception rather than the rule.

A review of literature reveals a surprising dearth of musicological scrutiny of the steel guitar, an instrument with a history that stretches from the late 19th century to the present day and which has occupied prominent positions in both Hawaiian and country music. As a stylistic and technical investigation of the instrument, this study is a rarity that fills a number of roles in the meager body of existing literature. Firstly, it represents a significant extension to a tiny array of technical studies on the steel guitar in western swing. Secondly, within the broader field of steel guitar studies, it addresses a gap that falls between investigations of the acoustic era of the instrument that extends from its invention to the early 1930s, and the era of the pedal steel guitar that began in the mid 1950s. Thirdly, this study serves as a companion to histories of the genre of western swing in which the steel guitar was one of the leading instrumental identities.

The reason for the paucity of technical studies of the instrument can be attributed to various difficulties in approaching musicological investigation that have dissuaded all but most energized and determined writers. In the absence of either notation or pedagogy, the writer's personal knowledge of the instrument and its many configurations, performance techniques and transcription skills are paramount in mounting a meaningful study. It is unsurprising, therefore, that the technical writing on steel guitar within western swing is limited to the work of one individual, Stacy Phillips, whose pedagogical texts are aimed at acoustic dobro players. His interest was indicated by a western swing transcription in his first handbook[12] and further demonstrated by a chapter entitled 'A Resonator Guitar Approaches Jazz (Gingerly)', included in his acclaimed manual, *Mel Bay's Complete Dobro Player*.[13] In

[11] Jocelyn Neal, 'Whither the Two-Step: Country Dance Rewrites Its Musical Lineage', in Travis Stimeling (ed.), *The Oxford Handbook of Country Music* (New York: Oxford University Press, 2017), 441-42.
[12] Stacy Phillips, *The Dobro Book* (New York: Oak Publications, 1977), 63.
[13] Stacy Phillips, *Mel Bay's Complete Dobro Player* (Pacific, Mo: Mel Bay Publications, 1996).

the chapter, Phillips offers a discussion of music theory and steel guitar technique applied to jazz, and illustrated with transcriptions of western swing players, Bob Dunn and Leon McAuliffe.

Historical studies of the steel guitar are similarly scarce and cover only a portion of the instrument's story that began in Hawaii in the late 19th century. John Troutman's definitive history, *Kika Kila: How the Hawaiian Steel Guitar Changed the Sound of Modern Music*, is unparalleled as a comprehensive account of the origins, cultural history and impact of the steel guitar.[14] In the first five of seven chapters, Troutman outlines the acoustic era of the instrument in exacting detail. Beginning with the guitar culture in which it arose, Troutman examines the Hawaiian origins of the instrument and follows the fortunes of Hawaiian steel guitarists as they traversed mainland America, exposing the instrument to a receptive populace. The ensuing American craze for the instrument is described by a chapter devoted to the rise of a second generation of steel players in Hollywood, steeped in the jazz of the 1920s and 1930s. Troutman's sixth chapter, to which this study is most relevant, is concerned with the separation of the steel guitar from its Hawaiian context. Troutman describes various ways in which this occurred. Hawaiian musicians modified their repertoires to accommodate audience preferences, black American slide players possibly forged a Hawaiian connection, and Hawaiian guitar schools became part of the mainstream of American music education. Troutman also identifies western swing as an area in which the instrument lost connection with its Hawaiian origins, a theme that can be traced through this study.

Another relevant treatise on the early steel guitar, published before Troutman's book, is the current author's master's thesis, 'Across the Pacific: the transformation of the steel guitar from Hawaiian folk instrument to popular music mainstay'.[15] This text takes a technical and analytical approach to the Hawaiian steel guitar performance culture of the acoustic era that is replicated in this study. The master's thesis provides an analysis of the musical context from which the instrument sprang, along with a close examination of the style and technique of early performers. Modes of performance, tunings and technique are discussed in detail and, subsequently, provide a firm basis on which the current study has been built.

A brief scholarly account of the steel guitar that shares the timeframe and context targeted by this study can be found in Jean Boyd's *The Jazz of the Southwest: An Oral*

[14] John W. Troutman, *Kika Kila: How the Hawaiian Steel Guitar Changed the Sound of Modern Music* (Chapel Hill: University of North Carolina Press, 2016).
[15] Guy Cundell, 'Across the Pacific: The Transformation of the Steel Guitar from Hawaiian Folk Instrument to Popular Music Mainstay', Master's thesis, University of Adelaide (2014).

History of Western Swing.[16] In a thirty page chapter, Boyd identifies and discusses the careers of four crucial western swing steel guitarists, devoting one page to Bob Dunn, six pages to Leon McAuliffe, three pages to Noel Boggs and two pages to Joaquin Murphey. Boyd underpins her oral history with interviews from the Baylor University Institute for Oral History where she is currently a professor of musicology, and completes her chapter with extensive excerpts from dialogues that she had conducted with steel guitar luminaries, Herb Remington and Tom Morrell.

The steel guitar has also received attention in short forms of writing and helpful overviews of the instrument in western swing can be found in the consistent chronicling of Rich Kienzle and a series of articles by Ralph Sheets. Both Kienzle's 1979 article in *Guitar Player* magazine[17] and Sheets' series for the short-lived *Steel Guitarist* magazine[18] are useful precursors to investigation that aided the establishment of focus of the current study. Also worthy of preliminary consideration are Kienzle's surveys of prominent western steel players[19] and his collection of essays on western swing performers.[20]

As the emergence of the amplified steel guitar was a pivotal moment in western popular music, the event is well detailed in the histories of major instrument manufacturers that were involved in the breakthrough. Distinguished instrument manufacturer, Leo Fender, first entered the field by constructing steel guitars and maintained an interest throughout the era under consideration, as histories such as *Fender: The Golden Age 1946-1970* attest.[21] The earlier participation of other major instrument manufacturers, Gibson, Rickenbacker, Epiphone and Bigsby, is similarly recorded in significant historical accounts.[22] These publications help to trace the organological developments that occurred across the timeframe of this study and provide one of the pieces of the puzzle required to decipher stylistic and technical development.

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[16] Jean A. Boyd, *The Jazz of the South West, an Oral History of Western Swing* (Austin, Texas: University of Texas, 1998).
[17] Rich Kienzle, 'Steel Guitar: The Western Swing Era', *Guitar Player* 13/12 (1979).
[18] Ralph Sheets, 'A History of Western Swing Part 1', *Steel Guitarist* 1/2 (1979).,Ralph Sheets, 'A History of Western Swing Part 2', *Steel Guitarist* 1/3 (1979), Ralph Sheets, 'A History of Western Swing Part 3', *Steel Guitarist* 1/4 (1980).
[19] Rich Kienzle, 'The Steel Guitar Players of Hank Penny', *Steel Guitarist* 1/6 (1981), Rich Kienzle, 'Bob's Playboy Pickers', *Vintage Guitar* March (2006).
[20] Rich Kienzle, *Southwest Shuffle: Pioneers of Honky-Tonk, Western Swing and Country Jazz* (New York: Routledge, 2003).
[21] Martin Kelly, Terry Foster and Paul Kelly, *Fender: The Golden Age 1946-1970* (London: Cassell Illustrated, 2011).
[22] A.R. Durchossoir, *Gibson Electric Steel Guitars 1935-1967* (Milwaukee: Hal Leonard Books 2009), Richard R. Smith, *The History of Rickenbacker Guitars* (Anaheim, California: Centerstream Publications, 1987), Jim Fisch and L.B. Fred, *Epiphone: The House of Strathpoulo* (New York: Amsco Publications, 1996), Andy Babiuk, *The Story of Paul Bigsby: Father of the Modern Electric Guitar* (Savannah, GA: FG Publishing, 2008).

A small body of scholarly work concerned with the development of the pedal steel guitar overlaps the end of this study. It takes the form of a PhD thesis by Tim Miller[23] and his subsequent chapter in *The Oxford Handbook of Country Music*, entitled "This Machine Plays Country Music: Invention, Innovation, and the Pedal Steel Guitar'.[24] Miller provides a brief history of the non-pedal instrument as a precursor to his main subject but had little technical literature on which to establish the preliminary conditions. The text that appears to be his principal source is Jerry Byrd's autobiography[25] that includes Byrd's summary of the development of steel guitar tunings.[26] The table that Miller uses to indicate the steel guitar tunings in use before the rise of the pedal steel instrument is modeled on Byrd's theories.[27] The table serves a twin purpose, showing relationships between tunings as well as their extent. However, it is deficient in several respects. As an indication of tunings in use in 1945, the inclusion of the low A, High bass A and E major is misleading, as these three had been largely superseded in professional circles by this stage, although they maintained a strong presence in amateur playing and pedagogy. More critical are significant omissions from the list, that of E13 and A6, the two most prevalent tunings in western swing in the 1940s and 1950s. The omission of A6 has a particular bearing on Miller's study. It is the secondary tuning of key innovator Bud Isaac's guitar, formed when the pedals of his instrument were depressed. An understanding of this characteristic provides context to an investigation of the development of pedal steel guitar style and helps to reveal the hybrid nature of Isaacs' groundbreaking style.

At the time of writing, a definitive history of western swing has yet to be written. The genre is clearly identified and framed in general country music histories such as Malone's *Country Music, USA*[28] and Lange's *Smile When You Call Me a Hillbilly: Country Music's Struggle for Respectability, 1939-1954*[29], which have been of assistance in defining the boundaries of this study. Biographies of two significant western swing bandleaders, Bob Wills[30] and Milton Brown,[31] further refine and advance discussion of the genre. Primarily oral histories, both books offer valuable insights of the musicians of the era, which have assisted the current study. In turn, this study offers analytical detail of music and style that may assist

[23] Timothy David Miller, 'Instruments as Technology and Culture: Co-Constructing the Pedal Steel Guitar ', PhD thesis, University of North Carolina (2013).
[24] Timothy David Miller, 'This Machine Plays Country Music: Invention, Innovation, and the Pedal Steel Guitar', in Travis Stimeling (ed.), *The Oxford Handbook of Country Music* (NY: Oxford University Press, 2017).
[25] Jerry Byrd, *It Was a Trip on the Wings of Music* (Anaheim Hills, California: Centerstream Publishing, 2003).
[26] Ohio born, Byrd was a prominent Nashville steel player in the 1940s and 1950s.
[27] Miller, 'This Machine Plays Country Music: Invention, Innovation, and the Pedal Steel Guitar', 196.
[28] Bill C. Malone and Jocelyn Neal, *Country Music, USA* (Austin: University of Texas Press, 2010).
[29] Lange, *Smile When You Call Me a Hillbilly: Country Music's Struggle for Respectability 1939-1954*.
[30] Charles R. Townsend, *San Antonio Rose: The Life and Times of Bob Wills* (Urbana: University of Illinois Press, 1976).
[31] Cary Ginell, *Milton Brown and the Founding of Western Swing* (Urbana: University of Illinois Press, 1994).

reading of the biographies, although conclusions of this study are not always in accord with the assessments expressed by two books' contributors.

The primary study of western swing at the time of writing is Boyd's oral history.[32] It is an account of western swing constructed from the experiences of instrumentalists attained by interview. Boyd provides chapters on fiddlers, guitarists, and steel guitarists, with rhythm section players grouped into bass and banjo, and piano and drums. Boyd's thesis is simple. 'Western swing was jazz created by and for country folk.'[33] Boyd persistently develops this argument throughout her book with little recourse to analysis of the music discussed. Two significant deficiencies become apparent. Firstly, Boyd leaves little room to discuss the complexities of the origins and components of western swing. The salient marker of 'western' in the title of the genre seems to be interpreted as a societal locator rather than an indication of musical style. The polarity between jazz and country music that exists in western swing is down played and the strong influence of blues is hardly mentioned. Secondly, Boyd's jazz thesis is applied as if it refers to a mostly static form, when in fact the changes that jazz went through in the era of western swing were enormous, a process that was reflected in the individual styles of many of the prominent performers, as this study will show.

Nevertheless, Boyd's appraisal of the relative significance of steel guitarists is valid and this study can be seen as an expansion of her chapter. The four key instrumentalists that she identifies are the most influential of the genre and their innovative stylings, examined in this study, are key to an understanding of the development of the performance culture of steel guitar.

This project takes the form of a historical narrative, framed as a form of genre study. Genre studies are relatively new to the musicological discourse. A basic definition of genre proposed by Adrian Holt in his book *Genre in Popular Music* is: 'a type of category that refers to a particular kind of music within a distinct cultural web of production, circulation and signification'.[34] Holt also offers different concepts of genre, the most predominant being 'historical genres' that are 'musical formations that have evolved over time' and can be considered in hindsight.[35] In contrast, he proposes the concept of theoretical or abstract genres, which can be further categorized as ensemble genres, which are determined by instrumentation, and social genres that are defined by function. Using Holt's framework, this dissertation can be seen alternatively as a historical genre study confined to one instrument, or

[32] Boyd, *The Jazz of the South West, an Oral History of Western Swing*.
[33] Boyd, *The Jazz of the South West, an Oral History of Western Swing*, 1.
[34] Fabian Holt, *Genre in Popular Music* (Chicago: University of Chicago Press, 2009), 2.
[35] Holt, *Genre in Popular Music*, 16.

an ensemble genre study of a single instrument, bounded by the historical genre of western swing.

An alternative and more succinct portrayal of this thesis is that of a study of the performance culture of the steel guitar in western swing. Performance culture is a term that I conceived for my previous study of the origins of the steel guitar, and is used throughout this thesis.[36] It describes activity surrounding an instrument, comprising style, technique and organology, as well as the culture surrounding the media of transmission, dissemination and reception of the instrument and its music. While the scope of the term is similar to that of ensemble genre, it is sympathetic to a discriminatory focus on one instrument. Furthermore, it provides a mechanism for the study of relationships of distinct parallel performance cultures, as is the case in this study, while accepting the inherently ill-defined borders of genres by permitting the inclusion of individual outliers.

This study examines the progression of performance of the steel guitar through the assembly of a sequential record of style and technique between the mid 1930s and the early 1950s. It does so through a combination of historical exploration, and the transcription and analysis of what are argued to be works of pivotal performers in the genre of western swing.

In the absence of published scores or formal pedagogy, this study relies on transcription and analysis of the primary sources of recordings for commercial records, radio transcriptions and motion pictures, as well as scraps of video evidence that survive within the motion pictures of the era. Some primary textual sources in the form of interviews have been consulted but recorded evidence is given precedence in the event of conflict between sources.

The scope of this study is vast, encompassing two decades of continual stylistic and technical development. The management of such an investigation within the confines of a thesis presented a quandary. The primary challenge has been the selection of examples from a huge body of recorded music, to represent a mainstream of stylistic development. A comprehensive assessment of the development of personal styles that would provide a comprehensive but cohesive narrative was preferred to a disjunct patchwork of observations. Therefore, investigation was limited to the most innovative and influential figures. The subjects needed to have exhibited a leading edge of style and technique, and to have exerted considerable influence on their peers. Four subjects were selected, Bob Dunn, Leon McAuliffe, Noel Boggs and Earl ‘Joaquin’ Murphey. Inevitably, some significant figures were overlooked. Players, such as the highly innovative Billy Briggs and the influential Herb Remington, were considered but rejected. I decided that the benefits of embracing a wider

[36] Cundell, 'Across the Pacific: The Transformation of the Steel Guitar from Hawaiian Folk Instrument to Popular Music Mainstay', 1.

compass of performers would be dissipated by reduced focus on the four foremost influencers.

Selection of recorded evidence was based on a systematic examination of the widest possible catalogue of recordings. The process was conducted in two phases. Appraisal of individual canons was based on available evidence. In the case of Dunn, a majority of his recordings were available and similarly, all of McAuliffe's pre-war and many of his post-war recordings were available. In contrast, only hundreds of recordings of Boggs and Murphey were available for consideration, from the thousands of studio recordings and radio transcriptions that they made. However, care was taken to sample recordings from across the breadth of their careers. Systematic application was then applied to the feature analysis employed to provide a platform for conclusions. The available catalogues were appraised for salient and characteristic features before specific instances were highlighted through transcription.

The maintenance of accuracy in transcription is an inherent burden of the process, exacerbated in this study by primitive recording methods and the location of the subject within ensembles of similar plucked string instruments. The occasional use of a computer application to lower tempos of the recordings was a useful aid but was of little assistance in differentiating notes of similar timbre.

Tablature provides evidence that assists assessment of performers' styles. Based on aural perception beyond basic pitch and rhythm, accurate assessment requires both identification and interpretation of miniscule increments of duration and inflection, and comparison of timbre of individual strings. Tablature was reviewed at tempo on the instruments of the researcher. The process was often one in which a solution had to be chosen from various alternatives on the available evidence. Following researchers may find alternative solutions more suitable in some cases.

Steel guitar tunings play a critical role in this study. They are a crucial but hidden determinant of style. A core element of instrument configuration, they are the first requirement in the process of creating tablature and are thus essential for any investigation of individual technique based primarily on aural sources. More broadly, once a tuning progresses from being an artifact of idiosyncratic or personal style to attaining wide spread use, it can be seen as a crucial platform of performance culture and may become a staging point for future development. Evolution and implementation of tunings provides a timeline of development and their identification provides tangible evidence of crosspollination of performance cultures. While tunings are often difficult to ascertain within an individual performance, a determination of their development and common usage provides this study

with a base from which to extrapolate stylistic connections and contributes to the validity of conclusions made herein.

This study comprises nine chapters that form a sequential account of steel guitar performance culture in western swing. Five chapters, each centered on key performers represent, in turn, the inception, development, refinement and decline of the instrument in a twenty year period that begins in 1935. Two of four ancillary chapters provide a preparatory summary of technique and style. A third chapter addresses a parallel Hawaiian performance culture and a fourth presents a case study of a controversial steel guitar composition.

Chapters 1 and 2 combine in an introduction to instrumental technique and style that provides a lens through which the following chapters can be interpreted. Chapter 1 defines core elements of technique and discusses their application to three melodic performance modes. An additional discussion of amplification considers its technical ramifications for steel guitarists. Chapter 2 approaches developments in instrument configuration and performance technique as responses to challenges exerted by an evolving repertoire. Discussion centers on the interrelationship of tunings and configuration, and the challenges presented by monophonic melody, concluding with a comparison of three contrasting stylistic approaches.

Inception is represented in Chapter 3 by an investigation of the style of Bob Dunn, the father of western swing steel guitar and the first electrically amplified country music performer. A review of literature shows an entrenched view of his style. New evidence is then presented that allows a fresh perspective on the origins his style, and analysis reveals a breadth of approach that had not been previously acknowledged. The mature style that Dunn demonstrated when he began his recording career is shown to have been based on earlier acoustic stylings, and analysis indicates that it underwent little subsequent development. This in itself explains why Dunn was not more influential beyond the Southwest.

Placed after consideration of Dunn's incipient but archaic stylings, Chapter 4 discusses the approach of Hawaiian steel guitarists in the 1930s and the modern model of performance that they provided to successive western swing players. Following a contextual discussion of Hawaiian steel guitar in the early 20th century and its influence on country musicians, an analysis is made of the modern style that arose as Hawaiian musicians enhanced their earlier acoustic style with amplification and new tunings. The amplified stylings and tuning development reveal a pattern of Hawaiian innovation that provided a blueprint for those western swing musicians who could decode it. The findings are referenced throughout the following chapters.

Development is embodied by chapters on two Southwestern innovators, Leon McAuliffe and Noel Boggs, who transformed Dunn's model into a style that would endure throughout western swing. Chapter 5 centers on the early career of McAuliffe, whose tenure with legendary bandleader, Bob Wills, elevated him to national prominence. Recorded evidence, drawn from a seven year period, allows a detailed investigation of McAuliffe's progress. A complex process of innovation and assimilation is exposed as McAuliffe tailored a style to suit the divergent and evolving repertoire with which Wills was shaping western swing. Chapter 6 is an addendum to Chapter 5, presenting a study of cross-cultural borrowing in the case of McAuliffe's famous composition, 'Steel Guitar Rag'. Addressing the controversy of the tune's origins, the investigation confirms similarities and exposes significant differences between McAuliffe's tune and Sylvester Weaver's 1923 composition, 'Guitar Rag'. Chapter 7 highlights a transformation in the style of Noel Boggs, whereby his primarily monophonic approach in pre-war recordings, strongly influenced by Dunn, was replaced by an innovative chordal method that dominated his post war style. Based on complex tunings, Boggs' chordal style was widely imitated but its shortcomings, imposed by the configuration, heralded the impending demise of the instrument.

Refinement is represented in Chapter 8 by an appraisal of the virtuosic style of Joaquin Murphey. A prodigy, Murphey emerged from the Hawaiian steel guitar scene in Los Angeles with remarkable technique and displaying fluent improvisational skills. With inherent jazz sensibility and deep harmonic insight, Murphey quickly reached the outer limits of performance of which the instrument was capable.

The decline of the lap steel guitar is approached in two ways in the concluding ninth chapter. Firstly, the rise of the pedal steel guitar, which displaced the lap steel, is shown to have been initiated by a serendipitous confluence of instrument design and the stylistic conceptualisation of Bud Isaacs. A second strand contrasts the styles of Billy Williamson and Vance Terry to reveal a missed opportunity to extend the instrument's longevity. Williamson was an almost invisible steel guitarist who accompanied Bill Haley in his period of rock and roll success in the 1950s, while Terry was a young virtuoso who briefly participated in rousing rock and roll styled performances with Bob Wills' younger brother. It is posited that, had Terry received the broad exposure experienced by Williamson, the lap steel may well have been allotted a role in rock and roll.

In revealing relationships between the styles of key innovators of western swing steel guitar, this study portrays a narrative of the evolution and decline of a distinct performance culture. In filling a role established by Bob Dunn, steel guitarists were required to refine their approach to meet evolving demands. The study demonstrates that their innovative efforts

were an artistic struggle to rise above the constraints of their instrument. The evolution of instrument design is shown to be a crucial enabler of the development of style, demonstrated most vividly in the increasing harmonic complexity of the tunings employed. The study also finds that, while dominant musical influences of country music, jazz and blues were drawn together by steel guitarists, Hawaiian stylings were threads that bound their performance culture and provided bedrock on which to build personal styles. Furthermore, as Hawaiian influences were consciously or subconsciously expressed, steel guitarists became responsible for infusing western swing with a widely unrecognized Hawaiian influence that would endure within country music more broadly.

Chapter 1: Technique and style

Hawaiian musicians of the 1920s had shown the steel guitar to be an adaptable instrument, capable of an extremely wide range of expression. From the mid 1930s to the 1950s, performers in western swing would demonstrate how this expressive spectrum could be utilised and reshaped in the context of dance music. After a brief discussion of musical context, this chapter will examine core Hawaiian steel guitar performance techniques and how they were combined to produce the idiomatic sounds of the instrument. An understanding of these basic techniques is crucial in the appreciation of an underlying theme of this study, the struggle of players to overcome the technical constraints imposed by the configuration of their instrument in the face of increasing musical demands. Discussion of core techniques will be followed by a consideration of the impact of electric amplification on steel guitarists, together with an examination of techniques to which the new technology gave rise and their application in western swing.

1.1 Swing: 'Sweet and Hot'

To understand the success of the steel guitar in western swing, it is instructive to consider the dance music culture into which it was welcomed. While western swing is often characterised as an analogue of hot jazz of the 1930s and 1940s, in reality, it was varied dance music, in the same manner as the mainstream popular music culture from which its name was derived, 'swing'.

Duke Ellington's composition of 1931, 'It Don't Mean a Thing If It Ain't Got That Swing', was described by Gunther Schuller as 'a prophetic piece and a prophetic title'. It heralded an era of two decades in which 'swing' remained the epithet of popular dance music.[37] The lyric, 'It makes no difference if it's sweet or hot' refers to stylistic extremes of 'sweet' and 'hot' that evolved in the jazz of the 1920s and these terms endured as common designations in the 1930s and 1940s. On one hand, hot bands were known for energetic music, dependent on strong rhythm and laced with frenetic improvisation. In contrast, the music of sweet bands was generally more sedate and reflective, relying on rich arrangements and orchestration rather than virtuosic soloists or driving rhythm. However, an understanding of how these two extremes melded in the complex musical culture of swing has been clouded by jazz historians. A distain for the sweet bands is evident in dismissive epithets such as 'novelty' or 'hotel' by Schueller[38] or descriptions such as 'sugary music with no jazz content'

[37] Gunther Schuller, *The Swing Era* (New York: Oxford University Press, 1989), 50.
[38] Schuller, *The Swing Era*, 763.

by Giddins and De Veaux.[39] With such commentary dominating the accounts of music of the era, the sweet bands have attracted little musicological attention despite their immense popularity that was evident in record sales and live performance.[40]

However, in a social genre of dance music, 'hot' and 'sweet' should be seen less as polarities and more as points in a continuum of style on which swing bands and individual musicians could draw.[41] While bands may have been identified with either end of the spectrum, they could also draw readily on tunes from the opposing end. Success could be achieved without committing either way as was demonstrated by Glen Miller, who reached towards sweet stylings with tunes such as 'String of Pearls' or towards the hot end of the spectrum with tunes such as 'In The Mood'. Similarly, individual musicians had no need to confine their interests to one extreme or the other. For example, trumpet luminary, Louis Armstrong, expressed a deep appreciation of the music of Guy Lombardo's sweet band.[42] While in sweet bands, the versatility of musicians could be rewarded with 'a shot at a hot chorus now and then'.[43]

The characterization of western swing as predominantly hot music is understandable. Many jazz influenced tunes are included in band repertoires across the era and tempos are often brisk. A consistent emphasis by historians on the elements of dance rhythms and improvisation reinforces this perception.[44] However, in the genre, the same polarities of hot and sweet music coexisted. Both at its inception in the South West and as it evolved, western swing repertoire included a wide range of material in which moderately paced dance tunes, waltzes and ballads coexisted with hot jazz tunes. For lead instrumentalists, an ability to shine at both ends of the spectrum was a commercial necessity, and this proved advantageous for steel players.

The versatility of the steel guitar had been previously been demonstrated by the instrument's Hawaiian initiators. Playing acoustic instruments, Hawaiian musicians of the 1920s had demonstrated that the steel guitar could be employed in disparate styles that ranged from mellifluous, languid, vocally-styled melodies to energized jazz solos. For over thirty years, professional players had pioneered and developed techniques that had elevated the steel guitar to prominence in popular music. Similarly, in western swing, steel players were called

[39] Garry Giddins and Scott DeVeaux, *Jazz* (New York: W.W. Norton & Co., 2009), 265.
[40] Elijah Wald, *How the Beatles Destroyed Rock and Roll: An Alternative History of American Popular Music.* (New York: Oxford University Press, 2009), 108.
[41] Holt, *Genre in Popular Music*, 16.
[42] Brian Harker, *Louis Armstrong's Hot Five and Hot Seven Recordings* (New York: Oxford University Press, 2011), 12, 115.
[43] Richard M. Sudhalter, *Lost Chords: White Musicians and Their Contribution to Jazz 1915 -1945* (New York: Oxford University Press, 1999), 197.
[44] Lange, *Smile When You Call Me a Hillbilly: Country Music's Struggle for Respectability 1939-1954*, 90, Malone and Neal, *Country Music, USA*, 158, Sheets, 'A History of Western Swing Part 1', 22.

on to provide melodic introductions and accompaniments, counter melodies and solos in repertoire that traversed the polarities of hot and sweet. They were able to draw on preexistent and coexistent Hawaiian styles and techniques, as will be seen in this study.

1.2 Instrument Configuration

In its initial form, the steel guitar was a reconfiguration of the Spanish guitar, played in an innovative manner. There were four essential elements of the reconfiguration. These elements continued to provide a foundation for performance on each of the related variants of the steel guitar; acoustic steel guitar, dobro or acoustic resonator guitar, electric steel guitar and pedal steel guitar. Firstly, the strings of the instrument are raised so that they do not touch the neck when pressure when is applied to them. Secondly, the strings are tuned to constitute a favourable chord. Thirdly, a steel bar is held in the left hand is employed to stop the strings. Finally, the instrument is placed laterally in front of the player, in contrast to the horizontal positioning of the Spanish guitar. Initially the instrument was positioned across the lap but as instruments became more bulky with the addition of extra necks, legs were added to convert the instrument to a console, behind which the player either stood or was seated. Additionally, in the late 20th century, players using acoustic resonator guitars in bluegrass bands used straps to suspend the instrument from their shoulders while maintaining the instrument's lateral position.

Joseph Kekuku, who may have invented the configuration, introduced a further innovation in the form of finger picks for the first and second finger and thumb, as shown in Fig. 1.1 below. While these are not essential to sound the instrument, they are crucial to achieve sufficient volume for an acoustic player to participate in an ensemble. In comparison to bare fingers, finger picks are cumbersome and require practice to achieve smooth and consistent picking but they offer the player a broader range of timbre and dynamics. Furthermore, they allow sharper articulation in rapid passages. While they are a necessity for acoustic players, some electric players elect not to use them.

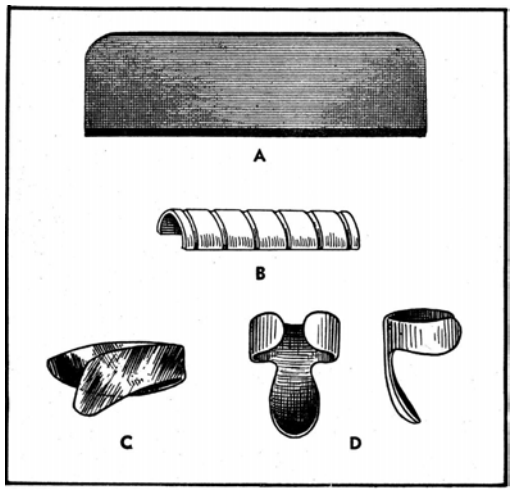
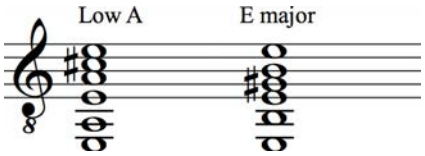


Fig. 1.1 A: steel, B: nut raiser, C: thumb pick, D: finger picks[1]

1.3 Core Techniques

At its most basic, the steel guitar is an instrument that is easily sounded and which instantly rewards a beginner's first steps with pleasing sonorities. With a basic triadic tuning, as shown in Ex. 1.1 below, the player can brush the strings with finger or thumb to sound an open chord. Then, by placing the bar on the strings parallel to the nut, the same chord can be sounded at different pitches. In this manner, using the fret markers to position the bar, the primary triads of any major key can be played with ease. Thus, a singer can quickly achieve musicianship sufficient to provide accompaniment for simple songs. However, beyond these initial steps, chordal playing is challenging. With the bar in perpendicular position, complete minor triads are impossible with the major triadic tunings. Other triads and seventh chords are, similarly, difficult to achieve.



Ex. 1.1 Common steel guitar tunings of the 1920s

Simple single note melodies are relatively easy to picking by repositioning the bar for each note, particularly on the top string. However, muting notes and suppressing extraneous noise from the bar and picks is more difficult, ensuring that articulation is a challenge from the outset.

Free movement of the steel bar on raised steel strings also provides the instrument with the facility of a distinctive glissando of one or more notes. This effect is an attractive idiosyncrasy of the instrument that permits imitation of vocal inflection, a distinct characteristic of Hawaiian steel guitar stylings. However, the precision required to maintain good intonation is a hurdle for beginners. Glissandi can be used to adjust pitch after a note has been initially sounded although the constant application of this device is a signifier of a novice.

1.4 Foundation of technique: Combining three core elements

To achieve fluent performance, three core elements of technique must be coordinated with great precision. The elements are picking, bar manipulation and string muting or 'blocking'. They are executed simultaneously with the coordination of both hands. The strings are picked with the right hand, pitches are determined by the left hand's placement of the bar and strings are muted with either hand to achieve required note durations and to remove extraneous string vibrations. Methods of bar manipulation and picking are overt. In

contrast, blocking methods are difficult for an observer to detect. For a developing player, blocking is a suite of techniques consciously employed for articulation and to reduce extraneous noise. But with increased proficiency, the process becomes ingrained and subliminal.

1.4.1 Picking technique in three performance modes

From inception, the steel guitar was employed primarily as a melodic voice in Hawaiian ensembles. Early recordings show the instrument providing primary and counter melodies in instrumental pieces or in support of vocalists. While it is possible to sound of all strings together, this approach is rarely used. Instead, three fingers are employed to pick the strings in a variety of ways.[45] Recordings show that early Hawaiian steel players developed the three distinct modes of melodic approach that have endured across time and genre; single note melody, dyadic melody and chordal melody.[46] The examination of picking technique that follows is conducted in the context of these three separate modes.

Fig. 1.2 Typical right hand position[47]

1.4.1.1 Single note melody

With the availability of two fingers and a thumb, picking monophonic melodies would seem a simple task. At slow tempos, the task is not demanding and a single digit can be used. However, as tempos increase, the need to use a pair of digits arises. Players routinely choose thumb and an opposing finger to execute lines in this way. It should be noted that a requirement to choose notes from non-adjacent strings increases the level of precision required dramatically.

[45] Most steel guitarists generally employ picks on two fingers and the thumb as shown in Image 2. A small minority may use a fourth finger pick and fewer still abandon finger picks altogether in favour of a plectrum.
[46] This concept is discussed in the context of performances of the second generation of Hawaiian players in Cundell's master's dissertation. Cundell, 'Across the Pacific: The Transformation of the Steel Guitar from Hawaiian Folk Instrument to Popular Music Mainstay', 86-95.
[47] Alvino Rey, *Modern Guitar Method, Hawaiian Style* (New York: Robbins Music Corporation, 1937), 10.

The use of three digits to pick melodic lines is always an option but, for various techniques, it becomes a necessity. The lightning triplet single-string rolls that were an impressive feature of Sol Ho'opi'i's playing in the 1920s required this technique executed with extreme precision. The technique is also de rigueur in contemporary dobro style and is applied to separate strings for the execution of fast arpeggios, referred to by bluegrass players as rolls.

While expert players may favour the use of a thumb and finger for single note melodies, they may also alternate between single, double and three digit techniques. Video of Joaquin Murphey, the most adept of western swing players, shows an effortless amalgamation of all three approaches. He can be seen to begin a line by favouring his thumb, continue with alternate picking and complete the line with three fingered arpeggios.[48]

1.4.1.2 Dyadic Melody

Dyadic melody is a staple of steel guitar style that permeates Hawaiian music from the earliest recordings of the instrument to the present day. The mode of performance is a characteristic of style that has endured as the instrument was adopted in popular music. Through the agency of pedal steel guitar players, sustained dyadic melody and countermelody became a totem of country music of the 1960s and 1970s.

Using opposing thumb and finger combined with bar slants, dyadic melodies are easily performed on the steel guitar. In triadic tunings, intervals of major and minor thirds and sixes can be formed with a straight or slanted bar. Smooth voice leading between adjacent diatonic intervals can be effectively achieved by progressing the bar horizontally or laterally without removing it from the strings, varying the size of intervals by adjusting the angle of the bar on the neck. The transcription, in Ex. 1.2 below, shows a typical dyadic melody performed by Hawaiian master, David Keli'i.[49] The bar movement in the opening phrase is of particular note. Beginning with a forward slant, Keli'i gradually rotates the heel of the bar from a forward slant to a reversed position, an oblique motion that diminishes the size of the interval from major sixth to minor sixth and then to perfect fifth. The harmonisation of this phrase utilises tones of the prevailing chords with minimal bar motion. The remaining melody is harmonised in similar fashion, exchanging major and minor thirds for sixths in bars six & seven. Keli'i applies legato articulation to the wistful harmonised melody in a powerful and evocative performance. Technical simplicity makes this approach highly accessible to all levels of performers.

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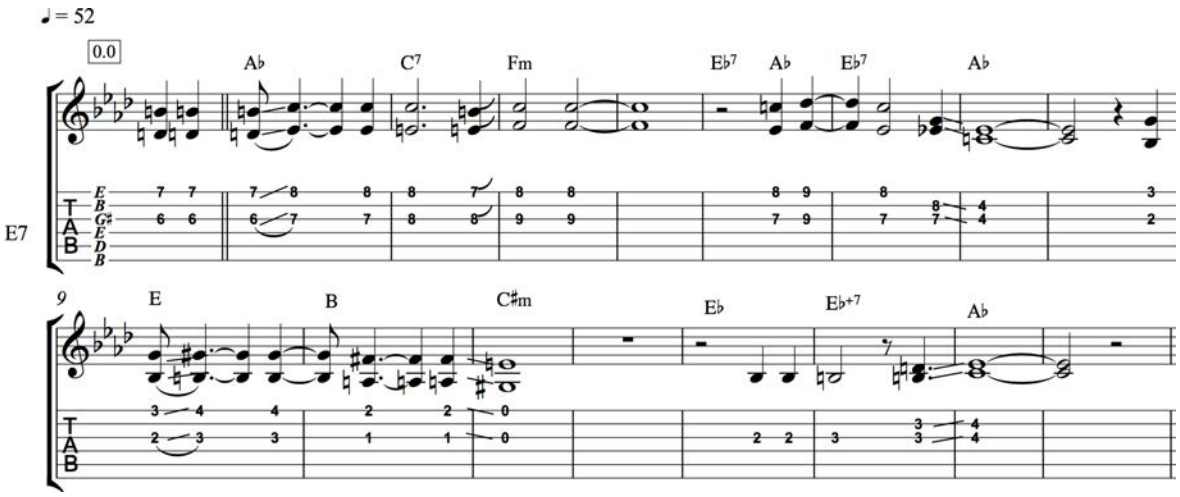
[48] Deke Dickerson, 'Joaquin Murphey Plays His Bigsby Steel Guitar 4' 2010. https://www.youtube.com/watch?v=RAx9Yk6bB7I (accessed March 23 1018).
[49] Al Kealoha Perry and His Singing Surfriders, 'Pua Rose', (MacGregor Transcriptions MAC-119-2), c1938.



Ex. 1.2 Melody of 'Pua Rose', David Keli'i (c1938, radio transcription)

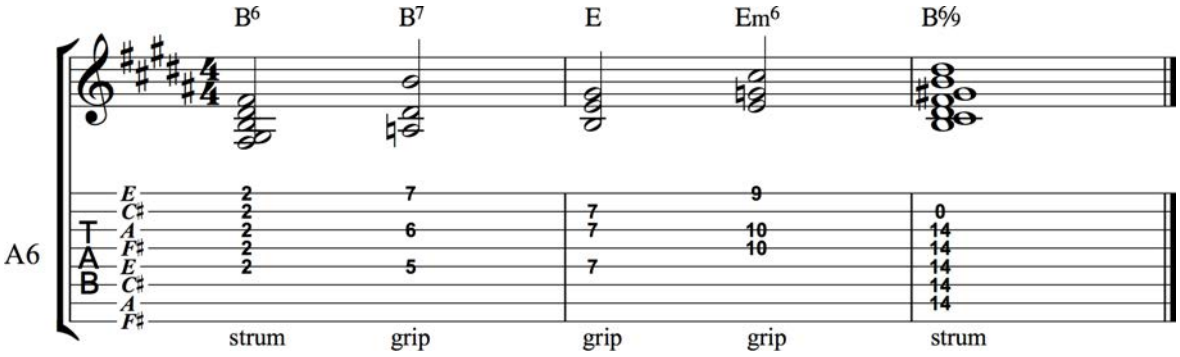
In the example above, all bar slants connect notes on adjacent frets. However, some of the slants are more difficult to execute than others. The reason is that the angle of the bar required for notes on adjacent strings is more acute than that required for strings that are more distant. The more acute the angle, the more difficulty the player has in achieving accurate intonation. Bar slants that connect notes that are two frets apart are possible and commonly employed. However, such slants cannot be effectively used on adjacent strings.

1.4.1.3 Chord Melody

Chord melody is the third distinct mode of melodic expression employed in steel guitar performance and early examples can be found in the jazz stylings of Sol Ho'opi'i in the 1920s.[50] Two discrete right-hand techniques can be employed for chordal playing; strums and 'grips'. Strumming entails the brushing of a pick across adjacent strings. Chords can be sounded by strumming from low strings to high with the thumb or in the opposite direction with a finger. String sets on the outside of the neck, for example, strings 1 to 4 of a six stringed instrument, require less precision to strum than inside string sets. Use of three note chords is more common and achieved by simultaneously plucking strings with fingers and thumb. Plucking allows the selection of non-adjacent strings. This technique, known as a 'grip', is used to extract the required notes from those barred by the steel, avoiding those not required for the chord. Rhythmically, the grip provides an avenue to more sharply defined articulation than does strumming because of the ease of blocking, which will be discussed below.

[50] Cundell, 'Across the Pacific: The Transformation of the Steel Guitar from Hawaiian Folk Instrument to Popular Music Mainstay', 93-95.

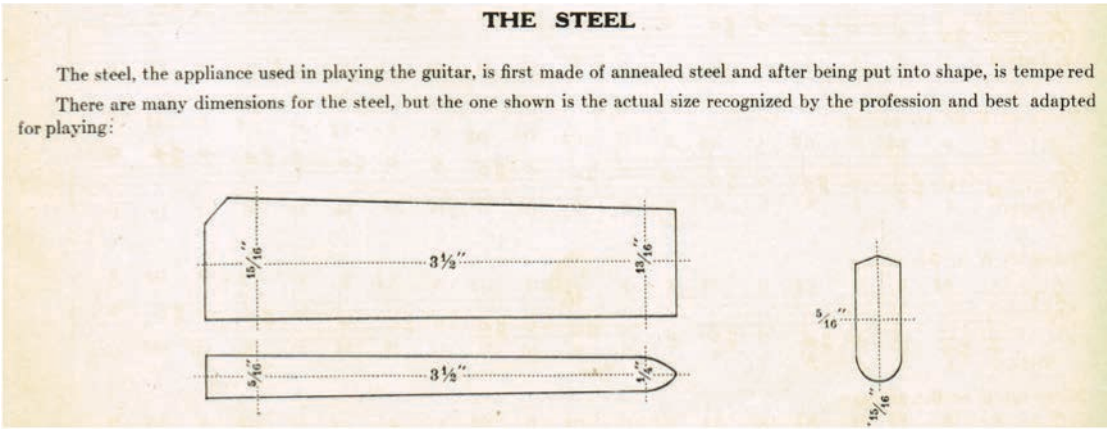
Crucially, the harmonic palette of the steel guitar is determined by the tuning, the angle of the bar and available of auxiliary open strings. Thus grips, used in combination with bar slants and open strings, are very important in widening a harmonic range that is restricted by the tuning, as is demonstrated in Ex. 1.3 below.



Ex. 1.3 Chord strums and grips

1.4.2 Steel Manipulation

The use of an object with a straight edge to stop suspended strings is a simple technique that has been shown to predate the late 19th century invention of the Hawaiian steel guitar.[51] The device that Joseph Kekuku developed was a flat metallic bar, or steel, with a radiused bottom edge. When laid horizontally across the strings, it could be moved laterally from between designated positions on the neck or slid, creating a glissando. As such, this seems little different from the use of a knife blade, a method that predated Kekuku's development. However, an important distinction exists in the different ways in which these devices are held. When gripping a knife handle, the blade that touches the strings extends beyond the hand and fingers. In contrast, a flat bar nestles in the palm of the hand, surrounded by fingers and thumb, providing acute control over manual manipulation and muting or blocking. A typical early design for a steel is shown below in Fig. 1.3.


THE STEEL

The steel, the appliance used in playing the guitar, is first made of annealed steel and after being put into shape, is tempered

There are many dimensions for the steel, but the one shown is the actual size recognized by the profession and best adapted for playing:

[51] George S. Kanahele, *Hawaiian Music and Musicians : An Illustrated History* (Honolulu: University Press of Hawaii, 1979), 367, Mantle Hood, 'Musical Ornamentation as History: The Hawaiian Steel Guitar', *Yearbook for Traditional Music* 15/ (1983), 144.

Fig. 1.3 An early steel design[52]

Early method books agree on the manner of gripping the steel, which is shown in Fig. 1.4 below. The illustration shows the steel gripped with finger and thumb either side and with the first finger laid across the top.

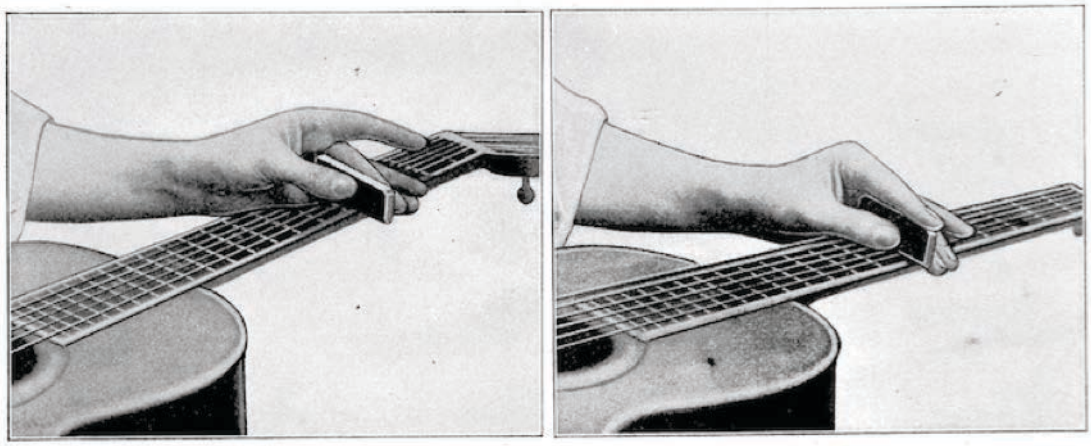


Fig. 1.4 Steel grip[53]

Held firmly, the steel can be tilted downwards with its tail retracted into the player's palm, exposing the tip that can be used to stop a single string, as shown in Fig 1.5 below. This technique reduces extraneous noise from the bar on unused strings and allows the player more agile movement of the left hand.

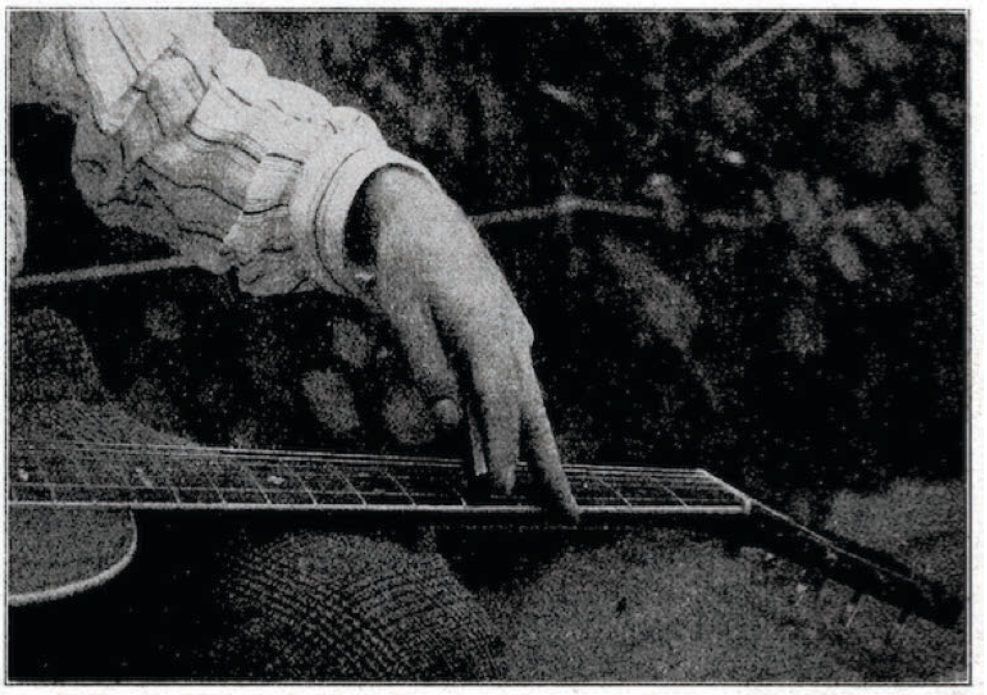


Fig. 1.5 Tilting the steel[54]

[52] Leon Coleman, *The Steel Guitar and How to Play It* (New York: Carl Fisher, 1917), 15.
[53] Myrtle Stumpf, *Original Hawaiian Method for Steel Guitar* (Los Angeles: Southern California Music Co., 1915), 10.

Slanting the steel to change the intervallic relationship between stopped strings is a foundation technique. A forward slant, as shown below in Fig. 1.6, is affected by angling the bar primarily with the fingers and with minimal wrist movement.

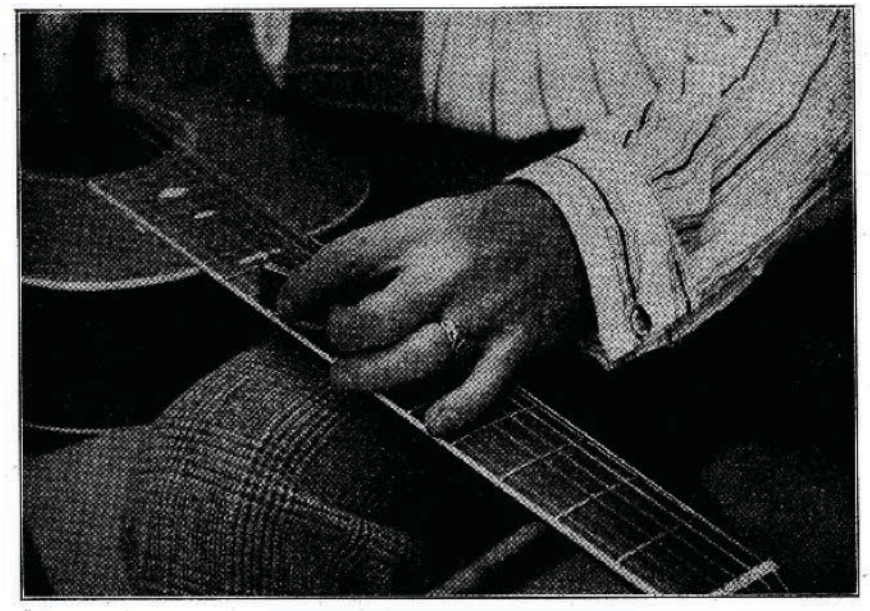


Fig. 1.6 Forward slant[55]

The reverse slant is a more difficult maneuver that relies primarily on manipulation of the steel with the fingers. Achieving accurate intonation is difficult and, furthermore, the adjustment of grip required is extremely awkward with a flat steel. Its appearance in early steel guitar literature is very rare. It became widely used only after the flat bar design was superseded by more easily manipulated designs.

By the early 1930s, various improved steel designs became available. While bar type was a matter of preference, elements of each design offered specific advantages. A heavier bar benefited note sustain, a tubular bar assisted vibrato control and a variety of grips were catered for with various shapes and surface etching. Fig. 1.7 below shows the range of bars on offer from the Fred Gretch Manufacturing Company in 1936.[56] The Stevens bar, seen at bottom of Fig. 1.7, featured an indentation running along the top edge in which the first finger was placed. This ensured a strong grip with which to move the bar laterally and to perform hammer-ons. This bar is favoured in bluegrass dobro style where hammer-ons and pull-offs are de rigueur.

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[54] Coleman, *The Steel Guitar and How to Play It*, 17.
[55] Coleman, *The Steel Guitar and How to Play It*, 18.
[56] 'Gretsch Musical Merchandise Catalog 36', (The Fred Gretsch Mtg. Co), 1936.

Fig. 1.7 Steel guitar accessories, 1936

Many professional steel players in the 1930s preferred bullet, or round-nosed bars. Four attributes of the design proved essential to the evolution of technique. These were, substantial mass, a round nose, a tubular body and a flat or slightly indented end. This design has remained prevalent and largely unchanged since the 1930s, with the only substantial variation being an increase in size in the 1950s to accommodate the wider necks of pedal steel guitars. Alternative materials to steel have been used, such as glass or ceramics, and the recent

innovation of polymer-coated bars has been well received. Polymer bars have dense metal cores and a coating that enhances glissandi while reducing excessive string noise.[57]

The bullet design provided many advantages over the flat bar of the 1910s and 1920s and was an important element in the continued development of style that occurred in the 1930s and 1940s. It contributed to both the sweet and hot extremes of steel guitar style. To the advantage of sweet stylings, the extra mass enhanced sustain, while vibrato and smooth glissandi afforded by the wider radius added depth to expression and vocal-like inflections. Melodic agility, a key requirement of hot playing, was improved by the domed nose of the steel that could be moved more easily across strings while in an angled position.

A bullet steel also served to increase harmonic vocabularies of the instrument in three ways. Firstly, the new design was less cumbersome and could be more readily manipulated than flat steels. Reverse slants were more easily and accurately accomplished by repositioning the steel with finger and thumb, as shown in Fig. 1.8 below. This facility expanded the number of chord voicings available in any tuning. Secondly, the radius of a tubular bar of 12mm or more, typical of the new offerings, presented a wider surface to the string than did the radius of a flat bar of 8mm. A wider bar served to increase harmonic scope of the instrument through a technique sometimes called ‘fudging’. The technique, which can be observed in recordings of the 1920s, also offered the player more chord voicing options.[58] The technique requires the nose of the steel to cover notes on two adjacent strings at the same fret, while stopping another adjacent string at an adjacent fret, as is demonstrated in Example 1.4 below. While the intonation of such voicings is always imperfect, they can be made more acceptable by the context in which they are presented or through a judicious application of vibrato. A third technique, known as a 'split slant’, further enhanced the harmonic properties of the instrument. The technique required the nose or the heel of the steel to cover two adjacent strings at one fret while the other end of the bar fretted another non-adjacent string at an adjacent fret. This is also demonstrated in Example 1.4 below. The angle of the steel is less acute than required for fudges, resulting in more accurate intonation. Fudging and split slants became a crucial resource for steel guitarists in the 1930s and 1940s as the harmonic demands placed on them increased.

[57] Addison Ching, 'Tone Bars: Stainless or Polymer?'. https://www.steeltrappings.com/201805/st20180502.shtml (accessed September 12 2018).
[58] Sol Ho’op’i employed this method as early as 1926 in his recording of ‘Stack O’lee Blues’. Cundell, 'Across the Pacific: The Transformation of the Steel Guitar from Hawaiian Folk Instrument to Popular Music Mainstay', 95.

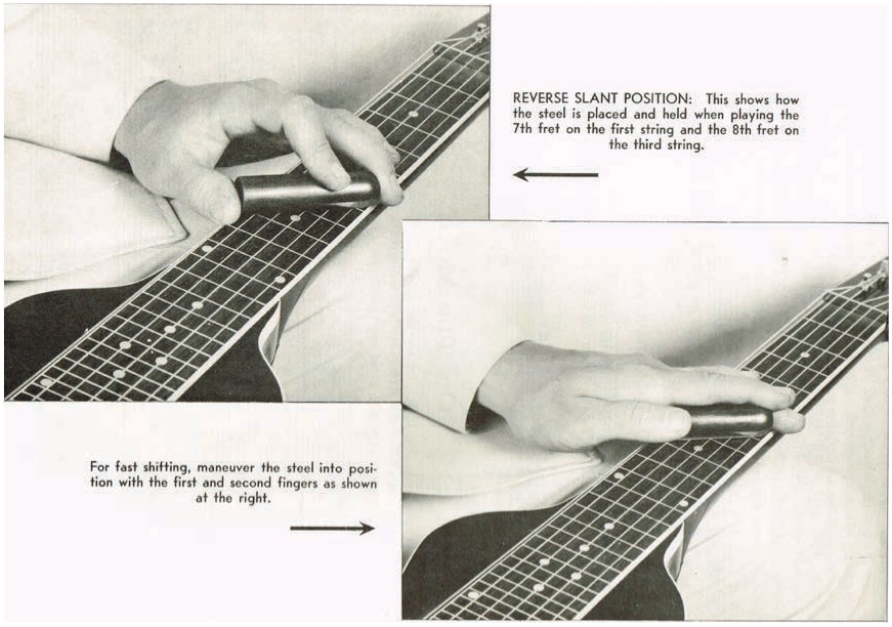
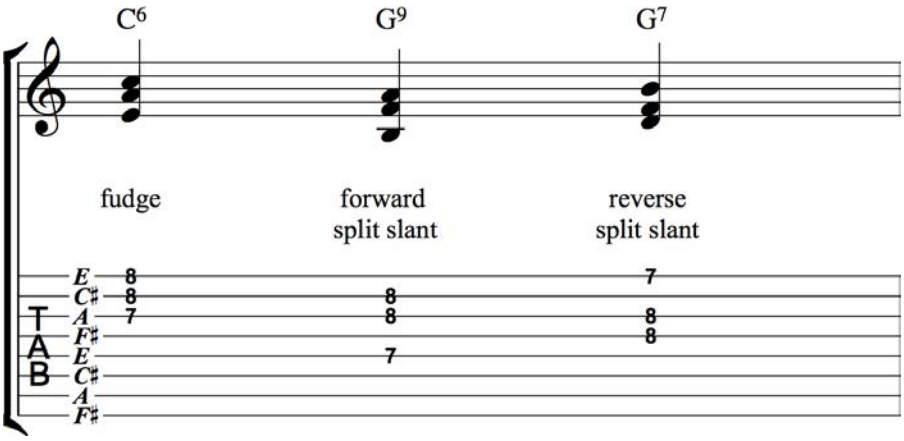


Fig. 1.8 Reverse slants with bullet nosed bar[59]



Ex. 1.4 Extended chordal voicings with angled bar

1.4.3 Blocking

Blocking or string muting is the third core technique of steel guitar performance. Unlike the first two, its application is subtle and the mechanics of the technique are not clearly apparent. Both complex and imperceptible, blocking provides the greatest challenge for the developing player.

Blocking has two essential functions. Firstly, it is a technique to eliminate extraneous noise created by the action of the steel on the strings, which is a problem that every beginner must address. Secondly, it is the art of silencing of vibrating strings in the service of articulation and, as such, is an essential element of style.

[59] Rey, *Modern Guitar Method, Hawaiian Style*, 44.

The principal technique to eliminate extraneous noise is to place the trailing fingers of the left hand across the strings to absorb any vibration. The hand position, with third and fourth fingers extended, serves as a commencement point for performance and can be seen most early instructional manuals. An example can be seen in Fig. 1.9 below showing Hawaiian steel pioneer Keoki Awai.

Fig. 1.9 Blocking with trailing fingers[60]

Blocking in the service of articulation is much more complicated, employing up to four distinctive approaches, deployed either individually or in combination. Two of these distinct techniques are associated with each hand.

The two techniques performed by the picking hand are palm blocking and pick blocking. Palm blocking requires the lower edge of the right hand to be lowered onto the strings to cease vibrations. Pick blocking ensues when, having picked a string, the picking finger returns to that string to dampen it. This method can be used to articulate phrases played both laterally on a single string, and horizontally across several strings. Pick blocking can be applied rapidly and is essential in achieving the extremes of legato and staccato expression without overlapping tones. While less crucial to lateral playing, where note durations are

[60] Keoki E. Awai, *The Superior Collection of Steel Guitar Solos Vol. 1* (San Francisco: Sherman Clay and Co., 1917), 5.

inevitably terminated by subsequent notes on the same string, pick blocking is an essential element of controlled articulation in cross string picking that is difficult to cultivate.

The two blocking techniques executed with the left hand are, in turn, enacted in front and behind the steel. Firstly, the thumb can be used to dampen or partially dampen notes in front of the steel. However, the second approach of removing the steel from vibrating strings and allowing the trailing fingers to absorb the vibrations is much more common. This second technique can be achieved in a number of ways. Firstly, the steel can be lifted from the strings completely by the thumb and third finger, while keeping the trailing fingers on the strings to immediately mute vibrations. Early publications refer to this method as a means of achieving staccato.[61] In an alternative approach, the steel maintains contact with the strings but is moved horizontally across the neck, allowing the muting of strings no longer stopped, by the trailing fingers. This can be achieved either with the steel positioned flat on the strings or with only the tip of the steel in contact with individual strings. While pedal steel players, with heavy bars, favour the first approach, an angled bar provides more agility and is favoured by lap steel players who employ smaller and lighter steels.

Blocking techniques can be implemented in combination in a complex coordination of motor skills. It is possible to rehearse and drill any of the four techniques in isolation but, in practice, coordinating and combining techniques becomes a subliminal process. Eventually, the player's concentration rests on the desired phrasing rather than the micro adjustments of hand position required to achieve it. Describing blocking on a specific piece, renowned contemporary lap steel player, Mike Neer, noted that his technique is not a conscious process.[62] Given the many methods and combinations, a player's approach to blocking provides a significant but almost invisible contribution to personal style.

The three core elements of technique, picking, bar manipulation and blocking, in combination are the primary determinants of steel guitar style. Each element provides challenges to the player and the solutions can become distinctive elements of personal style that become apparent in consistent approaches to phrasing. Initial issues of accuracy and coordination give way to dexterity, flexibility and velocity as the player's skill increases.

1.5 Extended Acoustic Techniques

Beyond the three core elements, supplementary techniques are routinely employed in steel guitar performance. They can be viewed in two broad categories; those developed by

[61] Stumpf, *Original Hawaiian Method for Steel Guitar*, 20., Pasco Roberts, *Master Lessons for Hawaiian Guitar*, vol. 2, 2 vols. (Chicago: Foster Music, 1937), 23.
[62] Mike. Neer, 'Straight, No Chaser' 2017. http://www.lapsteelin.com/category/fresh-baked-thoughts/ (accessed May 13 2018).

acoustic performers prior to the introduction of electric amplification and those developed to exploit new properties that the technology bestowed.

Vibrato is an embellishment that was ubiquitous in Hawaiian steel guitar stylings from inception. Mantle Hood observes that the technique is an intrinsic quality of Hawaiian playing rather than an adornment.[63] The speed and depth of vibrato can be varied to suit specific contexts but can also contribute significantly to personal style. References to vibrato, also described as oscillation or tremolo, are ubiquitous in pedagogical publications. Early manuals prescribe a quivering or vibration of the fingers. Writing after the introduction of the round bar, Alvino Rey insists that the movement should originate in the forearm.[64] While vibrato cannot be maintained in rapid passages of hot improvisation, where it appeared in slower passages, it remained an unmistakable Hawaiian marker in western swing.

Harmonics are another pervasive element of steel guitar technique in evidence on the earliest Hawaiian recordings. As with vibrato, Mantle Hood posits that similarities between harmonics and falsetto singing support his theory that Hawaiian steel guitar draws on vocal styling.[65] Also known as ‘chimes, the technique is as ubiquitous in early method books as vibrato. While both natural and artificial harmonics are commonly used, early publications only made reference to natural harmonics. Instruction for the production of second, third, fourth and even fifth natural harmonics are provided in manuals as early as 1915.[66]

Three methods of producing artificial harmonics are commonly used and employ, alternatively, a finger, knuckle or the palm of the picking hand in the process. These parts of the hand are used to touch the strings at a harmonic node, the position of which is determined by the point at which the steel stops the strings. A pick-less finger or knuckle can be applied to a single string only, whereas, the bottom edge of the palm can be used to the same effect but across multiple strings to sound a chord in harmonics. An early instruction for playing finger harmonics in this method is described in De Lano’s 1927 text.[67] Notably, artificial harmonics can be easily combined with a glissando to achieve an effect unique to the steel guitar. This effect permeates the performances of Hawaiian and western swing players alike.

Hammering-on is a bar technique employed in most steel guitar styles. It can form an integral part of melodic phrasing or can be used, in its own right, to create a distinctive tremolo effect. In melodic phrases, it can replace a pick stroke, with no audible diminution of volume. The frequency with which it is employed may vary depending on the demands of the

[63] Hood, 'Musical Ornamentation as History: The Hawaiian Steel Guitar', 144.
[64] Rey, *Modern Guitar Method, Hawaiian Style*, 19.
[65] Hood, 'Musical Ornamentation as History: The Hawaiian Steel Guitar', 145.
[66] Stumpf, *Original Hawaiian Method for Steel Guitar*, 22.
[67] C. S. De Lano, *The Hawaiian Steel Guitar: Complete Instruction for Its Artistic Study* (Los Angeles: C. S. De Lano, 1927), 15.

genre in which the instrument is employed. A prime example exists in bluegrass where hammer-ons are extensively used to generate rapid scalar lines on the dobro. (See Ex 2.12) In this case, hammer-ons increase velocity by reducing the need for time consuming picking strokes. While the technique can generate extremely fast lines, the economy of the maneuver comes at a price of control over articulation. By using open strings in melodic lines, the player surrenders control over various aspects of articulation. Inflection of a note sounded on an open string is impossible. Neither anticipatory motion towards nor consequential motion away from the pitch with the steel is possible. Nor is any form of vibrato available. Thus, when open strings are included, the ability of the performer to expressively shape a phrase is significantly reduced. At fast tempos, this effect may be less significant, but even then, a flatness of expression is discernable and imparts a distinct characteristic to style.

1.6 Amplification and technique

The advent of electric amplification in the early 1930s proved to be a turning point for the steel guitar. Greatly increased volume expanded the instrument's horizons. The lead role that it previously enjoyed in small acoustic ensembles could be extended to include larger, louder bands where it could now compete with frontline wind instruments.

While technique developed on acoustic instruments remained a bedrock on which the early electric steel guitarists relied, some variation of approach was required. Amplification holds both advantages and disadvantages. On the negative side, extra volume was accompanied by a requirement for more precise technique. Electric instruments are less forgiving that acoustic ones. The reason for this, as players discovered, was that extraneous and erroneous noises are also amplified and, in this process, achieve a prominence that they did not attract in acoustic performance where fast decay was kind. However, learning to adjust was a small price to pay for the many advantages that accrued from amplification.

The most obvious advantage of amplification, an increase in volume, was accompanied by a welcome increase in the sustain of string vibration. In acoustic performance, more rapid note decay was an inherent property that forced players either to resound notes or to employ tremolo picking in order to extend the durations of individual tones. Sustain that accompanied amplification added an exciting new dimension to the instrument. While the enhanced sustain did not rival that of wind or bowed string instruments, it expanded the steel guitar's melodic capabilities and added weight to its presence in accompaniment.

Another significant advantage of amplification was the greatly increased ease with which harmonics could be executed. This enhancement, in combination with sustain, ensured

the technique that had permeated traditional Hawaiian stylings was readily employed on electric instruments. This eventually led to the sound assuming a prominent place in country music.

1.6.1 New Effects

Beyond enhancement of existing qualities, amplification could also be exploited in producing effects and timbral qualities that were previously not associated with plucked stringed instruments. Experiments with mechanical control over volume and timbre, afforded by the new technology, resulted in techniques that further enhanced the instrument's range of expression.

In the process of amplification, the vibration of the guitar's strings was electronically encoded by means of a magnetic pickup attached to the instrument. The volume of the processed signal was determined by controls on both the amplifier itself and the instrument. Steel guitarists discovered that progressive control of the level of amplification could be employed in performance. Initially, it was discovered that rotation of a volume control knob on the instrument, adjacent to the bridge, could be achieved by the right hand and incorporated with picking to achieve remarkable dynamic control. The technique was outlined by Alvino Rey in his method book published in 1937.[68] Simultaneously, the function was replicated with commercially-available foot control pedals, as shown in Fig. 1.10 below. Alleviating the need for the picking hand to be diverted to this duty ensured both finer control and greater utility. This novel technique was widely adopted and, in combination with glissandi, created a distinctive and unique effect that was immediately exploited in both Hawaiian music and western swing.

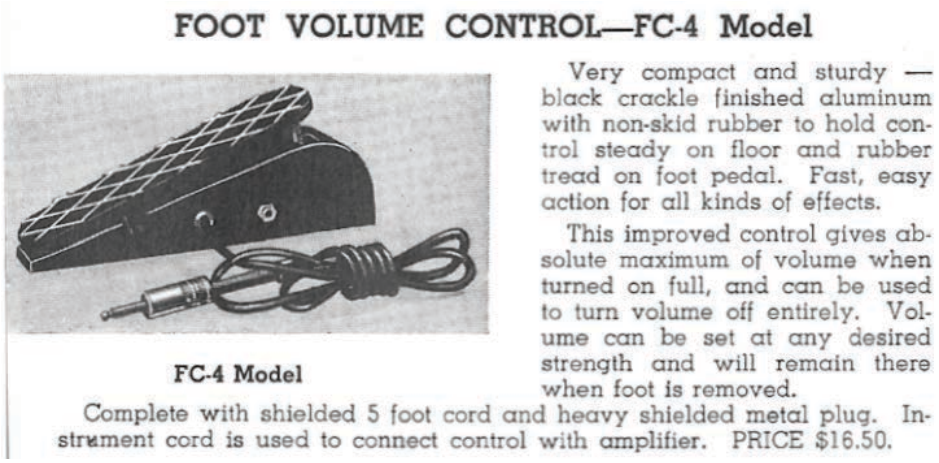


Fig. 1.10 Gibson volume controller[69]

[68] Rey, *Modern Guitar Method, Hawaiian Style*, 21.
[69] 'Gibson Catalogue', (Gibson Inc), 1939. 54.

Mechanical control of volume provided access to a range of expressive enhancements and effects. Firstly, the control of crescendos and diminuendos added a new dimension to steel guitar expression. Players were able to emulate the varied note attacks of wind players and violinists. The inherent problem of note decay remained an obstacle, as the initial energy of attack could not be increased, as was possible with the action of breath or bow. However, a gradual increase in the level of amplification could extend a note's duration by maintaining a constant volume as the note naturally decayed.

Another common exploit of a volume pedal or knob was to remove the sound of the picked attack of a note or chord. This was achieved by lowering the volume level to nil by hand or foot and restoring the volume after the string's vibration is initiated. In this way, the attack of a note can be completely reshaped, no longer resembling that of a percussive instrument and providing a further expressive resource to the performer.

As amplifiers and pickups were refined, tone controls were introduced. These were located on the instrument and the amplifier. Epiphone also offered a foot controller called the 'Rocco Tonexpressor' as early as 1937.[70] Low pass filters progressively attenuated frequencies as the controls moved the cutoff frequency up or down, providing players with some control over the timbre of the amplified signal. While the adjustment of tone controls could be a pre-performance process whereby an acceptable but static tonal setting was reached, some western swing players utilized the tone control on the pickup in the same manner as the volume control, producing a tonal sweep that progressively highlighted each available frequency. To achieve this affect, players sounded notes, usually chords, by hammering-on with the steel in their left hand while rotating the tone control on the instrument with their right hand. This affect, which was popularised in the late 1960s by players using foot-controlled 'wah-wah' pedals, was known as 'boo-wah' by western swing players.

This chapter has outlined basic techniques applied by players to the steel guitar in the acoustic and electric era. Overt and hidden core techniques have been described and the interdependent manner in which they function has also been outlined. The following chapter draws on this exposition to explain how the constraints of the configuration of the steel guitar compelled players to innovate in the quest to accommodate emerging musical styles. The endeavor became a joint effort between performers and instrument builders, a process which eventually saw the lap steel guitar supplanted by the pedal steel guitar.

[70] Fisch and Fred, *Epiphone: The House of Strathpoulo*, 32.

Chapter 2: Instrument Configuration and the Development of Technique

Each musical instrument is bestowed with particular sonic characteristics that arise from its design and the manner in which it is played. Musicians operate within the parameters of pitch, timbre, dynamics and polyphony dictated by the instrument's configuration. While some happily accept these confines, it is in the nature of others to explore the outer reaches of their instrument's capabilities and in doing so, blaze stylistic paths for others to follow. With reference to the framework of technique outlined previously, this chapter will examine the inescapable challenges engendered in the configuration of the non-pedal steel guitar and the struggle of players to overcome them as musical demands changed. The configuration of the instrument placed restrictions on both the melodic and harmonic dimensions of steel guitar performance. It was a reality from which players could not escape. The means by which these restrictions were surmounted opened new veins of style. The solutions included the development of the physical configuration of the instrument, both in terms of design and alternative tunings, as well as the development and tailoring of performance techniques. The labors of luthiers and steel guitarists in the amelioration of the dilemmas, advanced steel guitar style to dizzying heights in the era of western swing. Eventually, a revolutionary stylistic application of a pedal mechanism, designed to broaden tuning choices, resulted in a style that quickly supplanted previous efforts to advance the non-pedal instrument.

This chapter will discuss developments of technique and instrument configuration in three parts. Firstly, solutions to the problem of limited harmony will be discussed with reference to technique and organology. The second section will discuss the problems that the steel guitar's configuration held for hot monophonic solos and the stylistic solutions evolved to overcome them. Finally, to place the observations of this chapter in a broader technical context, a brief comparison will be made between differing applications of core techniques in contrasting monophonic styles associated with the dobro, the electric lap steel and the pedal steel guitar.

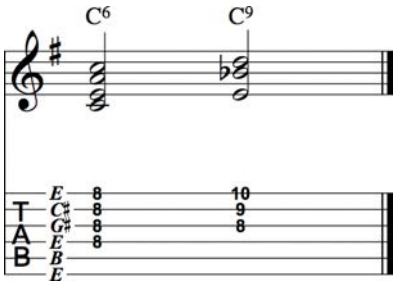
2.1 Harmonic Challenge

The chordal vocabulary of a steel guitar accrues from the notes that fall beneath the bar, with possible augmentation from open strings. A bar held in perpendicular fashion while moving along the neck provides sonorities drawn from the tuning, at varying pitches. With the intervallic relationship of the strings maintained, the sonorities available vary only in pitch. This method exposes the basic harmonic challenge of the instrument; the availability of

a meager array of chords and inversions resulting in an impoverished harmonic palate and severely impaired voice-leading options.

Historically, two broad approaches to overcoming these problems can be identified. The solutions involve either the extension of performance technique or physical changes to the instrument. Performance techniques to increase the harmonic properties of the instrument were developed to varying the intervallic relationships of the strings in different ways. Three common techniques are bar slanting, positioning of the bar in order to add open strings to stopped chords, and string pulls. In the latter approach, the trailing fingers of the left hand are used to stretch a stopped string behind the bar, thus raising the pitch of the string within the chord.

Performance solutions were explored through the variation of existing intervallic relationships of tunings, and the simultaneous provision of more options. Tuning solutions began with variations to conventional tunings and were further extended with alternative string gauges to allow for even more diverse tunings. More radical solutions involving instrument design included increasing the number of strings on a neck, increasing the number of necks available and culminated in mechanical devices to change string pitches. Technique and organology often worked in conjunction, providing effective new voicings, as in the case of the dominant ninth chord voicing in Ex. 2.1 below. The E6 tuning, known widely as C# minor, was a variation of E major tuning that employed a standard set of strings. The dominant ninth chord, shown in the example below, is attained with a forward slanted bar. Appearing first in Hawaiian music in the mid 1930s, the tuning was subsequently adopted in western swing where the characteristic dominant ninth voicing can often be heard.

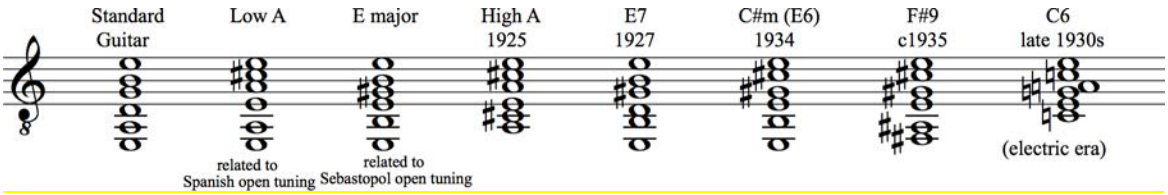


Ex. 2.1 Chords from C#m tuning

2.1.1 Development of Tunings

The embellishment of harmony through progressively more complex tunings is a phenomenon that can be observed throughout the history of the steel guitar. The refinement of tunings by Hawaiian players can be traced in the early 20th century and was linked

inextricably to stylistic development.[71] At first, the process of evolution was slow with two tunings related to popular Spanish guitar open tunings predominant until the mid 1920s. Thereafter, new tunings appeared more regularly in popular music. A number of factors may have caused an initial reluctance to adopt new tunings. Firstly, while new tunings offered new voicings, they also removed options provided by earlier tunings, such as the tonic and dominant alternations available on the bottom three strings of Low A tuning. Secondly, well-developed pedagogy devoted to Low A firmly established the tuning in early steel guitar performance culture. Ex. 2.2 below shows the progression of predominant six-string steel guitar tunings of the acoustic era. The tunings can be seen to proceed gradually from purely triadic structures to more complex sonorities.



Ex. 2.2 Progression of early six string steel guitar tunings

The example above suggests that string gauge was a limiting constraint on early tunings, apparent in the minimal movement in pitch of each string between tunings. Other than the bottom string of the High A tuning, deviation of pitch from standard guitar tuning in the early tunings is limited to a minor third. This stands in marked contrast to the C6 tuning of the late 1930s. To move tunings beyond the limits imposed by the gauges required for standard Spanish guitar tuning, changing string gauges was necessary. Catalogues from Gibson in 1930 and Epiphone in 1934 are early examples that show steel guitar strings available singly as well as in sets.[72] This may give an indication of a date at which that the opportunity to readily vary string gauges from the standard set was given to players.

2.1.2 Advancement in instrument design

While retuning an instrument was a means to vary harmony, it was also destructive in that the harmonic options of one tuning were replaced by those of another. An obvious, though unwieldy solution to this problem, was to carry more than one instrument. However, luthiers of the 1930s developed a number of alternative solutions.

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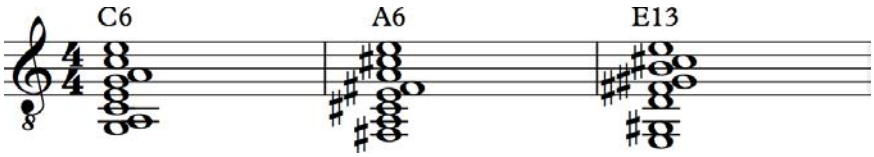
[71] Cundell, 'Across the Pacific: The Transformation of the Steel Guitar from Hawaiian Folk Instrument to Popular Music Mainstay', 96-108.
[72] 'Gibson Mastertone Fretted Instruments Price List', (Gibson Inc.), 1930. 67, 'Masterbilt Fretted Instruments ', (Epiphone Banjo Corporation), 1934. 30.

2.1.2.1 Extra strings

The advent of commercial production of electric steel guitars was almost immediately accompanied by another substantial innovation that had far-reaching implications for tunings and harmony. From the mid 1930s, in addition to six-string models, major electric steel guitar manufacturers Rickenbacker, Gibson and Epiphone offered instruments with seven and eight strings.[73] By the early 1940s, ten-string models were available in the form of Gibson's EH-185 and Epiphone's Eharp, designed by Eddie Alkire. While ten-string models were rare, seven and eight-string models proved popular. The new configurations provided scope for extending tunings in two ways. Both the range of the instrument could be increased and the size of intervals between strings could be reduced. Smaller intervals could be incorporated in more harmonically complex tunings. Some of the standard eight-string tunings used in western swing that utilised this new facility can be seen in Ex. 2.3 below. The manner in which these tunings evolved and were utilised provides a crucial foundation of steel guitar style that will be referenced throughout this study.



Ex. 2.3 Common western swing eight-string tunings

2.1.2.2 Multiple Necks

The advent of electric steel guitars provided luthiers with another avenue to address the harmonic problem. Previously, some multi-necked acoustic instruments had been constructed but they were a rarity, due possibly to design and construction difficulty, cost or their physical bulk that made them difficult to play. Solid body electric steel guitars were smaller, with less reliance on the intricate construction that acoustic resonance required, and were more easily fitted with extra necks. Bespoke models were initially constructed at the request of performers but dual-neck models became commercially available from Gibson and Epiphone as early as 1936.[74] The new designs were a solution for players who desired more than one tuning. Retuning or exchanging instruments to accommodate a particular tune became unnecessary. The new designs provided players with more flexibility and versatility in live performance. Furthermore, multiple necks provided an advantage that would become an important element in performance, the ability to swap between necks within a single tune.

[73] Fisch and Fred, *Epiphone: The House of Strathpoulo*, 133, Durchossoir, *Gibson Electric Steel Guitars 1935-1967*, 34, Smith, *The History of Rickenbacker Guitars*, 37.
[74] Durchossoir, *Gibson Electric Steel Guitars 1935-1967*, 38-43, Fisch and Fred, *Epiphone: The House of Strathpoulo*, 135.

Fig. 2.1 Epiphone's Rocco model, 1936

The first commercially available double-necked instruments represented a pragmatic extension to existing steel guitar design and, similarly, were designed to be played on the lap. However, the difficulty in supporting a bulkier instrument in this way was soon evident and Gibson provided legs to its Grand Console model in the first year of production.[75] With adjustable legs, the instruments could be played either seated or standing. Steel guitarists in western swing bands employed both modes of stance. However, the option of standing disappeared for performers who later adopted the pedal steel as the mechanical configuration precluded the legs from being extended.

[75] Durchossoir, *Gibson Electric Steel Guitars 1935-1967*, 42.

Fig. 2.2 Leon McAuliffe with a Fender double neck c1950, from the collections of the Center for Popular Music, Middle Tennessee State University

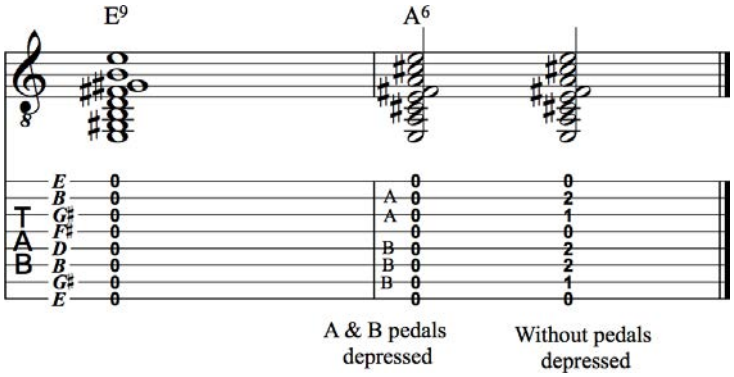
The configuration of individual necks varied at first. Gibson and Epiphone produced instruments with seven strings on one neck and eight on the other. Instruments with twin six-string necks were made but double eight-stringed models became a standard in the 1940s. However, dual necked instruments were just the beginning and in future years, three and four neck models became available. Triple necked instruments were not uncommon in the 1940s and, famously, Fender Instruments produced four neck 'Stringmaster' models in the 1950s. Four-neck instruments were large and unwieldy, requiring an awkward stretch to reach the outer necks and weighing over 20 kilograms. However, they were an impressive stage prop. The advent of four neck models give an indication of the length to which players were willing to go in the quest for extended harmony. Achieving this goal in a more practical way was an incentive for continuing development that culminated in a mechanically retunable instrument.

Fig. 2.3 Fender quad-neck Stringmaster c1955; from the collections of the Center for Popular Music, Middle Tennessee State University

2.1.2.3 Pedals

The concept of deriving multiple tunings from the neck of a steel guitar by mechanical means was longstanding. Inventors to begin tinker with mechanical concepts to achieve this aim as early as 1904.[76] The idea was first realized in commercial form in 1941 by the Gibson Company with their instrument, the Electraharp, an eight-stringed console with six pedals.[77] The cumbersome and expensive instrument was not popular, with only forty three units shipped before production was suspended with the onset of war. Another model was offered by Gibson between 1949 and 1955 by which time The Harlin Brothers of Indianapolis had also begun to produce a pedal instrument called the Multi-Kord. The bulk, reliability and cost of the instruments ensured that, as a practical source of multiple tunings, they did not challenge the popularity of multiple necked instruments.

However, an iconic moment in steel guitar history occurred when pedals were applied in a different manner.[78] While accompanying the singer Webb Pierce in the recording studio, steel player Bud Isaacs used the pedals of his custom-built Bigsby eight-string to shape a musical phrase. Isaacs' instrument was equipped with two pedals that, when depressed together, changed the E9 tuning to A6, providing him with two popular and well-known tuning, as shown in Ex. 2.4 below.

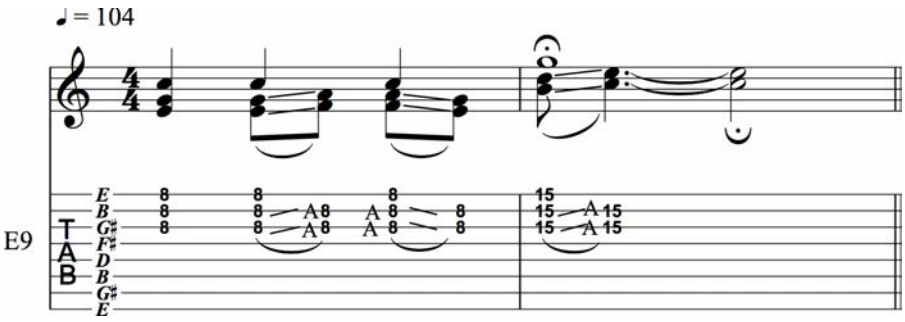


Ex. 2.4 Isaacs' pedal steel tuning, 1954

In an introductory musical gesture, Isaacs struck a chord on the top three strings while depressing one of his pedals. In so doing, he incorporated a glissando into the phrase that connected two chords. Perfect intonation of both the starting and finishing chords was achieved while maintaining a pedal note on the top string. The stark harmonic motif was a revolutionary moment in steel guitar history. 'Slowly' was a major hit and the distinctive

[76] Anthony Lis, 'The Harlin Brothers of Indianapolis and the Birth of the Pedal Steel Guitar Part One: Buttons and a Few Foot Pedals', *HSGA Quarterly* 32/123 (2016).
[77] Durchossoir, *Gibson Electric Steel Guitars 1935-1967*, 64.
[78] This moment, and the circumstances that led to it, are discussed more fully in Chapter 9 of this study.

technique was widely acclaimed.[79] A majority of steel players were so enamored that they abandoned or adapted their non-pedal instruments in search of the new sound. Isaacs' opening phrase, shown below in Ex. 2.5, was a death knell for the non-pedal instrument.



Ex. 2.5 Introduction to 'Slowly', Bud Isaacs (29/11/53, mx. NA 3181)

2.1.3 Evolution of Tunings

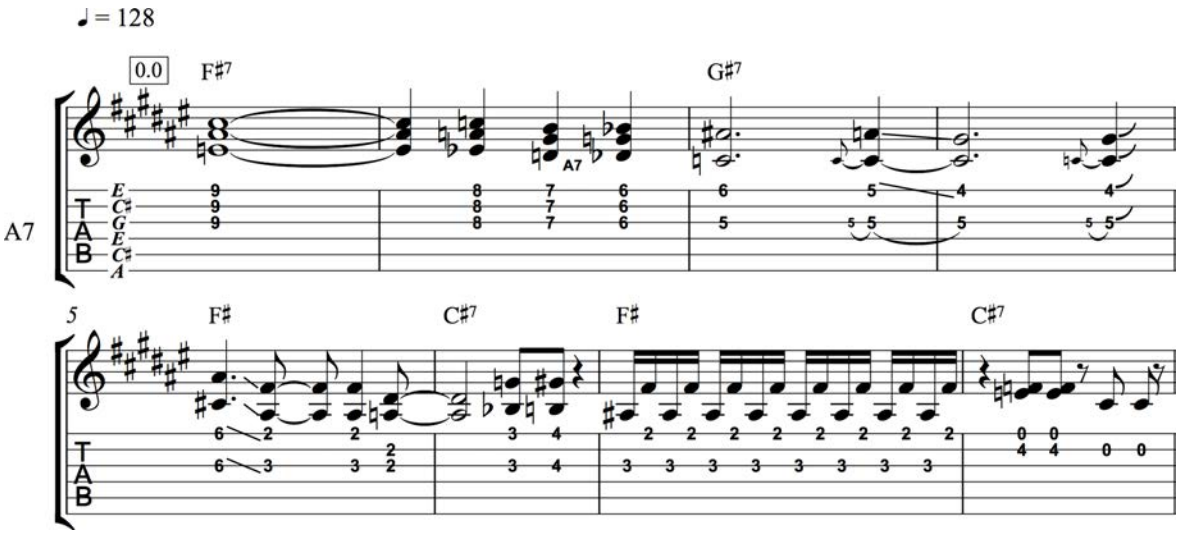
The manner in which new tunings developed is a matter for speculation, although observation of performance practice in Hawaiian steel guitar culture may provide some clues. Fundamentally, it seems to be a 'chicken or egg' question. What came first, a composition that required a specific tuning or a tuning that gave rise to a composition? Did players experiment with tunings in search of broader utility or were they motivated to alter tunings to achieve sonorities that they required for specific tunes? Or, were both processes at work?

While there is no positive indication as to why Sol Ho'opi'i used High A on his first recordings in 1925, in preference to the prevailing Low A tuning, utility may have been the reason. While the underlying tonality of the new tuning was unchanged, Ho'opi'i, the leading Hawaiian stylist of the late 1920s, demonstrated that the new tuning offered greater melodic versatility and a wider range of harmony. In consequence, the tuning's popularity rose spectacularly, in company with Ho'opi'i's personal ascent.

Although a few tunings were dominant in Hawaiian performance culture of the 1920s, the use of multiple tunings was commonplace. This practice may be a reflection of the interrelationship of steel guitar and slack key guitar, a style in which retuning for particular songs was not unusual.[80] An example of the modification of a common tuning to create a sonority to suit a specific song can be seen in Ho'opi'i's recording of 'I Ain't Got Nobody', seen in Ex. 2.6 below.[81] While dominant seventh chords are achievable with slants in High A tuning, Ho'opi'i adjusts the tuning by lowering the fourth string from A to G in order to play a dominant seventh chord with a straight bar. However, after the successful application of the

[79] Webb Pierce, 'Slowly', (Decca ED 2145), 1954.
[80] Kanahele, *Hawaiian Music and Musicians : An Illustrated History*, 370.
[81] Sol Hoopii and His Novelty Trio, 'I Ain't Got Nobody', (Columbia Co-1384-D), 1928.

tuning in this song, it is not certain that Ho'opi'i ever used the A7 tuning again. It seems to have served a purpose but was not deemed to have sufficient utility to supplant High A as his preferred tuning.



Ex. 2.6 Chord melody on 'I Ain't Got Nobody', Sol Ho'opi'i (27/3/28, mx. W 145923-1-2)

The example above demonstrates how one tuning could be derived through refinement of another. The practice of experimenting with tunings was wide spread in the Hawaiian music of the 1930s, as will be discussed further in Chapter 4. As new tunings evolved and were transmitted broadly through performance or recording, subsequent adoption by other professionals could begin a process that would elevate one to common usage while another would be largely ignored.

In Hawaiian steel guitar performance practice, two distinct functions lent themselves to disparate approaches to tunings. Where the principle function of the steel guitar was to perform the main melody of a piece, specific tunings could be deployed and the instrument retuned for following pieces. In contrast, where the function of the steel guitar was to provide hot improvisations, it is clear that leading players, such as Ho'opi'i and Bennie Nawahi, favoured a particular tuning. As this study will show, the same practice was the norm in western swing, where improvisation was the primary function of the steel guitar.

A rationale for the restriction of the number of tunings used by improvisers on any instrument can be deduced from current psychological research.[82] A key concept, on which an understanding of the process of improvisation is based, is that of schemas. The mind organizes information through conceptual hierarchies or multilevel classification systems based on common properties among items. In this system are schemas that are organized clusters of knowledge about particular objects, or events abstracted from previous experience

[82] Stein Helge Solstad, 'Strategies in Jazz Guitar Improvisation', Norwegian Academy of Music (2015), 74.

with the object or event. The ability to improvise relies on access to a vast schema that includes music theory, harmonic blocks or chunks, visual shapes, muscle memory and rehearsed examples. The schema is accessed at a subliminal level during improvisation. The intervallic configuration of the strings of an instrument is a critical fixed component of the schema on which other elements are anchored. If the tuning is changed, the schema is restructured, with many previously fixed relationships between elements are altered. While it may be possible to improvise on a high level on more than one tuning, different schemas will be employed and separate processes to establish the relationships of the components of each one will be required. The theory explains why the range of tunings used for improvisation by both Hawaiian and western swing steel players is not large. Additionally, the theory is supported by examples in this study that show where steel players in western swing had dual-necked instruments, they favoured one tuning for intricate melodic improvisation and the other for chordal melodies that relied on relatively simple rhythmic motifs rather than extended melody.

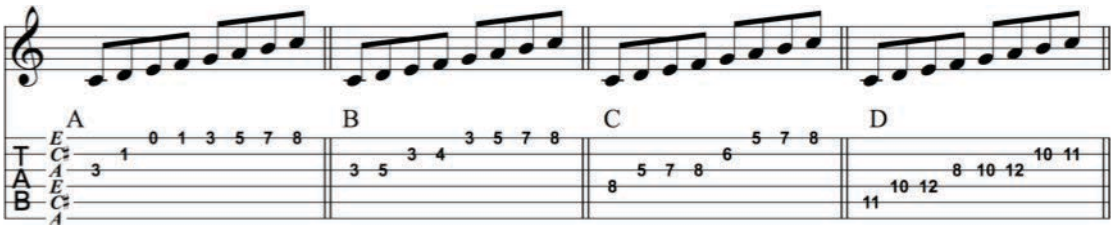
2.2 Melodic challenge

To a casual observer, the performance of single note melodies on the steel guitar seems a simple process. Plucking stopped notes in succession while repositioning the bar to required positions appears to be an elementary task, particularly if only the top string is employed. However, technical challenges immediately arise, as discussed in the previous chapter. These are the blocking of notes, in the service of articulation and noise minimisation, and exact bar placement, required for accurate intonation. In a repertoire of languid Hawaiian melodies, these techniques are not the obstacle that they present to the performance of rapid melodic passages or in hot improvisation generally.

The coordination of the core techniques of blocking, bar manipulation and picking becomes much more difficult at high tempo. Accordingly, control of articulation and accuracy of intonation are challenges that go hand in hand as tempi increase. As control over these techniques recedes, so does the player's ability to shape melodic phrases. As a result, western swing steel players were hard pressed to emulate the speed and phrasing of the hot improvisations of their rivals on the front row of the bandstand, the wind players and fiddlers.

Articulation and accurate intonation at speed are interrelated and both are dependent on bar manipulation. They both suffer when the left hand is required to move the bar laterally further than a distance of a single fret between sequential notes. The dilemma is demonstrated in Ex. 2.7 below, which shows four alternative fretboard paths for a C major scale in High A tuning, the Hawaiian tuning employed by the subject of the next chapter, Bob Dunn.

To facilitate equal note duration in such a passage, bar movement between frets must be swift. When the bar movement exceeds one fret, the time absorbed by the carriage of the bar noticeably curtails note duration, with unavoidable consequences for articulation. The use of glissandi is possible for sequential notes on one string but the technique is accompanied by a danger that the gliss lends an affect to phrasing in a manner that may not be either idiomatically or expressively desirable. A lateral approach to the neck, accompanied by generous use of glissandi, was an approach taken by many Hawaiian players but this approach did not serve hot improvisation well and was less common in western swing. However, such stylings were sometimes employed in western swing in accompaniment and in Hawaiian-styled tunes. A further complication associated with fast chromatic or scalar playing is the deleterious effect of a change in direction of the left hand. A requirement to rapidly reverse the bar hand makes accurate intonation far more difficult and further curtails possible note duration.



Ex. 2.7 Major scale paths in High A tuning

The example above demonstrates the dilemma that a simple scalar passage presents to a steel guitarist. The four bars contain different paths on the neck, each of which present technical challenges.

A) is the simplest approach, requiring only one change in bar direction but includes four bar movements of two frets. The final ascent of the top string requires either careful blocking to achieve note separation or the slurring of notes in an extended glissando. The open string helps to reduce bar movement but its inclusion renders this pattern available only in one key.

B) traverses three strings. Maintaining the third fret as a reoccurring point on the neck helps to maintain good intonation. However, the zigzag passage of the bar incorporates four changes in direction that impair articulation.

C) traverses the same scale but with only three changes in bar direction. This is an advantage over the previous example. However, any advantage is lost when the tuning dictates that the bar must travel three frets between the first two notes.

