THE ACOUSTIC GUITAR

IN AMERICAN CULTURE, 1880-1980

by

Andrew Durkota Augustine Bozanic

A dissertation submitted to the Faculty of the University of Delaware in partial fulfillment of the requirements for the degree of Doctor of Philosophy in History

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Libraries facilitated my image permission requests. My stay at the Smithsonian would not have been the same without my advisor Pete Daniel, who took the time to oversee my project though he had already retired from the museum. Pete's informal Tuesday gatherings at Irish Times provided opportunities for me to both socialize and get feedback from a diverse group of individuals. I am also grateful to Pete for serving as my outside reader.

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There are many people in the UD Department of History that I would like to thank for shepherding me through my time as a Blue Hen. The office staff of Cathy Allison, Diane Clark, Pat Orendorf, and Doug Tobias all took time to help me through my studies. Conversations with Anne Boylan, Kasey Grier, John Hurt, Will Scott, David Shearer, and Ram Rawat all informed this dissertation. In particular, Peter Kolchin provided me with an opportunity to comparatively study musical instruments at international expositions. Barry Joyce, who I traveled with throughout the American Southwest, lent his ear many times to hear me talk about guitars.

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Pilkington, Jen Moses, Hillary Murtha, Christine Sears, Lily Santoro Williams, Michelle Mormul, and Eric Steiger. The Mohun-Strasser dissertation group read through many of these chapters and I would especially like to thank Jennifer Armiger, Nicole Belolan, Jennifer Fang, Ai Hisano, Alison Kreitzer, Josh Probert, Anne Reilly, Janneken Smucker, Bess Williamson Stiles, and Cristina Turdean for their input. My roommates over the years, Dan Claro, Ben Schwantes, and Jamin Wells, all contributed through late night conversations and pages of feedback. Outside of my history cohort, I am thankful for time spent on the softball diamond with my teammates on the Paperbacks and Overworked and Underpaid. In my early days at UD, I am also proud to have been part of the Second Shift. Without my time in the Graduate Student Senate, I would not have met so many amazing graduate students at UD. A special thanks goes to Mary Martin and to my fellow GSS members Priscilla Cole, Tara Falcone, Bethany Willis Hepp, Megan Dively Lehman, Michele Maughan, Matthew Quirey, Rachel Schiavone, Maria Simona, and George Szczepanski.

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LIST OF ABBREVIATIONS

AC: Archives Center, National Museum of American History, Smithsonian Institution

AFC: American Folklife Center, Library of Congress

CTSMC: Charles H. Templeton, Sr. sheet music collection, Special Collections, Mississippi State University Libraries

DCA: Division of Culture and the Arts, Smithsonian, National Museum of American History

MIMA: Musical Instrument Manufacturers' Archive, National Music Museum, The University of South Dakota, Vermillion

NTCC: NMAH Trade Catalog Collection, Smithsonian Libraries

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ABSTRACT

Once primarily a Victorian parlor instrument, the acoustic guitar emerged in the twentieth century as a key component of almost every major genre of popular American music. How did this happen? The path to ubiquity involved manufacturers, cultural movements, networks of mass communication, and musicians. These factors combined to gradually transform the design, construction, dissemination, and use of the instrument in American musical culture. Makers employed new methods of mass-producing instruments to lower costs and improve the guitar's intrinsic qualities. They also utilized the strategy of "aspirational marketing." This tactic enticed consumers to purchase a guitar not simply as a music-making device, but rather as an object that could virtually transport a listener to faraway destinations or possibly serve as the ticket to gaining fame and fortune alongside the celebrities of mass media. The story of the popularization of the acoustic guitar is inextricably tied to periods of heightened American cultural interest in two other members of the fretted stringed instrument family: the mandolin and ukulele. Ultimately, this process culminated in a wide range of instruments from flimsy plywood guitars decorated with cowboy imagery to durable "Space Age" instruments like the Ovation guitars endorsed by recording artists. Yet this is not just a story about an object, but rather one that involves the people who made and used it, from skilled woodworkers to travelling folksingers.

INTRODUCTION

Setting the Stage

Once primarily a Victorian parlor instrument, the acoustic guitar emerged in the twentieth century as a key component of almost every major genre of popular American music. How did this happen? The path to ubiquity involved manufacturers, cultural movements, networks of mass communication, and musicians. These factors combined to gradually transform the design, construction, dissemination, and use of the instrument in American musical culture. Makers employed new methods of mass-producing instruments to lower costs and improve the guitar's intrinsic qualities. They also utilized the strategy of "aspirational marketing." This tactic enticed consumers to purchase a guitar not simply as a music-making device, but rather as an object that could virtually transport a listener to faraway destinations or possibly serve as the ticket to gaining fame and fortune alongside the celebrities of mass media. The story of the popularization of the acoustic guitar is inextricably tied to periods of heightened American cultural interest in two other members of the fretted stringed instrument family: the mandolin and ukulele.[1] Ultimately, this process culminated in a wide range of instruments from flimsy plywood guitars decorated with cowboy imagery to

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[1] A fret is a horizontal bar made of ivory, wood or metal that marks finger positions on the neck of an instrument. Guitars, mandolins, and banjos feature fretted necks or fingerboards making them fretted stringed instruments. This differentiates them from other stringed instruments that do not utilize fretted necks such as violins, violas, cellos, and basses. Jeremy Montagu, "fret," *The Oxford Companion to Music*, accessed January 11, 2015, *Oxford Music Online*.

durable "Space Age" instruments like the Ovation guitars endorsed by recording artists. Yet this is not just a story about an object, but rather one that involves the people who made and used it, from skilled woodworkers to travelling folksingers.

The acoustic guitar has a number of built-in attributes that made it particularly suited to the processes described in this dissertation. People chose the guitar because it was cheap, portable, easy to learn, and adaptable for playing music in a variety of styles. For example, a musician could use the same basic instrument to sing and play a folk tune, a blues progression, a Hawaiian melody, a country song, and a rock 'n' roll hit. The same could not be said for an instrument such as a saxophone or a trumpet. Though a player might be able to perform those same tunes on a piano, it was not nearly as portable or inexpensive as a guitar.

Like many commodities in the late nineteenth century, the acoustic guitar benefitted from the changes in production, transportation, and communication most associated with American industrialization. Unlike other merchandise of the period, the guitar did not conform to one production paradigm. It was, and still is, simultaneously manufactured by multiple companies and luthiers in large numbers, small batches, and individually crafted models.[2] The growth in print culture, distribution channels, and transportation networks enabled companies to market and sell the instrument to consumers throughout the country. An aspect of the growing American culture of consumption, people obtained guitars through a number of avenues including traditional brick and mortar stores, mail-order houses, and secondhand sites of consumption such as pawnshops and newspaper advertisements.

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[2] Lutherie is the art of making guitars. One who crafts guitars is often referred to as a luthier.

The guitar's acceptance into American musical culture was aided in part through what this dissertation calls ethnic music movements. Through two successive and overlapping periods, the first focused on the mandolin and the second on the instruments and sounds of Hawaii, the exotic music produced by the originators of the movements captivated American audiences and amplified already existing cultural fascinations with far off scenic vistas. Middle and upper class whites participated in these movements by attending performances, buying sheet music and records, and purchasing instruments such the Hawaiian style guitar to form their own ensembles. Guitar makers learned valuable lessons from these movements, altering their production inventories and facilitating the growth of groups and orchestras that included both the new instruments and acoustic guitars. Long after the movements had faded in popularity, the instruments, accessories, and playing styles lived on in genres of American music not associated with the originators of the movements.

Manufacturers used the burgeoning culture of mass communication in the form of records, radio, motion pictures, and television to connect the stars of stage and screen with the instruments they played. Aspirational marketing schemes offered consumers the chance to buy a guitar just like the ones their heroes used. Though aspects such as cost, tone, and appearance mattered to consumers, many purchased a guitar simply because it was endorsed by a particular celebrity, be it Gene Autry or Roy Smeck. Emblazoned with page after page of photographs of musicians, manufacturer catalogs provided consumers with the opportunity to one day appear in the same brochure as their musical idols. According to company advertisements, happiness and notoriety could easily be achieved through the tool of the acoustic guitar. While guitars may share some similarities with other late nineteenth century

commodities such as furniture and clothing, aspirational marketing sought to convince consumers that buying an acoustic guitar could be a path to wealth, in addition to personal fulfillment. The conspicuous consumption of fine clothing and home furnishings could be seen as symbols of fame and fortune but neither offered a practical means by which to get there. For a young musician, purchasing a guitar might be the first step on the road to an appearance on a vaudeville circuit or even a recording contract.

Beginning in the 1920s with the growth of jazz ensembles, guitarists sought new ways to amplify the instrument leading to developments that highlighted the social and cultural factors evident in the shaping of the acoustic guitar. A guitar that worked well in a parlor had a hard time competing with trumpets and saxophones in larger performance venues such as concert halls. In order to increase the volume of the instrument, makers experimented with steel strings, larger models, and new mechanically amplified resonator guitars made using metal parts. While some of these instruments found favor with musicians, by the 1930s an increasing number turned to electrically amplified guitars. But not all guitarists chose to plug in their instruments leading to the formation of an acoustic-electric divide in the market. Musicians sought the same organic, tonal qualities of the acoustic guitar, yet wanted to play it at louder volumes for larger audiences. Thanks to Cold War aerospace engineering, the use of composite materials and new types of pick-ups, Ovation guitars bridged the acoustic-electric divide offering consumers a guitar that sounded and looked like an acoustic, but could also be electrically amplified. While successful in their own right, these innovative guitars, like the metal resonators before them, did not bring about the end

of the wooden guitar, indicative of the larger cultural context in America that affected the production and use of the instrument.