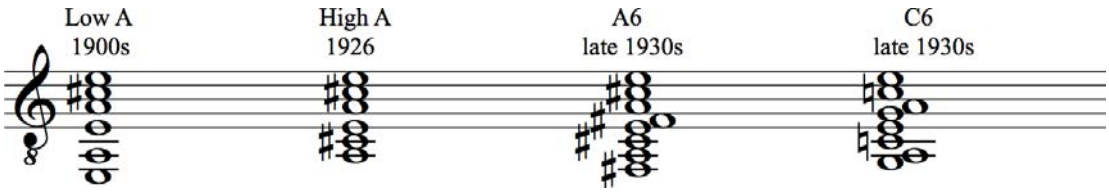
D) has the excessive direction shift of B combined with the three fret movement of C).

2.2.1 Solutions

A demand for velocity presented steel guitarists with a conundrum. A variety of approaches emerged in the struggle to mitigate the problem. As will be shown, some solutions arose as a direct response to the problem while others arose as a coincidence of some other development. Clearly, none of the measures discussed below places the instrument fully on par with the Spanish guitar or wind instruments, but instead, steel guitarists have had to settle for degrees of amelioration and formulate their approaches around the instrument's configuration.

2.2.1.1 Tunings

An examination of the monophonic melodies played on a range of steel guitar tunings reveals that as the intervals of a tuning are reduced in span, less deviation of the right hand is required in playing scales across strings. As tunings became more harmonically complex, their constituent intervals became closer with the attendant advantage of making scalar passages easier to execute. The growing complexity and diminishing intervals can be seen in Ex. 2.8 below. The progression from Low A to High A provided greater melodic facility on the bottom three strings. The difficulty in negotiating the perfect fourth interval between the third and fourth strings of High A was alleviated by the addition of the sixth degree of the chord in the A6 tuning, which was also reflected in C6 tuning. As this study will show, A6 and C6 became the primary tunings employed for monophonic melodies by western swing players.



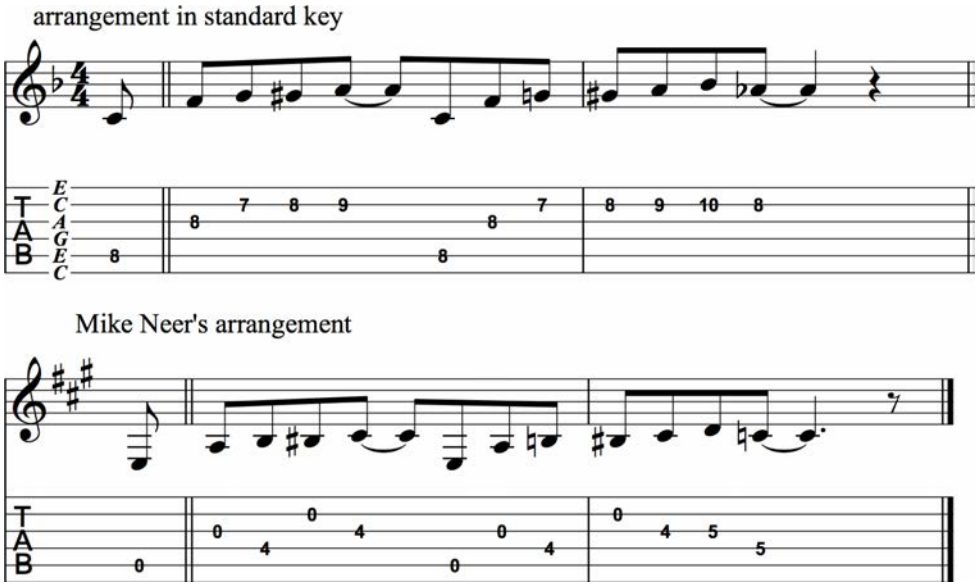
Ex. 2.8 Typical tunings between 1900 to 1940

2.2.1.2 Open Strings

A common technique for accommodating fast scalar passages is the incorporation of open strings amongst stopped notes. The resultant reduction in right hand movement provides an advantage so great that it facilitates scalar passages not otherwise possible at high tempo. This approach provides a melodic resource to steel players of all genres although its practice dominates melodic technique in bluegrass dobro style.

A contemporary application of the technique employed by standout contemporary steel player, Mike Neer, to facilitate a rapid passage in his arrangement of Thelonious Monk's

bebop standard, ‘Straight No Chaser’ is shown below in Ex. 2.9. The first system of the example shows a rendering of the opening phrase of the tune using C6 tuning in the original key. This is followed by Neer’s solution that he performs on a similar tuning at 174 bpm in the key of A on his album, *Steelonious*.[83]



Ex. 2.9 Contrasting melodic use of open strings

The problem of right hand movement that this tune presents in the original key of F is apparent in the tablature. A string skip between strings five and three is followed by a change of bar direction and chromatic movement on a single string that is repeated in the second half of the phrase with an extended chromatic movement followed by another change in bar direction. The bar must traverse a compass of four frets while incorporating six changes in bar direction and requiring blocking to avoid excessive glissandi. Neer’s elegant solution uses open strings to greatly reduce the demands on the right hand. The compass required of the bar hand is now only two frets, assisting both speed and accurate intonation. While demands on the accuracy of the picking hand have increased in the form of increased string skipping, an overall economy of movement has been achieved and the resultant control allows for a performance that sits comfortably within the bebop genre.

Utilisation of open strings does have attendant problems that are not apparent in Neer’s performance. Firstly, in the decision to play an open string lies an acceptance of lack of control of the articulation of that note. Without the bar, no inflection is possible, nor is vibrato. Articulation is further constricted by the absence of trailing fingers, removing one of the blocking options. At speed and with occasional use, these drawbacks may not seem

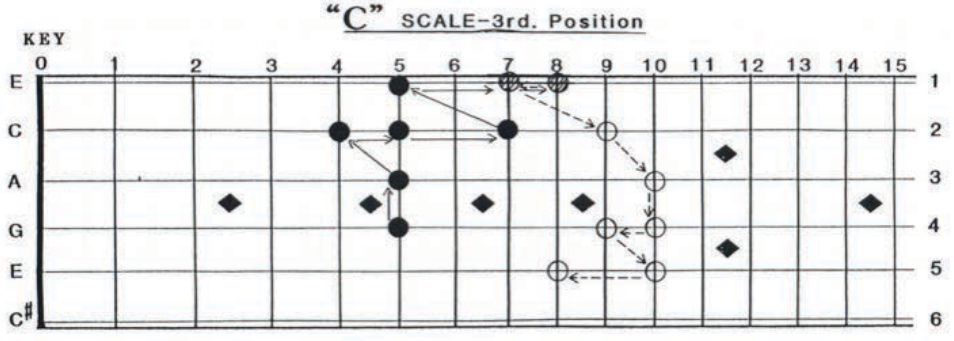
[83] Mike Neer, *Steelonious*, (Mike Neer), 2016.

significant but they have the effect of reducing the performer's ability to finely craft musical phrases.

A second drawback of open strings is that a melodic phrase or scalar pattern that incorporates an open string is not moveable and is, therefore, only beneficial in limited harmonic contexts. In this way, Neer's solution is only effective in the key of A. Notably, he states that he changed the key to enable his solution.[84] This does not present a problem to a bandleader, like Neer, who can dictate the keys in which tunes will be performed. However, a sideman, the role filled by most western swing steel guitarists, does not have that luxury and must be prepared to tackle keys determined by the leader or singer. Additionally, tunes that incorporate modulation present a further problem. As keys change, phrasing dictated by fixed positions has limited application. While open strings can provide occasional solutions, the hot improviser must be ready to explore multiple tonal centers that may shift rapidly. Being anchored to scalar patterns that employ open strings is an approach rarely seen in western swing.

2.2.1.3 Alternate Scalar Routes

Another strategy to facilitate the ease of scalar passages is proposed by steel guitar virtuoso Jerry Byrd. In an instruction book, Byrd describes how different fretboard routes can be used for ascending and descending a scale. He proposes this action "to keep the next note position in front of the steel bar for easier visibility and for rapid execution with minimal movement.'[85] Byrd's example, shown below in Ex. 2.10, only partially achieves his first objective because some backward movement of the bar is required. While overall bar movement is reduced, it is achieved by completing the passage at another fret. While this technique offers some advantages, it adds significant complexity to the process of learning scales and may be difficult to apply to unplanned improvised lines.

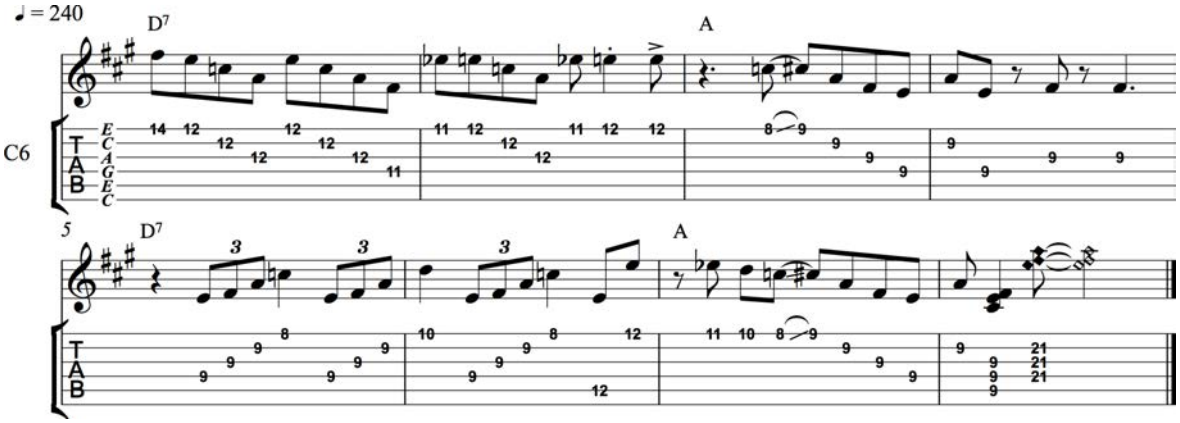


Ex. 2.10 Alternate Scalar Routes from The Jerry Byrd Instruction Course for Steel Guitar, 1955

[84] Neer, 'Straight, No Chaser'.
[85] Jerry Byrd, *The Jerry Byrd Instruction Course for Steel Guitar,* (Self Published, 1955), 197.

2.2.1.4 Scalar Avoidance

An alternative to confronting the dilemma of rapid scales with mitigating measures is to accept the constraint that the instrument imposes and to work in the limitations that are dictated. This can be achieved by favouring arpeggios over scales in improvisation. This approach is conspicuous in the style of eminent western swing performers such as Joaquin Murphey. As will be shown in Chapter 8, Murphey's breakneck improvised melodies were largely constructed of arpeggios. As such, they conformed to an aesthetic that prevailed in swing of the 1940s. Murphey's approach is shown in Ex. 2.11 below. The transcription shows the second half of a solo that that Murphey recorded with Spade Cooley.[86] In a context where tempo and note durations dictate that only minimal bar movement is desirable, Murphey's phrases are centered first on the twelfth fret and then on the ninth fret, from which points the bar only deviates slightly. As a result, he is able to maintain legato articulation that would be impossible had more distant bar movement been required.



Ex. 2.11 Improvisation on 'Crazy Cause I Love You', Joaquin Murphey (3/1/1946, mx. HCO 1639)

2.2.1.5 Pedals

A further solution to the problem of velocity came as a byproduct of the most radical organological advance of the instrument: pedals. While Isaacs' innovative application of the device can be seen as advancement in harmony and voice leading, it also led to a solution for the dilemma of achieving high velocity. As the design of mechanisms was refined, pedals, and later knee levers, could be activated quickly. The machine-assisted intonation was reliable and consistent. Additionally, pedals reduced the need to constantly reposition the bar. With less need to devote attention to the bar movement, players could concentrate on refining picking techniques. With this advantage, a culture of 'speed picking' of monophonic melodies emerged on the pedal instrument in the 1960s.

[86] Spade Cooley and His Orchestra, 'Crazy 'Cause I Love You', (Columbia 37058), 1946.

With the advent of ten string pedal steel necks, bars became larger and heavier. A greater encumbrance of larger bars contributed to the development of a new style whereby the bar primarily rested on the strings and was guided from position to position without being lifted. As a result, the traditional technique of blocking, using an angled bar and trailing fingers, was less crucial. The bar hand of the pedal steeler did not have the same acute demands of agility placed on it as did that of the non-pedal player. This generalisation does not hold for pedal steel luminaries, such as Buddy Emmons and Curley Chalker, who had trained on non-pedal instruments and maintained their left hand skills. However, the move to a dependence on pedal-initiated glissandi in scalar passages has led to a technique that has contributed a characteristic sound to contemporary pedal steel style. Furthermore, the introduction of a mechanized element to performance has had the effect of homogenizing elements of phrasing. A perceptible similarity of inflection and phrasing amongst pedal steel players stands in contrast to the individuality of non-pedal players. The idiosyncrasy of lap steel performance styles is a result of the extensive connection between player and instrument required by the three manual core elements of technique: picking, blocking and bar manipulation. While pedal steel guitarists utilise the same core techniques, their mechanism reduces their physical interaction with the instrument, with a resulting diminution of stylistic individuality.

2.3 Style Comparison

The following comparison is provided to offer insight into the evolution of steel guitar styles and, more specifically, to provide a context in which the subject of this study, aspects of amplified lap steel guitar style, can be evaluated. The three styles to be compared, lap steel, dobro and pedal steel, can be differentiated both by the chronological order in which they appeared and by the genres in which they were employed. The amplified lap steel appeared in western swing in the 1930s and 1940s, the dobro appeared in bluegrass in the mid 1950s and the pedal steel became an instrument of mainstream country music in the mid to late 1950s. The examples show each instrument employed in the same mode of rapid monophonic melody. The examples can be interpreted as stages in stylistic evolution or as divergences of style through adaptation of core techniques. Which ever view is taken, it is clear from both the notation and the tablature, that the varied approaches in technique have given rise to markers of style that impart idiosyncratic instrumental colouring to their respective genres.

2.3.1 Bluegrass Dobro

Bluegrass dobro is the most popular form of steel guitar at this time. Bluegrass music commands an international audience, providing many professional opportunities and attracting legions of amateur enthusiasts. The style arose through the efforts of Josh Graves, who joined Lester Flatt and Earl Scruggs' illustrious band, the Foggy Mountain Boys, in 1955. In the highly energized music of the ensemble, Graves honed a style designed to compete with the group's virtuosic banjo, fiddle and mandolin performers. To do so, he largely abandoned the Hawaiian stylings of prominent acoustic steel guitarists in country music that preceded him and developed a technique with which he could gain parity. His herculean effort succeeded, with a wholesale adoption of hammer-ons and pull-offs to combine open strings and fretted notes in rapid scalar passages. Additionally, Graves adopted a picking style using three fingers based on technique taught to him by banjoist, Scruggs.[87] Initially, it was predominately a modal style, complementing the simple harmony of bluegrass. The style was dependent on the tuning, with the rapid melodic patterns requiring specific scalar tones to be available on open strings. Furthermore, fluid three finger rolls on separate strings (in contrast to Ho'opi'i's single string rolls) required open strings and forgiving sustained tones that would blend with primary triads without dissonance. Pedaled open strings would then enhance the sonorities and blocking was much less crucial than in the Hawaiian style that predated Graves. The efforts of Graves, and those who followed him, elevated the dobro from a part time contributor in country music to a prominent instrumental voice in a bluegrass movement that gained wide popularity.

The transcription in Ex. 2.12 below is an excerpt from 'Pick Away', composed by Graves' contemporary, Mike Auldridge, which is now a bluegrass standard.[88] The piece is littered with examples of hammer-ons with the scalar passage of bar five particularly dependent on the technique. Auldridge uses a Stevens bar (see Fig 1.7), the profile of which provides a form that can be gripped strongly as rapid bar movements are applied. The three-fingered picking technique is in evidence in bar two as is the use of a pedal tone provided by the tuning. These stylistic imprints are augmented by the acoustic resonance of the instrument in the creation of a sound that is immediately associated with bluegrass.

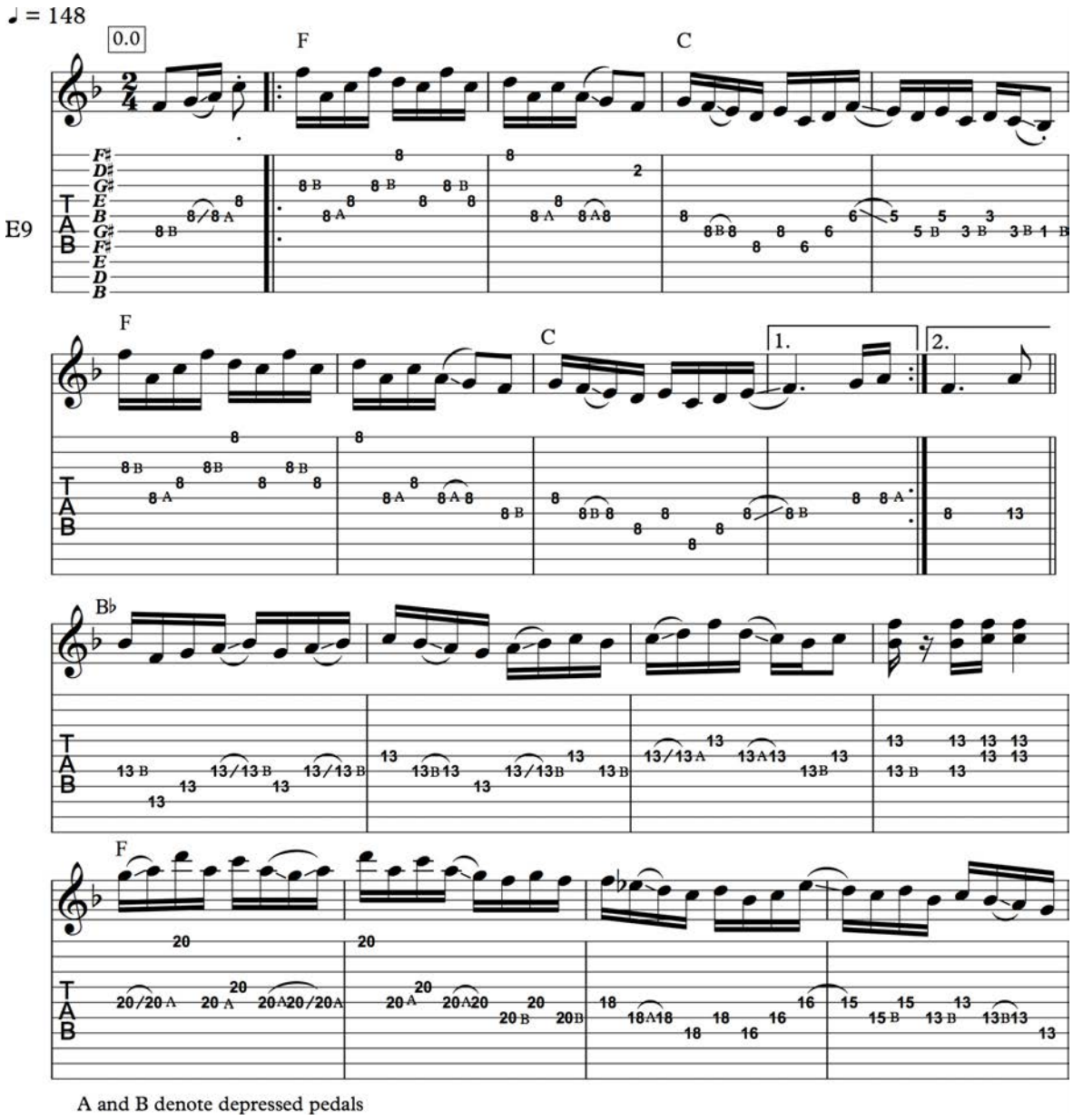
[87] Phillips, *Mel Bay's Complete Dobro Player*, 214.
[88] Mike Auldridge, 'Pickaway', (Takoma D1033), 1972.

Ex. 2.12 Melody of 'Pick Away', Mike Auldridge (1972, Takoma D1033)

2.3.2 Pedal steel

Pedal steel style is represented by the following transcription of 'Hot Foot' performed by Weldon Myric on E9 tuning.[89] The transcription was made by Fred Amandola and Russ Wever and appears in a method book by Dewitt Scott.[90] The melody is mostly monophonic, performed at speed, and harmonised on the recording by electric guitar. The tablature reveals the restricted motion of Myric's bar. The manipulation of the pedal renders bar movement unnecessary for numbers of sequential bars despite the rapid undulating melody. Mechanical glissandi that are required to perform the melody at this tempo are unavoidable and provide the frequently reoccurring articulation that became an ingrained component of style.

[89] Weldon Myric, 'Hot Foot', (Midland MD 24), 1979.
[90] Dewitt Scott, *Mel Bay's Anthology of Pedal Steel Guitar: E9 Chromatic Tuning* (Pacific, Mo: Mel Bay Publications, 1980).

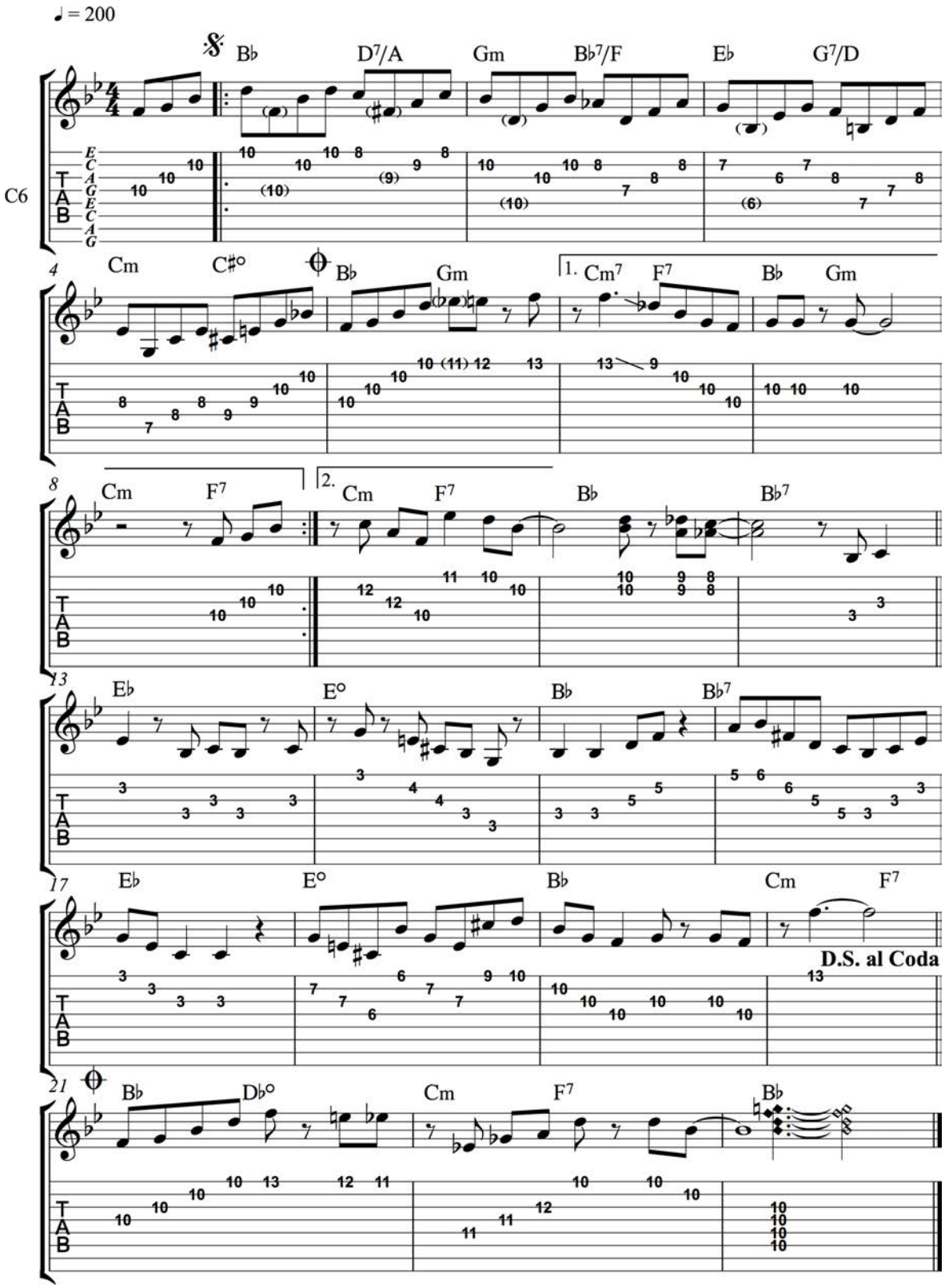


Ex. 2.13 Melody of 'Hot Foot', Weldon Myric, (31/5/1979, MD 24)

2.3.3 Lap steel

The final snapshot of contrasting style shows Joaquin Murphey's interpretation of the Joe Sullivan's intricate melody, 'Little Rock Getaway'[91], played at an almost impossible tempo with Spade Cooley's band. Murphey takes the spotlight, able to execute the difficult opening phrase of the composition at speed due to its arpeggio construction. Even so, the ghost notes that he employs may be a strategy to alleviate the difficulty of cross string picking or may be a compromise in articulation imposed by the severity of the task. The tablature shows that Murphey selects a position for each chord from which there is minimal lateral deviation as the bar traverses the neck. Additionally, adjacent strings are primarily employed. In this way, Murphey maintains legato articulation while ensuring that intonation doesn't suffer.

[91] Spade Cooley and His Orchestra, 'Little Rock Getaway', (Armed Forces Radio Service AFRS H-4-834), 1945.



Ex. 2.14 Melody of 'Little Rock Getaway', Joaquin Murphey (c1945, radio transcription)

In summary, the comparison above serves a number of purposes. Firstly, it demonstrates how, under similar demands, disparate adaptations of core techniques evolved, shaped by the configuration of the instrument that was available to the player. Second, it

provides some insight into the interaction of musical demands and instrument design that influenced style development. Third, with greatest significance to this study, the comparison serves to highlight the technical difficulty faced by non-pedal steel guitarists in western swing who evolved an intricate and exacting style, as the demands of their music mounted. Finally, despite their diverse application, the core techniques offer a glimpse of the instrument's Hawaiian heritage in each example.

Chapter 3: Bob Dunn

3.1 Introduction

Bob Dunn (5 February 1908 – 27 May 1971) was the first steel guitarist of western swing. Appropriately dubbed a 'steel colossus', he was a pioneering performer of electrically amplified music and a stylist who employed the technology to set a new course for the steel guitar.[92] A bold innovator, Dunn stood head and shoulders above his regional peers as he positioned his newly amplified instrument at the forefront of a vibrant dance bands in the southwestern states of America in the 1930s. The style that he employed appears, at first glance, to have been forged outside the prevailing performance culture of the instrument. A native Texan, his popularity in the Southwest spawned a generation of steel guitarists who admired and imitated him. His fame was regional but his influence was national. As western swing evolved and extended its reach across America, some of Dunn's disciples, notably Leon McAuliffe and Noel Boggs, refined and enriched their initially derivative styles, developing new approaches that became vogue in and beyond the Southwest. While Dunn's standing today remains firmly in the shadow of McAuliffe, Boggs and others, he is widely recognised as the founding father of steel guitar in western swing. However, while he is revered as a pioneer of both of western swing and amplified performance in country music, his style, once dominant, is today rarely lauded by steel guitarists. Regardless of his reputation and despite a large body of extant recordings, few efforts have been made to analyse his style, which remains enigmatic.

This chapter seeks to unravel the mystery surrounding Dunn through a comprehensive examination of his style and technique. After providing an overview of his career, a detailed analysis of the depth and progression of previous Dunn scholarship will conducted, to give light to prevailing perceptions that may benefit from the investigation that follows. Next, the origins of Dunn's style will be considered in light of important new evidence. The conclusions reached assist the following style analysis and may have broad significance for steel guitar and country music scholarship. Dunn's role, both as soloist and accompanist, will be considered and examples of his use of various modes of melodic playing will be scrutinised. Finally, his legacy and influence will be discussed, along with the perplexing question as to why his style has found so few supporters in ranks of contemporary steel guitarists.

His remarkable achievements tend to cloud a view of Dunn beyond that of musical iconoclast. However, Dunn's musical accomplishments are best assessed in the context of his

[92] Kevin Coffey, 'Steel Colossus: The Bob Dunn Story', *Journal of Country Music* 17/2 (1994).

life as a professional who forged a long career in popular music. His success in turning a commitment to his craft into an extended term of employment in a turbulent environment subject to fickle public tastes, speaks to his persistence, innovation and versatility. While Dunn's innovative approach to steel guitar may have been important in initially attracting employers' attentions, it was his adaptability, that stemmed from a breadth of style and technique, that rewarded him with a long career. The only band that he led was called the Vagabonds, a title that aptly describes the progress of his career, which was marked by many arrivals and departures. His legendary tenure of eighteen months with Milton Brown's Brownies was one of his longest.

While his large frame was imposing, he was characterised as being softly spoken, kind and affable.[93] Described by his contemporary, violinist Cliff Bruner, as a historian[94], Dunn was an intelligent man and a student of his instrument, as this study will show. He succumbed at times to the temptation of alcohol, a common trap for popular musicians whose engagements are often dependent on its sale. Though alcohol dogged him for much of his career, it was a problem that he eventually defeated.[95] Nevertheless, his long career as a sideman suggests that he remained a reliable performer despite this obstacle.

3.2 Life and Career

Dunn was born in Ft. Gibson, a small town in eastern Oklahoma. His father, a sawmill employee, was a breakdown fiddler through whom he was exposed to the joys of music making. In 1917, while living in the town of Kusa, fifty miles south of Tulsa, Oklahoma, Dunn's obsession with the steel guitar began when he witnessed a touring group of Hawaiian performers. He was fixated with the Hawaiian steel guitar and pursued instruction by purchasing correspondence lessons through a mail order catalog.[96]

The author of the lessons was Walter Kolomoku, a prominent member of first generation of Hawaiian steel guitarists. He had been a member of the Hawaiian Quintet that performed in the initial Broadway production of the influential *Bird of Paradise* stage show. The lessons themselves seem typical of a swathe of similar material on offer across America in the wake of a rising tide of popularity in Hawaiian music that had begun in the 1910s.[97] However, they were more comprehensive than most and provided Dunn with a solid technical base from which to begin further musical exploration.

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[93] Coffey, 'Steel Colossus: The Bob Dunn Story', 52.
[94] Coffey, 'Steel Colossus: The Bob Dunn Story', 52.
[95] Coffey, 'Steel Colossus: The Bob Dunn Story', 54.
[96] Cary Ginell, 'Bob Dunn: A Life in Music', *notes to Bob Dunn: Master of the Electric Steel Guitar 1935 - 1950* (Origin Jazz Library), 2010. 18.
[97] Walter Kolomoku, *Hawaiian Guitar* (New York: First Hawaiian Conservatory of Music Inc., 1923).

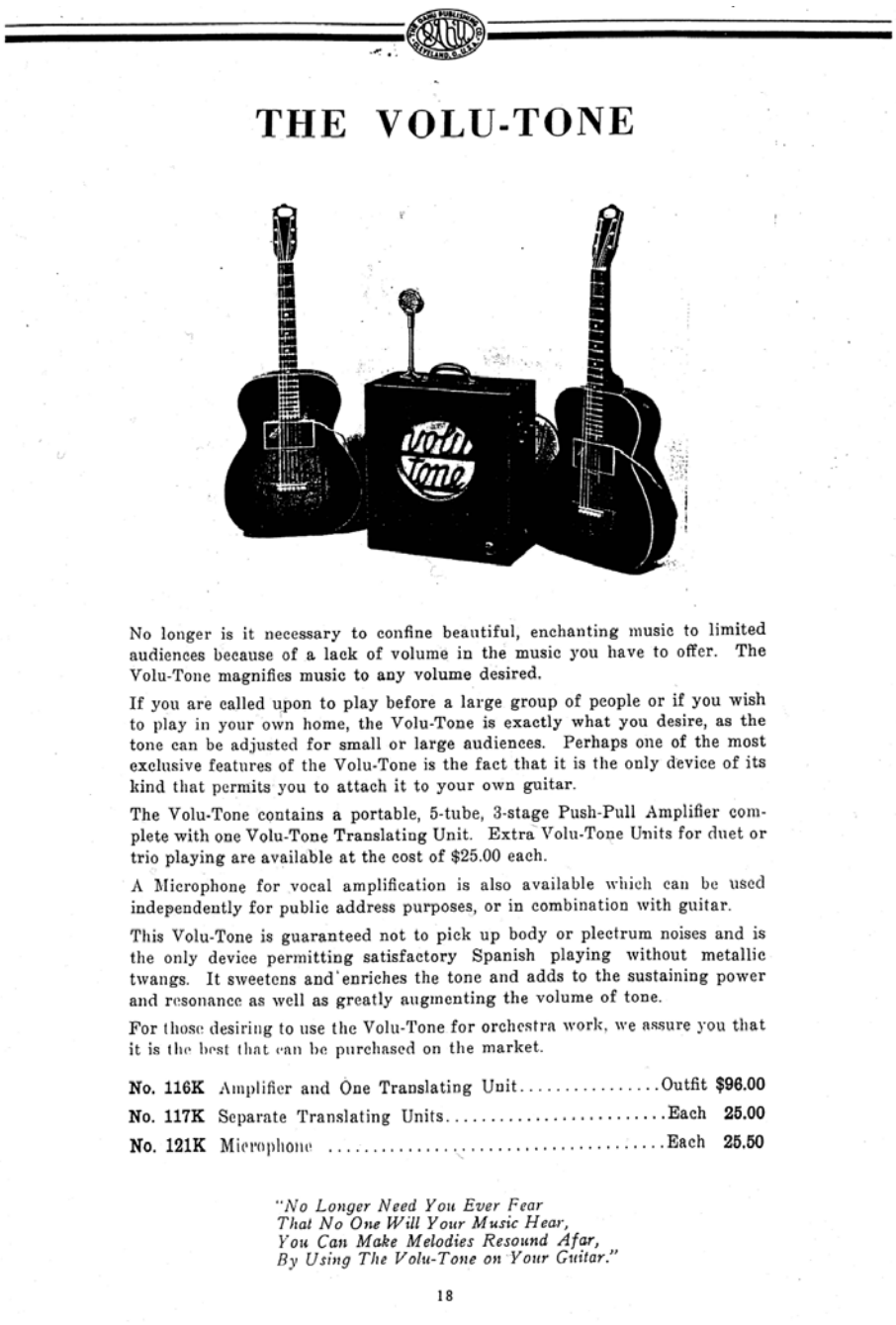
The earliest evidence of Dunn's music career is a flier advertising a presentation by Dunn and Robertson at a silent film screening in Muskogee, Oklahoma in 1927.[98] It marks the beginning of a music career that spanned over forty years. A handful of visual references offer insights into his early career. A photo from the late 1920s shows Dunn, with a guitar accompanist, playing steel guitar on an acoustic Spanish guitar on his lap.[99] He is adorned with a Hawaiian lei, a clear indication of the style of music he was playing. A photo from 1930 shows Dunn with a quartet, the Oklahoma Boys.[100] Displayed in front of them are a National resonator guitar, Spanish guitars, fiddles, banjos and two clarinets and a saxophone. Another photo from the early 1930s shows Dunn as a member of the Oklahoma Cowboys and Indians, a nine piece, vaudeville string band.[101] Dunn is also known to have worked on the radio show of a fraudulent doctor, John Brinkley. Dunn appeared on Brinkley's radio station, KFKB, in Kansas. Again, Dunn's tenure was brief as the station was soon closed by Federal authorities.[102] The photos are visual evidence of a patchwork of employment, a pattern that Dunn was destined to repeat for the remainder of his career.

An audition for renowned bandleader Milton Brown in December 1934 marked the moment at which Dunn's career began a meteoric rise. Deeply impressed by Dunn's steel guitar jazz stylings, Brown offered him a permanent position. The Brownies had already built a region-wide reputation as a groundbreaking string band that presented an exciting amalgam of popular songs, jazz and country music. The addition of Dunn, along with jazz pianist Fred Calhoun, added a new dimension to the band's repertoire that placed the Brownies at the forefront of popular music in the Southwest.

Before his engagement by the Brownies, Dunn's instruments had been acoustic. His audition for Brown was conducted on an acoustic steel guitar.[103] Brown employed this instrument as a novelty that he probably restricted to his radio broadcasts, its minimal volume making it an unlikely component of the lineup of his dance band. Thus, for Dunn's value to the Brown to be fully exploited, he would have to be heard in the rowdy environment of the dance hall. It seems unlikely that Brown was not aware of the limitation and did not have a solution in mind when he offered Dunn the job. Alternatively, Dunn may have mentioned amplification as solution to Brown at the audition.[104] In either case, Brown bought an electric

[98] Ginell, 'Bob Dunn: A Life in Music', 19.
[99] Ginell, 'Bob Dunn: A Life in Music', 20.
[100] Ginell, 'Bob Dunn: A Life in Music', 21.
[101] Ginell, 'Bob Dunn: A Life in Music', 23.
[102] Coffey, 'Steel Colossus: The Bob Dunn Story', 49.
[103] Kevin Coffey, 'Musical Meanderings: The Recordings of Bob Dunn', *notes to Bob Dunn: Master of the Electric Steel Guitar 1935 - 1950* (Origin Jazz Library), 2010.
[104] An account by Dunn contemporary, Jimmy Thomason, suggests that Dunn was aware of amplification and considered it desirable. Coffey, 'Steel Colossus: The Bob Dunn Story', 50.

amplification system for Dunn from a music shop in nearby Mineral Wells, soon after the audition. The Volu-tone system, shown in Fig. 1 below, was in the vanguard of the commercial application of electric amplification for guitars.



THE VOLU-TONE

No longer is it necessary to confine beautiful, enchanting music to limited audiences because of a lack of volume in the music you have to offer. The Volu-Tone magnifies music to any volume desired.

If you are called upon to play before a large group of people or if you wish to play in your own home, the Volu-Tone is exactly what you desire, as the tone can be adjusted for small or large audiences. Perhaps one of the most exclusive features of the Volu-Tone is the fact that it is the only device of its kind that permits you to attach it to your own guitar.

The Volu-Tone contains a portable, 5-tube, 3-stage Push-Pull Amplifier complete with one Volu-Tone Translating Unit. Extra Volu-Tone Units for duet or trio playing are available at the cost of $25.00 each.

A Microphone for vocal amplification is also available which can be used independently for public address purposes, or in combination with guitar.

This Volu-Tone is guaranteed not to pick up body or plectrum noises and is the only device permitting satisfactory Spanish playing without metallic twangs. It sweetens and enriches the tone and adds to the sustaining power and resonance as well as greatly augmenting the volume of tone.

For those desiring to use the Volu-Tone for orchestra work, we assure you that it is the best that can be purchased on the market.

No. 116K Amplifier and One Translating Unit.....Outfit **$96.00**
No. 117K Separate Translating Units.....Each **25.00**
No. 121K Microphone .....Each **25.50**

"No Longer Need You Ever Fear
That No One Will Your Music Hear,
You Can Make Melodies Resound Afar,
By Using The Volu-Tone on Your Guitar."

18

Fig 3.1 Volu-tone amplification system, 1935[105]

Dunn first used the amplification system to record with the Brownies on 27 January 1935. Whether he had previously experimented with amplification is uncertain but he did not own a system when he joined Brown. Thus, it is likely that he had only a matter of weeks both to adapt his style to accommodate amplification and to assimilate the band's repertoire.

[105] 'Oahu Catalog 19', (Oahu Publishing Co.), 1935.

The success of this and a subsequent session a year later, coupled with live appearances and radio broadcasts, catapulted Dunn and the electrified instrument to prominence across the Southwest, shaping the destiny of the steel guitar and changing the face of country music forever. In April 1936, a month after a second recordings session, session, Brown was killed in an automobile accident. While his brother Derwood tried to maintain the band's schedule, with its leader and star vocalist gone, the group disintegrated and Dunn moved on.

After his eighteen month tenure with the Brownies, Dunn remained in the Southwest, moving from band to band. In late 1938 he founded his own short-lived band, the Vagabonds from remnants of a previous outfit to which he had belonged, the Texas Wanderers. He remained performing and recording in the Southwest until 1941 when he began three years of wartime service in the navy. After the war he took advantage of assistance provided to ex-service personnel by the GI Bill and gained a masters degree in music from the Southern College of Fine Arts in Houston. His recording and performing career continued through this period. In 1950, Dunn opened a music store. His last recordings date from about this time. He continued to run his store until 1970 when he retired. Sadly, within weeks of the sale of his business, he was diagnosed with lung cancer and he died on 27 May 1971.

3.3 Dunn scholarship

At his death in 1971, Dunn was little known outside of a small coterie of western swing enthusiasts whose interests extended to the history of the genre. His influence over a generation of steel guitarists had long since faded and his place as the pathfinder of the electric steel guitar was rarely recognised. The genre itself had fallen from public favour in the 1950s and its renaissance in the 1970s was only just beginning. Despite his achievements, Dunn had been largely forgotten. However, scholarship that would revive interest in his work had begun just a few years before his death.

Initial revival of Dunn's memory can be traced to an entry in Bill Malone's epic history, *Country Music, USA,* first published in 1968.[106] Malone's entry has provided the premier source of a body of scholarship that has since emerged. The entry was substantially derived from an interview made in 1966 as Malone followed Dunn around Dunn's Houston music shop. Initially, Malone refers to Dunn as the premier electric guitarist in country music.[107] Subsequently, he notes that Dunn's interest in steel guitar was sparked by a travelling Hawaiian troupe and refers to Kolomoku's correspondence course. Malone mentions Dunn's varied professional engagements that predated his historic engagement by

[106] Malone and Neal, *Country Music, USA*.
[107] Malone and Neal, *Country Music, USA*, 157.

Milton Brown. Stressing Dunn's significance as the first amplified country musician, Malone briefly discusses his first electric setup, a Volu-Tone amplifier with a pickup that was fitted to an acoustic guitar.

Malone's entry describes Dunn solely in terms of a jazz stylist. Discussing the position of Brown's band within the vanguard of western swing, Malone observes that Dunn's addition to Brown's band extended a 'jazz influence'.[108] He further explains that Dunn's playing resembled a frontline jazz wind instrument, stating specifically that 'his short, staccato notes [resembled] the bursts of a trumpet'.[109] Malone also reports that Dunn maintained a 'personal campaign to make the steel guitar a jazz instrument, or what he termed a "modern instrument".' Malone's final stylistic observation was that Dunn moved the instrument 'dramatically away from the chorded Hawaiian style'.[110] Reference to any Hawaiian influence in Dunn's style was confined to the initiation of Dunn's interest in the steel guitar and the correspondence lessons. Malone's expressed opinion that Dunn's style was modeled on jazz wind instruments and that he had distanced the instrument from Hawaiian style proved most influential in subsequent scholarship.

Malone's work stood as Dunn's sole commemoration from 1968 until 1977 when two significant landmarks appeared, the first in Nick Tosches' iconoclastic history, *Country: The twisted roots of rock 'n' roll.*[111] Like Malone, Tosches acknowledges Dunn as a pioneer of the electric steel guitar. He develops Malone's jazz characterization, comparing Dunn to French guitarist, Django Reinhardt, who had started recording three years before Dunn.

The second significant Dunn reference that appeared in 1977 took the form of two transcriptions in dobroist Stacy Phillips' first publication, *The Dobro Book.*[112] An established recording artist, Phillips has published many books and DVDs including two volumes of Hawaiian steel guitar transcriptions, and dobro and popular fiddling instruction manuals. The pair of modified transcriptions of Dunn's recordings in Phillips initial publication were followed in 1996 by a deeper analysis in his celebrated and comprehensive publication *Mel Bay's Complete Dobro Player.*[113] Phillips' work remains the only technical analysis of Dunn's style while he and Jeremy Wakefield[114], are the only steel guitar instrumentalists to have written about Dunn.

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[108] Malone and Neal, *Country Music, USA*, 162.
[109] Malone and Neal, *Country Music, USA*, 162.
[110] Malone and Neal, *Country Music, USA*, 163.
[111] Nick Toches, *Country: The Twisted Roots of Rock 'N' Roll* (New York: Da Capo Press, 1977), 180-83.
[112] Phillips, *The Dobro Book*, 63-4.
[113] Phillips, *Mel Bay's Complete Dobro Player*, 144-47.
[114] Jeremy Wakefield, 'Taking Off: The Steel Guitar Style of Bob Dunn', *notes to Bob Dunn: Master of the Electric Steel Guitar 1935 - 1950* (Origin Jazz Library), 2010.

Since 1977, Dunn has received attention more regularly. While Malone's country music history remains a starting point for investigation, Dunn's name has appeared in a variety of contexts. He is mentioned in instrument-specific periodicals, in country music and jazz histories, in musicological studies and in liner notes of reissued recordings. The diversity of these writings, and the nature of the respect afforded Dunn therein, indicate a growing respect for his achievements. However, his treatment in jazz scholarship has been perfunctory.

Dunn received a brief acknowledgment in the auspicious journal *Guitar Player* that reinforced Malone's themes. In an article entitled 'Steel Guitar: The Western Swing Era'.[115] Rich Kienzle observes that Dunn's single-string leads were more akin to jazz trumpeter Louis Armstrong's lines'. He further asserts that Dunn 'sounded nothing like the Hawaiian steel guitar luminaries, Sol Hoopii or Dick McIntyre [sic]'.

The most extensive and comprehensive examination of Dunn to date is found in Kevin Coffey's 'Steel Colossus: The Bob Dunn Story' published in 1994.[116] In eleven pages, Coffey provides biographical details including a close account of Dunn's career. He explores the origins of Dunn's style as well as offering observations on details of Dunn's technique. Coffey's assessment of Dunn's style is uncompromising, proffering strong praise tempered with criticism of Dunn's weaker moments. Organological details and the identification of Dunn's steel guitar 'disciples' add to Coffey's expansive article.

Coffey offers a keen perception of Dunn music and, at the outset, acknowledges the impact of the sound of Hawaiian music on his style. Of other writers, he observes that:

> Though some who have written about him like to position Dunn's steel guitar as the antithesis of "Hawaiian guitar," his music always bore the imprint of its early impact upon him – especially his lead work on ballads and his ringing, beautiful tone, so sure even when he played his hottest jazz.[117]

However, following this reflection, Coffey does not again mention Dunn's Hawaiian influences, preferring jazz wind players as a descriptive analogue.

Dunn was also placed in significant biographical studies that dealt with western swing identities. A volume on the life and music of Milton Brown, published by Cary Ginell in 1994 is permeated with references to Dunn.[118] Ginell's work is primarily an oral history, consisting principally of interviews with Brown's contemporaries. It provides a valuable account of the Brownies activities while Dunn was a member, with many colourful accounts

[115] Kienzle, 'Steel Guitar: The Western Swing Era'.
[116] Coffey, 'Steel Colossus: The Bob Dunn Story'.
[117] Coffey, 'Steel Colossus: The Bob Dunn Story', 48.
[118] Ginell, *Milton Brown and the Founding of Western Swing*.

of his exploits by Dunn's contemporaries. Of particular interest are the circumstances of his audition for Brown and how the new electric instrument was integrated into the band. Ginell offers enthusiastic support to Dunn by commending him for 'inventing and popularizing an entirely new way of playing the steel guitar'.[119] However, some of the opinions of the interviewees made long after the events and after Dunn himself has died, are ripe for reassessment. Of particular concern are the recollections of Red Varner, a jazz guitarist, who asserts that Dunn 'modeled his steel guitar improvisations on the trombone approach to jazz'.[120] Ginell concurs with Varner's assessment in his introduction proclaiming that Dunn's 'sound was based on the wails of trombone a la Jack Teagarden'.[121]

The publication of Ginell's book seems to have affirmed musicologists' attitudes to Dunn's stylistic traits and influences. In the first extended scholarly work devoted entirely to western swing, *Jazz of the Southwest: An Oral History of Western Swing,* author Jean Boyd amplifies Ginell's view of Dunn's style as being derived from his trombone skills, a view that supported her thesis that western swing was fundamentally jazz.[122] Boyd opines that Dunn's solo on his 1935 recording of 'Taking Off' 'sounded remarkably like a very good trombone player' and that behind solos of others, his chords 'sounded like a horn section providing background fills'.[123] In a second book, *Dance All Night: Those Other Southwestern Swing Bands, Past and Present*, Boyd further reinforces her view, citing trombone and jazz trumpet as the sources of Dunn's inspiration.[124] The association between Dunn's style and that of trombone or horns is again advanced in academic treatises by Dietrich [125] and Miller.[126]

CD sleeve notes accompanying rereleased recordings have also provided a forum for commentary on Dunn and his style. Most significantly, notes accompanying Origin Jazz Library's broad retrospective of Dunn's work in 2010, were an important extension of Dunn scholarship.[127] The release included substantial essays by Kevin Coffey, Cary Ginell, Jeremy Wakefield and trombonist, Dave Sager. Coffey builds a picture of Dunn's career from the time of his first recordings, extending the detail of his 1994 article and providing commentary on the contents of the CDs that are drawn from the breadth of Dunn's career.[128] Ginell's

[119] Ginell, *Milton Brown and the Founding of Western Swing*, 112.
[120] Ginell, *Milton Brown and the Founding of Western Swing*, 112.
[121] Ginell, *Milton Brown and the Founding of Western Swing*, xxii.
[122] Boyd, *The Jazz of the South West, an Oral History of Western Swing*, 1.
[123] Boyd, *The Jazz of the South West, an Oral History of Western Swing*, 116.
[124] Jean A. Boyd, *Dance All Night: Those Other Southwestern Swing Bands, Past and Present* (Lubbock, Texas: Texas Tech University Press, 2012), 101.
[125] Madeline Dietrich, 'Western Swing in Transcription: Who's Sorry Now by Milton Brown and His Musical Brownies ', University of Wisconsin-Milwaukee (2013), 45.
[126] Miller, 'Instruments as Technology and Culture: Co-Constructing the Pedal Steel Guitar ', 42.
[127] Dunn, 2010.
[128] Coffey, 'Musical Meanderings: The Recordings of Bob Dunn'.

research uncovers biographical details of Dunn's early life and career.[129] Wakefield offers a steel player's perspective on Dunn's style and provides organological details that correct earlier misconceptions about his first electric set up.[130] Sager's essay argues that Dunn's style owes much to jazz trombone.[131] While Coffey, Ginell and Wakefield make fleeting references to Hawaiian music, a strong thrust of the commentary is that Dunn's style was overwhelmingly jazz oriented and was heavily influenced by jazz horn players.

In jazz scholarship, however, Dunn's professed desire to make steel guitar a jazz instrument has yet to gain much credence. Dunn is mentioned in Gunther Schuller's volume on swing in a fascinating pair of references.[132] On one hand, Schuller describes Dunn and other western swing musicians, guitarist Zeke Campbell and steel player Leon McAuliffe, as being 'very much in a jazz groove' and much removed from country styles. In an intriguing footnote to this text he describes Dunn as tending 'to feature more the slidy Hawaiian effects, very popular on records going back to the late twenties'. While it is difficult to imagine that Schuller devoted much time assessing the Brownies extensive catalogue of recordings, the observation of his footnote goes against the mainstream of musicological opinion but finds support later in this chapter.

Recognition of Dunn has increased slowly over time. Following Malone's authoritative study, it is difficult to imagine any music historian neglecting his influence. However, the essence of Malone's appraisal of Dunn's style has remained unchallenged in subsequent commentary in such an intractable manner that it presents an obstacle to the study of the history of steel guitar. The predominant view of Dunn's style and influences that has emerged has gained such wide acceptance that contrary opinions are discouraged.

3.3.1 Challenging the orthodoxy

The characterization of Bob Dunn's style advanced by Bill Malone in 1968 has been extremely influential.[133] In subsequent Dunn scholarship, Malone's description has been expanded into a tightly drawn comparison between steel guitar and jazz wind instruments that extends across style, technique and sound. Perceptions that Dunn drew on trombone technique, originating in the opinion of Dunn's contemporary jazz guitarist Red Varner, have been widely accepted and have distilled the argument into one of influence.[134] Rather than

[129] Ginell, 'Bob Dunn: A Life in Music'.
[130] Wakefield, 'Taking Off: The Steel Guitar Style of Bob Dunn'.
[131] David Sager, 'Bob Dunn and the Trombone', *notes to Bob Dunn: Master of the Electric Steel Guitar 1935 - 1950* (Origin Jazz Library), 2010.
[132] Schuller, *The Swing Era*, 564.
[133] Malone and Neal, *Country Music, USA*, 162-63.
[134] Ginell, *Milton Brown and the Founding of Western Swing*, 112.

merely an analogue, as proposed by Malone, jazz wind instruments have come to be seen as Dunn's source.

Fundamental to the argument is the portrayal of Dunn's style in terms of a singularity. Malone's jazz wind instrument analogy is advanced by historians and musicologists alike. Even Dunn's chordal work is described in terms of a jazz horn section.[135] Despite the odd exception, the consensus is comprehensive. As a result, an impartial assessment of Dunn's place in the broad sweep of style development of the steel guitar is yet to be made. Instead, he is lauded as an innovator who created a unique instrumental style, drawing on jazz wind players for inspiration and with little reliance on other sources.

Why has the correlation between steel guitar and jazz horns has been so alluring to commentators? A variety of factors may have been influential and made more convincing by their cumulative effect. For appraisals based on aural discrimination, supportive prima facie evidence is abundant. A primary element of Dunn's first historic recordings is the unusual timbre. At times, the distortion that his tiny amplifier adds to his tone, in conjunction with the added sustain, creates a unique sound that has some similarity to the saw tooth waveform of saxophone or a cornet under the duress of loud high notes. Dunn certainly employed melodic phrasing from the jazz idiom. Dunn emerged at an important turning point for both the steel guitar and country music. It is possible that the novelty of both the context of the emerging genre and Dunn's fresh approach may have blinded commentators to alternative origins and influences. As Dunn represented a new beginning, it may have seemed futile to search for origins of his playing in the history of his instrument. Thus correlation seems to have become causation, with jazz wind players seen to be the sole source of Dunn's muse. This argument became more deeply entrenched when it was augmented by theory that Dunn's technique was an extension of jazz trombone technique that he had previously developed. Alternatively, Malone and those that followed him may have had little knowledge on which to base counter theories. A rudimentary understanding of Hawaiian steel guitar style and technique or a stereotypical view of Hawaiian music as a serene, saccharine, homogeneous form could dissuade commentators seeking answers from that quarter.

The following sections of this chapter will challenge orthodoxy in an examination that will reveal a more complex situation than has been previously accepted. Existing views of Dunn's style will be challenged through three avenues. Firstly, a re-evaluation of Malone's interview with Dunn, employing important new information, will cast a different light on Dunn's influences. Notes made by Malone in the course of his interview with Dunn have been made available for this study and will form the basis for a reappraisal of Malone's

[135] Boyd, *The Jazz of the South West, an Oral History of Western Swing*, 116.

entry.[136] Second, the proposition that Dunn was strongly influenced by trombone technique will be closely examined. Third, an extensive analysis of Dunn's style will be presented, based on a close examination of his recordings. As a result, an alternative view of Dunn will emerge in the course of this chapter. It is hoped that the yoke that previous assumptions have placed on the appraisal of Dunn's style will be removed to allow a fuller appreciation of both the breadth of his talent and his true significance to the development of the steel guitar.

3.4 Dunn's Influences

The consensus of commentators that Dunn played his steel guitar in a jazz horn-like fashion is often honed by observations of similarities between Dunn's style and that of jazz wind players, Louis Armstrong, Jack Teagarden and Bix Beiderbecke.[137] The perceptions are generalized, with few musical examples cited to justify these parallels. While these observations may be valid, the exclusion of other influences has distorted the view of Dunn's place in the development of the steel guitar.

The formative influences on a musician are typically both diverse and continuous. They may include the music that first inspired the player and drew them to the instrument, music that was subsequently admired, pedagogy to which they were exposed and their process of learning. A determination of such factors and their significance is a difficult task for a researcher without substantial input from the subject. It is most fortunate, therefore, that notes made by Bill Malone in an interview with Dunn in 1966 have been made available for this study.[138] The notes provide a privileged view of Dunn's formative influences.

Bill Malone's interview with Dunn was conducted in 1966 while Malone was researching his country music history. Malone followed Dunn around his Houston music school and recorded his comments on a note pad. Nine hand written pages of responses cover details of Dunn's career, instruments, learning process and early steel guitar influences. While Malone's entry in his book is largely based on Dunn's responses, some crucial references to steel guitar influences are absent.[139]

After confirming Dunn's use of High A major tuning, the first three pages are concerned with Dunn's evaluation of early steel players and their styles. In order, those players are Sol Ho'opi'i , Frank Ferera, Sailor Keloa, Bob Pauole, and Andy Sannella.[140] On

[136] Bob Dunn, 'Personal Interview', ed. Bill Malone (unpublished), 1966.
[137] Ginell, *Milton Brown and the Founding of Western Swing*, xxii., Boyd, *The Jazz of the South West, an Oral History of Western Swing*, 116., Wakefield, 'Taking Off: The Steel Guitar Style of Bob Dunn', 31., Sager, 'Bob Dunn and the Trombone'., Malone and Neal, *Country Music, USA*, 162.
[138] Dunn, 'Personal Interview'.
[139] Malone and Neal, *Country Music, USA*, 157-63.
[140] Malone may have misheard of misspelled the name 'Sailor Keloa' as there is no prominent early steel player of this name.

the last page, it is noted that Dunn also listened to records of Pale K Lua, one of the earliest Hawaiian steel guitar masters. The rest of Malone's notes broadly canvas Dunn's career with details of his first amplification and the correspondence course. Significantly, Malone records no reference made by Dunn to jazz horn players. An indirect allusion is made in the mention of Dunn's plan to journey to New Orleans to join a Dixieland band in 1934, a trip that was abandoned after he was engaged by Brown.

3.4.1 Hawaiian influences.

Dunn's responses on the subject of Hawaiian steel guitarists and steel guitar music make up a third of the notes taken by Malone. Dunn's responses reveal an extensive knowledge and practice of the styles of prominent Hawaiian steel players. There are many possible reasons for Malone's exclusion of these references. Malone may have lacked knowledge of the Hawaiian players and was not confident in reporting on them. Furthermore, it may have been a matter of expediency for him to not open another wide field of investigation in support of such a small entry in his vast work. It is also possible that he may have trusted his own aesthetic judgment in assessing Dunn's style, dismissing early influences as inconsequential. Whatever the reason, it is now instructive to examine Malone's carefully transcribed notes closely.

Sol Ho'opi'i is the first Hawaiian steel player mentioned with an entry that reads in full:

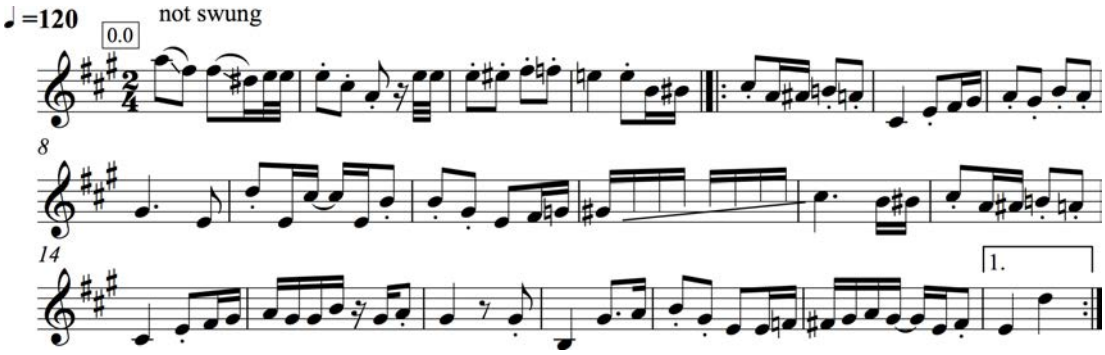
> another great early Hawaiian – 1920's Sol Hoopii
> Played in California – Did some jazz.
> Played background music for Paramount Movies
> Played later in Vitaphone 'shorts'

Ho'opi'i is the most renowned Hawaiian player of all time and was the inaugural voice of the second generation of Hawaiian steel players.[141] Ho'opi'i's recording career extended from 1925 to the late 1930s. He recorded both traditional Hawaiian mele, hapa haole tunes modeled on current popular music, as well as jazz. His jazz solos often consisted of rapid single note lines with exacting articulation, plucked with a highly developed right-hand technique. He also employed smooth dyadic melodies that were characteristic of the music of the first generation of steel players. Using the same High A major tuning as Dunn, Ho'opi'i also developed a method of playing chord melody. One of the earliest examples appears in the track 'Stack O'lee Blues', recorded in 1926.[142] That Malone needed to identify Ho'opi'i in as

[141] Cundell, 'Across the Pacific: The Transformation of the Steel Guitar from Hawaiian Folk Instrument to Popular Music Mainstay', 81- 107.
[142] Sol Hoopii and His Novelty Trio, 'Stack O'lee Blues', (Columbia 797-D), 1926.

much detail suggests that he may have had no prior knowledge of Ho'opi'i and his significance for steel guitarists.

The second reference on the first page of Malone's notes is to Frank Ferera, a prominent member of the first generation of Hawaiian steel players. This entry is of great significance, stating that Dunn learnt some of Ferera's tunes from records. The tunes cited were 'Maui' and 'Honolulu Rag'. Ferera was born in Hawaii in 1885 and left for the mainland in 1902. He performed in duos and other small ensembles and recorded extensively. The music of the Ferera's generation was multi faceted. Simple ethereal Hawaiian melodies contrasted with brisk marches and hapa haole tunes, energized by ragtime rhythms. Ferera was known for a rapid staccato picking style with which he created syncopated patterns to embellish melodies. Honolulu March, transcribed in Ex. 3.1 below, provides an example of Ferera's boisterous style.[143] The rapid march, with its embellishments, requires fast and accurate picking, while the preponderance of staccato notes demand tight and accurate blocking. The ninth bar demonstrates how ragtime rhythm can be introduced to a march as an embellishment. The use of glissandi is limited to the opening bar and the ninth bar, where it is exploited in the execution of an idiosyncratic microtonal effect.

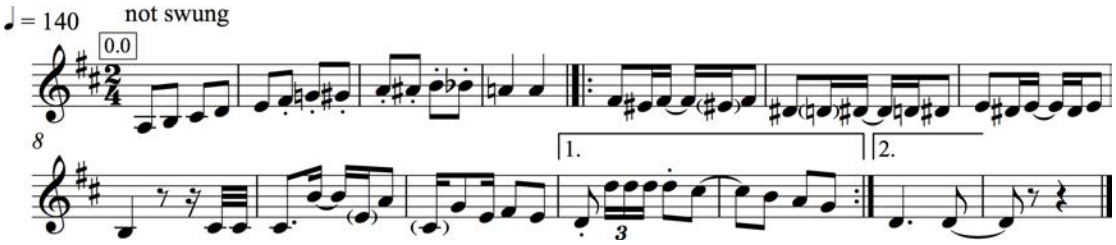


Ex. 3.1 Introduction and first strain of 'Honolulu March', Frank Ferera (c March 1920, mx. S 733-C)

The entry in Malone's notes directly below the reference to Ferera states: 'The Hawaiians played up-tempo. Didn't drag.' And with respect to Hawaiian marches the entry notes 'Had to have technique to play those songs.' Ferera's up-tempo tunes definitely didn't drag, but the rhythmic devices employed render them more a product of ragtime than the jazz age that followed. The comment that Dunn learned jazz technique from playing Hawaiian marches is telling. The technical demands of Hawaiian marches are high, involving an intense combination of picking, blocking and bar movement. Furthermore, the dynamic demands of an acoustic instrument required drove the player to achieve smooth fusion of techniques while

[143] Ferera and Franchini, 'Honolulu March', (Vocalion 4129), 1920.

exerting the picking hand. The transcription in Ex. 3.2 below shows the rhythmic intricacies of an early version of a Hawaiian standard, 'Kohala March' played by David Ka'ili.[144]



Ex. 3.2 Introduction and first strain of 'Kohala March', David Ka'ili (28/12/14, mx. B 15493)

On the following page, Malone records Dunn's opinion of Hawaiian playing styles in the phrases "Some Hawaiians in late twenties tried to play modern – but not too good'.
With Dunn's admiration of Ho'opi'i, a stylist of the late 1920s and 1930s, in mind, this statement seems to acknowledge the difficulty that jazz performance held for steel players.

Page three of Malone's notes contains some telling entries. It begins with the statement that Dunn 'wanted to make steel [guitar] part of modern music'. This proposition is rephrased by Malone in his book to read '[Dunn] was involved throughout his life in a personal campaign to make the steel guitar a jazz instrument, or what he termed a "modern instrument".'[145] There is a subtle difference between Malone's notes and his subsequent interpretation. The emphasis on jazz is Malone's. If Malone's entry is accurate, Dunn spoke of 'modern music', which could be applied to most of the Brownies repertoire at the time, which extended well beyond jazz. But it is possible to see that if Dunn's hot solos were Malone's primary sole focus, he would have been satisfied with his interpretation of Dunn's remark.

At the bottom of page three is a note of great significance that was overlooked by Malone. The entry reads:

1st steel guitar player he admired – Real Hawaiian Bob Penoli

Penoli played modern – played on KFBI – with group 'Bob and Jim'

This entry provides an important insight into what Dunn considered modern playing and can be read in conjunction with the entry close above concerning 'modern music'.

By 'Penoli', Dunn can only have been referring to Bob Pau'ole, who was a member of the duo Jim and Bob, the Genial Hawaiians, stars of Chicago's WENR radio station from 1928 and 1936.[146] A native Hawaiian, Bob left the islands in 1926 and moved to Chicago.

[144] Irene West and Her Royal Hawaiians, 'Kohala March', (Victor Vi 17710-A), 1914.
[145] Malone and Neal, *Country Music, USA*, 162.
[146] Cyril Lefebvre, 'Genial Hawaiians Jim and Bob', ed. Les Cook (Grass Skirt Records), 2012.

The duo were listed as ‘staff guitarists’ in a WENR advertising brochure in 1928. Bob changed the spelling of his name Pau’ole to Panoli to avoid spelling and pronunciation problems. The increasing power of WNER’s transmitters, and programing on many other stations, ensured that the duo’s live radio performances were heard by a vast audience across middle America.

Surprisingly, despite the size of their audience, Jim and Bob are only known to have recorded once, on 12 December 1933, when twelve sides were cut. Of the twelve recorded by the duo, six were vocal tracks with acoustic steel guitar and Spanish guitar accompaniment, five were instrumental, with steel guitar as lead instrument supported by Spanish guitar and the remainder were instrumentals without steel guitar. The repertoire was varied and included two jazz tracks, ‘St Louis Blues’ and ‘Sweet Georgia Brown’, a number of hapa haole Tin Pan Alley compositions, non-Hawaiian Tin Pan Alley compositions and some country and traditional tunes. This regrettably small number of recordings is a sample of the music that reached Dunn’s ears over the airways. However, they provide a valuable indication of what he considered to be ‘modern playing’ of the steel guitar.

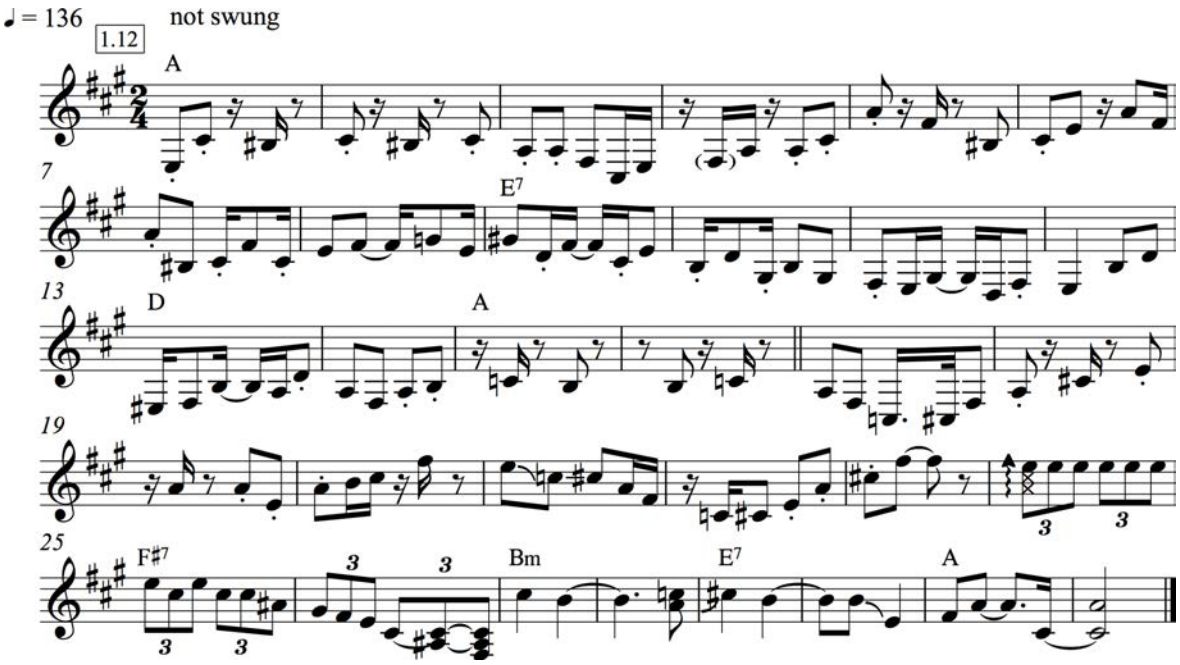
Employing the same A major tuning as Dunn, Pau’ole’s steel playing dominates most of the diverse sides. Predominately, the vocal performances are prefaced with long steel guitar introductions, while the instrumentals, other than a ukulele track, Sweet Georgia Brown, are showpieces for the steel guitar exhibiting a virtuosity that rivals Ho’opi’i.[147] Pau’ole employs the same melodic modes of single note, dyadic and chordal, as does Ho’opi’i and displays an even greater expertise in the use of harmonics.

The Hawaiian themed tunes, ‘Calling Aloha to Me’[148] and ‘Hula Blues’[149] give Pau’ole scope to exploit the idiosyncratic elements of steel guitar playing that are associated with Hawaiian music. The combination of dyadic melodies, harmonics, vocal inflections and chordal glides provide evocative musical settings that are similarly employed in the country tune, ‘There’s a Little Grey Mother Dreaming’.[150]

Pau’ole’s rhythmic mastery comes to the fore in his hot solo in ‘By the Waters of Minnetonka’, a composition fashioned from a Native American melody, published in 1913, which had achieved lasting popularity.[151] (See Ex.3.3 below) Originally a placid love song, Jim and Bob refashion the tune as an up-tempo dance number. Rhythmically, Pauole’s solo represents a transition from ragtime towards swing. In the 2/4 meter and without swung sixteenth notes, the syncopations of the first system create a strong cross rhythm of three over

[147] Jim and Bob and Genial Hawaiians, 'Sweet Georgia Brown', (Bluebird B-5944), 1933.
[148] Jim and Bob and Genial Hawaiians, 'Calling Aloha to Me', (Bluebird B-6056), 1933.
[149] Jim and Bob and Genial Hawaiians, 'Hula Blues', (Bluebird B-5047), 1933.
[150] Jim and Bob and Genial Hawaiians, 'There's a Little Grey Mother Dreaming', (Bluebird B-6056), 1933.
[151] Jim and Bob and Genial Hawaiians, 'By the Waters of Minnetonka', (Bluebird B-5944), 1933.

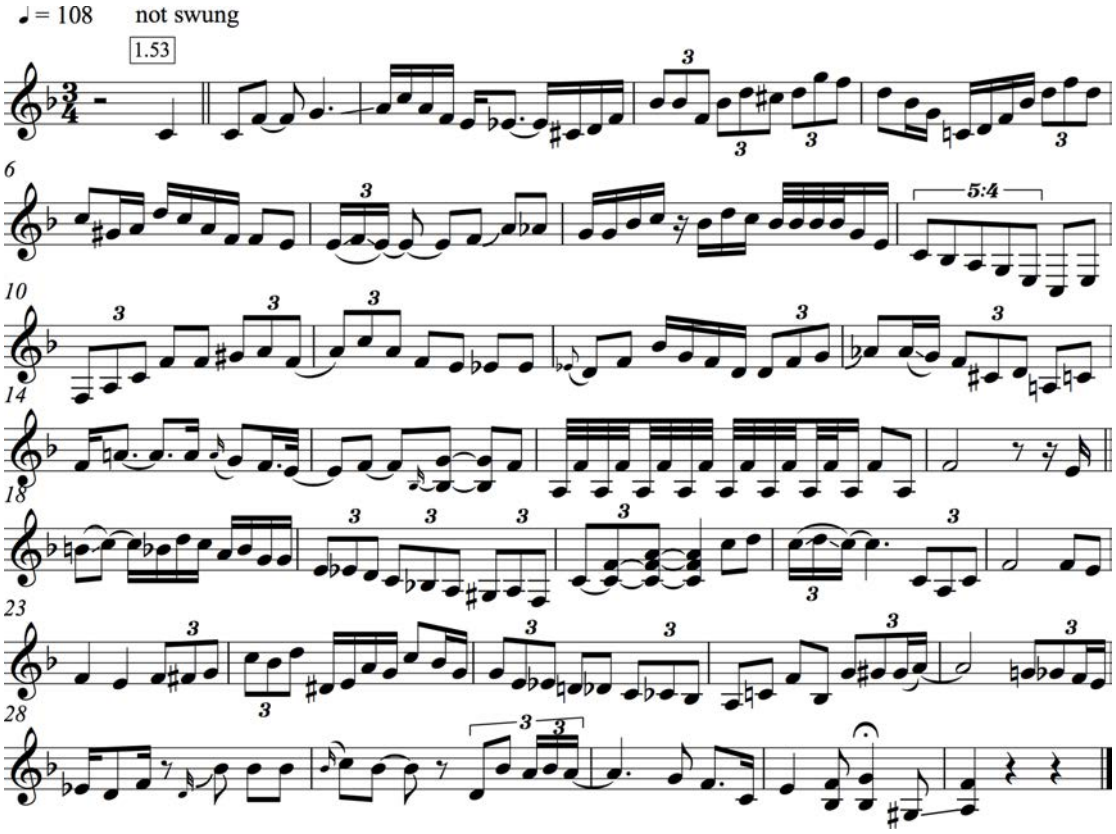
two. This is followed by drum-like syncopated motifs. He moves effortlessly into an extended phrase of triplets at bar twenty four that rhythmically references the swing idiom. The range of rhythmic devices is executed with precision at a brisk tempo.



Ex. 3.3 Improvisation on 'By the Waters of Minnetonka', Bob Pau'ole (12/12/33, mx. 73331-1)

Pau'ole's most spectacular display of virtuosity can be found in the last of three choruses of 'The Song of the Range', a rendering of the western song, 'Home on the Range'.[152] In the first two choruses, the melody is presented faithfully by the steel guitar. In the first iteration, it is harmonised, at times, in thirds and sixths and embellished with languid inflections, while in the second it is enhanced with rapidly picked trills. In the third chorus, transcribed below in Ex. 3.4, Pau'ole decorates the melody with abandon. The tune sometimes is lost at times beneath a torrent of embellishment, but surfaces by the middle of the chorus. On what may well be a composed solo, Pau'ole moves seamlessly between differing short note subdivisions in a flowing melody that pauses only to acknowledge the original melody. This solo remains one of the high points of the entire acoustic Hawaiian steel guitar era and it is little wonder that its creator caught Dunn's attention.

[152] Jim and Bob and Genial Hawaiians, 'Song of the Range', (Bluebird B-5316), 1933.



Ex. 3.4 Improvisation on 'Song of the Range', Bob Pau'ole (12/12/33, mx. 77332-1,)

Considering the diversity of Jim and Bob's repertoire demonstrated in their recordings and Dunn's stated admiration, it seems likely that Dunn's reference to modern playing in his interview with Malone refers as much to performance technique as to musical style. Pau'ole demonstrated that hot playing was not just the province of jazz players and could be employed in the service of a wide range of repertoire. A lesson that Dunn may have learnt from Pau'ole is that technique provides the key both to the utility and versatility.

The predominant role of wind instruments in early jazz, attained with a volume with which rhythm section instruments of the day could not compete, may have led commentators to their summation of Dunn's style. Dunn's amplification placed him at the forefront in a role that was uncustomary for a steel guitar, seemingly with few models other than wind soloists. However, the Hawaiian steel guitarists to whom Dunn was indebted all played in ensembles, albeit smaller and quieter ones. While Dunn's amplification could place him in larger louder bands, the role of principal soloist was not foreign to steel guitarists, nor was it a role with which Dunn was unfamiliar.

In summary, Dunn professed to a wide range of Hawaiian influences, each of which contributed to his success in western swing. He was impressed by the hot jazz solos and chord melody of Ho'opi'i, and by the virtuosity of Pau'ole. His technical mastery had been honed by the demands of Hawaiian marches and the ragtime rhythms of hapa haole tunes. Hawaiian

style, techniques and sensibilities ran deep in his playing but were unrecognized by many who later sought to divine his sources.

3.4.2 Jazz influences

While this investigation will show that Dunn's style extended far beyond jazz, it is his hot solos that have attracted the attention of audiences, his steel playing contemporaries and commentators alike. Dunn's considerable improvisational skills were apparent from in his first recordings with the Brownies in 1935. Seven years as a professional provided him with time and opportunity to develop such skills long before he met Brown. Nevertheless, to hone such fluency on the technically demanding steel guitar required both concentrated effort and persistence. In his interview with Malone, Dunn asserted that it was his jazz playing that won him the position with Brown.[153] One of his audition pieces, his composition 'Taking Off', was recorded with the Brownies weeks later.[154] Dunn's performance on the up-tempo jazz tune is based on the harmonic framework of Bix Beiderbecke's 'Singing the Blues'. The extent of his technical abilities is apparent in the head of the piece and the depth of his improvisational skills is clearly demonstrated in his solo that ends the recording. (See Ex. 3.20 below)

In his interview with Malone, Dunn acknowledged his jazz credentials while making no reference to favoured jazz performers. Therefore, suggestions that he was strongly influenced by wind players such as Armstrong, Beiderbecke and Teagarden are speculative, although it is likely that Dunn was aware of these early jazz leaders. There is even a suggestion that Dunn may have even met Teagarden in Texas.[155] However, the proposition that Dunn copied jazz wind players precludes a consideration of how the steel guitar itself mediated Dunn's attempts at jazz. The sonic characteristics, method of sound generation and performance technique of wind instruments are so dissimilar to that of the steel guitar that emulation would have been no simple matter.

The constraints that the steel guitar placed on Dunn's playing will be discussed later in this chapter. But briefly, it is clear from ghost notes and imperfect intonation of some of Dunn's solos that the musical lines he imagined did not fall easily under his bar. For him, notes were not as freely accessed and assembled as they were by wind players.

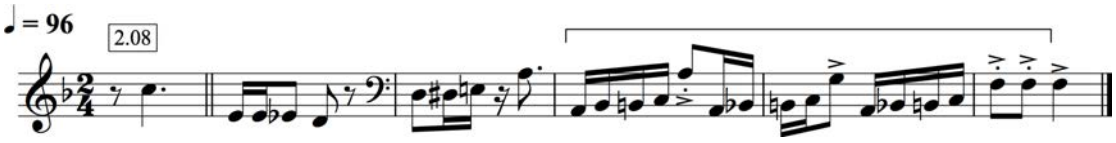
Furthermore, the dynamic envelope of notes of the percussive steel guitar differ inherently from those of wind instruments, resulting in entirely different qualities of note attack and sustain. Even had he attempted to emulate wind players, the idiosyncrasies of his

[153] Dunn, 'Personal Interview'.
[154] Milton Brown and His Brownies, 'Taking Off', (Decca 5149), 1935.
[155] Ginell, *Milton Brown and the Founding of Western Swing*, 196.

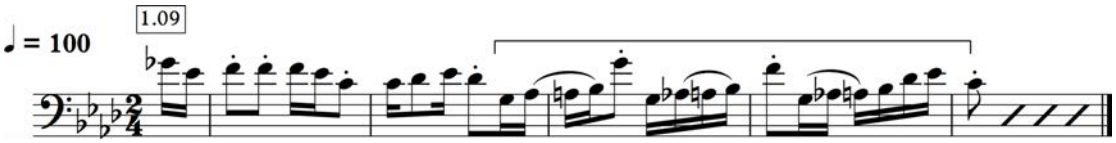
instrument ensured that an innovative style would emerge. Additionally, the assumption of influence chiefly from wind players diminishes consideration of the influence of other jazz instrumentalists, such guitarists, piano players and, in particular, violinists. Dunn constantly played in the company of expert jazz influenced violinists such as Cliff Bruner. It would be safer to assume that Dunn's jazz influences were far broader than is widely believed.

3.4.2.1 A micro-level stylistic analysis

One approach that may have encouraged commentators to make generalisations is the correlation of particular phrases played by Dunn and others. Dunn's recordings can be sifted for influences by examining them with a micro focus, identifying particular riffs or passages and seeking similar examples by other players. For example, the following passage occurs in the solo of Dunn's first recording of 'Taking Off' in 1935.[156] It is an example of melodic convergence with the repetition of a four note motif as an accented melody descends by seconds from A to F. (Ex. 3.5 below) The same device can be seen in a solo by Jack Teagarden on a popular recording of 'She's a Great, Great Girl' in 1928.[157] (Ex. 3.6 below) While it is tempting to note the similarities and thereby claim that Dunn had copied the passage from Teagarden's earlier recording, such an assumption is fraught with danger. Teagarden may have been Dunn's source but it is by no means a certainty. The passage has similarity to exercises from *Arban's Famous Trombone Method*.[158] It may well have entered the jazz lexicon through the agency of Miff Mole, whose classical training introduced a fresh dimension of style.[159] Therefore, while aural cues and laborious analysis may provide some clues, the validity of assumptions that rely on this process is open to question.



Ex. 3.5 Improvisation on 'Taking Off', Bob Dunn (28/1/35, mx. C 9731-A)



Ex 3.6 Improvisation on 'She's a Great, Great Girl', Jack Teagarden (14/3/28, BE-43358)

[156] Brown and Brownies, 'Taking Off'.
[157] Roger Wolfe Kahn and His Orchestra, 'She's a Great, Great Girl', (Victor BVE-43358), 1928.
[158] Charles L. Randall, *Arban's Famous Method for Trombone* (New York: Carl Fischer, 2008), 167-69.
[159] Tom Smith, 'Early Jazz Trombone... Missing Links... And the Rest of the Story' 2016. http://tomsmithjazz.wixsite.com/music/single-post/2016/05/29/EARLY-JAZZ-TROMBONE-MISSING-LINKS-AND-THE-REST-OF-THE-STORY-1 (accessed April, 3rd 2018).

3.4.2.2 A macro-level stylistic analysis

A more fruitful approach in the assessment of Dunn's jazz influences may be to consider his solos in macro dimension, in particular his approach to improvisation. A broad view of his recordings reveals that his predominant method to be one of harmonic or abstract improvisation. Brian Harker's investigation of Louis Armstrong's Hot Five and Hot Seven recordings made between 1925 and 1928 reveals that one of Armstrong's landmark contributions to the art of jazz improvisation was the popularisation of 'harmonic improvisation'.[160] Harker's analysis of 'Potato Head Blues'[161], shows how Armstrong's improvisational focus moved from the melody of a tune to its harmony.[162] Paraphrasing or embellishing melodies was a restraint on improvisers that was lifted when abstract improvisations were employed. Through this new approach, Armstrong demonstrated a freedom that allowed improvisers to extend their solos for as long as their inspiration endured, setting the scene for extensive improvisations that were at the core of bebop and the modern jazz that followed. Armstrong's revolutionary approach was widely emulated at the time and, either directly or indirectly, provided a model of 'modern' playing to Dunn as he developed his craft.

While Dunn paraphrased melodies occasionally, the majority of his hot improvisations were abstract. This marked a significant departure from the approach of the hot Hawaiian players of the 1920s. Leading players, Ho'opi'i and Bennie Nawahi relied predominately on paraphrasing. With such a small sample of Jim and Bob's recordings, it is hard to pass such a judgment on Pau'ole, as in his miniscule catalogue, examples of both approaches are in evidence. Generally, Dunn's approach can be seen as a departure from Hawaiian practice and very much influenced by Armstrong and the new generation of jazz players.

In summary, Dunn's jazz stylings were informed by a number of sources. Hawaiian players provided both a model of technique and a source of jazz that had been mediated by the unique constraints of their instruments. Dunn's appreciation of jazz could have been further fueled from the myriad of sources to which he was exposed; recordings, radio programs and live performances, and significantly, through interaction with colleagues and peers.

[160] Harker, *Louis Armstrong's Hot Five and Hot Seven Recordings*, 11.
[161] Louis Armstrong and His Hot Seven, 'Potato Head Blues', (Okeh 8503), 1927.
[162] Harker, *Louis Armstrong's Hot Five and Hot Seven Recordings*, 68.

3.4.3 The Trombone Fallacy

A curious hypothesis is deeply rooted in literature devoted to Bob Dunn. At time of writing, a preliminary Internet search unearthed the contentious supposition in his Wikipedia entry.[163] The first line describes Dunn as 'an American trombonist and a pioneer western swing steel guitarist'. While Dunn played trombone, and late in his career, taught the instrument in his music shop, there are no recordings to substantiate assertions that he showed any exceptional ability on the instrument. Recognition of his steel guitar achievements is greatly warranted. That said, the appearance of the trombone reference is a puzzling aberration, until the breadth of Dunn scholarship is examined.

As previously discussed, equating Dunn's playing with that of jazz horn players began with Malone's first reference in 1968 and has been echoed by most subsequent writers. While the proposition has merit, the degree of stylistic similarities and the sources of his inspiration are open to debate. However, a proposition that Dunn's trombone playing exerted strong influence over his steel guitar style began in 1994, with the publication of Ginell's book and has subsequently gained widespread acceptance.[164] The positive reception that the theory has received may stem from the support that it lends to Malone's primary observations. However, for those with detailed knowledge of technique required for both instruments, the notion is fanciful.

The origins of this misunderstanding can be clearly seen in the opinions of Dunn's colleague, guitarist Red Varner, recorded by Cary Ginell.[165] Varner is quoted as saying:

> When you come right down to it, the slide trombone is kin to the steel guitar in that sliding from position to position is common to both. With his background in trombone Bob must have realized this relationship between the two instruments and made good use of it in his early efforts to probe the mysteries of the steel guitar. I don't remember ever hearing him discuss this possible aspect of his studies but there was no good reason for him to do so because nine string players out of ten at that time would not have understood what he was talking about. I have no idea how far his study of the trombone had taken him but even the most limited or elementary knowledge of the instrument would have stood him in good stead in his study of the steel guitar.

Varner qualifies his assertion by admitting that the hypothesis is his and not Dunn's. Furthermore, his phrase 'the mysteries of the steel guitar' suggests that he has no great knowledge of the instrument. However, Ginell appears to have accepted the premise without

[163] Wikipedia, 'Bob Dunn (Musician)' 2017. (accessed 25th July 2017).
[164] Ginell, *Milton Brown and the Founding of Western Swing*.
[165] Ginell, *Milton Brown and the Founding of Western Swing*, 112.

further substantiation, and asserts in his introduction to the book that 'Dunn created an entirely unfolklike sound based on the wails of trombones à la Jack Teagarden.'[166] Elsewhere Ginell asserts that 'Bob Dunn used [the steel guitar] mainly to imitate the sounds of a jazz trombone.' Thereafter, references to Dunn and the trombone became commonplace in the literature. Prominent author, Jean Boyd, prefaces her account of Dunn by stating that, at the time he joined the Brownies in 1934, 'he was a former trombonist'.[167] Later, with reference to Dunn's performance on the 1935 recording of 'Taking Off", Boyd declares that he 'sounded remarkably like a very good trombone player on two outstanding choruses'.

The argument in support of the trombone hypothesis reached a pinnacle in an essay by David Sager that accompanies the 2010 reissue of Dunn's recordings by the Origin Jazz Library.[168] The essay, entitled 'Bob Dunn and the Trombone', is supplemented by a photograph of Dunn holding a trombone at full extension. (Fig. 3.1 below) This image provides the observer with a powerful visual cue of anticipated motion that can be mentally associated or equated with the motion of the steel guitar bar.

Fig. 3.2 Bob Dunn with trombone, courtesy of Kevin Coffey

At the heart of Sager's argument is the contention that trombone technique was embedded in Dunn's style, contending that Dunn employed trombone-like techniques of tongue and wind control in his articulation. He also suggests that Dunn's note choices are trombonistic, a contention supported by a belief that the wide intervals of Dunn's arpeggiated lines could be attributed to a trombonist's knowledge of the harmonic series, which he assumes Dunn possessed. Sager states that:

[166] Ginell, *Milton Brown and the Founding of Western Swing*, xxii.
[167] Boyd, *The Jazz of the South West, an Oral History of Western Swing*, 115.
[168] Sager, 'Bob Dunn and the Trombone'.

> Jazz-oriented guitarists seem more prone to play in a linear fashion, choosing phrases with notes that lay in an intuitive and sensible way that moves the fretting hand in a smooth motion. But Dunn played in the angular style that hot trombonists of the day were using.

This suggests that Sager is unaware of the vast gulf between Spanish guitar and steel guitar technique, and therefore the technical obstacles that shaped Dunn's melodic approach.

Fortunately, Dunn himself has provided direct evidence that can be used to refute the argument that his own trombone technique could have been a formative influence on his steel guitar style. The notes of his interview with Malone in 1966 record that he began playing trombone in 1934.[169] However, his recordings of January 1935, reviewed throughout this chapter, clearly demonstrate that his steel guitar style was already mature at that stage.

Glissando was the common stylistic feature which may have drawn Varner to conflate the trombone and steel guitar.[170] Had he and subsequent commentators been more aware of how it permeated Hawaiian steel guitar style and the functions that it fulfilled, perhaps the fallacy may not have taken hold as it did. Glissando is core to Hawaiian steel guitar technique. It was employed by Hawaiian musicians in discrete ways, both understated and obvious. It could be subtly employed in the imitation of vocal inflection, more stridently incorporated in blues inflection or conspicuously used in long glisses of harmonics or chords that are a hallmark of Hawaiian style. Dunn's recordings show that he was versed in all of these approaches.

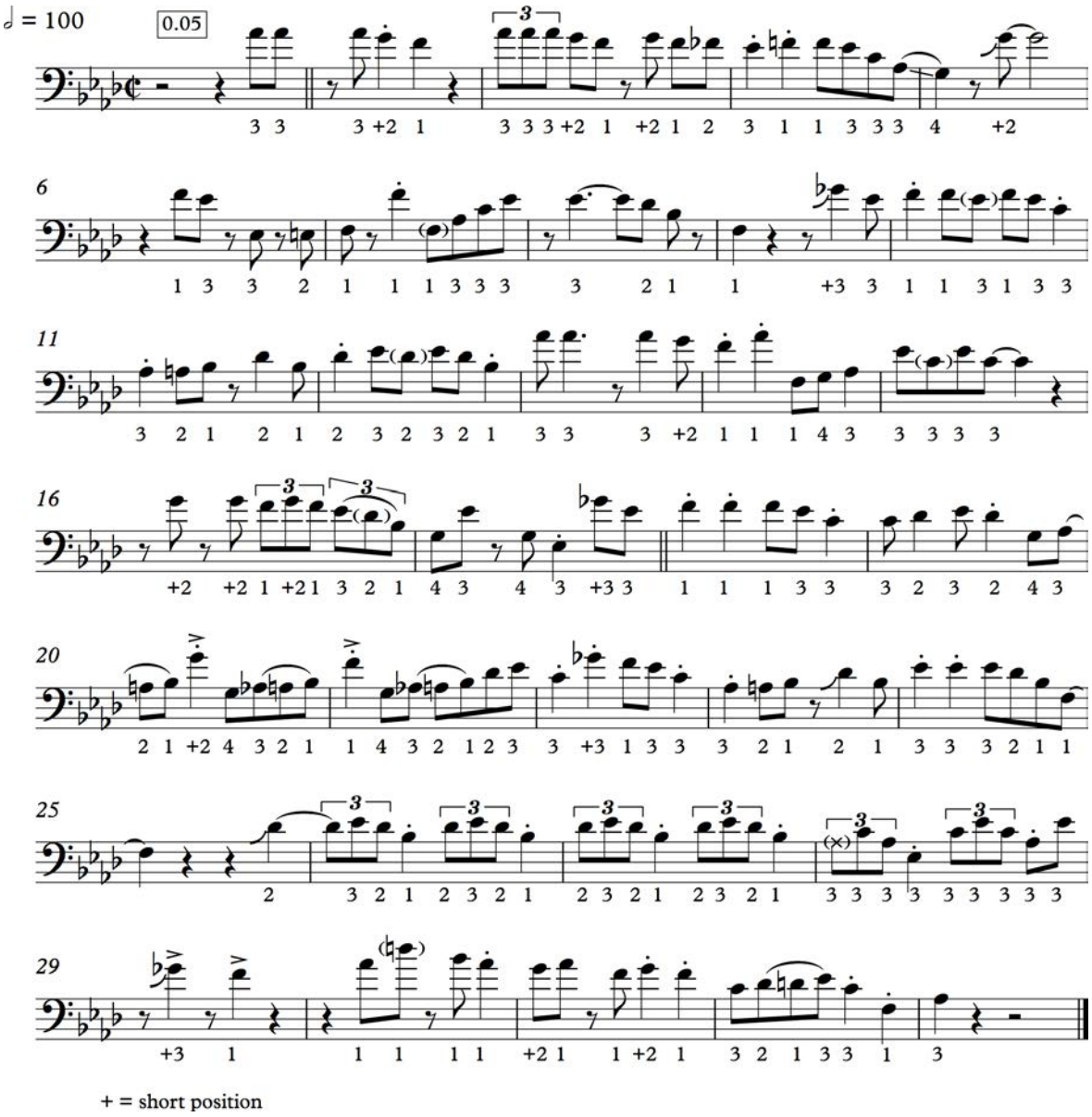
3.4.3.1 Jack Teagarden

To dismiss trombone-related glissando technique as an influence on Dunn does not preclude other more subtle influences of the music of jazz trombonists. Texan Jack Teagarden, who Dunn may have met, is mentioned as a possible influence and a more nuanced consideration of his style reveals similarities with steel guitar not previously considered.

To those unversed in the intricacies of the instrument's history, Dunn's photo, with trombone at full extension, brings to the mind the accentuated tailgate style of jazz trombonists such as Kid Ory, whose distinct long glissandi were conspicuous in the polyphonic improvisations of early jazz. For these musicians, the glissando provided an opportunity to achieve a presence and identity for the trombone, pitched below the other frontline instruments. Long glissandi provided an idiosyncratic device that distinctly signified

[169] Dunn, 'Personal Interview'.
[170] Ginell, *Milton Brown and the Founding of Western Swing*, 112.

the participation and function of the trombone in a crowded musical texture. Breaking from the tailgate tradition, Teagarden was a pioneer of a revolutionary style of 'slide-less' trombone articulation that was achieved by employing lip glisses and reducing the slide positions used from seven to four.[171] An example of how this was achieved can be seen in a transcription of his solo from 'She's a Great, Great Girl' in Ex. 3.8 below.[172]



Ex. 3.7 Improvisation on 'She's a Great, Great Girl, Jack Teagarden (14/3/28, BE-43358)

Teagarden's avoidance of glissandi may have had various motivations. He was influenced by Miff Mole whose was steeped in classical trombone technique that placed no special focus on glissandi and represented a quantum leap from that of the early players. But

[171] Schuller, *The Swing Era*, 592-93.
[172] Kahn and Orchestra, 'She's a Great, Great Girl'.

crucially, as the polyphonic style declined, Teagarden's solos attracted sole focus and garish devices like the glissando were not necessary to draw the spotlight. Schuller notes that Teagarden's trombone playing had a parallel in his vocal style, stating that they were 'virtually interchangeable'.[173] Schuller further observes that Teagarden's was a vocal conception, at odds with orthodox trombone playing.[174] This opens up an alternative avenue by which Dunn may have developed affection for Teagarden's playing beyond a love of hot jazz. A parallel exists between Teagarden's style and Hawaiian aspects of Dunn's playing, which, by tradition, was also vocally influenced. It is possible that this drew Dunn to a special admiration of Teagarden's style rather than any technical consideration. However, a detailed comparison to advance this argument is beyond the scope of this study.