From instrumental virtuosos to hobbyists who only knew three chords, musicians of varying abilities latched onto the acoustic guitar as their instrument of choice. With a limited amount of skill already built into the guitar, a beginner could quickly master the basics of the instrument. Those who sought further instruction learned from a variety of both formal and informal avenues. Students pursued the traditional routes of private teachers and method books. Those who could not afford an instructor relied on lessons from friends and family, bummed tips off local musicians, and mimicked the sounds of records and radio broadcasts. Often it was a combination of these strategies that enabled promising players to follow their musical dreams, regardless of their economic background or geographic location.

The acoustic guitar became omnipresent in American music thanks to the interplay between both makers and users of the instrument. Tinkerers and innovators devised variations on the same basic design (a resonant wooden box with vibrating strings) in order to offer an assortment of models to consumers. They built some to be louder. Other models accommodated different performing styles such as situating the instrument on a player's lap. Each of these innovations represented new directions in acoustic guitar design. Guitarists also participated in the process by incorporating the use of accessories into their playing. Producers never intended on musicians using broken bottlenecks and knives with a guitar but ultimately these tools became commodities that any performer could purchase in order to play music in a particular style. Consumers embraced some types of guitars while shunning others. For example, the Martin dreadnought style with its booming bass tone became quite popular with

players, prompting other companies to release their own versions. Conversely, Mario Maccaferri may have earned acclaim for designing some of Django Reinhardt's instruments but his plastic guitars failed to capture consumer interest in America. Musicians offered their input on guitar design and producers listened, debuting new models with features based on user feedback. Through this process of mutual shaping, both those who built the instrument and those who played it shared a role in making the acoustic guitar the American instrument of the twentieth century.

Where I Fit In

There have been *many* books written about guitars. This dissertation builds upon a vast literature of work, often not written by scholars, that caters to musicians and collectors who want to know more about specific kinds of instruments and companies. There is a smaller literature by musicologists, organologists, and other scholars, which is still about individuals or specific instruments but does attempt to put them in a historical context. Much, if not all, of the existing literature uses these narrow histories as a substitute for the larger explanation of why the guitar is important. By doing so, these works simplify the story and fetishize the prominent instruments and makers. I argue that it is not just about one musician, one instrument, one company, or one recording. It is not purely a story of producers and consumers. Instead, this was a complicated process that featured many elements. To understand how the acoustic guitar became the American instrument of the twentieth century, this dissertation looks at the many different factors that comprise the broader picture. My work synthesizes these threads together and expands upon them in order to explain the popularization of the acoustic guitar in American culture.

Essential to this dissertation is a large body of work written by journalists, collectors, and company employees who had experience in the industry and access to sources not readily available to scholars such as myself. For example, Mike Longworth worked for C. F. Martin & Company for over twenty-five years. Using the original company logbooks and personal letters of C. F. Martin, he compiled the first published history of the company. His research along with others written by former employees and company historians have been crucial to this dissertation in terms of understanding the detailed inner-workings of the major guitar makers.[3] Articles and books by George Gruhn offer insights and knowledge gained through years of collecting and examining vintage instruments. For forty-five years he has owned and operated Gruhn Guitars in Nashville, Tennessee, billed as "The World's Premier Guitar Store," giving him unprecedented access to thousands of instruments including some of the rarest and most valuable on the market. Along with the work of Tom Wheeler, former editor in chief of *Guitar Player* magazine, these books have helped

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[3] Mostly written for popular audiences, these company histories provide insights into the inner-workings of guitar producers while also listing information such as model numbers and inventories to help collectors and musicians date their instruments. The following works were particularly valuable in the writing of this dissertation: Walter Carter, *Gibson Guitars: 100 Years of An American Icon* (Los Angeles: General Publishing Group, 1994); Walter Carter and Jon Eiche, *The History of the Ovation Guitar* (Milwaukee: Hal Leonard, 1996); Richard Johnston, Dick Boak, and Mike Longworth, *Martin Guitars: A History*, rev. ed. (New York: Hal Leonard, 2008); Hubert Pleijsier, *Washburn Prewar Instrument Styles: Guitars, Mandolins, Banjos and Ukuleles 1883-1940* (Anaheim Hills, CA: Centerstream Publishing LLC, 2008); Joseph E. Spann, *Spann's Guide to Gibson, 1902-1941* (Anaheim Hills, CA: Centerstream Publishing, LLC, 2011); John Teagle, *Washburn: Over One-Hundred Years of Fine Stringed Instruments* (New York: Music Sales Corp., 1996).

me to understand the context of each maker within the larger guitar market.[4] Though not an academic work, radio personality Tim Brookes' book allowed me to draw connections between the acoustic guitar and its place in American culture, even though his anecdotal approach differs significantly from this dissertation.[5] Two other works written for a popular audience by Lorene Ruymar and Bob Brozman utilized insider connections not available to those outside of the community. Ruymar used her position as founder and later president of the Hawaiian Steel Guitar Association to pull from a network of musicians and industry contacts to compile a history of the Hawaiian steel guitar. Acclaimed musician Bob Brozman used his status as a

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[4] Ken Achard, *The History and Development of the American Guitar* (Westport, CT: Bold Strummer, 1990); George Gruhn, and Walter Carter, *Gruhn's Guide to Vintage Guitars, An Identification Guide for American Fretted Instruments* (San Francisco: Miller Freeman Books, 1999); George Gruhn and Walter Carter, *Acoustic Guitars and Other Fretted Instruments: A Photographic History* (San Francisco: GPI Books, 1993); Tom Wheeler, *American Guitars, An Illustrated History*, rev. ed. (New York: Harper Perennial, 1992).

[5] British author Tim Brookes tells his own version of the story of the American guitar that, at times, inserts the author's personal opinions into the narrative. While our projects do share some common themes, this dissertation offers a more systematic and documented attempt at explaining the popularization of the instrument. His work blends a story of losing his own acoustic guitar during an airplane flight and the subsequent construction of a new one with a larger history of the guitar in America. Directed at a public audience, the book, like many others written about the guitar, reveres the instrument and its players relying on hundreds of tiny anecdotes and stories rather than explaining the meaning behind them. Some subjects that are extensively covered in this dissertation, such as the relationship of the guitar to the mandolin and the impact of the Banjo-Mandolin-Guitar (BMG) culture, are only given a cursory mention. Brookes offers a selected bibliography for each section and does mention some scholarly works, but on the whole he relies on much of the popular literature written about the guitar and its players to tell his story. Tim Brookes, *Guitar: An American Life* (New York: Grove Press, 2005).

recording artist who exclusively played National instruments and his relationship to the company in order to write an expansive volume on resophonic instruments.[6]

This dissertation adds to the recent and emerging scholarly historiography that attempts to place luthiers and fretted stringed instruments within the context of larger social and cultural issues. Organologist Darryl Martin offered a brief, but comprehensive, survey of modern American and European guitar design that traces the evolution of the instrument while simultaneously presenting some short contextual connections.[7] Both Philip Gura's book and Robert Shaw and Peter Szego's recent collection of essays highlight C. F. Martin and his role in nineteenth century American guitar innovation. These works bring together scholarship from collectors, journalists, literary scholars, luthiers, and organologists to examine Martin and his contributions. Rather than simply celebrating him as a luthier, they examine Martin as a product of his nineteenth century American context. Scott Hambly's work on the mandolin and Jim Tranquada and John King's recent book on the ukulele also demonstrate the

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[6] Resophonic or resonator guitars are mechanically amplified instruments that utilize metal cones to achieve greater volume than a traditional wooden soundboard. These instruments will be discussed in Chapter 4 of this dissertation. Bob Brozman et al., *The History and Artistry of* National Resonator Instruments (Fullerton, CA: Centerstream Publishing, 1993); Lorene Ruymar, ed., *The Hawaiian Steel Guitar and Its Great Hawaiian Musicians* (Anaheim Hills, CA: Centerstream Publishing, 1996).