3.5 The Brownies Sessions

In the course of this inquiry, one hundred and seventy recordings, made between 1935 and 1950, have been examined. While this number includes twenty four tracks recorded with his own band, the Vagabonds, twenty four tracks with the band of his long-time colleague Cliff Bruner and over forty tracks under other band leaders, the seventy eight tracks he recorded with the Brownies at the beginning of his recording career provide crucial evidence to this study. Investigation will show that the style exhibited by Dunn in his first recording sessions is mature and that the refinements that he made across the fifteen years of his recording career were largely superficial.

Dunn's amplified presence at the first session, in Chicago in January 1935, was an iconic moment in country music history and for the steel guitar. It announced Dunn's arrival in the Texas radio, dance hall and recording scene. The subsequent recording session, made in New Orleans in March 1936, was equally well received. There may well have been more sessions to follow but for an automobile accident on 14 April 1936 that claimed Brown's life.

The two recording sessions proved significant for the Brownies. Brown's decision to record with the newly incorporated American Decca company was part of a strategy to broaden the popularity of the band. The group had made two previous recording sessions with RCA Victor that had only achieved scattered regional impact and, in moving to Decca, Brown sought an extension of reach. The hiring of Dunn at this time, to modernize the sound of the group, was an integral part of Brown's strategy.[175]

In assessing Dunn's early recordings, the circumstances under which they were made should be considered. The first session reveals a detailed picture of Dunn's stylistic

[173] Schuller, *The Swing Era*, 593.
[174] Schuller, *The Swing Era*, 593.
[175] Ginell, *Milton Brown and the Founding of Western Swing*, 166.

development at the end of 1934. Having been inducted into the Brownies only weeks before, the recordings document Dunn's style before he had an opportunity to thoroughly hone his skills with the newly acquired amplification system.

The pressure on Dunn to perform adequately with his new system would have been exacerbated by the length of recording sessions and the haste in which tracks were cut. The Brownies recordings were part of an effort by Decca to build a catalogue of 'hillbilly' music. Decca producer, Dave Kapp, describes how recordings at the time were made in quick succession on a tight budget. Long sessions were normal and the Brownies' second session in New Orleans was part of an exceptionally protracted operation for a mobile field-recording unit, which lasted for fifteen days during which time three hundred and fifty recordings were made.[176]

Typically, bands would set up in the studio around a single microphone and play tunes from their repertoire. The Brownies were able to draw on a large repertoire that had been assembled to serve long performances at dances. According to Roy Lee Brown, the band typically played for five hours at such engagements.[177] Few breaks were taken during the performance to avoid inevitable fights that would break out in the crowd when the dancing stopped.

Likewise, the recording sessions were a test of endurance, especially for soloists like Dunn, who were required to provide chorus-long improvisations throughout, as well as improvising counter melodies and providing fills and accompaniments where required. Of the thirty five tunes recorded at his two day session in Chicago, Dunn played on thirty, providing improvised choruses on nineteen, as well as various forms of accompaniment on these and eleven others. In the New Orleans session, Dunn played on all but one of the forty nine tracks, providing solos on forty one. Dunn's growing security in the lineup is demonstrated at the second session by both the increased percentage of tunes on which he soloed as well as his position as the first improviser on most tracks.

For recording, some rearrangement of tunes may have been necessary to ensure that the three minute limit imposed by the technology was not exceeded. For example, a performance of crowd favorite, 'St Louis Blues'[178] could extend for ten to fifteen minutes at a dance but the recorded arrangement was reduced to fit on the record.[179] This suggests that while soloists may have had developed an improvisation over several choruses in live performance, that luxury was not available in the recording studio where no solo, recorded on the Brownies sessions, extended beyond a single chorus.

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[176] Ginell, *Milton Brown and the Founding of Western Swing*, 188.
[177] Ginell, *Milton Brown and the Founding of Western Swing*, 121.
[178] Milton Brown and His Brownies, 'St. Louis Blues', (Decca 5070), 1935.
[179] Ginell, *Milton Brown and the Founding of Western Swing*, 132.

The use of a solitary microphone to record the bands provided a technical challenge for both musicians and sound engineers. While an electric microphone was a great advance on the mechanical methods that it superseded in 1926, the mixing of the recording was difficult. It was achieved through placement of the instruments in relation to the microphone and the players' subsequent ability to anticipate the dynamics required. Dunn's amplified instrument would have provided a totally new challenge for sound engineers on the first Brownies session. Furthermore, the relentless pace of recording did not allow for lengthy considerations of recorded tracks through playback, so the sound recordist's skill and the band's ability to accommodate one another were paramount.

The speed at which recording sessions progressed was an additional burden for musicians. To hasten proceedings, producers encouraged performers to achieve an acceptable recording with a single take. Fred Calhoun recounted that there were no second takes for the Brownies and it was 'just like playing at a dance'.[180] Without the option of a second take, the pressure on improvisers may well have impacted on their performances, with the option of caution being attractive.

In summary, the pressures on Dunn and his peers in the recording process were manifold. Firstly, the long durations of the sessions required great stamina and placed intense pressure on soloists who were charged with inventing numerous fresh improvisations. Adding to the pressure was the expectation that soloists must provide good quality performances instantaneously, with little opportunity for a second take. Additionally the rudimentary sound mixing practice added more uncertainty to the process. These conditions may have been compounded by the mental strain of recalling recent aural rearrangements necessary to compress tunes to a three minute format. There is little reason to doubt Dunn's associate Cliff Bruner's assertion that Dunn did not like to record.[181] The constraints of the studio would have been torturous compared with the freedom afforded by live performance. However, the astounding technique and stylish interpretations of Dunn's recordings do not support that Bruner's assertion that Dunn 'froze up' in the studio.[182] It is remarkable that, despite his difficulties, Dunn's imprint on the first session is so strong. Despite the compounding factors of the new amplification system, a new band and unfamiliar repertoire, Dunn's performances are outstanding.

[180] Ginell, *Milton Brown and the Founding of Western Swing*, 100.
[181] Coffey, 'Steel Colossus: The Bob Dunn Story', 50., Ginell, *Milton Brown and the Founding of Western Swing*, 189.
[182] Ginell, *Milton Brown and the Founding of Western Swing*, 189.

3.6 Dunn's Roles: Soloist and Accompanist

Dunn's reputation as a jazz stylist has been characterised in commentary primarily by his single note improvisations. While Dunn's stated aim may have been to make the steel guitar a 'modern' instrument, he undertook his quest within the confines of ensembles that he, for the most part, had little control over. While he led his own band for some brief periods, he was primarily employed as either a permanent or casual sideman. For the most part, he was answerable to bandleaders and was charged by them with fulfilling various tasks. His reputation as a hot jazz soloist may have won him employment but the range of music in Brown's repertoire, and western swing more generally, did not always require hot improvisation. His successful career was due, in no small part, to his versatility and the range of approaches and techniques that had been modeled for him by earlier players of his instrument.

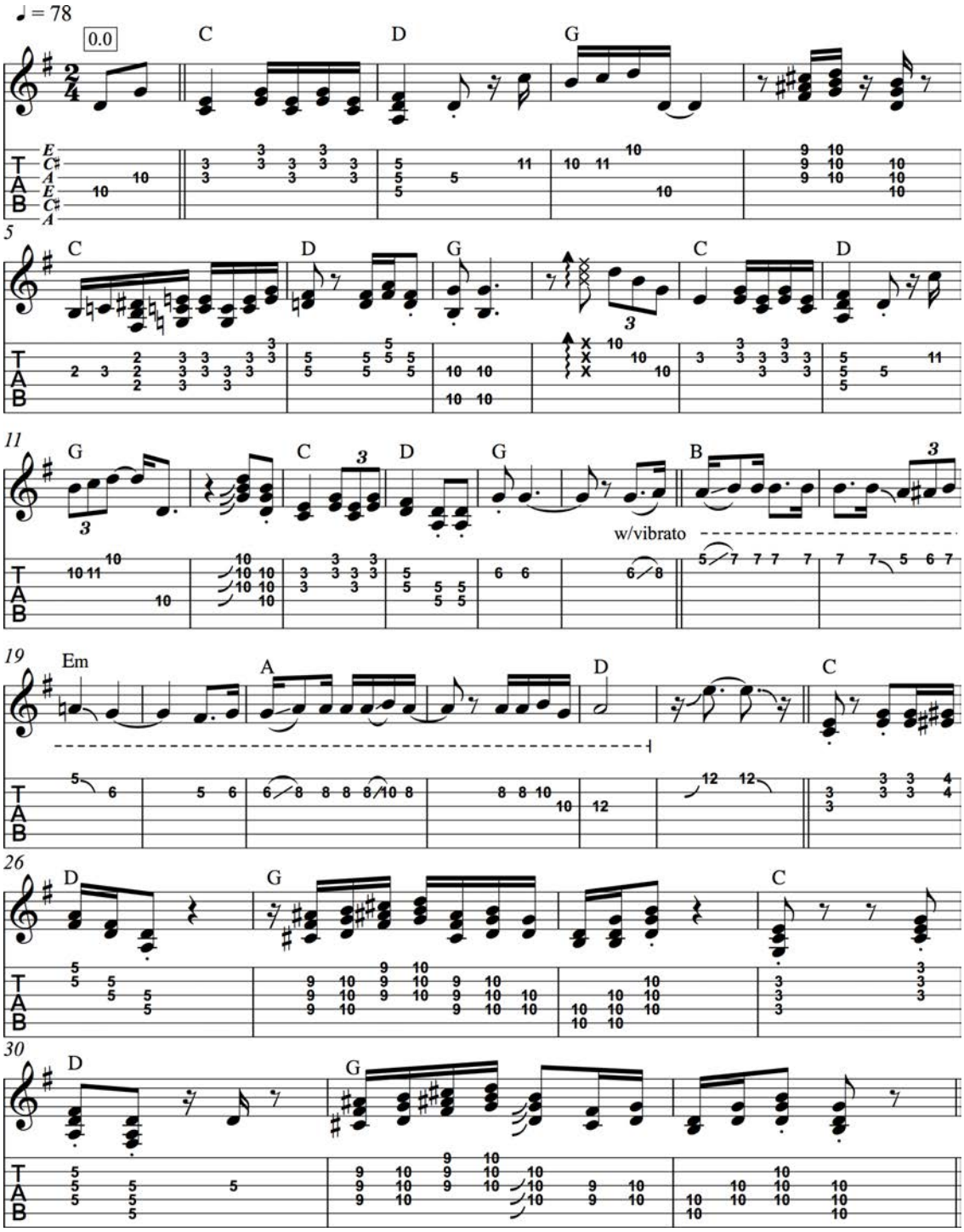
Initially, Dunn's jazz stylings impressed Milton Brown but it is possible that Brown had a wider role for Dunn in mind from the beginning. Brown was well aware of the attributes of the Hawaiian steel guitar before Dunn was introduced to him and had charged Wanda Coffman, the Brownies' bass player, with providing variety to the Brownies radio broadcasts by performing steel guitar pieces. Coffman played Hawaiian tunes such as 'Song of the Islands' and 'Hilo March'.[183] Thus Brown was aware that the wistful melancholy of the former piece and the brisk march rhythm of the latter could be wrought from the same instrument.

At his audition for Brown, Dunn demonstrated jazz stylings with his composition 'Taking Off'. He also displayed a more traditional approach in the other five tunes that he is known to have played at the occasion. They were 'Over Moonlight Waters', 'Ida, Sweet as Apple Cider' and 'An Old Water Mill by a Waterfall'.[184] Dunn also recalled playing 'Nobody's Sweetheart' and 'Song of the Islands' in his audition.[185]

Dunn's subsequent recordings of some of these tunes may provide an insight into what Brown heard at the audition. Dunn recorded both 'An Old Watermill by a Waterfall'[186] and 'Ida, Sweet as Apple Cider'[187] at the Brownies' New Orleans session in 1936. In 'An Old Water Mill by a Waterfall', the steel guitar opens the track with the thirty two bar melody, which is transcribed below in Ex. 3.8. The melody is harmonized with triads and dyads in the three A sections of the tune's AABA form. In these sections, Dunn decorates the melody

[183] Ginell, *Milton Brown and the Founding of Western Swing*, 109.
[184] Ginell, *Milton Brown and the Founding of Western Swing*, 110.
[185] Dunn, 'Personal Interview'.
[186] Milton Brown and His Brownies, 'An Old Water Mill by a Waterfall', (Decca 5233), 1936.
[187] Milton Brown and His Brownies, 'Ida, Sweet as Apple Cider', (Decca 5325), 1936.

substantially with improvised rhythmic ornamentation. In contrast, the B section melody is presented in single notes with vocal-like inflections and heavy vibrato, in a Hawaiian manner. Dunn's solo on 'Ida, Sweet as Apple Cider' is also chordal and dyadic, as is the steel guitar's part in Cliff Bruner's 1938 recording of 'Over Moonlight Waters' where Dunn's role is also to present the opening melody.[188]



Ex. 3.8 Introduction to 'An Old Watermill by a Waterfall', Bob Dunn (4/3/36, mx. 60633)

[188] Cliff Bruner and His Texas Wanderers, 'Over Moonlight Waters', (Decca 5672), 1938.

With a range of material presented to him at the audition, it may have been Brown's genius to envisage Dunn's multitude of techniques applied across the band's wide-ranging repertoire at a volume made audible by the newly available technology. Given that Dunn had only joined the band weeks before, it is remarkable to hear how many different ways his instrument was integrated into the texture of the tunes recorded in the first session.

The roles that Dunn filled in the first session in January 1935 were both soloist and accompanist. Of the thirty five tunes of the session, Dunn appears on all but five. He performed solo improvisations on nineteen tunes. On one of those nineteen, his composition 'Taking Off', he also played the opening melody.[189]

3.6.1 Accompaniment

Dunn's role as an accompanist with the Brownies has been largely overlooked by commentators, despite his significant contributions to accompaniment on almost all of the tracks at both the Brownies' Chicago and New Orleans sessions. In sextet employed on the first session, consisting of vocalist, acoustic guitar, banjo, fiddle, piano and double bass, the steel guitar has a prominence that extends beyond Dunn's many solos. The following examples from the first session show various ways in which the steel guitar was deployed in accompaniment.

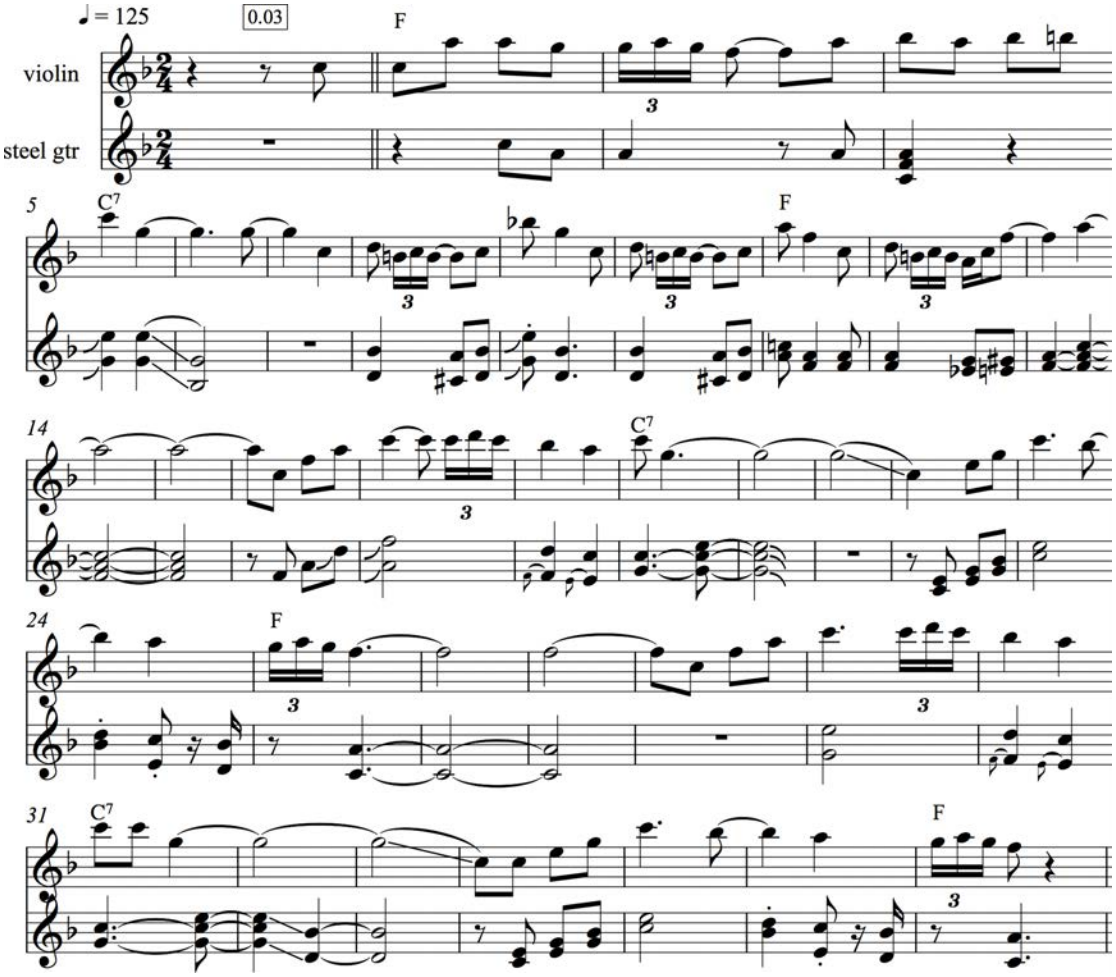
The texture of the Brownies' arrangements varies regularly, both from track to track and in sections of each song. Many tunes from the first session begin with a statement of the melody of the song by the fiddle, accompanied by the band. Dunn is often employed to provide a harmony or counter line to the fiddle's opening melody. Typically, vocals follow the introductions and are interspersed with instrumental solos. The texture of the accompaniment is adjusted throughout to provide support and focus for the lead, whether vocal or instrumental.

The accompaniments are of regular meter and strong rhythm, as would be expected of dance band. The ensemble has an identifiable rhythm section of the double bass, guitar, piano and banjo. The main melody and improvised solos are provided by the vocalists, fiddle, steel guitar and piano, with fleeting input from the banjo and guitar. While the piano is used extensively in both roles, the contributions of the steel guitar to the rhythm section are often ethereal, with limited contribution to surface rhythms. The texture of the accompaniments varies from sparse chordal progressions of one or two instruments that provide space for quieter soloists, notably the piano, to dense textures of the complete rhythm section, further layered with polyphonic improvisations from the violin and steel guitar.

[189] Brown and Brownies, 'Taking Off'.

The role of the steel guitar in accompaniment in the arrangements of the first session was remarkably varied. In terms of presence in the textures, the steel guitar at times assumes roles in the foreground, middle ground and background, sometimes shifting from one to another.

In 'El Rancho Grande', the steel guitar resides very much in the foreground while maintaining an accompanying role.[190] In the introduction, transcribed in Ex. 3.9 below, the steel guitar begins its supporting function tentatively but gains momentum in a few bars. Primarily its role is harmonisation but striking timbre, due in part to the distortion of the amplifier, along with melodic departures from the theme, imbue it with a strong and distinct identity that rivals the lead instrument.

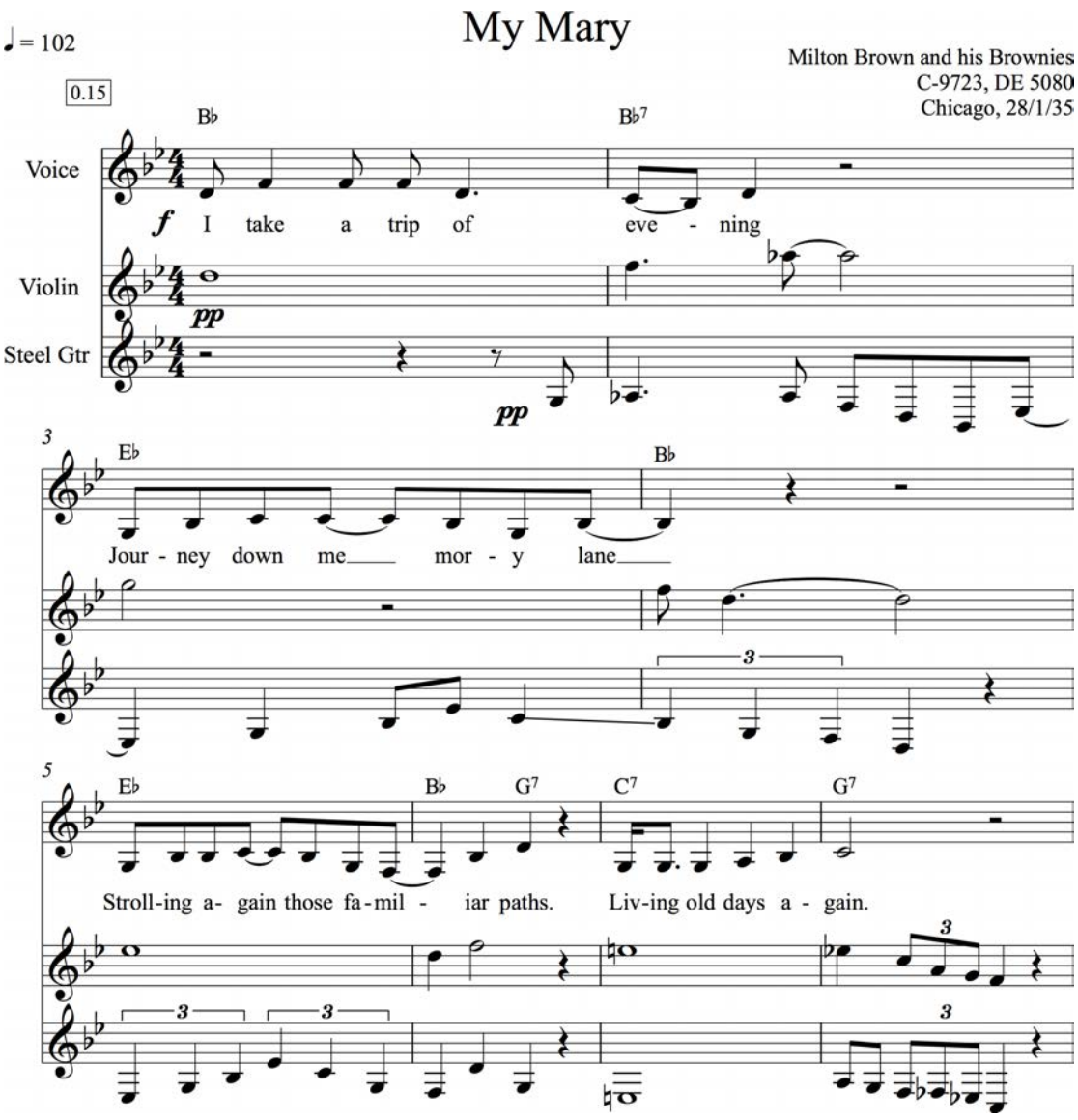


Ex. 3.9 Violin melody with steel guitar accompaniment on 'In El Rancho Grande', Bob Dunn (27/1/35, mx. C-9693)

In contrast, on the track 'My Mary', shown in Ex. 3.10 below, the steel guitar provides a counter melody far in the background.[191] Unlike the violin, which provides

[190] Milton Brown and His Brownies, 'In El Rancho Grande', (Decca 5071), 1935.
[191] Milton Brown and His Brownies, 'My Mary', (Decca 5080), 1935.

extended chord tones, the steel guitar maintains a constant melodic dialogue but at the low dynamic level used, neither of the instruments greatly attracts the listener's ear.



Ex. 3.10 Vocal melody with steel guitar and violin countermelodies on 'My Mary', Bob Dunn (28/1/35, mx. C-9723)

3.6.2 Accompaniment functions

Dunn contributed to accompaniment on almost all of the Brownies tracks recorded in the first session in Chicago. His varied approaches make three distinct contributions to the arrangements, in the form of harmony, melody and textural effects.

3.6.2.1 Harmony

Dunn makes harmonic contributions to accompaniment in the Brownies' 1935 session in a number of ways. His efforts are most striking when he harmonises or partly harmonises a melody, such is the case in the introduction to 'In El Rancho Grande'. (see Ex.

3.9 above) In this instance, his lines are mostly dyadic. A similar approach can be heard at the beginning of 'The House at the End of the Lane'.[192]

At times, Dunn also employed monophony in the service of harmonisation. In at least one instance, 'Beautiful Texas', he employs arpeggios.[193] In the introduction of 'Shine on Harvest Moon'[194], his single note line accompanying the opening violin melody is similar in approach to that of 'El Rancho Grande'[195] but in this case, his paraphrasing of the violin melody is less precise, with some additional rhythmic figures, although it does not represent a clearly independent countermelody.

In a different approach, Dunn often plays chords and chord tones of long duration in the background, subtly thickening the texture of the accompaniment. In tunes like 'I Love You'[196] and 'Chinatown, My Chinatown'[197], his accompanying triads often extend for the duration of each chord in the harmonic framework. In 'Put on Your Old Grey Bonnet' he takes a similar approach but uses chord tones sounded in harmonics.[198] In another more strident use of block chords, Dunn often marks the harmonic movement of turnarounds with accented block chords. A clear example can be heard behind the piano solo of 'I Love You'.

In another distinctive approach, Dunn plays accompanying block chords with rhythmic figures that imitate a countermelody. This can be seen in the introduction of 'Who's Sorry Now'.[199] In this instance, the rhythmic figures are fleeting and suggest that Dunn was happy to quickly adjust his approach as circumstances dictated.

3.6.2.2 Melody

In addition to his solos, Dunn's talents as an improviser were employed in the fabric of the Brownies' music to provide secondary melodies. Just as in his solos, these melodic contributions were both single note and chordal. Two distinct approaches can be identified.

Firstly, Dunn was occasionally called on to provide long, unbroken countermelodies that underlie the primary melody. Such is the case in 'Just a Dream'[200], behind the violin melody and also 'Who's Sorry Now'[201], behind the vocal. Another example occurs in 'My Mary' (see Ex. 3.10 above), where countermelodies from both the steel guitar and violin combine to create an independent polyphonic web behind the vocals.

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[192] Milton Brown and His Brownies, 'The House at the End of the Lane', (Decca 5194), 1935.
[193] Milton Brown and His Brownies, 'Beautiful Texas', (Decca 5071), 1935.
[194] Milton Brown and His Brownies, 'Shine on Harvest Moon', (Decca 5121), 1935.
[195] Brown and Brownies, 'In El Rancho Grande'.
[196] Milton Brown and His Brownies, 'I Love You', (Decca 5091), 1935.
[197] Milton Brown and His Brownies, 'Chinatown, My Chinatown', (Decca 5166), 1935.
[198] Milton Brown and His Brownies, 'Put on Your Old Grey Bonnet', (Decca 5134), 1935.
[199] Milton Brown and His Brownies, 'Who's Sorry Now', (Decca 5158), 1935.
[200] Milton Brown and His Brownies, 'Just a Dream', (Decca 5317), 1935.
[201] Brown and Brownies, 'Who's Sorry Now'.

A second approach to melodic accompaniment is evident throughout the first session in the form of melodic interpolations or fills. While countermelodies assumed secondary focus, fills were used to provide a fleeting primary focus between phrases of the primary melody, whether composed or improvised. In 'Just A Dream', Dunn's countermelodies continue both beneath the violin introduction and during breaks in the violin's phrases, but as the vocal begins, the steel guitar melodies condensed to fills that appear in the foreground between vocal phrases. Dunn's fills are also used idiomatically, using microtonal inflection to introduce a blues flavour to 'A Good Man is Hard to Find'.[202] Dunn was not committed to the use of single note lines in providing fills and often used short chordal melodies for the same purpose as can be heard in 'The Object of My Affection'.[203]

3.6.2.3 Textural Effects

At times, Dunn drew on the idiosyncrasies of the steel guitar popularised in Hawaiian styling. His use of 'chimes' or harmonics begins tentatively at the beginning of the second day of the first session in 1935, in 'Beautiful Texas'.[204] In subsequent tunes 'The House at the End of the Lane'[205] and 'In the Shade of the Old Apple Tree'[206], Dunn exploits harmonics in conjunction with long glissandi that leave no doubt as to their Hawaiian origins. These textural effects embellish the accompaniment without strong rhythmic ties.

Not only did Dunn employ different means of accompaniment, he also moved freely between them. His varied approach is clearly evident in 'I Love You'.[207] Behind the violin introduction, Dunn begins by quietly playing extended triads, which become more prominent with the introduction of a rhythmic figure. The chords achieve even more prominence as the turnaround is accented. Behind the following piano solo, the texture of accompaniment becomes sparse and the steel guitar is only heard during the turnaround. Next follows an improvised steel guitar solo for the duration of a chorus. The steel guitar is then silent for the following violin solo but rejoins behind the vocal in the final chorus. In this last section, the roles of the violin and steel guitar in the introduction are reversed, with the steel guitar playing a counter melody while the violin plays extended chord tones.

In summary, a full appreciation of the roles that Dunn filled is important to an assessment of his musicianship, the breadth of his style and his value as a sideman. Dunn's varying role in accompaniment helped to imbue the Brownies arrangements with freshness

[202] Milton Brown and His Brownies, 'A Good Man Is Hard to Find', (Decca 5070), 1935.
[203] Milton Brown and His Brownies, 'The Object of My Affection', (Decca 5072), 1935.
[204] Brown and Brownies, 'Beautiful Texas'.
[205] Brown and Brownies, 'The House at the End of the Lane'.
[206] Milton Brown and His Brownies, 'In the Shade of the Old Apple Tree', (Decca 5129), 1935.
[207] Brown and Brownies, 'I Love You'.

and vigour. The range of approaches that he employed on his first session with the Brownies was duplicated in the second session in New Orleans. Dunn's solid grounding in both Hawaiian and jazz styles equipped him well for the roles assigned to him both by Milton Brown and by the bandleaders he encountered during the remained of his career.

3.7 Style Analysis

The following overview of Dunn's style shows a breath and versatility that has been hitherto overlooked in favour of the narrow jazz wind instrument analogue. It will begin with an examination of the modes of performance that he employed and some examples of how he applied them. This will be followed by a consideration of broader aspects of style; improvisation, rhythmic conception, Dunn's approach to the blues and his late stylistic refinements.

3.7.1 Modes of performance

As has been shown, Dunn's role in the first Brownies session varied greatly. To fill his assigned roles, he used a variety of modes of performance. Four distinct modes can be identified; monophonic, chordal, dyadic and textural effects. These were used both discretely over individual choruses and also used in combination in choruses. These modes, referenced as distinct approaches to melody in Chapter 1, are characteristic of Hawaiian style and can be identified throughout the recordings of Sol Ho'opi'i', who provided an early model for Dunn as he developed his style.[208]

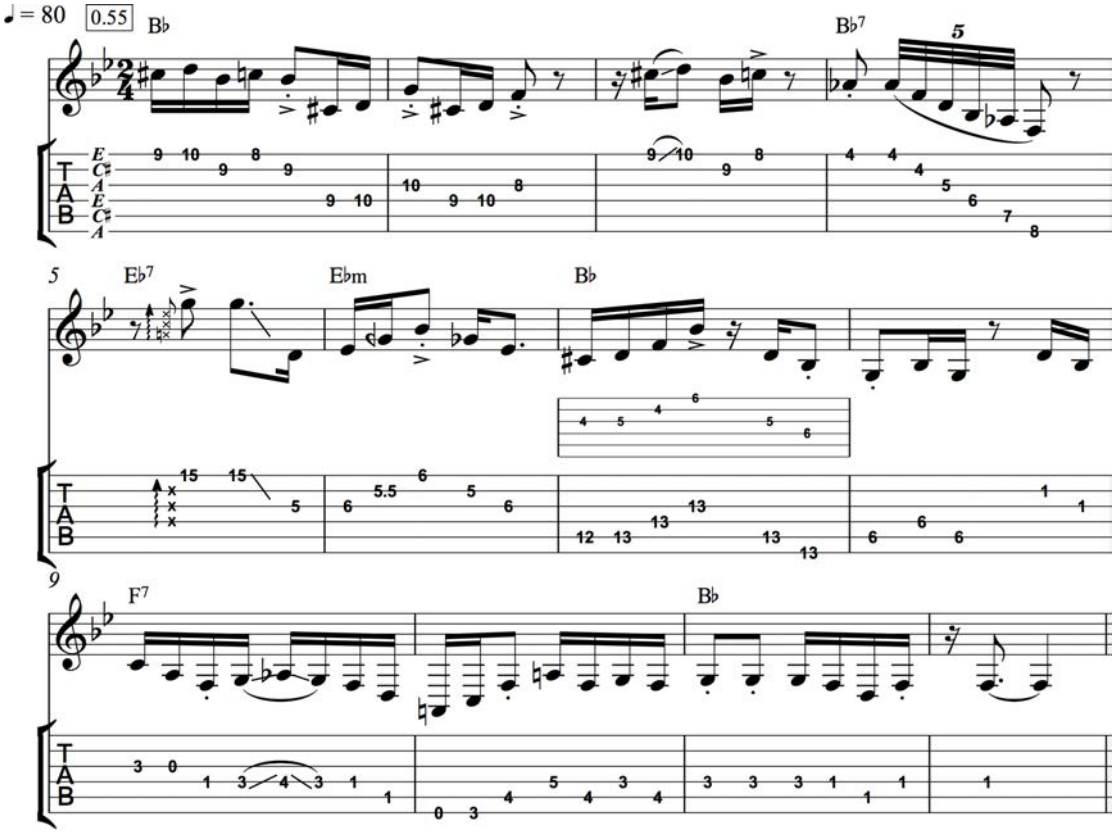
3.7.1.1 Monophonic

Of the four modes, Dunn's use of monophonic melodies predominates. It is the most common means that he employed for solos, countermelodies and fills. Dunn had no favoured tessitura and could use the full extent of the neck in individual solos. The predominance of arpeggios in his melodic lines required horizontal picking across the neck but this was interspersed with lateral movements that could include extremely rapid position shifts between neck positions.

In the solo from 'Cheesy Breeze', (see Ex. 3.11 below) horizontal playing is interspersed with rapid lateral bar movement.[209] Dunn begins the solo at the tenth fret with a four bar phrase but, after three bars, drops to the fourth fret for a smear achieved by dragging the bar across the strings in a diagonal line back up the neck. This is followed by a rip across

[208] Cundell, 'Across the Pacific: The Transformation of the Steel Guitar from Hawaiian Folk Instrument to Popular Music Mainstay', 89-95.
[209] Milton Brown and His Brownies, 'Cheesy Breeze', (Decca 5166), 1935.

a dampened neck at the fifteenth fret that accents the high G, whereupon a rapid glissando takes the bar back to the fifth fret. The seventh bar sees another rapid bar movement, this time to the twelfth fret. The purpose of this move is to crisply articulate the accented Bb. It would have been possible to play this portion of the phrase at the same neck position but, as the ossia shows, extra bar movement would have been required that may have impacted on the articulation and, possibly, the intonation. The final phrase of the solo is centered in the bottom register and employs the lowest note available

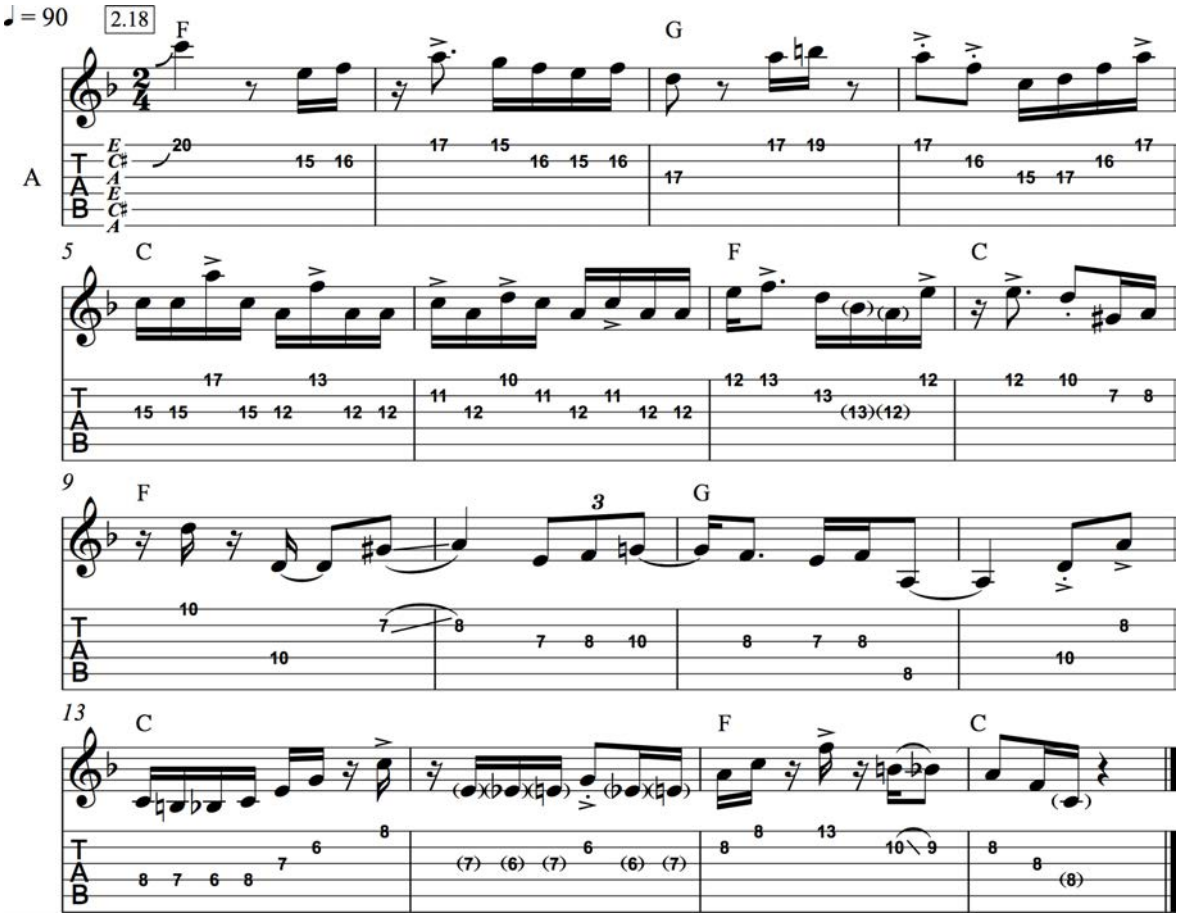


Ex. 3.11 Improvisation on 'Cheesy Breeze', Bob Dunn (28/1/35, mx. C-9718-A)

Dunn's solo on 'I'll Keep On Loving You', transcribed in Ex. 3.12 below, provides further insight into the constraints placed on Dunn's melodic choices by the neck position and tuning.[210] At a brisk tempo, bar movement is localized in three neck positions, at the fifteenth, twelfth and eight frets. Horizontal movement is employed at these points with lateral movement restricted to two frets at most. At this tempo, availability of notes is determined by their proximity to the prevailing neck position. Dunn fashions his melodic line from the tones made available by the tuning, moving the bar to new positions to access further sets of pitches. Any 'angularity' in the contour of his lines, particularly at the tempos of his hot solos, results from arpeggio dominated lines that are dictated, to a large degree, by the tuning. This approach is far removed from any consideration of harmonic series and is

[210] Cliff Bruner and His Texas Wanderers, 'I'll Keep on Loving You', (Decca 5672), 1938.

derived from a much more convoluted process than that required of Spanish guitarists, to whom a chromatic palate of two octaves lies easily under the hand in a single position. Furthermore, the level of difficulty in shaping a melody is raised considerably by an increase in tempo or in the density of harmonic rhythm.



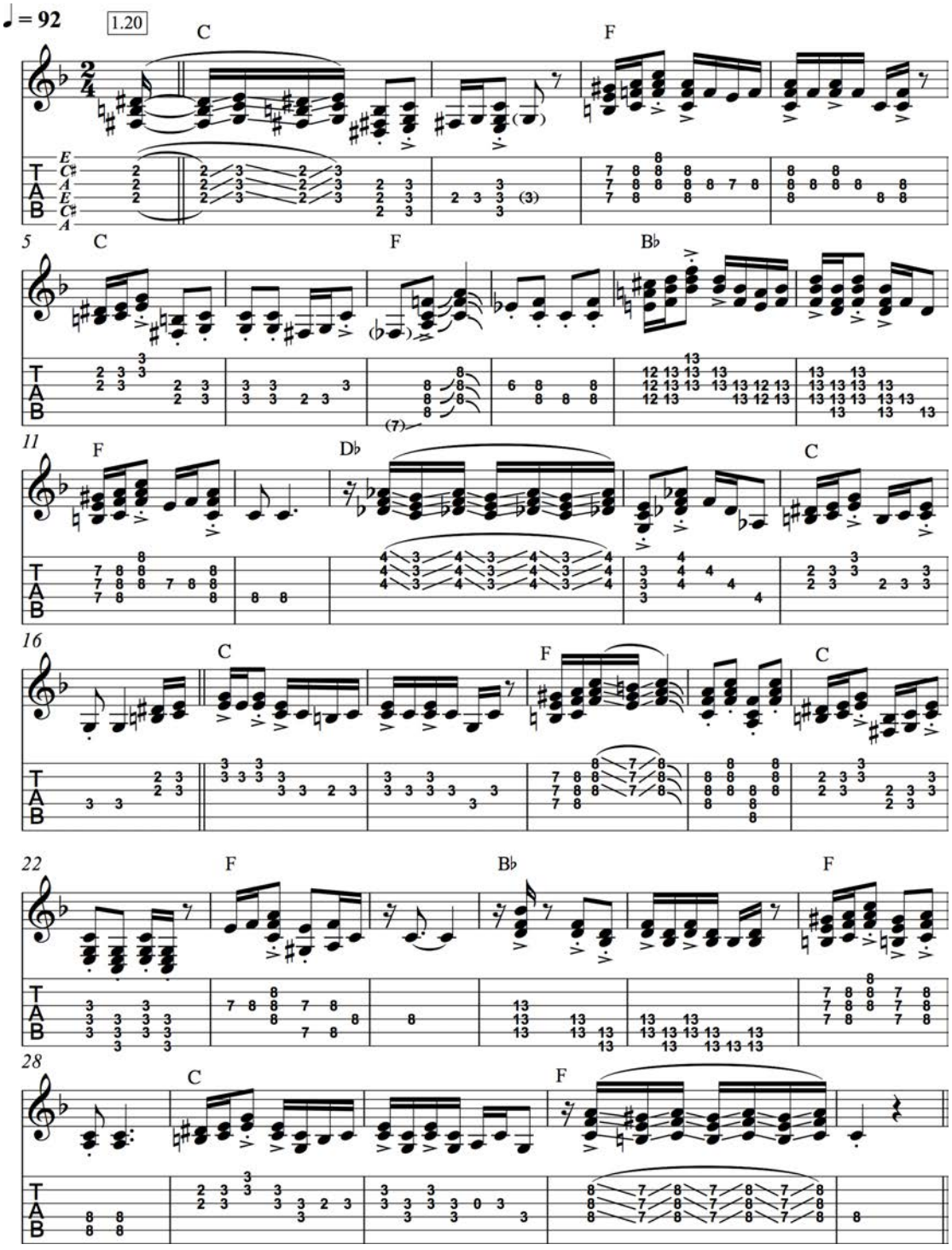
Ex. 3.12 Improvisation on 'I'll Keep on Loving You', Bob Dunn (19/9/38, mx. 65414-A)

3.7.1.2 Chordal

The chordal mode is the second most common melodic device found in Dunn's playing. While he can be heard occasionally using block chords as accompaniment, chord melody is the main way that he employs the polyphonic properties of the steel guitar. While rarely found in isolation in his work, it could dominate the style of a specific solo as in Ex. 3.13 below, 'Wabash Blues'.[211] Dunn plays with a perpendicular bar and uses chords based on the root position of the A tuning. Thus C chords are played at the third fret. The addition or omission of strings renders the top note of the voicing as the salient melody. Omission can reduce the voicing to a dyad or single note, but the bar remains straight. This approach makes less technical demands than the slants of Hawaiian styled dyads, discussed below. However, a

[211] Milton Brown and His Brownies, 'Wabash Blues', (Decca 5108), 1935.

simpler bar technique is an advantage in such a solo where precise rhythm is the dominating feature, with melody a secondary focus. An example of this mode alternating with monophonic melody can be in Ex. 3.8 above, 'An Old Watermill By a Stream'.

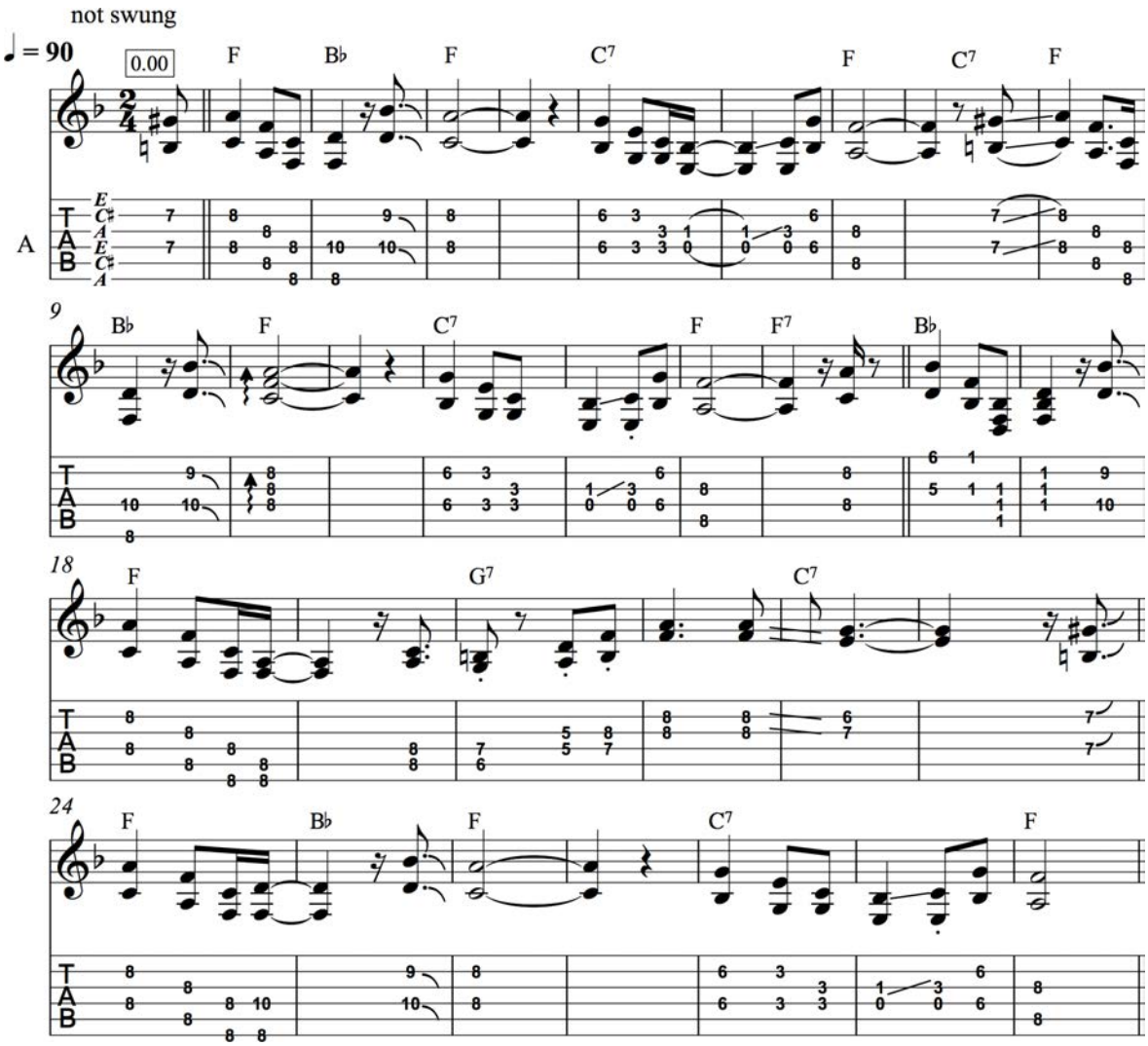


Ex. 3.13 Improvisation on 'Wabash Blues', Bob Dunn (27/1/35, mx. C9705-A)

3.7.1.3 Dyadic

Dunn's use of bar slants in Hawaiian styled dyadic melody is infrequent but assured. In Ex. 3.14 below, 'When Night Falls', Dunn's Hawaiian influences come to the fore as he

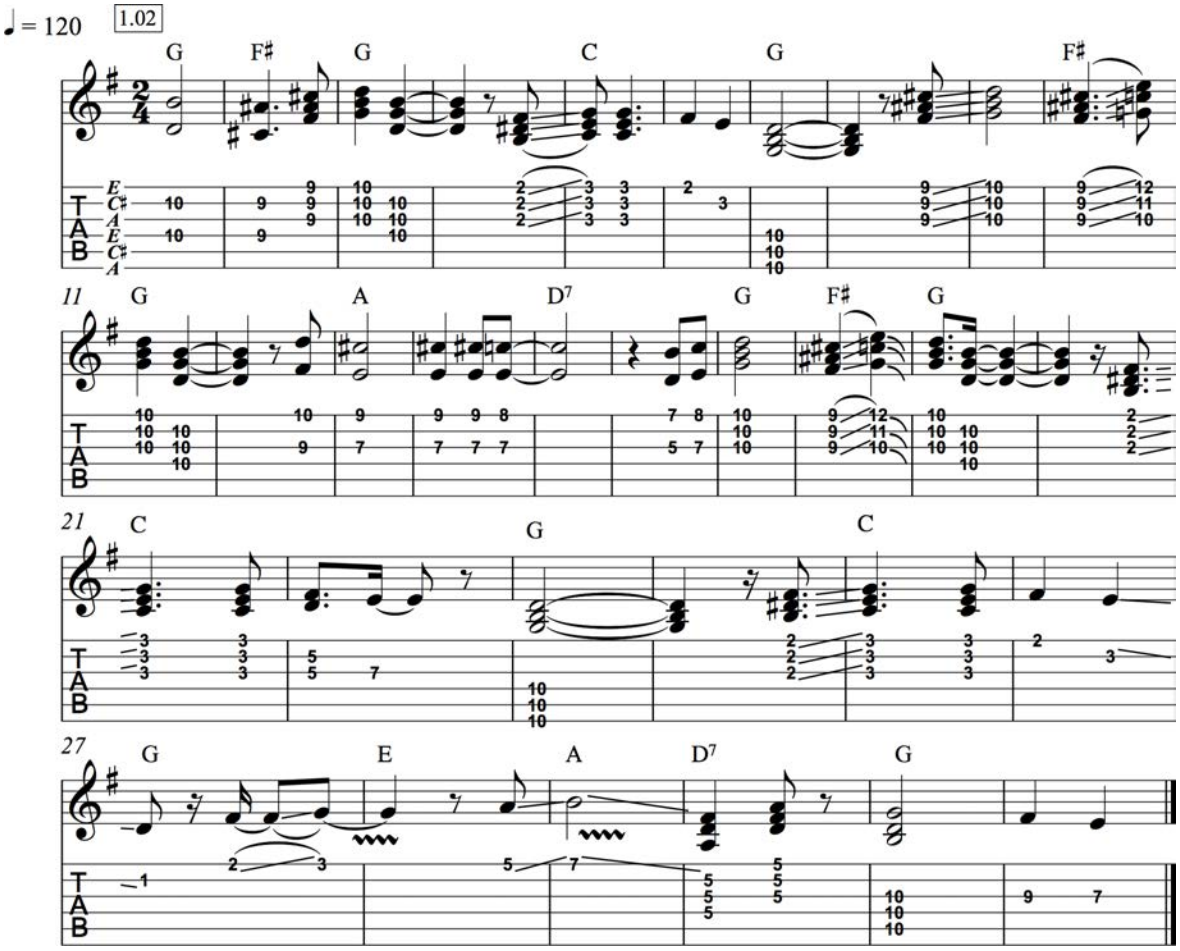
introduces the melody, harmonised predominately in sixths.[212] In the second bar, a two fret forward slant, a major sixth of F and D, is followed by a reverse slanted minor sixth that glides down to a perpendicular major sixth. While the melody receives little embellishment beyond the harmonisation, the effect of the glisses and careful combination of sixths and thirds gives the piece an unmistakable Hawaiian flavour.



Ex. 3.14 Introduction to 'When Night Falls', Bob Dunn (2/3/39, mx. 65106-A

Dunn could also use dyads in a subtle manner to imbue a tune with a Hawaiian essence. This can be heard in the march, 'Wednesday Rag', transcribed in Ex. 3.15 below.[213] In Dunn's solo, the chordal gliss from straight bar to forward slant in bar ten is a Hawaiian cliché, the origin of which is reinforced by the dyads of following bars. The Hawaiian styling, while not overt, is further enhanced by Dunn's use of a strong vibrato on chords and dyads alike, where note durations permit.

[212] Bob Dunn and His Vagabonds, 'When Night Falls', (Decca 5684-B), 1939.
[213] Bob Dunn and His Vagabonds, 'Wednesday Rag', (Decca 5772), 1939.



Ex. 3.15 Improvisation on 'Wednesday Rag, Bob Dunn (2/3/39, mx. 66421-A)

3.7.1.4 Textural Effects

A fourth discrete mode of performance employed by Dunn is evident in his use of idiosyncratic steel guitar techniques to impart atmospheric effects to recordings. The techniques employed are harmonics and glisses, used individually or in combination. Both effects can be applied to either single strings or chords. Harmonics can combined with an extended gliss to create a distinctive and engaging sound unique to the instrument and common in Hawaiian stylings.

In combination, the effects can add an ethereal layer to the texture of an arrangement. Tonal in nature, the gestures are not rhythmically integrated into the arrangement but are, rather, applied as if a transparent film. The process of adding the effects can be observed in two takes of Cliff Bruner's 'Sorry (I'll Say I'm Sorry)'.[214] In the first take, the steel guitar effects are evident in the background of both the introductory violin chorus and the vocals. In the alternative take, the effects have been completely removed, with the steel guitar accompaniment only evident in some subdued block chords.

[214] Cliff Bruner and His Boys, 'Sorry (I'll Say I'm Sorry)', (Decca 5860), 1940.

Dunn's use of effects can be heard in his very first recording with the Brownies, 'House at the End of the Lane', in the form of tentative harmonics beneath the violin introduction.[215] Nothing similar can be detected in the recordings until the first tune of the second day of the sessions, 'Beautiful Texas', when some harmonics can be appear, cautiously added behind the violin countermelody of the first verse.[216] The effects must have begun to find favour with the bandleader because towards the end of the session they appear more boldly behind the vocals of 'The House at the End of the Lane'[217] and 'In the Shade of the Old Apple Tree'.[218] By the time of the second session in New Orleans, Dunn's Hawaiian effects had become a valued arrangement option, appearing in ten recordings; 'Our Baby Boy', 'Mexicali Rose', 'The Waltz You Saved', 'Wheel of the Wagon', 'The Sweetheart of Sigma Chi', 'The Yellow Rose of Texas', 'The Roseland Melody', 'La Golondrina', 'I'll String You Along' and 'Carry Me Back to the Lone Prairie'.[219]

3.7.2 Dunn's Hot Solos

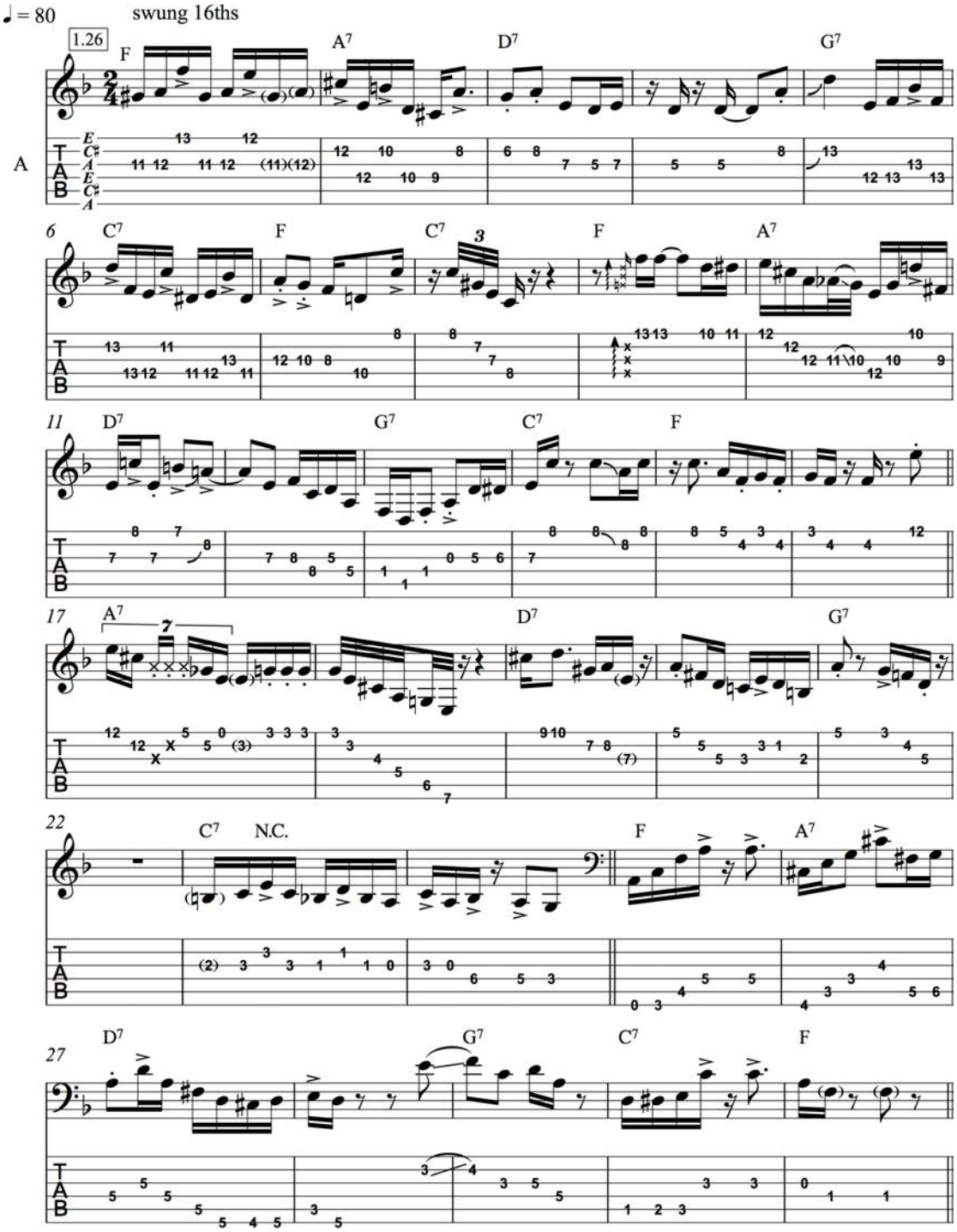
To the wider audience, Dunn's reputation rests on his improvisations. The most influential solos of his fifteen year recording career appear in his two sessions with the Brownies. These solos set a high standard that Dunn maintained across his recording career.

Broadly, Dunn's solos are predominately monophonic but he recorded a significant number of chord solos and often mixed the two modes. The content is, in the main, abstract or harmonic improvisation, based on the chord structures of the tunes. The assumption that the solos are improvised is supported by a number of alternative takes where the solos of each take are completely different.[220] However, this does not preclude the possibility that some solos were composed beforehand.

In most cases, Dunn's recorded solos extend over full choruses that were mostly of thirty two bar or, in the case of blues, twelve bar durations. The harmonic contexts varied between simple progressions of country tunes employing only tonic, subdominant and dominant chords, to more complex frameworks employed in popular music of the time. Some of the jazz tunes employed cyclical progressions of dominant chords. One of Dunn's notable achievements was to improvise over such progressions with confidence and fluency, thus demonstrating that the steel guitar was suitable for jazz and need not be confined to less harmonically challenging music. Dunn revealed this skill on the 1935 recording of 'You're

[215] Brown and Brownies, 'The House at the End of the Lane'.
[216] Brown and Brownies, 'Beautiful Texas'.
[217] Brown and Brownies, 'The House at the End of the Lane'.
[218] Brown and Brownies, 'In the Shade of the Old Apple Tree'.
[219] Russell, *Country Music Records, a Discography, 1921-1942*, 137-38.
[220] Cliff Bruner and His Boys, 'Sittin' on the Moon', (Decca 5619), 1938., Cliff Bruner and His Boys, 'Little White Lies', (Decca 5753), 1938., Bruner and Boys, 'Sorry (I'll Say I'm Sorry)'.

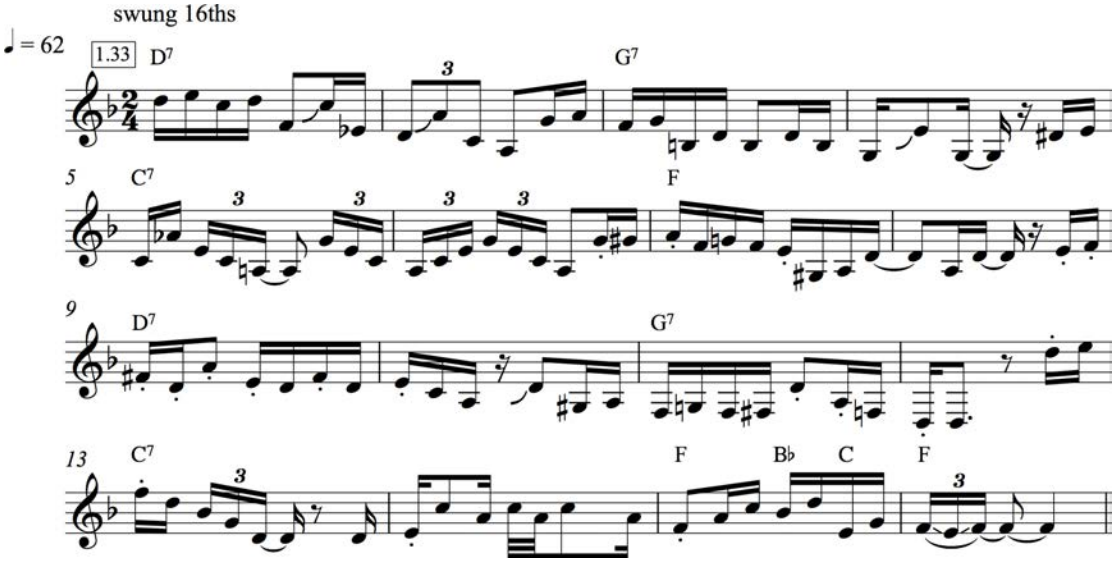
Tired of Me'.[221] The opening to Dunn's thirty two bar solo, transcribed in Ex. 3.16 below, can be viewed as two rhythmically related four bar phrases that extend across an eight bar cyclical progression. A third phrase descends over the same harmony. An expansive and ambitious opening gesture begins the B section, another iteration of cyclic harmony. It is marred slightly by imprecision but ends accurately with a soli rhythmic figure. The solo is an excellent demonstration of Dunn's invention and control on his newly amplified instrument.



Ex. 3.16 Improvisation on 'You're Tired of Me', Bob Dunn (28/1/35, mx. C9724-A)

[221] Milton Brown and His Brownies, 'You're Tired of Me', (Decca 5080), 1935.

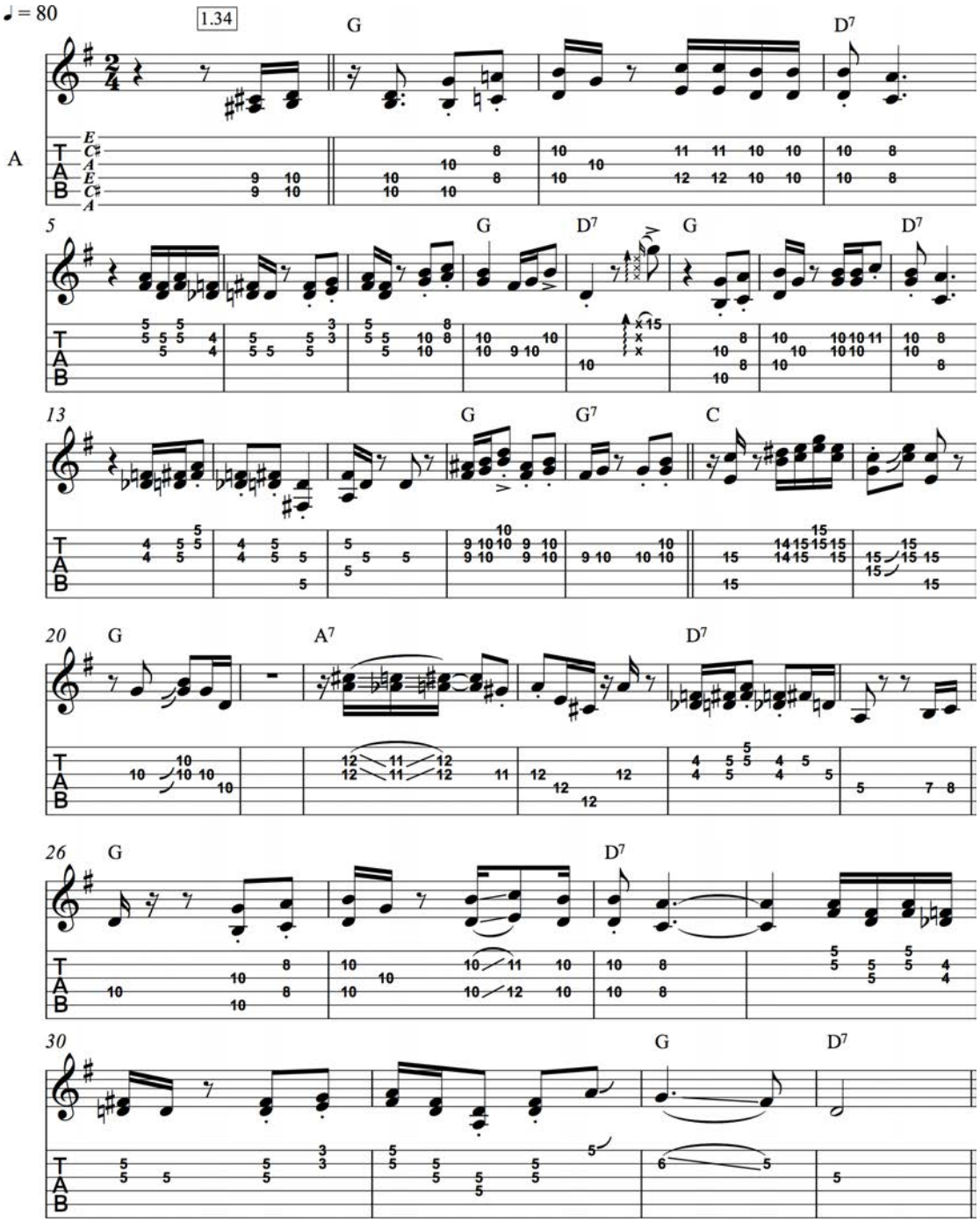
In his solo in ‘Shine On, Harvest Moon’, another early Brownies’ track, transcribed in Ex. 3.17 below, Dunn exhibits phrasing and rhythmic fluency that rivals his hero Pau’ole.[222] At a comfortable tempo of 62 beats per minute, arpeggios dominate the abstract melody. Utilizing most of the neck, Dunn moves comfortably between sixteenths and sixteenth triplets in four phrases that extend over two iterations on the cyclical harmonic pattern.



Ex. 3.17 Improvisation ‘Shine on Harvest Moon’, Bob Dunn (28/1/35, mx. C-9728-A

Other aspects of Dunn’s soloing, paraphrasing and chordal technique, are exhibited in ‘The House At the End of the Lane’, transcribed in Ex. 3.18 below.[223] Dunn combines paraphrasing with abstract melody in a dyadic solo of thirty two bars of AABA structure. Dunn paraphrases the tune’s melody in the A sections, embellishing it rhythmically with dyads extracted mainly from root positions of each chord, formed with a perpendicular bar. Resultant regimented bar movement is apparent in the tablature. This approach is maintained in the B section in which abstract improvisation is employed. The dominant feature of this solo is rhythm, with the restrained melody derived from chord tones made available by the bar at the appropriate neck position.

[222] Brown and Brownies, 'Shine on Harvest Moon'.
[223] Brown and Brownies, 'The House at the End of the Lane'.

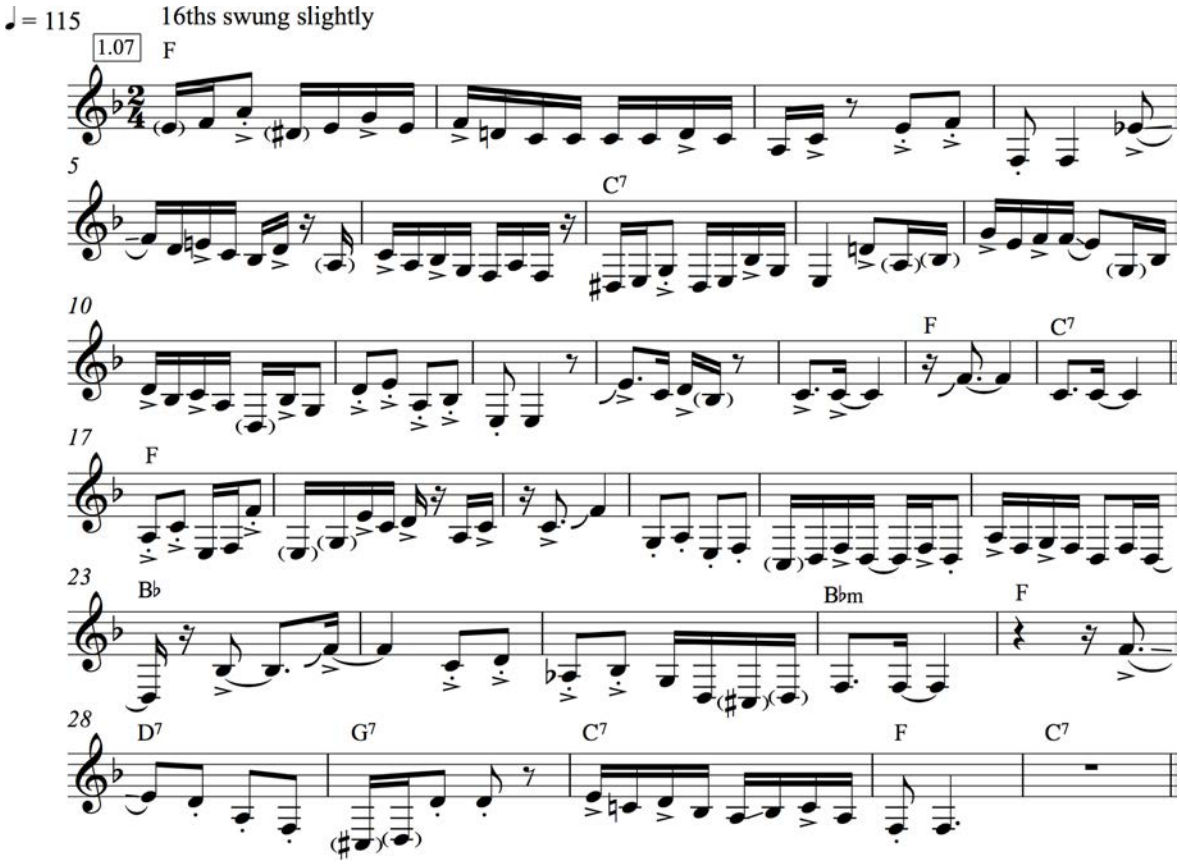


Ex. 3.18 Improvisation on 'The House at the End of the Lane', Bob Dunn (28/1/35, mx. C-9722)

3.7.3 Rhythmic Conception

Dunn's approach to rhythm was a dominant constituent of his style that set him apart from previous generations of steel players. It was a factor that helped him achieve his objective of making the steel guitar a 'modern' instrument. While his technique may have been honed on Hawaiian marches and the ragtime-influenced rhythms of Frank Ferera, his rhythmic feel and syncopations seemed a product of the jazz age of the late 1920s.

Dunn's approach to the 2/4 meter that prevailed in the Brownies repertoire and much of his subsequent recorded output, was to treat it as a fast 4/4, with the second, third and fourth eighth note receiving almost the same emphasis. His approach can be seen as an anticipation of the broad shift towards 4/4 that occurred as the swing era dawned. In this framework, Dunn's jazz feel was achieved with swung sixteenth notes. Dunn's 4/4 conception is demonstrated in the accents given to eighth notes in 'I Love You', transcribed in Ex. 3.19 below.[224] The alternate sixteenth notes in two opening four bar phrases are clearly accented, with few syncopations. As the solo progresses, accented eighth notes reinforce Dunn's rhythmic design.



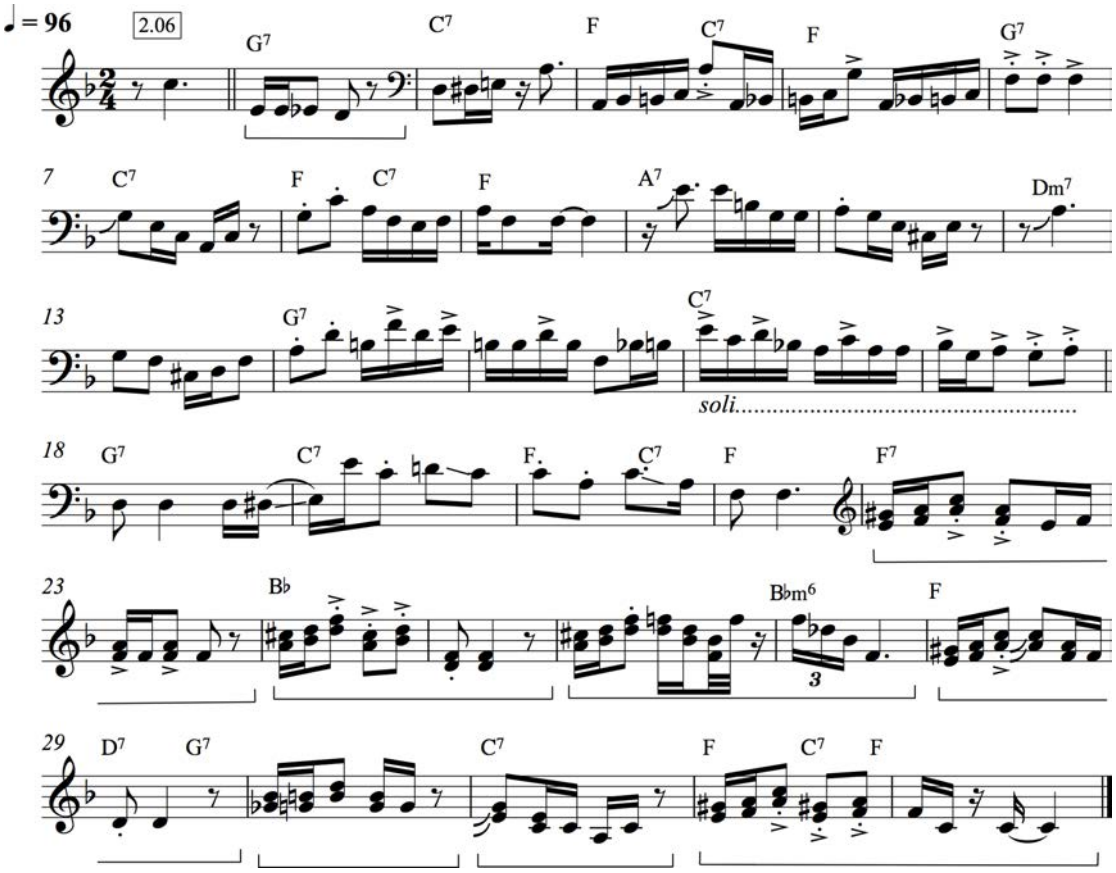
Ex. 3.19 Improvisation on 'I Love You', Bob Dunn (27/1/35, mx. C-9695)

In the context of the three minute duration of recordings, Dunn's solos would have been expected to have initial impact and to maintain interest across the chorus allotted to him. This he achieved through a rhythmic drive and momentum that rarely faltered. He employed two and four bar phrases of predominately sixteenth notes and also short motifs.

It is apparent that if melodic inspiration was to desert Dunn or if he attenuated his monophonic melodies by turning to chords, he could rely on a bag of rhythmic tricks to complete the span of his solo. In the concluding solo from 'Taking Off', transcribed in Ex.

[224] Brown and Brownies, 'I Love You'.

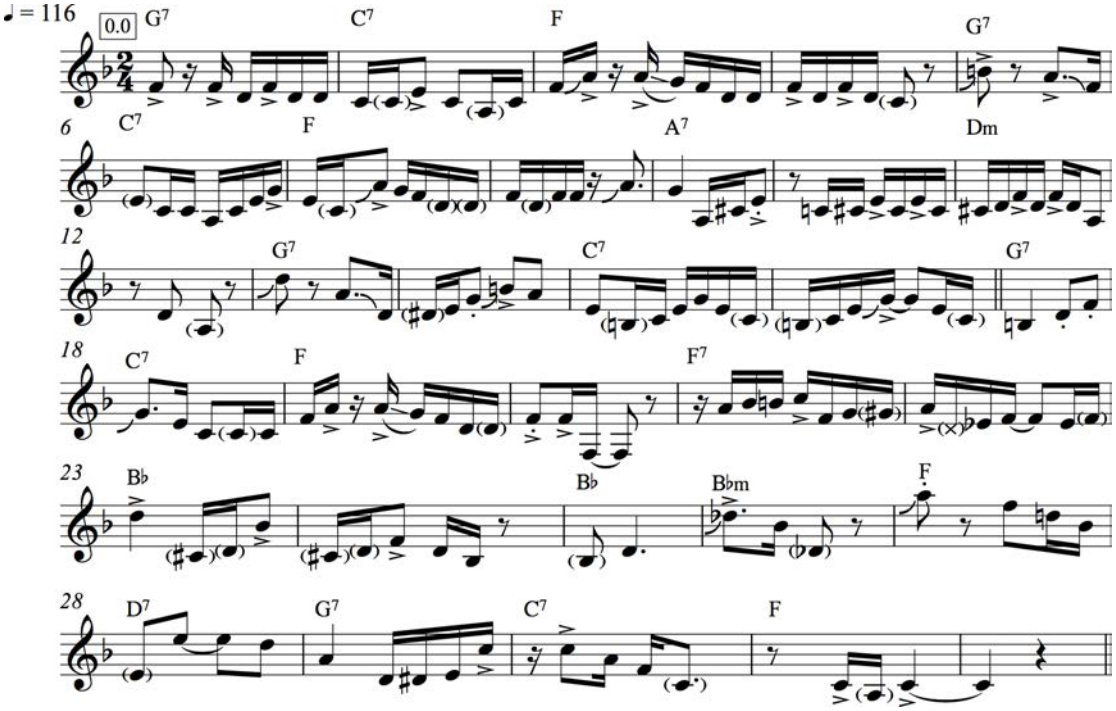
3.20 below, the rhythmic motif in the first bar plays an important role in the second section of the solo, when Dunn turns to dyads to complete the form.[225] With melodic choices limited by the use of a straight bar, Dunn employs variations of the opening motif in the final seven phrases, to maintain the momentum that he had previously generated.



Ex. 3.20 Improvisation on 'Taking Off', Bob Dunn (28/1/35, mx. C 9731-A)

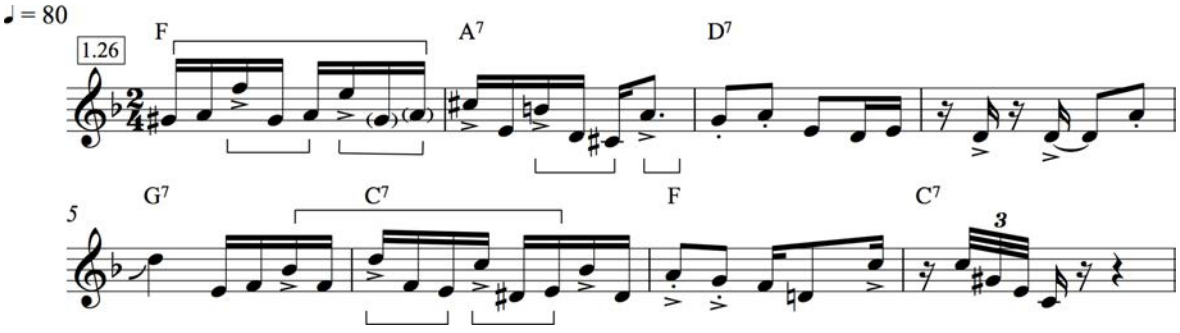
Maintaining rhythmic momentum is a challenge that increases with quickening tempos. Ex. 3.21 below demonstrates that momentum is one of Dunn's priorities, as he maintains the flow of sixteenth note phrases by ghosting notes where necessary. The example, 'Takin' Off' is a 1937 recording that shares the harmony of Dunn's previous recording with the Brownies, 'Taking Off', but has little in common with it's melody.[226] Taken at a tempo twenty beats per minute faster than the earlier tune, ghost notes abound in the predominately four bar phrases. In bars twenty one and twenty two, even ghost notes can't entirely save a phrase that was probably too ambitious at this tempo.

[225] Brown and Brownies, 'Taking Off'.
[226] Roy Newman and His Boys, 'Takin' Off', (Vocalion Vo 04025), 1937.



Ex. 3.21 Improvisation on 'Takin' Off', Bob Dunn (14/6/37, mx: DAL 308-2)

Syncopation lies at the heart of jazz rhythmic interpretation and Dunn achieves it through accents in unbroken lines of sixteenth notes and through salient accented notes. Accents are mostly accomplished through volume and pitch and at times are further stressed by use of staccato articulations. Dunn uses agogic accents much more sparingly. The opening phrase of 'You're Tired of Me', transcribed in Ex. 3.22 below, clearly illustrates both of Dunn's principal methods.[227] Furthermore, it demonstrates a high level of organization as the accented notes of the first two phrases incorporate polyrhythms of three sixteenth notes over Dunn's implied pulse of eighth notes. Furthermore, Dunn incorporates the motif of the first bar again in the second phrase, but this time it is displaced by an eighth note.



Ex 3.22 Rhythmic devices on 'You're Tired of Me', Bob Dunn (28/1/35, mx. C 9724-A)

[227] Brown and Brownies, 'You're Tired of Me'.

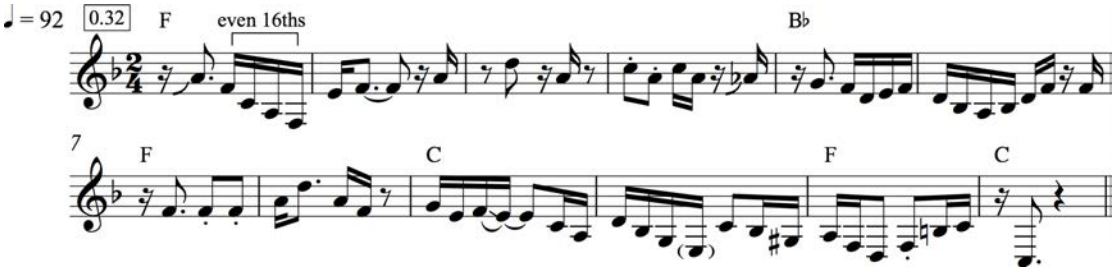
3.7.4 Blues styling

Blues tunes, based on twelve bar harmonic progressions, are sparsely represented in the recordings of the Brownies. Two examples can be found in the Chicago session while six were recorded in New Orleans. The balance of Dunn's recordings examined for this chapter revealed fifteen other examples, five recorded with Cliff Bruner, five with various other artists and five selected by Dunn himself for his band, the Vagabonds. The earliest was W C Handy's 'St Louis Blues'[228] recorded on the first day of the Brownies session and the last was 'San Antonio Blues'[229] recorded with Bruner in 1949.

Blues is an African-American form that provides a cornerstone of jazz. Its inclusion into western swing was inevitable as Brown reached to jazz to invigorate and modernize his repertoire. It might have been expected that Dunn's admiration of jazz musicians would be strongly in evidence through replication of blues tonality by the use of blue notes and microtonal inflection. Surprisingly, Dunn's blues solos are not steeped in the black American tradition, in contrast to the work of the Brownies fiddlers, Bruner and Brower. Despite his instrument providing a ready means to microtonal expression, Dunn's use of it in this way was most restrained. Clearly he had the wherewithal to do so, as he demonstrated in fills behind the vocal of 'A Good Man is Hard to Find' in the first Brownies session.[230] Dunn's blue notes and bluesy bends add greatly to the sultry tone of the song. For some reason, Dunn's subsequent approach to blues tunes was more restrained. His use of microtonal inflections was relatively discreet in most of his subsequent recordings. While he occasionally leaned on the seventh degree of dominant chords for colour, his use of the minor third was much more rare. The result is that many of his solos exuded a diatonic major tonality, quite distinct from the African American tradition.

'Toodle-Oodle-Oo', transcribed in Ex. 3.23 below, illustrates a solo on a blues tune that is almost completely devoid of the blues tonality and microtonal inflection, in contrast to the approach taken earlier in the tune by the singer and in the mandolin introduction.[231] While the Ab in bar four is, in name, a minor third against the tonic major, its role as a passing note contributes little to the tonality of solo.

[228] Brown and Brownies, 'St. Louis Blues'.
[229] Cliff Bruner and His Texas Wanderers, 'San Antonio Blues', (AYO Records B103-SA), 1949.
[230] Brown and Brownies, 'A Good Man Is Hard to Find'.
[231] Bob Dunn and His Vagabonds, 'Toodle-Oodle-Oo', (Decca 5676), 1939.



Ex. 3.23 Improvisation on 'Toodle-Oodle-Oo, Bob Dunn (2/3/39, mx. 65105A)

A less extreme example can be seen in 'Cheezy Breeze', transcribed in Ex. 3.11. In bar four, Dunn bends a minor third up to a major third and accentuates the minor seventh of the tonic. However, for the most part, the accidentals that Dunn uses are heard as passing notes in a mainly diatonic tonality.

3.7.5 Evaluation of Solos

Any qualitative assessment of Dunn's solos should be qualified by consideration of the conditions under which they were recorded. This is particularly relevant with regard to the Brownies sessions that set a benchmark by which Dunn's subsequent performances can be measured. Fortunately, documentation of the sessions in Ginell's book allows some insights into the process.[232] As noted previously, both sessions were marathons, the first of thirty five songs and the second of forty nine. While the tracks were mostly recorded in one take, some studio rehearsal can be assumed, if only to ensure the performances were of suitable length. Physical and mental stamina would have been required of the performers and, in particular, of the soloists. It would be understandable if Dunn's muse, under constant demand, ran dry at times. The pressure of achieving an acceptable take at the first pass would have exerted additional mental strain on all the soloists. Additionally, the first session, only weeks after his engagement, would have placed Dunn at the disadvantage of being required to produce improvisations on tunes with which he may not have been familiar and, furthermore, whose tempos and keys were not of his choosing.

In light of the pressure that he was under, it is not surprising to find that the quality of Dunn's solos across both sessions is variable. Dunn's solos were phrased with unifying melodic and rhythmic features that were not always consistent. The quality of Dunn's solos ranged from innovative and coherent to disjunct, halting and marred by poor intonation. A close examination of the Brownies recordings suggests that Dunn's coherence, clear articulation and good intonation bear a strong relation to the tempos with which he was presented. In many cases, solos at tempos above 120 beats per minute lacked cohesion and

[232] Ginell, *Milton Brown and the Founding of Western Swing*, 100-01, 73-74.

often gave an impression of through composed melodies without structure and clear cadence points. Frenetic flurries of notes were sometimes followed by chord tones of extended duration, suggesting that he was marking time and seeking fresh inspiration. At other times, strong melodic phrases that began solos were followed by rhythmic patterns utilizing a small range of notes that seemed designed merely to fill out the required duration. Some of the performances at fast tempos sound more like a matter of survival for the soloist than unimpeded musical expression. In contrast, Dunn exerts much more control at lower tempos. At slower speeds, repetition of melodic and rhythmic motifs impart coherence and the feeling of development, while transitions between phrases become more ordered. It is apparent that with increased confidence in his technique at lower tempos, Dunn's melodic and rhythmic invention thrived.

3.7.6 Style Refinement

Some refinement of Dunn's style is evident in the recordings that traverse the last thirteen years of his career. While enhancements in his monophonic melodies and Hawaiian stylings are relatively subtle, the chord solos of Dunn's later years were greatly enhanced by new tunings.

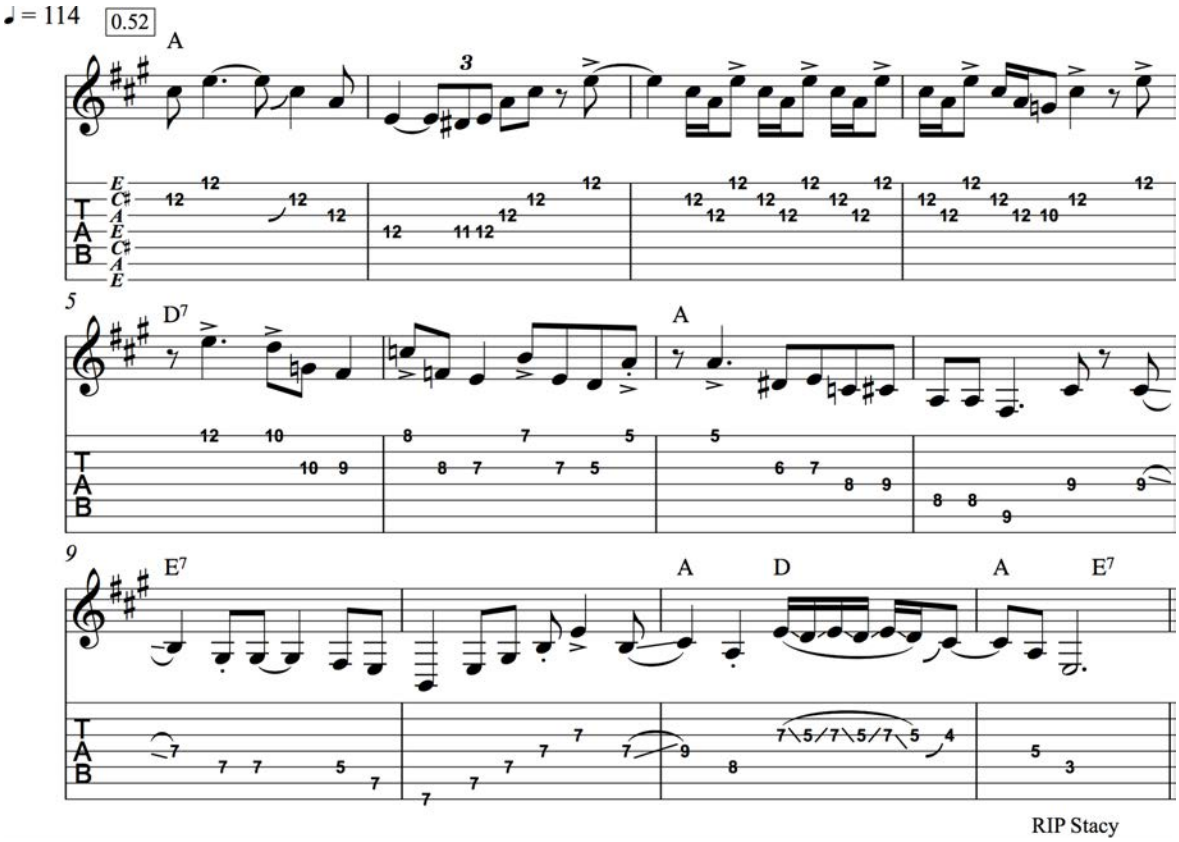
Although Dunn did not add new melodic devices to those displayed in his Brownies solos, a gradual reduction in the inconsistencies that marred some of his early work can be detected. A growing depth of experience in controlling his amplified instrument may have contributed to the improvement but, as subsequent recordings show, he was rarely again required to improvise at Brown's frenetic tempos. Perhaps this was because his heightened status as an improviser, the growing strength of his relationship with colleagues such as Bruner and his time as bandleader, gave him influence over the musical environment in which he was required to perform.

Additionally, a substantial improvement to the quality of Dunn's sound can be heard as his recording career progressed. The growl of distortion that permeated the Brownies sessions gave way to a cleaner tone on subsequent recordings. This was first evident in his recordings with Roy Newman in June 1937. As electric amplification became commonplace, improved recording practices may have also been a factor, but the enhancement of Dunn's equipment must have played a major role. He abandoned his Volu-Tone rig at some stage after the Brownies sessions and obtained a seven string Epiphone Electar steel guitar and an Epiphone amplifier as shown in Fig 3.3 below.

Fig 3.3 Bob Dunn with Cliff Bruner's band playing an Epiphone guitar and amplifier c1938, from the collections of the Center for Popular Music, Middle Tennessee State University

Dunn persisted with an A tuning on his new seven stringed instrument but how the extra string was employed is not clear from his recordings. It is apparent that Dunn's top strings remained the same until late in his career. Without an extensive inquiry, the only evidence of the extra string that has come to light in this study occurs in the ninth bar of 'Old Joe Turner Blues', transcribed in Ex. 3.24 below.[233] Dunn's articulation suggests that the seventh string plays a role at the bottom of the instrument's range. The assumption to be drawn is that the seventh string is tuned to E. Further investigation is required to clarify the issue.

[233] Cliff Bruner and His Boys, 'Old Joe Turner Blues', (Decca 5660), 1938.

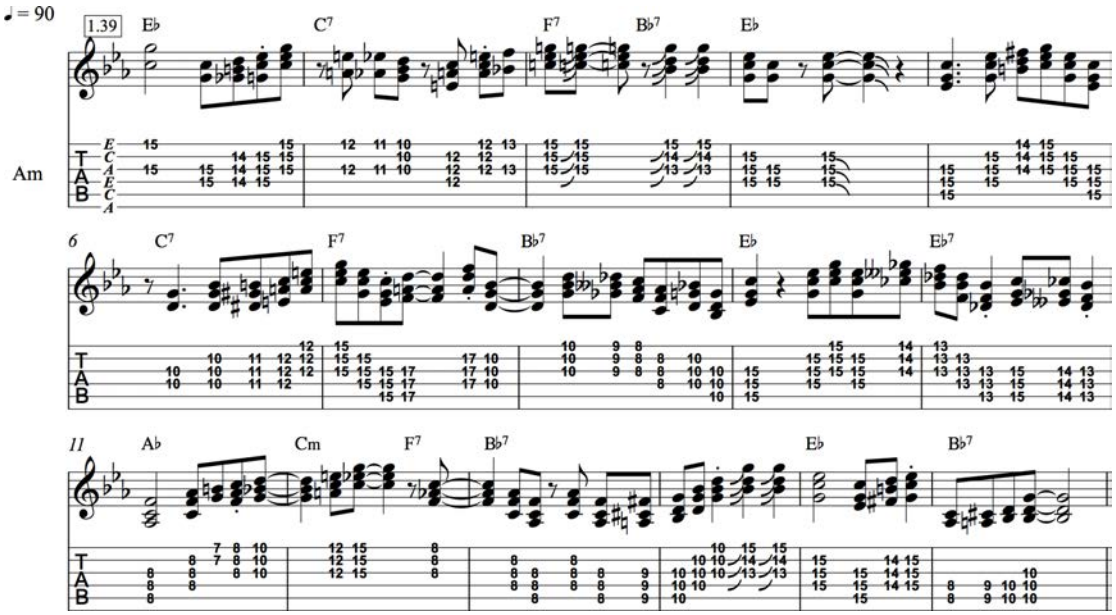


Ex. 3.24 Improvisation on 'Old Joe Turner Blues', Bob Dunn (14/9/38, mx. 64509-A)

The most salient enhancement of Dunn's later style can be observed in his chord solos in recordings after the war. Towards the end of his recording career, Dunn can be heard experimenting with tunings other than A major. This is apparent in three chord solos recorded in 1949 for different leaders, Cliff Bruner, Tommy Dover and Dub Poston. Dunn employs his typical rhythmic style, maintaining a mainly perpendicular bar and relying on voicings derived from root position chords at the appropriate neck position.