[7] Martin does briefly touch on several of the major producers covered in this dissertation including the innovations of Orville Gibson, C. F. Martin & Company, Lyon & Healy, National, and Ovation. His article provided a good starting point for thinking about guitar innovation in America and Europe over the past two centuries. While my work follows a similar trajectory, I take a more in-depth approach by placing each of these manufacturers within a broader social and cultural context. Darryl Martin, "Innovation and the Development of the Modern Six-string Guitar," *Galpin Society Journal* 51, (July 1998): 86-109.

possibilities for understanding the role of a particular ethnic instrument within American society and culture.[8] The work of Tom and Mary Evans and interdisciplinary collections edited by Andy Bennett, Victor Anand Coelho, and Kevin Dawe also provide some social and cultural context for the guitar, but these works cover a much larger chronological and geographical span than this dissertation. In addition, these books examine the context of both the electric and acoustic guitar.[9]

Above all, Jeffrey Noonan's recent work on the role of the guitar as a "cultivated instrument" in the late nineteenth and early twentieth-century Banjo-Mandolin-Guitar (or BMG) culture provides a solid foundation that I build upon in this dissertation. Noonan's book tackles some of the same questions that drive my own research, attempting to break down the mythical importance of the instrument and lay

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[8] This dissertation complements the growing field of scholarly works focused on examining fretted stringed instruments and luthiers within their social and cultural context. Philip F. Gura, *C. F. Martin and His Guitars, 1796-1873* (Chapel Hill: The University of North Carolina Press, 2003); Scott Hambly, "Mandolins in the United States Since 1880: An Industrial and Sociocultural History of Form" (PhD diss., University of Pennsylvania, 1977); Robert Shaw and Peter Szego, eds., *Inventing the American Guitar: The Pre-Civil War Innovations of C. F. Martin and His Contemporaries* (Milwaukee: Hal Leonard Books, 2013); Jim Tranquada and John King, *The Ukulele: A History* (Honolulu: University of Hawai'i Press, 2012); In addition, scholars have written in a similar fashion about the piano in American and European culture. Several notable examples include Arthur Loesser, *Men, Women and Pianos: A Social History* (New York: Dover Publications, Inc., 1990); James Parakilas, *Piano Roles: Three Hundred Years of Life with the Piano* (New Haven: Yale University Press, 1999) and Craig H. Roell, *The Piano in America, 1890-1940* (Chapel Hill: The University of North Carolina Press, 1989).

[9] Andy Bennett and Kevin Dawe, eds., *Guitar Cultures* (New York: Berg, 2001); Victor Anand Coelho, ed., *The Cambridge Companion to the Guitar* (New York: Cambridge University Press, 2003); Tom Evans and Mary Anne Evans, *Guitars: Music, History, Construction and Players, From the Renaissance to Rock* (New York: Paddington Press, 1977).

out a more complex story. However, this dissertation expands on his study both in terms of source material and chronology. While his self-described "pre-history" of the guitar in America draws heavily on the periodicals associated with the BMG movement, my research relies on a broader set of source materials, examining not just the guitar's appearance in literature, but also the objects (namely musical instruments and accessories), advertisements, sound recordings, and oral histories associated with the instrument. Rather than concluding in the Jazz Age, I argue that the post-World War I era and the quest for amplification yielded important insights into the adaptability and popularity of the acoustic guitar beyond just a focus on its electric cousin. To truly understand the appeal of the acoustic guitar, a thorough study must encompass the societal changes in America from the Great Depression through the Cold War. Despite these differences, this dissertation seeks to further expand our understanding of the guitar's relationship to American culture by answering Jeffrey Noonan's call for more research that places the guitar in the context of the broader musical history of America.[10]

To put together this complex picture of the acoustic guitar I also looked beyond the guitar-specific literature and drew on the broader scholarship of American history. Throughout this dissertation, I utilize a key concept from the history of technology called social construction in order to demonstrate how both users and

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[10] Jeffrey J. Noonan, *The Guitar in America: Victorian Era to Jazz Age* (Jackson, MS: University Press of Mississippi, 2008), 3-6, 176; Chapter 2 of this dissertation will offer a more detailed explanation of the BMG culture and its relationship to the shaping of the acoustic guitar in America.

producers shaped the development of the acoustic guitar in America.[11] Unlike other works on modern musical culture, this dissertation argues that musicians played an important role in influencing the use and production of the acoustic guitar.[12] This is not simply a top-down story of producers dictating to consumers and controlling the market. Instead, I argue that both users *and* producers of the acoustic guitar participated in the process of shaping the instrument, from developing larger and louder dreadnought models to resisting non-wooden guitar designs. As Melvin Kranzberg stated, "Technology is a very human activity." It is impossible to separate the user from the tool and, in the case of this dissertation, the musician from the acoustic guitar. Those who choose to play it fundamentally shape the production, adaption, and use of the instrument.[13]

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[11] Developed initially in the 1980s by European and American scholars studying the history and sociology of science and technology, the social construction of technology (SCOT) theory emphasizes a theoretical approach that places the study of technology within a larger social and cultural context. See Donald A. MacKenzie and Judy Wajcman, eds., *The Social Shaping of Technology* (Philadelphia: Open University Press, 1985); and Wiebe E. Bijker, Thomas P. Hughes, and Trevor Pinch, eds., *The Social Construction of Technological Systems: New Directions in the Sociology and History of Technology* (Cambridge, MA: MIT Press, 1987).

[12] For example, David Suisman focuses predominantly on the producers in the music industry arguing that "the creation of modern musical culture was not a consumer-driven phenomenon." While he does not discount consumer reception or its historical importance, he acknowledges the difficulty of documenting such evidence. David Suisman, *Selling Sounds: The Commercial Revolution in American Music* (Cambridge: Harvard University Press, 2009), 15, 292.

[13] This is a paraphrase of Kranzberg's Sixth Law, "Technology is a very human activity – and so is the history of technology," as stated in his 1985 presidential address at the annual meeting of the Society for the History of Technology. Kranzberg also offered an amusing but insightful anecdote about violinist Fritz Kreisler to prove his point that the violinist needed the instrument to produce beautiful music in the same way that the violin could not produce notes without the player. Melvin

The focus of historians of science and technology in recent years has expanded to include more about the agency of users in shaping technology offering valuable frameworks by which to study those who affected the development of the acoustic guitar.[14] I use this approach to examine how, in many ways, the users of the guitar (musicians and luthiers) shaped how the instrument was played and designed. Acoustic guitars, such as resophonic instruments, may have been intended for vaudeville players, but bottleneck bluesmen and rural string band Dobro players found they could get just the right sound from these models. Unintended consumers influenced manufacturers to produce new commodities based on user adaptations.[15] In a similar fashion to the early twentieth century farmers who adapted cars as pieces of agricultural machinery, musicians used everyday objects in conjunction with the

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Kranzberg, "Technology and History: "Kranzberg's Laws"," *Technology and Culture* 27, no. 3 (July 1986): 557-558.

[14] Some examples of recent works focused on users (from mechanics to farmers) and their relationship with technology (from personal computers to milk cartons) include Kevin L. Borg *Auto Mechanics: Technology and Expertise in Twentieth-Century America* (Baltimore: Johns Hopkins University Press, 2007); Joseph J. Corn. *User Unfriendly: Consumer Struggles with Personal Technologies, from Clocks and Sewing Machines to Cars and Computers* (Baltimore: Johns Hopkins University Press, 2011); and Nelly Oudshoorn and Trevor Pinch, eds., *How Users Matter: The Co-Construction of Users and Technology* (Cambridge, MA: MIT Press, 2003).

[15] The role of musicians/consumers in the network of acoustic guitar producers demonstrates their role at the center of the "consumption junction" whereby they exercised a large degree of agency in how the instrument was produced and sold in America. Ruth Schwartz Cowan, "The Consumption Junction: A Proposal for Research Strategies in the Sociology of Technology," in *The Social Construction of Technological Systems: New Directions in the Sociology and History of Technology*, ed. Thomas P. Hughes, Wiebe E. Bijker, and Trevor Pinch (Cambridge, MA: MIT Press, 1987), 261-280.

acoustic guitar to produce new sounds and genres of music. In both cases, manufacturers eventually capitalized on these user adaptations, resulting in new accessories and commodities made available throughout the country. While the initial users grabbed railroad nails and whiskey bottles, the consumers who followed bought commodified forms of these accessories (steel bars and glass slides), thus completing the cycle from unintended adaptation to commercially available product.[16] Different players wanted different instruments depending on a variety of factors. Some of these, such as cost, volume, portability, and decoration, were easily quantified. Other aspects such as tone, comfort, and celebrity appeal were harder to ascertain. Aesthetic taste and choice could weigh just as heavily on consumers as price.

This work also situates itself as part of the larger literature on the history of consumption. In the course of writing this dissertation, it became clear that manufacturers heavily utilized the concept of "aspirational marketing" to sell guitars to the American public. This strategy focused on appealing to the desires of consumers by selling them the tools that might one day make them the next great recording artist. Scholars such as Warren Susman have written about the connections between mass media stars and consumer products. Coupled with the endorsement of celebrities who performed and recorded on the instrument, the acoustic guitar became a popular commodity that benefited, like countless other twentieth century products, from the exposure brought by the networks of mass communication.[17] Catalogs showcased

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[16] Ronald Kline and Trevor Pinch, "Users as Agents of Technological Change: The Social Construction of the Automobile in the Rural United States," *Technology and Culture* 37, no. 4 (October 1996): 763-795.

[17] Warren Susman provides a good example of the potential for tying celebrities to consumer products. He argues that New York Yankee great Babe Ruth was "an ideal

photographs and quotes from noted performers endorsing a particular brand of instruments. With the growth of mass communication networks and sound recordings, stars of the stage and screen often became associated with the instruments they played. Producers, hoping the tactic would yield higher profits, offered custom models adorned with the names of celebrities. Consumers, dreaming of their own fame and fortune, could purchase a guitar just like the ones Gene Autry or Roy Smeck played on records and over the airwaves. People bought these instruments not on the basis of their appearance or sound but rather who endorsed them. A young boy growing up in rural Kansas during the Depression might be more inclined to dream of owning a guitar that Roy Rogers used, not because it sounded better or looked nicer, but simply because the "Singing Cowboy" played it.[18]

This dissertation also uses the work of historians such as William Leach and Roland Marchand who have shown that businesses used tempting advertising and grand spectacle in appealing to a new American culture devoted to mass consumption.[19] Along with celebrity endorsements, guitar producers used marketing

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hero for the world of consumption," translating his stardom on the baseball diamond into lucrative earnings in product endorsements, movie appearances, and Vaudeville shows. Warren I. Susman, *Culture as History: The Transformation of American Society in the Twentieth Century* (New York: Pantheon, 1984), 146-147.