In his solo in 'Blue Over You', transcribed below in Ex. 3.25, Dunn employs a variation of his A tuning.[234] With the C#s of an A tuning lowered to C, the resultant sonority is A minor. However, he treats the tuning's voicing as a major 6th chord without a perfect fifth, with the root on the fifth string. Thus the neck positions that he uses are recalculated using the pitch of the fifth string as locate a tonic in root position. Bar slants are employed in bars three and fifteen to form a Bb6 chord with the root on the third string. In contrast with his earlier chord solos, the major sixth sonority of the tuning dominates Dunn's solo in this blues.

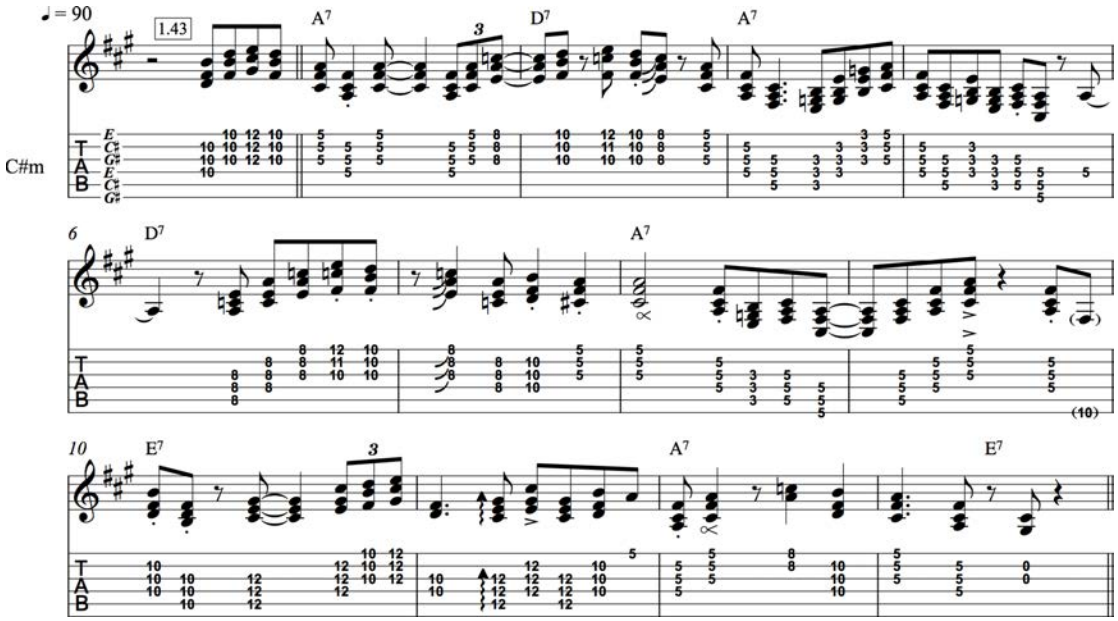
[234] Tommy Dover and His Texas Rhythm Boys, 'Blue over You', (ACA 1200), 1949.



Ex. 3.25 Improvisation on 'Blue Over You', Bob Dunn (c 9/1949, mx. ACA 1200)

In 'San Antonio Blues', recorded in Houston near the time of 'Blue Over You', Dunn uses a form of C#m tuning.[235] The tuning, in fact a voicing of E6, had been introduced by Hawaiian players in the early 1930s and adopted by some western swing players in the late 1930s. Dunn's tuning varies from the standard version by virtue of a bass string tuned to G# rather than a low E. This was probably due to the ease of adjusting an A tuning of A C# E A C# E (low to high) by lowering both As to G#. The configuration of the tuning also provided Dunn with the familiar symmetry of his A tuning. Had a low E been required, replacing the bottom string with a heavier gauge may have been necessary to provide sufficient tension on a string lowered by a perfect fourth. Again, Dunn uses a mainly straight bar and neck positions determined by the root of the chord, now on the fourth string. However, with a forward slant in bars three and six, he uses a dominant ninth voicing popularised earlier by eminent Hawaiian players, Sol Ho'opi'i and Dick McIntire.

[235] Bruner and Wanderers, 'San Antonio Blues'.



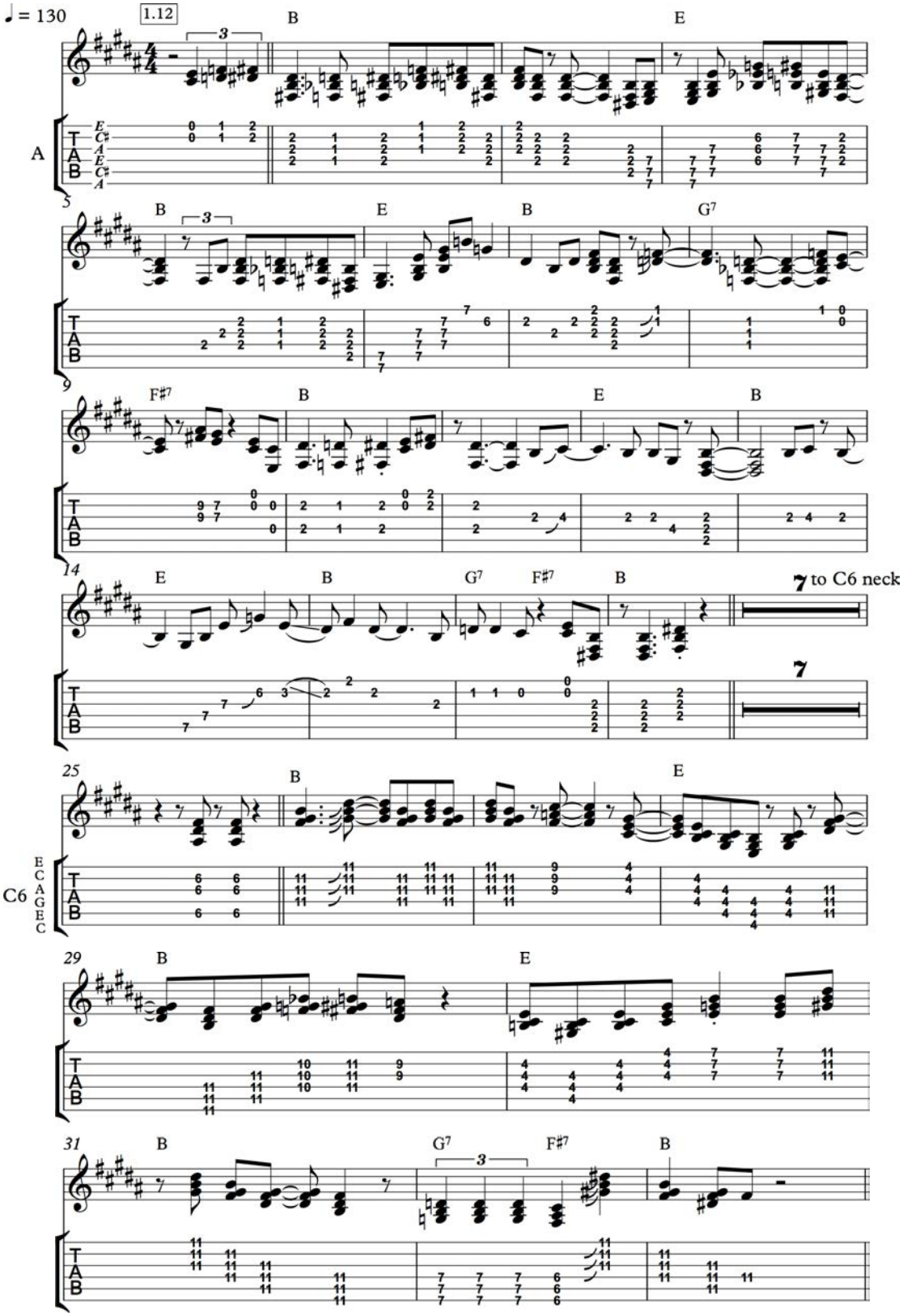
Ex. 3.26 Improvisation on 'San Antonio Blues', Bob Dunn (1/9/49, mx. ACA 1177)

The third solo, on 'I Can't Use You Anymore', transcribed in Ex. 3.27 below, is notable for two reasons.[236] Firstly, the song was recorded with a double neck instrument, which is apparent from the different tunings used. While Dunn doesn't change necks mid phrase, the first two A sections of the thirty two bar AABA form are performed on his regular A major tuning, while the last A section is performed using a different tuning provided by the second neck. Photographs from this time, as seen in Fig. 3.4, show Dunn's twin neck guitar, and this recording provides evidence of how he employed the two necks and an example of how they may have been tuned.

[236] Dub Poston, 'I Can't Use You Anymore', (ACA, Houston), c1949.

Fig. 3.4 Dunn playing twin necked instrument with Bennie Leader's band, 1948, courtesy of Kevin Coffey

The second notable element is the tuning of the second neck, which is C6. A6 and C6 tunings appeared at the end of the 1930s and became preferred tunings for hot solos in western swing. The examination of Dunn's catalogue conducted for the current study suggests that this was an isolated example of his use of the tuning.



Ex. 3.27 Improvisation on 'I Can't Use You Anymore', Bob Dunn (c 1949, ACA)

3.7.7 Summary of style

This examination has shown Dunn's style to be more expansive than previous commentaries acknowledge. Dunn was an innovative steel player of exceptional talent but he was foremost a

pragmatic sideman who forged a long career. He was able to skillfully adapt his instrument to various roles. While his hot solos garnered attention, the rest of his work has gone virtually unnoticed and, in the process, a broad picture of his achievements has not been portrayed.

Dunn's style represented a major breakthrough for steel guitarists. His rhythmic conception and melodic innovation combined to provide compelling momentum to his solos. He updated the ragtime rhythms of Ferera and drew on the style of later Hawaiians, Ho'opi'i and Pau'ole, and jazz soloists, to create a jazz styling that won him an influential position at the birth of western swing. His abstract solos also added a modern element that took steel guitar improvisation beyond the paraphrased approach of the Hawaiian players of the 1920s. He can be considered to have been completely successful in his quest to make the steel guitar a modern instrument of his era.

Dunn has been revered as an innovator who brought amplification to country music and who forged the prominent position of the steel guitar in western swing. Until now he has been seen as a pioneer who evolved a new style from influences of jazz wind instrumentalists. The question of how his style fits in the Hawaiian tradition of steel guitar has not previously been addressed. It should be clear from this study that he was influenced by the heritage of his instrument as well as his aesthetic jazz leanings. Dunn had previously observed and employed the steel guitar in a lead function of Hawaiian ensembles, so his move to establish the steel guitar as a prominent voice for his new employer Brown, was not an unprecedented innovation. His technique had been honed on difficult Hawaiian repertoire and Hawaiian, Bob Pau'ole, had initially inspired his vision of making the steel guitar a modern instrument. While this study does seek to diminish his original contributions, it does show that Dunn's approach was founded on the style and techniques of his Hawaiian steel guitar predecessors and shaped by the characteristics and limitations of the instrument itself.

3.8 Legacy and Influence

When Dunn erupted on the Southwest dance scene in 1935, his influence was powerful. The Brownies' success, achieved regionally with live appearances and radio performances and even further afield with recordings, placed the craft that Dunn had so carefully developed over years before a huge audience. Bandleaders wishing to emulate Brown's success sought out steel players to mimic Dunn's sound. Dunn had turned many heads and volunteers were plentiful. Almost immediately imitators appeared in bands across the region. Steel guitarists became a requirement for string bands wishing to repeat Milton Brown's success.

The amplification became available through the efforts of guitar builders such as Gibson, Rickenbacker and Epiphone who were beginning to manufacture new pickup-equipped models en mass. Some players, such as Emil Hofer, seen in Fig. 3.5 below, bought the Volu-Tone system with which Dunn had begun, possibly in a bid to accurately reproduce his sound.

Fig 3.5 Emil Hofer with Volu-Tone amplification system, performing with Jimmie Revard and the Oklahoma Playboys Summer, 1937; from the collections of the Center for Popular Music, Middle Tennessee State University

Mimicry of Dunn's style can be heard in many recordings of the period made in the Southwest before the war. The imitators had varied success. At one end of the scale, players like Leon McAuliffe turned in Dunn-influenced performances of high quality while at the other, players like Emil Hofer and Ted Daffan struggled with the basics of technique, evident in poor intonation. Other players, such as J C Way, Lefty Perkins and J D Standee, began to evolve their own personal styles that incorporated Dunn-like characteristics.

A pivotal but uncelebrated moment in western swing may have occurred when Dunn promoted of the career of his mentee, Leon McAuliffe, to Bob Wills. In his interview with Malone[237], Dunn professed to have recommended McAuliffe before he was offered a position with Wills' band. Will's consequent national success saw McAuliffe's amplified steel guitar exposed to a national audience.

[237] Dunn, 'Personal Interview'.

While Dunn's influence in the Southwest was profound, other factors provided the conditions in which steel guitar could subsequently prosper. It can be assumed that many of players emerging soon after Dunn's breakthrough in 1935 had begun to play long beforehand and had developed degrees of personal style under the influence of Hawaiian steel guitar performance and pedagogy. This is apparent in three recordings by Buster Jones. In two recordings in 1937, 'Mean Old Lonesome Blues'[238] and 'The Women ('Bout to Make a Wreck Out of Me)'[239], Jones exhibits purely Hawaiian stylings with no hint of Dunn's influence. Nevertheless, in 'Streamlined Mama, recorded later the same year, Jones provides a faultless rhythmic chord solo that sounds like Dunn at his best.[240]

For the most part, the influence of Dunn's style remained regional. While some of his adherents, most notably Deacon Evans, maintained a Dunn-derived style through out his career, many others forged their own paths. As the genre of western swing evolved, Dunn's style became passé and new heroes emerged. Two of Dunn's disciples, McAuliffe and Noel Boggs, adopted new tunings and developed their own influential styles. Subsequently, the pair became leading figures of steel guitar in the golden decade of western swing, the 1940s.

Dunn remains the colossus who established the amplified steel guitar in country music and its subgenre, western swing. However, his style has not been revered by subsequent generations and there are few players who seek inspiration from it. Dunn's recordings may not appeal to contemporary players for a various reasons. Firstly, Dunn's sound on early recordings is coarse and, at times, shrill. The distorted sound of the tiny amplifier at full volume, coupled with the imprecise intonation of some tracks, is not attractive. Dunn's inconsistency in his early work, as he struggled at times with difficult tempi, is difficult to ignore. While his rhythmic approach was innovative, it was based on jazz styles of the late 1920s and may be less attractive to the modern ear than the more sophisticated rhythmic approach taken by Boggs and Joaquin Murphey in the 1940s. Furthermore, Dunn's A major tuning, used for most of extant recordings, has passed from favour and has been rarely used in western swing steel since the 1930s.

Nevertheless, Dunn leaves a body of work that has been largely unexamined. Over his career, Dunn explored and uncovered the secrets of the A major tuning in jazz. This may be of great significance to the largest body of steel guitarists that exists today, six string dobro players, whose G major tuning shares the intervallic configurations of Dunn's A major. Dunn's catalogue sits as a huge untapped resource for dobro players who seek to escape from the resonant modal approach that dominates the bluegrass genre where so many current

[238] Buddy Jones, 'Mean Old Lonesome Blues', (Decca 5372), 1937.
[239] Buddy Jones, 'The Women ('Bout to Make a Wreck out of Me)', (Decca 5345), 1937.
[240] Buddy Jones, 'Streamlined Mama', (Decca 5538), 1937.

players reside. Dunn's ideas and techniques remain for any players who wish to avail themselves of them.

Dunn's style was the product of his innovative nature and the influences provided to him by the musical environment by which he was surrounded. The basics of his style and technique were founded on the music of the 1920s, in which decade his career had begun. His initial models, Ferera, Ho'opi'i and Pau'ole, were all players of the first and second generations of Hawaiians who had forged a musical culture on acoustic instruments. Those who modeled themselves on Dunn, and whose style had advanced little after his first electric recordings, were, in fact, looking backwards. However, in the 1930s, Hawaiian innovation rolled on relentlessly. Players swiftly adopted amplification and incorporated its advantages in an evolving style that was available to any with the wherewithal of aurally deciphering the innovations. The next chapter examines the Hawaiian innovations and the processes by which they were forged, painting a picture of an independent performance culture on which developing western swing steel players could draw.

Chapter 4: A Modern Hawaiian Model

4.1 Introduction

The previous chapter exposed deeply rooted Hawaiian influences in the style of inaugural western swing steel guitarist, Bob Dunn. Dunn and his contemporaries fashioned their craft in the shadow of an acoustic Hawaiian tradition that extended through the early 20th century. The dynamic Hawaiian performance culture offered styles of two distinct generations of players on which Dunn drew. With the dawning of the age of amplification, a new phase of Hawaiian development began. Hawaiian steel guitarists immediately embraced the new technology and exploited it fully, in the service of their distinct style. An examination of Hawaiian steel guitar style conducted in this chapter will reveal an evolving technical and harmonic model that showed the way to the western swing pioneers who followed Dunn. The chapter will begin with a brief summation of early Hawaiian steel guitar culture and the manner in which its influence was imparted to country musicians, with a case study of Jimmy Tarlton presented. Then, an assessment will be made of the evolution of the Hawaiian electric steel guitar stylings of 1930s with specific attention to the evolution of tunings. The timeline that is established provides a reference point for analysis of developments in western swing.

But what can be deemed as a 'Hawaiian influence'? For the purposes of this study, a simple answer to this complex question can be found in separate spheres of aesthetics and technique. Firstly, in the wake of waves of popularity on the mainland, American musicians could be directly enamored with and influenced by Hawaiian music that they experienced through live performances on stage and radio, commercial recordings and from pedagogy available from teachers, academies or printed material. Secondly, they could adopt Hawaiian techniques incorporated in steel guitar music in non-Hawaiian repertoire, thus unwittingly absorbing Hawaiian influences. Rich opportunity for both types of encounters existed for American musicians in the early 20th century.

From a contemporary standpoint, the proposition that the music and musicians of the Hawaiian Islands could exert any influence on country musicians in the south west of America in the 1930s seems, at first glance, fanciful. But a comprehensive account of how the Hawaiian steel guitar came to permeate mainland American popular music at the beginning of the 20th century is told both in John Troutman's celebrated book *Kika Kila: How the Hawaiian Steel Guitar Changed the Sound of Modern Music*[241] and the current author's master's dissertation 'Across the Pacific: the transformation of the steel guitar from Hawaiian folk instrument to popular music mainstay'.[242]

[241] Troutman, *Kika Kila: How the Hawaiian Steel Guitar Changed the Sound of Modern Music*.
[242] Cundell, 'Across the Pacific: The Transformation of the Steel Guitar from Hawaiian Folk Instrument to Popular Music Mainstay'.

4.2 The Acoustic Era

The first two decades of the twentieth century saw an influx of Hawaiian entertainers to mainland America who were exercising rights of citizenship, newly acquired after the annexation of their homeland by the United States in 1898, and chasing employment in greener pastures. In their ranks were players skilled in a steel guitar performance style that had only recently been developed in the islands. As the groups fanned out across America, the steel guitar provided an attractive voice in their musical ensembles that soon found broad favour with audiences. The touring groups became fixtures on vaudeville circuits, were featured at trade and cultural exhibitions and played an integral role in *The Bird of Paradise*, an internationally successful stage production. The distinctive and novel sound of the instrument became an ethereal totem of the exotic location and romanticised lifestyle of Hawaii that was admired by mainlanders.

The repertoire of the touring ensembles was a diverse mix of Hawaiian and western music. It consisted of three core elements; Hawaiian mele, hapa haole tunes that used Hawaiian language and themes juxtaposed over western styled music, and a range of popular music included to broaden the appeal of the repertoire. Ensembles consisted mainly of stringed instruments; guitar, ukulele, violin and steel guitar. In these ensembles, the steel guitar assumed a leading melodic role.

The ubiquitous presence of glissando, vibrato and harmonics, to impart singing qualities to melodies in steel guitar performance, encouraged comparisons with vocal timbre and inflection. American musicologist, Mantle Hood, speculated that the performance style might have been developed in imitation of the voice.[243] Short glissandi provided the means to closely imitate vocal inflection. Acute control of vibrato, afforded by the bar, added to a player's ability to imitate vocal performance through subtle variation in oscillation. Hood also observed that harmonics, which were frequent ornamentations in steel guitar style, were also a form of vocal imitation, mimicking falsetto.[244]

The attraction of the steel guitar lay not only in its exotic evocations but also with the novelty of its idiosyncratic sound production, which was revolutionary. Once the secret of the tourists' technique was revealed, non-Hawaiian musicians in Vaudeville were quick to adopt the instrument.[245] The speed and enthusiasm of the take up by non-Hawaiian professionals was an indication of how the popularity of the instrument was to spread in the broader populace.

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[243] Hood, 'Musical Ornamentation as History: The Hawaiian Steel Guitar'.
[244] Hood, 'Musical Ornamentation as History: The Hawaiian Steel Guitar', 45.
[245] Joe Laurie, *Vaudeville: From the Honky-Tonks to the Palace* (New York: Henry Holt and Company, 1953), 70.

The expanding reach of the steel guitar in the early twentieth century can be observed in three distinct media, those of live performances, commercial recordings and printed material. Riding a wave of popularity of Hawaiian music, the steel guitar progressed to other genres, as Hawaiians broadened their repertoire and non-Hawaiian players adopted the instrument. Enthusiasm for Hawaiian music also saw a flood of recordings that peaked in 1916.[246] Many musical careers began with interest and passion sparked by encounters with Hawaiian players. The deep penetration of America by Hawaiian troupes brought the music to remote sites where some future steel guitar legends were smitten. Bob Dunn was not the only prominent steel player impressed by touring Hawaiians. Jerry Byrd's path to international steel guitar fame was initiated by a Hawaiian troupe in a tent show in Lima, Ohio in 1933.[247] Transmission through the airwaves also provided inspiration. In the Southwest, both Dunn and Leon McAuliffe were stimulated by the radio show of the Genial Hawaiians from Chicago.[248] Film sound tracks also played a role. In Mishawaka, Indiana, another of Bob Will's future steel players, Herb Remington, was first inspired by the playing of Hawaiian, Sam Koki, who he heard in the soundtrack to Bing Crosby's movie, Blue Hawaii.[249]

As the steel guitar became a familiar musical voice on the airways and in movie houses, it simultaneously became popular as a parlor instrument. Easy to begin but hard to master, the instrument provided beginners with fast access to basic musical performance. An initial demand for lessons was met, at first, by Hawaiian professionals who used tuition to supplement their performance incomes. Subsequently, a vast pedagogical industry arose that extended from individual teaching practices to huge academic franchises operating across the continent. Hawaiian teachers taught mainlanders, some of whom maintained the tradition by setting up teaching practices of their own. From teaching practices, schools evolved, some of which became huge academic franchises, such as the Oahu Publishing Company of Cleveland. One estimate suggests that up to 200,000 students graduated from a possible 1200 Oahu franchises during the company's fifty year history.[250] Instructors and academies were supported by publishing houses across America that generated scores and pedagogical material. By these means, Hawaiian influence of both technique and repertoire was imparted to future western steel players at an impressionable age. Bob Dunn was indebted to

[246] The assertion that in 1916 Hawaiian music was the most popular genre in the output of major recording company Victor was made in an Hawaiian almanac. 'Hawaiian Music Universally Popular', *The Edison Phonograph Monthly* 14/9 (1916).
[247] Byrd, *It Was a Trip on the Wings of Music*, 12.
[248] Malone and Neal, *Country Music, USA*, 157. Stacy Phillips, 'Dunn/Paole/Mcauliffe', ed. Guy Cundell, Email ed., 2017.
[249] L.V. Eastman, 'Herb Remington: Developing the Sound of the Steel Guitar', *Guitar Player* 12/5 (1978), 36.
[250] Lorene Ruymar, *The Hawaiian Steel Guitar and Its Great Hawaiian Musicians*, (Anaheim Hills, California: Centerstream Publishing, 1996), 70.

Kolomoku's correspondence course in ensuring a strong technical basis for his style. Prominent west coast steeler, Billy Tonessen, recounted early lessons with Hawaiian player George Kaahiki in Los Angeles in 1943.[251] The first instrumental steps of both Jerry Byrd and Leon McAuliffe were overseen by teachers of Hawaiian music, neither of whom were Hawaiian.[252] Herb Remington was introduced to the instrument by a door-to-door salesman and subsequently completed sixty lessons provided by the Oahu academy.[253]

It can be argued that the broadening of repertoire and the growing number of non-Hawaiian teachers diminished Hawaiian influence. However, the techniques and core principles pioneered by Hawaiian performers continued to be disseminated. Method books demonstrated techniques of bar slants, vibrato, blocking and harmonics and included Hawaiian repertoire. Additionally, steel guitar recordings in various genres often employed the same distinctive dyadic approach that marked the original Hawaiian style.

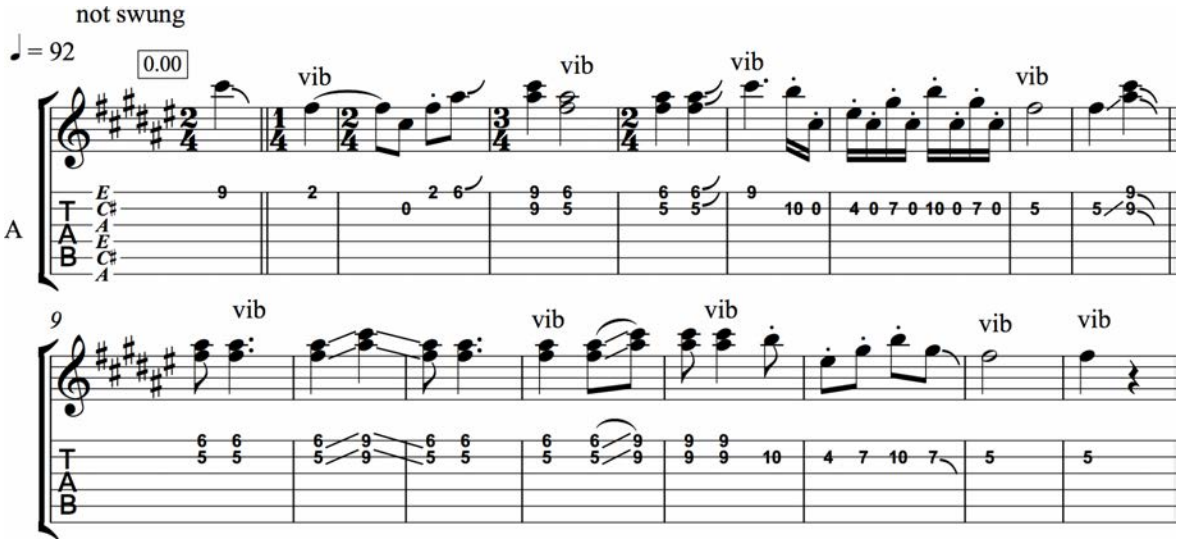
4.2.1 Jimmy Tarlton

While dissemination of steel guitar technique and repertoire occurred on a grand scale in the pedagogical industry, opportunities also existed for casual exchange between musicians. Although difficult to document, an example of this type of interchange is evident in the 1927 encounter between Jimmy Tarlton and Hawaiian master, Frank Ferera. Tarlton was part of a successful hillbilly duo, Darby and Tarlton, who made commercial recordings between 1927 and 1933. Both sang and accompanied themselves with Spanish guitar, played by Tom Darby, and steel guitar, played by Tarlton. The history of the duo was documented by Graham Wickam in 1967 after a series of interviews with Tarlton.[254] Tarlton, born in 1892, was the son of a sharecropper who spent his childhood in the Carolinas where he took up Spanish guitar at the age of nine. He began playing steel guitar at the age of ten after he had encountered black street musicians playing instruments across their laps. Wickham's article is equivocal on this point, with an assumption made that these players were African Americans. However, they may well have been an early Hawaiian touring party promoting their show on the street.

Wickham notes that Tarlton met renowned Hawaiian player, Frank Ferera, in Los Angeles around 1924, and that he 'learned a great deal from Ferera'.[255] This

[251] Billy Tonnesen, '2-Weekly Hawaiian Steel Guitar Lesson Assignments' 2009. https://bb.steelguitarforum.com/viewtopic.php?t=163811&sid=497246f27143167d2503fb5b140700b4 (accessed September 25th 2018).
[252] Byrd, *It Was a Trip on the Wings of Music*, 15. Leon McAuliffe, 'Leon Mcauliffe: The Story of a Steel Guitar Pioneer', *Guitar Player* 10/7 (1976), 16.
[253] Eastman, 'Herb Remington: Developing the Sound of the Steel Guitar', 16.
[254] Graham Wickham, 'Darby and Tarlton', *Blue Yodeler* (1967).
[255] Wickham, 'Darby and Tarlton', 9.

acknowledgement of the extent of Ferera's influence is eroded as Wickham's sentence continues 'as even today he is able to play Hawaiian songs in a manner that is quite different from his usual country style'. While Tarlton may have been able to render Hawaiian tunes at the time of the interview, Wickham's contention that his 'usual country style' is removed from Hawaiian style is contestable, as is evidenced by the following transcription of Tarlton's performance on an early hit recording by the duo, 'Colombus Stockade Blues', recorded in 1927.[256] The steel guitar introduction, transcribed below in Ex. 4.1, is typical of Tarlton's recordings of the period.



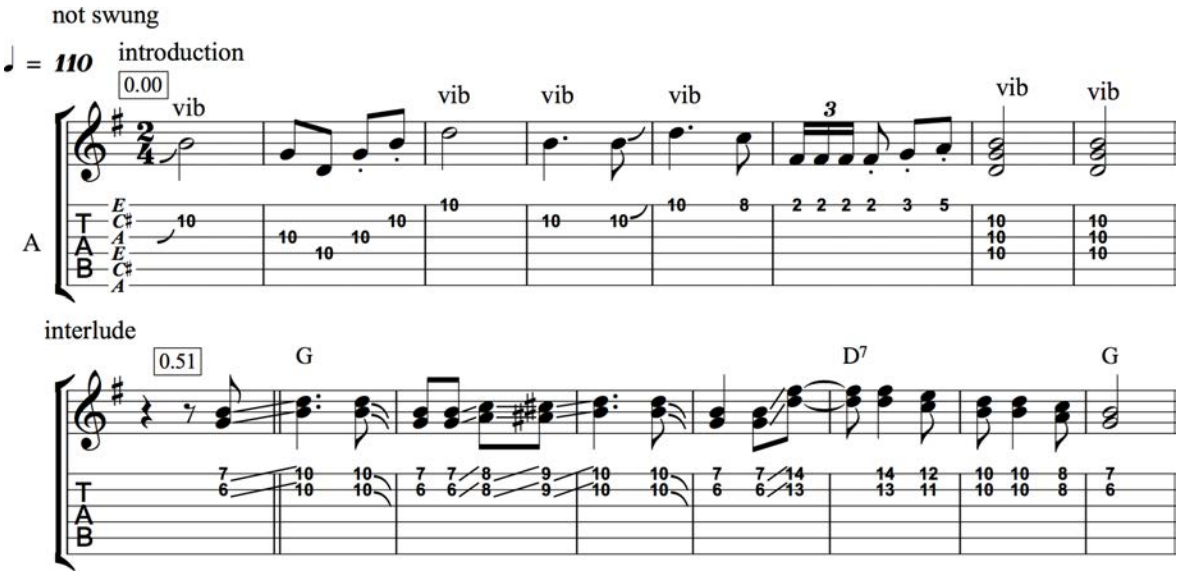
Ex. 4.1 Introduction to 'Colombus Stockade Blues', Jimmie Tarlton (10/11/27, mx.145203-2)

Key elements of Hawaiian steel guitar technique and style permeate Tarlton's performance. A significant element of Hawaiian technique is Tarlton's use of slants to achieve dyadic harmonisation. Furthermore, his melodies are played laterally, in a Hawaiian manner, rather than across the neck. Aesthetically, generously applied vibrato and many inflections, achieved by bar glisses, impart rudimentary vocal qualities to the solo. These attributes, along with the staccato passages in this march-like piece, are elements of early Hawaiian style that Tarlton would have been able to observe first hand in Ferera's playing, although he was undoubtedly exposed to Hawaiian sources in additional ways.

It is instructive to compare Tarlton's recording with another rendition of the same tune by Bud and Joe Billings, a pseudonym for Frank Luther and Carson Robison, made in New York in 1928.[257] The transcription in Ex. 4.2 below shows two eight bar strains that are repeated, the first as an introduction and coda, and the second as an interlude between verses.

[256] Darby and Tarlton, 'Colombus Stockade Blues', (Colombia Co 15212-D), 1927.
[257] Bud & Joe Billings, 'Columbus Stockade Blues', (Victor V-40031), 1928.

In a regular meter and at a faster tempo than Tarlton's version, these two strains demonstrate a more sophisticated adoption of Hawaiian steel guitar style. The staccato picking style of the first strain is typical of the first generation of Hawaiian steelers. The triplet roll in bar six demonstrates a well honed and disciplined picking technique. The Hawaiian flavour is supplemented by use of glissandi that evoke vocal inflection and by the generous wide vibrato applied to notes of extended duration. The second strain employs the Hawaiian technique of bar slants to effect harmonised dyadic melody that reaches high on the neck. Tony Russell's discography notes that the instrumentalists on the record are unknown but that steel player may have been American multi instrumentalist, Roy Smeck.[258] Alternatively, the precision of this cultivated performance suggests that it may have been Frank Ferera, Tarlton's tutor and prolific session player, rather than the energized but less disciplined Smeck. Rockwell's Hawaiian discography indicates that Ferera's involvement is possible as he was recording in New York in December 1928 and January 1929.[259] If the steel guitarist on this track was Ferera, the recording gives an accurate aural indication of the model to which Tarlton was exposed.



Ex. 4.2 Introduction and interlude to 'Colombus Stockade Blues', unknown steel guitarist (27/12/28, mx. 49600-2)

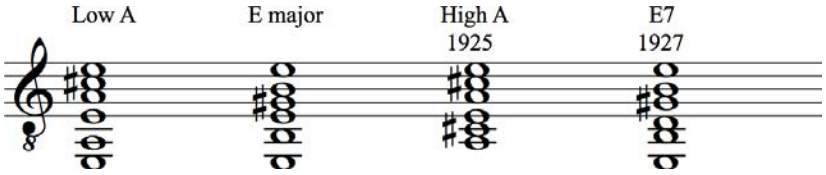
Both recordings above exhibit elements of Hawaiian steel guitar style developed in the acoustic era, the duration of which extends from its inception in the late 1890s to the mid 1930s. The period was marked by two distinct styles. The inaugural style began to be augmented in 1925, with the emergence of Sol Ho'opi'i', the leading light of a following generation. In terms of repertoire, Hawaiian mele, hape haole and popular music are elements

[258] Russell, *Country Music Records, a Discography, 1921-1942*, 768.
[259] T. Malcolm Rockwell, *Hawaiian & Hawaiian Guitar Records, 1891-1960* (Kula, Hawaii: Mahina Piha Press, 2007), 323.

common to both generations but the latter two were prone to the influence of changing public tastes. Thus the most pronounced delineator between the two generations was the rising jazz influence of the 1920s that required steel guitarists to change their approach.

The popular music elements of the repertoire of the first generation were spiced with ragtime influences. The jagged rhythms of the craze infused hape haole tunes, Hawaiian marches and renderings of popular music alike. Staccato picking was widely employed, both to effect the stark syncopations demanded. The melodic role of the instrument was enacted primarily through monophonic and dyadic modes of performance. Tunings employed simple triadic harmony, with Low A and E major most prominent.

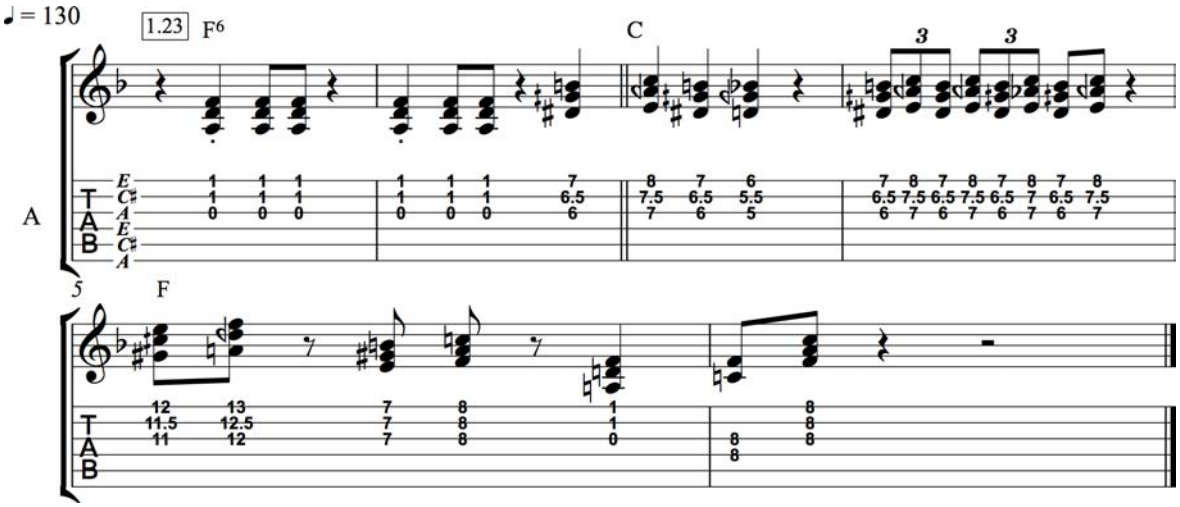
The advent of the jazz age saw a moderation of the angular syncopations of ragtime and a rising prominence of swing feel in popular music. This was replicated in the style of the new generation of steel players who also had to wrestle with a growing complexity of harmonic structures and sonorities. Low A tuning began to be replaced by the more versatile High A tuning, popularised by Ho'opi'i, and E7 became a popular alternative to E major.



Ex. 4.3 Popular tunings of the 1920s

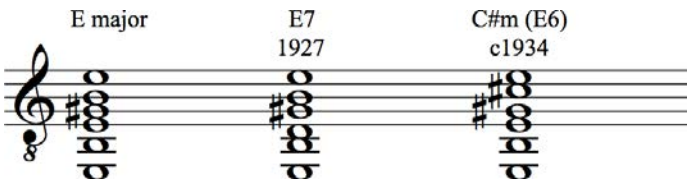
While monophonic and dyadic melodic modes continued to dominate, Ho'opi'i also struggled to coax chord melody from his High A tuning. In an extension of the dyadic approach, he led the way in developing a chordal mode of performance that was to become an important part of steel guitar style in both Hawaiian music and western swing. The difficulty that Ho'opi'i encountered can be seen in Ex. 4.4 below, extracted from his second recording of the popular hapa haole tune "Hula Blues'.[260] The recording, made in February of 1934, was one of the last that Ho'opi'i made using an acoustic instrument. By December of the same year, he had adopted an electric instrument for recordings. The major sixth chordal sonority that pervades his performance can be considered a modern sound that had begun to be commonly employed in popular music in the late 1920s and early 1930s.[261] It became an essential tool for big band arrangers of the swing era for the harmonisation of the expanded saxophone section with the 'thickened line' device. Significantly it also became a pervading harmonic essence in Hawaiian music.

[260] Sol Hoopii and His Novelty Quartet, 'Hula Blues', (Brunswick 55075), 1934.
[261] Cundell, 'Across the Pacific: The Transformation of the Steel Guitar from Hawaiian Folk Instrument to Popular Music Mainstay', 103.



Ex. 4.4 Improvisation on 'Hula Blues', Sol Ho'opi'i (22/2/34, mx. LA 122-A)

The first two bars of the Ex. 4.4 employ a voicing of a tonic F6 chord using a combination of open and fretted strings with the tip of the bar. The use of an open string in this way ensures that the intonation of the chord is perfect but, as the voicing is not moveable, the technique has limited application. The problem is apparent in the next bars when Ho'opi'i seeks to repeat the same voicing with the root of C. His only alternatively is to employ the imprecise technique of fudging using a slanted bar. As a result, the A is flat by about half a semitone but is made acceptable by the context of the preceding chord and the chromatic movement that disguises the flaw. When Ho'opi'i returns to an F chord, two bars later, he briefly repeats the voicing at the octave but returns to more desirable intonation, first with a triad, using a straight bar at the eighth fret, and then with his original voicing. The imperfect intonation of the fudge is unavoidable and, while it can be masked by vibrato to some degree, it is not surprising that soon after Ho'opi'i sought an alternative tuning that allowed him to access the desirable sonority in a moveable form. This he achieved with an E6 tuning, derived from a basic E major, that came to be widely known as C#m, as shown in Ex. 4.5 below. The new tuning, along with some close variations that shared pitches of the top four strings, came to dominate Hawaiian stylings in the early electric era.



Ex. 4.5 C#m tuning and its antecedents

4.3 The Electric Era

The era of electric amplification can be said to have begun in America in late 1928 with the release of the Stromberg electric guitar and amplifier. Cumbersome and very expensive, the instrument proved to be a false dawn that was extinguished by the Great Depression that began the following year.[262] The era began in earnest in 1932 when the Ro-Pat-In Corporation, undeterred by the continuing depressed economic conditions, released an amplified steel guitar. The company, founded by George Beauchamp, became Rickenbacker Electro in mid 1933. The steel guitar, the Rickenbacker Electro A-25, had a cast aluminum body with a shape that suggested its nickname, 'the Frypan'. A succession of manufacturers soon brought other electric instruments on to the market; ViVi-tone, Dobro and Volu-tone in 1933, and Gibson in 1935.

The arrival of the Frypan was the fulfillment of a quest for volume that had begun the previous decade with the invention of the National Tricone resonator guitar. The earlier instrument used mechanical means of thin resonating metal discs to increase the volume of a metal-bodied guitar. The company's first steps in marketing the device were aimed at the steel guitar market, with square-necked models designed specifically for steel players. The celebrated performer chosen to endorse and demonstrate the new instrument was Sol Ho'opi'i. The design proved popular and Hawaiian players took to the new instrument en masse.[263] With the success of the Tricone, it is unsurprising that Ro-Pat-In and Beauchamp, himself a steel player, decided to test the market for the new technology initially with a steel guitar.

The revolutionary product delivered its inventor's vision of increased volume and, in so doing, changed the role of both the steel and Spanish guitars in popular music. Extra volume allowed Spanish guitar players to take a more prominent role in dance bands and orchestras where previously they were confined to rhythmic duties. Subsequently, the guitar would be popularised by a long line of jazz players, such as Charlie Christian, whose fresh improvisatory styles impelled an inexorable rise in the instrument's popularity in the twentieth century.

Added volume also allowed steel guitarists like Bob Dunn to assume a frontline position in western swing, but in Hawaiian music, the steel guitar was already a leading instrumental voice. The benefits of the new technology were immediately evident to Hawaiian players and apparent in the very first recording of steel guitar with amplification.

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[262] Lynn Wheelwright, 'Stromberg Electro' 2010. http://www.vintageguitar.com/3657/stromberg-electro/ (accessed 28 August 2018).
[263] Ruymar, *The Hawaiian Steel Guitar and Its Great Hawaiian Musicians*, , 114.

4.3.1 Enhancing the sound

The first recording of an electrically amplified steel guitar, 'Dreams of Aloha', was made in New York in February 1933.[264] The ensemble was the Noi Lane Hawaiian Orchestra and composer, Joseph Lopes, was probably the steel guitarist. Lopes was a veteran Hawaiian player who was married to vocalist Noelane Lopes, after whom the ensemble was named. He had been the steel player in the ensemble of renowned Hawaiian composer Johnny Noble in 1924 when a radio broadcast from Hawaii was first heard on the mainland.[265] The appearance of the new technology was of great interest, as evidenced by the session notes for 'Dreams of Aloha' that record that two record company supervisors were present. These were recording executive, Alfredo Cibelli, who oversaw all Victor's foreign recordings, and Anthony Franchini, who was Frank Ferera's long time accompanist. The executives may have attended to assess the merits of the new technology.[266] The small ensemble used appears to comprise the electric steel guitar, an acoustic Spanish guitar and a ukulele, which is consistent with Hawaiian groups of the era. The piece features a steel guitar melody throughout, with only muted accompaniment from the other instruments. Given the date of the recording and the paucity of other alternatives, instrument used was probably a Ro-Pat-In EleKtro A-25 Frypan. A full transcription of the steel guitar melody appears in Ex. 4.6 below.

The exotic and ethereal promise of the title of the track is confirmed in a sweet languid melody, realized in the Hawaiian style and technique of the steel guitar performance. The form of the slow moving waltz had been carefully crafted to fit within the three minute confines available. It begins with a short introduction extracted from the theme, which is followed a sixteen bar verse, repeated with variation. The thirty two bar theme is followed by another variation of the verse and an eight bar excerpt of the theme, resulting in a track of two minutes fifty two seconds duration. Hawaiian stylings that permeate the piece include a dyadic melody, heavy vibrato, glisses, voice-like inflection and some harmonics, all familiar characteristics of the acoustic era.

A striking feature of the performance is the enhancement of the Hawaiian stylings employed by the new technology. Volume, itself, does not change the function or prominence of the steel guitar performance but the extra sustain that it imparts is exploited in a number of ways. Firstly, the extra sustain allows legato articulation for lines of long notes that was not previously possible. Lopes uses minims and dotted minims to create a forceful legato melody,

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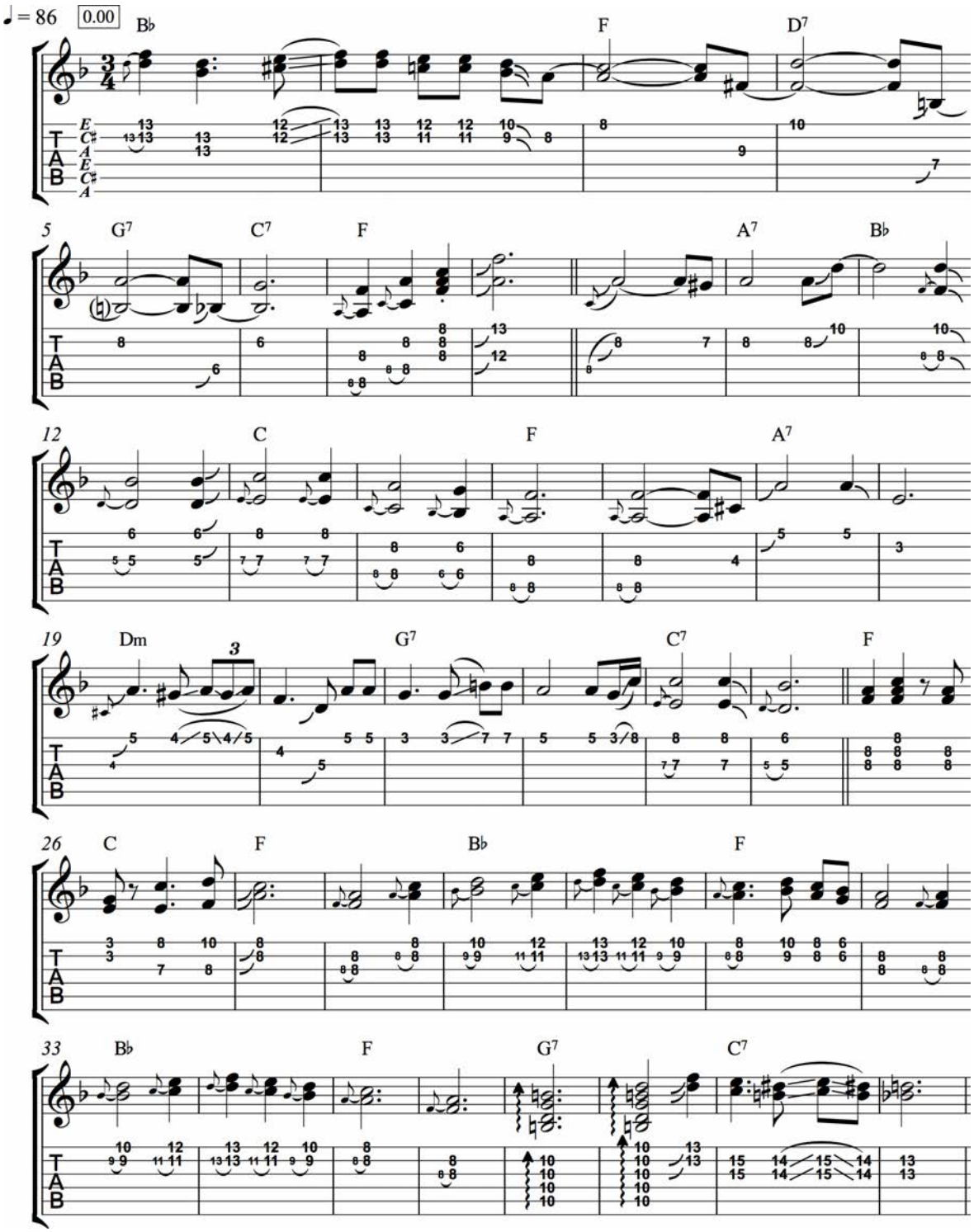
[264] Noi Lane Hawaiian Orchestra, 'Dreams of Aloha', (Victor Vi V92), 1933.
[265] Ruymar, *The Hawaiian Steel Guitar and Its Great Hawaiian Musicians*, , 98.
[266] 'Victor Matrix Bs-75273. Dreams of Aloha / Noi Lane Hawaiian Orchestra.'. https://adp.library.ucsb.edu/index.php/matrix/detail/800040563/BS-75273-Dreams_of_aloha (accessed 28 August 2018).

rhythmically impelled only with anticipations. Amplification relieves him of the need that acoustic players had to restrike strings in order to maintain long durations. Furthermore, the enhanced sustain of the electric instrument significantly enhances the vocal-like qualities of the melody.[267]

Sustain afforded by amplification was also beneficial to vibrato employed throughout 'Dreams of Aloha', which is more prominent and effective than would have been possible on an acoustic instrument. Again, this improvement enhanced the vocal properties of the performance. Additionally, the extra volume and sustain effectively increased the range of the instrument, giving more prominence to notes above the twelfth fret, particularly on inside strings, which, on acoustic instruments, suffer more acutely from rapid decay than do notes at lower positions. Lopes exploits this new facility to create a climax in the final rendering of the theme.

A second advantage provided by the new equipment, that of enhancement to timbre, is more subtle and difficult to discern but proved to be just as significant as sustain. Although the beginning of the track exhibits some distortion, Lopes quickly adjusts his approach and the timbre of his guitar becomes smooth and glassy, in contrast to the strained over-driven sounds of Bob Dunn's Volu-Tone system years later. Lopes' constant vibrato creates a shimmering effect, an enhancement of the exotic ethereal sound that had first ignited popular interest in the acoustic instrument. The richness of the timbre is consistent in the sustained tones and also benefits from a reduction in rate of decay. Picking is a much less muscular exercise so that precision and consistency can be more easily achieved. As a result, Lopes performance is both relaxed and powerful. As improvements to both instrument and amplifier were made, control over timbre would increase manifold from this initial step.

[267] A dramatic example of the effect can be seen by comparing two versions of 'Song of the Islands' by Eddie Bush, on in 1928 and then on an electric instrument in 1934. Both versions are taken at sixty beats a minute. In the acoustic version, Bush is required to use a tremolo picking technique to maintain the intensity of notes of long duration. No extra sounding of the strings is required in the later electric version. Earl Burtnett and His Biltmore Trio, 'Song of the Islands', (Brunswick 4350), 1928. Eddie Bush and His Biltmore Trio, 'Song of the Islands', (Victor 24602), 1934.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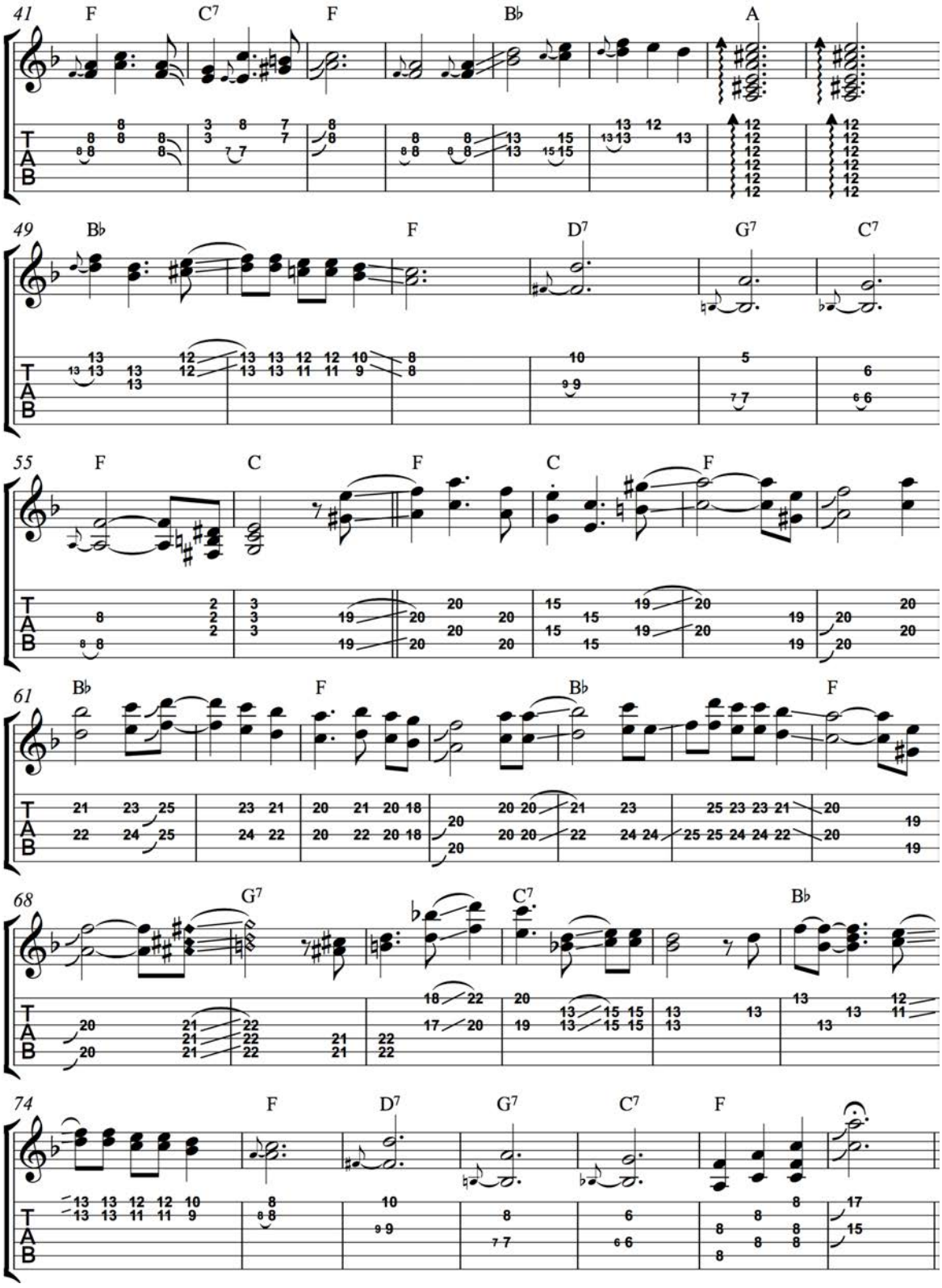

Ex. 4.6 Melody of 'Dreams of Aloha', prob. Joseph Lopes (22/2/33, mx. BS 75273-1)

In summary, the new technology enhanced effects that Hawaiian guitarists had strived to achieve on acoustic instruments. The advantages were soon apparent to leading Hawaiian players, who rapidly adopted the instrument and forged a distinct sound. Discographies record that in 1934, Sol Ho'opi'i, Danny Stewart, Dick McIntire and Eddie

Bush recorded with electric instruments. In 1936 Sol K. Bright, Sam Koki and Andy Iona followed suit and were joined in 1937 by David Keli'i, Freddie Tavares and Bobbie Nichols.[268] Of course, the players may well have adopted the new technology well before they first used it to record but discographies suggest that they quickly abandoned acoustic instruments.

Sol Ho'opi'i's first recording session with the new instrument was conducted in December 1934 when, in the jargon of the day, he 'waxed' ten sides. The properties of the instrument came to the fore in dreamy Hawaiian tunes such as 'Mauna Kea' and 'Makala Pua', where long slow steel guitar introductions mirrored the unhurried vocals of the quartet that followed in inflection, sustain and, to some degree, timbre.[269] In Lopes' footsteps, these recordings showed the way to Hawaiian players who used the properties of the instrument to enhance personal style and, jointly, generate a distinct sound that would become an enduring hallmark of Hawaiian music.

4.3.1.1 'Pua Rose'

Amplified enhancement of Hawaiian style and technique reached a pinnacle in David Keli'i's masterpiece 'Pua Rose'[270], recorded in 1938.[271] Keli'i was one of the giants of Hawaiian steel guitar, whose tenure on the influential radio show emanating from the Islands, 'Hawaii Calls', extended from 1937 to 1952, the longest of any of the program's steel players by far.[272] Keli'i had availed himself of the advantages that advances in amplification and instrument design offered. At the time of this recording he may have had an electric instrument with twin six-string necks. But it is likely that, even if true, he only used one neck, tuned to E7, for this recording. Another crucial technological element contributing to this performance was a volume pedal that allowed Keli'i the use of both hands to manipulate the strings while controlling the volume.

Keli'i's performance, transcribed in its entirety in Ex. 4.7 below, is powerfully evocative. The tune has a slow mournful melody with a wistfulness heightened by glissandi, use of a volume pedal to delay the attack, and strategic tremolo picking. The melody has a twenty-four bar form of two eight bar phrases with a four bar refrain. With each of the three repeats of the form, additional techniques are employed to heighten the melancholia. The

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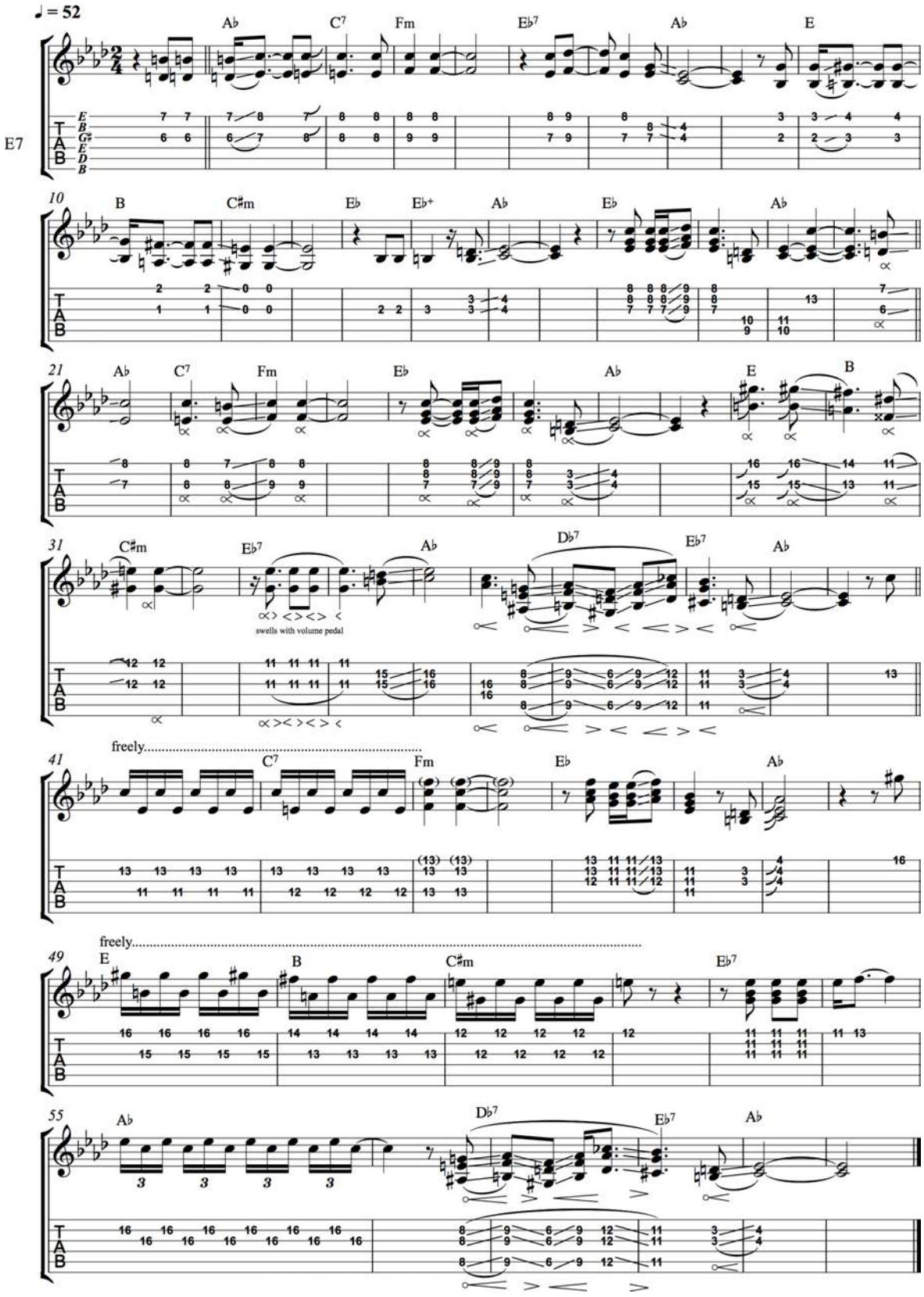
[268] Rockwell, *Hawaiian & Hawaiian Guitar Records, 1891-1960*.
[269] Sol Hoopii and His Novelty Quartet, 'Mauana Kea', (Brunswick 55082), 1934, Sol Hoopii and His Novelty Quartet, 'Malaka Pua', (Brunswick 55082), 1934.
[270] Perry and Surfriders, 'Pua Rose'.
[271] The origins of the tune are not clear as it resembles an earlier recording by Sol Hoopii and His Novelty Trio, 'Hawaiian Hula Song', (Columbia 40009-D), 1930.
[272] Ruymar, *The Hawaiian Steel Guitar and Its Great Hawaiian Musicians*, , 48.

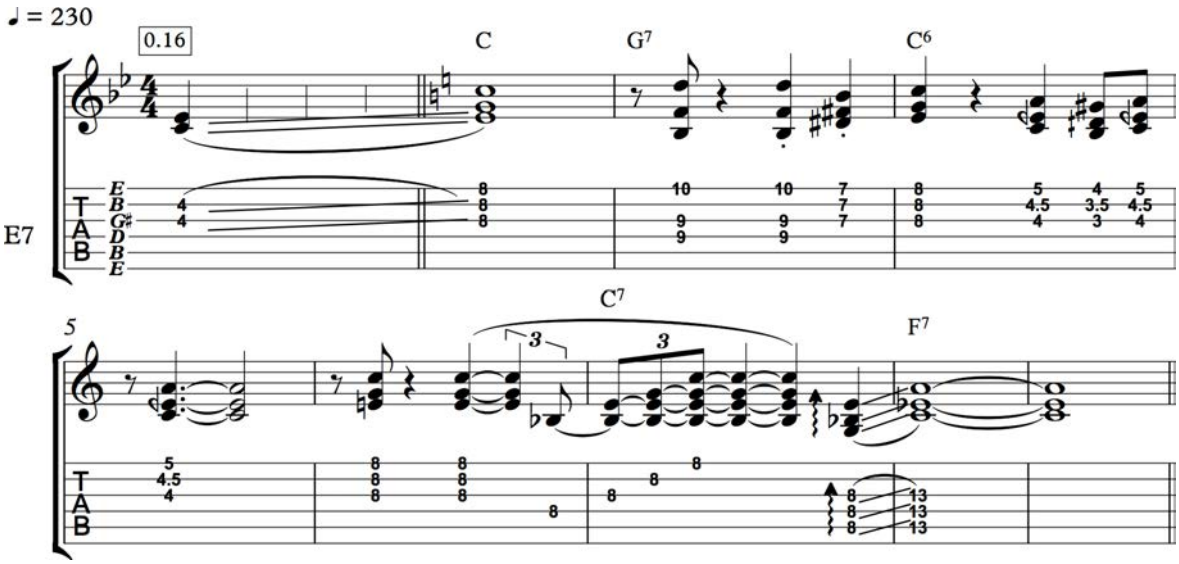
exposition is a dyadic melody, greatly enhanced by vibrato. In contrast, the four bar refrain uses a triadic texture that includes a major sixth chord. Keli'i then deploys his volume pedal to remove all picking attacks on the next repeat of the form, creating a distinctive ambiance unique to this technological configuration. The pedal is also used to create volume swells at bar thirty three. He uses the same effect in a remarkable way in the refrain that follows. The undulating volume, in conjunction with the parallel dominant sevenths chords, produces an eerie effect resembling the discordant sound of wind in the trees, a desolate but dispassionate sound of nature that contrasts with the melancholy of the previous phrases. The attack of the notes is restored for the final presentation of the melody in which tremolo picking provides a variation that suggests weeping, only to be contrasted with a final repeat of the refrain, a parallel movement of dominant seventh chord with note attacks again removed. This performance is an excellent demonstration of how the expression inherent in Hawaiian steel guitar style could be greatly enhanced by skilled and intuitive use of the new technology.



Ex. 4.7 Melody of 'Pua Rose', David Keli'i (c1938, Radio Transcription Mac 119-2)

4.3.2 Hawaiian Jazz Ensemble

Less than a year after Lopes' ground breaking recording, another recording shows Hawaiian musicians exploiting the volume of the new instrument to position it as an equal partner to the wind section of a jazz ensemble. The first of eight sides recorded by Andy Iona and his Islanders in Los Angeles on 29 August 1934 featured the electric steel playing of Danny Stewart in an up tempo foxtrot called 'Minnehaha'.[273] In a thirty two bar introduction, the steel provides the lead in an eight bar B section that contrasts with the A sections led by two trumpets and tenor sax. A rhythm section of guitar, ukulele and double bass complete the ensemble and provide accompaniment to the wind instruments, steel guitar and voices. In an instrumental interlude, the roles were reversed with steel guitar improvising on the three A sections while a clarinet took the lead on the B section. The eight bar steel guitar opening response is transcribed in Ex. 4.8 below.



Ex. 4.8 Improvisation on 'Minnehaha', Danny Stewart (29/8/34, mx. LA 187-A)

The opening glissando heralds the arrival of a steel guitar, which must have come as a shock to listeners who had never before heard the instrument in such boisterous company. Although brief, the steel guitar interlude is forcefully played, providing a harmonised melody mirroring the three-piece wind section and referencing Sol Ho'opi'i's pioneering syncopated chord solos. As chordal response to the wind trio's introduction, it is clearly not an imitation but, instead, provides a demonstration of the capabilities of an instrumental voice new to this setting; a voice that could be used monophonically or polyphonically and had a range of spectacular idiosyncratic effects to offer.

[273] Andy Iona and His Islanders, 'Minnehaha', (Columbia 2962-D), 1934.

4.4 Tuning development in the electric era: Utility and Harmony

The instrument's tuning is a crucial foundation on which steel guitar style is built. At its most basic, a tuning determines the notes that can be played in combination, and influences how notes can be played sequentially. The tunings that evolved in Hawaiian music in the 1930s provided templates that became an integral component of the personal style of individual western swing musicians. Thus, insight into stages of development and durability of tunings in Hawaiian music assist in an investigation of how western swing steel guitar styles subsequently developed. The breadth and complexity of the subject precludes a detailed exposition of Hawaiian tuning development. Instead, salient examples have been selected from the vast recorded output of this 1930s, to provide a précis of evolution with a timeline that shows the pioneering role of Hawaiians musicians.

An examination of Hawaiian recordings of 1930 reveals an explosion in the diversity of steel guitar tunings. The struggle to extract modern harmony from the steel guitar proved a difficult exercise and initiated much experimentation with tunings over the decade. Each new solution presented both advantages and disadvantages and eventually a small number of tunings became predominant.

In Hawaiian musical culture, tunings of the associated style of slack key guitar[274], had been closely guarded within families[275] and likewise, professional steel guitarists kept their tunings secret.[276] But when steel guitar performances were available on record, interested parties could study the music and discern tunings through repeated listenings. Replication was immediately possible for musicians with a keen ear. While this may have had little consequence in the 1910s and 1920s when a lack of diversity of tunings was apparent, recordings of the 1930s provided much richer rewards for those listening closely. An example of a keen ear was demonstrated by Jerry Byrd who discerned elements of the C#m tuning used by Sam Koki in the 1937 tune 'Paradise Island'.[277] After a third viewing of the film he raced home, holding the top three notes of the tuning in mind and duplicated them on his instrument.[278]

In the 1920s and early 1930s, publishing of new tunings in pedagogy trailed a long way behind the cutting edge of professional practice. By the late 1920s, High A had become a dominant professional tuning but it didn't appear in popular Oahu sheet music until the

[274] Kanahele, *Hawaiian Music and Musicians : An Illustrated History*, 371.
[275] Kanahele, *Hawaiian Music and Musicians : An Illustrated History*, 353-54.
[276] Ruymar, *The Hawaiian Steel Guitar and Its Great Hawaiian Musicians*, , 159.
[277] *Paradise Isle*, dir. Arthur Grenville Collins. 1937.
[278] Byrd, *It Was a Trip on the Wings of Music*, 116-17.

middle of the 1930s.[279] However, when it did eventually appear, it was soon accompanied by other new tunings. In a 1937 method book that explored A7 and E7 tunings, Pasco Roberts observed that 'In recent years the Hawaiian Guitar has gone through what might be termed an experimental stage of new tunings to gain special effects and harmony changes for either solo or orchestral playing.'[280] Alvino Rey's landmark method book of the same year was directed mainly at players of High A and E7 tunings. However, in an appendix, twelve diverse six string tunings are offered along, with several seven and eight string tunings.[281] Subsequently the floodgates were opened and listings of multiple tunings, mirroring the diversity of professional tunings, appeared in many method books and even accompanied steel guitar listings in Gibson catalogues. While these sources of new tunings may have provided inspiration to some with professional aspirations, it seems more likely that imitation and subsequent development by professionals in advance of publication, with new tunings unveiled in live or recorded performance.

In developing new tunings, certain restraints of configuration shaped exploration. Without design enhancement of increased string number and multiple necks, detailed in Chapter 2, many new tunings could not have evolved. Additionally, availability of varied string gauges was a significant factor. Initially the tuning of a six string acoustic steel guitars was a refinement of Spanish guitar tunings, on strings supplied for that purpose. Sevastopol and Spanish were two popular open tunings for Spanish guitar that were the first basic steel guitar tunings, Low A and E major. The potential to increase or reduce tension on strings supplied for Spanish tunings was limited. This property is inherent in acoustic steel guitar tunings. Both Low A and E major tunings were easily attainable from a standard set of strings as were E7 and C#m. High A required slightly lighter bass strings but the later tuning of C6 on a six string instrument would require substantially lighter bass strings. The Gibson catalogue of 1930 lists Mastertone Mona-Steel strings individually or in sets for Low A tuning, giving the impression that players had been provided with a range of string gauges to choose from, including those listed singularly for banjo or guitar.[282] Similarly, Epiphone's catalogue of 1934 offers guitar strings, Hawaiian guitar strings and banjo strings either singularly or as sets.[283] Thus, in the 1930s, players may have experienced a new freedom in experimentation with new tunings, with the parameters of pitch expanded by the availability of varying string gauges.

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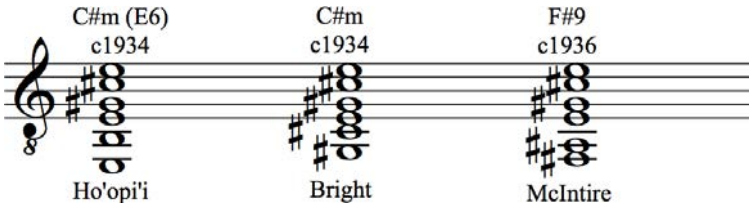
[279] Ruymar, *The Hawaiian Steel Guitar and Its Great Hawaiian Musicians*, , 159.
[280] Roberts, *Master Lessons for Hawaiian Guitar*, 20.
[281] Rey, *Modern Guitar Method, Hawaiian Style*, 70.
[282] 'Gibson Mastertone Fretted Instruments Price List', 67.
[283] 'Masterbilt Fretted Instruments ', 30.

While tuning development in the 1930s was a journey towards the generation of more complex harmony, it was one in which players had to be mindful of the utility of melodic playing. Both functions were desirable in a single tuning, although with the advent of multiple necks, different tunings with contrasting attributes were simultaneously available. However, the vast majority of Hawaiian steel performances in the 1930s appear to have employed single necked instruments, in which circumstance, versatility was essential.

4.4.1 C#M-E6-F#9

Tunings that incorporated a major sixth sonority first appeared in the 1930s, a sonority that has been an important element in steel guitar tunings ever since. The most significant early tunings of this type included an E major sixth sonority, which became a common feature of Hawaiian music of the 1930s. There were at least three common variants, as shown in Ex. 4.9 below, two of which subsequently played prominent roles in western swing. Determining the precise origins of these tunings is difficult. Two factors make the task of differentiation of these tunings in the wealth of extant recordings challenging. Firstly, the three tunings share the same top four strings. Having established the pitches of the top strings of a recording, careful examination is then required to determine lower elements of chords. Unfortunately, many of the recorded performances utilise only the top four strings, making identification of the complete tuning configuration impossible. A second obstacle is the often-fleeting nature and low tessitura of evidence on the lower strings.



Ex. 4.9 Similarly configured tunings, mid 1930s

Because of the ambiguity described above, it is unclear when each of the tunings in Ex 4.9 first appeared. Sol Ho'opi'i is thought to have made predominate use of the most common of the tunings, C#m, after he began recording on an electric instrument in December 1934. Close scrutiny of his sessions in late 1934, July 1935 and February 1936 shows that, his use of the tuning was spasmodic. Instead, he used a variety of tunings including many instances of High A. He used E7 on 'Hula Breeze' in 1936.[284] He may have used C#m in 1934 on the track 'Iniki Malie' but, with only the top four strings employed, this is not

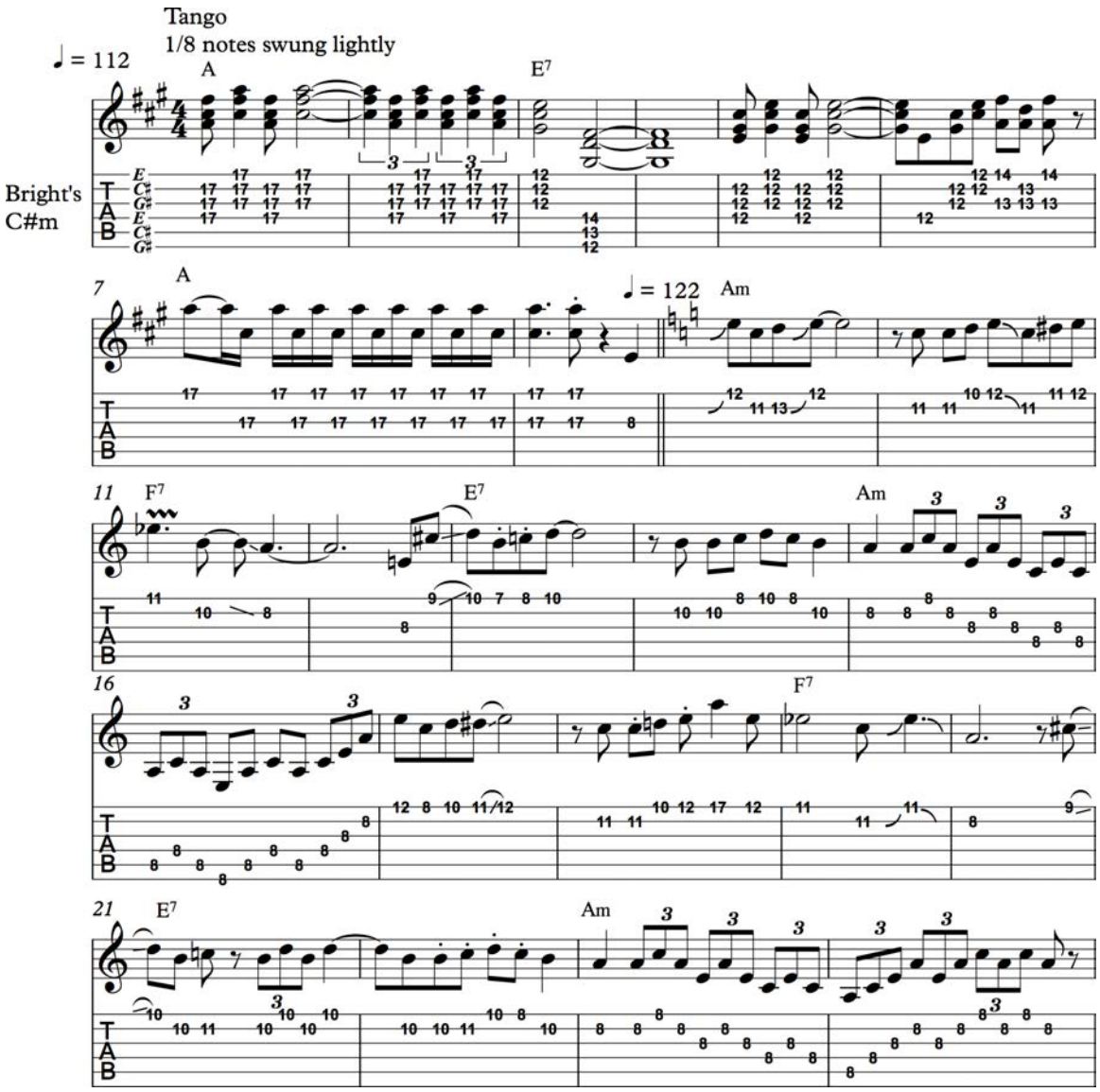
[284] Sol Hoopii and His Novelty Five, 'Hula Breeze', (Brunswick 55088), 1936.

certain.[285] His first conclusive use of C#m, identified in research for this study, is on the track 'Hilo Hattie (Does the Hilo Hop), recorded in February 1936.[286]

Sol K Bright employs an E6 type tuning on a track entitled 'Kalua Lullaby', recorded by ten months before Ho'opi'i's 1934 recordings.[287] While the majority of the melody is dyadic, upper elements of the tuning are briefly revealed in both major sixth and minor sonorities along with the tuning's characteristic voicing of a dominant ninth chord at 0.47 and 2.44. However, Bright's tuning is fully revealed in a recording made two weeks later in a tango entitled 'La Rosita'.[288] (See Ex. 4.10 below.) Stacy Phillips first revealed this tuning in his initial book of Hawaiian steel transcriptions in which he adapted Bright's performance for a contemporary audience of dobro players.[289] Bright's tuning is almost certainly a variation of High A in which both A strings are lowered to G#. This results in a tuning with the same symmetry as it's A major parent, consisting two adjacent second inversion C#m triads.

Bright uses the tuning in two distinct ways. As the transcription shows, the tune begins with an eight bar chord melody in A major employing the major sixth sonority of the top four strings. After an intervening minor theme, this strain is repeated four times, after which Bright improvises a chord melody in the same key to the end of the track, a further thirty-two bars. The contrasting melody in A minor employs only single notes that culminate with a spectacular arpeggio at bars fifteen and sixteen, facilitated by the tuning. The piece consists primarily of extensive chordal melody that utilises the major sixth and minor sonorities provided by the tuning. The minor arpeggio that concludes the short single note section may have been a fortuitous byproduct. Although the tuning was not without admirers, as can be seen in a late recording of Bob Dunn, it was not widely adopted in the same way as C#m.[290] With the root of the major sixth chord in the bass, the latter tuning proved much more popular and was disseminated through scores and pedagogy, while Bright's tuning remains relatively unknown today.

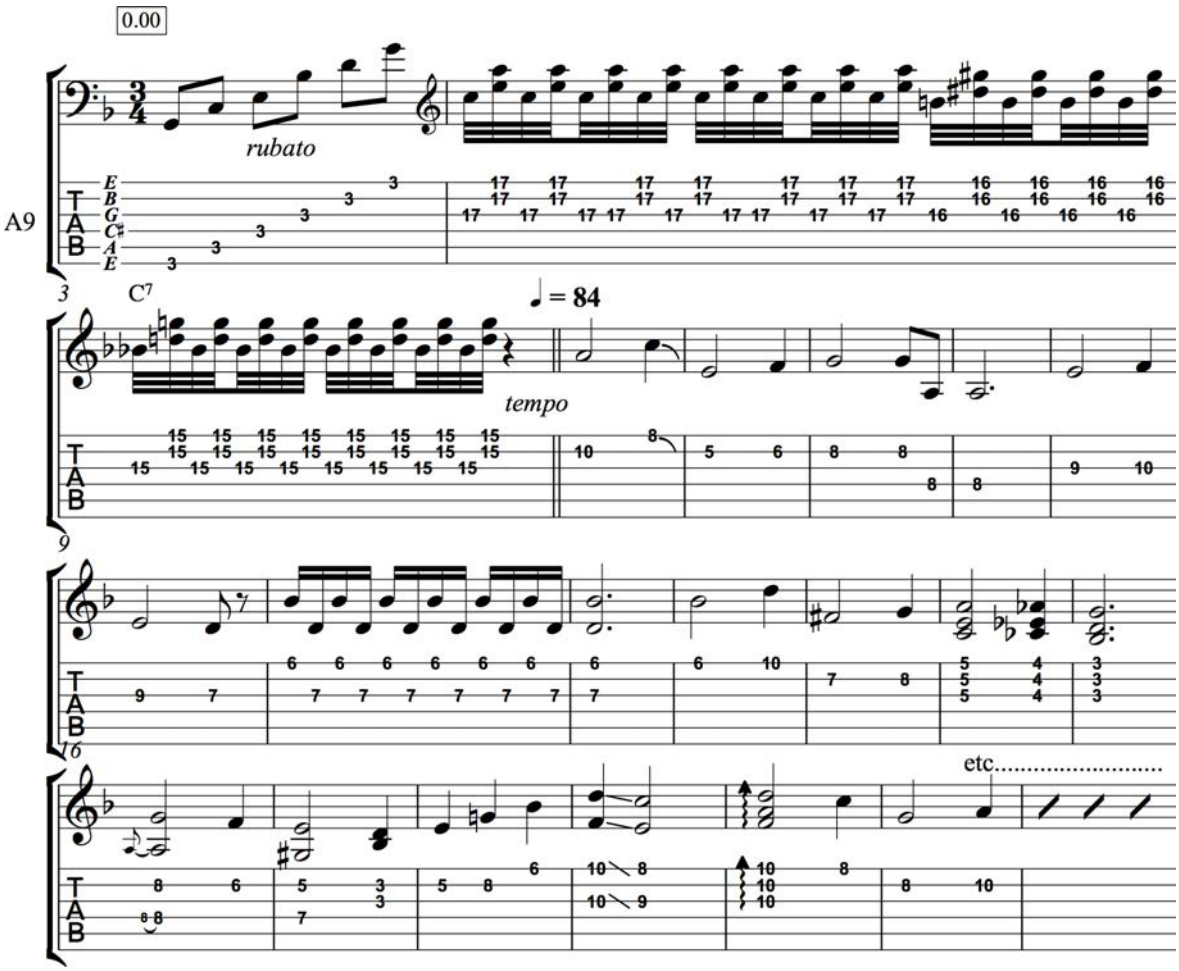
[285] Sol Hoopii and His Novelty Quartet, 'Inikie Malie', (Brunswick 55080), 1934.
[286] Sol Hoopii and His Novelty Five, 'Hilo Hattie (Does the Hilo Hop)', (Brunswick 55087), 1936.
[287] Sol K Bright and His Hollywaiians, 'Kalua Lullaby', (Victor 24584), 1934.
[288] Sol K Bright and His Hollywaiians, 'La Rosita', (Victor 24671), 1934.
[289] Stacy Phillips, *The Art of Hawaiian Guitar Volume 2*, vol. 2 (Pacific: Mel Bay Publications, 2005), 87.
[290] Cliff Bruner and his Texas Wanderers, 'San Antonio Blues', (ACA 1177), 1949.



Ex. 4.10 Melody of 'La Rosita', Sol K Bright (9/3/34; mx. PBS 79109-2)

The origins of F#9 are also unclear. It has been suggested that it may have appeared first in the playing of Charles Opunui[291] in 1932, on the track 'Then Someone's In Love'[292], a proposition supported in the current author's master's thesis.[293] However, close examination of the recording reveals the tuning to be an unusual A9 voicing that is revealed by Opunui in the first bar and confirmed by subsequent passages, as can be seen transcribed in Ex. 4.11 below.

[291] Martin Wheatley, 'Notes to Genial Hawaiians Jim and Bob Plus George Ku and His Paradise Islanders', (Grass Skirt Records GSK 1005), 2012.
[292] Paradise Islanders, 'Then Someone's in Love', (Victor 23687), 1932.
[293] Cundell, 'Across the Pacific: The Transformation of the Steel Guitar from Hawaiian Folk Instrument to Popular Music Mainstay', 107.

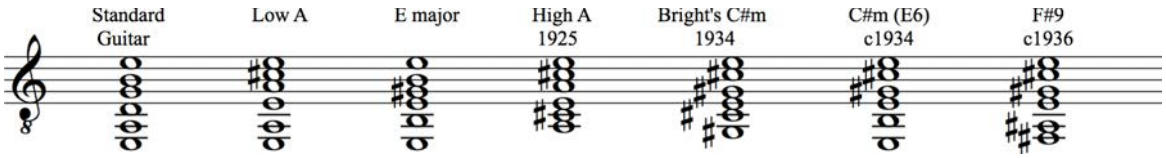


Ex. 4.11 Introduction to 'Then Someone's In Love', George Opunui (17/5/32, mx. BE 72639-1)

Alternatively, an early appearance of F#9 is clearly apparent on Dick McIntire's 1936 recording of 'Moon Over Burma', though earlier examples may exist.[294] While most commentators would suggest that path to F#9 lay from E major, through Ho'opi'i's C#m, the derivation of Bright's C#m tuning from High A gives rise to another possible source. Bright's tuning may have provided a halfway point between high A tuning and F#9. Heard in isolation, the top four strings of Bright's tuning imply an E6 chord, with the prominent bass note heard as the root. But, lowering the bass string of Bright's tuning to the nearest consonant pitch, the F# just a tone below, generates a pleasing consonance, with the lowered F# functioning as root. Experimenting further by lowering the fifth string from C# to A# provides a consonance of a major third and reveals the sought after sonority of dominant ninth, while retaining the E6 chord of the top four strings. Significantly, the only action required in reaching this tuning from High A is the slackening of strings, a riskless endeavor in contrast to that of tightening strings as required when adjusting E major to F#9.

[294] Dick McIntire and His Hawaiians, 'Moon over Burma', (SW McGregor Mac 5008), 1936.

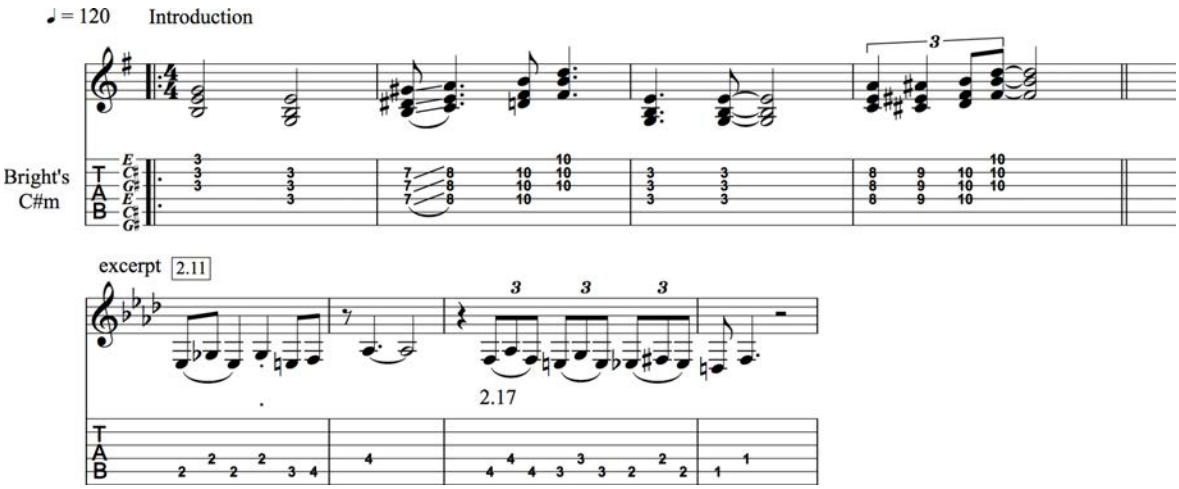
To speculate even further, the date of the appearance of Bright's tuning also gives rise to the possibility that Ho'opi'i's C#m may also have been derived from High A rather than the more intuitive parent of E major, where the raising of the second string from B to C# is the only alteration necessary. In a similar manner, C#m could have arisen through the adjustment of the two lower strings of Bright's tuning, by way of a player seeking to reinforce the major sixth sonority of the top four strings with a root on the bottom string and perfect fifth on the fifth string. As shown in Ex. 4.12 below, the chronology of the appearance of tunings makes this theory feasible but the dates provided are based on scrutiny of a limited selection of recordings from the era. In a period of severe industry downturn in the depression years, the few recordings that were made do not necessarily represent a true record of development and a more accurate representation may never be possible.



Ex. 4.12 A progression of selected tunings in 1930s

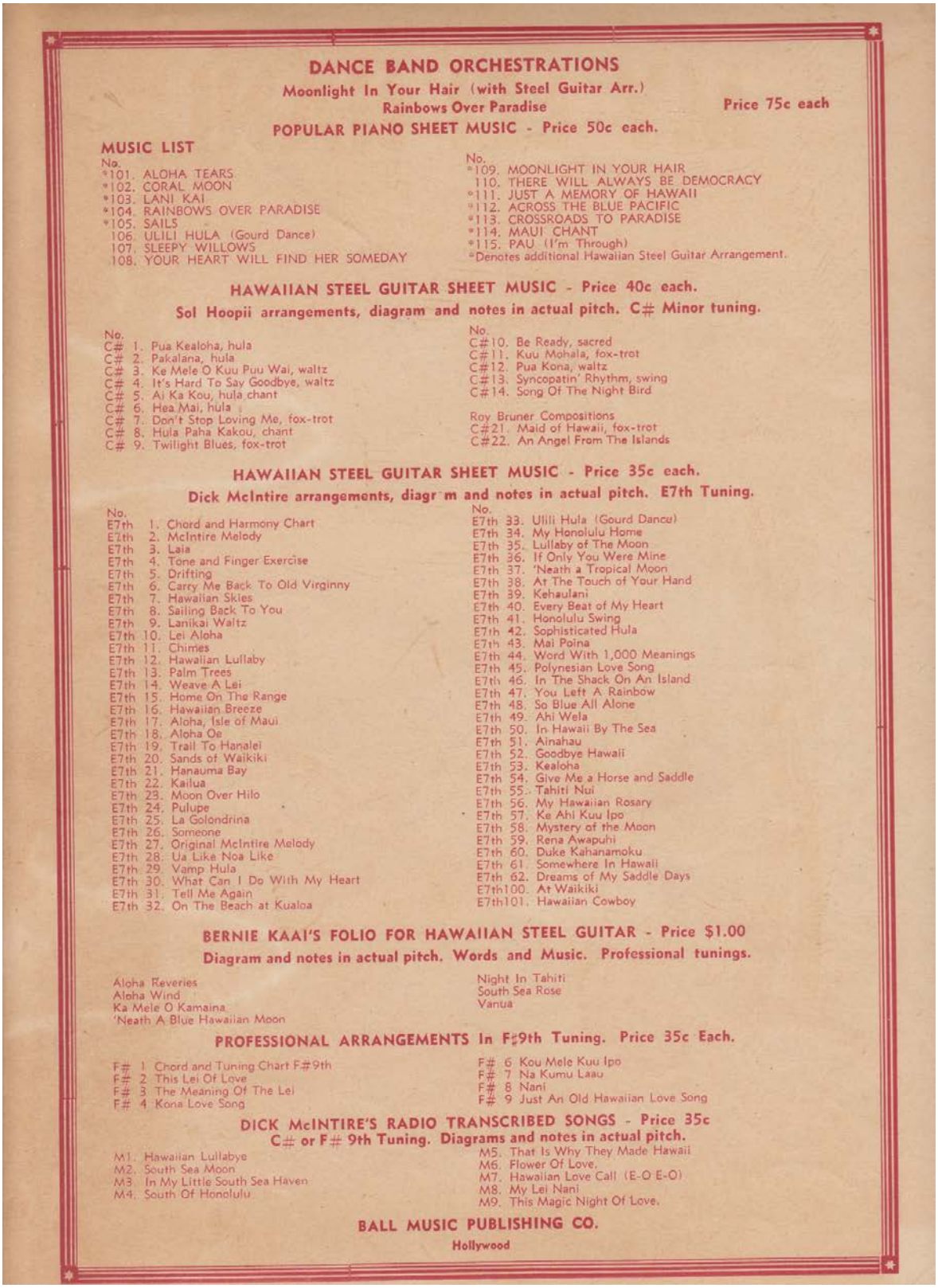
Bright's tuning makes an early appearance in the electric era on a session for Eddie Bush in Los Angeles in November 1934. Bush performed with many Hawaiian groups in a career that continued to the 1960s. Born in Milwaukee to Hawaiian parents, he began a professional career at the age of sixteen as vocalist and steel player at the Biltmore Hotel in Los Angeles in 1927. In both tracks of the Los Angeles session, 'The Object of My Affection' and 'Talking To Myself', Bush clearly employs the major sixth sonority of the top four strings.[295] He does not use the bottom two strings in chords in either tune. However, the evidence that the tuning is Bright's C#m can be deduced from a melodic passage in 'The Object of My Affection', notated in Ex. 4.13 below. This melody could not be executed with the same articulation in either C#m or F#9 tunings.

[295] Eddie Bush and His Biltmore Trio, 'Talking to Myself', (Decca 332), 1934, Eddie Bush and His Biltmore Trio, 'The Object of My Affection', (Decca 332), 1934.



Ex. 4.13 Introduction and excerpt from 'The Object of My Affection', Eddie Bush (1/11/34. mx. DLA 85A)

Of the three similar tunings, Bright's C#m, Ho'opi'i's C#m and McIntire's F#9, the latter two proved to be the most enduring. A 1942 listing by Ball Music, Hollywood (see Fig 4.1 below) shows arrangements by leading Hawaiian players based in Los Angeles that utilise tunings of C#m, F#9 and E7.