[18] Guitar companies used the names of celebrities to brand particular instrument models. As Susan Strasser has shown, manufacturers employed product branding to try to eliminate price as a possible variable in consumer purchasing. If customers "would accept no substitutes" for a particular brand, they might choose the more expensive product over a competitor's based partly on loyalty to the brand. Susan Strasser, *Satisfaction Guaranteed: The Making of the American Mass Market* (New York: Pantheon, 1988), 28, 158-160.

[19] Merchants aligned with government, educational institutions, museums, and religious organizations to create a new American culture based on consumption in the

schemes that implied happiness and contentment could be achieved by purchasing a guitar.[20] Moreover, these "apostles of modernity" viewed advertising as a medium for dispensing morality lessons in the early twentieth century and guitar manufacturers such as Gibson employed the same techniques in their catalogs.[21] In this new culture of consumption, a guitar was advertised as something that could improve a person's social life, no matter where they called home or what they did for a living. As one company touted, "New friends, new pleasures, new and interesting experiences, invitations galore – dinners, dances, weekend parties, outings, - are some of the good things playing a Gibson brings into your life."[22] Endless possibilities awaited budding guitarists whose instrument's "silvery twang speaks of jolly beach parties, moonlight and canoes" and produces "music that weaves a magic spell."[23]

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early twentieth century. As Leach has demonstrated, department stores played a key role in this process. William Leach, *Land of Desire: Merchants, Power, and the Rise of a New American Culture* (New York: Pantheon, 1993).

20 One of the three basic ideas, according to David Suisman, ingrained in the growing consumer capitalism of the late nineteenth century included "the promise that consumption was the path to personal fulfillment." Suisman, 10; Another good example comes from the work of William Leach who demonstrated how the theories of Simon Patten glorified a culture that consumed for the purposes of wish fulfillment. Leach, 237, 241-242.

21 Roland Marchand, *Advertising the American Dream: Making Way for Modernity, 1920-1940* (Berkeley: University of California Press, 1985); See also Pamela Walker Laird, *Advertising Progress: American Business and the Rise of Consumer Marketing* (Baltimore: Johns Hopkins University Press, 1998); and Daniel Pope, *The Making of Modern Advertising* (New York: Basic Books, 1983).

22 Gibson Mandolin-Guitar Co. "The Music Pals of the Nation" (advertisement), *Popular Science*, February 1923, 103, NMAH Library, Smithsonian Libraries.

23 Lyon & Healy, Inc., *Band and Orchestra Instruments* (Chicago: Lyon & Healy, 1930), 30, MIMA.

Utilizing the framework of business historians, most notably Alfred Chandler and Susan Strasser, this dissertation examines the many ways by which people could purchase guitars. Highlighting how its widespread availability helped it become an instrument of the masses, I trace the ways Americans bought and sold goods (including guitars) from the period of industrialization through the first half of the twentieth century. Businesses, including guitar manufacturers, turned to the transportation and communication networks as new ways to reach consumers, especially those who lived outside of urban centers. Wholesalers, or jobbers, acted as middlemen, selling a variety of goods to shops throughout the country.[24] Mail-order companies, beginning in the 1880s, used the railroads to ship a range of commodities from tools to clothing to cooking utensils all over the country through the mail. Sears Roebuck and Montgomery Ward spearheaded new distribution systems that moved increasing numbers of commodities throughout the country via freight and mail services. With the advent of mail-order firms and catalog ordering, a consumer could send away for many types of goods, including musical instruments, and then wait patiently for the day that the Wells Fargo Wagon would deliver "something special" to his or her doorstep.[25]

My work examines the methods, materials, and tools used by luthiers and companies to produce guitars, drawing on the research of historians of technology

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[24] Alfred D. Chandler, Jr., *The Visible Hand: The Managerial Revolution in American Business* (Cambridge: Harvard University Press, 1977), 220; Strasser, 59-60.

[25] Strasser, 77, 212-216; For a satirical look at the rise of the American musical instrument industry and its effects on a small Iowa town see Meredith Wilson's musical *The Music Man*. *The Music Man*, directed by Morton DaCosta (Warner Bros. Pictures, 1962), DVD (Warner Home Video, 1999).

including David Hounshell and Philip Scranton.[26] The addition of assembly line techniques, steam driven factories, developing transportation networks, and wholesale distributors were each vital to the growth of American production in a number of industries including musical instruments. The acoustic guitar benefited greatly from the evolving research, design, and production advances from American industrialization through the Cold War space race. From C. F. Martin to Charles Kaman, guitar makers identified their works as a blending of traditional Old World craftsmanship combined with the latest advances in science and technology. Built on hundreds (or perhaps thousands) of years of stringed instrument design, guitar makers in the late nineteenth and early twentieth centuries utilized new materials, design concepts, and technologies to construct instruments.

This dissertation also employs the work of music historians, musicologists, and other scholars who have explored the artists and recordings associated with twentieth century American music. The complex history of country and bluegrass music examined by Robert Cantwell, Bill C. Malone, Jocelyn R. Neal, and Diane Pecknold provides a backdrop for understanding how steel guitarists and mandolin players became key aspects of these styles.[27] This project contributes to the work of David

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[26] David Hounshell, *From the American System to Mass Production, 1800-1932: The Development of Manufacturing Technology in the United States* (Baltimore: Johns Hopkins University Press, 1984); Philip Scranton, *Endless Novelty: Specialty Production and American Industrialization, 1865-1925* (Princeton: Princeton University Press, 1997).

[27] Robert Cantwell, *Bluegrass Breakdown: The Making of the Old Southern Sound* (Urbana: University of Illinois Press, 1984); Bill C. Malone and Jocelyn R. Neal, *Country Music, U.S.A.*, 3rd ed. (Austin: University of Texas Press, 2010); Diane Pecknold, *The Selling Sound: The Rise of the Country Music Industry* (Durham: Duke University Press, 2007).

Evans, Elijah Wald, and Gayle Dean Wardlow in mapping the players, styles, and evolution of blues music by highlighting the adaptability of the guitar and its adoption by musicians such as Tampa Red and Bukka White.[28] Building on Pete Daniel's work on the post-World War II culture and music of the South, this dissertation showcases how guitarists acquired the instrument and the skills to play it.[29] From poor rural musicians emulating the stars of the Grand Ole Opry to middle class teenagers joining the folk movement, my work examines the role of the acoustic guitar and the variety of musicians who played it within the context of American musical culture.

As historians such as Laurel Thatcher Ulrich have demonstrated, objects have stories to tell, and the material culture associated with the acoustic guitar is no exception.[30] From the weight of holding a steel body Tri-cone to the cultural ideals embodied in cowboy guitars, my research examines the acoustic guitar as an object of

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[28] David Evans, "Afro-American One-Stringed Instruments," *Western Folklore* 29, no. 4 (October 1970), 229-245; David Evans, *Big Road Blues: Tradition and Creativity in Folk Blues* (Berkeley: University of California Press, 1982); David Evans, ed., *Ramblin' on My Mind: New Perspectives on the Blues* (Urbana: University of Illinois Press, 2008); *Elijah Wald, Escaping the Delta: Robert Johnson and the Invention of the Blues* (New York: Amistad, 2004); Gayle Dean Wardlow, *Chasin' That Devil Music: Searching for the Blues* (San Francisco: Miller Freeman Books, 1998).

[29] Pete Daniel, *Lost Revolutions: The South in the 1950s* (Chapel Hill: University of North Carolina Press for Smithsonian National Museum of American History, Washington, D.C., 2000); Pete Daniel, "Rhythm of the Land," *Agricultural History* 68, no. 4 (Autumn 1994): 1-22.

[30] This dissertation studies the material culture associated with the guitar in a similar fashion to the fabrics and tools that Ulrich examines in her study of early American textile production and its relation to larger social and cultural structures. Laurel Thatcher Ulrich, *The Age of Homespun: Objects and Stories in the Creation of an American Myth* (New York: Alfred A. Knopf, 2001).

material culture. The physical dimensions of the instrument affected the ways people used it. In addition, objects of material culture are often imbued with cultural meanings that powerfully resonate with makers and users.[31] For example, country musician Marty Stuart, upon buying the Gibson J-200 guitar that Johnny Cash once used to write songs with, proclaimed "Holding that guitar in my hands and knowing that those songs and that record were born on that instrument was overwhelming."[32] For some players a guitar was just another instrument, but for others it could be seen as an object of veneration.

Chapter Walkthrough

This study sets the development of the instrument against the backdrop of industrialization, ethnic influences, and changing musical cultures in the United States from 1880 to 1980. By the early twentieth century, brass, string, and woodwind instruments, which would have largely been imported just fifty years earlier, were primarily produced and sold by American firms. These manufacturers used the latest innovations in machine tools and mass production techniques in order to generate large quantities to meet the growing demand. Moving beyond the piano in the parlor of the Victorian era, Americans took an interest in smaller musical instruments that

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[31] Scholars such as Igor Kopytoff have devised frameworks by which to view commodities as "culturally constructed entities" that can be "classified and reclassified into culturally constituted categories." Igor Kopytoff, "The Cultural Biography of Things: Commoditization as Process," in *The Social Life of Things: Commodities in Cultural Perspective*, ed. Arjun Appadurai (Cambridge: Cambridge University Press, 1986), 64-91.