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106. ULILI HULA (Gourd Dance)
107. SLEEPY WILLOWS
108. YOUR HEART WILL FIND HER SOMEDAY

No.
*109. MOONLIGHT IN YOUR HAIR
110. THERE WILL ALWAYS BE DEMOCRACY
*111. JUST A MEMORY OF HAWAII
*112. ACROSS THE BLUE PACIFIC
*113. CROSSROADS TO PARADISE
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C# 2. Pakalana, hula
C# 3. Ke Mele O Kuu Puu Wai, waltz
C# 4. It's Hard To Say Goodbye, waltz
C# 5. Ai Ka Kou, hula chant
C# 6. Hea Mai, hula
C# 7. Don't Stop Loving Me, fox-trot
C# 8. Hula Paha Kakou, chant
C# 9. Twilight Blues, fox-trot

No.
C#10. Be Ready, sacred
C#11. Kuu Mohala, fox-trot
C#12. Pua Kona, waltz
C#13. Syncopatin' Rhythm, swing
C#14. Song Of The Night Bird

Roy Bruner Compositions
C#21. Maid of Hawaii, fox-trot
C#22. An Angel From The Islands

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No.
E7th 1. Chord and Harmony Chart
E7th 2. McIntire Melody
E7th 3. Laia
E7th 4. Tone and Finger Exercise
E7th 5. Drifting
E7th 6. Carry Me Back To Old Virginny
E7th 7. Hawaiian Skies
E7th 8. Sailing Back To You
E7th 9. Lanikai Waltz
E7th 10. Lei Aloha
E7th 11. Chimes
E7th 12. Hawaiian Lullaby
E7th 13. Palm Trees
E7th 14. Weave A Lei
E7th 15. Home On The Range
E7th 16. Hawaiian Breeze
E7th 17. Aloha, Isle of Maui
E7th 18. Aloha Oe
E7th 19. Trail To Hanalei
E7th 20. Sands of Waikiki
E7th 21. Hanauma Bay
E7th 22. Kailua
E7th 23. Moon Over Hilo
E7th 24. Pulupe
E7th 25. La Golondrina
E7th 26. Someone
E7th 27. Original McIntire Melody
E7th 28. Ua Like Noa Like
E7th 29. Vamp Hula
E7th 30. What Can I Do With My Heart
E7th 31. Tell Me Again
E7th 32. On The Beach at Kualoa

No.
E7th 33. Ulili Hula (Gourd Dance)
E7th 34. My Honolulu Home
E7th 35. Lullaby of The Moon
E7th 36. If Only You Were Mine
E7th 37. 'Neath a Tropical Moon
E7th 38. At The Touch of Your Hand
E7th 39. Kehaulani
E7th 40. Every Beat of My Heart
E7th 41. Honolulu Swing
E7th 42. Sophisticated Hula
E7th 43. Mai Poina
E7th 44. Word With 1,000 Meanings
E7th 45. Polynesian Love Song
E7th 46. In The Shack On An Island
E7th 47. You Left A Rainbow
E7th 48. So Blue All Alone
E7th 49. Ahi Wela
E7th 50. In Hawaii By The Sea
E7th 51. Ainahau
E7th 52. Goodbye Hawaii
E7th 53. Kealoha
E7th 54. Give Me a Horse and Saddle
E7th 55. Tahiti Nui
E7th 56. My Hawaiian Rosary
E7th 57. Ke Ahi Kuu Ipo
E7th 58. Mystery of the Moon
E7th 59. Rena Awapuhi
E7th 60. Duke Kahanamoku
E7th 61. Somewhere In Hawaii
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F# 8 Nani
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M1. Hawaiian Lullabye
M2. South Sea Moon
M3. In My Little South Sea Haven
M4. South Of Honolulu
M5. That Is Why They Made Hawaii
M6. Flower Of Love.
M7. Hawaiian Love Call (E-O E-O)
M8. My Lei Nani
M9. This Magic Night Of Love.

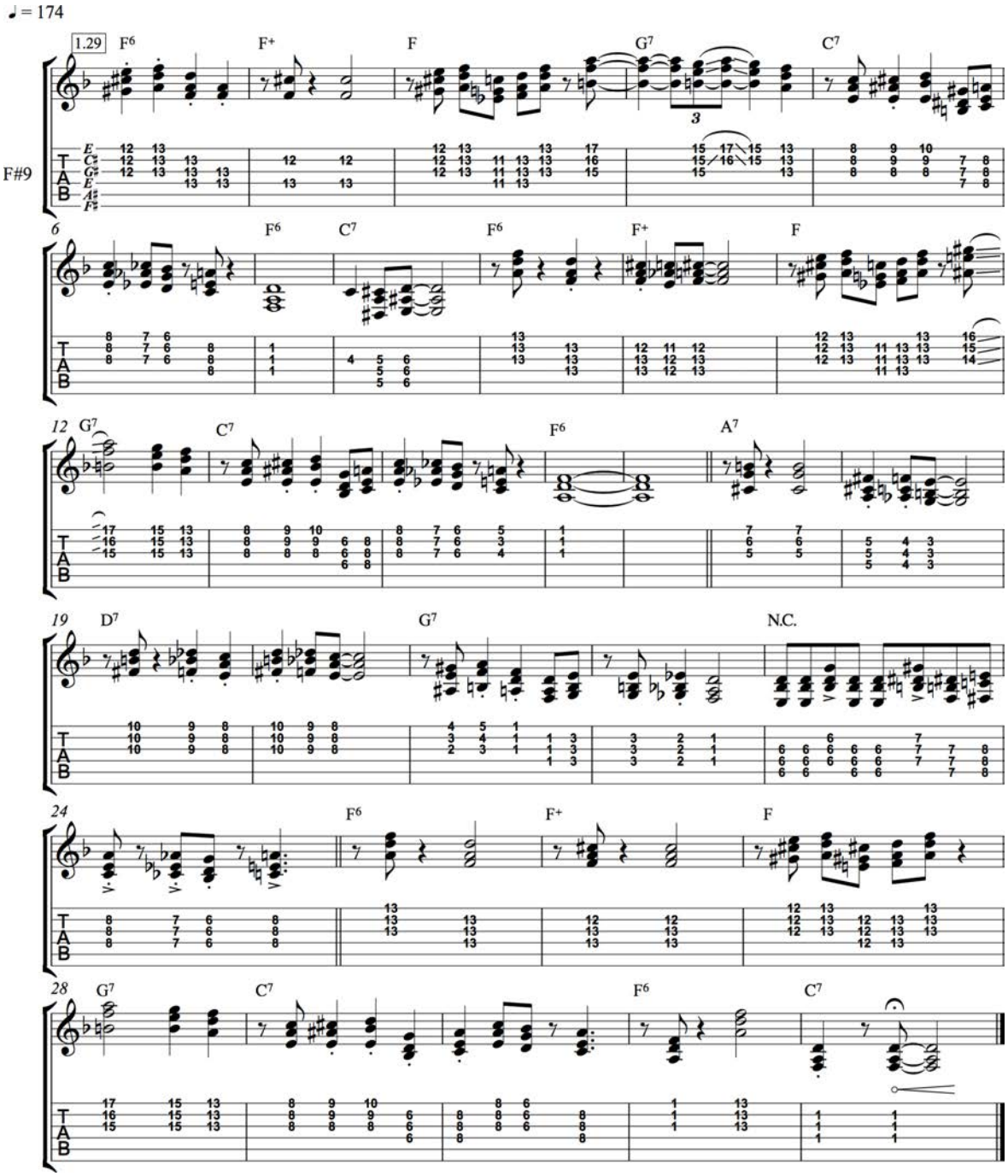
BALL MUSIC PUBLISHING CO.
Hollywood

Fig. 4.1 Listing of steel guitar arrangements by Ball Music 1942

Along with Ho'opi'i, Dick McIntire became a leading voice of Hawaiian steel guitar in the 1930s. Like Ho'opi'i, he was based in Los Angeles, playing in nightclubs, recording and appearing in movies. Born around 1900, he began a music career in 1923 and finally rose to prominence with a radio show in San Diego in the mid 1930s, at which time his prolific

recording career began. McIntire was an outstanding stylist whose rich tone and silken legato melodies utilised the augmented sustain of his amplified instrument to the fullest. Also in common with Ho'opi'i, McIntire had developed an affinity for chord solos and his recordings demonstrate crafted chordal melodies with a rhythmic drive that rivaled those of his colleague. His improvised chorus on 'Twilight Blues', shown in Ex. 4.14 below, is marked by precision, economy and strong syncopation.[296] The top four strings of his F#9 tuning are used for most of the solo, with its full identity revealed briefly in bars eight and twenty three. The ubiquitous dominant ninth voicing employing a forward slant on the top three strings is used at many points throughout the solo. It is clear that impressive exhibitions of technique and style, like McIntire's, provided a model for Western swing players. As following chapters will show, the chordal approach and tunings were adopted in western swing and provided a platform for further development in the early 1940s.

[296] Dick McIntire and His Harmony Hawaiians, 'Twilight Blues', (Standard Radio Transcriptions Q-171), 1939.



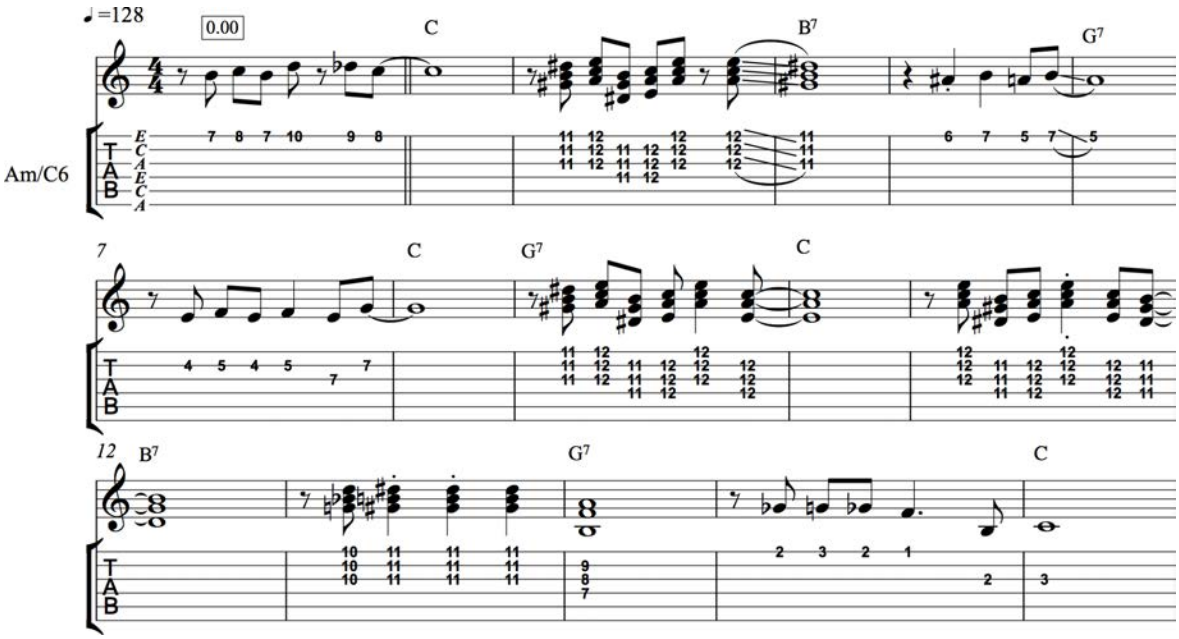
Ex. 4.14 Improvisation on 'Twilight Blues', Dick McIntire (c1939, Radio Transcription)

4.4.2 Am/C6

Experimentation was a watchword of Hawaiian steel guitar in the 1930s. Dick McIntire can be heard occasionally using tunings other than F#9, E7 or C#m. His 1936 recording of 'Night of Tropic Love' reveals another tuning with a major sixth sonority.[297] The tuning, for which an apt name would be Am/C6, could have been derived simply from High A, by lowering the C#s to C. The salient features of the resulting tuning are that, while the symmetry of adjacent A minor triads mirrors High A, the major sixth sonority has a root of C. The C6 chord is still

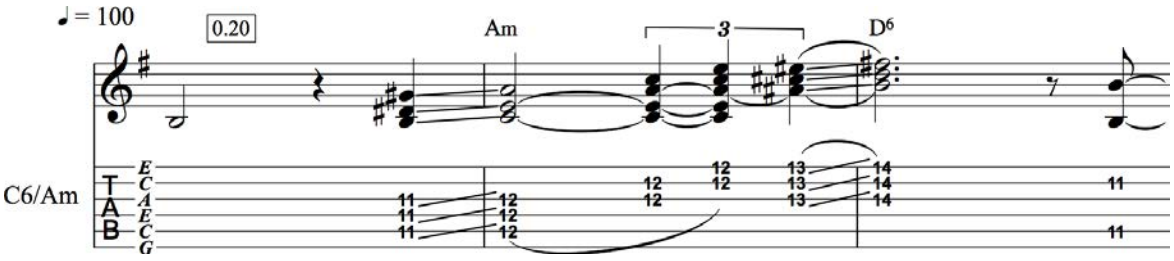
[297] Dick McIntire and His Hawaiians, 'Night of Tropic Love', (SW McGregor Mac 5005), 1936.

incomplete but it now has a major third on the top string, in contrast to previous tunings. Ex. 14.15 below demonstrates McIntire's use of the tuning with a predominately perpendicular bar in the fast chordal phrases, with the solitary use of a slant at bar fourteen to form a dominant chord.



Ex. 4.15 Introduction to 'Night of Tropic Love', Dick McIntire (late 1936, mx.148-2-RE)

McIntire uses the tuning for both tunes that were recorded at the session. While he uses the top four strings almost exclusively in both tracks, fleeting evidence of the full tuning in the second tune, 'For Ever and Ever', is transcribed in Ex. 4.16 below.[298]

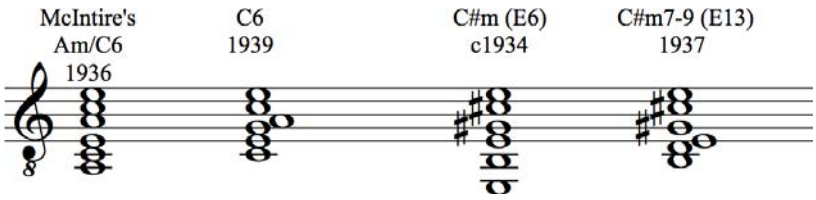


Ex. 4.16 Excerpt of 'For Ever and Ever', Dick McIntire (late 1936, mx. 147-1-RE)

The significance of McIntire's Am/C6 tuning is that it represents a halfway point in the development of C6, one of the most prominent tunings of the 1940s and 1950s in both western swing and Hawaiian music. The innovative leap that was required to bridge the two tunings was the replacement of heavy bottom strings of the Am/C6 tuning to enable higher pitches required by C6. A similar action had been required to change C#m (E6) to the dominant sonority of E13 as can be seen in Ex. 4.17 below. The earlier appearance of E13, as

[298] Dick McIntire and His Hawaiians, 'For Ever and Ever', (SW McGregor Mac 5007), 1938.

will be discussed below in Ex. 4.20, suggests that the process by which it was enabled may have provided an example for those experimenting with C6.



Ex. 4.17 Developing tuning with string gauge substitution

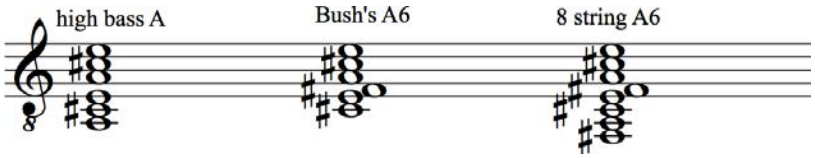
In his autobiography, Jerry Byrd claims credit for the invention of C6 tuning in late 1938. In evidence, he cites an unpublished recording made in February 1939.[299] The first recorded occasion at which Byrd used the tuning was on a Renfro Valley Barn Dance radio broadcast, two months later.[300] In his book, Byrd admits that there is conjecture as to who first used the tuning and challenges all comers to provide evidence to the contrary. However, the tuning was emerging in Hawaiian music emanating from the West Coast at the time and it seems unlikely that a radio broadcast of a single tune by an unknown artist from Dayton, Ohio, would cause ripples in Los Angeles. Nevertheless, there is no reason to believe that Byrd did not arrive at this tuning independently.

Byrd made a further significant modification to the C6 tuning that he had forged. This was to raise the bass string from C to C#. This resulted in a tuning of dual sonorities. The top five strings expressed a C major sixth chord while the bottom four formed an A9th chord in first inversion without root. Dual sonority was not an entirely new property of tunings. It can be seen in the F#9 tuning that also has an E major sixth chord on the top four strings, although the relationship of the two chords in Byrd's tuning are not diatonic, as is the case with F#9. However, it was a useful variation that could be achieved with the minimal effort of raising one string by a semitone. Byrd was later able to employ both variations at once on a seven string instrument with C and C# on strings six and seven.

4.4.3 A6

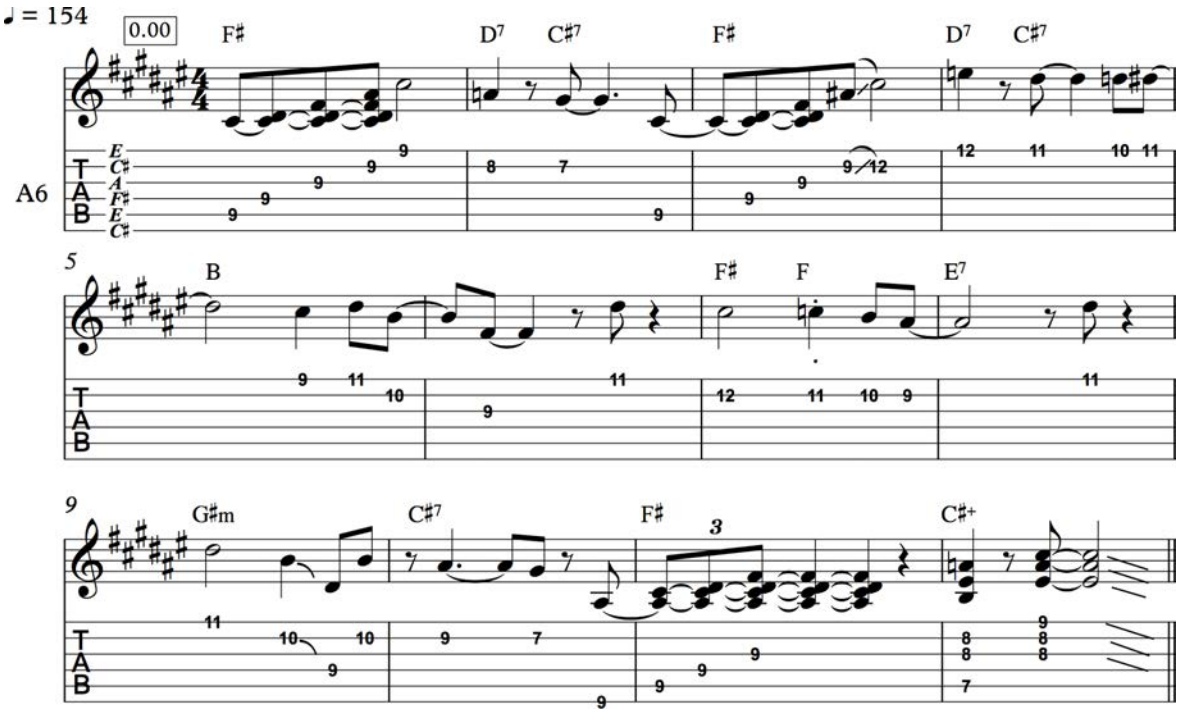
A6 was to become one of the main tunings of western swing in the 1940s but it originated in Hawaiian style in late 1930s. With the E major sixth sonority pervasive in Hawaiian tunings by the mid 1930s, the introduction of a major sixth tone to the basic High A seems an obvious step, but it also relied on lighter gauges of lower strings than the standard sets provided. Additionally, if a lower root was to be included, a seven stringed instrument was needed as can be seen in Ex 4.18 below. If an eight string model was used, a low F# proved useful for a low minor seventh chord in root position.

[299] Byrd, *It Was a Trip on the Wings of Music*, 118-19.
[300] Jerry Byrd, 'Beach at Waikiki' 1939. https://dla.acaweb.org/digital/collection/berea/id/2269/rec/1 (accessed February 10 2014).



Ex. 4.18 Stages in development of A6 tuning

While A6 became a standard eight string tuning, the earliest example discovered for this study was found on a six string instrument, as is evidenced by Eddie Bush's recording of 'Sweet Little Sweetheart', recorded in August 1939.[301] The tuning, revealed in the introduction transcribed below in Ex. 4.19, is made distinct from the earlier E6 styled tunings by the fifth of the chord on the top string, rather than the tonic. Thus an A6 tuning is made familiar to players of high or low A tunings by the root position triad on the top three strings. Additionally, the subsequent addition of low root on a seventh string and a submediant on a bass string provided the same symmetry as high A tuning and also included two root position major triads but with an intervening submediant.



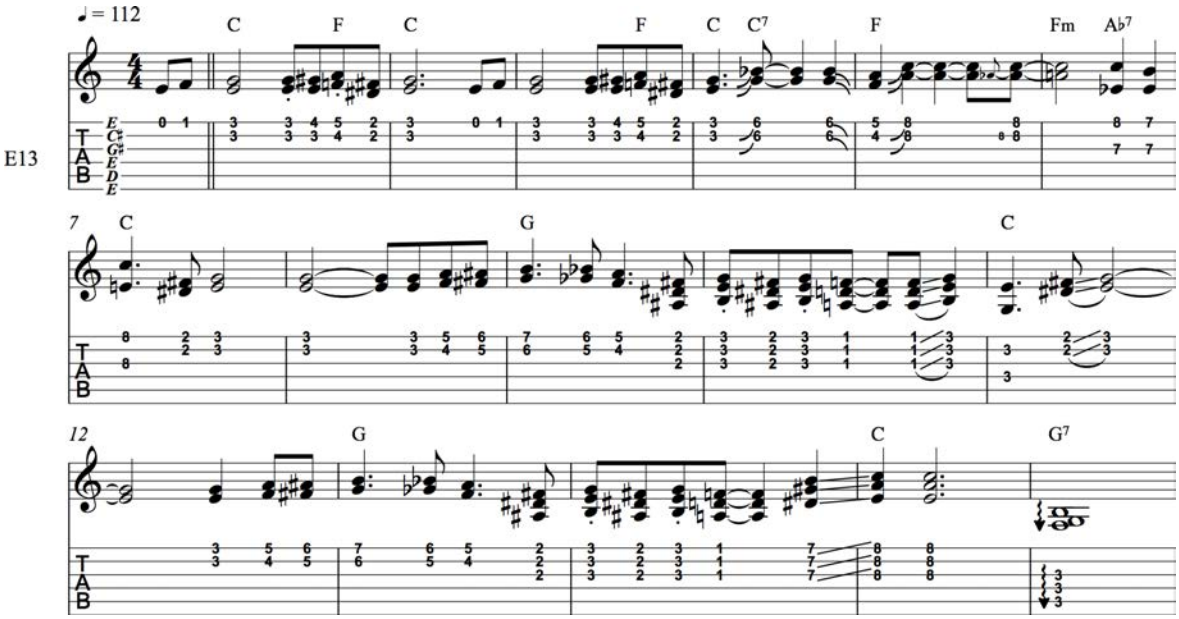
Ex. 4.19 Introduction to 'Sweet Little Sweetheart', Eddie Bush (1/8/39, mx. DLA 1859)

4.4.4 C#m-9/E13

Another Hawaiian tuning innovation of the 1930s, E13, was to be of great significance for western swing players. Its antecedent, E7 had emerged as a popular tuning in the late 1920s and remained so in the 1930s. The confluence of E7 and E6 (C#m) to form E13 was a logical harmonic extension that was easily achieved by raising the pitch of the fifth string of E6

[301] Lani McIntire and the Eddie Bush Quartet, 'Sweet Little Sweetheart', (Decca 2704), 1939.

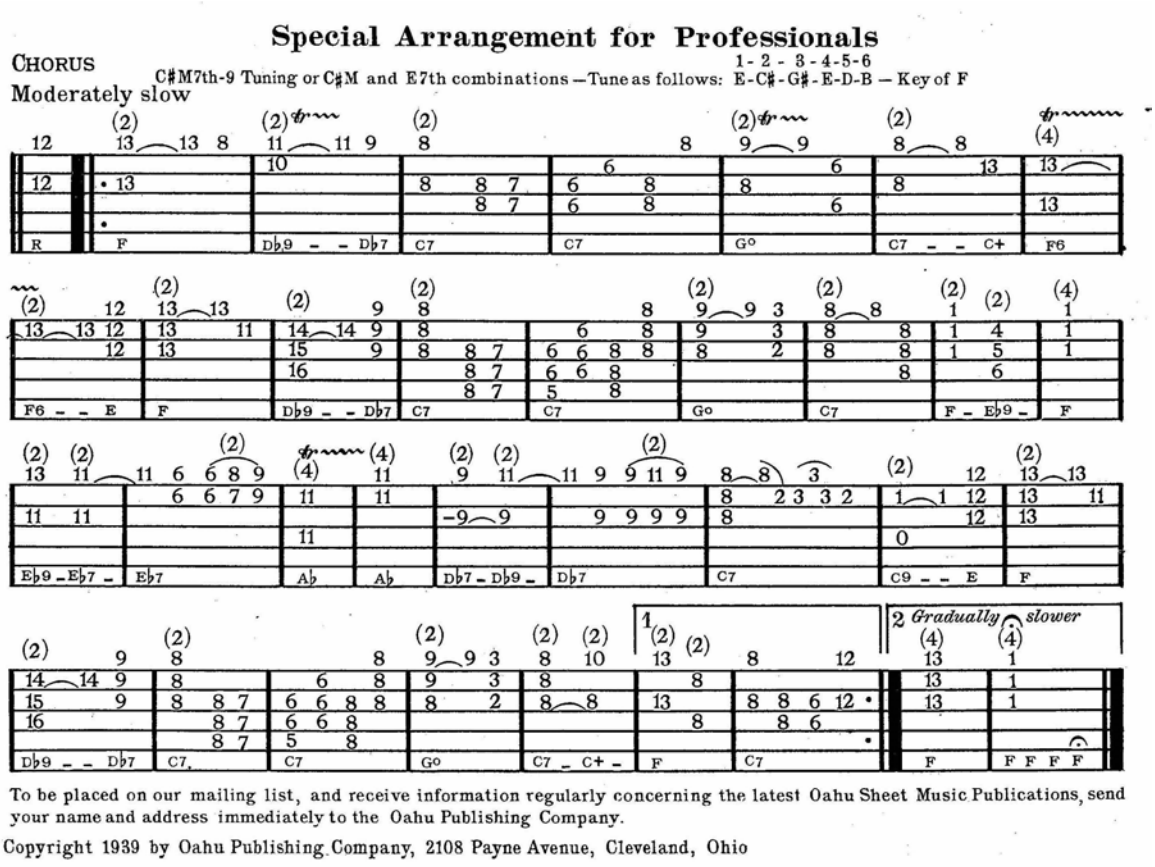
(C#m) to a minor seventh. The resultant E13 tuning can be detected, as early as 1937, at the end of the opening theme of Bob Nichol's introduction to 'My Tropical Garden', transcribed in Ex. 4.22 below.[302]



Ex. 4.20 Introduction to 'My Tropical Garden', Bob Nichols (28/4/37, mx. DLA 782A)

In a further significant step in the development of the E13 tuning on a six string instrument, Andy Iona raised the pitch of the bass string from E to B. To enable the retuning, a recalibration of lower string gauges was necessary. This variation appeared in a set of arrangements by Iona published by Oahu in 1939.[303] Denoted as 'Special Arrangements for Professionals', the four arrangements are alternatives to arrangements in tunings of Low A. An example can be seen in Ex. 4.21 below. It safe to assume that Iona was using this tuning for sometime before this publication. Derivatives of this tuning, adapted for eight stringed instruments, became a staple of western swing, as will be seen in future chapters.

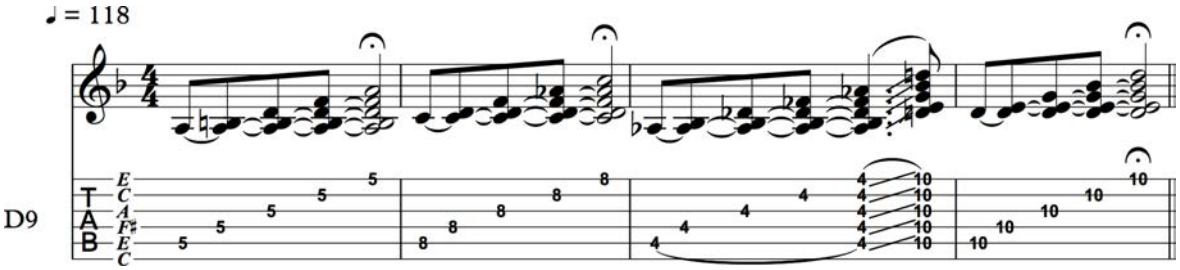
[302] Lani McIntire and His Hawaiians, 'My Tropical Garden', (Decca 1328), 1937.
[303] Andy Iona, *Andy Iona's Folio of Hawaiian Songs No. 517* (Cleveland, Ohio: Oahu Publishing Company, 1939), 5.



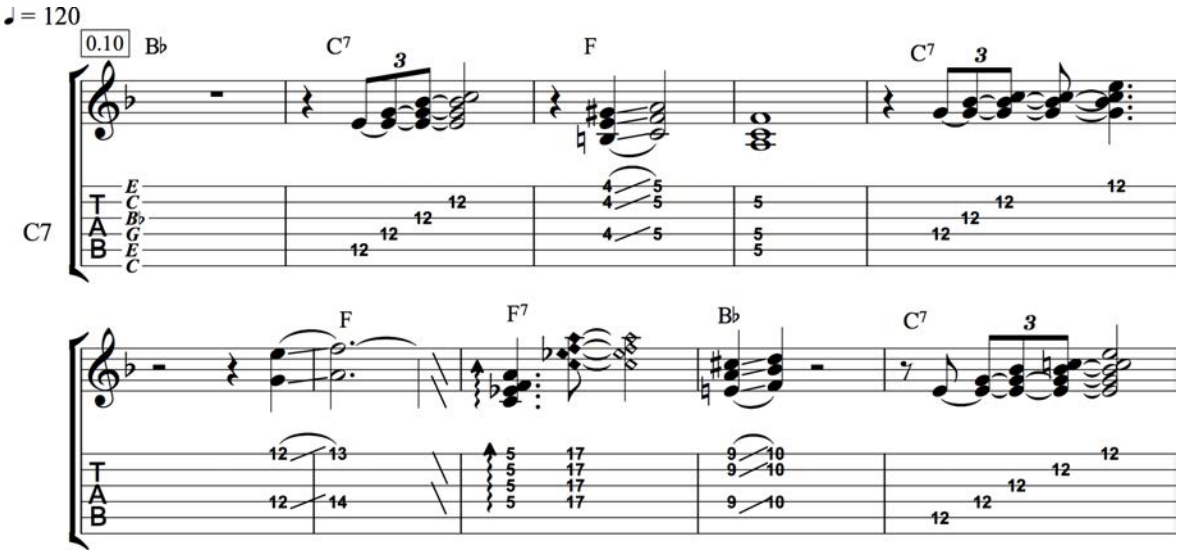
Ex. 4.21 Arrangement of 'My Rose of Waikiki' in E13 tuning, Andy Iona, 1939

The preceding overview of tunings was derived from a selection of recordings that represent pieces of a large and complex jigsaw. It provides some insight into the prominent tunings of the Hawaiian steel guitar performance culture of the 1930s and into the process of their development. The identification of tunings is difficult not only because of the fleeting nature of the evidence, but also because that evidence must be evaluated in a process that takes into account many variables such as string pitches, string numbers, use of open strings, bar slants and the possibility of multiple necks. The difficulty of identification is compounded by a Hawaiian performance culture in which the practice of retuning for specific songs is embraced. With no assurance of consistency, the transcriber must approach each tune cautiously. The extent of the challenge is revealed in the three final examples of this chapter, taken from a single recording session in October 1939. The session was conducted for Manny Klein's Hawaiians and the steel player was Eddie Bush. There were four tracks recorded in the session, three of which, when compared, provide an insight into steel guitar performance practice of the era. Transcriptions show how tunings could be adjusted with small but telling pitch modifications to meet changing harmonic demands. In the introduction to first track, 'Rainbows Over Paradise', transcribed in Ex. 4.22, the steel guitar introduction employs a D9

tuning, a subtle variation of C6 tuning.[304] The fourth string of C6 is tuned down a semitone from G to F# resulting in a dominant ninth voicing without the root. For the second track, 'Makalapua O Kamakaeha', transcribed in Ex. 4.23, Bush raised the third string from A to Bb while returning the fourth string from F# to G resulting in a C7 chord.[305] For the final tune, 'Maori Brown Eyes', transcribed in Ex. 4.24, the Bb is returned to A resulting in the C6 tuning that was to become one of the most widely used tunings in both Hawaiian music and western swing in decades to come.[306]

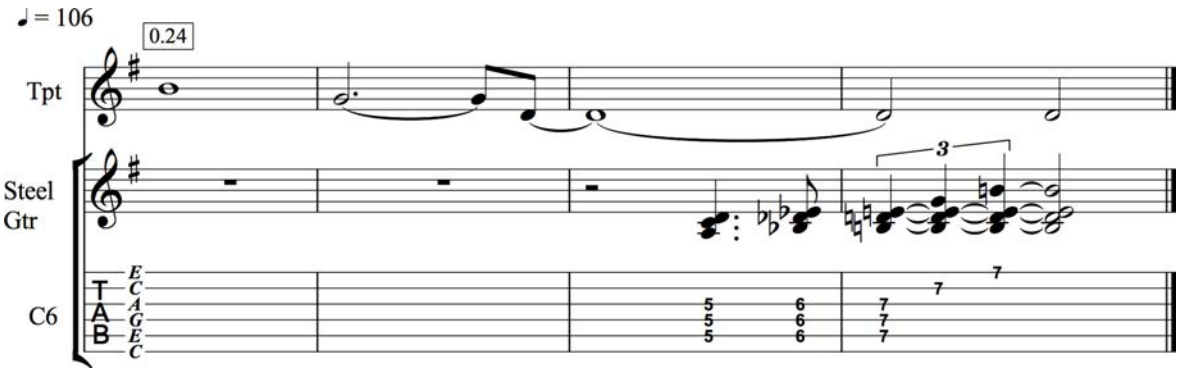


Ex. 4.22 Introduction to 'Rainbows Over Paradise', Eddie Bush (16/10/39, mx. 042189-4)



Ex. 4.23 Accompaniment excerpt from 'Makalapua O Kamakaeha', Eddie Bush (16/10/39, mx. 042190-3)

[304] Mannie Klein and His Hawaiians, 'Rainbows over Paradise', (Bluebird B-10505), 1939.
[305] Mannie Klein and His Hawaiians, 'Makalapua O Kamakaeha', (Bluebird B-10505), 1939.
[306] Klein and Hawaiians, 'Rainbows over Paradise'.



Ex. 4.24 Accompaniment excerpt from 'Maori Brown Eyes', Eddie Bush (16/10/39, mx. 042192-5)

In summary, the development of Hawaiian steel guitar style developed apace throughout the 1930s, expanding on a dynamic culture established by previous generations. Public demand for the music prompted a new generation of Hawaiian musicians to reshape popular music with their own musical sensibilities. They created a modern style in which steel guitar was king. As a leading voice in the ensemble, Hawaiians steel players showcased the expressive extremes of which the instrument was capable, from gentle accompaniment, through strident lyricism to hot jazz syncopation. They demonstrated three distinct modes of melodic performance, single note, dyadic and chordal melody. They embraced the new technology of amplification and showed how its attributes could be exploited to the fullest. They probed the outer limits of the instrument's harmonic properties and in doing so developed new techniques and multitude of new tunings. Furthermore, a pedagogical empire developed around their instrument in which future steel players of all persuasions were nurtured and developed. Any formal student of the steel guitar was a student of the Hawaiian steel guitar and, whether the teachers were of Island origin or mainlanders, the musical culture that they advanced was, at its root, Hawaiian. While western swing had many tributaries, steel guitarists brought a Hawaiian flavour to the music whether the recipients were aware of it or not. As western swing players forged their personal styles, absorbing influences from jazz and country music, they did so on a base of Hawaiian techniques.

Chapter 5: Leon McAuliffe

In the mid 1930s, dance band leaders in the Southwestern states of America sought steel guitarists to fill a role that had been cast by pioneer, Bob Dunn. Of the legion who answered the call, many attempted to emulate Dunn, while others began to forge divergent approaches. Two individuals emerged from the ranks to become dominant stylists of the next generation. The first, Leon McAuliffe (3 January 1917 – 20 August 1988), became an influential instrumentalist and vocalist with Bob Wills' famous group, the Texas Playboys. His tenure coincided with Wills' elevation to national prominence and, as a result, McAuliffe became one of the most influential steel guitarists of the era. This chapter will examine McAuliffe's development with Wills, between 1935 and 1942, as he tailored his style to suit the evolving repertoire with which Wills was shaping the genre that would become known as western swing. The second player to emerge at this time, Noel Boggs, will be discussed in a following chapter.

Social dancing flourished in America in the 1930s and with it, a demand for dance bands. In the Southwest, Milton Brown's band, with Bob Dunn in the steel guitar chair, was the most popular. The swing era was dawning and the music that Brown's band played was an early formulation that had yet to be designated western swing. That marker was to be claimed later in California by Spade Cooley as he staked a claim in a market crowded by western dance bands and elite swing bands. Whether the music that Brown's band deserved the label of western swing is moot and one that is not entirely resolved today. The question is akin to that surrounding the assignation of 'swing' itself, in jazz. Was the swing era initiated by the arrangements of Don Redmond in Fletcher Henderson's big band or was swing born in the solos of Louis Armstrong, in a small ensemble in the mid 1920s? If the former holds, then western swing arose as Bob Wills' band assumed large proportions in the late 1930s. But if the latter is accepted, then the music of the smaller southwest string bands in the early 1930s was the site of western swing's inception.

Milton Brown's success was achieved by compiling a string band repertoire more aligned to popular music than country music, and lacing it with jazz improvisation, an approach that inspired bands all over the Southwest and as far afield as Alabama.[307] With the presence of Dunn's steel guitar so dominant in the Brownies' sound, a demand for steel guitarists arose, as numerous bandleaders sought to emulate both the sound and the success of the Brownies. Recordings of the period confirm that Dunn's influence extended to the personal styles of his steel guitar peers. But Dunn had set the bar high and few imitators

[307] Malone and Neal, *Country Music, USA*, 163.

approached his fluency and inventiveness. The technical limitations of the instrument that Dunn had overcome provided a barrier to many of his followers, which was most evident in phrasing and intonation of many hot solos recorded in the region at the time. Nevertheless, his influence was widespread and the distinct staccato style of Dunn's single note lines can be detected in the playing of many of his Southwestern peers.

In the late 1930s, both jazz and Hawaiian music were undergoing significant transformation. The era of big band swing had taken hold and, in Hawaiian music, the sound of the electric steel guitar was ascendant. Steel guitar style in the Southwest was also undergoing generational change with the emergence of two outstanding players, Leon McAuliffe and Noel Boggs. The influence of Dunn is apparent in the early recordings of both but, as their careers developed, his influence waned and they began to reveal new progressive styles that came to dominate steel guitar for the next two decades. Drawing on contemporary Hawaiian stylings and jazz performance practice, they developed specific techniques with which to exploit the attributes of the newly amplified instrument and, in the process, evolved unique sounds and stylings that became synonymous with western swing and country music, more broadly.

Leon McAuliffe is the most recognised steel guitarist of western swing. His name was celebrated in the famous catchcry 'Take it away, Leon!', exclaimed by his leader Wills, as he called McAuliffe to take a solo. When McAuliffe joined, the Texas Playboys was a regional dance band operating in the Southwest but, by the time he left to serve in the war, the band's popularity had extended nationally, fueled by hit songs and a string of movie appearances. He joined Wills in 1935 and left in 1942, a crucial period of stylistic explorations in which Wills defined the genre of western swing. Wide scale exposure of McAuliffe's unique style, through recordings, radio and live performances, exerted strong influence on his peers and helped guide the electric steel guitar to national prominence. Additionally, the success of his composition, 'Steel Guitar Rag', discussed in the following chapter, became the most recognised and performed steel guitar instrumental, further securing his place as a major figure of the instrument.

McAuliffe's career is well documented in music histories, articles and liner notes, which are supplemented by a number of published interviews. His musical development in the Texas Playboys is well chronicled in nine substantial recording sessions, conducted between September 1935 and July 1942. Analysis in this chapter will show that, while his was initially inspired by Dunn, McAuliffe assimilated a broad range of influences. With acute perception, he applied innovative techniques to the mounting demands of an evolving repertoire. Directed by a proclivity for the blues and a taste for jazz, and informed by

Hawaiian training, he forged a style that maintained currency as Wills guided the style of his band from Texas fiddle music to the cutting edge of big band swing.

5.1 Early Life

McAuliffe was born in Houston on 19 August 1917. His father was a competent amateur guitarist and mandolinist, whom McAuliffe idolized. Leon was introduced to, and impressed by the social aspects of ensemble playing when his father hosted musical house parties.[308] His parents were divorced when he was seven, but his father's musical bent had left an important impression on him. McAuliffe was gifted a Stella acoustic guitar at the age of fourteen and took a dozen lessons from a local teacher, Lattés Merrick, on both Spanish and Hawaiian steel guitar. The lessons ended for want of money but, with basic technique and tuning information, McAuliffe pressed on by himself. He described learning tunes from the radio, which attests to an early development of aural skills through the difficult task of determining musical features from intermittent listenings.[309] McAuliffe admitted to liking Hawaiian music but said that he also enjoyed playing popular tunes.[310]

McAuliffe sought to play with others at the first opportunity. He could play both Spanish and Hawaiian steel style but, in seeking companions, he was always able to find other Spanish guitarists but never other steel players. This influenced his decision to concentrate on steel guitar, while retaining his Spanish guitar skills.[311] McAuliffe didn't finish high school and began seeking paid performance work at the age of fifteen. At sixteen, he had a minor staff musician post at Houston's KPRC radio station, playing banjo and steel guitar. In 1933, he joined the Light Crust Doughboys, a popular band based in Ft Worth that appeared daily on three powerful Texas radio stations. In radio performances, McAuliffe played solo pieces and contributed to background accompaniment of the vocalists. He played a flat top Martin acoustic guitar with raised strings, suspended from his neck with a strap. With only a single microphone deployed for the whole ensemble, the strap enabled him to shuffle up to the microphone when his relatively quiet instrument was required in the musical foreground.[312]

During McAuliffe's term with the Light Crust Doughboys, Bob Wills had moved his band, the Texas Playboys, to Tulsa, Oklahoma. With an ear on the radio, Wills was aware of Milton Brown's new direction with the Brownies and had heard Bob Dunn's stunning contribution.[313] He was also aware of McAuliffe's presence in the Light Crust Doughboys, who were similarly accessible through the airwaves. Wills offered McAuliffe a position with his band, which he accepted and he joined Wills in Tulsa on March 25, 1935.

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[308] Leon McAuliffe, 'Interview with Cecil Whaley', ed. Cecil Whaley (Country Music Foundation), 1969. 2.
[309] Leon McAuliffe, 'Interview with Dave Stricklin', ed. David Stricklin (Baylor University), 1985. 50.
[310] McAuliffe, 'Interview with Cecil Whaley', 3.
[311] McAuliffe, 'Interview with Cecil Whaley', 5.
[312] McAuliffe, 'Interview with Dave Stricklin', 51.
[313] Rich Kienzle, *San Antonio Rose: Bob Wills and the Texas Playboys* (Hamburg: Bear Family Records, 2000), 24.

Fig. 5.1 McAuliffe with Bob Wills and the Texas Playboys, 1935, from the collections of the Center for Popular Music, Middle Tennessee State University

5.2 Early Influences

In evaluating Leon McAuliffe's early influences, one needs to look beyond the admissions of his published interviews. His initial Hawaiian steel guitar training was clearly formative but, while he acknowledged a love of Hawaiian music, he also belittled its importance in one interview[314] and disparaged it in another.[315] However, in a phone interview with Stacy Phillips, McAuliffe admitted that he shared Bob Dunn's great admiration of Hawaiian Bob Pau'ole, and listened attentively to his programs.[316] Furthermore, to undertake radio performances of solo Hawaiian steel guitar pieces, McAuliffe would have required a very solid grounding but he did not readily acknowledge this in interviews.

McAuliffe was also significantly influenced by Bob Dunn. Close contact between the two was enabled when McAuliffe joined the Light Crust Doughboys in Ft Worth.[317] He attended Brownies performances at the Crystal Springs dance hall and on at least one occasion was permitted to sit in for Dunn, on Dunn's Volu-Tone amplified instrument. McAuliffe was clearly impressed by Dunn's style, elements of which can be detected throughout most of McAuliffe's early recordings with Wills. Dunn's influence extended to McAuliffe's choice of equipment when, soon after joining the band, McAuliffe persuaded Wills to buy him a Volu-Tone system to use with the Texas Playboys. The window of

[314] McAuliffe, 'Interview with Dave Stricklin', 50.
[315] McAuliffe, 'Interview with Cecil Whaley', 3.
[316] Phillips, 'Dunn/Paole/Mcauliffe'.
[317] Kienzle, 'Bob's Playboy Pickers'.

opportunity for the interaction with Dunn seems small. Dunn joined the Brownies in December 1934 and McAuliffe left for Tulsa in March 1935. However, McAuliffe would have had additional access to Dunn's playing through the avenues of both radio and recordings. Furthermore, their paths would have undoubtedly crossed on the dance band circuit. Interestingly, in four lengthy interviews that covered his early career, McAuliffe made no mention of Dunn. Furthermore, in a letter to a fan, he brazenly stated that he and Noel Boggs 'were just about the only steel players in western bands at that time [1935]'.[318] While McAuliffe may have been reluctant to acknowledge the influence of either Dunn or Hawaiian steel players, his recorded output leaves little doubt as to their importance in the development of his style, as will be shown below.

5.3 McAuliffe's Instruments

The tone that McAuliffe generated from his Volu-Tone system in his first session with the Playboys in September 1935 was thin and distorted, not unlike Dunn's tone on his first session with Brown. However, the situation had improved greatly by the time of the following session, twelve months later. By this time, he had acquired two Rickenbacker B6 steel guitars, shown on his lap and beside him in Fig. 5.2 below.[319] These instruments represented a cutting edge of steel guitar design and construction. First commercially available in July 1935, their solid Bakelite bodies replaced the aluminum of earlier Rickenbacker Frypan models and overcame both the feedback problems of hollow bodied instruments and the temperature sensitivity of aluminum that contributed to tuning problems of the Frypans. Notably, Sol Ho'opi'i also favoured Rickenbacker's Bakelite models after he switched to amplified instruments in the mid 1930s.

[318] Leon McAuliffe, 'Leon Mcauliffe Letter', *Steel Guitar World* 1/6 (1992).
[319] Kienzle, 'Bob's Playboy Pickers'.

Fig. 5.2 McAuliffe with the Texas Playboys with two Rickenbacker B6 steel guitars c1937, from the collections of the Center for Popular Music, Middle Tennessee State University

A pair of six-stringed Rickenbacker instruments provided McAuliffe with two alternative tunings to be readily interchanged on stage or in the studio. Initially, he appears to have maintained them in High A and E major tunings. The appearance of twin necked instruments provided a more convenient solution, and McAuliffe joined the vanguard of users when Noel Boggs sent him an early double-necked Rickenbacker instrument in 1940.[320] McAuliffe subsequently informed the manufacturer of a design drawback, whereby necks at the same level hindered rapid interchange. Subsequently the company altered the design by raising the outer neck, and McAuliffe used this improved Rickenbacker for years. When Fender Instruments of Fullerton, California, began to make twin necked instruments in 1946, McAuliffe was provided with a prototype. This began a long association that he had with the company. Sometime in 1947 McAuliffe received one of the first triple-necked models, shown below in Fig.5.3. Subsequently, Fender provided him with a four-necked Stringmaster model when they became available in the early 1950s, with which he persisted for the remainder of his career.[321]

[320] McAuliffe, 'Leon Mcauliffe: The Story of a Steel Guitar Pioneer', 17.
[321] Richard R Smith, *Fender: The Sound Heard around the World* (Milwaukee, WI: Hal Leonard Corporation, 2009), 52.

Fig. 5.3 Leon McAuliffe with Fender Deluxe Pro Triple, late 1940s, from the collections of the Center for Popular Music, Middle Tennessee State University

5.4 The Music of Bob Wills, 1935-1942

Leon McAuliffe's style evolved in the framework of the repertoire of Bob Wills and his Texas Playboys. During the term of McAuliffe's tenure with Wills, from 1935 to 1942, the music of the band underwent constant development, absorbing shifts in popular music, influenced by new members and maneuvered by its leader to maintain a commercial edge. The repertoire created in the process was a complex pastiche of popular trends and rural cultural markers.

The two main elements of Wills' collage were country music and jazz. However, neither element was intrinsically homogenous. Jazz was represented in the mainstream of popular music by extremes of hot and sweet. Country music could also be viewed as a broad amalgam of styles, with fiddle breakdowns at one extreme and vocal ballads at the other. Another significant ingredient of the Playboy's repertoire was blues, either as jazz standards, such as 'St Louis Blues', or accessed from other African-American repertoire, as was in the

case of the Mississippi Sheiks' 'Sitting on Top of the World'.[322] In a repertoire that was primarily designed for dancers, other lesser influences are apparent in the form of sentimental tunes and waltzes, Hawaiian standards and an occasional Mexican melody.

Significantly, the myriad of musical influences on which Wills' band drew was reflected in their performances, both as representations of a single genre and as hybrids. The measured intent of the leader in determining style is apparent in the way that two opposing facets of the band's repertoire could be recorded on subsequent days, as was the case in Fort Worth in 1941. On the first day of the three day session, the band recorded swing jazz exclusively, with a large horn section. However on the following two days, without the horns, the band cut decidedly country flavoured tracks, with prominent harmonised fiddles.

Another dimension to the polarity between country and jazz in the Playboy's music is apparent in terms of stasis and progression. While a largely static tradition of country music is represented by repertoire and style in the Playboys' music, the rapid progression of jazz in the 1930s is also reflected, albeit slightly behind the cutting edge of the mainstream jazz innovators. Progression in style is clearly apparent in the wide contrast between early jazz tunes such as 'Osage Stomp'[323] or 'White Heat'[324] and later swing recordings such as 'Lyla Lou'.[325]

The agencies through which disparate genres were represented in the Playboy's music were manifold and were evident in the compositions, arrangements, instrumentation and performance styles. Country tradition is apparent in songs with rural themes and harmonic structures that assert simple tonic and dominant interchange. Country music is also represented at the core of the ensemble in the string band instrumentation of fiddles, guitars, double bass and banjo. Stylistically, the use of rhythmic double stopping, harmonised violins and a rhythm section texture of chordal strumming with 2/4 meter stated strongly by the double bass, provided markers of country music to which the band would freely return after excursions in jazz.

Jazz elements are apparent in repertoire that employed more complex harmonic frameworks, including extensive use of secondary dominants and cyclic dominant seventh progressions. In jazz flavoured tunes between 1935 and 1939, the Playboys clung to the 2/4 meter of early jazz, at a time when the mainstream had progressed to 4/4. However, in 1940, their jazz arrangements began to employ 4/4 meter, which helped to exaggerate the polarity of their material. Like Milton Brown before him, Wills employed a jazz pianist, who often used

[322] Mississippi Sheiks, 'Sitting on Top of the World', (OKeh 8784), 1930.
[323] Bob Wills and His Texas Playboys, 'Osage Stomp', (Vocalion 03096), 1935.
[324] Bob Wills and His Texas Playboys, 'White Heat', (Vocalion 03614), 1937.
[325] Bob Wills and His Texas Playboys, 'Lyla Lou', (OKeh 06327), 1941.

a distinctive stride style, providing an insistent jazz reference when brought to the fore in solos. Wills' use of a drummer was a step that took him beyond Milton Brown's jazz innovations and contributed to the functionality, and possibly the popularity, of the dance band. It was a step that helped to delineate western swing as a subgenre within country music. This is illustrated by a controversial incident in December 1944 when, at Wills' insistence, his band became the first to appear with drums at the Grande Ole Opry, the bastion of country music, held in Nashville, Tennessee.

From inception, arrangements for the Playboys' wind instruments gradually grew in sophistication. Initially ear arrangements that applied the methodology of black territory bands were used, as was the case with early tunes like 'White Heat'. The arrival of guitarist and arranger Eldon Shamblin in 1938 accelerated the process of refinement. Gradually, Wills turned to Shamblin and other arrangers to craft charts that employed careful juxtapositions of wind section identities, in the manner pioneered by Don Redmond with Fletcher Henderson. Eventually, some of the band's recordings, such as 'Big Beaver', arranged by Shamblin, became indistinguishable from the mainstream of big band swing.[326]

The improvisation of soloists was a key component of the music of the Wills band and, during McAuliffe's tenure, many expert players passed through its ranks. Notable violinist, Jesse Ashcroft, a long-term member of the band, admired the jazz stylings of Joe Venuti and had learned from Cliff Bruner. Louis Tierney was another fiddler who doubled on saxophone. Many of the horn players aired sophisticated jazz stylings, including trumpeters Everett Stover and Benny Strickler. The addition of Shamblin added not only a skilled guitar improviser but also a knowledgeable music theorist who helped elevate the band's musicianship. McAuliffe maintained a close relationship with Shamblin, working side by side with him in the rhythm section. McAuliffe, exposed to a variety of improvisational styles on a daily basis, grew in stature and became a key soloist in the group.

5.5 Engagement by Wills

Bob Wills had been a member of the Light Crust Doughboys in the early 1930s, in the company of Milton Brown. After a few years with the group in Ft Worth, Wills left and formed a new band in Waco, Texas, that became the Texas Playboys. Faced with a market filled by a proliferation of bands, which included the successful Brownies and their imitators, Wills moved his operating base to Tulsa, Oklahoma. There he was welcomed at radio station KVOO, whose powerful transmitter would ensure the transmission of his music across the Southwest. Early in 1935, faced with the departure of his acoustic steel player, Kermit

[326] Bob Wills and His Texas Playboys, 'Big Beaver', (OKeh 05905), 1940.

Whalen, Wills offered a position to McAuliffe, who accepted it immediately. In the same period in which Whalen left, Wills had hired his first drummer, Smoky Dacus. Whether the increased volume added to the ensemble by drums contributed to Whalen's decision to leave is unknown, but it would have undoubtedly added to the challenge faced by an acoustic steel player, already struggling to be heard. The extent of Whalen's duties is unclear, as no recordings or radio transcriptions of Wills' first year in Tulsa exist, but it could be assumed that he was required to provide contrasting Hawaiian solos in band's radio shows. Any contribution of his relatively quiet instrument to the ten piece band, consisting of trumpet, saxophone, trombone, two guitars, two fiddles, double bass and banjo, would have been problematic, and a much more difficult proposition than was McAuliffe's with the smaller Light Crust Doughboys ensemble.

Wills would have soon become aware of the impact of Dunn's amplified steel guitar on the Brownies' sound. Although the initial recordings of the Brownies, made in early February, may not have reached him before he made his decision to invite McAuliffe, he would have undoubtedly heard radio broadcasts of Brown's band. It is possible, therefore, that he had plans for an amplified steel before engaging McAuliffe and that his purchase of Volu-Tone equipment for McAuliffe within a month of his arrival was preplanned, rather than the result of a request by McAuliffe to update his rig.

McAuliffe's acoustic renderings of Hawaiian steel guitar numbers on Light Crust Doughboys' radio programs made him an obvious substitute for Whalen. But Wills may also have been acquainted with McAuliffe's vocal abilities and his skill on the Spanish guitar. His versatility made McAuliffe a shrewd choice, as his first session with Wills would prove.

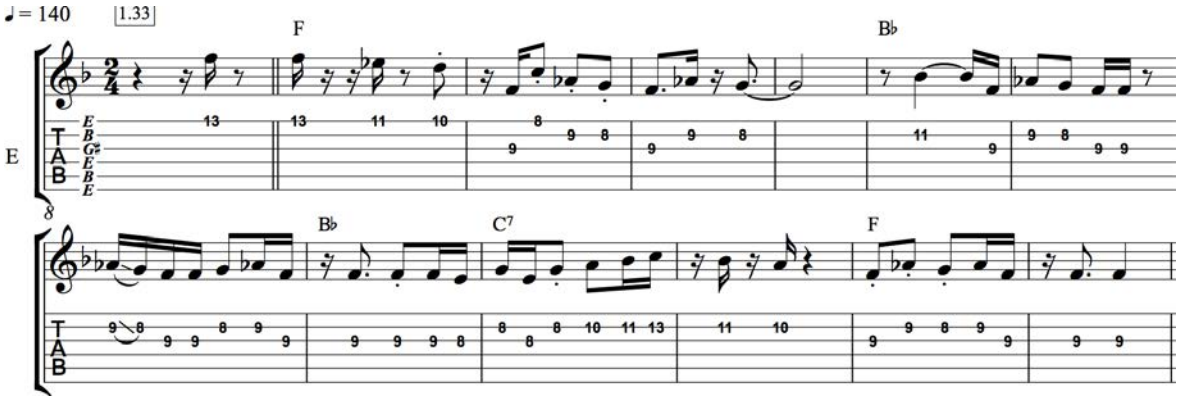
5.5.1 First Session, September 1935

McAuliffe participated in the Texas Playboy's first extended recording session which was conducted on the 23rd and 24th of September in Dallas, at which time twenty tracks were recorded. Despite having performed with the group for almost six months, McAuliffe's steel was underutilized on the session. He was given only two steel solos on the first day's recording when eight tracks were cut, and none on the second day. Furthermore, the steel is discernable in accompaniment on only three other tracks. Nevertheless, McAuliffe's presence on the session was extensive. He performed two solos on the Spanish guitar on the first day and six on the second. He also assumed the role of lead vocalist on a number of tunes.

The recorded evidence suggests that, on steel guitar, McAuliffe consciously avoided Hawaiian styling during this inaugural recording. While he employs harmonics in

accompaniment of ‘The Maiden’s Prayer’[327],‘Blue River’[328] and ‘Mexicali Rose’[329], they are mostly ethereal arpeggios. His first solo exhibits few Hawaiian traits, while the second, although mainly dyadic, is almost free of glissandi and vibrato. In light of his Hawaiian training and extensive Hawaiian solo and small group experience, this approach is surprising and may have been either a conscious decision on his part or a direction from his leader. The bias against Hawaiian steel guitar stylings is curious, and made more so by the abandonment of the strategy on later sessions.

Both of McAuliffe’s solos in the 1935 session are noteworthy. He is utilised on the first track of the session, an instrumental blues in F entitled ‘Osage Stomp’.[330] A transcription of the first of his two choruses appears in Ex. 5.1 below. McAuliffe is struggling to be heard above the rhythm section, with the drums dominating in their first appearance on a Playboys’ recording. The thin steel guitar timbre indicates the inadequacy of the Volu-Tone system, possibly compounded by poor positioning of the amp in relationship to the microphone. Additionally, the brisk tempo ensures a difficult recording baptism for McAuliffe, but he rises to the challenge. The opening phrase, while Dunn-like in its syncopation, is flavoured with blue notes of Ab and Eb and ends confidently on a ninth, the G, providing an unresolved tone from which to launch into the consequent phrase. McAuliffe’s familiarity with blues tonality, apparent in this first recording, was to become a distinctive feature of his playing that helped him blend into the country jazz hybrid that Wills was developing.

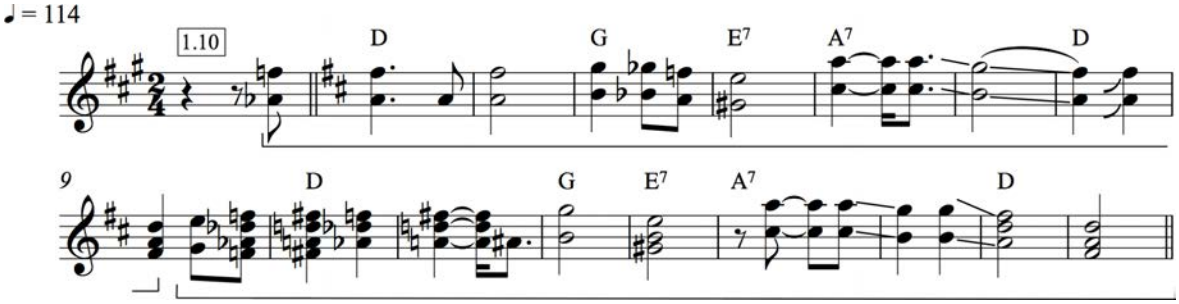


Ex. 5.1 Improvisation on ‘Osage Stomp’, Leon McAuliffe (23/9/35, mx. DAL 126)

McAuliffe’s second solo of the session, on ‘Spanish Two Step’[331], foreshadowed his contribution to one of the Playboys’ biggest hits, ‘San Antonio Rose’[332] and provides evidence as to the identity of the composers and method of composition of the famous tune.

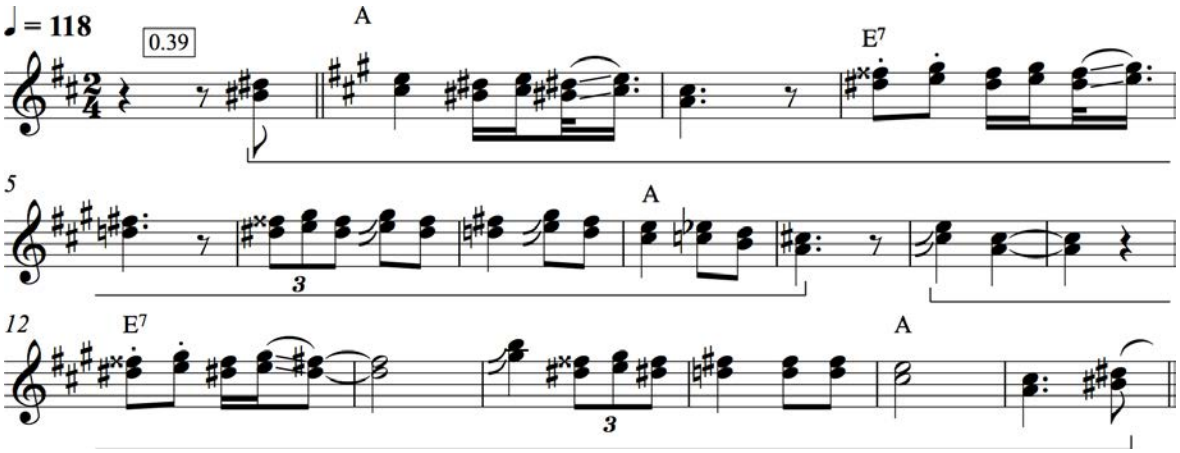
[327] Bob Wills and His Texas Playboys, 'The Maiden's Prayer', (Vocalion 03924), 1935.
[328] Bob Wills and His Texas Playboys, 'Blue River', (Vocalion 03230), 1935.
[329] Bob Wills and His Texas Playboys, 'Mexicali Rose', (Vocalion 03086), 1935.
[330] Wills and Playboys, 'Osage Stomp'.
[331] Bob Wills and His Texas Playboys, 'Spanish Two Step', (Vocalion 03230), 1935.
[332] Bob Wills and His Texas Playboys, 'San Antonio Rose', (Vocalion 04439), 1938.

The solo appears about halfway through the track, which is a fiddle tune constructed on repetitive harmonic framework of tonic, sub dominant and dominant, in the key of A major. The sixteen bar steel solo, transcribed in Ex. 5.2 below, provides the only contrast to the fiddle melody in the three minute track. A stark divergence is achieved with a change of soloist, instrumental timbre and texture. The tune's harmonic structure varies with a modulation to the key of the subdominant and an increase in complexity by way of a secondary dominant. The appearance of this radical departure from the main melody, in such an organized manner, and with such an idiosyncratic steel melody, suggests that it is a composition of the soloist, McAuliffe.



Ex. 5.2 Interlude in 'Spanish Two Step', Leon McAuliffe (23/9/35, mx. DAL 130)

The relationship that McAuliffe's solo bears to Bob Wills' composition, 'San Antonio Rose', recorded three years later, is of great significance. There are a number of telling similarities between the two recordings that suggest that the latter is derived from the former. Firstly, the harmonic framework of McAuliffe's earlier solo is identical to that of the A section of 'San Antonio Rose', suggesting that its use in 'San Antonio Rose' may represent a revival of a basic element of the section composed by McAuliffe for the earlier tune. Secondly, there are similarities between Ex. 5.2 and the B section of 'San Antonio Rose' played on the 1938 recording by McAuliffe, transcribed in Ex. 5.3 below. Despite differing harmony, similarities in the melodies are striking. Although the surface rhythm of 'San Antonio Rose' is more dense, the lengths and melodic contours of the corresponding phrases of the two solos are similar. Texturally, both passages share a dyadic approach. Another correlation can be identified in manner in which both of McAuliffe's solos modulate sharply, 'Spanish Two Step' to the subdominant and 'San Antonio Rose' to the dominant. These observations support the proposition that, despite receiving no acknowledgement, McAuliffe contributed significantly to the composition of 'San Antonio Rose'. His contributions are embodied both in its harmonic foundations and in the melody of the B section, which he refashioned from his earlier effort.



Ex. 5.3 Opening of B section of 'San Antonio Rose', Leon McAuliffe (28/11/38, mx. DAL 615)

5.5.2 Second Session, September1936

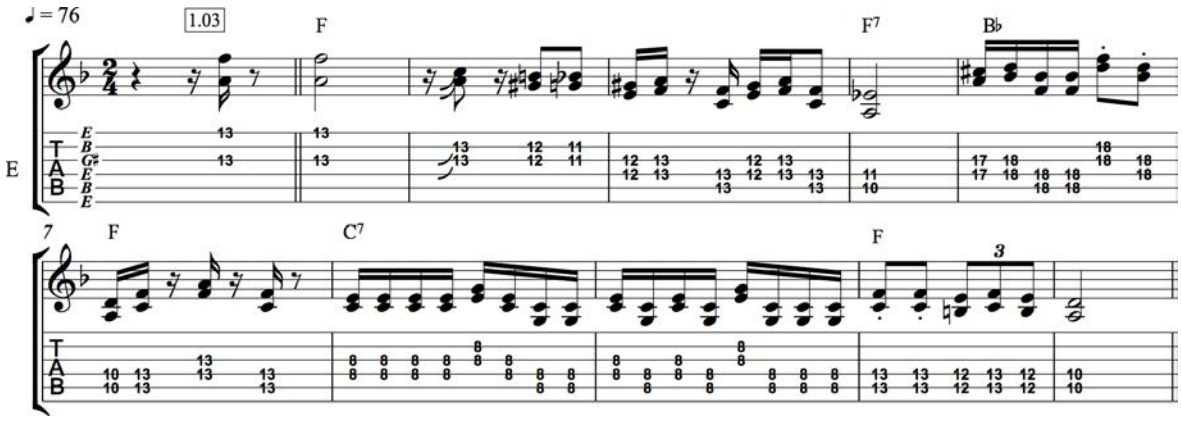
With a further year's experience, and equipped with new Rickenbacker instruments, McAuliffe's steel guitar was far more prominent in the three day recording session conducted by Wills and the Playboys in September 1936. Thirty one different tunes were recorded, of which twenty were released. On those released, McAuliffe contributed eleven solos, including his soon-to-be famous composition 'Steel Guitar Rag'.[333] Additionally, the steel guitar was used much more extensively within accompaniments, with McAuliffe's sustained harmonics piercing the dense textures created by an ensemble consisting of trumpet, two saxes, two fiddles, two guitars, banjo, double bass, drums and vocalist.

In this session, the polarities of jazz and country music are favoured individually at times. Tracks where the string band dominates, such as 'She's Killing Me', have a strong country flavour, which is not diminished by either muted trumpet or piano solos.[334] In contrast, the track following, 'Weary of the Same Old Stuff', which features arranged horn passages and group improvisation, signals the other extreme.[335] A blues influence is pervasive throughout the session, with colouration by blue notes and microtonal smears and slides in abundance throughout many improvised solos. Thirteen of the released tunes are either based on twelve or eight bar blues progressions, while others, such as 'Basin Street Blues'[336], can be described as a 'titular blues'.[337]

[333] Bob Wills and His Texas Playboys, 'Steel Guitar Rag', (Vocalion 03394), 1936.
[334] Bob Wills and His Texas Playboys, 'She's Killing Me', (Vocalion 03424), 1936.
[335] Bob Wills and His Texas Playboys, 'Weary of the Same Old Stuff', (Vocalion 03343), 1936.
[336] Bob Wills and His Texas Playboys, 'Basin Street Blues', (Vocalion 03344), 1936.
[337] 'Titular' blues are tunes that are titled 'Blues' and, while they may not exhibit a blues harmonic structure, were clearly considered to be blues by the culture in which they were originated. Peter C. Muir, *Long Lost Blues : Popular Blues in America, 1850-1920* (Urbana: University of Illinois Press, 2010), 2.

Between the extremes of country music and jazz, another distinct style began to coalesce around the merger of blues with country music. The descriptive title 'country blues' would seem apt for tunes that combine a strong 2/4 meter with a blues progression and tonal colouring, but without horn arrangements or the group improvisation of 1920s jazz. An example is 'Bluin' the Blues',[338] or even McAuliffe's 'Steel Guitar Rag'.

The powerful blues influence that pervaded the session allowed McAuliffe to play to his strength and provided him with a platform from which he could confidently develop solos. The bold opening of his single chorus solo on 'Fan It', shown in Ex. 5.4 below, is a blues-flavoured descending phrase that repeats a minor to major third inflection in bar four and comes to rest on the minor seventh.[339] The dyadic, but slantless, solo continues with a syncopated phrase and ends with a sixteenth note passage strongly reminiscent of Dunn.



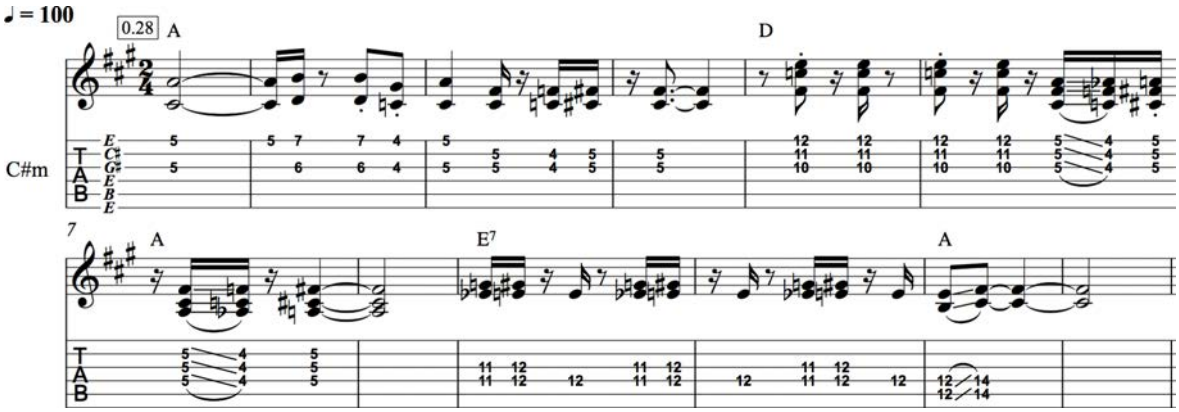
Ex. 5.4 Improvisation on 'Fan It', Leon McAuliffe (30/9/36, mx. C 1493)

Dunn's rhythmic influence can be detected to some degree in most of McAuliffe's six monophonic solos on the session. Additionally, he demonstrates his affinity with blues by a repeated use of sustained notes, often accompanied by microtonal inflection that accentuates blue notes. McAuliffe moves freely between the two approaches. On one hand, his hurried eight bar solo on 'Back Home in Indiana'[340] is decidedly Dunn flavoured, while on the other, the sixteen bar solo on 'Bring It On Down to My House'[341] favours a strong blues inflection and tonality. The latter example shows that McAuliffe is much more inclined than Dunn to repeat riffs or phrases, hammering home rhythmic interpretation and tonality.

Overt Hawaiian influences are almost totally absent from McAuliffe's playing in this session, as they had been in his first. Glissandi are few and far between and he makes light use of vibrato. Without glissandi or vibrato, his dyadic solos, such at that on 'Bluin' the

[338] Bob Wills and His Texas Playboys, 'Bluin' the Blues', (Vocalion 03424), 1936.
[339] Bob Wills and His Texas Playboys, 'Fan It', (Vocalion 03361), 1936.
[340] Bob Wills and His Texas Playboys, 'Back Home in Indiana', (Vocalion 03578), 1936.
[341] Bob Wills and His Texas Playboys, 'Bring It on Down to My House', (Vocalion 03492), 1936.

Blues', do not exude Hawaiian styling.[342] Steel guitar harmonics are used on a number of tracks as background to vocals but they are not embellished with glissandi. Instead, harmonics generally appear as arpeggios of sustained notes that, enhanced by amplification, reinforce harmony. This usage differs subtly from Hawaiian practice where harmonics often appear in secondary melodic phrases, with glissandi employed as embellishments within the contour of melody. Again, McAuliffe's approach would seem to be the result of a conscious decision to draw minimally on his background and training. However, McAuliffe's solo on 'What's the Matter with the Mill', shown in Ex. 5.5 below, reveals a curious detail of his interest and development.[343] While the dyadic solo exhibits a similar mix of blues and syncopated rhythm to the rest of his work on this session, the tuning that is employed is C#m, then a tuning at the cutting edge of Hawaiian practice. In bar five and six, he uses the characteristic dominant ninth voicing that was becoming prevalent in Hawaiian music. This indicates that while he may have been consciously distancing himself from displaying Hawaiian styling, he continued to have an ear to developments in that scene.



Ex. 5.5 Improvisation on 'What's the Matter at the Mill', Leon McAuliffe (29/9/36, mx. C 1482)

5.5.3 Third Session, June 1937

The next Playboys session, conducted on three days in late June 1937, was not particularly productive, with only twelve of twenty eight tunes released. On the released takes, McAuliffe's role was undiminished, featuring as soloist on nine tracks and his composition, 'Steel Guitar Stomp' was one of the tracks that survived.[344] Overall, his style did not differ greatly from that of the previous session. Hawaiian influence was scant, with few glissandi evident and minimal vibrato in evidence. Harmonics were used extensively in accompaniment

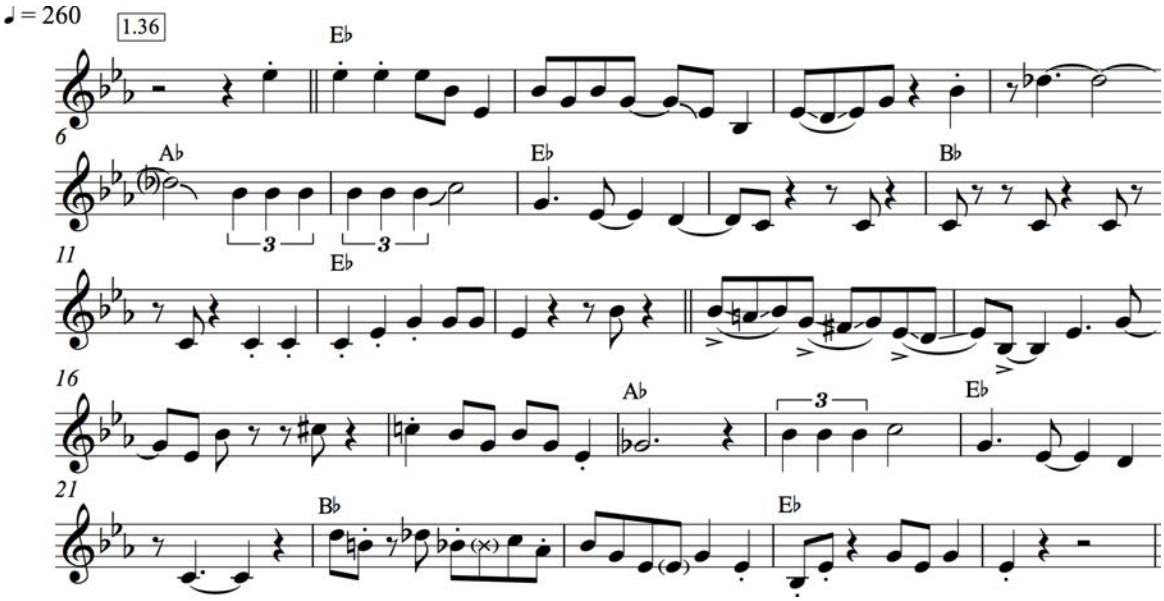
[342] Wills and Playboys, 'Bluin' the Blues'.
[343] Bob Wills and His Texas Playboys, 'What's the Matter with the Mill?', (Vocalion 03424), 1936.
[344] Bob Wills and His Texas Playboys, 'Steel Guitar Stomp', (Vocalion 03997), 1937.

on four tracks, but without glissandi and with little melodic motion, they resemble sustained tones of a vibraphone.

Stylistic development can be seen in the expansion of a function that McAuliffe briefly filled in the track 'Sugar Blues', recorded at the previous session.[345] At the end of the earlier recording, the steel guitar had provided chordal responses to phrases from the horn section, acting as an additional polyphonic instrumental identity of equal strength. This function is repeated in two tunes on the first day of the 1937 session, 'White Heat'[346] and 'Bleeding Heart Blues'.[347] In the coda of 'White Heat', the steel guitar provides a rhythmic response to a horn riff for one chorus. The roles are then reversed for the next chorus, with the steel providing the riff and the horns replying with a rhythmic chordal response.

Of McAuliffe's nine solos on the session, six were predominantly hot monophonic improvisations that alternated his bluesy approach with Dunn's syncopated staccato style. An example can be seen in his solo in 'White Heat', an adaptation of Jimmie Lunceford's big band hit of 1934, transcribed in Ex. 5.6 below. The tune is a twelve bar blues with horns. It is taken at a brisk tempo of two hundred and forty beats a minute, with the 4/4 meter determined by a heavy guitar chord on the beat. McAuliffe is clearly challenged by the tempo and utilises sustained notes and repeated tones in the first chorus to negotiate the changes. The opening phrase incorporates blues inflection, with the major third of the tonic in the second bar passing through the minor third and coming to rest on the minor seventh in bar four. A polyrhythmic device of two dotted quarter notes over three quarter notes is used to slow the surface rhythm and negotiate bars six to nine, while maintaining rhythmic momentum. The strategy is maintained in the second chorus, with repetition of the polyrhythm and concludes in a Dunn-like rapid staccato flourish across the final four bars. This solo maintains intensity and momentum throughout and is an excellent example of McAuliffe's improvisatory skill.

[345] Bob Wills and His Texas Playboys, 'Sugar Blues', (Vocalion 03361), 1936.
[346] Wills and Playboys, 'White Heat'.
[347] Bob Wills and His Texas Playboys, 'Bleeding Heart Blues', (Vocalion 03597), 1937.

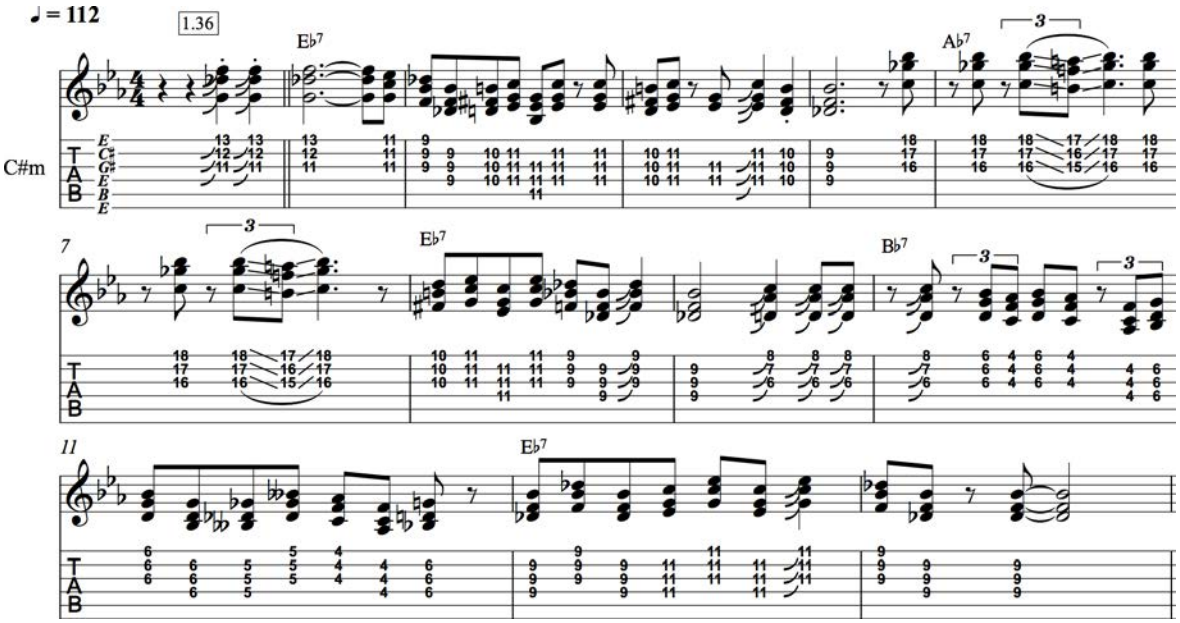


Ex. 5.6 Improvisation on 'White Heat', Leon McAuliffe (7/7/37, mx. DAL 212)

On the three remaining solos on the session, 'Steel Guitar Stomp', 'Bleeding Heart Blues' and 'The New St. Louis Blues'[348], McAuliffe performs chord solos. His solos exhibit considerable progression from his efforts in 1936. The influence of Dunn is absent, replaced by a fresh approach that incorporates chord melody, swing rhythms and the voicings provided by a C# minor tuning. In the solo in 'Bleeding Heart Blues', shown in Ex. 5.7 below, McAuliffe balances these elements in an outstanding improvisation. He employs three dominant chord voicings on each chord root of the blues progression. These are achieved with three core bar positions; a forward slant to produce a dominant ninth, a perpendicular bar in root position to produce a major six chord and, two frets below, another dominant ninth voicing that omits the root and the major third. Using these minimal elements, and with some chromatic passing tones, McAuliffe creates a compelling solo with strong phrasing, clearly articulated syncopation and forward motion. This example is a precursor of a chordal style that he continued to develop in his remaining time with the Playboys.

McAuliffe's mentor Dunn had also recorded chord solos with the Brownies but, unlike Dunn's archaic staccato approach, McAuliffe's effort was influenced by the evolving swing phenomenon, which is imprinted on his phrasing. Additionally, Hawaiian steel guitarists were also providing an apposite model of swing chord soloing and, given McAuliffe's adoption of the C#m tuning, it is likely that he was aware of their examples.

[348] Bob Wills and His Texas Playboys, 'The New St Louis Blues', (Vocalion 03693), 1937.



Ex. 5.7 Improvisation on 'Bleeding Hearted Blues', Leon McAuliffe (7/6/37, mx. Dal 218)

5.5.4 Fourth Session, May 1938: A Change in Direction

By 1937, swing was well entrenched and its influence permeated popular music, with Benny Goodman's big band at the forefront. The small string band recordings of the Hot Club of France were also making an impact, with Django Reinhardt's guitar virtuosity becoming recognised globally. The big swing bands set a high standard of musicianship. Written arrangements demanded literate players and hot improvisation was expected of all soloists.

The level of musicianship of Will's band was uneven, at best. Eldon Shamblin, recruited by Wills in 1937 to raise standards, described the group as 'the sorriest band I'd ever heard."[349] Shamblin was a self-taught jazz guitarist and arranger, who Wills had heard playing swing arrangements of classical music on local Tulsa radio station KTUL. Shamblin's engagement began a continuous development that culminated in the high quality arrangements and expert musicianship displayed in recordings in Hollywood in 1941. He was responsible for many arrangements and coached non-reading players in their interpretation. He tutored band members in harmony and helped to enhance the harmonised fiddle style that became a feature of the band's sound.[350] With McAuliffe, he applied a similar method of harmonisation for Spanish guitar and steel guitar. The style became a highlight of Wills' repertoire and was widely imitated in western swing.

While the hot swing bands were ascendant in the late 1930s, the more sedate music of the sweet bands, such as Guy Lombardo's Canadians, maintained wide favour with audiences.

[349] Eldon Shamblin, 'Interview with Jean Boyd', ed. Jean A. Boyd (Baylor University), 1992. 7.
[350] Kienzle, *San Antonio Rose: Bob Wills and the Texas Playboys*, 47.

The enduring popularity that sweet dance music enjoyed may have convinced Wills to select three Hawaiian flavoured tunes for the Playboys' recording session in May 1938. The inclusion of the tunes into the band's repertoire appears to have provided a catalyst that moved McAuliffe to widen his approach. He began to incorporate elements of the Hawaiian styling with which his career was initiated but which he had shunned throughout his first years with the Playboys.

His dramatic shift is heralded on the initial track of the two day recording session. The track, 'Black Rider' is a medium tempo blues in which McAuliffe is given the first solo.[351] McAuliffe provides a chorus of chordal improvisation that begins cautiously. As in previous chord solos, he uses the bar to add inflections to the colourful voicings available on his C# minor tuning. But the final gesture of the solo consists of a tonic chord, sounded in harmonics, and rising an octave with glissando. This bold gesture, a Hawaiian staple, is a rarity in his previous recordings and serves as a prelude to a wholesale application of Hawaiian steel guitar styling applied throughout the session. His melodic application of either monophonic, dyadic or chordal harmonics, embellished with glissandi, contrasts greatly with his approach of earlier sessions. A transformation is clearly in evidence on tracks such as 'Blue Prelude'[352], 'Little Red Head'[353] and 'I Wish I Could Shimmy Like my Sister Kate'.[354] Furthermore, his dyadic steel guitar introduction to 'Little Red Head', replete with dyadic melody, glissandi and harmonics, is unmistakably styled on Hawaiian performance.

Like Dunn, McAuliffe began playing Hawaiian music on an acoustic instrument, so the Hawaiian flavoured tunes offered McAuliffe the opportunity to apply his initial training to an amplified instrument. The first of the three tunes, 'Everybody Does It in Hawaii'[355], was written by Elsie McWilliams and Jimmie Rodgers. The tune had been recorded by Rodgers in 1928, accompanied by ukulele, acoustic steel guitar played by Hawaiian, Joseph Kaaaia Kaipo and guitar played by himself.[356] Hawaiian aspects of Rodger's version are muted and, other than the subject matter, are confined to subtle background embellishment of the vocals with chordal glissandi by Kaipo. In contrast, McAuliffe's main contribution to Wills' recording, transcribed in Ex. 5.8 below, is calculated to impart a Hawaiian flavour to the hapa haole song from the outset. It consists of a strident four bar dyadic introduction that incorporates a glissando and ends with harmonics. The passage is repeated twice more in the recording.

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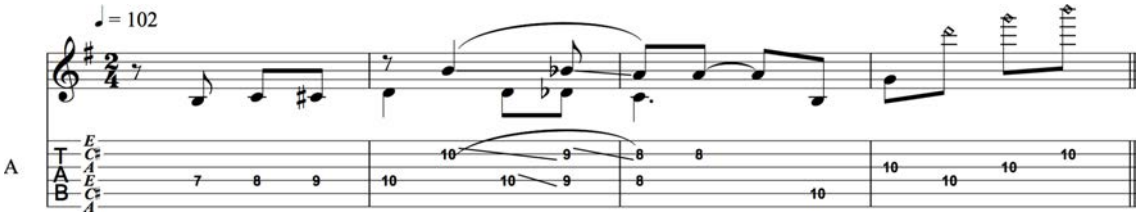
[351] Bob Wills and His Texas Playboys, 'Black Rider', (Vocalion 04132), 1938.
[352] Bob Wills and His Texas Playboys, 'Blue Prelude', (Vocalion 05333), 1938.
[353] Bob Wills and His Texas Playboys, 'Little Red Head', (Vocalion 04325), 1938.
[354] Bob Wills and His Texas Playboys, 'I Wish I Could Shimmy Like My Sister Kate', (Vocalion 04439), 1938.
[355] Bob Wills and His Texas Playboys, 'Everybody Does It in Hawaii', (Vocalion 04132), 1938.
[356] Jimmy Rodgers, 'Everybody Does It in Hawaii', (Victor 22143), 1928.



Ex. 5.8 Improvisation on 'Everybody Does It in Hawaii', Leon McAuliffe (16/5/38, mx. DAL 563-1)

The two other Hawaiian tracks, drawn from then current popular repertoire, provide a far more distinct representation of contemporary Hawaiian music in Wills' session. The first of the two tunes is 'Sophisticated Hula'[357], written by Sol K. Bright and recorded by him on 24 May 1937.[358] Bright's recording is primarily a song for tenor and chorus, with the steel guitar in an accompanying role. It is more likely that McAuliffe's inspiration for his contribution to Wills' track is Lani McIntire's recording of the same tune a month earlier.[359] This recording featured steel guitar playing by Bob Nichols, who provided both an introduction and a hot solo. Also recorded at McIntire's session of April 1937 was 'Little Heaven of the Seven Seas', the second of the Wills' selections, which also features Nichols' inspiring steel guitar.[360]

Nichols' approach to 'Sophisticated Hula' differs from McAuliffe's in many respects, but it is undoubtedly McAuliffe's source. Overall, the Wills recording is significantly slower than the 180 bpm tempo set by McIntire, and the 2/4 meter lends a slightly rural tone, in contrast with the fast even 4/4 of McIntire's track. Nichols' introduction presents the melody in full, before giving way to a vocal rendition. This he follows with a hot abstract improvisation on the full form. In contrast, Wills' version is entirely instrumental and relies on McAuliffe's steel guitar to carry the tune. McAuliffe doesn't stray far from the melody in the two iterations of the tune's thirty two bar form. Nichols' introduction is entirely monophonic but he employs lengthy syncopated chordal passages in his solo. In contrast, McAuliffe employs dyadic and chordal modes to present the melody. Notably, C# minor tuning is used by both players.

Significant conclusions can be made from an assessment of McAuliffe's performances on the two Hawaiian tracks. Firstly, as McIntire's recording session was conducted just a year before McAuliffe's efforts, it is clear that, not only was McAuliffe listening to current Hawaiian performances, but also their influence was emerging in his playing. If it is assumed that his listening extended beyond the purpose of research of

[357] Bob Wills and His Texas Playboys, 'Sophisticated Hula', (Vocalion 05333), 1938.
[358] Sol K Bright and His Hollywaiians, 'Sophisticated Hula', (Brunswick 55094), 1937.
[359] Lani McIntire and His Hawaiians, 'Sophisticated Hula', (Decca 1330), 1937.
[360] Lani McIntire and His Hawaiians, 'Little Heaven of the Seven Seas', (Decca 1329), 1937.

repertoire required for Wills and was concerned with current developments in Hawaiian music more generally, then the source of the C# minor tuning that he began to use in 1936 is revealed. Additionally, the stimulus for McAuliffe's rapid refinement of chord melody can be seen in the performances of Nichols and other leading Hawaiians, and the results detected in tracks such as 'Bleeding Hearted Blues', where similar chord voicings and voice leading are incorporated. (see Ex. 5.7 above) Notably, by not soloing in 'Sophisticated Hula', McAuliffe avoided any direct comparison with Nichols' hot improvisation. However, there is little doubt that McAuliffe was motivated by the new harmonic templates and modes of application provided by Nichols and his Hawaiian colleagues. In the absence of earlier overt Hawaiian styling, McAuliffe's inspiration remained hidden, but his approach on the two contemporary Hawaiian tunes of this session point clearly to the wellspring.

5.5.5 Fifth Session, November 1938

McAuliffe's next session with the Playboys occurred six months later. In three days, twenty one tracks were recorded, sixteen of which featured the steel guitar in a variety of roles. Two highlights of McAuliffe's contribution to the session are the melody for the instrumental blues, 'Little Girl, Go Ask You Mother'[361], which may be either a McAuliffe composition or arrangement, and the B section to the famous melody of 'San Antonio Rose'.[362] The steel guitar provides improvised solos on six tracks and is used extensively to adorn accompaniment with harmonics, glissandi and chordal vamps. While more refined, McAuliffe's approach was similar to that of the previous session. Hawaiian techniques and stylings were again deployed, but this time, in the absence of a Hawaiian context, their origins were obscured, especially when used in combination with other techniques or approaches. This session represents an early example of Hawaiian techniques, augmented by amplification and distanced from their origins, passing to western swing on en route to becoming staples of country music.

The context in which McAuliffe's B section of 'San Antonio Rose' is presented is crucial to the way in which it is perceived. (see Ex. 5.3 above) McAuliffe employs a Hawaiian technique to fashion a harmonised lyrical dyadic melody. However, the passage is readily heard as an extension of the legato melody of the A section, played by twin violins. Glissandi and vibrato add some semblance of vocal styling to the steel guitar passage that might suggest Hawaiian style. However, the flow of the melody is briefly interrupted by staccato articulation, disrupting an initial perception of vocal-like phrasing. Similarly, in the tune 'The Convict and the Rose', McAuliffe executes a dyadic solo that incorporates

[361] Bob Wills and His Texas Playboys, 'Little Girl, Go Ask Your Mother', (Vocalion 04625), 1938.
[362] Wills and Playboys, 'San Antonio Rose'.

harmonics.[363] By virtue of the melodic contour, phrasing and context, McAuliffe evokes harmonised mariachi trumpets rather than the Hawaiian style that provided him with the means to execute his ideas.

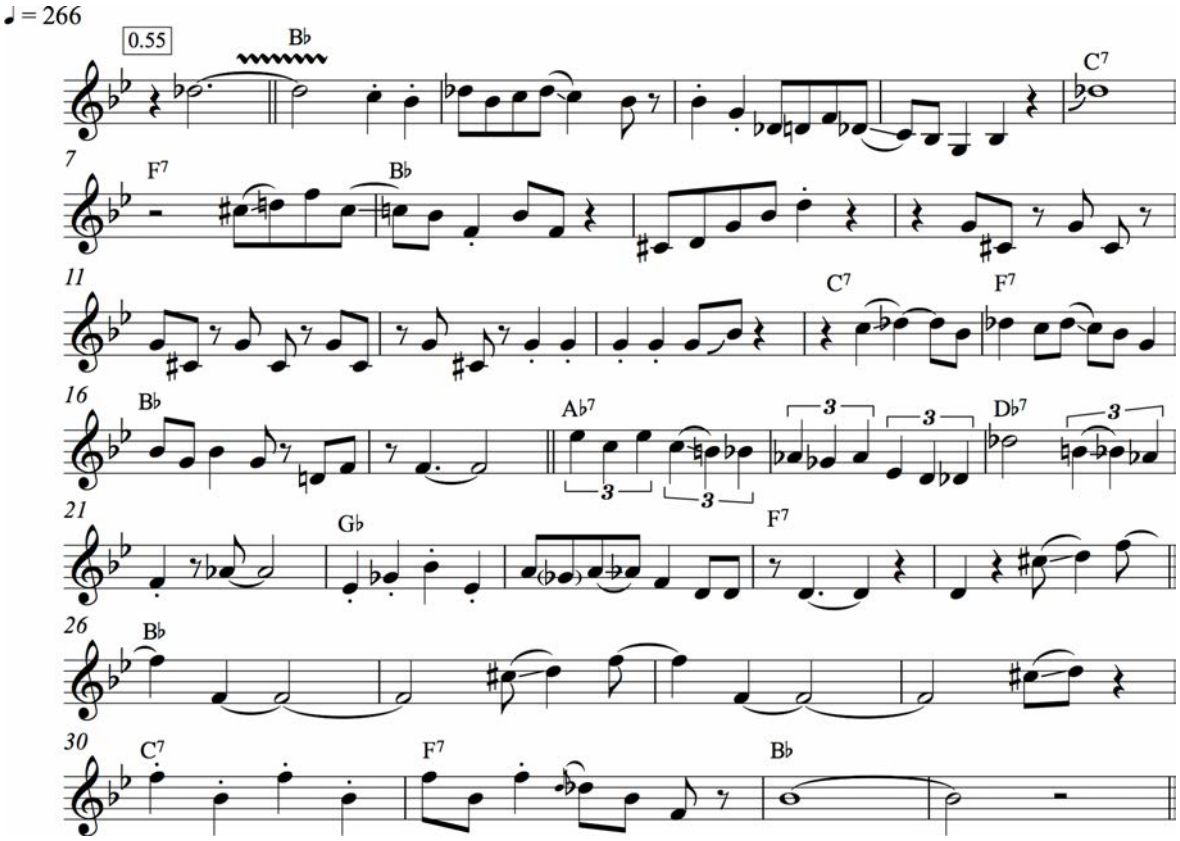
The manner in which McAuliffe fused styles can be seen in his approach to harmonics in 'Silver Bells'.[364] The instrumental track features closely harmonised fiddles, whose melodic phrases are answered by the chiming of steel guitar harmonics. McAuliffe's responses employ sustained notes to give a bell-like harmonic effect that he had used on previous sessions. Continuing the timbral theme and titular association, the following thirty two bar steel solo is constructed entirely from harmonics. However, the incorporation of glissandi to enhance the melody evokes the style of Hawaiian acoustic master, M. K. Moke, on his recording of 'Moana Chimes'.[365]

There are many other instances in the session where McAuliffe employs combinations of the distinctly Hawaiian techniques of dyadic melody, harmonics and glissandi, in non-Hawaiian contexts. 'I Wonder if You Feel the Way I Do' is a country flavoured number, in a 2/4 meter and at moderate tempo, that McAuliffe decorates relentlessly with long dyadic glissandi from which the picking attack has been removed with a volume pedal.[366] In the popular song 'Yearning'[367], harmonic glissandi are employed both as an accompaniment to the introduction and in an eight bar iteration of the melody. Yet another example can be seen in the dyadic glisses of the introduction to the sentimental song, 'The Waltz You Saved For Me'.[368]

While chord solos are surprisingly absent from the session, McAuliffe's hot style can be seen in monophonic improvisations on five tracks; 'Little Girl, Go Ask Your Mother'[369], 'Carolina in the Morning'[370], 'Prosperity Special'[371], 'You're OK'[372] and 'Liza Pull Down the Shades'.[373] In these solos, a refinement of approach can be detected in his colouration of jazz horn riffs with blues tonality, at times using Dunn's staccato approach. However, Dunn's influence was clearly receding, in favour of legato articulation. An example can be seen in the transcription of 'You're OK' in Ex. 5.9 below. At a challenging tempo, McAuliffe's propensity for the blues is apparent from the start, leaning on the minor third of the tonic in

[363] Bob Wills and His Texas Playboys, 'The Convict and the Rose', (Vocalion 04755), 1938.
[364] Bob Wills and His Texas Playboys, 'Silver Bells', (Vocalion 04934), 1938.
[365] , Johnny Noble's Hawaiians, 'Moana Chimes', (55012), 1928.
[366] Bob Wills and His Texas Playboys, 'I Wonder If You Feel the Way I Do', (Vocalion 04566), 1938.
[367] Bob Wills and His Texas Playboys, 'Yearning', (Vocalion 04934), 1938.
[368] Bob Wills and His Texas Playboys, 'The Waltz You Saved for Me', (Vocalion 04999), 1938.
[369] Wills and Playboys, 'Little Girl, Go Ask Your Mother'.
[370] Bob Wills and His Texas Playboys, 'Carolina in the Morning', (Vocalion 05079), 1938.
[371] Bob Wills and His Texas Playboys, 'Prosperity Special', (Vocalion 05228), 1938.
[372] Bob Wills and His Texas Playboys, 'You're Ok', (Vocalion 04839), 1938.
[373] Bob Wills and His Texas Playboys, 'Liza Pull Down the Shades', (Vocalion 04839), 1938.

the opening bars and continuing to flavour the solo with minor thirds and minor sevenths. The polyrhythm, that extends from bars nine to eleven, points to the jazz influence of horn players. Staccato articulation is used sparingly.