[32] Marty Stuart, quoted in Geoffrey Hines, "The Curator: Traditional country music is in good hands with Marty Stuart," *Fretboard Journal,* no. 21 (Spring 2011): 51.

simultaneously produced beautiful sounds and exhibited the mark of fine craftsmanship. Prior to the advent of commercial sound recordings, people relied on producing their own music, whether in private spaces at home or in public spaces such as general stores, bandstands, and churches. With the growth of urban music stores and mail-order catalogs, Americans bought musical instruments in increasing numbers. Companies sought to lower the cost of instruments, including the acoustic guitar, by producing them domestically instead of relying on European imports.[33]

Chapter one begins with an examination of acoustic guitar production in late nineteenth century America, highlighting the role of the instrument in the culture of a rapidly developing and industrializing country. Many of the innovations and design changes illustrated in this dissertation are connected to a particular time and place in American history.[34] The establishment of a domestic musical instrument industry ties

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[33] For a discussion of the overall American musical instrument industry at the turn of the century, see Margaret Downie Banks, *Elkhart's Brass Roots: An Exhibition to Commemorate the 150th Anniversary of C. G. Conn's Birth and the 120th Anniversary of the Conn Company* (Vermillion, SD: The Shrine to Music Museum, 1994); Paul Alan Bro, "The Development of the American-made Saxophone: A Study of Saxophones made by Buescher, Conn, Holton, Martin, and H. N. White" (PhD diss., Northwestern University, 1992); Robert E. Eliason, *Keyed Bugles in the United States* (Washington, D.C.: Smithsonian Institution Press, 1972); Nancy Groce, *Musical Instrument Makers of New York: A Directory of Eighteenth- and Nineteenth-Century Urban Craftsmen* (Stuyvesant, NY: Pendragon Press, 1991); Margaret Hindle Hazen and Robert M. Hazen, *The Music Men: An Illustrated History of Brass Bands in America, 1800-1920* (Washington, D.C.: Smithsonian Institution Press, 1987); Martin Krivin, "A Century of Wind Instrument Manufacturing in the United States: 1860-1960" (PhD diss., State University of Iowa, 1961); and William Waterhouse, *The New Langwill Index: A Dictionary of Musical Wind-Instrument Makers and Inventors* (London: Tony Bingham, 1993).

[34] According to Hughes, "Technology should be appropriate for time and place." Thomas P. Hughes, "The Evolution of Large Technological Systems," in *The Social Construction of Technological Systems: New Directions in the Sociology and History*

directly to the changes that were happening in Gilded Age society. I examine how guitar makers such as Martin, Lyon & Healy, and Gibson all took dramatic steps towards the establishment of a truly American guitar industry. To feed the demand, manufacturers experimented in the ways by which they could take a traditionally crafted product that originally took years to build by one person and turn it into a mass-produced consumer good without sacrificing the tonal and aesthetic qualities of a handmade instrument. The story of acoustic guitar manufacturing did not conform to one single linear model of industrial production. Instead, it simultaneously exhibited characteristics of several paradigms, ranging from an individual workshop, to flexible-batch production, to the streamlined efficiency of Fordist production located within a large corporation. The acoustic guitar has been (and still is) produced in multiple ways, catering to different clientele. As Thomas Hughes noted, "There is no one best way to paint the Virgin; nor is there one best way to build a dynamo."[35] The same could be said for lutherie. Producers, realizing they could reach many segments of the market with relatively similar versions of an item, made guitar models in multiple trim levels. Just as a new car might come in one body style with several layers of features, so too did acoustic guitars. Yet unlike cars, the guitar did not lend itself easily to mass production. Aspects such as wood inlay and carving often could not be accomplished with the aid of purpose-built tools. Instead, the human hand remained an invaluable asset in the construction of an acoustic guitar.

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of Technology, ed. Wiebe E. Bijker, Thomas P. Hughes, and Trevor Pinch (Cambridge: MIT Press, 1987), 68.

[35] Ibid.

Chapters two and three explore the role of ethnic music movements in the social construction of the acoustic guitar, introducing American audiences to new instruments and sounds. While other scholars have referred to these as fads or crazes, I argue that they had long lasting influences on American culture, most of which were unintended consequences of the originators. Chapter two examines the mandolin movement from 1880 to 1920 and Chapter three looks at the Hawaiian music movement from 1898 to 1941. While the scholarship for both of these movements point to catalyst events that launched American cultural interest in the music and instruments associated with them, it is clear that the seeds had been planted long before the first wave of musicians caught the attention of the American public. Through new instruments including the mandolin, and ukulele, and adaptations like the Hawaiian steel guitar, musicians added exotic flavors to songs both foreign and domestic. For the majority of the population who had never seen the Mediterranean coast or the Hawaiian Islands, the sweet melodic lines of the mandolin and ukulele and the glissandos of a steel sliding across the strings of a guitar offered a way to put oneself in the mindset of a beautiful, faraway place, regardless of whether it was real or imagined. In addition, these movements allowed white, middle and upper class Americans to participate with some creating imposter ensembles of "Spanish students" and others fashioning their own ukuleles to serenade Greenwich Village crowds.

Musical instrument manufacturers learned valuable lessons from these cultural trends and reorganized their production inventories to ride the wave of consumer demand. They also helped to form ensembles around these new instruments. Guitars became a vital part of these groups, putting the instrument in the hands of more and more musicians and increasing its visibility in American musical culture. When the

public's interest in these ethnic music movements diminished, they did not disappear entirely from the cultural landscape. Mandolins and Hawaiian guitar techniques still exist in American music, just not in the same packaging as when they first appeared in these ethnic music movements. They offered musicians the tools and techniques to introduce new playing styles and music into the existing repertoire and forged lasting changes through the creation of entirely new genres of popular music.

With the advent of electrical recording and amplification, makers and users of the acoustic guitar responded in several ways to the new technologies. The second half of this dissertation addresses how guitarists dealt with the growing problem of volume and the subsequent creation of an acoustic-electric divide. Chapter four examines this dilemma beginning in the 1920s, when horn sections in large ensembles overpowered guitarists. While some turned to the tenor banjo to cut through the noise, others adopted new types of acoustic guitars such as dreadnoughts and arch-tops that featured changes to the body of the instrument. A third group of musicians chose to embrace the new experimental materials and body designs produced by the National String Instrument Corporation and their mechanically amplified metal instruments. When companies, such as Rickenbacker and Gibson, incorporated electrical amplification into the guitar itself, many thought the problem had been completely solved, but this was far from the case. This divergence in solutions led to the formation of intertwined, yet competing markets for electric and acoustic guitars.

Chapter five brings together the threads of production and consumption to highlight the period where the acoustic guitar became the instrument of the American masses. From the 1920s to the 1960s, a combination of increased production in low-end guitar models, mail-order networks, places of secondhand consumption (such as

pawn shops), and the growing influence of mass media made the guitar an extremely accessible and popular commodity. Players from varied musical and economic backgrounds chose the acoustic guitar as a cheap instrument that was easy to learn and adaptable to many styles of music. Through oral histories and interviews with musicians, I examine the many ways that people acquired the instrument and the skills to use it. From young jazz players to future rock 'n' roll legends, musicians throughout the country picked the guitar as their instrument of choice, demonstrating its immense flexibility in use and acquisition. Players mimicked the sounds they heard on records, and over the airwaves. Some even longed for the specific instruments used by recording artists in motion pictures and television shows. This chapter also explores how the combination of production, consumption, and celebrity endorsement fueled the growth of the hugely popular cowboy guitars of the period. It did not matter that these cheap instruments were a far cry from the shiny, expensive guitars produced by National, they offered the same basic tools by which young players could start their own musical careers.

As Chapter six shows, the birth of the electric guitar did not equal the death of the acoustic and consumers sought solutions that could offer the tone and feel of an acoustic with the amplification capabilities of an electric: in other words, the best of both worlds. By the 1940s and 1950s, the acoustic guitar began to embody a more organic, stripped down sound associated with folk and country music, when compared to the amplified and sometimes distorted sound of the electric guitar. Amidst the Cold War, an aerospace company known primarily for building helicopters decided to use its expertise in engineering research and design to build a better acoustic guitar. The resulting Ovation guitars bridged the growing gap between acoustic and electric

musicians with a cheaper, more durable guitar, using Space Age materials and acoustic testing. Equipped with pick-ups, these instruments mimicked the sound of a much more expensive Martin model and yet could be interchangeably played either as an acoustic or an electric guitar. While Ovation (and National) experienced success with their innovative designs, some consumers still resisted non-wooden guitars, something that points to the larger social and cultural factors that have shaped the acoustic guitar market. The dissertation concludes by highlighting several contemporary examples that reinforce the main themes of the study, namely the social shaping of the instrument, aspirational marketing, and the continued flexibility in acoustic guitar production.

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In order to trace the social construction of the acoustic guitar in America, one must take a long and complex journey. The path winds from a small Moravian town in Pennsylvania to the bustling streets of Chicago, Kalamazoo, and New Haven and eventually to the sunny West Coast. Stops must be made in the Mississippi Delta and the Hawaiian Islands and the imagined far off vistas of Arcadia. The journey connects a Chautauqua tent in Lima, Ohio to a dark and crowded Boston theater. Some spots, such as a tiny woodshop in rural Virginia might pale in comparison to the state of the art aerospace labs at a helicopter factory, but in the end they are equally important to the story. A few stragglers might even tag along including "potato bugs," "jumping fleas," and "spider bridges."