Ex. 5.9 Improvisation on 'You're OK', Leon McAuliffe (29/11/38, mx. DAL 634)

This session shows McAuliffe's facility to have been substantially enhanced by his wholesale incorporation of Hawaiian techniques and by his willingness to employ them in combination. An example can be seen in the track 'You're OK' where his participation begins in the introduction, with embellishment of the horn harmonisation with long harmonic glisses. He then provides a hot monophonic jazz improvisation, seen in Ex. 5.9 above. In the final vocal choruses, aided by the clarinet, he provides syncopated chord stabs in the manner of a horn section. By developing and honing his approach to these individual functions, McAuliffe continued to ensure his value to Wills. More broadly, this session can be seen as the point at which Hawaiian steel guitar techniques, fueled by the growing success of the Texas Playboys, develop a trajectory by which they became a country music staple. Regrettably, steel players across the country who emulated McAuliffe's approach would be largely unaware of its origins, a circumstance exacerbated by the innovator's reluctance to acknowledge his sources.

5.5.6 Sixth Session, April 1940

Fifteen months had elapsed before the Playboys again entered the recording studio and the ensuing session represented another pivot point in the development of McAuliffe's approach, one in which improvisation was greatly attenuated. On the first of two days, eleven tracks were recorded by the string band alone. On the following day, an augmented horn section was added to cut four sides. Included were two notable tracks, 'Big Beaver'[374] and 'New San Antonio Rose'[375], a vocal reworking of the tune recorded at the previous session in 1938.

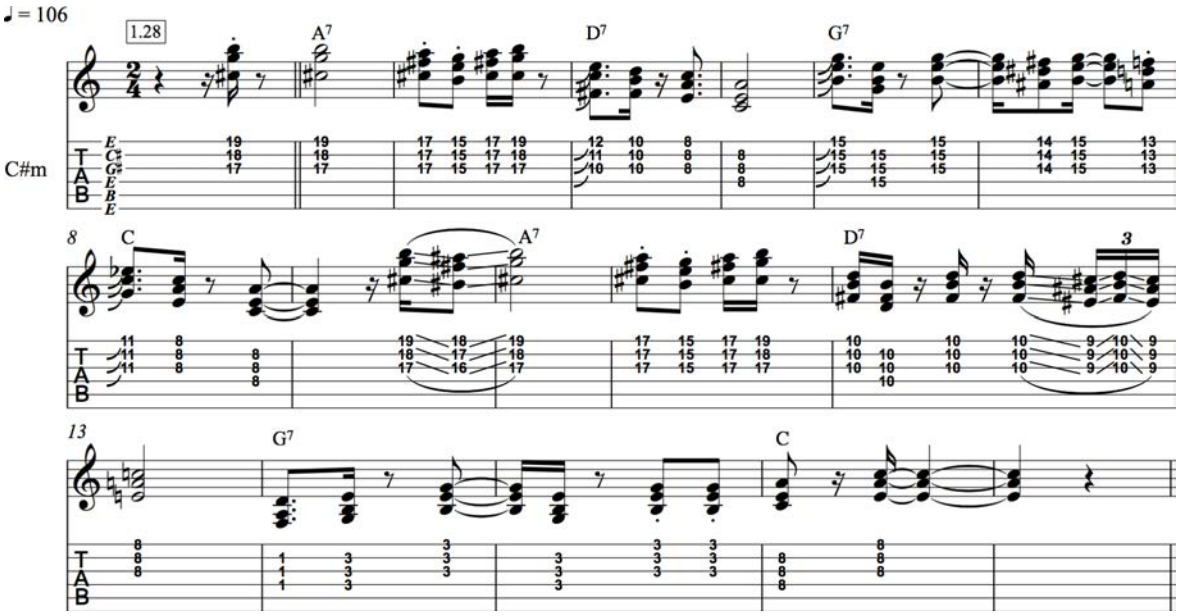
The steel guitar played a prominent role in all but one of the tracks recorded on the first day. McAuliffe provided accompaniment on a majority of tracks and performed nine solos. Highlights of the session were his composition 'Blue Bonnet Rag', that subsequently became a steel guitar standard, and a harmonised solo with Eldon Shamblin, which was a forerunner of a style that would become entrenched in western swing tradition.[376] McAuliffe continued to refine his montage of techniques, combining a Hawaiian facility with jazz styling. He resumed use of chord melody to augment his dyadic and monophonic approaches, after its absence in the previous session.

Continued refinement of technique is apparent in McAuliffe's accurate and robust application of harmonics and glissandi. Further incremental change is discernable in the continuing diminution of Dunn's influence on his solos, which were becoming increasingly dominated by legato articulation and steeped in blues and contemporary jazz phrasing. However, the most dramatic change in his approach is the absence of hot improvised solos. Many of McAuliffe's solos reiterate the melodies of the tunes, while others exhibit structures that suggest that they had been composed. His application of this approach across the session indicates that a new strategy was in place.

An example of a composed solo can be seen in McAuliffe's contribution of 'Lone Star Rag', as transcribed in Ex 5.10 below.[377] The symmetrical nature of phrasing suggests that composition, rather than improvisation, is in play. The sixteen bar form that McAuliffe must negotiate has a repeated eight bar harmonic frame in the key of C. A regular harmonic rhythm assigns two bars to each chord in a cyclical pattern of dominants, that begins on the submediant and ends on the tonic. McAuliffe's solo is, likewise, symmetrical consisting of four, four bar phrases in a pattern of A B A C. Repetition of his opening A phrase is a clear indication of composition or, at least, a strong measure of preplanning. Furthermore, the solo is unhurried, with an orderly melody contour that begins with a descent from the opening bar

[374] Bob Wills and His Texas Playboys, 'Big Beaver', (Okeh 05905), 1940.
[375] Bob Wills and His Texas Playboys, 'New San Antonio Rose', (OKeh 05694), 1940.
[376] Bob Wills and His Texas Playboys, 'Blue Bonnet Rag', (OKeh 05523), 1940.
[377] Bob Wills and His Texas Playboys, 'Lone Star Rag', (OKeh 05637), 1940.

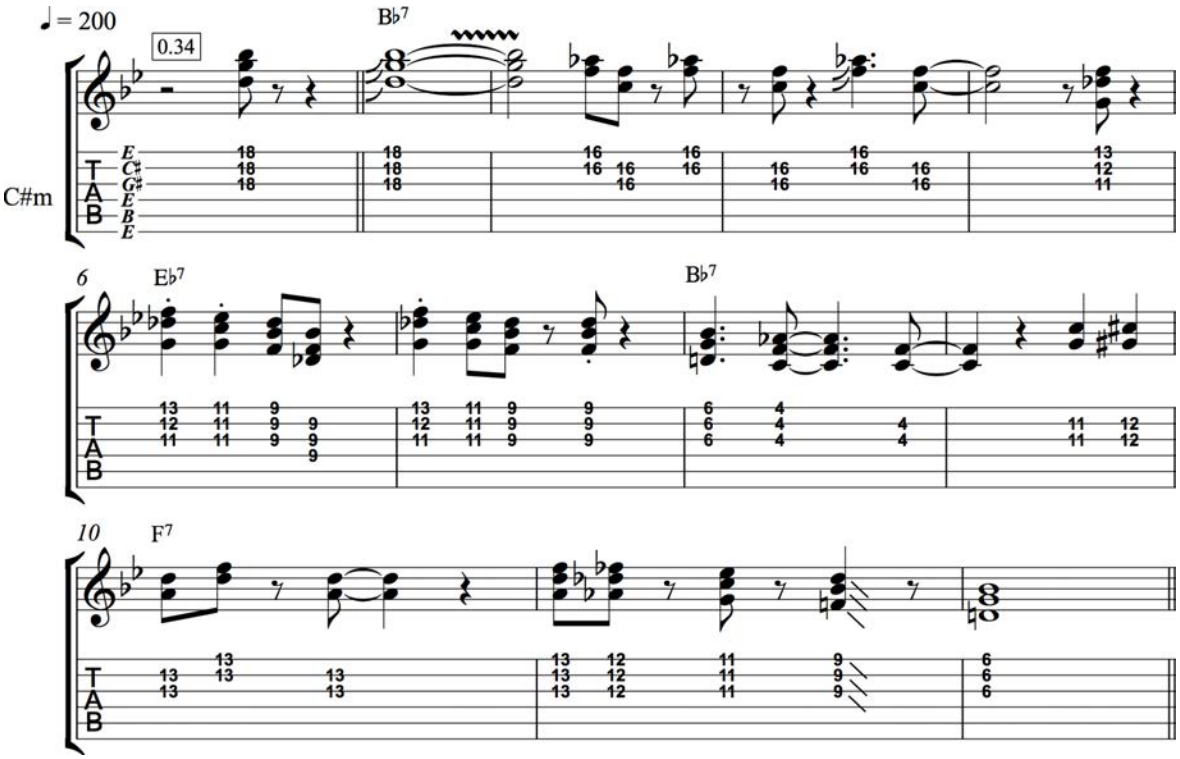
that continues to the close of the second phrase at bar nine. After the repetition of the first phrase, the last phrase rises until it terminates at the tonic.



Ex. 5.10 Improvisation of 'Lone Star Rag', Leon McAuliffe (15/4/40, mx. Dal 970-1)

McAuliffe's chord solo on the twelve bar blues, 'Corrine Corrina', transcribed in Ex. 5.11 below, may be his only improvisation in the session, although this is open to question.[378] The rhythm of first and last of the three phrases suggest spontaneity but the structure of the middle phrase is more organized. The apparent effortlessness of this solo may have arisen from the improvisational expertise that he showed on earlier chord solos such as 'Bleeding Hearted Blues' but it may also have benefited from preplanning.

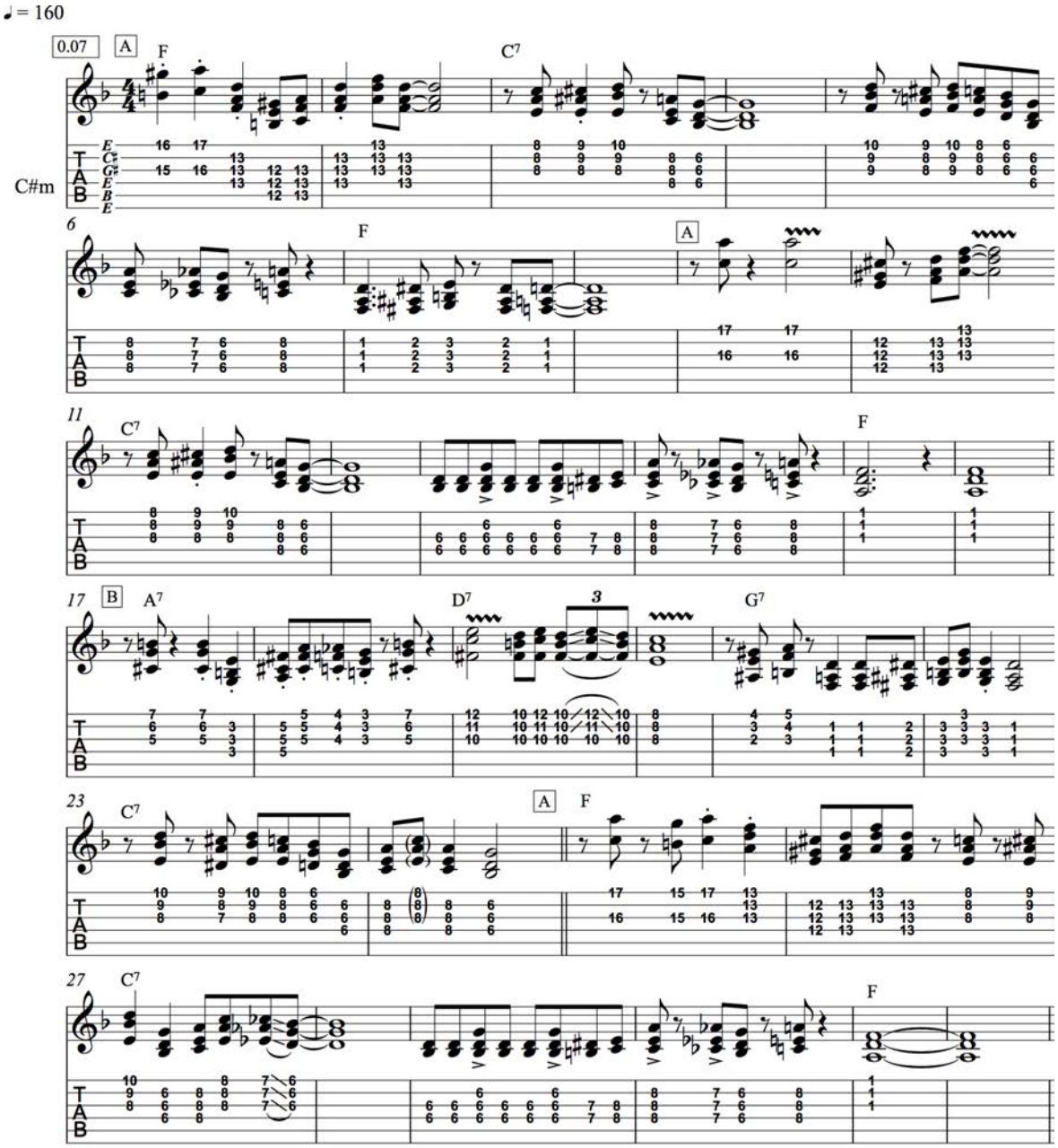
[378] Bob Wills and His Texas Playboys, 'Corrine Corrina', (OKeh 06530), 1940.



Ex. 5.11 Improvisation on 'Corrine Corrina', Leon McAuliffe (15/4/40, mx. DAL-974)

Whether his solos were composed or improvised, McAuliffe continued to refine his approach to chordal melody. In light of his covert admiration of Hawaiian stylists, a clue to the source of his inspiration is apparent when examination reveals the height to which Dick McIntire had elevated the craft by 1939. McIntire's composition, 'I'll Do the Hula for You', is transcribed in Ex. 5.12 below.[379] McIntire had been developing the style since the early 1930s and, by the mid 1930s, had adopted the C#m tuning and its close relative F#9. In developing his approach to swing, McIntire had minimized key traditional elements of harmonics, glissandi and vibrato, as a means to sharpen the syncopations on which the style depends. This adaptation can also be seen, to a lesser degree, in the swing recordings of Sol Ho'opi'i in 1938. As a result, McIntire's rhythms are articulated crisply and accentuated by seamless legato phrasing and strategic staccato articulation. Employing the same tuning, McAuliffe's rhythms are similarly sure footed. The identical voicings can be readily seen when comparing the tablature and notation of McAuliffe's solo in 'Lone Star Rag' (Ex. 5.10) to the B section of McIntire's tune that shares the same harmony.

[379] Dick McIntire and His Harmony Hawaiians, 'I'll Do the Hula for You', (Standard Radio Transcriptions Q-171), 1939.

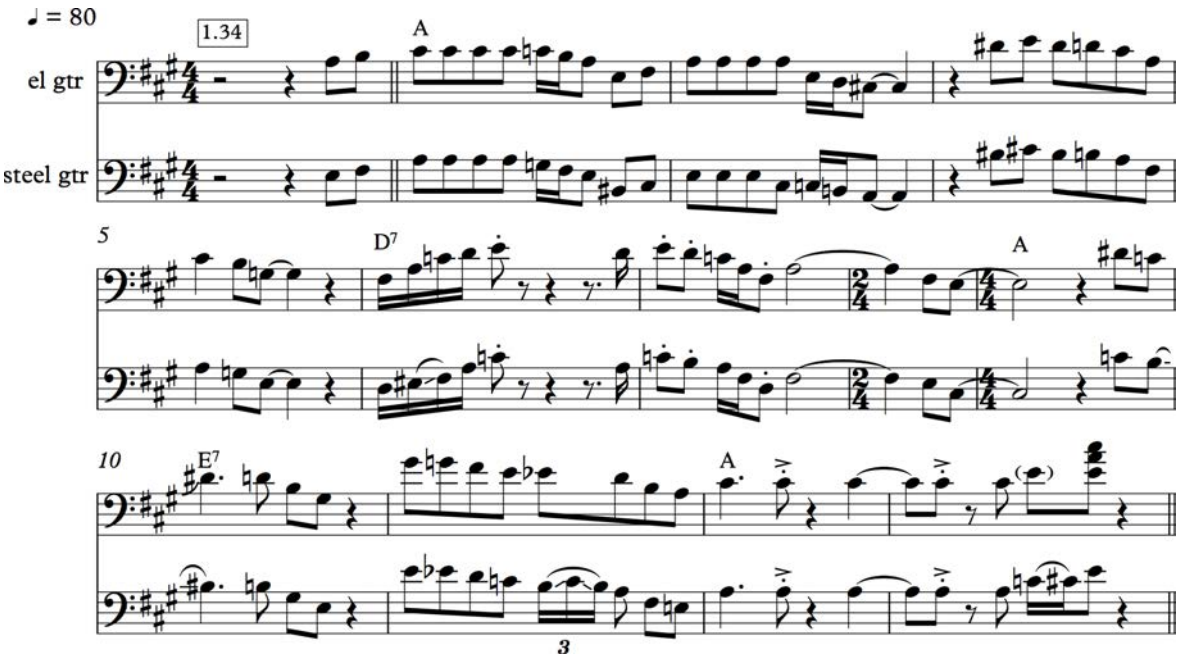


Ex. 5.12 Improvisation on 'I'll Do the Hula for You', Dick McIntire (c 1939, Standard Radio Transcription Q-171)

An arresting and enduring stylistic innovation of the session can be heard on the track 'Bob Wills Special', a twelve bar blues in A.[380] McAuliffe and Leon Shamblin perform a composed chorus of harmonised melody, transcribed in Ex. 5.13 below. The harmonisation is coordinated with almost perfect rhythmic precision and mirrored blues inflection, as can be seen in the opening two bars. The phrasing, syncopation and tonality indicate jazz styling and the unusual phrasing of bars six and seven exudes a faint essence of the bebop era to come. The texture and style of this chorus stands out on the session. It clearly pleased the leader because it was repeated at subsequent sessions and remained a feature of Wills' repertoire

[380] Bob Wills and His Texas Playboys, 'Bob Wills Special', (OKeh 05694), 1940.

even after McAuliffe had been replaced. Widely known as 'twin guitars', it became a strategy used by Spanish and steel guitar teams throughout western swing, culminating in the spectacular recordings of Speedy West and Jimmy Bryant in the early 1950s.



Ex. 5.13 Melody harmonisation on 'Bob Wills Special', Leon McAuliffe and Eldon Shamblin (16/4/40, mx. DAL 977-2)

5.5.7 Seventh Session, January 1941, Fort Worth

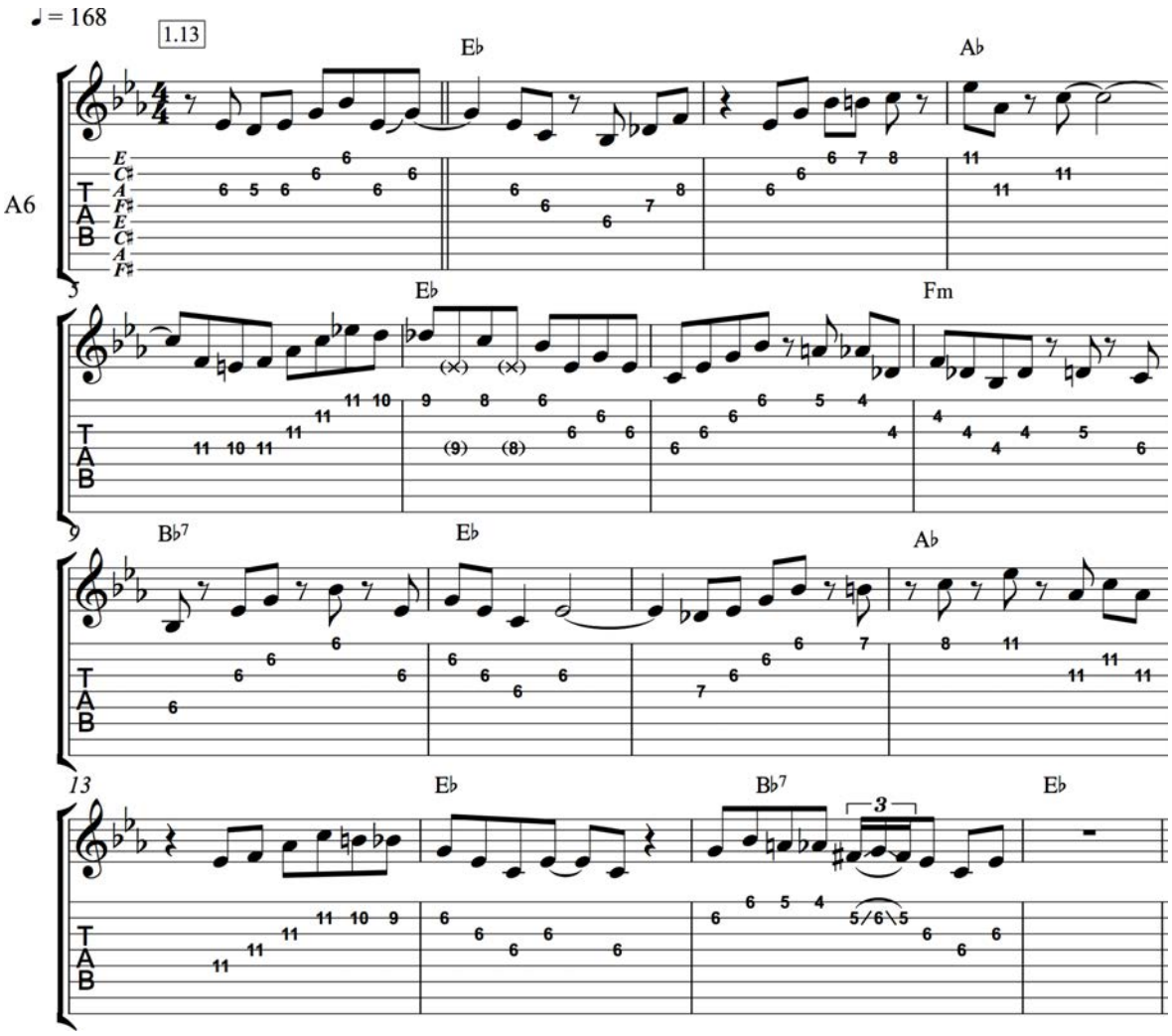
In September 1940, with his popularity growing nationally, Bob Wills took five band members, including McAuliffe and Shamblin, to Hollywood, California, to appear with him in a short movie, 'Take Me Back To Oklahoma'. It was to be the first of five films made before McAuliffe left the group in December 1942. The visit only extended for a month but McAuliffe estimated that, over the next two year period, he spent six months with Wills in California.[381] On subsequent trips, Wills took the majority of the band and supplemented the horn section with expert Californian based players. During this period, the band maintained a schedule of live performances that included three huge dance venues, located within a few miles of one another at seaside amusement parks in Venice, Ocean Park and Santa Monica. McAuliffe claimed that on one occasion the Playboys outdrew the famed Tommy Dorsey Orchestra, that was performing near by, with an audience of eight thousand, compared to Dorsey's eight hundred.[382]

[381] McAuliffe, 'Interview with Cecil Whaley', 12.
[382] McAuliffe, 'Interview with Cecil Whaley', 12.

On return from Hollywood, McAuliffe demonstrated significant advances in technique and style in a recording session that was conducted in Saginaw, Texas. The same country-jazz polarity of the previous session was apparent. The first of three days was devoted to jazz arrangements, utilizing a large horn section, while the following days employed the string band, with wind instruments, a pair of clarinets, utilised on just two tracks.

McAuliffe's steel was used on two of the four tracks recorded on the first day. He performed one solo, on 'New Worried Mind', which is transcribed in Ex. 5.14 below.[383] This remarkable solo marks the completion of a total transformation in style, from one initially dominated by jazz influences of 1920s, to a smooth confident legato style that had the hallmarks of the swing horn players who surrounded him. With unhurried syncopations and extended phrases, McAuliffe's solo is perfectly adapted for the contemporary big band style in which it is placed. A subtle but crucial enhancement of McAuliffe's melodic agility was provided by a new tuning. The tuning, A6, is a Hawaiian invention of the late 1930s that McAuliffe may have encountered first hand in Los Angeles, a crucible of Hawaiian steel guitar style and the base for many prominent players such as the McIntire brothers. It seems more than coincidental that this cutting edge tuning appeared on McAuliffe's instrument soon after his West Coast visit. The intervals that comprise A6 do not exceed a major third, a property not shared by his earlier tunings. Thus the new tuning reduced the requirement to move the bar in the execution of melodies. This allowed McAuliffe to extend the range of his phrases at each neck position before the harmony demanded that he move on. Additionally, reduced bar movement significantly assisted the legato articulation that he was pursuing.

[383] Bob Wills and His Texas Playboys, 'New Worried Mind', (OKeh 06101), 1941.



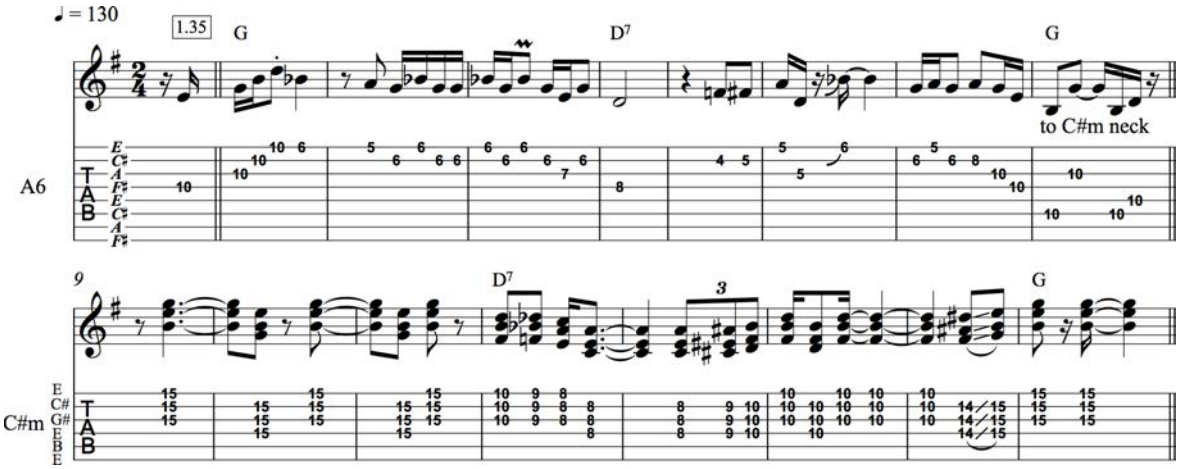
Ex. 5.14 Improvisation on 'New Worried Mind', Leon McAuliffe (24/2/41, mx. DAL 1170)

The steel guitar was employed more extensively on the final two days of the session, with solos or accompaniment on four of the five tunes recorded. One of the tunes was the influential 'Twin Guitar Special', with an introduction and solo of harmonised melody by McAuliffe and Shamblin.[384] While the composed harmonised passages are primary features of the recording, the steel guitar alone provides the main chordal melody. In an interview, Shamblin stated that the compositional process consisted of a joint contribution to the melody, with subsequent harmonisation by himself.[385]

A significant stage of McAuliffe's development is documented on the track 'Take Me Back to Tulsa', when he employs two tunings in a single continuous solo, moving rapidly between the two necks of his guitar, as can be seen transcribed below in Ex. 5.15.[386] The guitar was a twin-necked eight-string Rickenbacker, recently received from his colleague,

[384] Bob Wills and His Texas Playboys, 'Twin Guitar Special', (OKeh 06327), 1941.
[385] Richard Lieberson, 'Western Swing Lives on in Eldon Shamblin', *Guitar Player* (1975).
[386] Bob Wills and His Texas Playboys, 'Take Me Back to Tulsa', (OKeh 06101), 1941.

Noel Boggs. The instrument's eight string configuration was utilised earlier in the session for the A6 tuning. In the solo below, McAuliffe uses the A6 neck to create a monophonic line in the first eight bars. To complete the solo, he switches to the second neck, which is tuned to C# minor, and plays a chord solo executed entirely with a perpendicular bar. The opening to the chord solo lacks precision, suggesting that he had not yet mastered the new technique.



Ex. 5.15 Improvisation on 'Take Me Back to Tulsa', Leon McAuliffe (25/2/41, mx. DAL 1180)

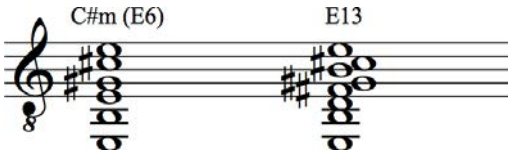
5.5.8 Final Sessions, 1941 and 1942 Hollywood

McAuliffe's two final recording sessions with Wills were conducted in Hollywood while the Texas Playboys were engaged in further movie appearances. Steel guitar was well represented on the sessions, appearing on nine of eleven tracks released from a session in July 1941, and on seven of eleven tracks released from a session in July 1942.

One salient addition to McAuliffe's otherwise mature style is the tuning employed in two consecutive tracks recorded on 14 July 1942; 'We Might as Well Forget It'[387] and 'Home in San Antone'.[388] On the second neck of his eight stringed Rickenbacker, McAuliffe had installed an E13 tuning that he then employed for chord melody, abandoning the C# minor tuning that had served him well for years. Like his A6 tuning, the origin of the E13 tuning may have been the Hawaiian steel scene in California. Alternatively, it could have resulted from a suggestion by Shamblin, as was advanced by McAuliffe in an interview in 1969.[389] E13 is a refinement of C# minor and was a logical progression that became possible only when McAuliffe's six string configuration was replaced by eight strings. As shown in Ex. 5.16 below, C# minor tuning sits within E13. With a forward slant, the same characteristic dominant ninth voicing of the top three strings of C# minor is available on E13. However, the

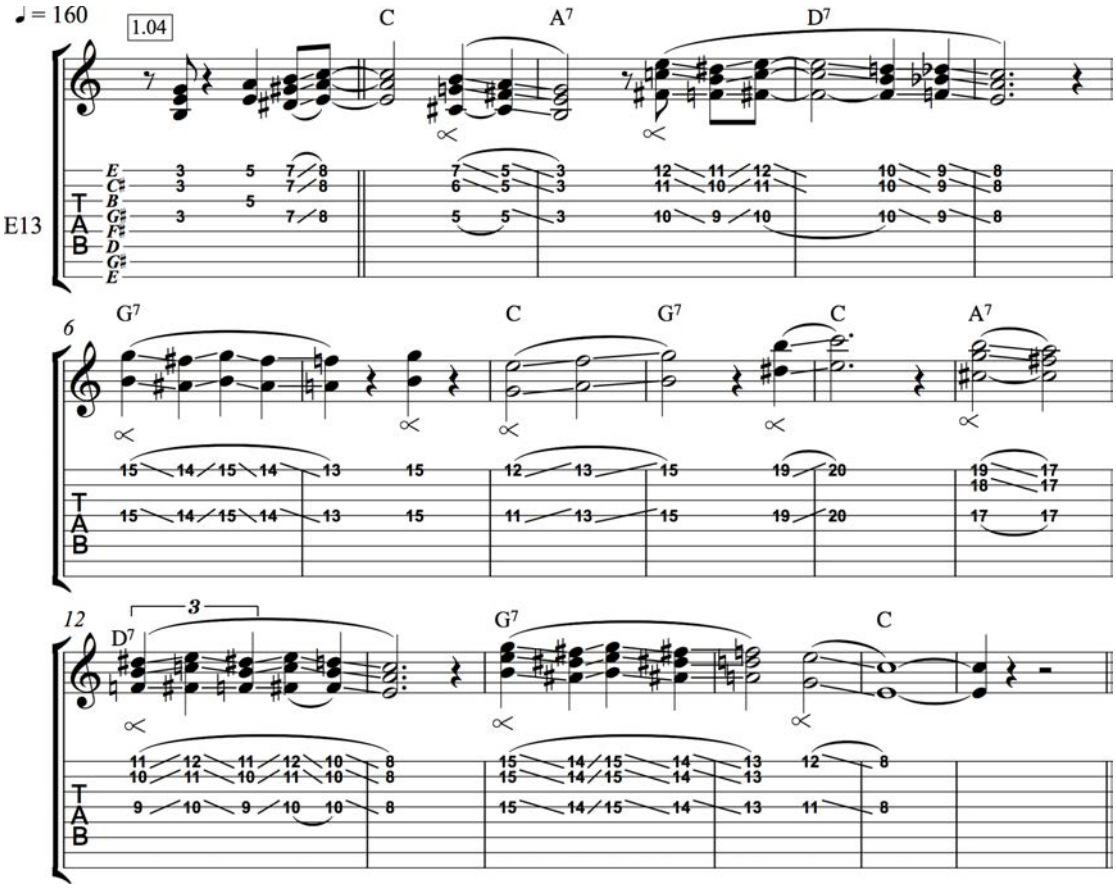
[387] Bob Wills and His Texas Playboys, 'We Might as Well Forget It', (OKeh 6722), 1942.
[388] Bob Wills and His Texas Playboys, 'Home in San Antone', (OKeh 6710), 1942.
[389] McAuliffe, 'Interview with Dave Stricklin', 57.

voicing is slightly more difficult to execute on E13, requiring a picked ‘grip’, with a strum impossible due to the intervening third string. Additionally, the intonation of the middle note of the voicing is slightly inaccurate. This results from the intervening third string disrupting the symmetry that accompanied the same voicing on three adjacent strings of C# minor. Nevertheless, characteristic dominant ninth voicings and line progressions of C# minor were still available to a player using E13.



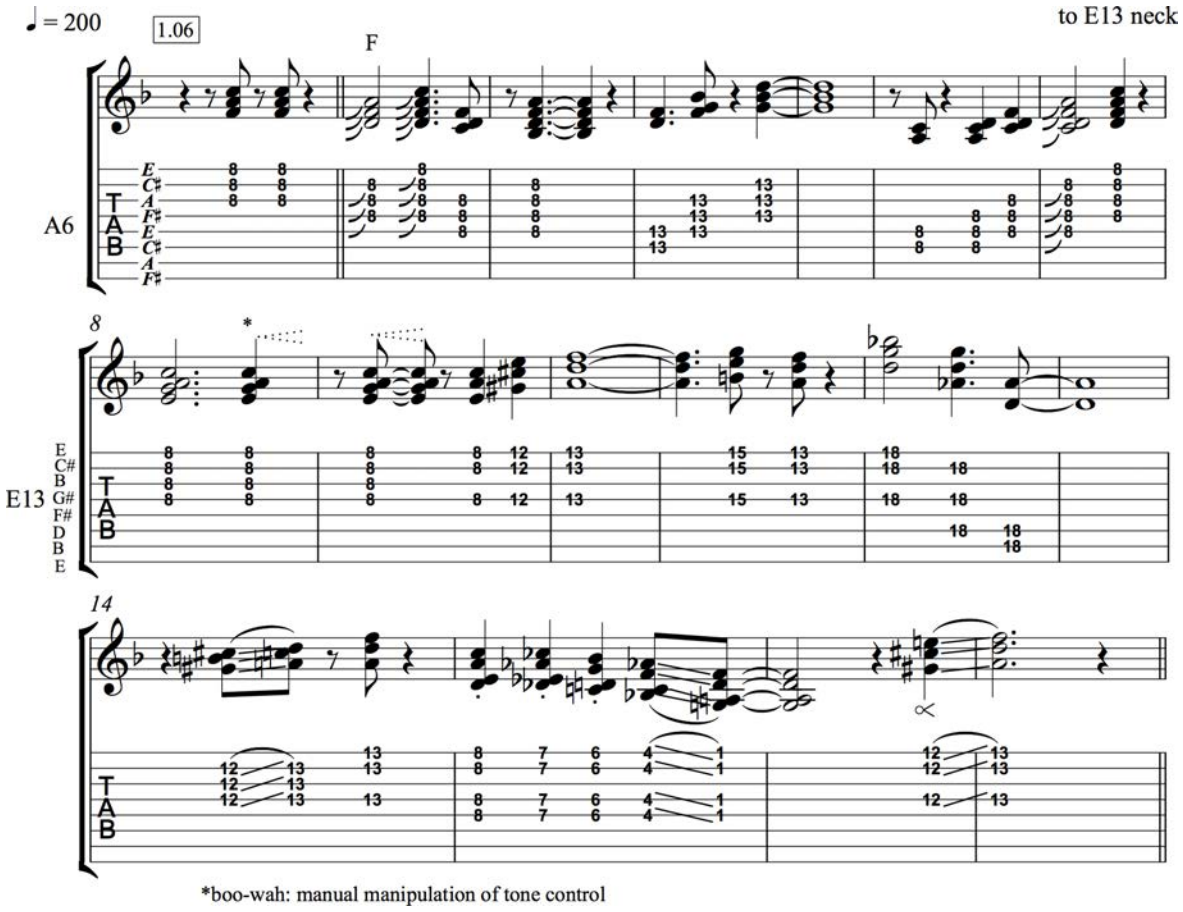
Ex. 5.16 C#m and E13 tunings

An example of how C# minor chord clichés continued to be used by McAuliffe on his new E13 tuning can be seen in his solo on ‘We Might as Well Forget It’, shown in Ex 5.17 below. The major six and dominant ninth voicings of C# minor appear in characteristic bar movements, but are plucked rather than strummed. In this example, the plucked attacks are removed with a volume pedal throughout the solo and, relying on sustain from amplification, chords glide from voicing to voicing in an exaggeration of Hawaiian glissandi technique.



Ex. 5.17 Improvisation on ‘We Might As Well Forget It’, Leon McAuliffe (14/7/42, mx. H 834-1)

McAuliffe's ability to refine and extend techniques is on display on another track from the session. In 1941, the 'neck hopping' technique that he used on 'Take Me Back To Tulsa' (Ex. 5.15) was employed to provide contrasting harmony to two adjacent phrases. In 1942, a chord solo on 'Home in San Antone', transcribed in Ex. 5.18 below, demonstrates that he had perfected the technique to such a degree that he was able to move seamlessly and imperceptibly between necks, mid phrase. After an opening four bar phrase on his A6 neck, McAuliffe begins a consequent phrase on the same neck in bar six. During this phrase, at bar eight, he moves to the E13 neck. Close listening reveals a miniscule imbalance in the initial volume of the E13 neck, which is redressed instantaneously.



Ex. 5.18 Improvisation on 'Home in San Antone', Leon McAuliffe (14/7/42, mx. H 836)

In seven years with Wills, McAuliffe's style had continued to evolve. From his first utterances in September 1935, McAuliffe's recordings demonstrate an ability to absorb and incorporate new influences in a process of constant development. The techniques that he accumulated helped him to fill multiple roles and appear equally at home at both extremes of Wills' country-jazz synthesis. As a soloist, McAuliffe's approach had blossomed. His initial style, that combined the influence of Bob Dunn and an affinity for the blues, grew into a multifaceted approach that had developed in step with the increasingly diverse repertoire of the Playboys. He freely employed the three established modes of melodic production, either

individually or in combination. With an ear on contemporary music trends, he gradually abandoned his mentor Dunn's staccato articulation, in favour of a predominantly legato approach. He fostered a confident dyadic style and developed syncopated chord melody to a pinnacle. Curiously, towards the end of his tenure with Wills, he shunned hot improvisation in favour of safe composed melodies. However, his 1942 solo on 'Liberty' shows that he retained the skill, nevertheless.[390]

A desire for improvement is evident in McAuliffe's interest in tunings and his rapid adoption of new Hawaiian developments, firstly in the form of C# minor and then A6. Similarly, his use of two alternatively tuned instruments showed a resolve to widen his harmonic horizons and he was subsequently in the vanguard of players to adopt multiple necked instruments. This progression culminated in his refinement of a technique of changing from neck to neck within a solo and he was possibly the first player to use the method in recording.

McAuliffe's incorporation of new techniques afforded by amplification was also very influential. Beyond the benefits to sustain and production of harmonics, amplification offered the opportunity to use mechanical means to process sound electronically. His use of a foot pedal to control volume became a staple of steel guitar performance in western swing and country music more broadly. His manipulation of tone control to dynamically alter timbre also became widespread in western swing.[391]

As an accompanist, McAuliffe blossomed during his tenure with the Playboys. From a tentative beginning in 1935, his use of harmonics became more and more prevalent and, in 1938 he began to embellish them with glissandi in the Hawaiian manner. Unequivocally, through Wills' popularity, McAuliffe cemented these techniques in western swing, which in turn influenced its wide scale adoption throughout country music. The steel guitar's presence in the Playboys recordings also grew by virtue of improvised countermelodies and fills as McAuliffe's stature grew within the band. Furthermore, McAuliffe pioneered the use of the steel guitar as a chordal identity to be used as a foil to the horn section of Will's unique ensemble.

McAuliffe left the Playboys to join the military not long after the United States entered World War Two, in late 1942. He served as a flying instructor and, at the end of the war, resumed a music career. In an initial endeavor, he formed a big band to perform mainstream popular music but it was a financial failure. Subsequently he renamed his band the Cimarron Boys and returned western swing in 1946. He had a hit with his composition

[390] Bob Wills and His Texas Playboys, 'Liberty', (Columbia 37926), 1942

[391] Examples of both can be seen notated in Ex. 5.18 above.

‘Panhandle Rag’ in 1949. While this song became a standard of steel guitar repertoire, he had little further influence on the development of the instrument, other than as an early adopter of three and then four necked instruments. After western swing declined, he owned and operated a radio station in Oklahoma. He was lured back to a western swing revival in 1974, participating in Bob Wills’ last recording session. McAuliffe subsequently led the reformed Texas Playboys for a number of years and eventually died in 1988.

In blending Hawaiian, blues and jazz influences, McAuliffe had forged a style that became a model for all those that followed and his standard of performance set a high benchmark. The versatility that he displayed while a member of Wills’ influential band cemented the instrument’s place in western swing. In his hands, steel guitar style had evolved into a form that remained largely unchanged until the genre withered in the 1950s. Although two giants of the instrument, Noel Boggs and Joaquin Murphey would, in separate ways, refine the craft further, the bedrock had been firmly established through the pioneering efforts of Dunn and refined to an enduring form by McAuliffe. Notably, while much of the evolution of western swing steel guitar style occurred in the Southwest, crucial Hawaiian elements of the style had been incorporated without the physical presence of the originators but, rather, had been assimilated from recordings and radio broadcasts, by musicians with keen ears and a pioneering spirit. Chapter 7 will examine the significant contribution of Noel Boggs to the development of the style established in the Southwest as he rode a wave of popularity in the golden age of western swing on the West Coast.

Chapter 6: Steel Guitar Rag

'Steel Guitar Rag' is the most recognised constituent of the steel guitar repertoire and one of the most significant compositions to originate in western swing. There have been numerous recordings of the tune since its first appearance in 1936 and it is become a standard of the country music repertoire. The origins of the tune are enmeshed in a controversy that will be examined in this chapter. Ostensibly, it was composed by a young Leon McAuliffe on an acoustic six-string instrument. A key contributor to the broad popularity of tune is its relative simplicity. The melody dwells on primary triads and can be interpreted with ease on most common tunings. As a result, it is a perennial favorite of amateur players, as well as providing a staple for professional repertoires.

Bob Wills and his Texas Playboys first recorded the tune on 26 September 1936 in Chicago, during the band's second recording session, with McAuliffe on steel guitar. Wills had proposed to record the tune at the first session a year earlier in Dallas, but the producer, Art Satherly, had vetoed the suggestion. Ostensibly, Satherly's reasoning was that the recording label, Columbia, employed Roy Smeck to cut any steel guitar solos for the label and that performances by others were not needed.[392] To find the normally forceful Wills thwarted in this way is unusual and it may be a measure of his insecurity at an early stage of his career. However, the ambivalent attitude of the record company may be an indication that, in the formative stages of western swing, the position of the steel guitar was tenuous. The subsequent popularity of 'Steel Guitar Rag' was invaluable in raising the profile of the instrument and thus helping to entrench its position in western swing.

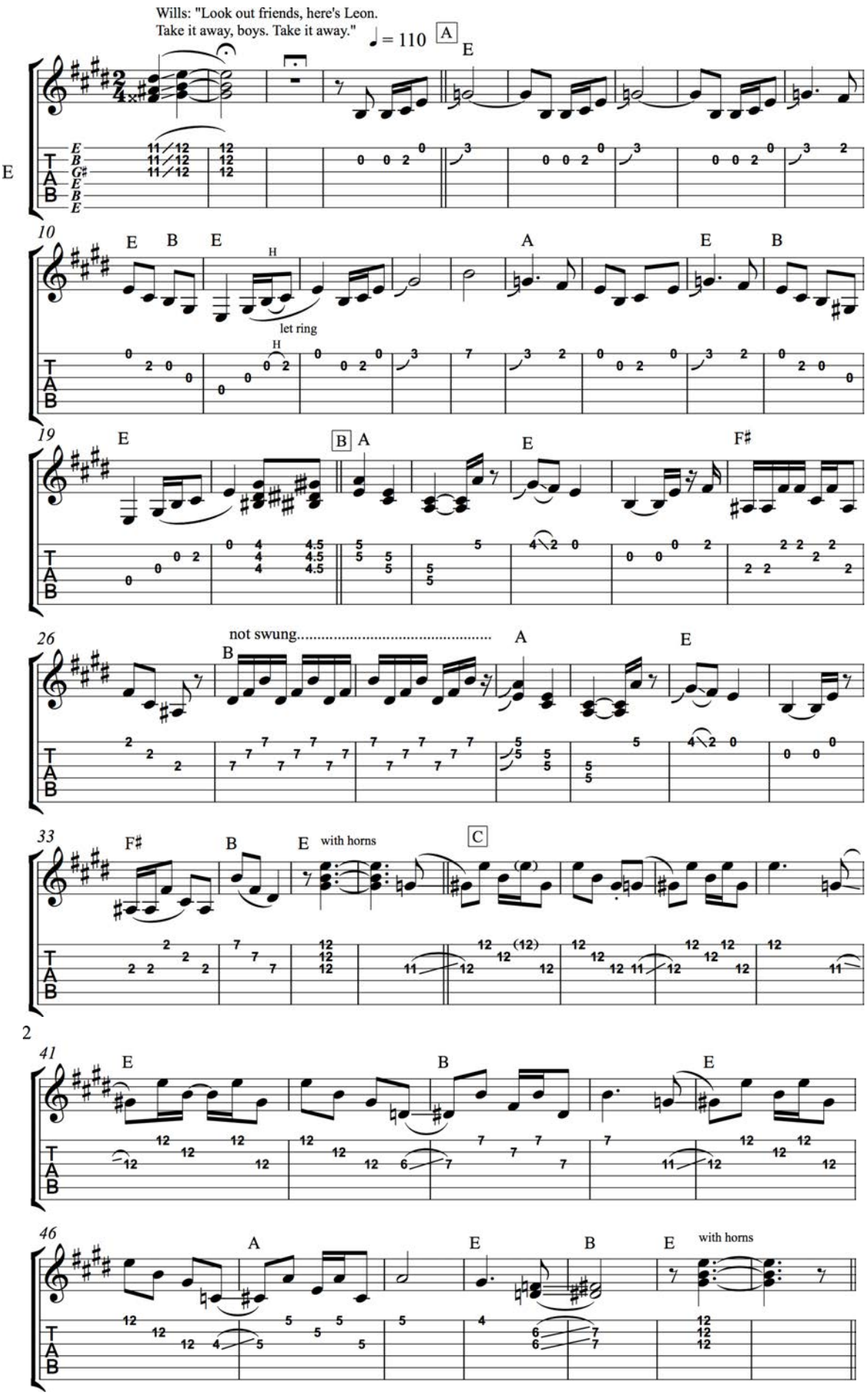
Leon McAuliffe's reputation as a player and composer was greatly enhanced by the success of 'Steel Guitar Rag', which he claimed to have written at the age of fourteen.[393] The composition played a pivotal role in two early milestones of McAuliffe's career. Firstly, he used the tune to audition for a position with the renowned Light Crust Doughboys at Fort Worth in 1933. From an interview in 1969, it can be inferred that, because of the tune's dissimilarity to Hawaiian repertoire, McAuliffe chose it to demonstrate the versatility of his instrument.[394] Subsequently, it became the first tune that he played on radio with the Doughboys. Later, he again used it as an audition piece for Bob Wills in early 1935 and it became the first piece he played on Wills' radio program.[395]

[392] Leon McAuliffe, 'Interview with Laurie Mills', ed. Laurie Mills (Canadian Broadcasting), c1979.
[393] McAuliffe, 'Leon Mcauliffe: The Story of a Steel Guitar Pioneer'.
[394] McAuliffe, 'Interview with Cecil Whaley', 6.
[395] McAuliffe, 'Interview with Cecil Whaley', 7-8.

Wills' full ensemble contributed to the 1936 recording. McAuliffe's melody was interspersed with improvised solos from piano and saxophone, and accompanied throughout by a rhythm section of guitars, piano, double bass and drums. A horn section of trumpet and saxophones added a solitary sustained chord at the end of selected sections. The form of McAuliffe's composition comprised three distinct sixteen bar sections, A, B and C. The two and a half minute arrangement began with McAuliffe's forty eight bar head. Next followed a piano solo on the C section, a repeat of McAuliffe's A section, a saxophone solo again on the C section, with a reiteration of the complete melody to finish. The transcription in Ex. 6.1 below represents the first full iteration of the head, captured on the second of two takes of the arrangement recorded that day.[396]

The piece is in the key of E major with secondary dominants in the B section lending contrast to the diatonic triads of sections A and C. The steel guitar melody is primarily monophonic but dyads add further contrast to the B section. A salient melodic feature of the A section is a repeated motif that ends with a rising inflection to the minor third of the tonic, G natural. Reiteration of this blues-flavoured gesture amplifies a dissonance that is eventually resolved in bar thirteen, when a similar gliss passes through the minor third to reach the major third. However, it is the only overtly blues trait in the composition. Curiously, subsequent recordings of the tune by other performers generally avoid the minor third, substituting the major third within the phrase. Such substitution significantly changes the nature of the McAuliffe's melody by both removing overt blues styling, and by diminishing the contrast between sections that the composer had clearly intended.

[396] Wills and Playboys, 'Steel Guitar Rag'.



Ex. 6.1 Melody of 'Steel Guitar Rag', second take, Leon McAuliffe (29/9/36, mx. C 1479)

The second take, which was released by OKeh, was necessitated by two obvious flaws in the first. In the arrangement, the horn section's only contribution is a long chord with a syncopated entry at the end of each B and C section. (See bars thirty four and fifty one in Ex. 6.1 above.) In the course of the first take, the horns miss the entry required after the sax solo, by a bar. An extra bar from the rhythm section on the tonic chord is necessitated. The resultant distortion of the form unsettles McAuliffe who misses his following entry. Furthermore, in the confusion, he omits the B section from the concluding head. Nevertheless, the first take is valuable in that it allows a comparison between the two takes. Close examination reveals that, beyond the obvious flaws, the performances are almost identical, with just a few minor variations in rhythm, confirming the detail of McAuliffe's unnotated melody.

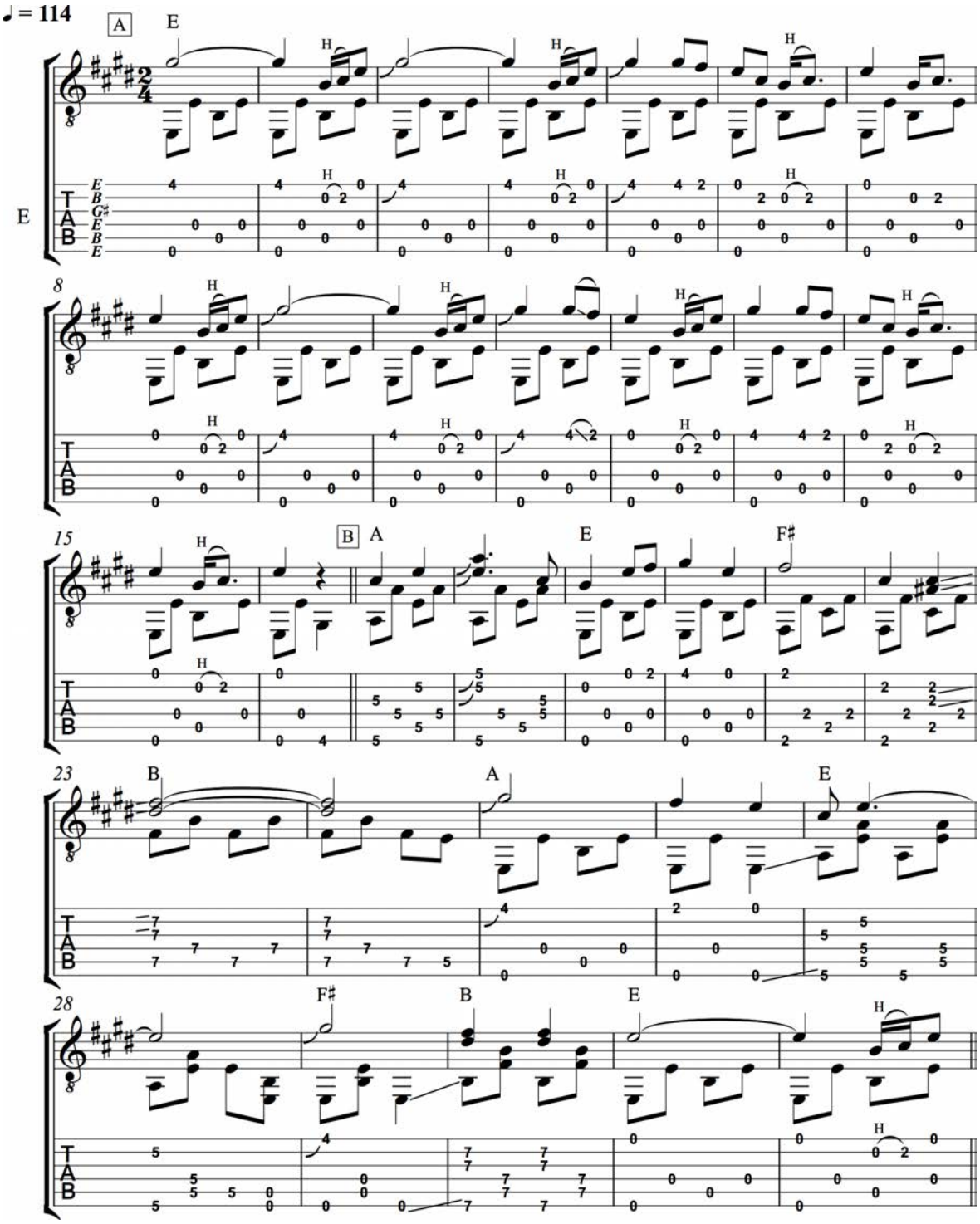
McAuliffe's claim to have composed 'Steel Guitar Rag' is contentious and has been challenged by various commentators, who cite the preexistence of a similar tune, entitled 'Guitar Rag'.[397] At least three versions of 'Guitar Rag' were recorded and commercially released before either the first recording of 'Steel Guitar Rag" or the first occasion at which McAuliffe used the tune to audition for the Light Crust Doughboys in 1933. The tune's composer, Sylvester Weaver, recorded two versions, the first on 6 April 1923[398], and the second on 13 April 1927.[399] These were followed by a version recorded on 4 December 1930 by a duo comprising guitarist, Roy Harvey and steel player, Jess Johnson.[400]

Sylvester Weaver (25 July 1896 – 4 April 1960) was an obscure African-American performer active in the 1920s. Little is known about his career before his 1923 recording, but it is believed to have ended around 1928 with his retirement from performance.[401] However, he holds an esteemed position in American vernacular music history as being the first blues guitarist on record. He was first recorded on 24 October 1923, when he provided accompaniment to vocalist Sara Martin on 'Longing for Daddy Blues'.[402] Nine days later he recorded his composition 'Guitar Rag', a partial transcription of which appears below in Ex. 6.2.

Weaver's 'Guitar Rag' is a solo piece that utilises finger picking to establish a homophonic texture of melody, with a bass accompaniment of alternating root and perfect fifths. It employs a thirty two bar form in two equal sections. The form is repeated five times

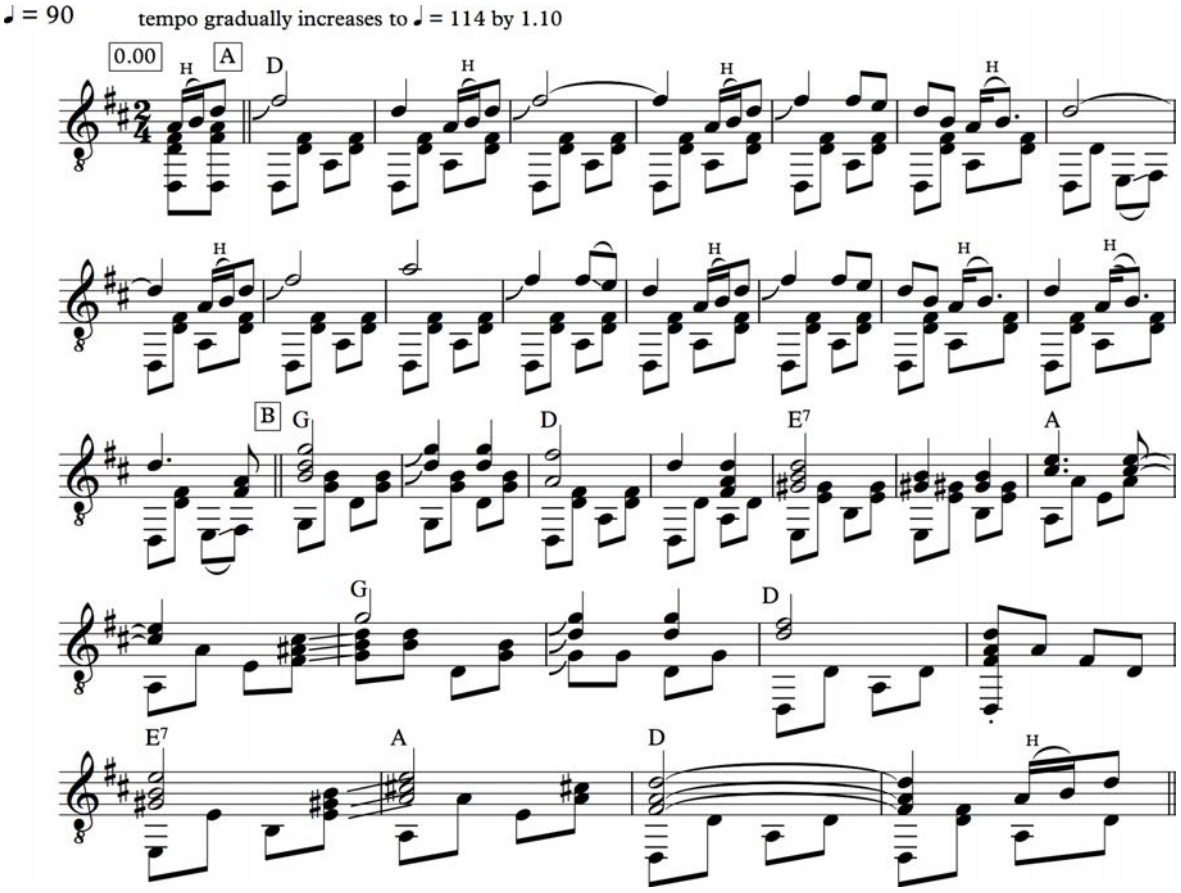
[397] Dick. Spottswood, 'Guitarcheology: The First Guitars on Cylinders & 78s ', *Guitar Player* 30/5 (1996)., Jas Obrecht, *Early Blues: The First Stars of Blues Guitar* (Minneapolis: University of Minnesota Press, 2015), 9-10., Troutman, *Kika Kila: How the Hawaiian Steel Guitar Changed the Sound of Modern Music*, 181.
[398] Sylvester Weaver, 'Guitar Rag', (OKeh 8109B), 1923.
[399] Sylvester Weaver, 'Guitar Rag', (OKeh 8480), 1927.
[400] Roy and Jess Johnson Harvey, 'Guitar Rag', (Champion 17350-B), 1930.
[401] Jim O'Neal, 'Guitar Blues: Sylvester Weaver', *Living Blues* 52 (1982).
[402] Obrecht, *Early Blues: The First Stars of Blues Guitar*, 9.

in the three minute duration of the recording, with little variation other than a gradual increase in tempo from 114 bpm to reach 120 bpm. The A section consists of an eight bar phrase on the tonic chord that is repeated with sight variation. A contrasting B section consists of two distinct eight bar phrases on harmony that adds a secondary dominant to the primary triads of E major.



Ex. 6.2 Opening A and B sections, 'Guitar Rag', Sylvester Weaver (2/11/23, mx. 71996B)

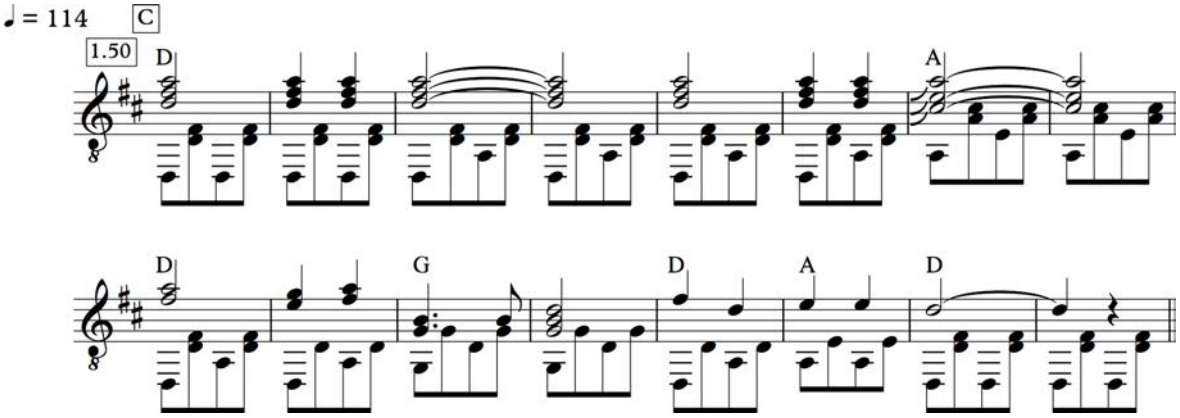
In the second version of his composition, recorded in 1927, Weaver refines and expands his earlier melody. The second solo arrangement begins a little slower than the first, although a similar gradual increase in tempo is evident. This time, Weaver's instrument is tuned to D major, which shares the intervallic configuration of the E tuning used previously. Thus, the second version, in a new the key of D major, is approached with similar technique. A transcription of the opening thirty two bars appears below in Ex. 6.3.



Ex. 6.3 Opening A and B sections 'Guitar Rag', Sylvester Weaver (13/4/27, mx. 80727-A)

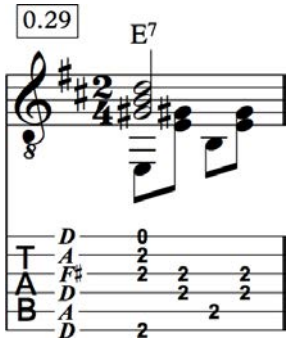
In the 1927 recording, Weaver made two significant modifications to the original composition. Firstly, the repetition of the first eight bars of the melody of the A section is replaced with a new consequent phrase that descends an octave between bars ten and fourteen and ends by rising to the tonic. The second substantial modification, the inclusion of an extra 16 bar section, renders the form of Weaver's 1927 version significantly different from the 1923 recording. The arrangement of the 1927 version begins in a similar manner to the first, with three iterations of the A and B sections, but then a new contrasting sixteen bar C section is inserted, incorporating a simple chord melody over a fresh harmonic changes. (See Ex. 6.4 below.) Then follows a sixteen bar repetition of the new harmony on which the melody of the

A section is superimposed. The track concludes with a repetition of the initial A section and a B section with variation to the original melody.



Ex. 6.4 C section, 'Guitar Rag', Sylvester Weaver (13/4/27, mx. 80727-A)

Slide technique is intrinsic to Weaver's performance of 'Guitar Rag'. Advertising material from the recording company, OKeh, indicates that he used a knife to fret the guitar.[403] Whether it was the knife's blade or handle is not specified but, to apply a straight edge to the strings, the instrument can be held in two basic positions, either against the body in the standard manner of Spanish guitar playing or on the lap, 'Hawaiian style'. With the guitar in standard position, the knife or bar can be applied from above, with the elbow raised, or from below in 'bottle neck style'. Three elements of the Weaver's 1927 performance suggest that Weaver had the instrument on his lap. Firstly, in bar twenty one, an open string is played concurrently with a triad stopped at the second fret. (See Ex. 6.5 below) The open first string is added to strings stopped at the second fret to form an E7 chord. This maneuver is impossible to perform with a slide rising from beneath the neck, providing conclusive evidence that the piece was not performed 'bottle neck style'. Not only does this chord suggest that the guitar was positioned in Hawaiian manner, but also that Weaver was employing a staple Hawaiian technique of extending chords through the combination of open and fretted strings.



Ex. 6.5 E7 chord, 'Guitar Rag', Sylvester Weaver (13/4/27, mx. 80727-A)

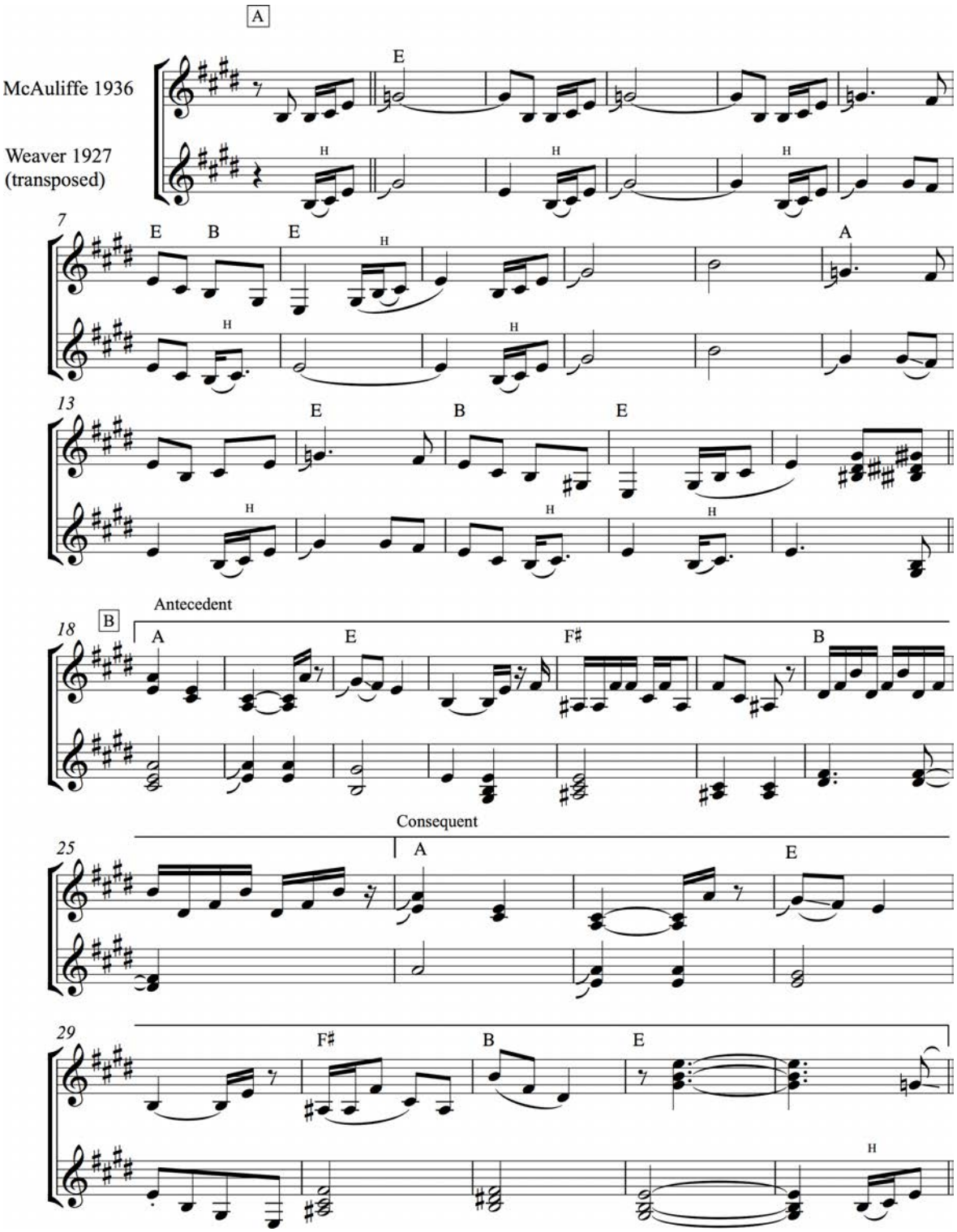
[403] Obrecht, *Early Blues: The First Stars of Blues Guitar*, 11.

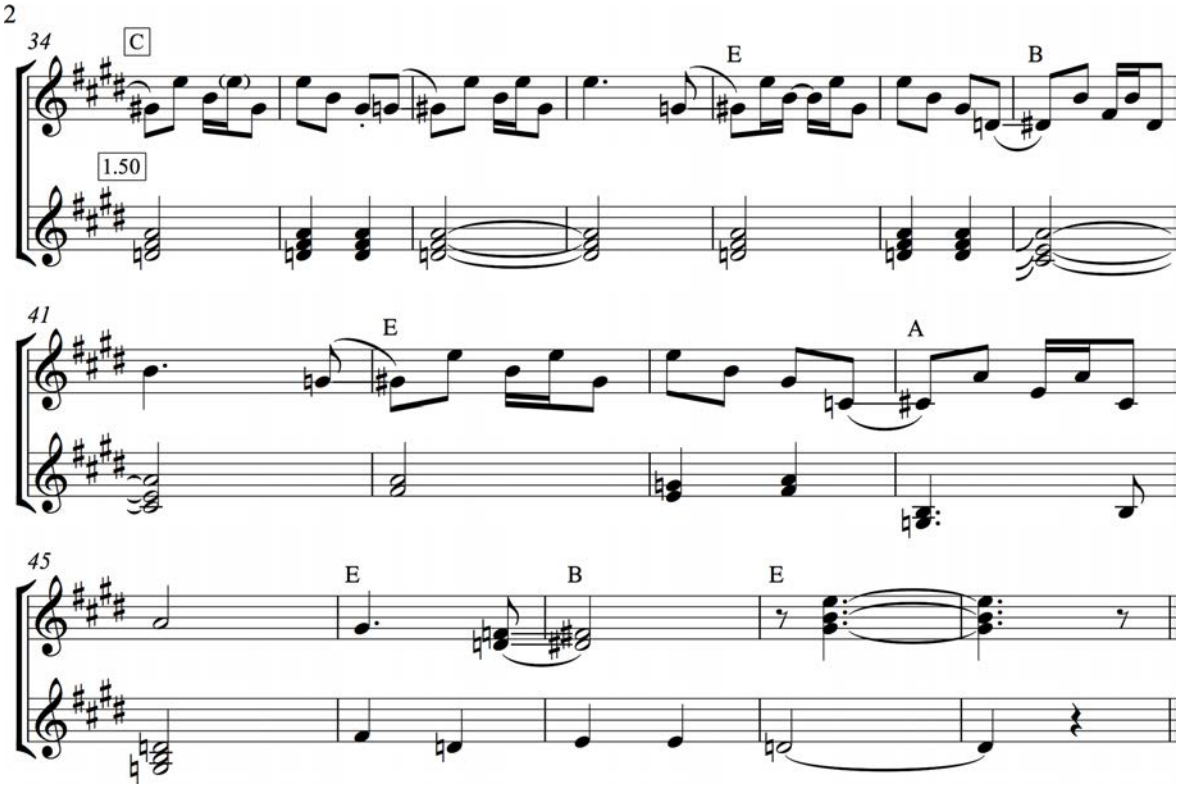
Secondly, Weaver uses a hammer-on to fret the second string on eight occasions in the A section. To execute this technique on inside strings requires that the instrument is supine so that the bar can be angled downwards with the tip addressing the required string in isolation. In standard position, with the bar hand approaching the neck from either below, this precise maneuver is not feasible. Thirdly, Weaver achieves near-perfect intonation when stopping all strings with the bar. The precision required to ensure such intonation with a perpendicular bar is simple to maintain consistently with the instrument on the lap, but awkward wrist positioning makes good intonation difficult to achieve in standard position, with a bar approaching the neck from above.

A third version of 'Guitar Rag' was recorded three years after Weaver's second recording, by duo Harvey and Johnson. While their recording employs the same homophonic texture of Weaver's performances, it is achieved with the melody rendered by steel guitar and rhythmic accompaniment by a Spanish guitar. Despite the spoken introduction by Harvey that purports 'Guitar Rag' to be an old tune that they used to play 'way back in West Virginia', Harvey and Johnson's 1930 recording of 'Guitar Rag' is clearly an imitation of Weaver's 1923 recording. The two sixteen bar sections of Weaver's melody are duplicated, with minor rhythmic variations in the key of Eb. The repetitive form of Weaver's first recording is necessarily duplicated.

Similarities in melody and harmony between McAuliffe's 'Steel Guitar Rag' and 'Guitar Rag' are striking and it is difficult to believe that Weaver's piece did not provide McAuliffe with a model. The version of 'Guitar Rag' with which 'Steel Guitar Rag' has most in common is Weaver's second recording, although a close similarity between McAuliffe's A section and the A section of all three previous recordings is unequivocal. A common element that immediately points to Weaver's second recording as McAuliffe's source is the forty eight bar form and the identical harmonic structure that it employs.

To achieve a close comparison of 'Steel Guitar Rag' with Weaver's second recording, a juxtaposition of the two melodies appears in Ex. 6.6 below. Weaver's melody has been transposed from D major to E to aid comparison.


A
McAuliffe 1936
Weaver 1927
(transposed)
7
13
B
Antecedent
18
Consequent
25
29



Ex. 6.6 Melody comparison: 'Steel Guitar Rag', Leon McAuliffe (29/9/36, mx. C 1479) and 'Guitar Rag', Sylvester Weaver (13/4/27, mx. 80727-A)

A close comparison of the first sixteen bars confirms the prima facie evidence of plagiarism that commentators have aurally identified. The phrase and motif structures of the A sections are revealed to be almost identical, with only minor variations in the pitch and rhythm. The most striking difference is in pitch in the opening phrase, where McAuliffe's repetitive minor third of G natural replaces Weaver's major third of G#. The reversal of McAuliffe's substitution by artists in almost all subsequent recorded versions is thus revealed to be a deep irony. Additionally, McAuliffe varies a prominent aspect of Weaver's articulation by avoiding the repetitious hammer-ons on the second string by substituting a rapid pick stroke.

However, the melodies of the remaining two sections differ greatly. In the B section, Weaver plays a chordal and dyadic melody of slow surface rhythm and narrow range. While McAuliffe employs Weaver's phrase structure, in which an antecedent of 8 bars is repeated with variation to the final four bars, any similarity ends there. The range of McAuliffe's melody is increased and its undulating contour bears little resemblance to the stasis of Weaver's tune. These factors, in combination with a variable surface rhythm, mark McAuliffe's B section as an entirely new composition. Similarly, in section C, while adopting Weaver's tactic of raising the tessitura of the section by an octave to aide the climax of the

melody, McAuliffe replaces Weaver's slow moving chordal melody with a syncopated monophonic line that relies on precise picking as it traverses the neck.

Instrumentation may have provided the means to the McAuliffe's innovation in his B and C sections. As in Harvey and Johnson's 1930 version, McAuliffe performs his melody with accompaniment. Relieved of the encumbrance of simultaneously providing a bass line, McAuliffe had facility to surpass Weaver's simple melody. While retaining the harmonic framework and the same basic bar positions, the fast rhythmic patterns of McAuliffe's B and C sections demand a technical facility not available to Weaver, and the resulting melody stands in stark contrast.

McAuliffe claimed never to have heard Weaver's tune[404] and suggested that the B section was drawn from a hapa haole tune, "On the Beach At Waikiki'.[405] However, the melodies and harmony of the two are entirely different. He repeatedly asserted that he composed the tune at the age of fourteen, during the period in which he was receiving his initial training from his teacher, Lattis Merrick. In an interview in the mid 1970s, McAuliffe claimed that he wrote 'Steel Guitar Rag' while attempting to find notes of a chord after changing his tuning from A major to E major.[406] In an interview in the late 1970s, his explanation was more expansive, stating

> I'd play my guitar in A for a while and then I'd tune it to E, just trying to find positions on the E neck, which were different than the A neck. Running arpeggios (sings major arpeggio) … that's all it is, just runnin' down the chord. But I liked that sound; it stuck with me and I wanted to put a little beat to it and it just came from there.[407]

McAuliffe's account is inadequate to the point of seeming glib. While the process that he describes could have been used to forge the melody of his B and C sections, the repeated major sixth (C#) and minor third (G natural) of the A section are conspicuous anomalies. Both notes fall beyond the ambit of a major arpeggio that he describes and, in open position, stopping of strings is required to complete the distinctive contour of the melody and distinct blues inflection.

With the likelihood of McAuliffe appropriating at least some of Weaver's composition, McAuliffe's interviews provide clues as to the circumstances of the borrowing and how he subsequently developed his version. McAuliffe attests to the early development of acute skills in aural transcription, developed while learning tunes from occasional radio

[404] Kienzle, *San Antonio Rose: Bob Wills and the Texas Playboys*, 38.
[405] Henry Kailimai, *On the Beach at Waikiki* (Honolulu: Bergstrom Music Co., 1915).
[406] McAuliffe, 'Leon Mcauliffe: The Story of a Steel Guitar Pioneer'.
[407] McAuliffe, 'Interview with Laurie Mills'.

performances.[408] Clearly, he had the ability to copy Weaver's work at time that he claimed to have written his version in 1931.

McAuliffe's early utilisation of 'Steel Guitar Rag' in performance provides an indication as to how his version may have evolved. In interviews, McAuliffe cited four specific instances in which he performed 'Steel Guitar Rag' prior to the 1936 recording. These were as an audition piece and a radio item for both the Light Crust Doughboys in January 1933 and Bob Wills in 1935. When McAuliffe used the tune as an audition piece, it is reasonable to assume that no member of either band would have been sufficiently familiar with the forty eight bar harmonic structure to provide accompaniment. Therefore, it is likely that McAuliffe's performances in audition were unaccompanied. Furthermore, while the B and C sections of his 1936 performance could stand successfully without accompaniment due to their arpeggiated nature, the monophonic melody of the A section, with repeated notes of long duration, demands accompaniment. It follows that for the piece to have been an effective vehicle with which to audition, there is a strong likelihood that McAuliffe's early performances utilised the same homophonic texture that Weaver employed, reinforcing the proposition that McAuliffe's tune evolved from Weaver's composition.

While the similarities between the two tunes are inescapable, their differences are extensive. If McAuliffe's imitation of 'Guitar Rag' began as a homophonic solo piece, the transition to the enhanced and revised melody that he recorded in 1936 is more likely to have been an evolution rather than an event. An indication of how the process unfolded can be inferred from both evidence in McAuliffe's interviews and his recorded performances in the interim. McAuliffe claimed repeatedly that Wills had wanted to record 'Steel Guitar Rag' at the first Texas Playboy session in September 1935.[409] According to McAuliffe, the record company rejected the idea because, at the time, they employed a specialist steel player, Roy Smeck, to record steel solos. While this policy may have been in place, an evaluation of McAuliffe's performances in the 1935 session raises the possibility of an alternate objection. On the session, McAuliffe's role is primarily a lead guitarist and vocalist and his steel playing is not prominent. Steel guitar is only evident on five of the fifteen tracks recorded with the full band and, of those, only two include steel guitar solos. The first solo appears on 'Osage Stomp' (see Ex. 5.1) in which McAuliffe takes a monophonic solo on two choruses of a fast twelve bar blues. The second solo appears in 'Spanish Two Step" (see Ex. 5.2) which is a dyadic melody of Hawaiian styling.

[408] McAuliffe, 'Interview with Dave Stricklin', 50.
[409] McAuliffe, 'Interview with Cecil Whaley', 8.,McAuliffe, 'Interview with Laurie Mills'., McAuliffe, 'Interview with Dave Stricklin', 52.

These two solos show McAuliffe's style and technique at an early stage of development and neither gives any indication that McAuliffe had developed sufficient skill to execute the precise syncopations employed in the 1936 recording of 'Steel Guitar Rag'. Furthermore, McAuliffe had only been gifted his first amplification system five months previously and, as the two solos show, he was in a process of refining the technique he had developed on an acoustic instrument, in order to adjust to the challenges and advantages of amplification. It is therefore possible that, at this time, McAuliffe's composition was underdeveloped and was rejected for that reason. An extra year would have provided McAuliffe opportunity to enhance the melody and develop a strong arrangement for live performance using the increased sustain and volume that had become available to him, as he simultaneously continued to develop his personal style and technique.

Condemnation of McAuliffe continues to grow today as Weaver's obscure recordings circulate through reissues on CD and Internet videos, and so providing an ease of comparison that McAuliffe could never have imagined. In view of the rising criticism, it is fair to consider any factors of mitigation that may exist. Firstly, it is possible that McAuliffe's appropriation was inadvertent. He may have been exposed to Weaver's melody by hearing any of the three recordings that had been made before 1931 and subconsciously reproduced it as he composed his tune. However, McAuliffe's use of an identical forty eight bar harmonic structure suggests that his awareness of Weaver's tune extended well beyond casual exposure and pinpoints Weaver's 1927 recording as McAuliffe's source. Second, McAuliffe may have heard Harvey's claim that 'Guitar Rag' was a traditional tune and assumed that appropriating it had no consequence. However, if this was the case, the form of McAuliffe's tune indicates that he would also have been aware of Weaver's 1927 recording, which was a clear negation of Harvey's claim. Third, it is possible that McAuliffe considered that the alterations that he made to Weaver's tune changed the original melody sufficiently for him to claim it as his own. This would explain why he retained Weaver's title as the root for his own. If so, there is merit in his opinion. The melody of a substantial portion of the piece is clearly original and harmonic progressions are not subject to copyright regulation. Furthermore, he had made changes to salient pitches of the A section. However, it seems unlikely that such a defense would protect McAuliffe from litigation in contemporary courts but it may have been successful in 1936.

Alternatively, McAuliffe's borrowing may have been a shameless act, for which he had no remorse. The obscurity of the retired Weaver and his little-known recording may have made the prospect of discovery seem remote at the time and McAuliffe's choice of title may be an indication of indifference. However, if McAuliffe's actions in altering the extended

major thirds and adjusting the articulation of Weaver's A section are interpreted as an effort of concealment, then McAuliffe's indifference was not total.

Charles Townsend observes that Bob Wills regularly adopted repertoire from the catalogue of 'race records' found in the Vocalion catalogue in the 1930s. He argues that Wills was forced to look there for appropriate hot dance music because, before 1935, big bands had not yet begun to release dance records in any number.[410] Whether McAuliffe's action was calculated or not, 'Steel Guitar Rag' demonstrates a different and unusual route of appropriation of black music in western swing. The elephant in the room that persists is the lack of justice for Weaver and his heirs. It has been calculated that sales of Weaver's first recording amounted to around five thousand from which he garnered $25 for performance and less than $50 in composer's royalties.[411] Discographer, Tony Russell, estimates sales of his second recording to be even fewer.[412] In contrast, the enormous commercial success of 'Steel Guitar Rag' must have generated income for McAuliffe and his estate for many years.

[410] Townsend, *San Antonio Rose: The Life and Times of Bob Wills*, 115.
[411] O'Neal, 'Guitar Blues: Sylvester Weaver', 19.
[412] Tony Russell, 'Email', ed. Guy Cundell, 2018.

Chapter 7: Noel Boggs

Noel Boggs (14 November 1917 – 31 August 1974) was one of the select group of steel guitarists whose innovation dictated the course of the development of the instrument in western swing. Like McAuliffe, Boggs followed in the footsteps of Dunn, forging a personal style that was widely admired, as he rose to prominence on the West Coast in the 1940s, the golden decade of western swing. His reputation was established as a member of prestigious bands led by Bob Wills, Spade Cooley, Jimmy Wakely, and Hank Penny. His reach was extended beyond the wide compass of his bands through recording sessions for prominent singers, such as Tex Williams, T. Texas Tyler, Johnny Bond and Wade Ray. It is estimated that he contributed to around two thousand recordings during his career.[413] Using cutting edge tunings, Boggs developed a chordal approach to soloing that dominated his recorded performances and became his signature. While other session players, such as Speedy West, strived to adapt to the style of the artists who engaged them, Boggs maintained his approach with a consistency that made his presence on a recording instantly identifiable. This chapter will discuss his development and the mature style that generated a high demand for his services and secured his place as one of the premier stylists of the steel guitar. It will also consider how limitations of the instrument impacted Boggs' chordal approach. The conclusions will assist an appreciation of the groundbreaking impact that the addition of pedals held for steel players in the 1950s, and how Boggs' rejection of the new accessories contributed to a decline in the demand for his services.

7.1 Career

Noel Boggs was born in Oklahoma City to a family of modest means. His career began in the mid 1930s and was centered in the South West until 1944, when he was invited to join Bob Wills' band in California. There he achieved immediate and enduring success and the West Coast remained his base for the rest of his life.

Boggs showed musical aptitude as a child, taking up the steel guitar around the age of twelve and progressing so rapidly that he was able to gain employment as a performer on three separate radio stations in 1935, while still in high school.[414] No details of his musical education have been published other than that, in the difficult financial times of the early 1930s, he was afforded the luxury of a music theory course while at junior high school.[415] In

[413] Ward Meeker, 'Boggs' Quad' 2014. https://www.vintageguitar.com/20992/boggs-quad/ (accessed January 18 2019).
[414] Meeker, 'Boggs' Quad'.
[415] Bea P. Perry, 'Noel Boggs: A Life Devoted to Steel Guitar', *Guitar Player* 12/1 (1978).

1968, Boggs provided a hint as to another pedagogical source in an interview with Ken Griffis, when he made reference to a Hawaiian influence, stating 'I couldn't use what the Hawaiians had taught me with bands like Bob Wills cause it didn't fit.'[416] Whether Boggs was exposed to Hawaiian playing through formal or informal learning, or through aural sources is not clear. However, the influence was not enduring, as this chapter will show.

Boggs' professional career began a month before he was due to graduate from high school when he accepted a position with a young bandleader, Hank Penny. After performing with Penny in various southern locations, he returned to Oklahoma City in 1937. There he was employed at radio station WKY as a staff musician and performed on air with singer, Jimmy Wakely. He rejoined Penny's band in 1939 and participated in an extended recording session in Memphis in July of that year. He formed his own band in 1941, which performed regularly in Oklahoma City until he left for Los Angeles in 1944.[417]

Boggs' relocation to California came at the request of Bob Wills, who had moved there from Tulsa in 1943. Boggs stayed briefly with Wills and left in mid 1945 to form his own band and to take on free-lance recording, a practice that Wills discouraged. He again worked briefly with Hank Penny, before rejoining Wills in 1946 for five months, during which time he participated in the revered Tiffany radio transcriptions. Later, in mid 1946, he joined Spade Cooley's band to replace Joaquin Murphey. He continued to work for Cooley until 1953, with the exception of a nine month spell with Tommy Duncan's Western All Stars that began in late 1948. In 1956, he formed his own ensemble from the remnants of the Plainsmen. He continued to perform with this group through the 1960s but, as health problems accumulated, his career gradually declined and he died in 1974.

7.2 Early Influences

An assessment of extant Boggs' recordings reveals evidence of two distinctive stylistic periods; an early period, when based in the South West, and a mature period revealed in recordings made in California in and after 1944. While Boggs' performances are documented in thousands of recordings, the vast majority of these were made on the West Coast. Unlike McAuliffe's case, where regular recording sessions with Wills provide oversight of a gradual development, evidence of Boggs' early years is confined to two recording sessions; a pair of sides recorded in 1938 with the Arkansawyers, and an extended recording session with Hank Penny in 1939. Though a concerted search has been made for this study, no recordings between 1939 and 1944 have been uncovered. Available recordings

[416] Kevin Coffey, 'Email Report of Griffis Interview 1968', ed. Guy Cundell, 2018.
[417] Meeker, 'Boggs' Quad'.

show that Boggs' style underwent a metamorphosis between 1939 and 1944. An early style that integrated agile single note melodies with chord melody and accompaniment, gave way to a primarily chordal approach of complex sonorities, sourced from new tunings.

Without recorded evidence, the question of how the disparity between the two styles was bridged presents a mystery. Boggs' own words from the 1968 interview provide a clue.[418] His account of abandoning Hawaiian style because 'it didn't fit' Wills' western swing band suggests an ongoing attempt to shape his style to meet the demands of the bandstand. However, the pre-war recordings are not greatly infused with Hawaiian styling but may represent a point in a process of refinement that had begun when Boggs first began ensemble work with Penny in 1936. Subsequent development may have been incremental, although the acquisition of new tunings would have provided a watershed moment for the development of his chordal style.

Boggs provided another clue to his early influences in the same interview with Griffis when he expressed a clear debt to Bob Dunn. He credits Dunn as being 'the first jazz steel player ever in my life', and that he was 'a great influence on me'.[419] Significantly, Boggs identified that Dunn's style was a departure from Hawaiian stylings and that Dunn's playing resembled that of a horn player. This suggests that Boggs was unaware of the pioneering jazz approach of Ho'opi'i or other Hawaiians in the 1920s and early 1930s, and that any early Hawaiian influence came to him through more traditional settings.

Leon McAuliffe was yet another significant early influence on Boggs. The two began a close friendship in 1935 in Oklahoma City where McAuliffe played with Wills every Tuesday night. Concurrently, Boggs appeared on a local radio station each morning. Close proximity enabled continued interaction between the two, with McAuliffe based only one hundred miles away in Tulsa. Significantly, McAuliffe recalled that 'we listened to one another every chance we got'.[420] As the previous chapter shows, there was much for Boggs to absorb, had he continued to follow McAuliffe's progression with Wills. Furthermore, when Boggs later joined Wills, he was compelled to perform repertoire that had McAuliffe's stamp, such as 'Steel Guitar Rag'. Nevertheless, Boggs' accumulation of influences resulted in a mature style that was quite distinct from that of McAuliffe or Dunn.

[418] Coffey, 'Email Report of Griffis Interview 1968'.
[419] Coffey, 'Email Report of Griffis Interview 1968'.
[420] Perry, 'Noel Boggs: A Life Devoted to Steel Guitar'.

7.3 Early Style

7.3.1 First Known Recording, 1938

The first glimpse of Boggs' anterior style can be found on a recording made with the Arkansawyers in 1938, entitled 'Chinese Honeymoon'.[421] His association with the group most likely occurred through the radio station WKY in Oklahoma City, where Boggs was employed as a staff musician and the group sometimes performed. In both accompaniment and solo improvisation, Boggs demonstrates outstanding qualities of versatility, dexterity and imagination, foreshadowing the development that carried him to the forefront of western swing.