Along the way, a traveler will meet an array of characters that embraced the instrument. There will be people who speak Czech, Dutch, German, Hawaiian, and English. One will encounter Germans who claim to be Spanish and Chicagoans who

imitated Hawaiians. Some of the people learned chords while picking cotton in the blazing Southern sun while others practiced countless hours of the night learning four instruments while selling shoes during the day. Dashing cowboys from the Wild West with a guitar slung on their backs and colorfully dressed *estudiantes* make appearances along the way. So too does The Wizard of the Guitar and The Wizard of the Strings, along with The Queen of the South Sea Flappers and The Possum. There were some who set out to make as many guitars as possible and others who just wanted them to sound "good." Some worked with their brothers while others inherited the trade from their father. A few became rich while others remained anonymous and penniless. There were those who played on gleaming metallic instruments and others whose guitars looked like they had seen better days. All of these people, regardless of race, gender, or class, viewed the acoustic guitar as an object that one could easily obtain, learn how to play, and adapt in order to make their own style of music.

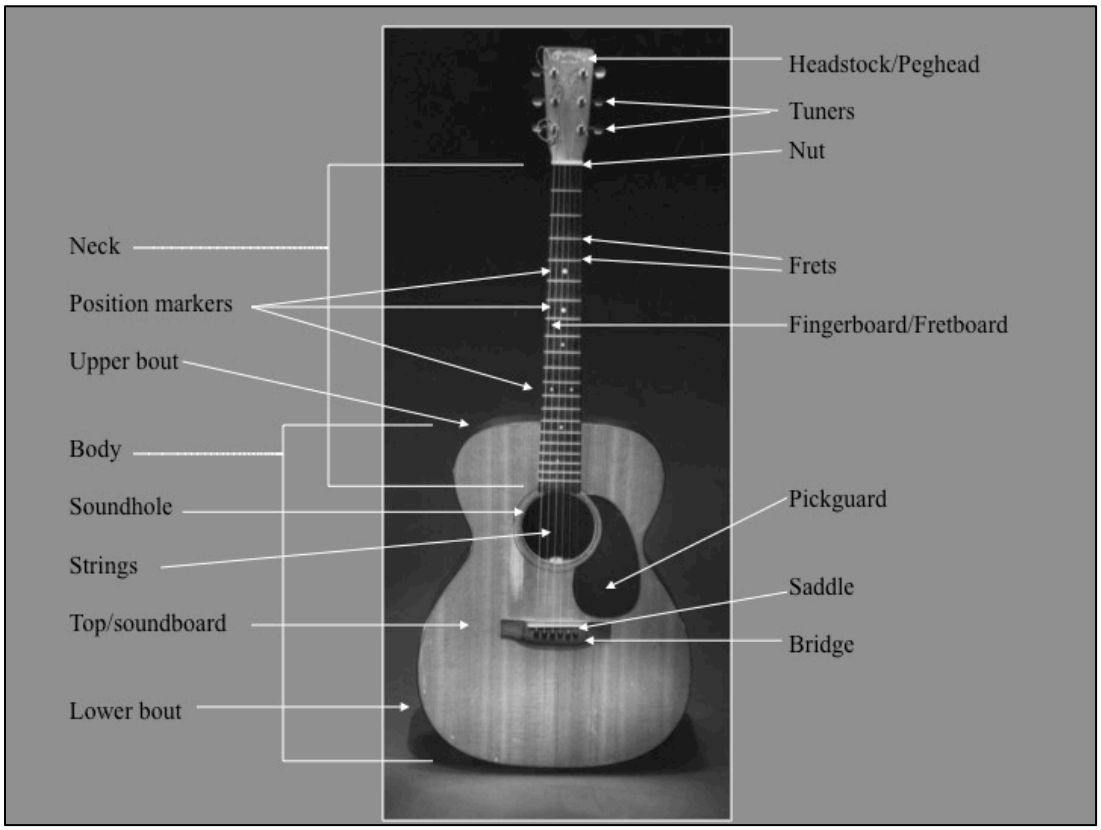

Figure 1 Diagram of the parts of a guitar. Guitar by C. F. Martin & Co., Nazareth, PA, 1950, Auditorium Orchestra Style 000-18 owned by Libba (Elizabeth) Cotten. Smithsonian, National Museum of American History.

Chapter 1

FRETTED FLEXIBILITY – A COMPARATIVE LOOK AT THE PRODUCTION, DISTRIBUTION, AND MARKETING OF MARTIN, WASHBURN/LYON & HEALY, AND GIBSON ACOUSTIC GUITARS (1880-1917)

From a rural workshop filled with immigrant workers to a cockroach infested former bakery to a dedicated musical instrument plant, Martin, Lyon & Healy, and Gibson built guitars in drastically different factory environments. These shops and assembly areas featured the smell of freshly cut wood and the pungent odor of finishing lacquer. Workers used a variety of tools from rasps to belt-driven drills as they fashioned pieces of rosewood and mahogany into thousands of resonant boxes. For most of the nineteenth century, the acoustic guitar, much like the piano, was viewed as a parlor instrument to be found in middle and upper class homes. But by the 1880s, this perception was changing as musicians and audiences began to realize how adaptable the acoustic guitar was for performing in a variety of venues and musical styles. In order to meet this demand, companies endeavored to supply the public with an increasing number of instruments. While both consumers and producers participated in the development of the acoustic guitar, makers played a larger role in the formative years of the industry. Against the backdrop of American industrialization, each company used their own unique approach to manufacture, distribute, and market acoustic guitars to consumers.

During the period beginning around 1880 and concluding prior to the United States entry into World War I, the acoustic guitar, partly thanks to the benefits of

industrialization, gradually began to overtake the mandolin, banjo, and piano to become the instrument of choice in America. None of this would have been possible without the advances in how guitars were manufactured and sold during a period of profound technological and social change. Though it is difficult to paint a complete picture of the production numbers for this era, the period from 1880 to 1917 was one of immense growth in the acoustic guitar industry, despite financial challenges like the Panic of 1893 and workplace hazards such as the constant threat of fire.[1]

This chapter examines the company origins, production techniques, technological innovations, and marketing approaches of three significant acoustic guitar manufacturers in the late nineteenth and early twentieth centuries: the family-owned company of C. F. Martin, a firm driven by European craft traditions combined with new innovative approaches to guitar design; Midwest music giant Lyon & Healy and its division of mass-produced Washburn guitars; and the Gibson Company, founded initially by Orville Gibson, a first generation American woodworker, who shortly thereafter sold the company (and his name) as a limited partnership. While

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[1] It is hard to look closely into the production numbers and sales figures for these companies when most of the evidence comes from catalogs and advertisements. Fires at Washburn and poor record keeping at Gibson also exacerbate this problem. Some scholars have been able to compare period instruments to the company advertising, but whether intentional or unintentional, inaccurate information abounds from this period. About the only reliable company source is C. F. Martin, which has allowed several scholars to have full access to their records. Hubert Pleijsier, *Washburn Prewar Instrument Styles: Guitars, Mandolins, Banjos and Ukuleles 1883-1940* (Anaheim Hills, CA: Centerstream Publishing LLC, 2008), 3; Ken Achard, *The History and Development of the American Guitar* (Westport, Conn: Bold Strummer, 1990), 4; John Teagle, *Washburn: Over One-Hundred Years of Fine Stringed Instruments* (New York: Music Sales Corp., 1996), 16; Richard Johnston, Dick Boak, and Mike Longworth, *Martin Guitars: A History*, rev. ed. (New York: Hal Leonard, 2008), ix, 1.

other options were available to consumers during this period, these major producers offer historians a window into three distinct and profitable approaches to building and selling guitars.[2]

Luthiers, family-owned companies, and corporations crafted individual strategies that all resulted in successful firms supplying a growing consumer interest in acoustic guitars. For example, Martin produced fewer guitars, but used more expensive materials and favored the idea of craftsmanship over efficiency in its batch production. On the other hand, Washburn utilized concepts such as the integration of large-scale production and distribution in order to more efficiently assemble instruments like the manufacturers described in the works of Alfred Chandler, David Hounshell, and Philip Scranton.[3] Taking the middle road, Gibson transitioned from a craft shop to a limited partnership, adopting and altering some of the same strategies used by their competition to carve their own path in the industry. By the first decade of the twentieth century, all three companies sought to combine the techniques of Old

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[2] A number of smaller manufacturers such as Epiphone, Gretsch, Harmony, and Vega, also operated at this time in a musical instrument landscape that was increasing in overall size and scope throughout the United States. For brief histories of other late nineteenth century guitar makers see Achard, 3-4, 15; Walter Carter, *Epiphone: The Complete History* (Milwaukee: Hal Leonard Corporation, 1995).

[3] As discussed in the introduction, the period of American industrialization greatly changed the way that businesses produced and sold goods to consumers using growing networks of transportation and communication. For a more detailed look at this transformative moment in American business and technology see Alfred D., Jr. Chandler, *The Visible Hand: The Managerial Revolution in American Business* (Cambridge: Harvard University Press, 1977); David Hounshell, *From the American System to Mass Production, 1800-1932: The Development of Manufacturing Technology in the United States* (Baltimore: Johns Hopkins University Press, 1984); Philip Scranton, *Endless Novelty: Specialty Production and American Industrialization, 1865-1925* (Princeton: Princeton University Press, 1997).

World craftsmanship with the new technologies and processes brought about by industrialization, though not all of the firms adopted modern methods to the same extent. While some jobs benefited from new machine tools, other tasks, such as inlay, still required the skilled hands of a human worker.[4]

The three companies featured in this chapter each tinkered with the design of the acoustic guitar, incorporating technological innovations that affected the sound, design, and manufacture of the instrument. For C. F. Martin, the use of X-bracing transformed the sound of acoustic guitars by simultaneously allowing for greater resonance of the top while strengthening the overall construction of the instrument. Washburn (and really Lyon & Healy) brought together the established manufacturing, production, and distribution methods for American instruments (and other mass-produced commodities) in the late nineteenth century and applied them to acoustic guitars. The company moved the production of the instruments from the workshop and placed them in the increased productivity of the factory, a feat now possible in the age of American industrialization. Finally, Gibson's beautiful and ornate woodcarvings added a new structural and stylistic dimension to the traditional shape of a guitar. What was once a flat box with curved sides now became less angular and more fluid, setting the stage for advances in mandolin construction and later in arch-top guitars.

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[4] Inlay is a painstaking process of embedding decorations into the surface of the wooden instruments using materials such as mother of pearl or ebony. The decoration is sanded so the inlay is flush with the surface. Alternate shades of wood were also used that contrasted with the color of the instrument. Larry Robinson, *The Art of Inlay: Design & Technique for Fine Woodworking* (San Francisco: Backbeat Books, 2005) 13, 124-125.

Each guitarmaker utilized the growing print culture of the day along with distribution channels made up of dealer stores and individuals to market its products, though with decidedly different pitches. In an era of increasing professionalization in the advertisement industry, all three employed in-house writers to create their catalogs.[5] Martin, the bastion of "tradition" in the trade, offered literature that featured drawings of the instruments with sparse descriptions. The name Martin itself was (and in many ways still is today) the main marketing tool. Relying initially on distributors and then forging its own networks through direct sales to and personal relationships with customers, Martin evolved from a northeast manufacturer to a national producer.[6] Lyon & Healy's (Washburn) approach differed by printing ornately designed and richly colored catalogs featuring instruments and musician testimonials.[7] Washburn

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[5] For a discussion of the growth of professional advertising and the cultural and social implications involving the rhetoric of progress see Pamela Walker Laird, *Advertising Progress: American Business and the Rise of Consumer Marketing* (Baltimore: Johns Hopkins University Press, 1998); T. J. Jackson Lears, *Fables of Abundance: A Cultural History of Advertising in America* (New York: Basic Books, 1994); Roland Marchand, *Advertising the American Dream: Making Way for Modernity, 1920-1940* (Berkeley: University of California Press, 1985).

[6] A good example of early Martin marketing can be seen in the 1898 catalog. C. F. Martin & Co., *Martin Guitars and Mandolins* (Nazareth: C. F. Martin & Co., 1898; repr. Catalog Vault, n.d.), MIMA.

[7] The 1892 catalog showcases some of the early Washburn marketing. Lyon & Healy, *Washburn Souvenir, Catalogue of the Washburn Guitars, Mandolins, and Zithers* (Chicago: Lyon & Healy, 1892), box 4, Warshaw Collection of Business Americana, AC; While one Washburn historian claims that Lyon & Healy's publication of instrument catalogs inspired Martin and Gibson to do the same, I would argue that the growth in number of guitar catalogs during the 1890s has more to do with the rise of industrialized production and marketing in numerous other industries including catalogs from mail-order houses. Teagle, 23; In addition, the importance of Banjo, Mandolin, Guitar or BMG periodicals of this period also affected the print culture of these early guitar makers, something that will be discussed in Chapter 2. See also,

engaged consumers at home and abroad through their connection to the established music house of Oliver Ditson & Company in the East, a tightly controlled network of exclusive dealers, and music teachers who promoted and sold guitars. The last of the three to arrive on the scene, Gibson, relied on pages and pages of eloquent prose, worthy of the finest sermons given in Protestant pulpits around the country, to instruct consumers as to why Gibson instruments were the best. The company used a network of teacher-agents to preach the Gibson gospel in an attempt to convert all players into "Gibson-ites." The pages of the catalogs also included performers and teachers, foreshadowing Gibson's later innovations in celebrity endorsement and signature recording artist models.[8]

Generations of Tradition: C. F. Martin & Company

Evolving from a workshop to a factory, C. F. Martin & Company remained firmly attached to the notion that their products embodied a rich "tradition" of quality instruments made in rural Pennsylvania. The efforts of Martin are best summed up in their motto, "Non Multa Sed Multum" that translates to "Not Many But Much."[9] In

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Jeffrey J. Noonan, *The Guitar in America: Victorian Era to Jazz Age* (Jackson, MS: University Press of Mississippi, 2008).

[8] The "Gibson-ite" prose is eloquently displayed in the company's 1912 catalog. Gibson Mandolin-Guitar Company, *The Gibson Catalogue "H"* (Chicago: Hammond Press/W. B. Conkey Company, 1912), 9, MIMA; See Chapter 3 of this dissertation which details some of the first celebrity acoustic guitar models, the Nick Lucas and Roy Smeck guitars produced by Gibson in the late 1920s and early 1930s.

[9] Frank Henry Martin, a self-taught student of Latin, established this as the motto when he took over the company. He made an ornate carving of it in wood and hung it in the factory (where it still is today). Dick Boak, *C. F. Martin & Co.* (Charleston, South Carolina: Arcadia Publishing, 2014), 29.

other words, Martin did not attempt to make as many guitars as possible, nor did they adorn their instruments with copious amounts of decoration. Instead they focused on producing instruments of the highest quality. These distinctly American acoustic guitars incorporated Old World methods combined with new design innovations. Martin let customers decide for themselves what constituted a "good" instrument. Using word of mouth, personal contacts, and relationships with distributors, Martin, one of America's oldest and most successful family-owned businesses, sold guitars with an emphasis on the idea that if the name Martin was on the guitar, a consumer was getting a quality instrument.

Like other early American guitar innovators, Christian Frederick (C. F.) Martin (1796-1873) immigrated to this country bringing with him the tools and techniques of craftsmanship that he learned as an apprentice in his homeland.[10] He learned the trade of lutherie initially from his father Johann Georg Martin, before supposedly becoming an apprentice in Vienna under the tutelage of the highly successful maker Johann Stauffer. A member of the cabinetmaker guild and a skilled luthier, C. F. Martin possessed the know-how to build and repair stringed instruments. A dispute between the guilds of violinmakers and cabinetmakers led Martin to immigrate to New York in 1833 from Markneukirchen in the Saxony region, a major site for the production of

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[10] His name is spelled alternatively as Christian Friedrich Martin. It is important to note that much of the history of Martin that is discussed in this chapter is primarily concerned with the descendants of C. F. Martin and their factory in Nazareth rather than the original instruments built in New York City upon his arrival in America. Nevertheless, C. F. Martin's legacy directly impacted his son and the other family members who followed in his footsteps as the company grew to become an iconic brand in the realm of acoustic guitar manufacture.

musical instruments.[11] After working as a repairer, importer, and guitar maker in New York for several years, Martin grew tired of the city and moved to the small town of Cherry Hill, Pennsylvania in 1839, a location that reminded him more of his native country. There, in a three-story house, Martin developed and crafted new guitar designs in a ground floor workshop while the family used the upstairs as living quarters. After joining the Moravian church, the Martin family relocated to the nearby town of Nazareth. He built a factory on North Street and hired a workforce, many of whom were immigrants like himself. There, Martin employed the business and management skills he learned while apprenticed to Stauffer for lutherie.[12]

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[11] Johnston, Boak, and Longworth, Martin Guitars: A History, 23-24, 26; Located in present day Germany, Markneukirchen/Mark Neukirchen was a major site of European musical instrument manufacture. Even American companies such as John F. Stratton & Son built factories there in the second half of the nineteenth century and imported instruments back to the United States. Many Americans also purchased imported cheap German brass and wind instruments in the late nineteenth century as part of the growing brass band movement of the period. Martin Krivin, "A Century of Wind Instrument Manufacturing in the United States: 1860-1960," (PhD diss., State University of Iowa, 1961), 34-36; Margaret Hindle Hazen and Robert M. Hazen, The Music Men: An Illustrated History of Brass Bands in America, 1800-1920 (Washington, D.C.: Smithsonian Institution Press, 1987), 131-132.

[12] Though there is some question as to whether Martin did indeed apprentice under Stauffer, he definitely incorporated aspects of Stauffer's designs into his own guitars. According to Chris Martin, the current head of Martin Guitar and a direct descendant of C. F. Martin, the Martins lived right next to the first factory, allowing C. F. Martin to walk out one door of his house and right into the factory. Some stories claim that Martin built guitars in the family kitchen, but his descendants insist this was not the case. Darcy Kuronen, Lenny Kaye, and Carl Tremblay, *Dangerous Curves: The Art of the Guitar* (Boston: MFA Publications, 2000), 46; Johnston, Boak, and Longworth, *Martin Guitars: A History*, 3-5, 7, 9-10, 17; Walter Carter, *The Martin Book: A Complete History of Martin Guitars* (San Francisco: Backbeat, 2006), 12-13, 20.