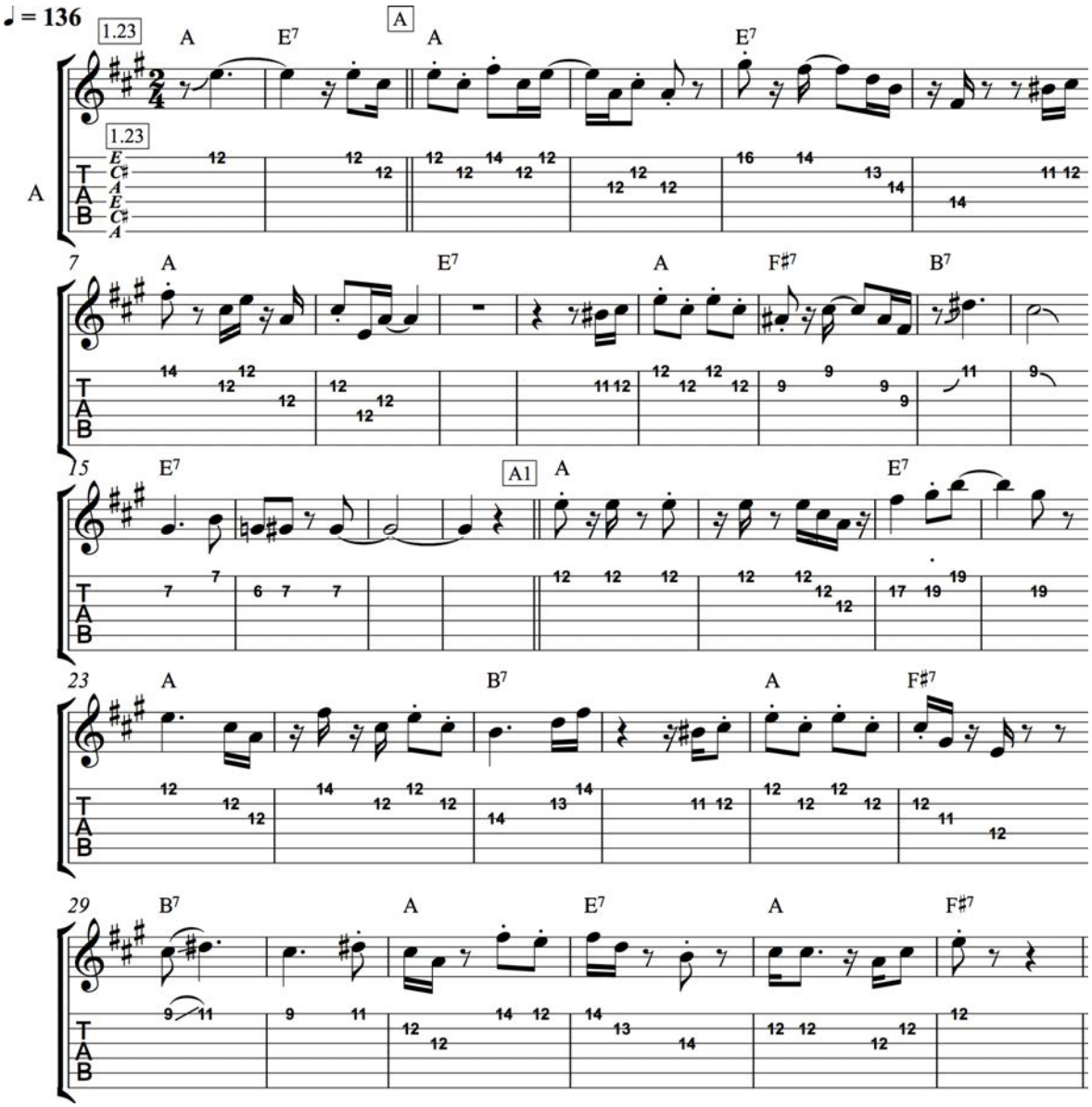
The poor quality of reproduction makes full identification of the ensemble's configuration difficult, but it appears to consist of a vocalist backed by a rhythm section of banjo, guitar and acoustic bass, with a saxophone and steel guitar providing solos and additional accompaniment. Ward Meeker writes that Boggs packed his Rickenbacker, as he departed to join Penny's tour in 1936.[422] If so, it would probably have been a six-stringed Bakelite B6 instrument, as McAuliffe also used. (Pictured below in Fig. 7.1) Analysis of Boggs' solo indicates that the instrument was tuned to High A, the Hawaiian tuning favoured by Bob Dunn and used by McAuliffe in his early recordings.

Fig. 7.1 1938 Rickenbacker B6, from the author's collection

[421] The Arkansawyers, (Private collection), 1938.
[422] Meeker, 'Boggs' Quad'.

‘Chinese Honeymoon’ employs a thirty two bar form of two sixteen bar sections, A and A^1. The key of the three minute arrangement oscillates between B major, for the introduction and the vocals, and A major for the instrumental solos. In addition to his solo, Boggs maintains a near constant presence in accompaniment. The steel guitar is just audible behind two presentations of the melody by fiddle and saxophone, providing block chords of one bar duration. Boggs repeats the approach, more forcibly, behind the saxophone solo, and contributes an energetic countermelody to the concluding vocal.

Boggs’ solo, transcribed in Ex. 7.1 below, shows a high degree of technical finesse and creative flair that placed him, at twenty years of age, well above most of his South West contemporaries. At a challenging tempo, Boggs approaches the chord progression with confidence, primarily using chord tones in a clearly phrased improvisation. His rapid syncopated surface rhythms are surefooted, with an excellent example being the polyrhythmic opening to the A^1 section, at bars nineteen and twenty. Despite the poor recording, his tone is full, with a clarinet-like timbre apparent on the opening note and his intonation is routinely accurate. The melody that he develops is completely abstracted from the harmony. Tonally, he doesn’t stray far from the prevailing triads but repeatedly adds the major ninth tone to dominant seventh chords as is evident in bars five and six.



Ex. 7.1 Improvisation on 'Chinese Honeymoon', Noel Boggs (c1938, radio transcription)

Beyond a common tuning, various elements of Boggs' solo indicate the influence of Bob Dunn. Broadly, the fluency and momentum of Boggs' melodic line through the cyclical harmony is reminiscent of Dunn. The impression is enhanced by the prevalence of staccato articulation, executed with precise picking. Furthermore, the ragtime rhythms of bars three, four and twelve echo Dunn's 1920s influences.

However, the tablature reveals a marked contrast in the bar movement of Boggs and Dunn. While Dunn moved his bar rapidly up and down the neck, Boggs tends to dwell on chordal root positions, generating rapid arpeggiated lines with melodic phrases picked across the neck, as can be seen at bar twenty. In one example, at bars seven and eight, Boggs uses alternating finger and thumb strokes to create a descending broken arpeggio, in a cross rhythm, a gesture that would become a signature.

Notably, Dunn exhibits few Hawaiian characteristics in this solo, which suggests that his abandonment of Hawaiian affectations was well advanced by this time. Generally, his extensive use of neck positions contrasts with a lateral Hawaiian approach. His use of glissando and inflection is extremely limited, with most notes centered squarely on the required pitch. Additionally, the predominance of staccato articulation limits the opportunity for vibrato. The overall impression is of an improvisation dominated by rhythm and harmony, in contrast to a lyrical and vocally inflected Hawaiian approach.

7.3.2 Recording Session with Penny, 1939

A much more comprehensive evaluation of Boggs' early style can be made from the eighteen recordings that he completed with Hank Penny in July 1939. Penny had sent for Boggs while based in Atlanta, to replace a departing steel guitarist. Boggs stayed with Penny for a year and played on the Radio Cowboys' second recording session, which was conducted in Memphis. Boggs' arrival completed a sextet of two fiddles, banjo and double bass with Penny, the main vocalist, on guitar, pictured below in Fig. 7.2.

Fig. 7.2 Hank Penny and His Radio Cowboys 1939, courtesy of Kevin Coffey

Following the Arkansawyers' recording, Boggs had acquired a twin necked Epiphone guitar, seen in Image 7.2 above. It was one of the first twin necked electric instruments

commercially manufactured and was named after its endorser, New York musician, Anthony Rocco. The configuration consisted of necks with seven and eight strings. The model was discontinued in 1939 but photographs show Boggs continuing to use his instrument in 1945.[423]

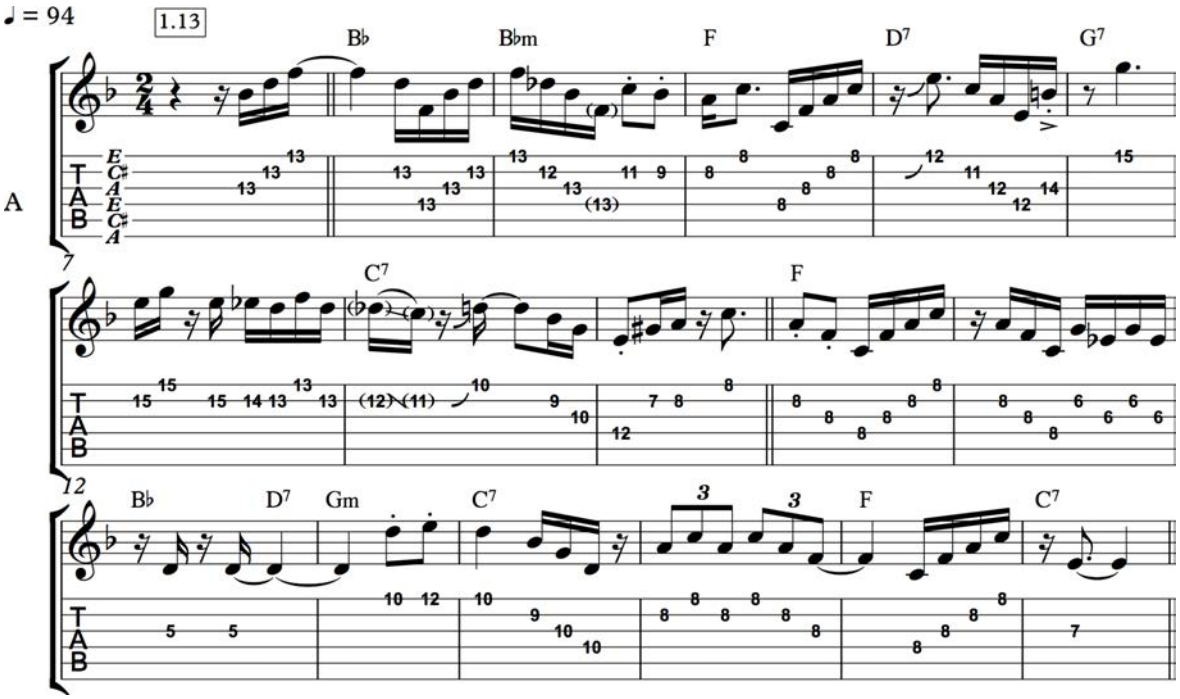
In the two day marathon session, Boggs filled essential roles, both as soloist and accompanist. His improvised solos are featured on almost every track and his accompaniment is a constant presence throughout the session. Boggs also contributed two compositions to the track list, 'Chill Tonic'[424] and 'Mississippi Muddle'.[425] These were both instrumentals with a written steel guitar melody, to which Boggs added an improvised solo. In accompaniment, the steel guitar's role is generally unobtrusive. Boggs used chords of extended duration to support staccato banjo and guitar rhythms. With little rhythmic activity and only occasional chordal harmonics or glisses, Boggs provided a subdued but significant element to the texture of rhythm section.

In contrast to his accompaniment, Boggs' solos are a highlight of the recording session, appearing often in the most prominent position, following the opening vocals. The finesse that he displayed with the Arkansawyers had been further refined and can be more readily appreciated due to an improved quality of recording. Of the nineteen solos, thirteen are predominately monophonic, with the remaining six primarily chordal. One solo, on 'The Last Goodbye', is a notable departure that employs dyads exclusively.[426] In a composed exchange with the fiddles, a melody harmonised in thirds provides the only overt sustained Hawaiian styling in Boggs' contribution in the entire session.

An outstanding example of Boggs' improvisation, on the tune 'Walking Home from an Old County School', is transcribed in Ex. 7.2 below.[427] Following a harmonised reiteration of the melody by the fiddles, Boggs is given the B and final A sections of the thirty two bar AABA form. His energetic solo provides rhythmic contrast to the relatively slow moving and predictable melody. He employs the same High A tuning as he had in 1938, and many elements of his solo resemble those of his earlier recording. He maintains a high standard of intonation and picking accuracy and again, the full tone of sustained high notes are reminiscent of a clarinet in altissimo register. There is noticeable refinement in both rhythm and articulation. Predominately, he uses lateral picking to derive rapid arpeggios in root positions on the neck. Ragtime clichés are absent and the staccato articulation of the earlier

[423] Fisch and Fred, *Epiphone: The House of Strathpoulo*, 135.
[424] Hank Penny and His Radio Cowboys, 'Chill Tonic', (unissued MEM 23-1), 1939.
[425] Hank Penny and His Radio Cowboys, 'Mississippi Muddle', (Vocalion 05026), 1939.
[426] Hank Penny and His Radio Cowboys, 'The Last Goodbye', (Vocalion 05148), 1939.
[427] Hank Penny and His Radio Cowboys, 'Walking Home from an Old Country School', (Vocalion unissued), 1939.

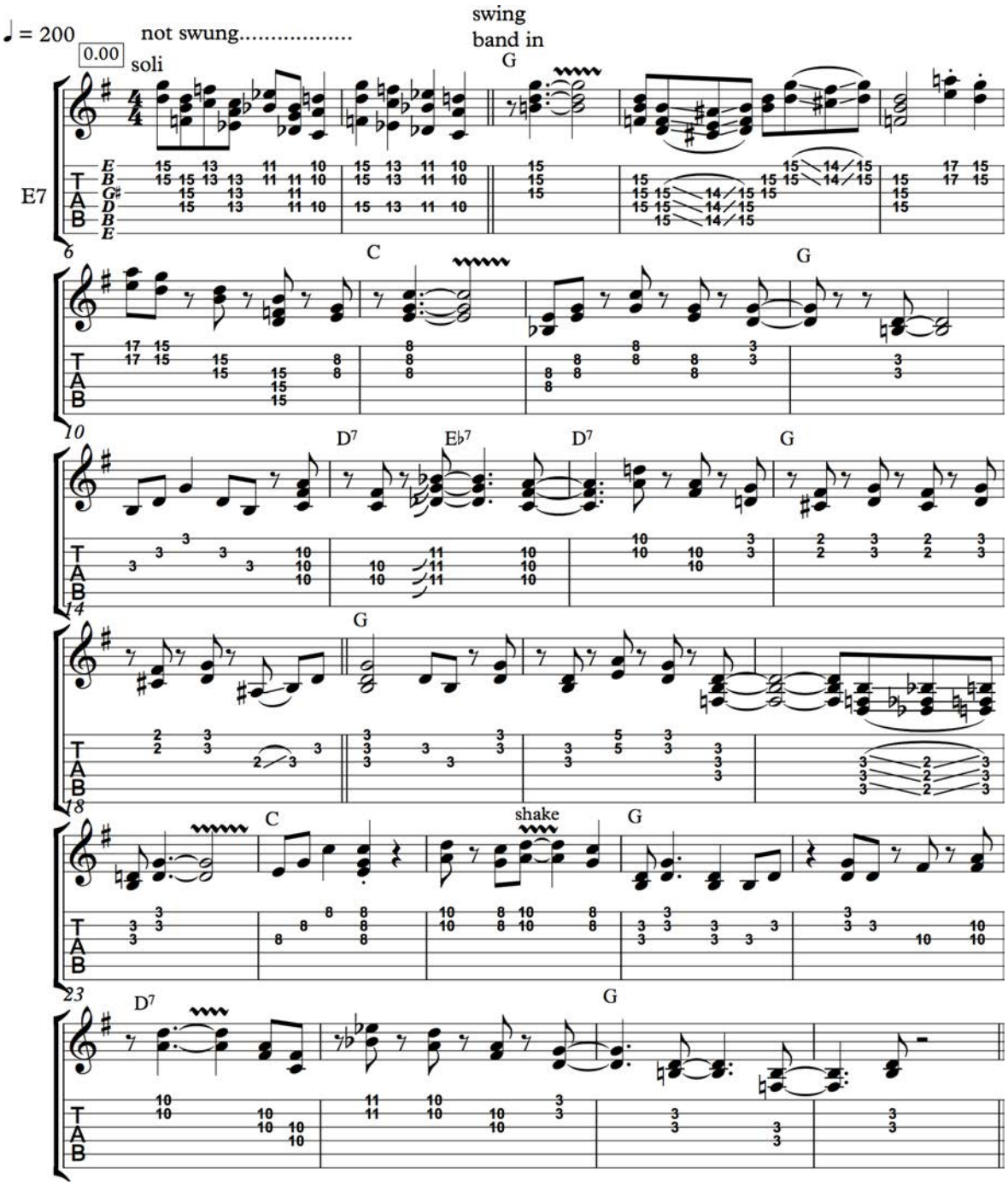
session is greatly reduced. The resultant smoother phrasing indicates an attenuation of Dunn's influence.



Ex. 7.2 Improvisation on 'Walking Home From an Old Country School', Noel Boggs (3/7/39, mx. MEM 25)

While not the prevalent form of expression, a chordal style, that was to dominate Boggs' later recordings, emerges in this session. It is employed in Boggs' two compositions, 'Chill Tonic' and 'Mississippi Muddle' and in improvisations on 'All Night and All Day Long'[428] and 'Won't You Ride in my Little Red Wagon'.[429] In each instance, his approach to chord melody appears similar, including the use of an E7 tuning. An example, the head of 'Mississippi Muddle', is transcribed in Ex. 7.3 below.[430]

[428] Hank Penny and His Radio Cowboys, 'All Night and All Day Long', (Vocalion 05215), 1939.
[429] Hank Penny and His Radio Cowboys, 'Won't You Ride in My Little Red Wagon', (Vocalion 05438), 1939.
[430] Penny and Cowboys, 'Mississippi Muddle'.

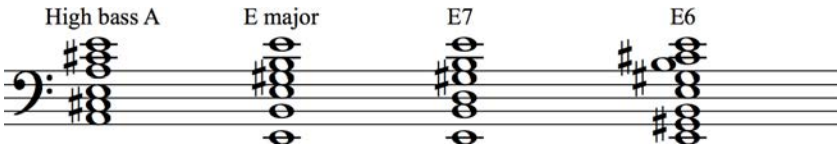


Ex. 7.3 Head of 'Mississippi Muddle', Noel Boggs (4/7/39, mx. MEM 36-1)

'Mississippi Muddle', a fast blues in G major, is one of the most memorable cuts of the session and represents a landmark in the development of Boggs' style. However, the head can also be viewed as a demonstration of the restraint on chord melody imposed by the configuration of the steel guitar, and shows Boggs' approach to the problem.

In Boggs' chord melody, the uppermost note of chords or dyads provides a salient melodic line. The melodic contour is formed from notes that are mostly drawn from root positions of each prevailing chord. With a perpendicular bar, each note of the tuning is available to form consonant chord voicings. In the case of 'Mississippi Muddle', the tonic is

at the third and fifteenth fret, the subdominant at the eighth fret and the dominant at the tenth fret. To extend melodic choice, Boggs reaches above or below prevailing root positions, keeping the bar perpendicular. A byproduct of this technique is copious parallel motion of dyads and triads, by a tone or semitone. Without the use of the Hawaiian technique of bar slants, parallel motion is unavoidable and the scope of chordal and dyadic melody is diminished. Additionally, without the use of slants, the voicing of the chordal elements of the melody becomes repetitive. Boggs compensates for the tonal paucity with strong rhythmic phrasing. With the limited harmonic colour of the E7 tuning and restricted melodic choices, Boggs' rhythmic craft comes to the fore in syncopation and phrasing.

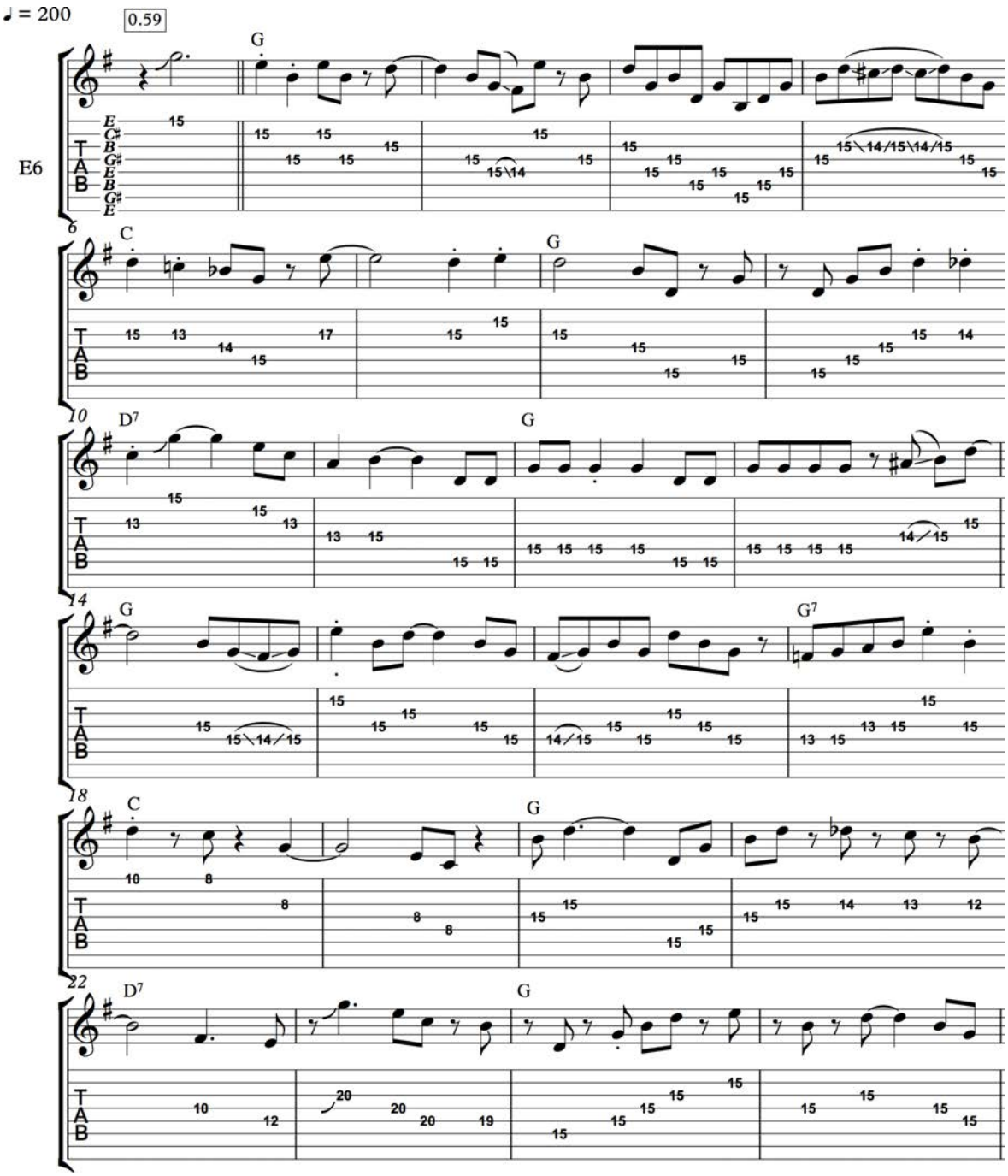


Ex. 7.4 Noel Boggs' pre WWII tunings

Analysis of transcriptions of the session suggests that, in 1939, Boggs employed three distinct six note tunings, detailed in Ex. 7.4 above. Fig. 7.2 above shows Boggs' twin-necked Epiphone instrument with seven strings on one neck and eight on the other. Magnification of the image confirms that eight strings are fitted to one neck but suggests that the seven string neck is carrying only six strings. Alternatively, the presence of a six string tuning could also be explained by the possibility that Boggs may have retained his six string Rickenbacker and used it on the session. However, the presence of A major, E major and E7 tunings on the session raises an interesting possibility. Retuning is an instant process but restringing takes more time and effort. It is possible that, in addition to retaining a six string instrument tuned to High A, Boggs tuned the six strings on the seven string neck to the standard E major tuning, a configuration that could be quickly changed to E7 by lowering the middle E string to D. This would leave the eight string neck available for yet another tuning.

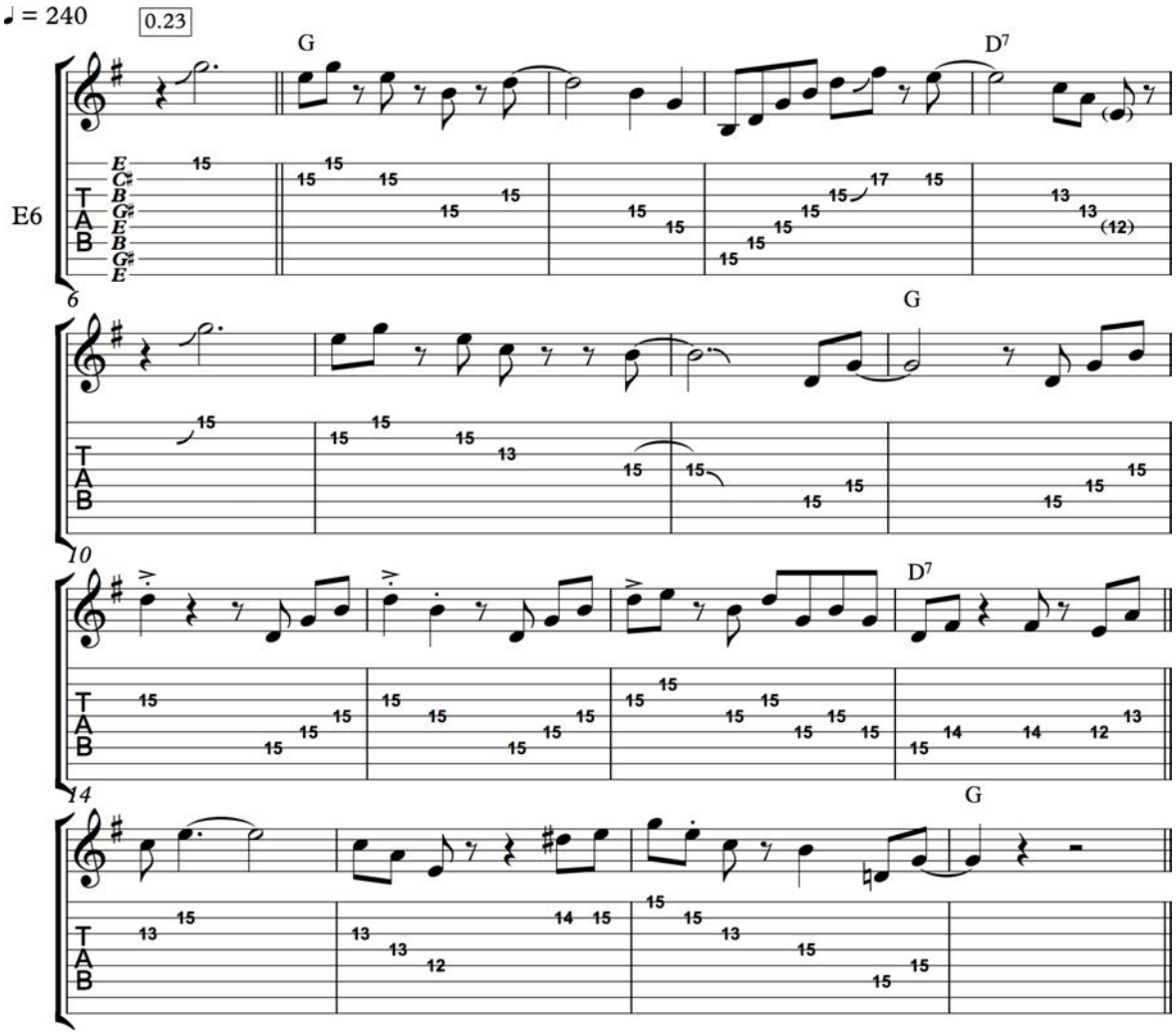
Analysis of Boggs' monophonic solo in 'Mississippi Muddle', transcribed in Ex. 7.5 below, reveals an unusual tuning of E6 that employs at least seven strings. (Shown in Ex. 7.4 above) It seems likely that Boggs had both a familiar six string E7 tuning and an eight string E6 tuning at his disposal on the same instrument, using them alternatively for the head and solo. Broadly, Boggs' solo does not vary greatly in style from others recorded on the previous day. The solo demonstrates a similar level of technique, evident in expert picking and accurate intonation. The tablature shows that Boggs utilised the same approach of position playing to effect rapid arpeggios which, in bar four, reveals the tuning that was used. The rapid descending broken arpeggio, that would become a Boggs signature gesture, is only

possible with an E6 tuning. This tuning represents an interesting progression from the orthodox Hawaiian C#m tuning used by McAuliffe at that time. The configuration places a perfect fifth on the third string, a development made possible by extra strings. The intervallic configuration of the tuning is similar to that of A6, a tuning that was coming into vogue in Hawaiian music and which had become Boggs' stock tuning by 1944. E6 also bears a resemblance to E13, a tuning that emerged in McAuliffe's recordings. The earliest that McAuliffe used A6 or E13 was 1941. If McAuliffe was listening to Boggs, as he claimed, it may have been Boggs who prompted him to experiment with A6 and E13.



Ex. 7.5 Improvisation on 'Mississippi Muddle', Noel Boggs (4/7/39, mx. MEM 36-1)

Analysis of a second solo from day two confirms Boggs' use of the unusual E6 tuning for single string melodies. The solo, from 'It Ain't Gonna Rain No More', transcribed in Ex. 7.6 below, shows how Boggs used the tuning to increase melodic fluency.[431] The second string adds the sixth degree to major tuning and is used to extend phrases on the tonic. It also offers more tonal options to Boggs' approach to the dominant chord, D7, on which he fashions phrases within two or three frets of the tonic root position. The elimination of long bar shifts helps to create phrases that smoothly bridge chord changes, at the fast tempo.



Ex. 7.6 Improvisation on 'It Ain't Gonna Rain No More', Noel Boggs (4/7/39, mx. MEM 33-2)

7.4 Post-war style

After a brief period with Penny's band in 1939, Boggs returned to Oklahoma City to continue work with his own ensembles and on radio, until 1944 when he was summoned to

[431] Hank Penny and His Radio Cowboys, 'It Ain't Gonna Rain No More', (Vocalion 05067), 1939.

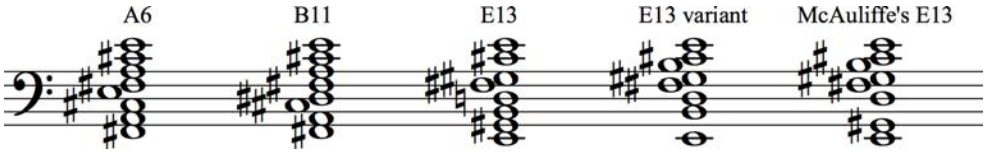
Los Angeles by Bob Wills. Wills had moved to California from Tulsa, Oklahoma, after a brief uncomfortable tenure in the army, with the hope of rekindling his pre-war success. Boggs joined Wills as a second steel guitarist. The incumbent steel player, Les Anderson, had been enlisted by Wills in Oklahoma and had relocated with him to Los Angeles. Anderson was greatly influenced by McAuliffe but lacked his depth of skill. Boggs arrived in California in the spring of 1944 and Anderson left soon after, in circumstances that he would later not discuss.[432] Previously based close to Oklahoma City, Wills would have been well aware of Boggs' talent, and his move to attract Boggs to Los Angeles was clearly an attempt to improve his ensemble.

Soon after assuming sole responsibility for steel guitar duties with Wills, Boggs appeared with the Texas Playboys on radio transcriptions. On four tracks, recorded in July for the American Forces Radio Service, Boggs revealed a style that had undergone seismic change in the five years since the session with Penny. Most noticeably, the mode of his improvisations had changed substantially, favouring chordal solos over the monophonic solos that dominated his 1939 recordings. This dramatic change in emphasis was to be sustained throughout the remainder of his career. In two film soundtracks recorded for Wills, he used chord solos exclusively on each of the six tunes.[433] A review of his recordings for Wills, Penny, T. Texas Tyler and Spade Cooley in the following years confirms Boggs' overwhelming preference for chord solos. Of eighty five, post-1944 solos reviewed for this study, sixty two were predominately chordal, six were entirely monophonic, and fifteen combined the two modes. Additionally, Boggs' accompaniment style had been significantly augmented by expert application of harmonics, in both chordal and monophonic form. It may have been McAuliffe's great skill with harmonics that convinced Boggs to further develop his facility.

Most significantly, Boggs now employed more complex tunings. His two stock tunings were A6 and E13. Ex. 7.7 below shows the two tunings, accompanied by associated variants that he also employed. B11 is a variant of A6 that can be reached by lowering the fifth string by a semitone. The top three notes of Boggs' E13 tuning are common to C#m tuning, which may be an indication of its origin. Boggs also used an E13 variant, in which a perfect fifth, B natural, appears on third string. This tuning is similar to McAuliffe's E13. With these tunings, a massive change in tonal colouring engulfed both Boggs' improvisations and accompaniment. Additionally, the pitch relationship between the two tunings was helpful

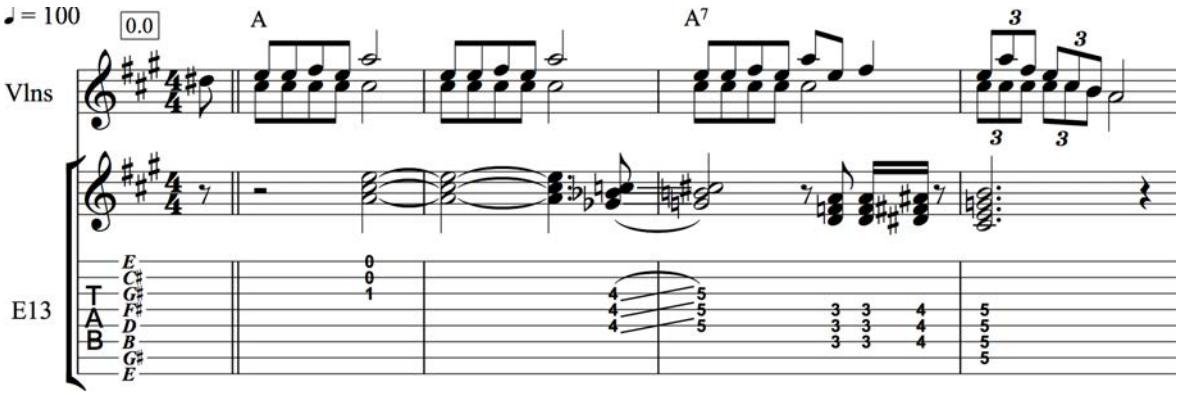
[432] Robbie Bossert, 'It's That Ol' Redhead Again: Les "Carrot Top" Anderson', *Steel Guitar World Magazine* 16 (1994).
[433] *Blazing the Western Trail*, dir. Vernon Keays. Columbia Pictures), 1945, *Lawless Empire*, dir. Vernon Keays. Columbia Pictures), 1945.

in combining adjacent necks in performance. If the harmony of a tune dictated the move from tonic to dominant, the player could shift from the A6 neck to the E13 neck at the same fret, maintaining root position.



Ex. 7.7 Noel Boggs Post WWII tunings

The deeper harmonic colour of Boggs' new tunings is on display in both accompaniment and soloing on the first track that he recorded with Wills in 1944, 'Bob Wills Special'.[434] The tune is an instrumental twelve bar blues, performed at a moderate tempo, that allows each of the six soloists to showcase their skills. The opening bars, transcribed in Ex. 7.8 below, show a typical Boggs' contribution to accompaniment, using an E13 tuning. The configuration of the tuning includes two tritones, the pairing of either strings three and five, or five and seven. Using both options at one position, Boggs is able to extract two distinct dominant ninth voicings to augment the accompaniment, which he does with chords of extended duration.

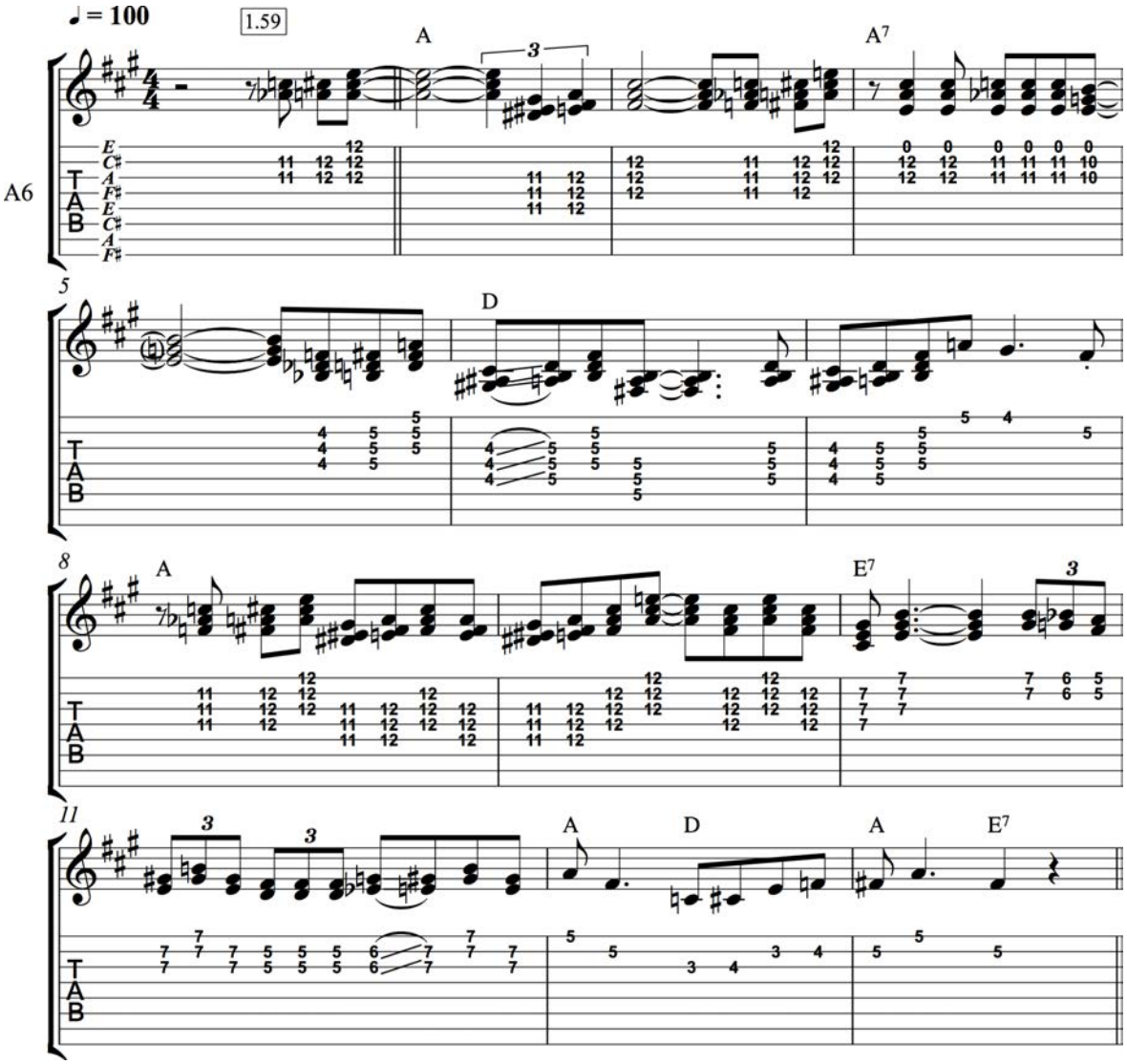


Ex. 7.8 Accompaniment to 'Bob Wills Special', Noel Boggs (July 1944, Radio Transcription AFRS W-27)

Boggs' solo on 'Bob Wills Special', transcribed in Ex. 7.9 below, foreshadows an improvisational style that he would favour for the remainder of his career and is a refinement of the style demonstrated in the head of 'Mississippi Muddle' (see Ex. 7.3 above). His approach is characterised by improvisations of rich chords extracted from his new tunings, the harmonic complexity of which is accentuated by legato articulation. The invention and

[434] Bob Wills and His Texas Playboys, 'Bob Wills Special', (Armed Forces Radio Transcriptions AFRS W-27), 1944.

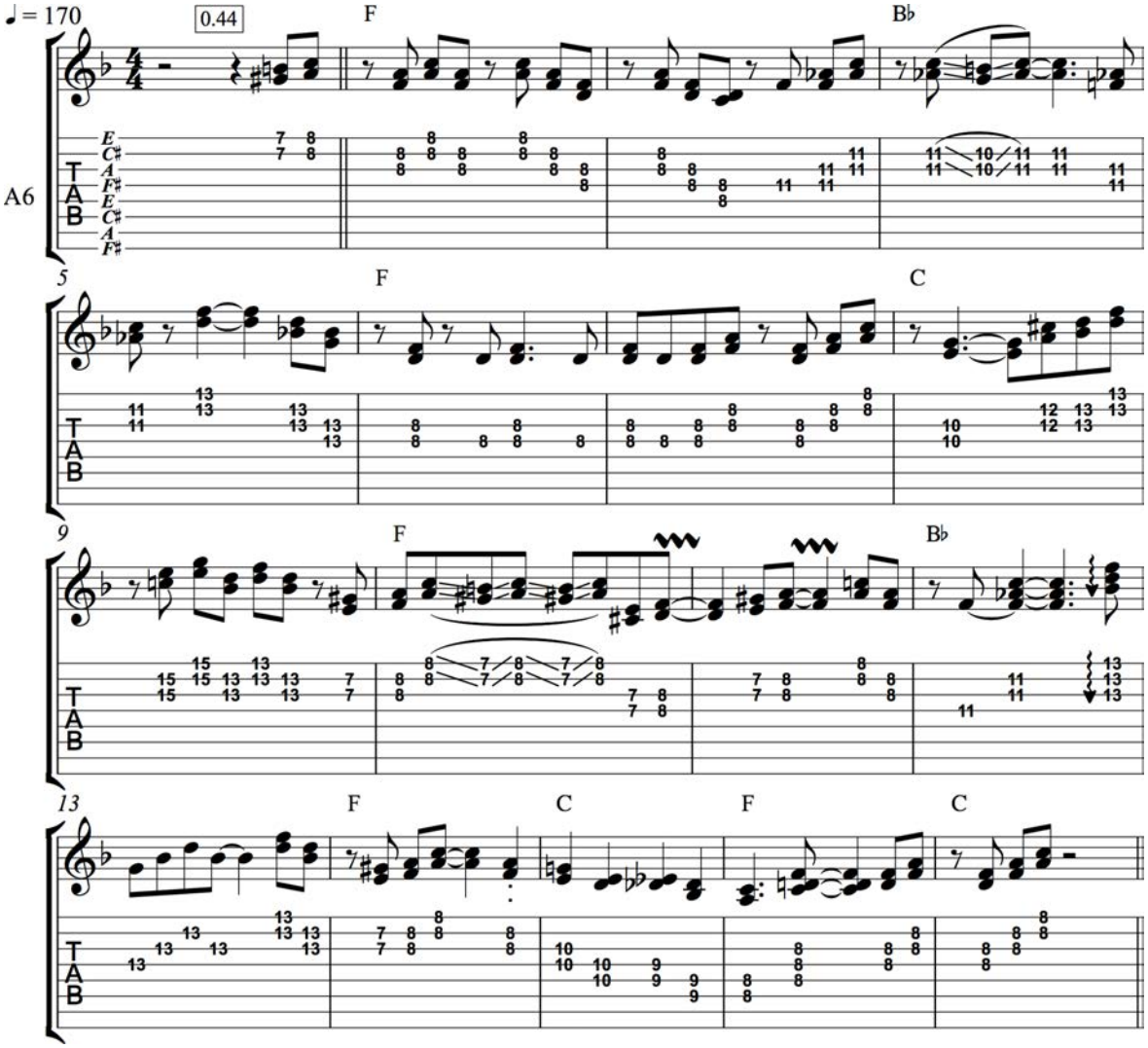
technique that he displays on ‘Bob Wills Special’ are assured. His phrasing is deft and his intonation is perfect. The guile of the device used in bar four, where a low pedal tone is produced from a high string, shows resourcefulness. However, the tablature reveals that his earlier predominate use of a perpendicular bar hasn’t changed substantially. As before, he favours root positions that limit tonal choices and restrict the melody outlined with the top note of each voicing. His enhances the limited melodic options with chromatic movement of the three note voicings, a technique that can be observed in almost every bar. Even when dyads are employed, as in bars ten and eleven, a perpendicular bar imparts the same restrictions. Boggs compensates for his narrow melodic palette with assertive rhythmic phrasing and the harmonic richness inherent in A6 tuning.



Ex. 7.9 Improvisation on ‘Bob Wills Special’, Noel Boggs (July 1944, Radio Transcription AFRS W-27)

The melodic constraints that Boggs’ technique placed on his chordal improvisation are again clearly demonstrated in his solo on ‘I’m Gonna Get Mad’, transcribed in Ex. 7.9

below.[435] In this dyadic example, Boggs characteristically employs a straight bar and rarely strays from root chord positions. With scalar melodic motion being a difficult proposition without slants, Boggs confines his melodic choices to chord tones, with occasional chromatic embellishment. In this context, the dissonance of the major second interval between the fourth and fifth strings, in bars three and fifteen, is both conspicuous and incongruous. Within Boggs' style, such dissonance is generally resolved by the superimposition of other chord tones, rather than by more satisfying voice leading. While dissonance, and its resolution, may be less apparent in fuller voicings, it is an inherent quality of Boggs' chordal style that is dictated by a combination of technique and the restraints of instrument configuration.

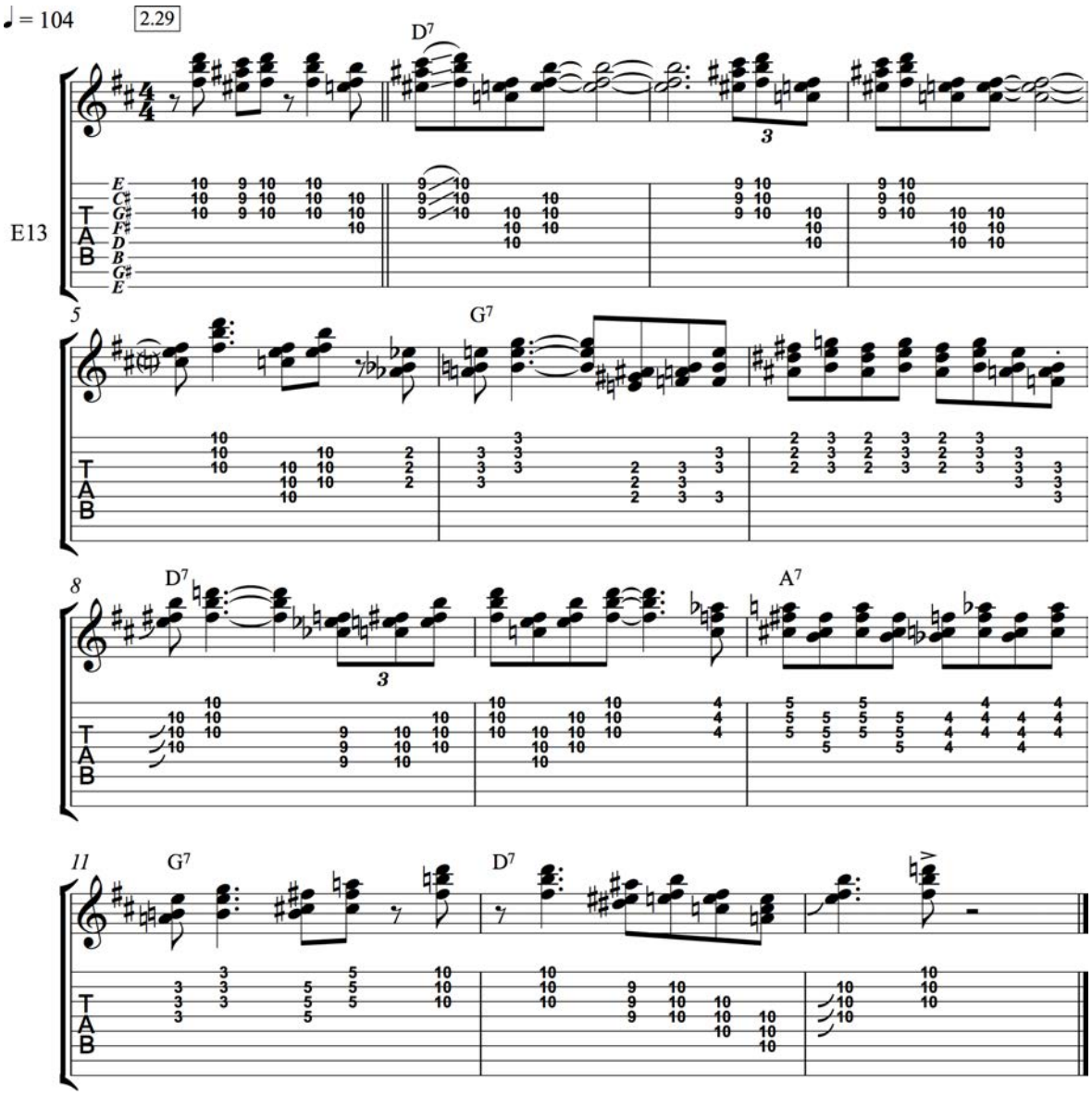


Ex. 7.9 Improvisation on 'I'm Gonna Get Mad', Noel Boggs (21/8/46, mx. 1509AS-1)

Boggs applied his chordal style equally to E13 tunings. An example, an improvisation on 'St Louis Blues Pt 2', is transcribed in Ex 7.10 below.[436] The tune is a twelve bar blues in

[435] T. Texas Tyler and His Oklahoma Melody Boys, 'I'm Gonna Get Mad', (4 Star 1509-AS 1141), 1946.
[436] Bob Wills and His Texas Playboys, 'St Louis Blues Pt 2', (Tiffany Transcriptions), 1946.

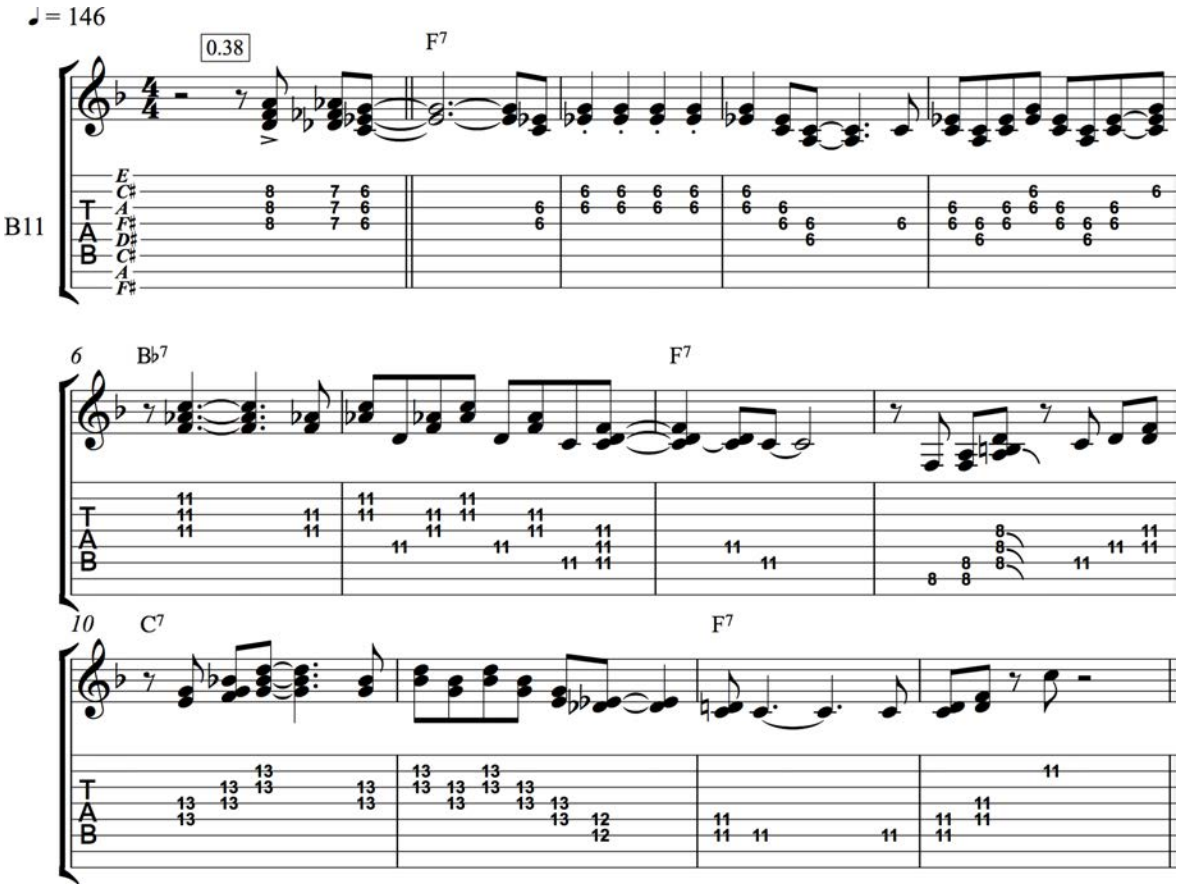
the key of D that forms part of the Tiffany Transcriptions, recorded by Wills and the Texas Playboys for radio in 1946. Typically, he uses a straight bar and root position voicings, embellished with chromatic approaches, but few glissandi. The tuning has a major second interval between the third and fourth strings, and additional dissonances of a tritone between the third and fifth strings and fifth and seventh strings. In blues, the tonal colouring of a minor seventh of the tonic and subdominant chords is endemic. Thus Boggs' use of root position voicings provides appropriate harmonic colouring but, as in the previous example, there is no attempt to resolve dissonance through voice leading, despite the melodic context.



Ex. 7.10 Improvisation on 'St Louis Blues Pt2', Noel Boggs (22/4/46, Tiffany Transcriptions)

A B11 tuning provided Boggs with an alternative dominant voicing to E13. It could be quickly formed by lowering the fifth string of an A6 tuning by a semitone. The resultant

configuration formed a dominant ninth chord, without root, on strings two to seven. Boggs used the tuning in a solo on 'That's All', transcribed in Ex. 7.11 below.[437] The characteristics of Boggs' chordal style are unchanged. A dyadic variation of his characteristic broken arpeggio gesture is apparent in bar seven, derived from a root position voicing of Bb9.

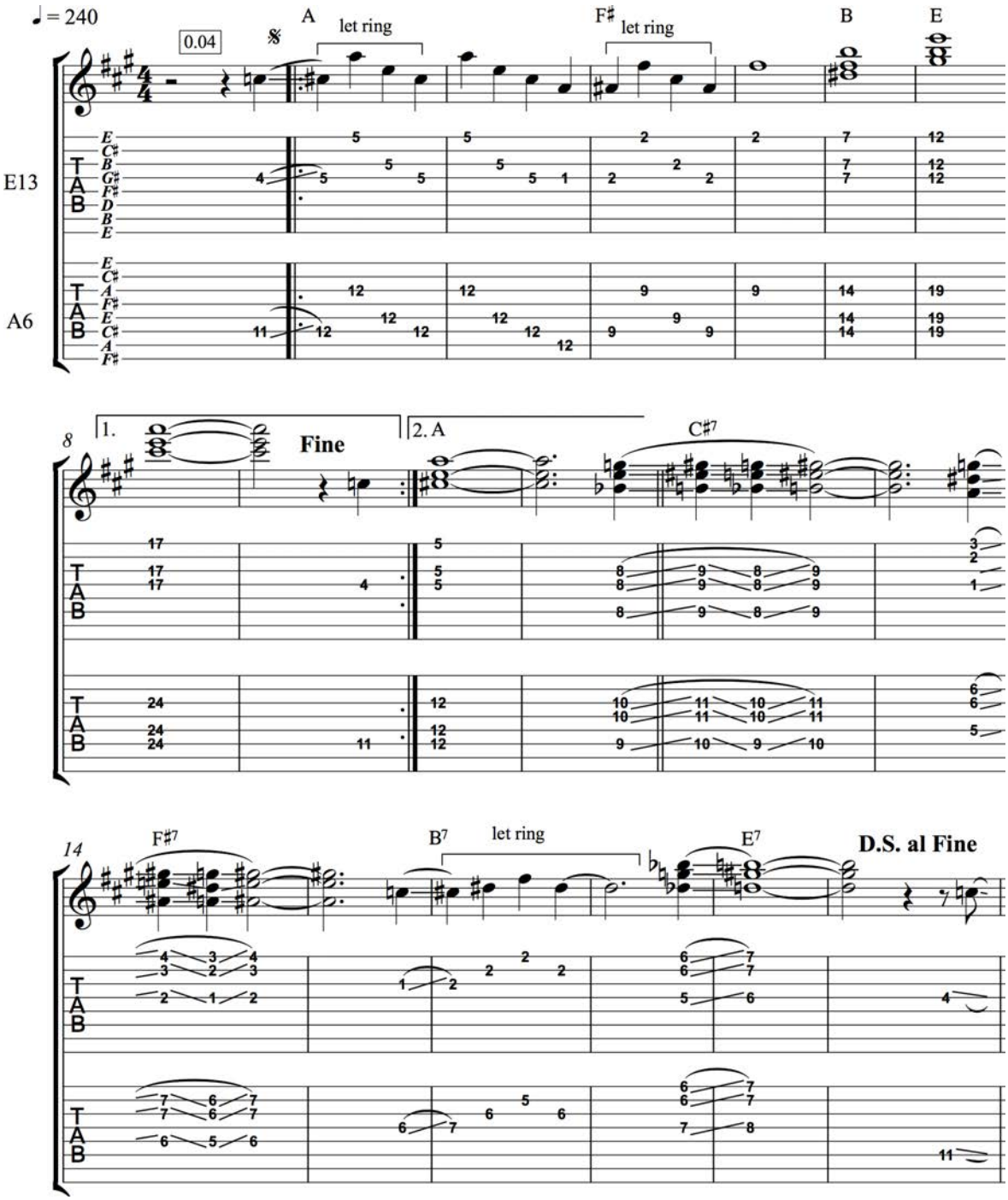


Ex. 7.11 Improvisation on 'That's All', Noel Boggs (Dec 1946, mx. 1538AS)

With a dual necked instrument, Boggs was able to move between necks during solos, just as McAuliffe had begun to do in 1942. This technique offers wider harmonic choices but, depending on tunings, varying the angle of the bar can also provide a voicing of the same chord on both necks. The tablature accompanying the following transcription of 'Steel Guitar Stomp' shows the tune played on both tunings, highlighting commonality between the intervals of A6 and Boggs' E13 tuning.[438] The tune, now a steel guitar standard, was recorded with Hank Penny in 1945. The melody appears to be based on the second chorus on Penny's 1940 recording of 'Steel Guitar Hula', played by steel guitarist, Eddie Duncan.[439] The form of the thirty two bar composition is AABA, with an A section of simple triadic construction that can played with a perpendicular bar on both tunings. The B section employs

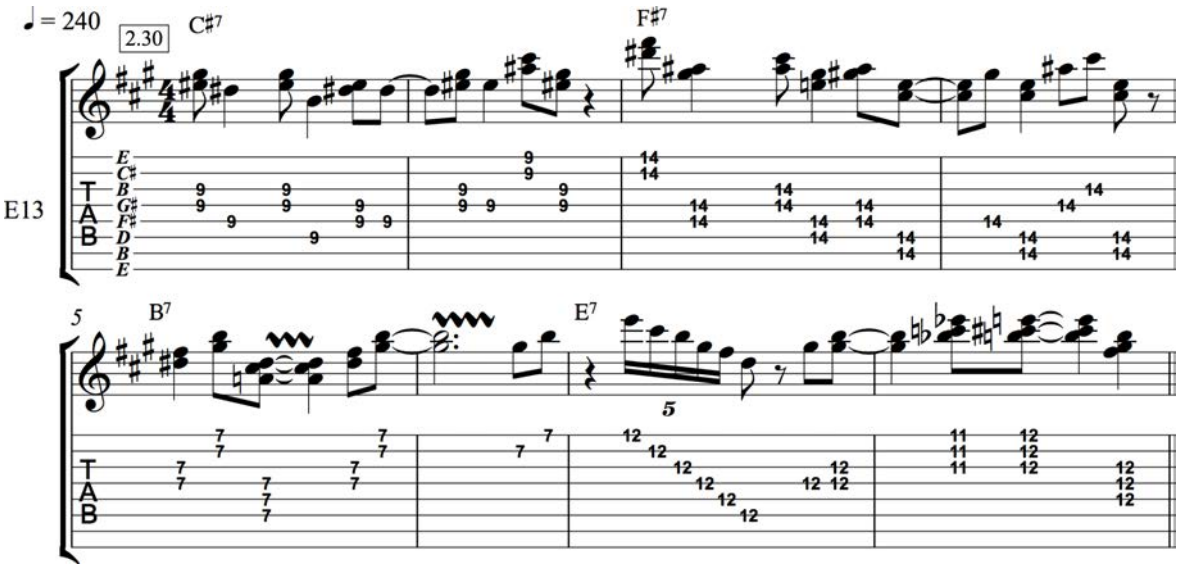
[437] T. Texas Tyler and His Oklahoma Melody Boys, 'That's All', (4 Star 1538 1166), 1946.
[438] Hank Penny, 'Steel Guitar Stomp', (King 528-A), 1945.
[439] Hank Penny and His Radio Cowboys, 'Steel Guitar Hula', (OKeh 05724), 1940.

cyclical dominant harmony that can also be duplicated on either neck, but requires contrasting bar slants. Boggs could employ either neck for the tune and could swap between them, in order to achieve different nuances of timbre or inflection. In this case, the B section in A6 tuning requires reverse slants, a technique rarely used by Boggs, suggesting that he used the E13 neck at that point. Nevertheless, he may have used either tuning, or both.



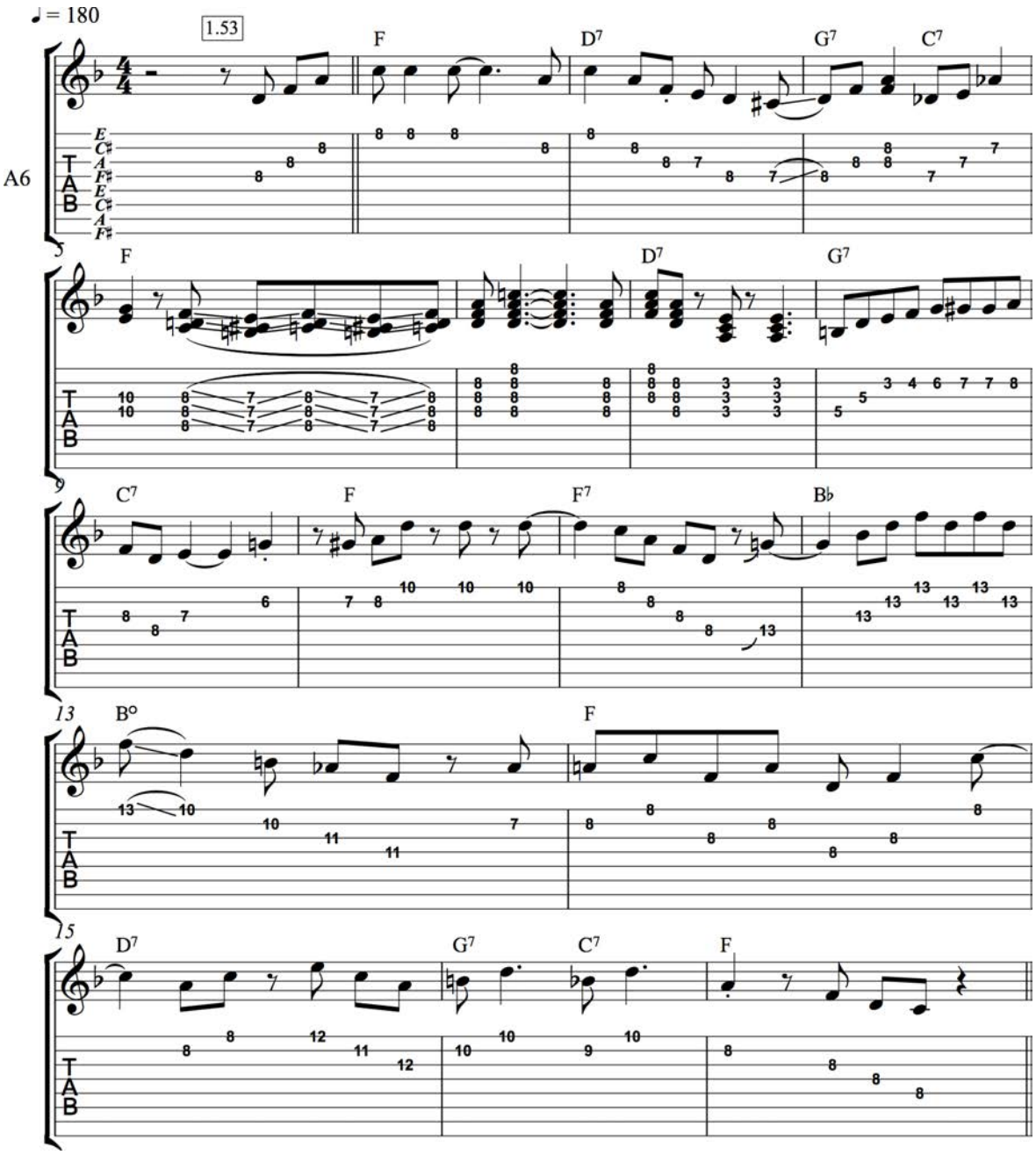
Ex. 7.12 Head of 'Steel guitar Stomp', Noel Boggs (8/10/45, mx. K1942)

The bridge of his final chorus on 'Steel Guitar Stomp', transcribed in Ex. 7.13 below, can only be performed on E13 tuning, confirming its use in those bars, at least.



Ex. 7.13 Improvisation on 'Steel Guitar Stomp', Noel Boggs (8/10/456, mx. K1942)

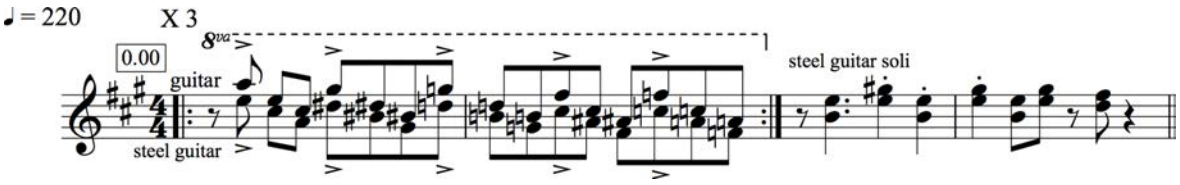
Boggs combined monophonic and chordal passages in almost twenty percent of the solos examined for this study. Not in evidence before the war and rarely employed with Wills, the frequency of this dual approach increased as Boggs' career progressed. The style allowed his talent for monophonic melody to shine, while providing contrast and variation to his more staid chordal improvisation. An excellent example can be seen Ex. 7.14 below. In this sparkling solo, Boggs' largely legato line lithely negotiates the predominately cyclical harmony. The bar position and angle revealed by the tablature suggests that chordal conception and technique still influence melodic choices in the monophonic melody. However, Boggs does occasionally break free from these confines with lateral bar movement, as can be seen in bars eight, thirteen and fifteen. Nevertheless, root position is used to generate his ubiquitous broken arpeggio in monophonic form in bar fourteen. The elegant merging of Boggs' two primary improvisational modes provides the highpoint of Penny's track.



Ex. 7.14 Improvisation on 'Flamin' Maime', Noel Boggs (c1952, Standard Radio Transcriptions)

When Boggs joined Bob Wills in 1944, he formed close ties with another recent enlistment, outstanding jazz guitarist, Jimmy Wyble. Together, they continued the practice of 'twin guitar' harmonisation, in the tradition established by McAuliffe and Eldon Shamblin in Wills' pre-war recordings. Like Shamblin, Wyble was a reading musician who was versed in jazz. Wyble, like many western swing guitarists, was enamoured with the style of Charlie Christian, Benny Goodman's pioneering guitarist. But Wyble's solo on the blues 'Bob Wills Special', recorded in 1944, suggests his appreciation for jazz extended to the emerging bebop

genre.[440] Wyble and Boggs remained close friends and later worked together in established bands and on many recording projects. Together, they composed perfect harmonised segments with which to decorate arrangements. An example can be heard in the opening to Spade Cooley's recording of 'It's Dark Outside', transcribed in Ex. 7.15 below.[441] The accented cross rhythm of the chromatically descending motif, executed at a brisk tempo, demonstrates the precision with which Boggs and Wyble collaborated.



Ex. 7.15 Harmonised melody on 'It's Dark Outside', guitar, Jimmy Wyble, steel guitar, Noel Boggs (31/1/47, mx. D7-VB-451)

7.5 Summary

When Boggs emerged from relative anonymity in Oklahoma onto the stages of California, the personal style that he had developed gained a prominent place in the epicenter of western swing. His style was distinct, impressive and consistent. Its predominately chordal nature, not founded on Hawaiian technique or sensibility, provided an alternative model to his greatest contemporary rival, Earl 'Joaquin' Murphey. His approach was widely emulated and represented a distinct school of playing, directly attributable to him.

The emergence of Boggs' advanced chordal style in 1944 represented a strong transformation of his earlier style. He adopted more complex tunings and relied on their intervallic properties as a key element of his solos and accompaniments. An assessment of his output suggests that, once he had adopted the new tunings, his creative development slowed. His chord solos can be said to be consistent, which is both a compliment and a pejorative. While maintenance of high standards is a positive attribute, working within limited confines is not necessarily a recipe for exciting improvisation. Nevertheless, he maintained a deft rhythmic touch that bandleaders appreciated.

The near absence of Hawaiian influences contributed to the sound and consistency of Boggs' solos. Chord solos, by their nature, are not easily infused with the vocal inflection and nuance that characterised Hawaiian steel playing and, other than some vibrato, Boggs made few attempts to emulate Hawaiian style. Crucially, Boggs used the Hawaiian technique of bar slants sparingly, without which harmonised scales and dyadic melodies are difficult, and

[440] Wills and Playboys, 'Bob Wills Special'.
[441] Spade Cooley and his Band, 'It's Dark Outside', (RCA Victor 20-2181-B), 1947.

opportunities for voice leading are greatly diminished. So it was that Boggs, and the many that emulated his style, reached an impasse. Without chordal variety, constant reiteration of the same voicings became stale. Importantly, parallel movement between chords became very predictable.[442] Bar slants offered only a partial solution, attended by limited options and difficulty in execution. More necks with varied tunings offered another option, but with scope limited by the difficulty of smooth phrasing distributed on multiple necks. It is not surprising that the sound of moving voices against a pedal tone, in Bud Isaac's performance on 'Slowly', should be such a revelation to a generation of players who had been struggling for so long to overcome the parallel motion of chords that their instrument dictated.

The following chapter is examines the style of Boggs' contemporary rival, virtuoso Joaquin Murphey, whose fresh approach further expanded the harmonic scope of the instrument but who was also eventually engulfed by a tide of pedal steel players.

[442] Beyond repetitiveness and predictability, a psychological explanation can be found for dissatisfaction with chordal movement that lacks satisfying voice leading. Huron's theory of schematic predictability holds that music is constructed to conform with an audience expectation that arises from musical experience. Beneath the salient tonic-dominant relationships that Western-enculturated musicians and audiences expect lies the mode of resolution, voice leading. Thus a paucity of voice leading can be in conflict with deep player and audience expectations. David Huron, *Sweet Anticipation: Music and the Psychology of Expectation* (Cambridge, Mass.: MIT Press, 2007), 224-25, 40.

Chapter 8: Earl 'Joaquin' Murphey

Earl 'Joaquin' Murphey (30 December 1923-25 October 1999) was the brightest star of the steel guitar in the golden decade of western swing, the 1940s. He was a jazz stylist with a voice as distinctive, revered and influential, as was Charlie Parker's in bebop. Like Parker, his influence extended far beyond the genre in which he achieved prominence. Murphey combined unparalleled melodic inventiveness with a sublime rhythmic acumen in a style based on deep harmonic insight. He struggled to give voice to his advanced musical ideas within the limitations imposed by the steel guitar. Yet his unhurried style betrayed none of the stress that he was exerting on the limits of the instrument. This chapter will consider Murphey's influences and examine the development of his style. It will show the extent to which Murphey resourcefully extended the harmonic properties of the instrument and, in highlighting the difficulties he encountered, points to the inevitability of the imminent decline of the instrument as pedals opened harmonic floodgates and heralded a new stream of stylistic development.

8.1 Career

Joaquin Murphey was a Californian who was raised in the Los Angeles, the crucible of Hawaiian steel guitar style in the 1930s. A prodigy, he was inculcated with Hawaiian technique and sensibility as a teenager at Roland Ball's music studio in Hollywood. In an interview with Kenneth Rainey, Murphey stated, 'When I started playing, I was playing strictly Hawaiian types of things. I had never heard western swing. I liked Dick McIntire and Sol Hoopii, and guys like that.'[443]

Details of Murphey's teachers and the method of his instruction are sketchy. Ernie Ball related that his father, Roland, had a number of leading Hawaiians on his teaching staff but was unable to name them specifically.[444] He did note his father's close association with Sol Ho'opi'i, Dick McIntire and Bernie Kaai, whose compositions and arrangements he published.[445] Whether Ho'opi'i, McIntire or Kaai ever taught for Ball, or if Murphey had ever received formal or informal instruction from them elsewhere, is unknown. However, an anecdote from Ball's son suggests that there was at least informal contact. Ball related that, on the occasion of a visit from McIntire, his father placed Murphey in an adjacent room and told him to imitate Ho'opi'i. Murphey impersonation was close enough to convince McIntire that he was listening to Ho'opi'i, confirming both Murphey's prodigious talent and the richness of

[443] Kenneth Rainey, 'Earl "Joaquin" Murphey: Steel Man Extrordinaire', *The Journal of Country Music* 22/1.
[444] Ernie Ball, 'Telephone Interview', ed. Kenneth Rainey, 1998.
[445] Ball claimed coauthor ship of most of McIntire's work but little of Ho'opi'i's.

the musical culture in which he developed.[446] Murphey acknowledged the teaching of Tommy Sargent, whose group lessons of five or six students he attended. After lessons, Murphey would remain and jam with his teacher.[447]

In 1942, at the age of nineteen, Murphey took the cheap six-string electric instrument, bought for him by his parents, to the Riverside Rancho Ballroom to audition for a position with Spade Cooley's band. Cooley had been performing on the same dance circuit on which Bob Wills had achieved his initial West Coats success, run by Bert 'Foreman' Phillips. Cooley was intending to expand his operations by forming a second larger band, a task made more difficult by gaps that were opening up in his existing lineup, as musicians were drafted for military service. Murphey, however, had been exempted from service due to lungs scarred by pneumonia. He was being considered as a replacement in the smaller group, but his performance, first for Smokey Rogers and Tex Williams, and later Cooley himself, was so impressive that he was drafted into the larger band led by Cooley.[448]

Under Cooley's patronage, Murphey was immediately inducted into the musician's union. His student guitar was soon replaced with a professional model. He later upgraded to a double-necked eight-string instrument, constructed by renowned luthier, Paul Bigsby, and it was this guitar on which his first recordings were made.[449] Cooley made concession to Murphey by way of his performance duties. Cooley's ensemble was the first western swing band to work exclusively from written arrangements.[450] Although his aural acuity and harmonic understanding ran deep, Murphey did not read music. To compensate, Cooley's arrangements had no written parts for Murphey, but spaces were left for his solos. According to Murphey, Cooley instructed him not to worry about the melody and improvise as he felt.[451]

Cooley's success on the Californian dance circuit continued but, because of an eighteen month recording ban instituted by the musicians union, he did not record until December 1944. The session yielded a song, 'Shame on You'[452], that went to the top of *Billboard*'s chart listing country music in March 1945.[453] Cooley's popularity was also enhanced by a number of movie appearances in which Murphey can be seen with his double-necked Bigsby guitar.[454]

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[446] Ball, 'Telephone Interview'.
[447] Rainey, 'Earl "Joaquin" Murphey: Steel Man Extrordinaire', 27.
[448] Rainey, 'Earl "Joaquin" Murphey: Steel Man Extrordinaire', 27.
[449] The instruments made for Murphey represented Bigsby's first foray into instrument manufacture. Babiuk, *The Story of Paul Bigsby: Father of the Modern Electric Guitar*, 23.
[450] Kenneth Rainey, 'Larry "Pedro" Depaul: The Ace Behind the King of Spades', *Journal of Country Music* 20/3 (1999).
[451] Rainey, 'Earl "Joaquin" Murphey: Steel Man Extrordinaire', 27.
[452] Spade Cooley and His Orchestra, 'Shame on You', (Okeh 6731), 1944.
[453] The *Billboard* chart was entitled "Most Played Juke Box Folk Records'. It was first published in 1944 and was replaced by 'Country& Western Records: Best Sellers in Store' in 1948. Joel Whitburn, *Hot Country Songs 1944 - 2012* (Menomonee Falls, Wisconsin: Record Research Inc, 2013), 495-98.
[454] *Rockin' in the Rockies*, dir. Vernon Keays. Columbia Pictures), 1945.,*Texas Panhandle*, dir. Ray Nazzarro. Colombia Pictures), 1945.

In the spring of 1946, Murphey left Cooley to join the Plainsmen, with whom he performed and recorded until late 1947. He subsequently joined Tex Williams' band, the Western Caravan. This group consisted of Cooley alumni who had left, en masse, tired of Cooley's stringent regime and abusive behavior. In the early 1950s, as western swing began to decline, Williams left and Murphey moved to San Diego in a diminished Western Caravan led by Smokey Rogers. However, he was unable to adjust to the pressure of the group's daily TV appearance and returned to Los Angeles where he continued to accept casual live and recording work. In the hard times that ensued, Murphey asked Cooley for work and was rehired. But in 1961, Cooley was imprisoned for the murder of his wife.

Murphey seems to have given up music in the 1960s, caring for an aunt and taking odd jobs. Alcoholism took a toll on his health. In 1996, three years before his death, he met Los Angeles musician, Michael Johnstone who, with steel player and luthier Chas Smith, supported him and helped rekindle his musical flame. They supplied him with a new instrument, equipped with pedals to his specification, and, over an extended period, organized recording sessions. On the resulting album, Murphey's technical prowess is little subdued by age and health. His rhythmic touch and melodic inventiveness remain and the depth of his harmonic insight is evident on every track. The timely album provides a fitting epitaph to the career of an outstanding and influential musician.[455]

8.2 Influences

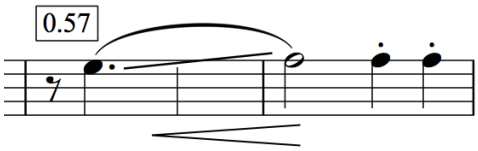
The Hawaiian training gained at Ball's academy helped Murphey to develop the skills required to win a place with Cooley and provided a technical platform on which to develop his personal style. Murphey was instructed in the core elements of Hawaiian technique and exposed to the expressive devices of glissando, inflection and vibrato, in the context of Hawaiian music. The repertoire he encountered employed the three modes of melodic expression; single note, dyadic and chordal. Additionally, he enjoyed the advantage of encountering or receiving instruction on current Hawaiian tunings of C6 and F#9 at an early age. Furthermore, he was privileged to witness these elements infused in the styles of the best Hawaiian players of the day. As a result, the flawless technique that he developed never waivered and provided a strong footing from which his improvisations seem to flow effortlessly.

Murphey's affinity for jazz was a crucial factor that launched his career. It was his performance of 'Limehouse Blues' at audition that caught Cooley's attention.[456] Evidence

[455] Joaquin Murphey, 'Murph', (Class Act Records), 1999.
[456] Rainey, 'Earl "Joaquin" Murphey: Steel Man Extrordinaire', 27.

suggests that the Hawaiian players that Murphey encountered were in some part responsible for his development of this interest. Both of the greatest Hawaiian exponents of jazz on the steel guitar, Sol Ho'opi'i and Dick McIntire were in Murphey's orbit and clearly left a deep impression on him. In an interview with Mike Neer, Jeremy Wakefield recounts Murphey's repeated references to McIntire, when he met Murphey in 1999. Echoes of Ho'opi'i's and McIntire's smooth legato articulation and rich tone can be heard in Murphey's playing. More significantly, distinct similarities exist between the Hawaiians' and Murphey's syncopated approaches to swing chord solos, a resemblance that was assisted by Murphey's adoption of McIntire's preferred F#9 tuning.

Beyond initial Hawaiian jazz influences, Murphey studied contemporary jazz players but, with the notable exception of Noel Boggs, avoided steel guitarists.[457] His clarinet styling affirms the influence of jazz wind players such as Benny Goodman. With a legato style that minimized the sound of the picked attack, Murphey incorporated expressive inflections in melodic lines coloured by a rich clarinet-like timbre. The effect is uncanny. A vivid example can be found in Cooley's 'You Can't Break My Heart', when Murphey fashions a long clarinet-like glissando that appears to swell in volume.[458] (See Ex. 8.1) Renown steel guitarist Herb Remington, who replaced Boggs in Wills' band, recounted being puzzled when first hearing the Western Caravan. He thought he heard a clarinet but couldn't see the player on stage. But it was Murphey, sitting unobtrusively at the back of the stage.[459]

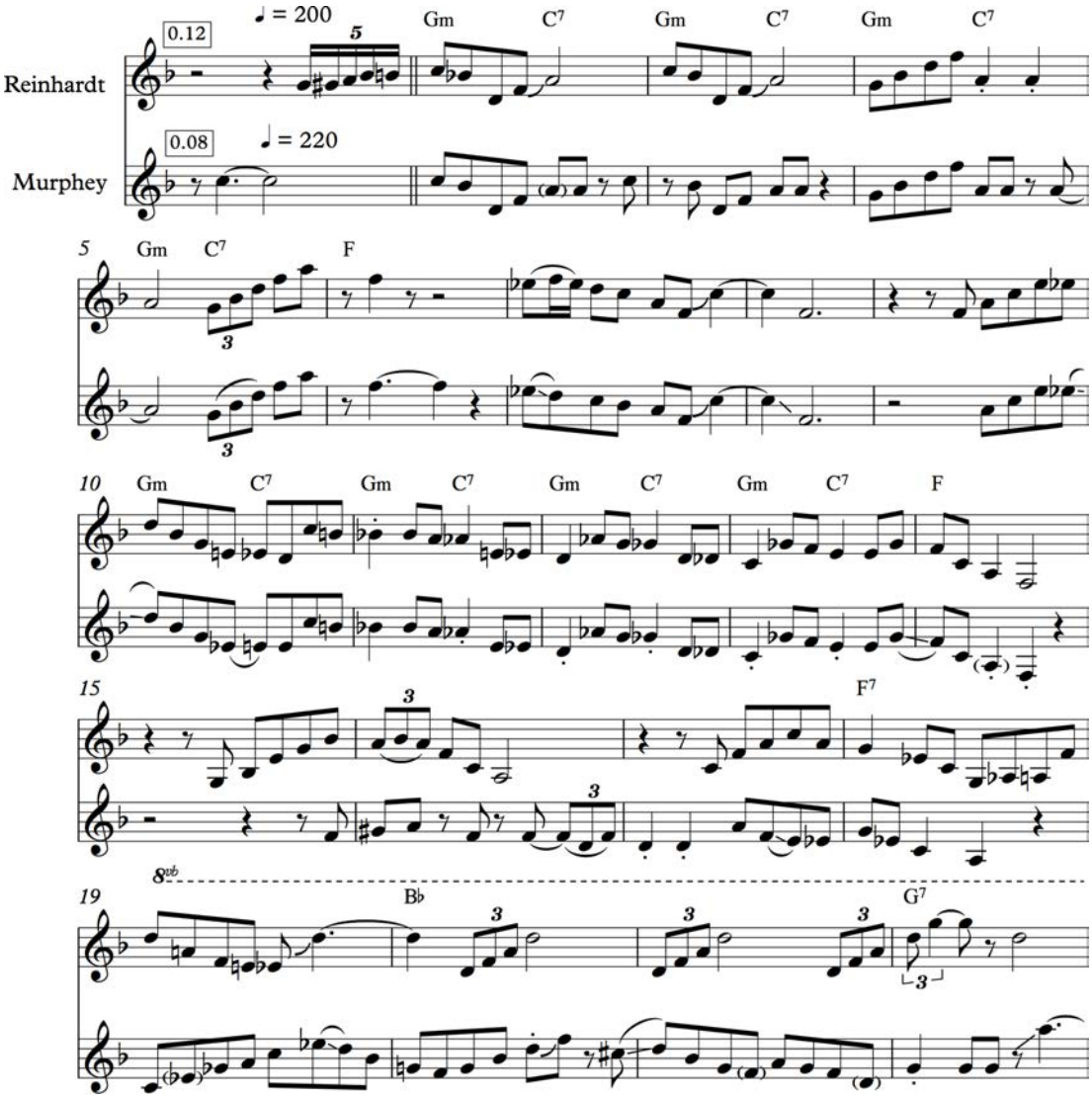


Ex. 8.1 Clarinet-like gesture, 'You Can't Break My Heart', Joaquin Murphey (24/7/45, mx. HCO 1488)

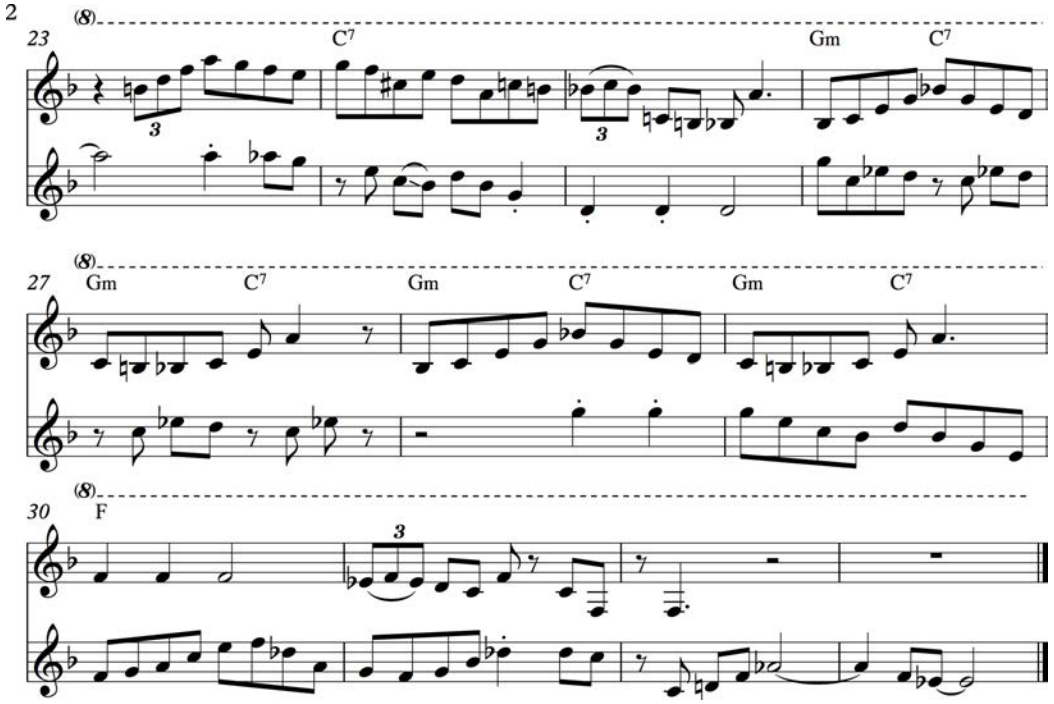
Murphey didn't form a close partnership with a guitarist, in the manner of McAuliffe and Shamblin or Boggs and Wyble. In fact, he expressed a degree of contempt for guitarist Johnny Weis, with whom he was paired in both Cooley's band and the Western Caravan, criticizing his blinkered mimicry of Charlie Christian.[460] Murphey's own appreciation of jazz guitarists extended beyond Christian to Les Paul and Django Reinhardt. The depth of Murphey's admiration for Reinhardt is revealed in a recording with the Plainsmen in 1946[461],

[457] Rainey, 'Earl "Joaquin" Murphey: Steel Man Extrordinaire', 28.
[458] Spade Cooley and His Orchestra, 'You Can't Break My Heart', (Columbia 36935), 1945.
[459] Rainey, 'Earl "Joaquin" Murphey: Steel Man Extrordinaire', 28.
[460] Rainey, 'Earl "Joaquin" Murphey: Steel Man Extrordinaire', 28.
[461] The Plainsmen, 'Honeysuckle Rose', (Coast 8008), 1946.

when he recanted the improvised opening sixteen bars of Reinhardt's 1938 recording of 'Honeysuckle Rose'[462], a comparison of which can be seen below in Ex. 8.2. At a faster tempo, Murphey follows Reinhardt's version closely, embellishing the line occasionally with glissandi. Reinhardt's solo contains a remarkable gesture of segmented parallel chromatic arpeggios that descends between bars ten to fourteen, which Murphey reproduces assiduously. Murphey abandons any pretense of imitation when he reaches the contrasting B section and completes the thirty two bar form in his own distinct style. This example is an indication not only of the breadth of Murphey's influences, but also the depth. It illustrates the acuity of his aural skills and the extraordinary technique required to translate the nuances of Reinhardt's improvisation from Spanish guitar to steel guitar.



[462] Quartet of the Hot Club of France, 'Honeysuckle Rose', (Fremeaux FA 307), 1938.



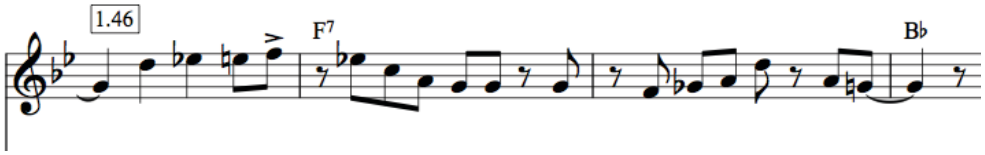
Ex. 8.2 Comparison of Honeysuckle Rose heads, Django Reinhardt (31/1/38, mx. DTB3523-1) and Joaquin Murphey (April 1946, mx. 277)

The depth of Murphey's harmonic insight is apparent in various aspects of his style, but no specific early source of inspiration is apparent. A great admiration for blind British jazz pianist, George Shearing, is acknowledged in the scant literature devoted to Murphey.[463] Shearing was known for constructing improvised solos of close-voiced, two-handed, block chords. His voicings were often comprised of many small intervals that enhanced the dissonance of already complex chords. However, Shearing only made a handful of recordings for Decca in England before the war.[464] He moved to America in 1947 and his recording career only took off in 1949, so it is unlikely that Murphey had heard him before he began his career with Cooley.

Towards the end of his life, Murphey expressed regrets at not having a pedal steel guitar available in his youth and that he would have pursued complex chord melodies if he had the facility at the time. Instead, he said, he was forced to resort to 'horn line style single note playing, out of frustration'.[465] This assertion provides a valuable insight into the source of influences on his monophonic style, in which harmony is often expressed through unusual and stridently dissonant arpeggios. An early example, from Murphey's solo in 'Troubled

[463] Andy Volk, *Lap Steel Guitar* (Anaheim Hills, California: Centerstream Publishing, 2003), 102.,Rainey, 'Earl "Joaquin" Murphey: Steel Man Extrordinaire', 28.
[464] George Shearing, Alyn Shipton, *Lullaby of Birdland* (New York: Continuum, 2004), 72.
[465] Michael Johnstone, 'Email of Murphey's Comments', ed. Guy Cundell, 2019.

Over You', can be seen in Ex. 8.3 below.[466] In a two bar phrase over the dominant chord, F7, Murphey begins with a descending dominant arpeggio that comes to rest on the ninth, then ascends from the tonic through elements of a piquant F13b9 chord.



Ex. 8.3 Improvisation from 'Troubled Over You', Joaquin Murphey (25/7/45, mx. H 1486)

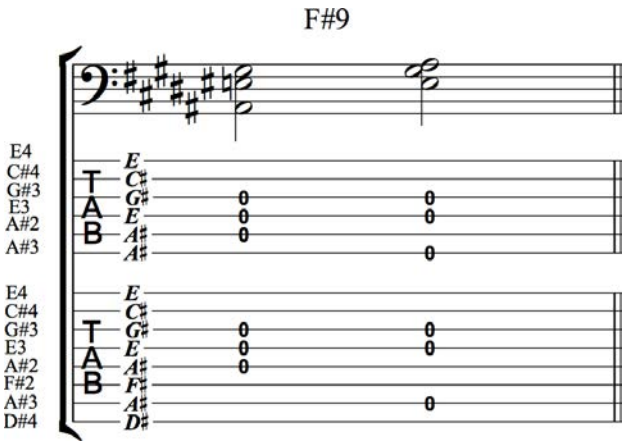
8.3 Tunings

Murphey's predisposition to complex sonorities can be seen in his development of tunings. Murphey began playing with a six string F# minor tuning, presumably at the suggestion of the tutors at Ball's academy.[467] When interviewed by Michael Johnstone in 1995, he describes enhancing the F#9 tuning by adding a reentrant bottom string.[468] Murphey doesn't specify the configuration of the instrument, but states that he was seventeen or eighteen at the time. This suggests that it may have been the six string instrument that he began his career with. A significant implication that follows is that his primary tuning, before he began using twin necked guitars, was F#9.

In the interview, he does not state the pitch of the string but mentions that he used a heavy unwound string. This narrows the possible range of pitch of the reentrant string to between that of the wound third string and unwound second string of an F#9 tuning. These two strings represent the minor seventh and the perfect fifth of F#9. Experimentation reveals that, of the available pitches between the two, the major third, A#, was Murphey's choice. He describes the effect of the addition as making the tuning sound modern. While the A# is merely a duplication of the pitch of the fifth string, in this context its higher pitch imparts a subtle quality to the voicing of F#9. Placing the major third next to the major ninth creates an interval of a major second. The overtones of the two notes conflict slightly, creating a shimmer of dissonance that Murphey was looking for. In chord solos, he often selects a three note close-voicing of a dominant ninth chord, as shown in Ex 8.4 below. While is not clear if Murphey's addition of the reentrant A# was applied to his six-string instrument, he certainly had the string available on the Bigsby eight-string that he received in late 1944. On a six-string, he may have replaced the bottom F# with the A#, as shown below. One possible eight-

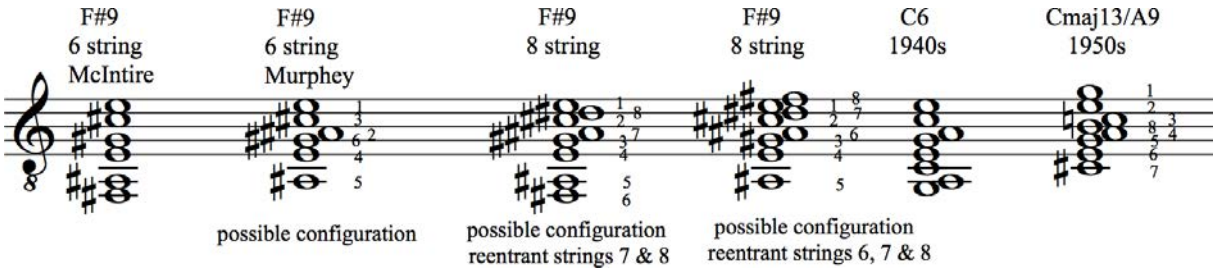
[466] Spade Cooley and His Orchestra, 'Troubled over You', (Columbia 37937), 1947.
[467] Volk, *Lap Steel Guitar*, 105.
[468] Volk, *Lap Steel Guitar*, 106.

string configuration is also shown below for comparison. Another configuration is shown in Ex. 8.5 but these two examples do not exhaust the possibilities. Further investigation is required to build a clearer picture of how Murphey approached the tuning.



Ex. 8.4 Alternative chord voicings, F#9 tuning

In the early 1950s, Shearing's influence may well have caused Murphey to reconfigure the C6 tuning that he used in the 1940s, as shown in Ex. 8.5 below. He made three substantial changes to the earlier tuning. Firstly, he raised the pitch of the tuning by placing a high G on the top string, removing the lowest string. Second, after moving seven remaining strings by one position, he raised new seventh string, C2, by a semitone, in a manner since attributed to Jerry Byrd.[469] By lifting the C to C#, he created a dual tuning in which the lower portion formed an incomplete A7, while the top portion retained a C6 formation. To this configuration, he added a reentrant eighth string with a pitch of B. This extended both coexisting voicings to A9 and Cmaj13 respectively. The resultant variety of complete and incomplete close voiced chords that fell beneath a perpendicular bar provided him with a kaleidoscope of harmonic colour to add to his F#9 tuning.

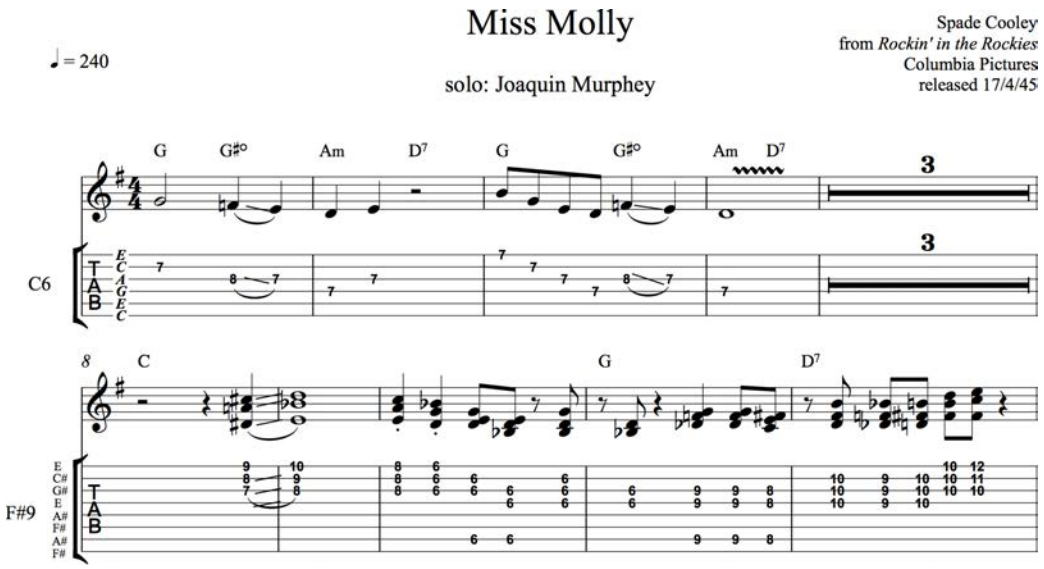


Ex. 8.5 Joaquin Murphey's Tunings

[469] Byrd, *It Was a Trip on the Wings of Music*, 118.

8.4 Early Recordings

The first commercially released recording of Murphey was made in December 1944, over a year after he had joined Cooley's band. It is therefore possible that his first recorded performance for Cooley was in the film *Rockin' in the Rockies,* released in mid 1945, but produced earlier.[470] Murphey's twelve second appearance is one of a handful of video representations of his performance in existence. Murphey is seen seated, with the new Bigsby double-necked instrument on his lap. He has a prominent position in band's rendition of 'Miss Molly', taking an introductory solo, which is transcribed below in Ex. 8.6. He begins the solo by paraphrasing the first line of the song on his C6 neck. Though brief, the phrase demonstrates exceptional legato articulation and full tone. He then moves to his F#9 neck for a subsequent chordal phrase that utilises the close voicings that the reentrant string provides. Three string grips of his right hand can be clearly seen. While he is miming his part, the economy of his hand movements is appreciable.[471]

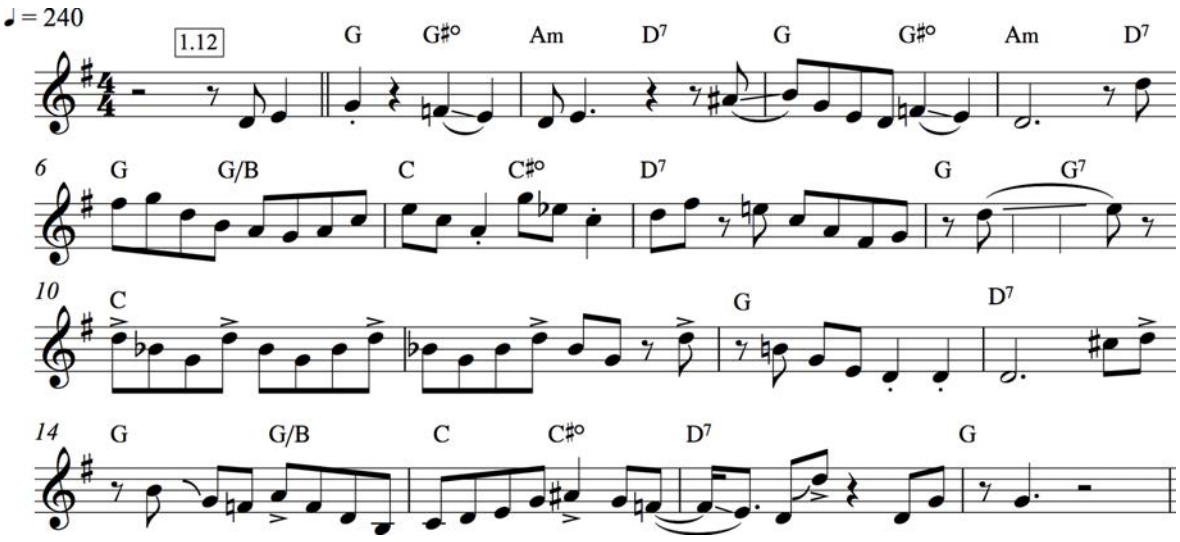


Ex. 8.6 Improvisation on 'Miss Molly', Joaquin Murphey (c Jan 1945, film sound track)

Murphey's performance is an excellent but brief example of a performance in the stressful environment of a high-profile Hollywood film sound stage. A contrasting recording, made in the informal setting of the Riverside Rancho dance hall soon after, shows Murphey's approach to the same tune, with shackles removed. The recording is a radio transcription, transcribed below in Ex. 8.7, was recorded live for broadcast on station KECR.[472] In this performance, Murphey is given the whole chorus and, having completed the opening phrase

[470] *Rockin' in the Rockies*, dir. Keays.
[471] Spade Cooley, 'Miss Molly' c 1945. https://www.youtube.com/watch?v=kfBdHfg1Gpg (accessed March 5th 2019).
[472] Spade Cooley and His Orchestra, 'Miss Molly', (radio transcription), 1945.

of the melody, launches into a torrid solo of eighth note arpeggios. A clarinet-like glissando provides a resting point at bar nine and he laces the remaining line with syncopated accents.



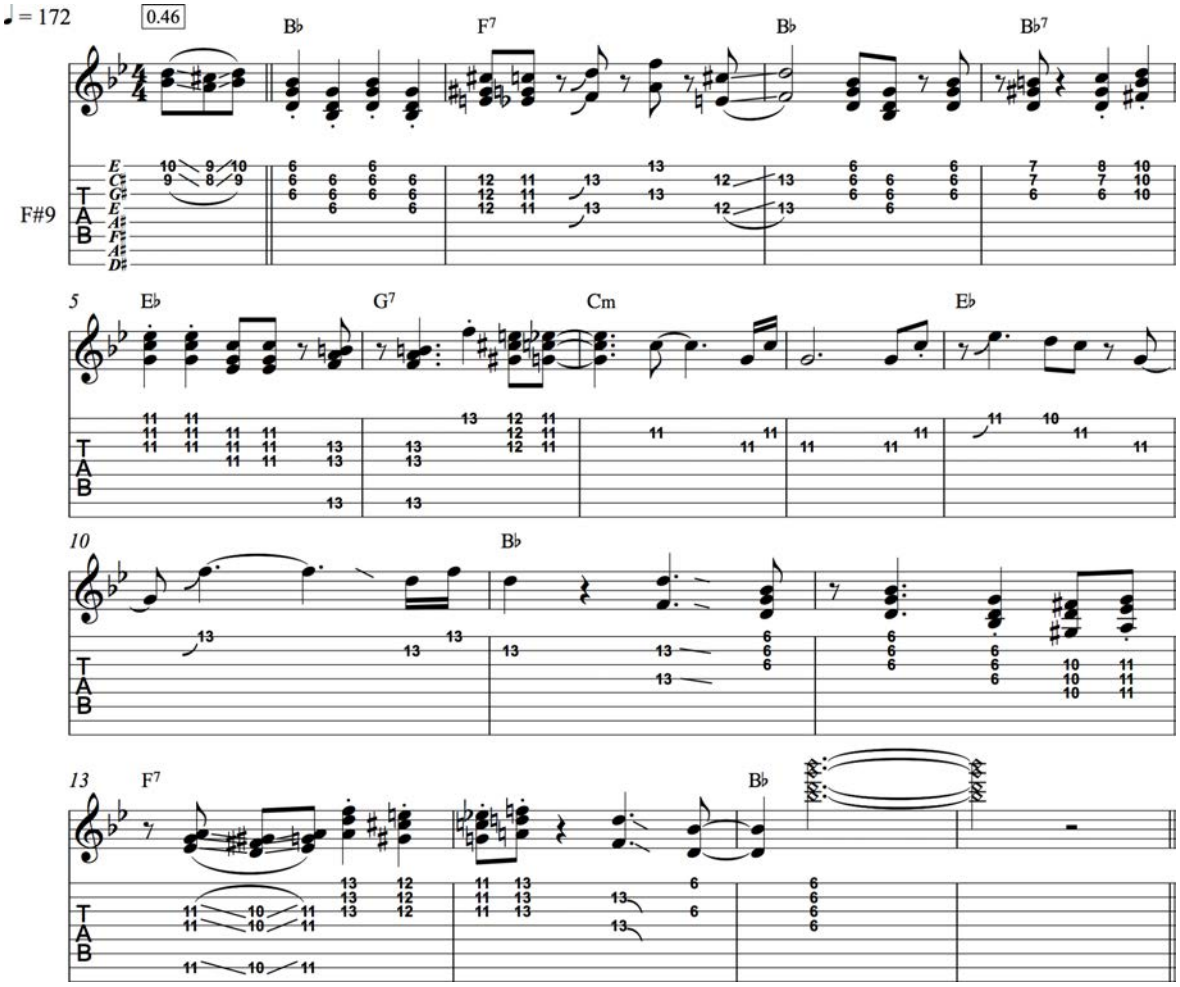
Ex. 8.7 Improvisation on 'Miss Molly', Joaquin Murphey (c 1945, radio transcription)

For the most part, Murphey's contributions to his first session with Cooley were as restrained and disciplined as his movie performance. Only five tracks were recorded on the session, contrasting with Bob Will's marathons when twenty or more sides were cut. However, the practice of recording a limited number of tracks became the norm for Cooley, with no more than five tracks recorded at any one session while Murphey was with the group. A factor limiting output was that, in contrast to Wills' head arrangements that relied on improvisation by the rhythm section, all of Cooley's arrangements were written and, as Murphey reported, rehearsals were extensive and detailed.[473] The exhaustive process would have restricted the amount of material that could be prepared and recorded at any one time. As a further consequence of this process, Murphey was at the beck and call of Cooley's arranger, Larry 'Pedro' De Paul. With no tradition of steel guitar scoring to draw on, and Murphey's experimental tunings providing yet a further barrier, De Paul would have been at a loss if intending to write for Murphey who, of course, couldn't read anyway. Beyond his solos, Murphey was given little license to improvise within De Paul's tight arrangements. As a result, steel guitar is used sparingly throughout the first session, a pattern that would reoccur through out Murphey's tenure and that of his successor, Noel Boggs.

Steel guitar is employed on four of the five recordings made in December 1944. Murphey is required to solo in each of the four cuts but is only allotted eight bars in two of them and in a third, his solo is fragmented into four bar sections. The piece in which he has the opportunity to shine is 'Shame on You', where his solo, transcribed in Ex. 8.8 below,

[473] Volk, *Lap Steel Guitar*, 104.

extends for an entire sixteen bar chorus.[474] In the opening bars, distortion from his amplifier provides a timbral edge to the chords, which dissipates as he moves to a monophonic line in bar seven, allowing a clarinet-like tone to emerge. In bars four and five, the tablature shows a characteristic chord sequence of the F#9 tuning, propelling the melodic line through a secondary dominant and extending the phrase to eight bars duration. The following monophony provides contrast and release, with the chordal style returning to achieve a climax, assisted by slight distortion and the close-voiced chords. This tune was a national hit for Cooley and announced Murphey's arrival in western swing.



Ex. 8.8 Improvisation on 'Shame on You', Joaquin Murphey (4/12/44, mx. H 1158)

When Murphey left Cooley's band to join the newly formed Plainsmen, he entered a very different environment, one in which his talents as both a soloist and accompanist could be extended. The Plainsmen was a smaller ensemble, assembled around an adept vocal trio. Recordings suggest that the smaller group relied more on the musicianship and creativity of its members to compile accompaniments, rather than music literacy and the skills of an arranger, as had been the case in Cooley's band. As a result, throughout the early recordings,

[474] Cooley and Orchestra, 'Shame on You'.

Murphey was called on to provided various forms of accompaniment. An example can be heard on 'New San Antonio Rose', recorded in Murphey's first session with the group in April or May 1946.[475] Murphey adds chords of extended duration to the violin introduction and solo, and melodic chordal fills behind the vocal trio that, at times, extend to substantial countermelody. With an energetic sixteen bar solo and extensive accompaniment, Murphey only rests for the duration of the accordion solo, in stark contrast to his minimal duties with Cooley.

Murphey had joined the Plainsmen in company of another Cooley refugee, accordionist George Bramby. Together they provided an instrumental nucleus of high quality, on which the group depended in its early recordings. Many of the early recordings, such as 'Honeysuckle Rose', 'Vance Lane Special' and 'Sweet Georgia Brown' were instrumental vehicles for Murphey and Bramby.[476] Murphey demonstrated a maturity of style on these recordings that he never surpassed.

8.5 Style Overview

Murphey was widely considered the premier western swing steel guitarist by his peers. He was a jazz musician with highly developed improvisational skills, facilitated by a remarkable technique that he developed in the context of Hawaiian music and honed on the bandstand. He was equally adept in the three modes of steel guitar performance, although monophonic and chordal modes were dominant in his recordings. Dyads were incorporated within his chordal work but seldom called for in isolation in the repertoire that he played.

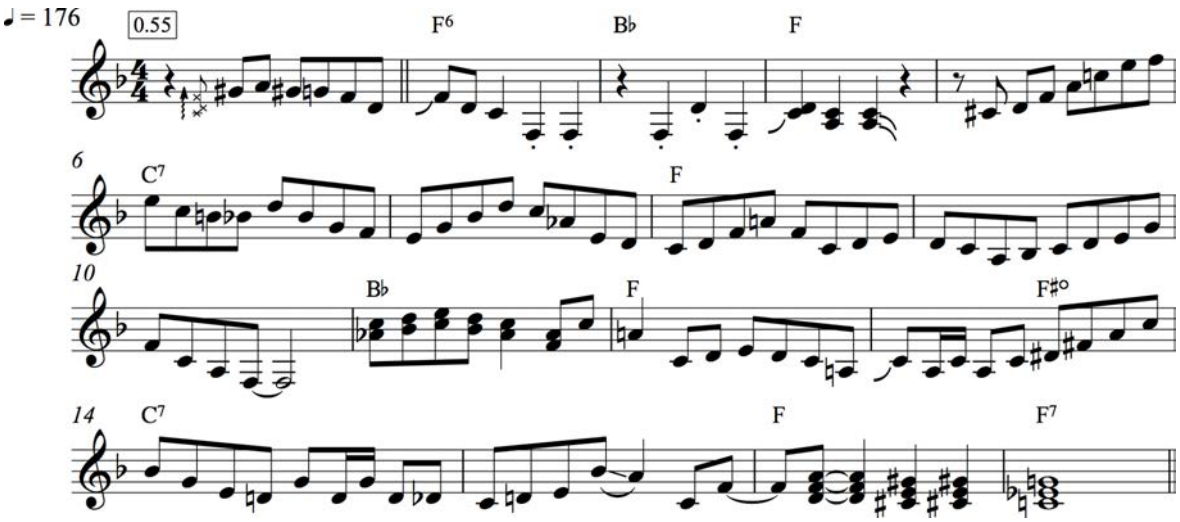
8.5.1 Monophonic

Murphey's single note lines can be characterised as precise, at times blistering fast, and articulated with great detail. Murphey coordinated the core techniques of bar manipulation, picking and blocking with an extremely light touch that facilitated his legendary velocity. Additionally, he developed a system of position playing that enabled him to access notes with minimal bar movement. The concept was not new but, using the relatively new C6 tuning, he developed the technique to a pinnacle. This can be seen in his performance of the head of pianist, Joe Sullivan's spritely melody, 'Little Rock Getaway', transcribed in Ex. 2.14 in Chapter 2.[477] Sullivan's arpeggiated melody moves rapidly through a set of chord changes of fast harmonic rhythm that provides a difficult challenge for steel guitarists. The tablature shows that Murphey negotiates the melody with a well-planned route that utilises the width of

[475] The Plainsmen, 'New San Antonio Rose', (Coast 227), 1946.
[476] The Plainsmen, 'Sweet Georgia Brown', (Coast 8008), 1946., Plainsmen, 'Honeysuckle Rose'.,Andy Parker and Plainsmen, 'Andy Parker and the Plainsmen, Vol. 2', (British Archive of Country music 329).
[477] Cooley and Orchestra, 'Little Rock Getaway'.

the neck, with gradual movement of the bar from position to position within a five-fret range. As a result, he is able to achieve legato articulation throughout the entire melodic line, an effect that would be impossible with a linear approach.

For swing and bebop players, improvising across chord changes in an unbroken line of eighth notes is a staple and, for some, a signifier of prowess. This world was closed to the conventional steel player of the 1940s, impaired by traditional technique and the restraints of the instrument. Murphey was the exception, with a skill that elevated him above his steel guitar peers and placed him in the ranks of his jazz contemporaries. The fluent line in his solo on 'New Panhandle Rag', recorded with Smokey Rogers in 1950 and transcribed in Ex. 8.9 below, clearly demonstrates an assured improvisational fluency with contemporary features.[478] After an opening statement of four bars, a consequent phrase is extended with a legato passage that, at the end of bar nine, bridges the two eight bar sections of the solo. The blurring of demarcation of form in this manner is a distinctive characteristic of bebop soloists. The modernity of the effect is heightened in bar eleven by the tonality of the following dyadic passage of parallel major thirds on the subdominant.



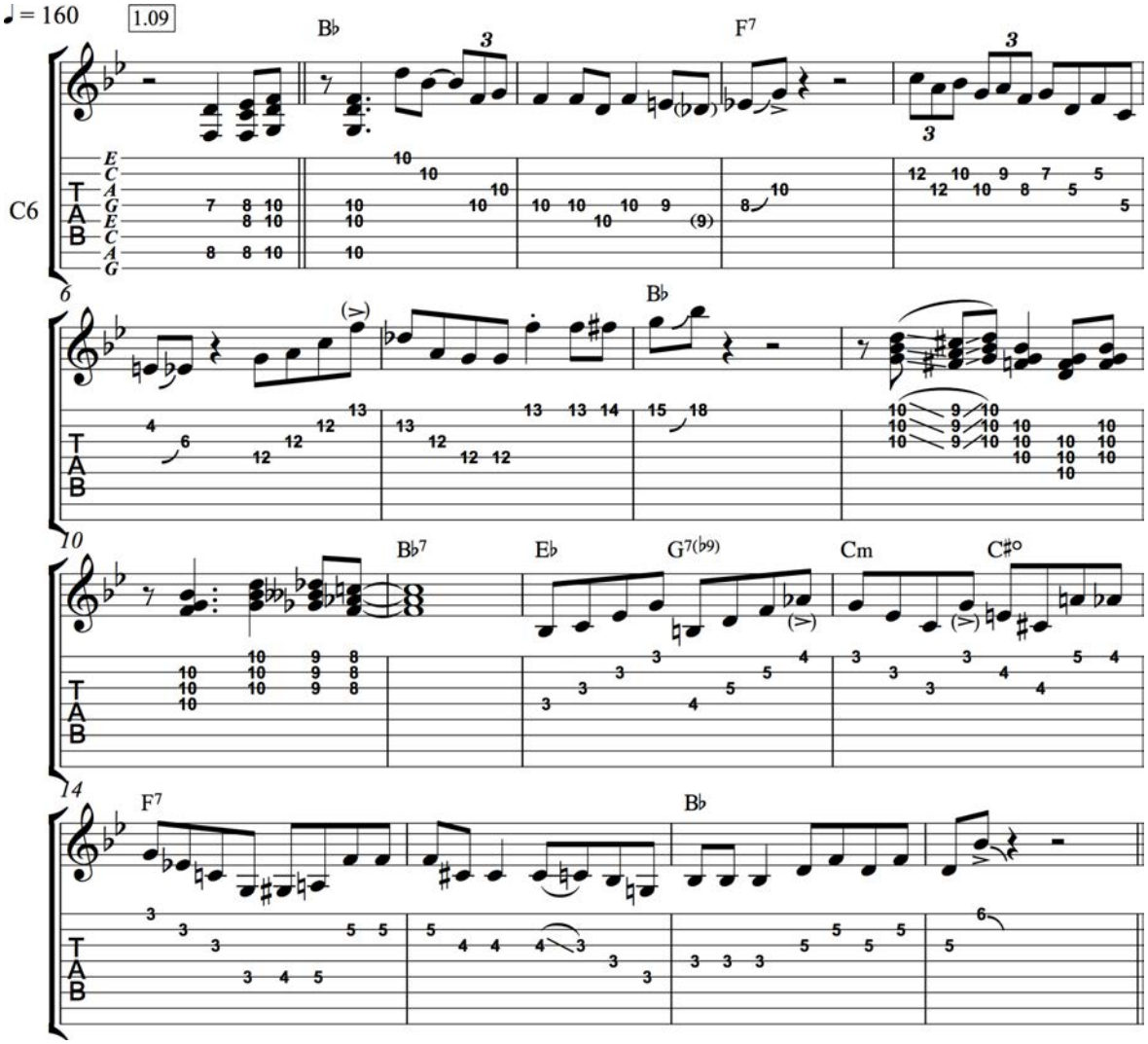
Ex. 8.9 Improvisation on 'New Panhandle rag', Joaquin Murphey (12/6/50, mx. L5656)

For Murphey, velocity was not merely an instrument of blunt force. He also could shape his rapid phrases with delicate rhythmic nuance. His techniques are demonstrated in his solo on 'Blue Blue Eyes', recorded with the Plainsmen in 1946 and transcribed below in Ex. 8.10.[479] In the first four bars, Murphey paraphrases the original melody with rhythmic embellishment. In a melodic retort to the first phrase, Murphey's melody descends with rapid triplets in bar five. Not only is this phrase rhythmically deft, but also it is a technical marvel.

[478] Smokey Rogers and His Band, 'New Panhandle Rag', (Coral 9-64052), 1950.
[479] The Plainsmen, 'Blue Blue Eyes', (Coast 306), 1946.

The bar travels in a smooth linear fashion with increasing velocity as the triplets evenly are picked.

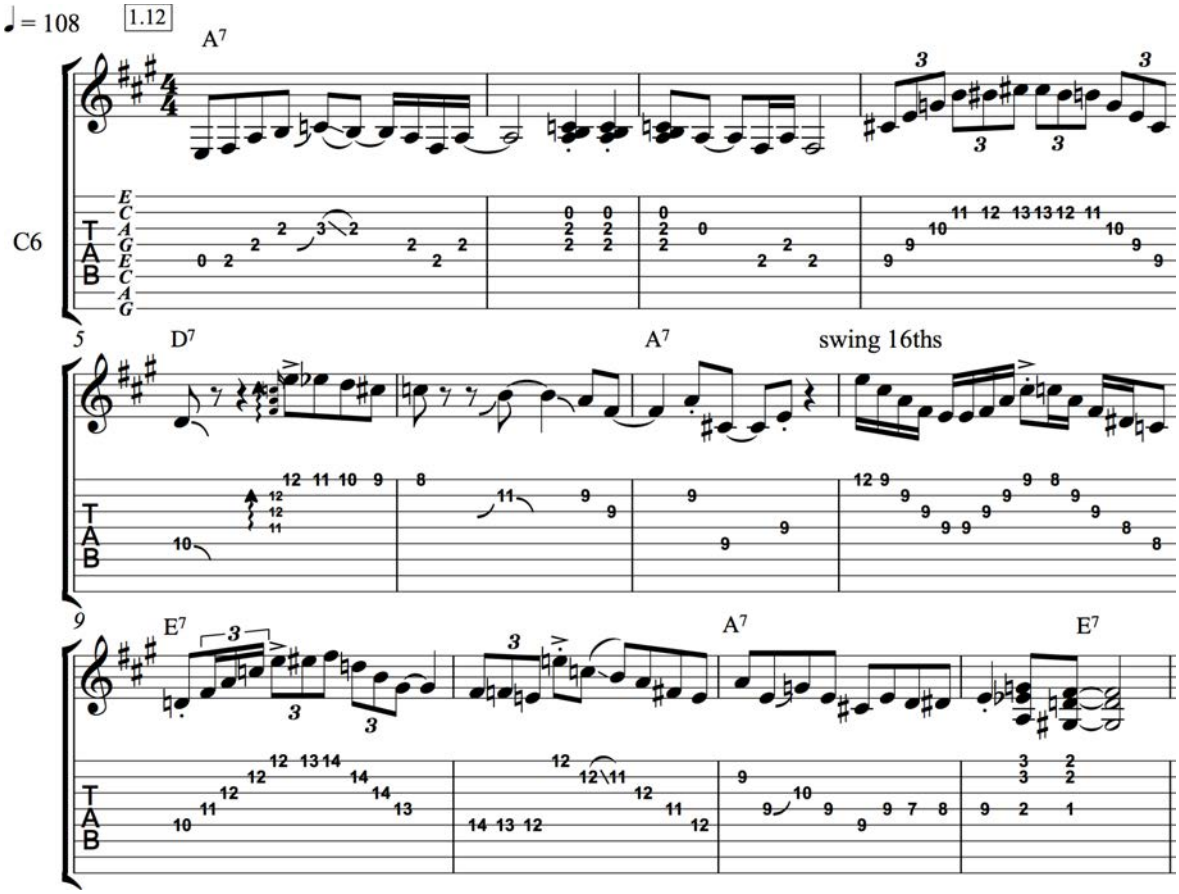
Notes at the top of melodic contours are prominent and an improviser, in devising phrases, can choose to place them anywhere in the bar as accents. With this method, Murphey was able to create individual rhythmic highlights, displace regular metric accents or create new cross rhythms within continuous eighth note lines. In Ex. 8.10, Murphey employs a line of even eighth notes beginning at bars six and twelve. At bar six, he uses the accent attracted by the high F to displace the downbeat of bar seven. The same device is used in bars twelve and thirteen to displace the metrical accent by an eighth note. This jazz technique was a regular feature of his single note improvisations.



Ex. 8.10 Improvisation on ‘Blue Blue Eyes’, Joaquin Murphey (c Sept 1946, mx. 240)

A further display of Murphey’s rhythmic artistry can be seen in his solo on ‘I Can Tell Just as Plain’, a blues recorded by Jimmie Widener in 1946, transcribed in Ex. 8.11

below.[480] Murphey's solo is a mixture of restraint and abandon, as he displays the freedom of a jazz clarinetist, radically varying surface rhythms from phrase to phrase. With predominantly legato articulation, Murphey relies on neck position to effect rapid passages with limited bar movement, saving glissandi for blues tonal affectations that take the form of two semitone slides and an occasional microtonal inflection. The unusual dissonant tone cluster in bar two seems to be an idiosyncratic blues gesture, invented in the course of this solo.



Ex. 8.11 Improvisation on 'I Can Tell Just As Plain', Joaquin Murphey (25/3/46, mx K2005)

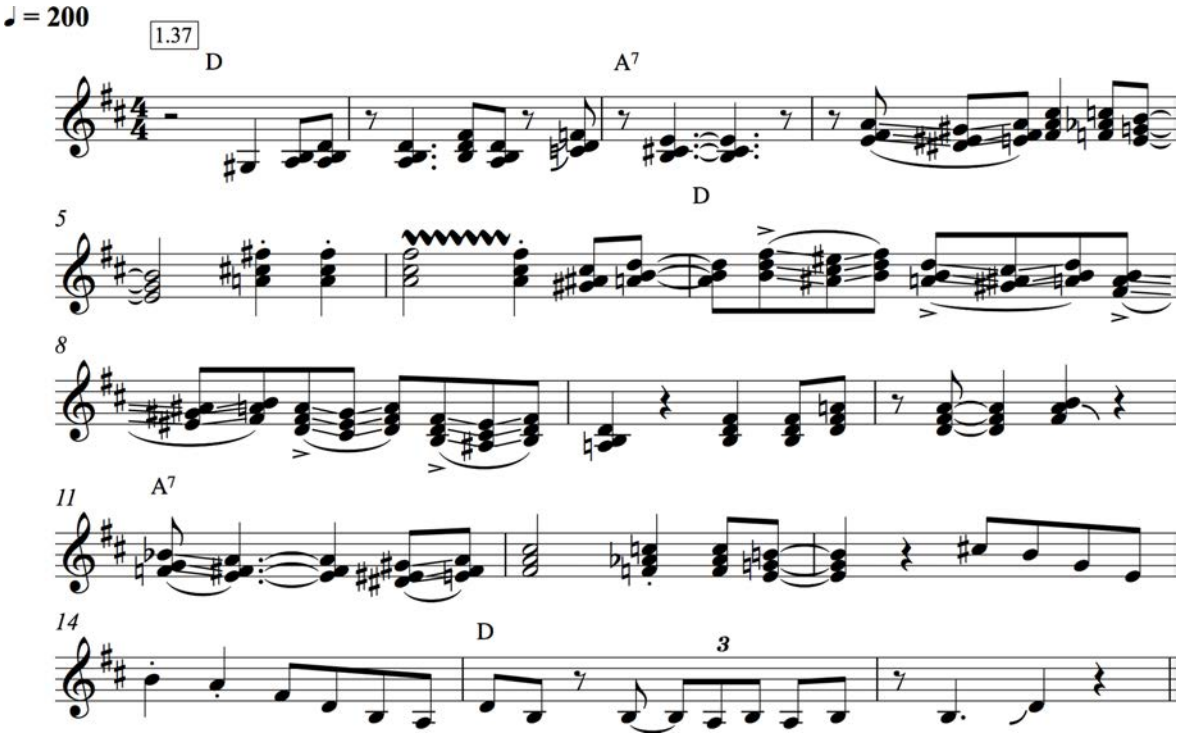
8.5.2 Chordal

Like Boggs and McAuliffe, Murphey used multi-necked instruments in the 1940s, on which he had at least two contrasting tunings. Furthermore, the nature of the tunings was a common denominator between the three players. Murphey employed a C6 tuning on one neck, that Murphey used primarily for single note melodies. Correspondingly, Boggs and McAuliffe employed an A6 tuning for monophonic lines. On the other neck of each player's instrument was a dominant chord. In Murphey's case it was F#9, while Boggs and McAuliffe used E13.

[480] Jimmie Widener, 'I Can Tell Just as Plain', (King Records 536), 1946.

The dominant tunings were used predominantly for chords, with the tritone adding harmonic colour to chord solos, although monophonic usage was also possible.

Both Murphey and Boggs developed an ability to perform chord solos on their respective major sixth necks. Murphey did so regularly, while it appears to have been Boggs' first preference. An example of a chord solo performed by Murphey on his C6 neck is transcribed in Ex. 8.12 below.[481] The solo consists of two eight bar phrases that represent contrasting harmonisations, built loosely on the melody of the song's chorus. As an exercise in paraphrasing and rhythmic variation, the solo is very effective. However, when compared with Murphey's F#9 solos, the limitations of the C6 tuning become apparent. In the simple harmonic framework of the song, comprised of only the tonic and dominant, the absence of a tritone in Murphey's voicings lends blandness to the solo, which is alleviated by rhythmic interest and recourse to a final monophonic statement.

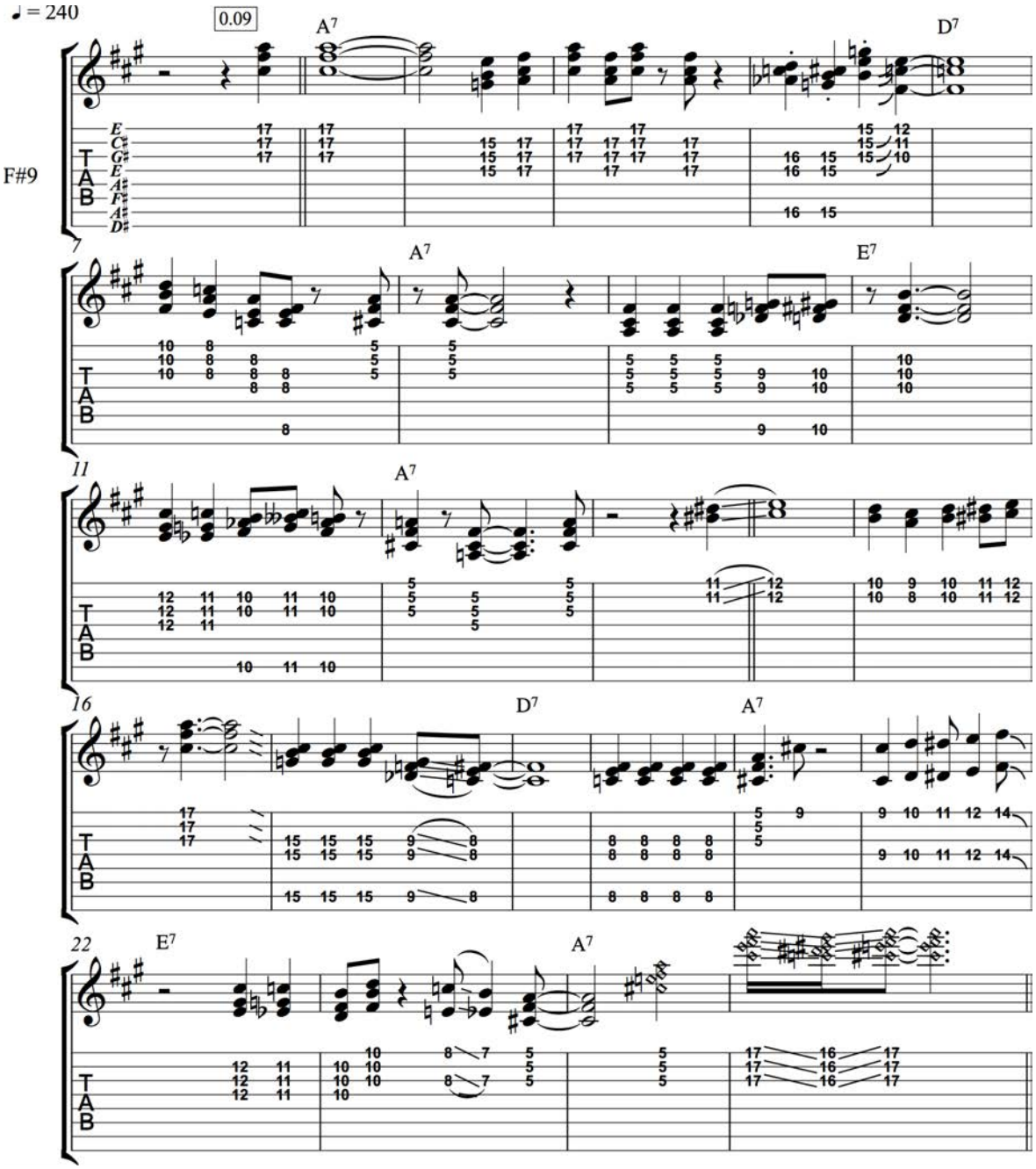


Ex. 8.12 Improvisation on 'It's A Boy', Joaquin Murphey (July 1947, mx. T 1243)

Murphey's chordal mastery is on show on his most famous composition, 'Oklahoma Stomp', recorded with Cooley's band in 1946 and transcribed in Ex. 8.13 below.[482] His opening melody extends over two choruses of a twelve bar blues. With little motivic repetition or development binding the two choruses, Murphey's composition may have had its origins in improvisation. Nevertheless, Murphey's tune is a western swing favourite and the melody has even been adapted for violin by renowned bluegrass fiddler, Bobby Hicks.[483]

[481] Eddie Dean and His Boys, 'It's a Boy', (Majestic 11020), 1947.
[482] Spade Cooley and His Orchestra, 'Oklahoma Stomp', (Columbia 37237), 1946.
[483] Bobby Hicks, 'Fiddle Patch', (Rounder CD 0416), 1998.

Performed on the F#9 neck, Murphey's triads are laced with dominant ninth voicings, many of which are made more piquant by the close proximity of the ninth and major third, as can be seen in bar sixteen. Murphey is not confined entirely to chordal mode, with a brief excursion into dyads in bar fifteen. In this passage, he maintains diatonic harmony with a rapid bar slant. The ascending octave passage in bar twenty provides a similar exception. Murphey's solo is a clever amalgam of short rhythmic statements and memorable melodic movement.

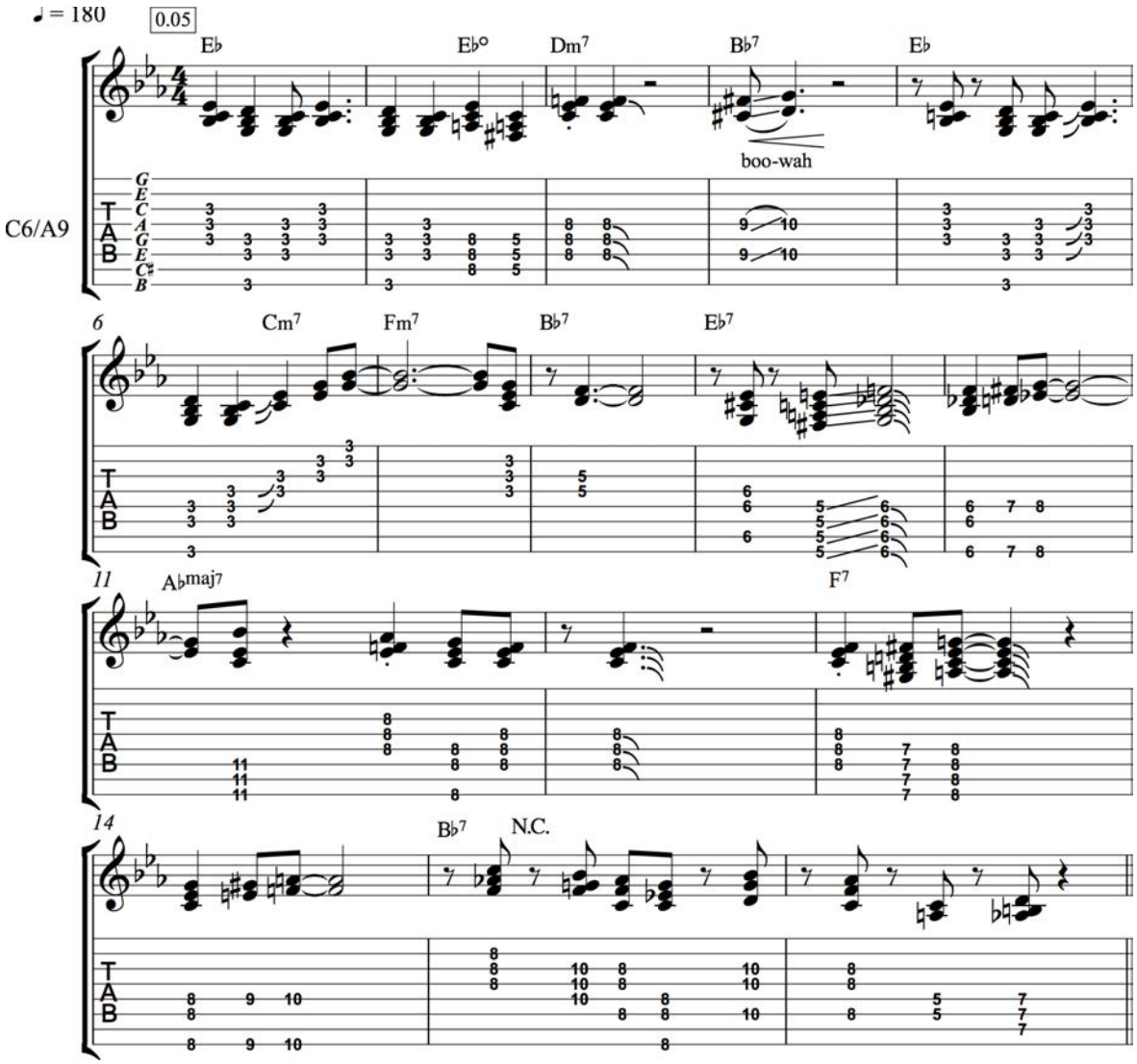


Ex. 8.13 Head of 'Oklahoma Stomp', Joaquin Murphey (3/5/46, mx. HCO 1818)

Murphey's performance on 'I Can't Give You Anything But Love', the opening bars of which are transcribed in Ex. 8.14 below, represents the height to which he elevated chordal

melody on the steel guitar before the revolution in style and technique of the pedal steel instrument made his efforts obsolete.[484] It shows Murphey, acutely aware of the problems of parallelism, successfully rising above the instrument's limitations, but not without innovative tuning and a finely honed picking technique.

The context of this solo is a big band arrangement for live television, in which Murphey takes the lead melody. Fittingly, Murphey's harmonisation of the melody resembles the thickened line of a saxophone section. The homorhythmic chord tones generally move in the same contour. Murphey utilises the reentrant eighth string and clever note selection to achieve the oblique movement of a harmonised horn lines, while simultaneously avoiding the chromatic parallelism that dogged Boggs' solos. He is even able to achieve a measure of contrary motion in the final bar.

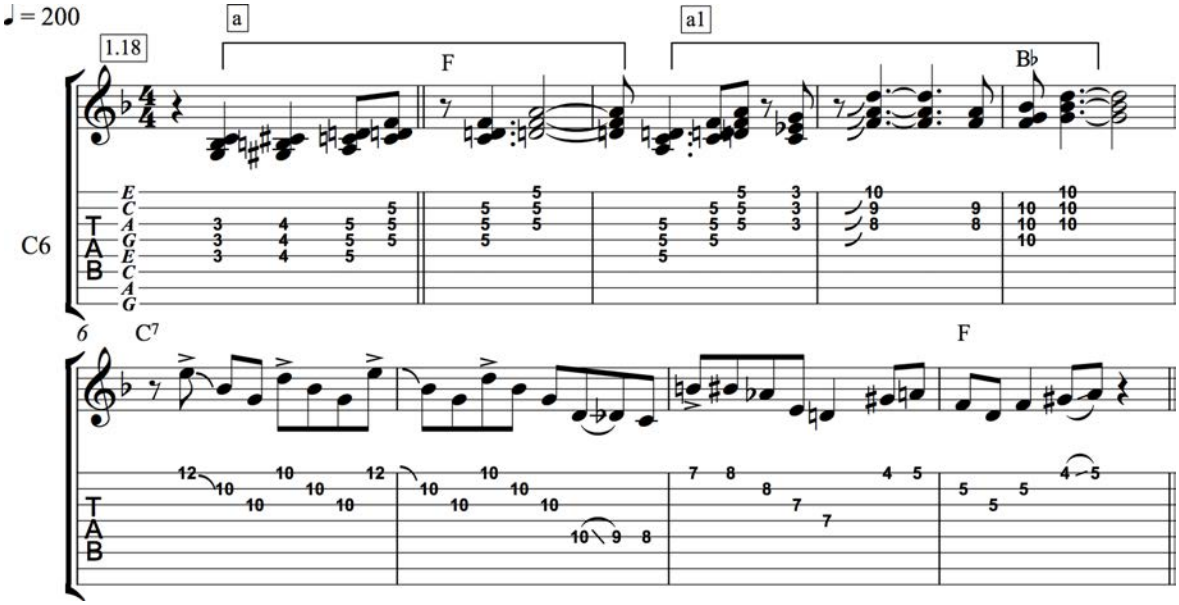


Ex. 8.14 Head to 'I Can't Give you Anything But Love', Joaquin Murphey (c 1955, KTLA television transcription)

[484] Spade Cooley and His Orchestra, 'I Can't Give You Anything but Love', (KLTA Transcription 'The Spade Cooley Show'), c1955.

Murphy was a jazz stylist. But as a soloist in western swing, he faced a different, and arguably more difficult improvisational task than did his peers in swing and bebop. While jazz soloists commonly had opportunity to develop an improvised musical narrative that lasted for a chorus or more, Murphey was often required to make rousing musical statements in the form of vignettes. Even his longer solos were generally confined to a single twelve bar chorus of the blues or a consecutive pair of eight bar A sections of thirty two bar changes, the most prevalent form in popular music at the time. But with seeming ease, Murphey rose to the challenge and delivered perfectly formed miniature solos. A brilliant example can be seen in his solo on 'New Wabash Cannonball', recorded in a session for singer Johnny Bond in 1947, transcribed in Ex. 8.15 below.[485]

Murphey makes full use of his eight bar allotment by anticipating its beginning by three beats. This allows him to develop an opening six-note motif with a repetition that employs the same pitch contour but is varied in rhythm and extended in duration. He then shifts to monophonic mode and outlines a melody in eighth notes, in which three note motifs set a cross rhythm against the underlying meter. The clarity of ideas and sharpness of execution provide a measure of Murphey's genius. Furthermore, his lesser contemporaries would have reversed the order in which the two modes of performance appeared, as the extra tonal weight of chords aid a perception of development and climax. But for Murphey, his single note work was so exceptional that he had no need to follow this convention.



Ex. 8.15 Improvisation on 'New Wabash Cannonball', Joaquin Murphey (10/12/47, mx. HCO 2924)

[485] Johnny Bond, 'New Wabash Cannonball', (Jasmine Records JASMCD 3541), 2002.

8.6 Legacy

In the 1950s, as the demand for Murphey's services dwindled, he was at the height of his powers. He had refined and extended the harmonic properties of his instrument and developed a sophisticated approach to chordal soloing that was beyond the imaginings of Bob Dunn and the other six-string pioneers. His monophonic improvisations were flawless and drew on a deep harmonic insight. His influence on steel players in western swing was immense. Renowned player, Herb Remington, who replaced Noel Boggs with Wills' band and enjoyed a long career as a pedal steel player, claimed Murphey as his strongest influence.[486] Another giant of the instrument, Speedy West, admitted that he hoped to play like Murphey but didn't have the skills and was forced to develop his own style.[487] Murphey's influence spread beyond the West Coast and western swing as evidenced by Don Davis' solo on Nashville master guitarist Hank Garland's 1949 recording of 'Sugarfoot Boogie'.[488] At a tempo close to the original, Davis offers a note perfect rendition of the first chorus of Murphey's improvised solo on 'Oklahoma Stomp'.[489] He then continues at the blistering tempo with a second chorus in Murphey's style.

While Murphey's genius has been obscured by time, it is instantly apparent when his old recordings are examined. The freshness and excited energy of his lines is palpable, even if their context may now seem dated. But his fortune was bound to that of western swing and as its popularity diminished, so did his. It was particularly unfortunate that his inspiring early work was associated with Spade Cooley, whose hideous crime of 1961 threw a dark shadow over the remarkable recordings of his accomplished bands. It is of some comfort that Murphey enjoyed a brief Indian summer, thanks to Michael Johnstone and Chas Smith, to whom credit must also go for the production of Murphey's last recordings.

A legion of western swing steel guitar stars arose on the West Coast in the 1940s and iconic players such as Herb Remington and Speedy West are worthy of further study. However, Murphey eclipsed them all. As steel guitar luminary Tom Morrell succinctly stated, 'he was a lot better than anybody else'.[490] Having considered the foremost stylist, this study will conclude in the next chapter with an examination of the decline of the electric non-pedal steel guitar in the 1950s, in the face of the twin challenges of the pedal steel guitar and falling interest in western swing.

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[486] Eastman, 'Herb Remington: Developing the Sound of the Steel Guitar'.
[487] Kevin Brown, 'Interview with Chas Smith' 2011. http://dustedmagazine.com/features/293 (accessed March 16 2019).
[488] Eddie Crosby and His Sugarfoot Shufflers, 'Sugarfoot Boogie', (Decca De 46168), 1949.
[489] Cooley and Orchestra, 'Oklahoma Stomp'.
[490] Tom Morrell, 'Interview with Jean Boyd', ed. Jean A. Boyd (Baylor University), 1993. 26.

Chapter 9: Decline

No one rings a bell to signify the end of a musical era. Rather, one can expect a complex process of diminution involving elements of dispersion, encroachment and transformation, as was the case as western swing declined in the 1950s. Audiences dwindled as alternative entertainment, in the form of television, took its toll on the popularity of live performance and social dancing.[491] Tastes changed and the era of big band swing was drawing to a close, hastened by financial pressures that made large ensembles unviable. The audience was also fractured by the rise of a youth culture that demanded its own music. Previously, the reach of popular music genres extended across multiple generations, but in post war America, teenagers began to rebel against the music and dance styles of their parents, adopting rock and roll as their preference.[492] For those steel guitarists whose fortunes were tied to western swing, hard times were inevitable. But for the non-pedal steel guitar more generally, a bell of impending doom did sound, in the clear resonation of Bud Isaacs' Bigsby pedal steel guitar as it glided between two major triads. The arresting gesture caused a shockwave that devastated the existing steel guitar performance culture and heralded an entirely new era.

9.1 Pedals

The pedals on Isaac's guitar were not an innovation. Mechanical means of changing string pitch had long been envisioned as a solution to the fundamental inflexibility of the steel guitar's configuration. Experimental mechanical designs for acoustic instruments had been patented as early as 1903.[493] The advent of the solid body electric steel guitar provided inventors with a more solid frame on which to attach mechanisms and, subsequently, a number of inventions were commercially embodied. An early example was Epiphone's 'Electar Varichord', a seven-string steel guitar with hand operated pitch-changing levers. For an instrument that required exacting two-handed technique, this was impractical and proved to be an expensive failure for the manufacturer.[494] A more practical approach employing foot pedals was used in the design of Gibson's 'Electraharp', as shown in Fig. 9.1 below, which began production in 1941.[495] The design concept was replicated in 1947 by the Harlin Brothers' Kalina 'Multi-Kord'.

[491] Lange, *Smile When You Call Me a Hillbilly: Country Music's Struggle for Respectability 1939-1954*, 115.
[492] Neal, 'Whither the Two-Step: Country Dance Rewrites Its Musical Lineage', 441-42.
[493] Lis, 'The Harlin Brothers of Indianapolis and the Birth of the Pedal Steel Guitar Part One: Buttons and a Few Foot Pedals'.
[494] Fisch and Fred, *Epiphone: The House of Strathpoulo*, 136.
[495] 'Gibson Catalogue', (Gibson Inc), 1942.

Fig. 9.1 Gibson Electraharp, 1942

Bandleader, Alvino Rey, made significant contributions to the development of the Electraharp and demonstrated the potential that pedals held for the steel guitar in his recordings and movie appearances. Rey had been entranced by the style of jazz-influenced New York steel guitarist, Andy Sannella, and bought one of Rickenbacker's earliest electric

models.[496] He began experimenting with pedals and subsequently brought his experience to bear on Gibson's development of the Electraharp.[497] Rey developed a largely chordal style that relied on the range of sonorities that pedals permitted. The first iteration of the Electraharp was ungainly, unreliable and did not enjoy a good reputation with players. Only forty three units were made before production was curtailed in wartime, although Gibson later persisted with the concept, introducing a redesigned model in 1949. The reissue was much more successful and Gibson shipped 107 of the units in the first year, averaging around fifty units a year, until production was ceased in 1955.[498] Early pedal steel guitars addressed the fundamental limitations that fixed tunings imposed, but did not effect a fundamental change in the style or approach to the instrument. However, the Electraharp was to play a crucial role in the revolutionary style that emerged soon after the revamped instrument began production.

The passage to a new paradigm of pedal steel guitar performance required the confluence of two elements; the concept that Bud Isaacs initiated, and reliable equipment that could voice Isaacs' ideas accurately, consistently and clearly. Suitable quality in operation and sound was achieved by iconic luthier, Paul Bigsby, in response to a commission, by Speedy West, to design and build a pedal steel guitar. West's instrument was the first of many that Bigsby was to supply to professional players across America. West was beginning to develop prominence in the western swing scene in California. He had recently enhanced his amplification by acquiring one of Fender's latest designs and, similarly, aimed to upgrade his instrument. He sought out Paul Bigsby, who had recently provided West's hero, Joaquin Murphey, with a triple-necked guitar. West ordered a similar instrument but gave Bigsby the added challenge of designing and manufacturing four pedals to alter string pitches. Bigsby fulfilled the brief in February 1948.[499] The instrument he supplied sounded magnificent and the mechanisms worked perfectly. Soon after, West was hired by Spade Cooley and became, along with Murphey, one of the most admired steel players in America. His new instrument was featured on many nationally successful recordings. The instrument was displayed with Cooley's band in movies, on stage, and on television, although West kept the pedals hidden behind a large panel on the front of the instrument.

[496] Durchossoir, *Gibson Electric Steel Guitars 1935-1967*, 50.
[497] Anthony Lis, 'The Harlin Brothers of Indianapolis and the Birth of the Pedal Steel Guitar, Part Two', *HSGA Quarterly* 32/124 (2016).
[498] Durchossoir, *Gibson Electric Steel Guitars 1935-1967*, 100.
[499] Babiuk, *The Story of Paul Bigsby: Father of the Modern Electric Guitar*, 30.

Fig. 9.2 Speedy West c1950, courtesy of Andy DePaule

West's interest in pedals had been inspired by West Coast steeler, Eddie Martin, who had set a small Rickenbacker guitar in a desk sized cabinet. Martin drilled a hole under and, presumably, through both the Rickenbacker and desktop, and attached a coat hanger with a fishhook to the string to create a crude pitch-bending device.[500] West's choice of luthier was serendipitous. His commission brought Bigsby's remarkable skills and persistence to bear on the problem. The excellent sound of Bigsby's instrument, achieved with his hand made pickups, excited wide interest from players and proved to be as crucial an element of success as the reliability and accuracy of the mechanisms.

[500] Speedy West, 'Interview with Douglas Green', ed. Douglas B. Green (Country Music Foundation), 1974. 9.

West used the pedals to change between tunings, without the need to shift to another neck. To disguise the pitch changes, he used a foot pedal to quickly lower the volume before he operated the instrument's pedals, and restored it once the pedals had been engaged. He claimed that this was a stylistic endeavor rather than a ruse to hide the pedal technique.[501] As a result, West's style was significantly enhanced by the increased number of tunings he had available. With pedals obviating the need to reposition his hands, West could achieve smooth phrasing of passages that incorporated two tunings. With the mechanisms concealed, steel guitarists were perplexed, as his phrasing was impossible to recreate on a conventional instrument. When the secret was eventually exposed, Bigsby was inundated with orders from all over the country, including one from Bud Isaacs in Nashville.

9.2 Bud Isaacs

Bud Isaacs (26 March 1928 – 4 September 2016) was born in Bedford, Indiana. As a child, he attended the Oahu School of Music in Bedford, sent by his mother, an admirer of Jerry Byrd. Isaacs persisted with lessons at the Hawaiian academy although, at the time, he expressed a preference for the steel guitar style of Noel Boggs.[502] Initially he played an acoustic guitar with raised strings and later acknowledged the early influence of two of Roy Acuff's dobro players, Clell Summey and Pete Kirby, both of whom played in Hawaiian style. At fourteen, Isaacs was sufficiently accomplished to be offered a position with Pee Wee King's band, while on a visit to Nashville. However, the offer was retracted when his age was revealed. Subsequently, Isaacs withdrew from high school at the age of sixteen and began a professional music career, playing with various bands and on radio stations in the Mid West.

Isaacs purchased a newly designed Gibson Electraharp, a model that Gibson began to ship in mid-1949. Isaacs must have been one of the earliest customers because the instrument can be heard on his first recording session in July 1950. Unlike Gibson's prewar model, the instrument was lighter and of more compact design, making it more suitable for professional performers who were constantly changing venue. With a single eight-string neck, it was equipped with four pedals.[503] The pedals were designed to change a basic E7 tuning to G6, C#m, D9 and A6.[504]

[501] West, 'Interview with Douglas Green', 11.
[502] Eddie Stubbs, 'Notes to 'Bud's Bounce'', (Bear Family BCD 16798 AH), 2006.
[503] Later models had an option of extra pedals and necks. 'Gibson Catalogue', (Gibson Inc), 1955.
[504] Durchossoir, *Gibson Electric Steel Guitars 1935-1967*, 99-100.

Fig 9.3 Gibson Electraharp, 1955

A recording entitled 'Big Blue Diamonds'[505], cut for King Records in Cincinnati, was cited by Isaacs as the one of the first on which he used pedals.[506] While the use of pedals can be detected in Isaac's chordal solo, and at times in his accompaniment, their utilisation is not overt and is easily missed, unlike his later pedal usage. However, the Electraharp exhibits a dull and growling tone that stands in stark contrast to brightness and clarity of Bigsby's instruments. Once he had heard West's recordings, timbre may have been an important factor motivating Isaacs to order a Bigsby.

Isaacs moved to Nashville in late 1950 at the invitation of country singer, Jimmy Dickens. Dickens was in urgent need of a steel player and had encountered Isaacs previously in Indiana. Isaacs' career flourished in his new surroundings, playing with Dickens, Red Foley and others, and appearing regularly on the Grand Ole Opry, broadcast on radio station WSM. Isaacs traded his Gibson for a Bigsby sometime after he arrived in Nashville. Persisting with pedals, Isaacs claimed that he wanted to achieve the effect of three harmonised fiddles or harmonised vocals.[507] This can be interpreted as seeking harmonisation

[505] Red Perkins, 'Big Blue Diamonds', (King Records King 45-903), 1950.
[506] Bud Isaacs, 'Interview with John Rumble', ed. John Rumble (Country Music Foundation), 1989. 40.
[507] Isaacs, 'Interview with John Rumble', 11.

with a degree of independence of each line, in contrast to the parallel movement that afflicted harmonisations on the non-pedal instrument. Isaacs asserted that he had been experimenting with his Gibson, unsuccessfully trying to achieve his goal with his own modifications and had traded it to Bigsby, who was amused by his amateur efforts.[508]

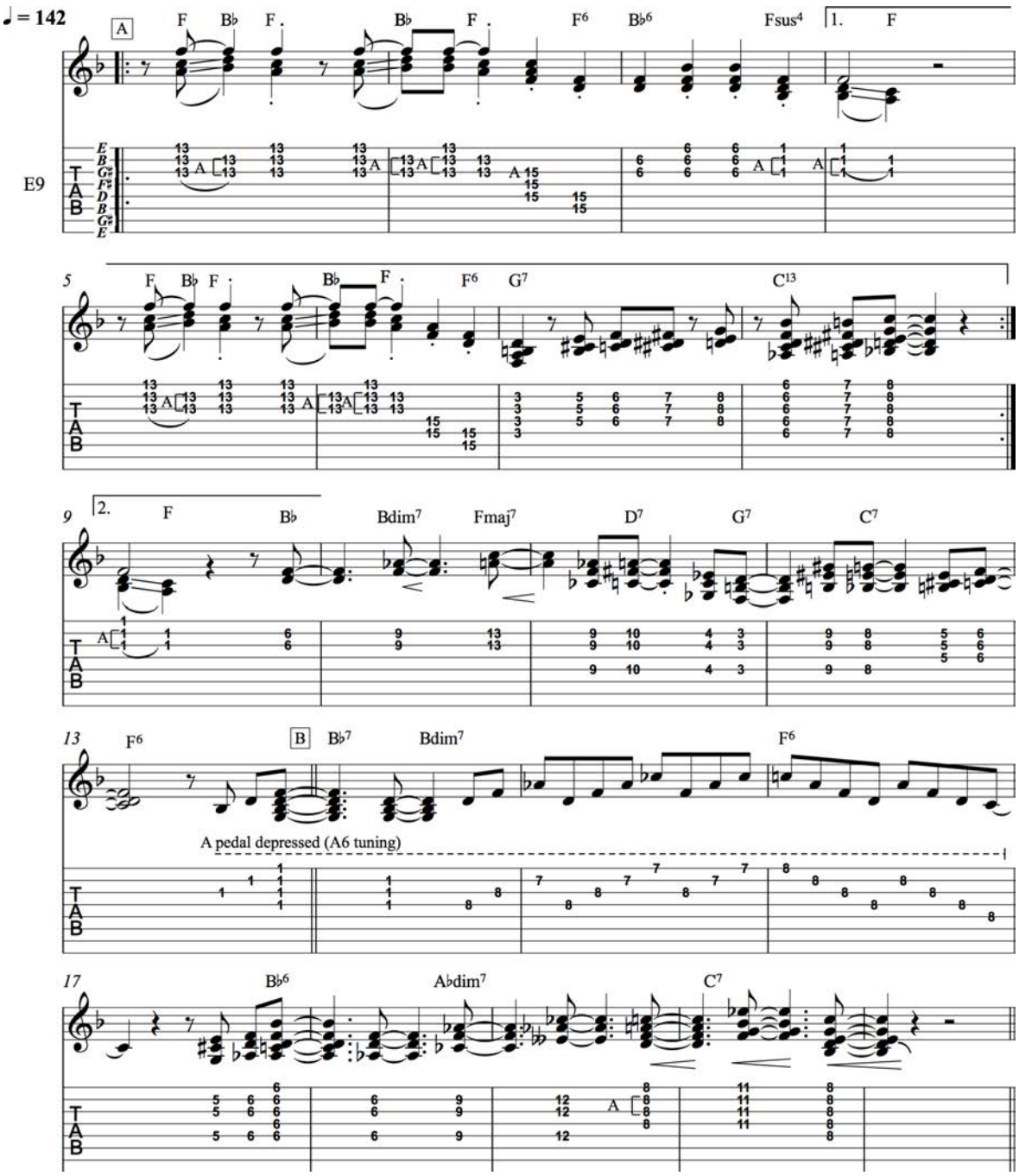
The historic harmonic motif of 'Slowly', for which Isaacs is famous, is the movement of a first inversion tonic triad to a root position subdominant triad. (see Ex. 2.5) This simple movement was a spectacular breakthrough for a number of reasons. In fact, by pivoting the bar the maneuver was possible on a non-pedal instrument tuned to C6 or A6. But it could not be performed with the perfect intonation that Bigsby's design provided. On the pedaled instrument, not only were both starting point and end point in tune, but also, in the process of transition, perfect relative intonation was maintained as two pitches were shifted by different intervals at different rates. Furthermore, pedals provided total control over the rate and direction of glide. The inspiration for the pedal setting, or copedent, is a matter for speculation but it may have been based on the movement of the Electraharp pedals that provided a transition between E7 and A6 tunings.

Though revolutionary, Isaacs' pedals provided only limited harmonic movement. Nevertheless, Isaacs thoroughly exploited the narrow range of pitch mobility in many different rhythmic motifs and phrases. The sound became a cliché, echoing throughout a series of recordings that he made under his own name for Capitol between 1954 and 1956. Nevertheless, he employed its distinctive quality to good effect, delighting his employers and sparking envy in steel guitarists across the country. The harmonic movement is prominent in Isaacs' composition, 'Bud's Bounce', transcribed in Ex. 9.1 below.[509] The transcription shows the opening two eight bar A sections and the contrasting B section of Isaacs' thirty two bar composition.

The famous pedaled chord transition plays a crucial melodic and rhythmic role in the opening phrase. In the first two bars, F serves as a pedal tone to the distinctive harmonised melody of the second and third strings. However, at the end of the phrase, in bar four, the pedals serve a different function, creating and resolving a suspension that is secondary to the melody note above. Notably, consequent phrases, beginning in both bars five and ten, end with syncopated parallel chord movement, typical of western swing chord solos. Isaacs contrasting B section begins at bar fourteen, with a monophonic line. Tellingly, he depresses both pedals, changing the E9 tuning to A6, on which he fashions a rapid arpeggiated melody

[508] Jon Rauhouse, 'Wire and Hinges: How Pedal Steel Guitar Legend Bud Isaacs Changed the Course of Country Music' 2012. https://www.fretboardjournal.com/features/steel-guitar-legend-bud-isaacs-interview/ (accessed March 19 2019).
[509] Bud Isaacs, 'Bud's Bounce ', (RCA Victor 47-6062), 1955.

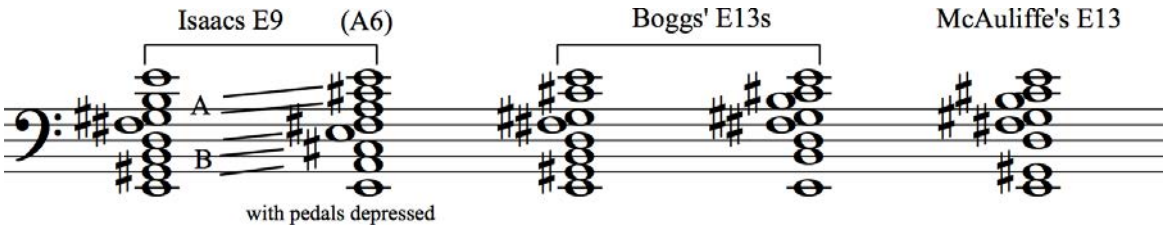
that is worthy of Murphey. The consequent four bar phrase reverts to largely parallel chord melody, in which the pedal is used only once, in bar seventeen. What is apparent from this example is that Isaacs' style was a hybrid that combined substantial non-pedal stylings with his new approach.



Ex. 9.1 Head to 'Bud's Bounce', Bud Isaacs (16/2/55, mx. FB-WB-2054)

In 'Bud's Bounce', Isaacs displays a highly developed non-pedal style alongside his basic pedal technique. His single note passages are nimble and his chord solos rely on the harmonic weight of the E9 tuning, in the same manner that Boggs, McAuliffe and Murphey relied on their E13 and F#9 tunings. Indeed, a comparison shows that his E9 tuning is closely

related to both McAuliffe's and Boggs' E13. The primary departure is the replacement of the C# on the McAuliffe's and Boggs' second string by a B, a change that was required to facilitate the iconic pedaled chordal movement.



Ex. 9.2 Tuning comparison: Isaacs, Boggs and McAuliffe

Isaacs may have desired to extract more from his new technique but the configuration, as it stood with a dyadic movement activated by the A pedal, had limited application. It would be up to a new generation of players, led by Buddy Emmons and Jimmy Day, to reconfigure and expand Isaacs' concept, by separating the paired movement and assigning it to two independent pedals. Nevertheless, Isaacs' initial chordal gesture can be achieved on most contemporary pedal steel guitars in E9 tuning, by simultaneously depressing the A and B pedals.

In 1954, Webb Pierce's recording of 'Slowly', with Isaacs' epochal introduction, spent seventeen weeks at the top of both *Billboard*'s 'Best Seller in Stores' and 'Most Played on Jukebox' charts, and fifteen weeks at the top of the 'Most Played by Jockeys' chart. The tremendous success raised questions in two sets of minds. Bandleaders and producers were pondering how they could avail themselves of the sound, while steel guitarists were wondering precisely how it was made. In an unprecedented audience response, Isaacs described receiving two full laundry baskets of fan mail at radio station WSM, most of which was from steel guitarists enquiring as to how he was getting the sound.[510] Both amateurs and professional alike wanted to know. Having determined that Isaacs' effect was impossible with bar control, Lloyd Green describes designing a mechanism, drilling holes and fitting rods to imitate the sound.[511] Pete Drake, in Atlanta, installed a single pedal on a four-necked instrument that he had made himself.[512] Buddy Emmons, on the other hand, took a more direct path. An admirer of Speedy West, Emmons had ordered a Bigsby in 1952 but, as Bigsby's tiny enterprise produced only one instrument per month, Emmons guitar was not delivered until 1954, just a few months after 'Slowly' was released.[513] He had identified the

[510] Isaacs, 'Interview with John Rumble', 24.
[511] Lloyd Green, 'Country Music Foundation Oral History Project', ed. Douglas B. Green (Country Music Foundation), 1973. 2.
[512] Pete Drake, 'Country Music Foundation Oral History Project', ed. Douglas B. Green (Country Music Foundation), 1973. 1.
[513] Babiuk, *The Story of Paul Bigsby: Father of the Modern Electric Guitar*, 141.

source of Isaacs' sound and asked Bigsby to put the 'Slowly' tuning on the new instrument.[514] In an interesting assertion, prominent Nashville steeler Don Davis describes Isaacs' success as a 'legitimisation' of the use of a technique that had been previously available but was neither utilised nor called for.[515]

9.3 Nashville Sound and Nashville style

Western swing was not generally associated with the Nashville country music scene in the 1940s and 1950s, although its influence can be detected in the styles of Nashville steel players of the era, as evidenced in Isaacs' composition 'Bud's Bounce'. Nashville professional, Don Davis, professed a love for western swing and jazz, which he pursued on the steel guitar, acknowledging the influence of Noel Boggs.[516] The virtuosic Buddy Emmons included western swing improvisers Speedy West and Joaquin Murphey, in a list of his early influences.[517] However, Isaacs' new technique represented the genesis of an entirely new steel guitar style that came to be associated with Nashville. With the new style came a new role, quite distinct from that of the steel guitar in western swing. In contrast to the ebullient improvisations of western swing steel players, the new role would be supportive and sympathetic, initially blending with sophisticated string and choral arrangements that accompanied country songs in the 'Nashville Sound' that emerged in the late 1950s.

The Nashville Sound was the product of a shift in the hierarchy that controlled the recording process. Producers assumed fine creative control over the shape of the product as they searched for the formula for commercial success. In the new regimen, the instrumental forces used for accompaniment became subservient to the song at all times, and the primacy of improvisation that characterised western swing was curtailed. The steel guitar would be required to retreat from the frontline and take a more subdued role behind the singers. To survive, steel guitarists would have to conform and, fortuitously, Isaacs' technique provided players with the means to do so. However, to western swing steel players, subservience was an anathema. In an interview, Bob Wills' famed steel player, Herb Remington, was melancholic at the turn of events and barely disguised his distain for the style to which it gave rise.[518] Alternatively, for Nashville players, it was a commercial reality. Don Davis related that his predilection for improvisation was tempered by the firm hand of his bandleader, Pee

[514] Buddy Emmons, 'Buddy Emmons Q&a 1'. http://buddyemmons.com/QApage1.htm (accessed March 15 2019).
[515] Don (2) Davis, 'Country Music Foundation Oral History Project ', ed. John Rumble (Country Music Foundation), 1983. 24.
[516] Don Davis, 'Country Music Foundation Oral History Project', ed. John Rumble (Country Music Foundation), 1983. 10-12.
[517] Emmons, 'Buddy Emmons Q&a 1'.
[518] Herb Remington, 'Interview with Jean Boyd', ed. Jean A. Boyd (Baylor University), 1991.

Wee King, who would guide him back from any western swing styled solos he might be tempted to proffer. Amusingly, he also recalled that George D. Hay, founder of the Grand Ole Opry, had a red light on the side of the stage that he activated if he thought a particular solo was getting 'too way-out and wild'.[519] Buddy Emmons also related being brought back to earth by his employer, Ernest Tubb, after Emmons had completed what he thought was a particularly creative recording take.[520]

Isaacs' chordal gesture signaled the beginning of the development of a new style. At first, the gesture was subjected to endless rhythmic variation in limited harmonic contexts until a revolutionary improvement was made in 1957. The paired action of Isaacs' A pedal was split onto two separate pedals, providing independent movement for the two strings. This ensured that dyadic harmonisation no longer required bar slants and, as a result, perfectly intoned dyadic melodies became a country music staple. Subsequently, the modern configuration of the instrument took shape, as two extra strings and more mechanical pitch shifting devices, in the form of knee levers, were added. Chord vocabularies increased significantly and voice leading became more advanced, no longer afflicted by poor intonation. The devices greatly enhanced steel players' abilities to fulfill the new brief that they had been assigned by Nashville producers. However, these advancements attracted valid criticism from non-pedal players who observed that, while the use of mechanics lifted technical performance standards to levels of perfection, in the process they standardised performance to the detriment of individuals' nuances. Although the early masters of the pedal steel, such as Buddy Emmons, Hal Rugg, Pete Drake and Lloyd Green displayed distinctive personal styles, players employing the same mechanical processes, on country songs with similar simple harmony, began to sound the same.[521]

While the E9 pedal steel tuning became one of the most recognizable sounds in country music in the coming decades, a reminder of the non-pedal era remained in the configuration of twin-necked pedal instruments. The predominant tuning on the second neck was C6, which could be used for western swing and jazz, if a need arose. Herb Remington observed that, had Isaacs' breakthrough occurred on the West Coast rather than in Nashville, the second neck would have been routinely equipped with an A6 tuning rather than C6. He attributed the retention of C6 to the wide influence that Nashville's Jerry Byrd exerted before the pedal revolution.[522]

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[519] Davis, 'Country Music Foundation Oral History Project', 12-13.
[520] Buddy Emmons, 'Buddy Emmons Q&a 4'. http://buddyemmons.com/QApage4.htm (accessed March 15 2019).
[521] Remington, 'Interview with Jean Boyd', 10.
[522] Eastman, 'Herb Remington: Developing the Sound of the Steel Guitar', 86.

9.4 The Road to Rock and Roll

The popularity of western swing waned rapidly in California in the mid 1950s as television antennas began to bristle from homes everywhere. In Sacramento, electric mandolinist, Tiny Moore, related that crowds at the Wills Point ballroom halved in a matter of months, as television arrived.[523] But western swing was also assailed by a second threat to its audience numbers; the rising enthusiasm of youth for rock and roll, a style based on African American rhythm and blues. However, this threat was accompanied by an opportunity. Jazz and blues were a foundation stone of western swing. Both the swing rhythm and blues stylings that were ingrained in western swing were common to rock and roll. There was hope for western swing musicians if they could reshape their style and repertoires in a way that could engage teenagers. If western swing players could enhance the already deep African American elements of their music, they might be drawn into the new musical craze. If they were successful, the steel guitar might maintain its position in the ensemble and, accordingly, could thrive in the new genre.

9.4.1 Billy Williamson

A spectacularly conversion made by rock and roll pioneer, Bill Haley, who successfully bridged the gap between western swing and rock and roll. Born in Michigan in 1925, Haley was a singer who idolized Bob Wills.[524] He made his first recordings on a minor label in Philadelphia, with a band he named the Four Aces of Western Swing. His next band, the Saddlemen, was formed in 1949 and was renamed the Comets in 1952. Haley's affection for rhythm and blues was demonstrated in his first recording on joining a new label, Holiday Records, in 1951. The track was a cover version of Jackie Brenston's 'Rocket 88', which is often acknowledged as the first rock and roll song.[525] Despite limited success, Haley continued to record a mixture of country music, and rhythm and blues, with Holiday. However, in 1953, Haley's rhythm and blues styled composition, 'Crazy Man, Crazy', rose to number twelve on the national Billboard Juke Box Chart.[526] He was subsequently signed by major label Decca and continued recording covers of rhythm and blues tunes. When 'Rock Around the Clock' was included in the movie, *Blackboard Jungle*, it became a remarkable phenomenon, selling over seventeen million copies.[527]

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[523] Rich Kienzle, 'Notes to 'Billy Jack Wills and His Western Band'', (Joaquin Records JR2503), 1996.
[524] Toches, *Country: The Twisted Roots of Rock 'N' Roll*, 35.
[525] Bill Haley and the Saddlemen, 'Rocket 88', (Holiday 105), 1951.
[526] Bill Haley and His Comets, 'Crazy Man, Crazy', (Essex E-321-A), 1953.
[527] *Blackboard Jungle*, dir. Richard Brooks. 1955.

Like Elvis Presley, Haley's music was a hybrid of country music, western swing and urban rhythm and blues. But unlike Presley and other rockabilly artists, Haley didn't abandon the steel guitar. His steel player, Billy Williamson (9 February 1925 – 22 March 1996), was a founding member of the Saddlemen and stayed with Haley until 1963, at which time he retired completely from music. Williamson also contributed compositions to the group's repertoire and occasionally sang lead vocals. He was a competent steel player, but not a virtuoso. When 'Rock Around the Clock' broke nationally, he was catapulted with Haley into the public eye, on a stage where vitality and stagecraft were paramount. Unfortunately, anchored behind the steel guitar, he was at an initial disadvantage when compared with the guitarists and saxophonist who danced as they played, and the bass player who climbed on top of his instrument.[528] Additionally, Williamson cut less than an impressive figure on stage, with a receding hairline that identified him more with the parents of audience rather than the teenagers themselves. Significantly, the steel guitar was seldom prominent on Haley's recordings, facing strong competition for solos from the guitar and saxophone. Indeed, the instrument is barely audible on Haley's most iconic track, 'Rock Around the Clock'.[529] When it was audible, it was difficult to differentiate from the loud electric guitars. Williamson was given an occasional solo but was routinely restricted to the background. The steel guitar was occasionally used for glissando effects, as can be heard in 'Thirteen Women'[530], and the twin guitar approach of McAuliffe and Shamblin was occasionally employed, as evidenced on the studio recording of 'Crazy Man, Crazy'.[531] But with limited opportunities, Williamson did not provide an impressive model to inspire the members of the next generation. In stark contrast, his fellow band member, guitarist Danny Cedrone, provided one of the most iconic moments in the history of the guitar with his solo on 'Rock Around the Clock', influencing a generation of guitar players. Williamson's membership of the Comets represented a tantalizing opportunity but proved to be a cul de sac for the steel guitar in rock and roll.

[528] A typical performance can be seen in a 1953 television show entitled 'Glory in the Flower'. Bill Haley and His Comets, 'Crazy Man Crazy' 1953. https://www.youtube.com/watch?v=MI2vUzUqeZY (accessed March 28 2019).
[529] Bill Haley and His Comets, 'Rock around the Clock', (Decca 9-21924), 1954.
[530] Bill Haley and His Comets, 'Thirteen Women', (Decca 9-29124), 1954.
[531] Haley and Comets, 'Crazy Man, Crazy'.

Fig. 9.4 Billy Williamson with Bill Haley and His Comets, c1955

9.4.2 Vance Terry

A promising window to a future in rock and roll for the steel guitar appeared briefly in the form of a young virtuoso named Vance Terry. Terry had joined the band of Billy Jack Wills, Bob Wills' youngest brother who was twenty years his junior. Billy Jack was representing his brother's interests in Wills Point, Sacramento, where Bob had opened a ballroom in 1948.[532] It served as home base for the Texas Playboys, who broadcast from the room over powerful Sacramento radio station KFBK. When Bob moved the Playboys back to Oklahoma in 1949, Billy Jack assisted mandolinist, Tiny Moore, a former Playboy member, in organising a house band to keep the dancehall running. The lineup of the band was finally settled with the arrival of seventeen year old Terry in 1951. The band was a septet of guitar, steel guitar, trumpet, electric mandolin, drums, bass, and vocalist.[533] Once established, Billy Jack's band made a daily broadcast over KFBK that transmitted to northern California, Idaho, Oregon and Washington, assisting them to foster a touring circuit in the region. With tight head arrangements by Moore, the band played an eclectic mix of western swing, country music, blues and jazz. In view of Wills' admission that BB King was a favourite performer, it was no surprise that the group ventured into the realm of rhythm and blues, and rock and roll.[534] Their broad mix of material is chronicled in a set of transcriptions of the band's performances

[532] Andrew Brown, 'Charlie Moore Interview (Billy Jack Wills' Western Swing Band)' 2017. http://wired-for-sound.blogspot.com/2017/12/charlie-moore-interview-billy-jack.html (accessed March 25 2019).
[533] Brown, 'Charlie Moore Interview (Billy Jack Wills' Western Swing Band)'.
[534] Kienzle, 'Notes to 'Billy Jack Wills and His Western Band"'.

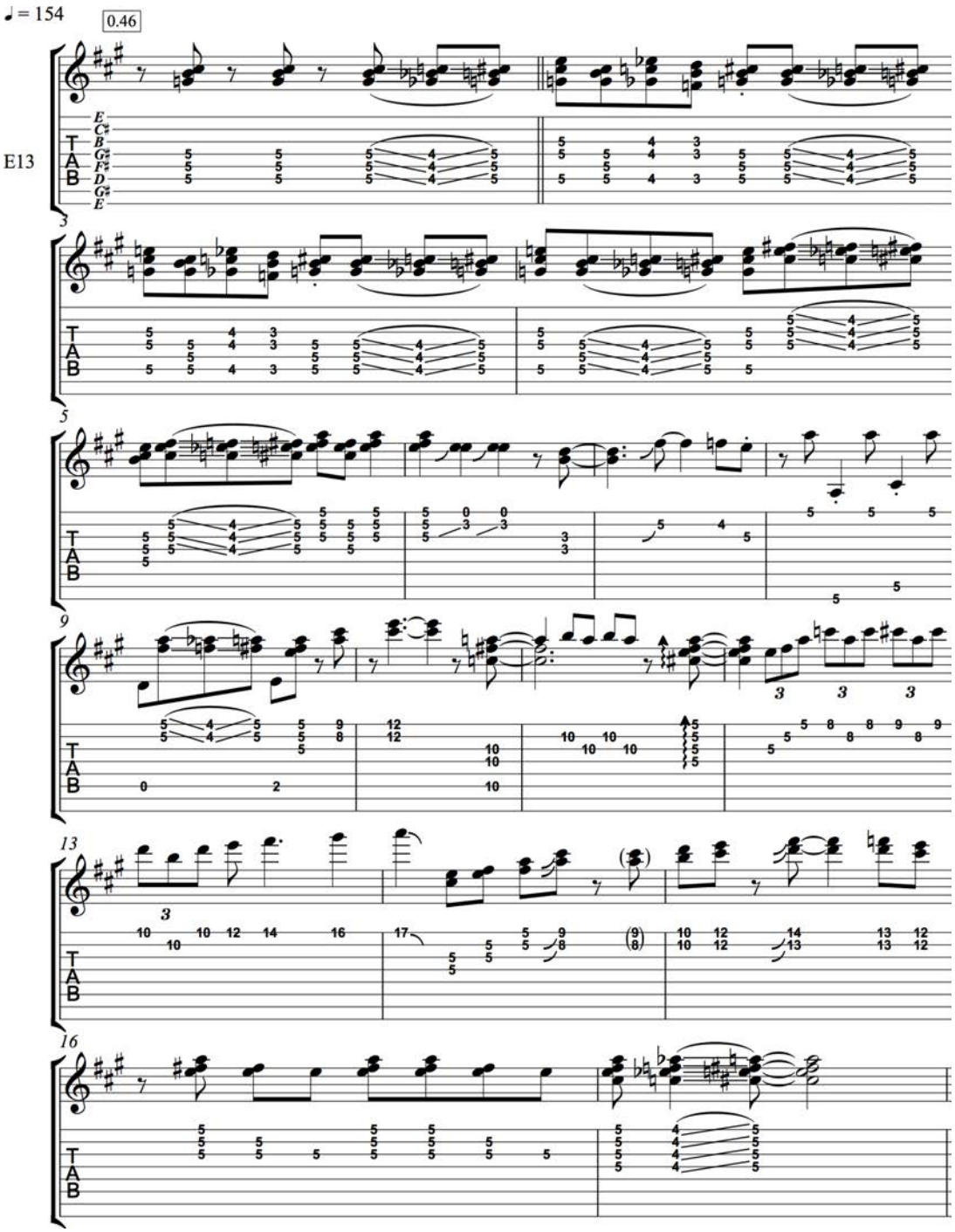
made for radio KFBK between 1952 and 1954, and which have been collated and reissued on CD.[535]

Terry was a Sacramento native who had grown up listening to Noel Boggs, Joaquin Murphey and Speedy West, whose styles he aggregated and refined. He began his tenure with Wills playing a Fender Dual Pro steel guitar and took delivery of a triple neck Bigsby late in 1951, as shown in Figure 9.4 below. Terry's early mastery of the instrument is a feature of the radio transcriptions. The harmonic and rhythmic facilities that he had developed were remarkable, and his contributions were crucial to the band's energetic performances. A comparison with Bill Haley's band shows Wills and his group in a most favourable light. In 1953, Wills' band covered Haley's early hit, 'Crazy Man, Crazy' with a powerful version that eclipsed the original. Terry took a central role in the cover version, replacing the twin guitar line of Haley's arrangement with a tight chordal response that utilised extended harmony and electronic control of volume and tone. The energy and drive of this recording suggests that, with more exposure, promotion and repertoire curation, Wills' band could have made a significant impact with teenagers nationally.

Fig 9.5 Vance Terry with Billy Jack Wills' Western Swing Band, c1952

[535] Billy Jack Wills and His Western Swing Band, 'Billy Jack Wills and His Western Swing Band', (Joaquin Records JR 2503), 1996., Billy Jack Wills and His Western Swing Band, 'Crazy Man, Crazy!', (Joaquin Records JR 2505), 1999.

Terry's refined approach to rhythm and blues can be seen in his chord solo to 'Cadillac In Model A', which is transcribed in Ex. 9.3 below.[536] Using McAuliffe's E13 tuning, Terry establishes a strong rhythmic chordal motif before traversing the neck with monophonic and dyadic lines. From the opening syncopated boogie piano-like riff to the rapid ascending triplets of bars twelve and thirteen, Terry's rhythmic touch is peerless, and his inventiveness is on display in the syncopated melodic convergence of bars eight and nine.



Ex. 9.3 Improvisation on 'Cadillac to Town', Vance Terry (c1953, radio transcription KFBK)

[536] Billy Jack Wills and His Western Swing Band, 'Cadillac to Town', (KFBK), 1954.

Throughout the radio transcriptions, Terry demonstrated that the steel guitar could fill a valuable role in a modern dance band, both as an instigator of driving rhythms, and a lead instrumental voice, that could be as wild and abandoned as any electric guitar. Had he shared Bill Haley's spotlight, his inspired performance would have encouraged others and it is possible that the instrument may have found a place in rock and roll. But this wasn't the case and, just as rock and roll began to climb the popular music charts, Bob Wills stepped in and abruptly closed the window of opportunity that his younger brother had opened. Bob moved back to Wills Point in 1954 to take control of operations and merged Billy Jack's band with the Texas Playboys, effectively ending his brother's rock and roll experiments. The tenor of the repertoire of the band reverted to one to which Bob was more accustomed. The Playboys' recording session for Decca in January 1955 shows the chasm between Bob's style and the direction that Billy Jack had taken. The majority of the tracks are re-recordings of Wills' standards, but the track entitled 'Too Much Mambo' is extremely surprising.[537] The tune is in a Latin style, popularised in the 1950s by band leader, Perez Prado. The recording represents a desperate bid for commercial success, with Wills' customary 'Aha' sitting uncomfortably on top of the rhythm of maracas, with incongruous steel guitar phrases in the background.

In 1954, shortly before the session with Bob Wills, Terry asked Paul Bigsby to equip his instrument with two pedals.[538] Recordings from the session show that he had quickly mastered Isaacs' technique. His use of pedals is most prominent in the track 'Hoopaw Rag' where, in the introduction, he uses Isaacs' 'Slowly' gesture in reverse, starting the first passage with the A pedal depressed.[539]

Terry abandoned his professional music career not long after Wills had changed the group's musical trajectory. He left the band to undertake college studies and subsequently began a career in banking. He continued to perform for recreation with guitarist, Jimmie Rivers, a sample of which was captured on his personal tape recorder and has been edited and released by Joaquin Records.[540]

The demise of western swing in the mid 1950s was swift, even though leading lights, Bob Wills and Spade Cooley, persisted. Wills continued to chase work in the embers of the genre, but ill health and age gradually took their toll. Cooley persevered with a mix of television, recording and live work, until his hideous crime of 1961 saw him behind bars. Similarly, there was no great reward for western swing's heroes of the steel guitar. Bob Dunn retired from performance in 1950. Leon McAuliffe became deeply involved in an Oklahoman

[537] Bob Wills and His Texas Playboys, 'Too Much Mambo', (Bear Family BCD 16550 NL), 2005.
[538] Mylos Sonka, 'Vance Terry'. https://people.well.com/user/wellvis/terry.html (accessed March 28 2019).
[539] Bob Wills and His Texas Playboys, 'Hoopaw Rag', (Bear Family BCD 16550 NL), 2005.
[540] Jimmie Rivers and the Cherokees, 'Western Swing 1961-64', (Joaquin Records JR2501), 1995.

radio station that he had bought. Joaquin Murphey faded into obscurity as job opportunities evaporated and his phone stopped ringing. Noel Boggs tried to expand into popular music but changing musical fashion and ill health impeded his progress. Although inspired by these champions, the following generation of steel players eschewed the non-pedal instrument. In country music, the lap steel was dead, with the only notable holdout being Jerry Byrd. Byrd continued to develop his non-pedal technique to an extraordinary pinnacle, which is demonstrated on his 1964 album, *Admirable Byrd*, but his efforts were in vain.[541] Pedal steel was ascendant in Nashville, where he was based, and he was forced to relinquish his full-time performing career for other forms of employment. In 1972 he resettled in Hawaii, a safe haven where he continued to play and teach.[542]

A revival of western swing was staged in the 1970s by Ray Benson and his band, Asleep at the Wheel. A resurgence of interest saw Bob Wills gather the Texas Playboys and return to the studio in 1973 to record an album entitled *For The Last Time*. Sadly, Wills was terminally ill and died not long after. However, the Playboys began regular performances under the leadership of Leon McAuliffe. Currently, although almost invisible, western swing maintains a cult audience around the world. Asleep at the Wheel continues to perform and a regional following of the genre persists in its birthplace of Texas. While elements of western swing can sometimes be found within the repertoire of country and rockabilly bands, ensembles devoted to the genre are rare. Assembling an ensemble is not a difficult task, with the majority of instruments readily available. However, non-pedal players are few and far between, and bandleaders may have to opt for a pedal steel guitar to complete their lineup. However, those who seek to reproduce authentic western swing will only be satisfied by the sound of a lap steel guitar.

[541] Jerry Byrd, 'Admirable Byrd - the Steel Guitar Magic of Jerry Byrd', (Monument SLP 18014), 1964.
[542] Byrd, *It Was a Trip on the Wings of Music*, 86-87.

Conclusion

The detailed account of the steel guitar provided by this study has been achieved through a multi-dimensional examination of the approach taken by leading players to the amalgam of popular musics represented in the repertoire of western swing. The evolution described here traces those cutting edge stylists who shaped the performance culture of steel guitar in the genre. Rather than a parabola of gradual development and gentle subsidence, the study reveals a constant progression that came to a sudden and precipitous end. The study explores western swing on a number of levels, understood here in terms of its historical context, its stylistic evolution, cross-pollination between practitioners, and external influences, most notably and critically in the form of Hawaiian performance practices.

From its inception in the early 1930s, Bob Wills reshaped the incipient stylings of Milton Brown by broadening and updating his repertoire, refining arranging practice and improving the musicianship of his players. In the process, Wills in the early 1940s arrived at a level of performance that came to typify the genre as a whole. The study shows that steel guitar stylings in western swing also underwent constant development and provided an important pillar of Wills' modernisations.

Four stages of evolution have been delineated; inception, development, refinement and decline. Inception has been represented by the powerful entry of Bob Dunn onto the Texas dance scene in 1935, as he applied advanced techniques and mature stylings to the new technology of amplification. A subsequent developmental phase has been depicted by the evolution of the styles of Leon McAuliffe and Noel Boggs that occurred before 1942 in the Southwest, and in the postwar period on the West Coast. A period of further refinement has been identified in the virtuosic approach of Californian Joaquin Murphey, as western swing enjoyed its golden era in the 1940s. Finally, the circumstances of decline have been outlined through an investigation of Bud Isaacs and his innovative incorporation of mechanical inflection into steel guitar performance.

The study clearly establishes continuity in stylistic development but exposes an unexpected disparity in the ostensible succession between the principal subjects. In the Southwest, the early dominant style of Dunn gave way to distinct styles developed by McAuliffe and Boggs, who both knew Dunn personally. Analysis highlights Dunn's influence in their early performances, and shows that his approach provided a launching point for their stylistic journeys. Murphey's style is shown to be an extension of both Boggs' sophisticated chordal approach and McAuliffe's hard swinging improvisations. However, Murphey's development in California was autonomous. Enlisted by Spade Cooley as a teenager, he

immediately assumed a position as one of western swing's foremost steel guitarists. However, his recordings do not show a process of gradual assimilation of the styles of his predecessors, but rather, an ongoing refinement of his remarkable inceptive skills. This puzzling phenomenon was explained when Murphey's Hawaiian training was considered. More broadly, this study has shown that pedagogy formed part of a Hawaiian influence that provided a hidden unifying factor to the performance culture of steel guitar in western swing.

In terms of external influences, the study has uncovered a strong Hawaiian influence permeating western swing steel guitar practice. Formal Hawaiian steel guitar pedagogy was a factor common to the formative years of the four main performers examined here. Dunn purchased Kolomoku's detailed correspondence course. McAuliffe took lessons with Lattés Merrick. Boggs hinted at Hawaiian training, while Murphey received the most comprehensive tuition of the four, attending Ball's academy in Los Angeles. Each was subject to the elements of the same mature pedagogy, in which consistent standards of technique were codified, and repertoire was designed to develop specific stylings. While the four subsequently developed distinct personal styles, they were based on the same technical bedrock. Additionally, the study has also shown that informal Hawaiian sources of recordings and radio performances informed Dunn and McAuliffe and were clearly reflected in their performances. Murphey's experience was even more immediate and impactful, with personal contact with virtuosos, Sol Ho'opi'i and Dick McIntire, and access to a progressive Hawaiian scene in Los Angeles that had embraced jazz stylings in the 1930s.

The study has determined that in addition to core Hawaiian techniques, western swing steel guitar players employed idiosyncratic Hawaiian devices of glissandi and harmonics so widely that they became a staple of the genre. Additionally, Hawaiian tuning innovations, a key to refinement of both harmony and melody, have also been shown to have influenced the crucial stylistic innovations of McAuliffe and Boggs. The study shows a pervasive and ingrained Hawaiian influence, immersed so deeply in the stylistic amalgam of western swing that its origin was no longer apparent. When the lap steel was superseded by the pedal steel, the entrenched Hawaiian stylings became a resource employed in the new sound of country music emerging in Nashville in the 1950s. The reign of the lap steel in western swing was over, yet the echoes of the Hawaiian style that the instrument engendered came to be synonymous with country music itself.

In terms future research, the study defines a path through largely unexplored musical territory, and offers many opportunities for expansion and refinement. The project was initiated by a desire to make a comprehensive evaluation of the style of Joaquin Murphey, which has only been achieved in the abridged form of a chapter, and a more substantial

investigation of Murphey's contribution is warranted. Similarly, the remaining three primary subjects of the study display distinct innovative approaches worthy of investigations of greater depth. To achieve deeper understanding of regional cultures, investigation of the steel guitar in the crucial period covered by this study could be undertaken by locale, with the South West, West Coast and Nashville providing rich provincial cultures to be explored. Similarly, studies based on smaller temporal units may reveal greater technical detail and uncover more interrelationships between individuals and musical cultures.

Two areas of steel guitar activity flagged in the study, both of which lie beyond the confines of western swing, invite further research. Firstly, the culture of Hawaiian steel guitar of the 1930s offers a fascinating and challenging subject that holds relevance for broader studies of popular music. Second, the transitory period following Isaacs' innovation, whereby an entire musical subculture of country steel guitarists simultaneously took a radical stylistic tack, seems a unique event in popular music culture. Further studies of this period seem warranted and would serve as preparatory work for an investigation of the evolution of the performance culture of the pedal steel guitar, an area that has received little scholastic attention.

Finally then, the study offers evidence to a broader and complex area of musicological study. Issues of ethnicity in American popular music exist in a tangled web of relationships in which the most influential can become the least rewarded. In the complex weave of musical influences that shaped western swing, black music was dominant. At inception, jazz tunes were prominently featured by Milton Brown, and Bob Wills' repertoire was filled with blues. Individual African American musicians were widely emulated by western swing performers. Stuff Smith and Eddie South provided a model on which fiddlers could draw.[543] The influence of jazz guitarist, Charlie Christian, can be heard throughout the western swing era, exceptionally clearly in the style of Cooley's guitarist, Johnny Weis. Despite the depth of this influence, the only African American musician referenced in the literature is a trumpeter, hired one night by a drunken Wills and fired in the clear light of the following morning.[544] Similarly, despite the significant and enduring influence of Hawaiians on western swing steel players, only one, Freddie Tavares, featured prominently in western swing.

The performance culture of the lap steel guitar was not entirely extinguished by the advent of the pedal steel. The recent phenomenon of social media has served to bolster interest in the instrument by bringing tiny remnants of the culture together. The survivors may

[543] Boyd, *The Jazz of the South West, an Oral History of Western Swing*, 39-40.
[544] Townsend, *San Antonio Rose: The Life and Times of Bob Wills*, 115.

take interest in the historical aspects of technical development assembled here. A greater potential audience exists within the performance culture of the dobro that has been forged in the increasingly popular genre of bluegrass. Progressive leaders of the movement, such as Jerry Douglas, Rob Ikes and Billy Cardine, have been expanding the scope of the culture through new directions in repertoire and by regularly employing solid body amplified steel guitars in performance. This study offers their movement a detailed view of largely forgotten techniques and may help to accelerate the broadening of musical expression that the leaders are demonstrating. Finally, a massive potential audience can be found in the legions of standard guitarists, whose means of expression is being gradually curtailed by advancing years. As sinews age and joints decay, the exacting technique of the Spanish guitar inevitably becomes more awkward and burdensome. However, an Indian summer of pleasurable playing awaits any guitarist willing to experiment with the comfortably positioned lap steel guitar. All that is needed are the basics assembled over a hundred years ago in Hawaii; a Spanish guitar, a nut riser and a tuning or two.

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---. 'Yearning'. Vocalion 04934, 1938.
---. 'You're Ok'. Vocalion 04839, 1938.