Utilizing a combination of European trade skills and his own ingenuity, Martin put his own stamp on American acoustic guitar design by infusing new technological and aesthetic innovations into the instrument. C. F. Martin did not just replicate his master's guitars, but instead tinkered with the structure of the instrument and in a way "invented" a distinctly American acoustic guitar.[13] Beginning with his earliest American produced models, Martin offered two headstocks: one that resembled the guitars he made with Stauffer in Europe with all six tuners on one side of a scrolled headstock and the other a slotted version with three tuners on each side of the headstock.[14] By the 1840s Martin began experimenting with guitar designs, infusing aspects of Austro-German and Spanish styles into his American-made guitars. His biggest change was the introduction of X-bracing, changing the pattern and way that the top of the guitar is supported and allowing for greater resonance of the top or soundboard. Unbeknownst to a player, the guitars may have resembled Stauffer's on the outside, but on the inside, they were distinctly Martins. While this method did not have a major impact on the gut-strung guitars of the period, it would later be an

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[13] Martin's early years in America and his influences have been extensively covered in a new collection of research. Robert Shaw and Peter Szego, *Inventing the American Guitar: The Pre-Civil War Innovations of C. F. Martin and His Contemporaries* (Milwaukee: Hal Leonard Books, 2013).

[14] Carter, The Martin Book, 19; Johnston, Boak, and Longworth, *Martin Guitars: A History*, 5-8; Richard Johnston, "C. F. Martin in New York, 1833-1839," in *Inventing the American Guitar: The Pre-Civil War Innovations of C. F. Martin and His Contemporaries*, ed. Peter Szego and Robert Shaw (Milwaukee: Hal Leonard Books, 2013), 31-32; The scrolled headstocks, with all of the tuners situated on one side, would later become a staple of Fender electric guitars, minus the scrollwork.

essential feature to the structural integrity and resonant capabilities of steel-string guitars.[15]

Unlike the other American guitar makers discussed in this chapter, Martin made certain that, regardless of the business' size, it would remain a family company. After almost 30 years in Nazareth, and with his health beginning to fail, C. F. Martin re-organized the company. He included his son Christian Frederick Martin, Jr. in the business along with a nephew C. F. Hartmann, making them partners and changing the name to C. F. Martin & Company in 1867. The elder Martin died in February 1873 leaving behind an impressive legacy and a business built on his name but carried on by his family.[16] Frank Henry Martin, despite being only 22 at the time, was well suited to take over the company in 1888 when his father C. F. Martin, Jr. passed away. Having been around the business for his entire life, Frank Henry became the first American-born member of the clan to head the company. These family ties enabled Martin to smoothly transition its leadership and provided valuable experience for Frank Henry to keep the company afloat during the financial Panic of 1893.[17] Eventually C. F. Martin

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[15] Martin and his friend Henry (Heinrich) Schatz worked together and it is possible that Schatz helped to develop the X-bracing pattern. Carter, *The Martin Book*, 19, 22; Jim Washburn and Richard Johnston, *Martin Guitars: An Illustrated Celebration of America's Premier Guitarmaker* (Emmaus, PA: Rodale Press, Inc., 1997), 8.

[16] Carter, *The Martin Book*, 20.

[17] Surprisingly, Frank Henry Martin was not proficient on the guitar, only learning a few chords. Regardless of this fact, he was an excellent woodworker and clearly had a knack for building instruments, even if he could not play them. Johnston, Boak, and Longworth, *Martin Guitars: A History*, 32, 35, 39, 94.

& Co. incorporated in 1921 under the direction of Frank Henry Martin with the family members holding all of the shares. It still remains a family business today.[18]

The workshop turned factory started by C. F. Martin in Nazareth featured familiar aspects of American industry of the period such as batch production and a largely immigrant work force in order to produce a steady stream of instruments. C. F. Martin, Jr., or Frederick, as he was known, significantly expanded the factory and bought new equipment including steam-powered band saws.[19] The company relied on mostly German immigrants as workers through the nineteenth century, hiring its first American-born workers after 1900.[20] Utilizing batch-production methods, Martin took advanced orders and built guitars in batches of varying size.[21] During the 1870s, production peaked at 245 instruments in 1873 and dwindled down to 97 guitars by 1878, in part due to the financial Panic of 1873 and its after-effects. By 1882, production returned to outputs of nearly 200 guitars per year.[22] In 1883, Martin offered 13 different models ranging in price from $36 to $90.[23] In stark contrast to the

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[18] Johnston, Boak, and Longworth, *Martin Guitars: A History*, 67; Achard, 12.

[19] Philip F. Gura, *C. F. Martin and His Guitars, 1796-1873* (Chapel Hill: The University of North Carolina Press, 2003), 190.

[20] When Frank Henry Martin took over after the death of his father, he was the only worker in the shop who had been born in America. Washburn and Johnston, *Martin Guitars*, 93.

[21] The type of manufacturing performed at Martin during this period is reminiscent of other operations that used batch-production method as described by historian Philip Scranton. Scranton, *Endless Novelty*, 10-12.

[22] Gura, *C. F. Martin*, 186-187.

[23] Boak, *C. F. Martin & Co.*, 30.

flashy creations of other makers, the majority of Martin instruments featured little to no decoration. One exception to this would be the Style 45 model introduced in 1902 that featured extensive mother-of-pearl inlay in a "tree of life" pattern.[24]

Martin's production adapted to consumer trends, something that helped them stay afloat during the first decade and a half of the twentieth century. When business dipped in 1906 due to an increased consumer interest in mandolins over guitars, Martin brought back a smaller-sized guitar that was first introduced in 1856, but had been dropped from the catalog in 1898. The Style 17 became a low-end guitar that could be purchased for $20-$25 depending on the particular model, a bargain compared to others such as the Style 42 that ranged as high as $80. Through 1913, Martin produced a little less than 250 guitars per year. By the end of the decade, as the mandolin movement began to subside, they had increased this to over 1,000 guitars sold in a year, due in part to the company's efforts at catering to the Hawaiian music movement of the 1910s.[25]

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[24] Boak, *C. F. Martin & Co.*, 34; Carter, The Martin Book, 25; During the last two decades of the nineteenth century, Martin dealers in Western cities such as Butte, Montana and San Francisco, California were some of the best sellers, especially of the more expensive models, possibly due to profits from mining and agricultural enterprises. Johnston, Boak, and Longworth, *Martin Guitars: A History*, 41.

[25] C. F. Martin & Co., *Martin Guitars and Mandolins* (Nazareth: C. F. Martin & Co., 1898; repr. Catalog Vault, n.d.), MIMA; Carter, *The Martin Book*, 24-25; Martin's ability to adapt to ethnic music movements will be further discussed in Chapters 2 and 3 of this dissertation.

Figure 2 Guitar by C. F. Martin & Co., Nazareth, PA, 1913, O-28 model. Smithsonian, National Museum of American History.

C. F. Martin utilized both direct sales and partnerships with instrument distributors to reach consumers throughout the country. C. F. Martin (Sr.) had built up an impressive client list over the course of his time with the company. By the time of his death in 1873, he was still working with clients he had first sold guitars to in the 1840s. When his son Frederick took over the business, he maintained these relationships, a key component that later enabled Martin to survive on its own

distribution network without the aid of others.[26] The most significant distribution partnership involved Charles Zoebisch & Sons of New York who handled Martin sales from 1839 to 1898. The end of the distributorship meant that Martin was confident it could continue to sell guitars through its own direct sales to consumers. Though it was considered a gamble, the move paid off as Martin survived without experiencing a significant decline in sales.[27] Ironically, Lyon & Healy helped introduce Martin guitars to consumers in the Midwest, a market that Zoebisch had not monopolized by the time Lyon & Healy came on the scene in 1864. This relationship would end by the mid-1870s when Lyon & Healy established their own guitar manufacturing operation.[28]

If Martin's advertising mantra could be summed up into one word, it would be "tradition." Relying on this loosely defined term came to be Martin's cornerstone marketing technique. The company chose to let the guitars "speak" for themselves. Rather than building flashy, eye-catching instruments, Martin promoted their reputation for reliable guitars that sounded better than their competitors' models. As early as the 1880s, using phrases like "The Old Standard" and "The Old Reliable," Martin attempted to distinguish themselves from other copycat luthiers who capitalized on the ambiguity of Martin's use of "New York" in their brand name and tried to sell guitars to an otherwise unaware consumer public.[29] By the 1890s, the

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[26] Gura, *C. F. Martin*, 185.

[27] Carter, *The Martin Book,* 19, 21-22, 24.

[28] Gura, *C. F. Martin*, 178-180.

[29] When Frank Henry severed the distributorship with Zoebisch, the instruments made afterwards bore the stamp of Nazareth, PA rather than the original New York stamp

company literature pointed to the notion that those who play guitar know the name of Martin and their guitars "need no introduction."[30] Another approach asserted their instruments had long been considered the best stating, "Martin Guitars have been the world's standard since the days of your great-grandfather."[31] Later advertising of the 1920s highlighted the importance of a trade passed from one generation to the next. "Martin Guitars of today are the product of skillful and patient experimentation by three generations of guitarmakers."[32] The Martin tradition was synonymous with producing a great sounding instrument that had been carefully crafted the same way for generations.

Martin's advertising, unlike many of its competitors, did not use aspirational marketing to attract potential customers. The pages of the catalogs did not feature photographs or testimonials from teachers and musicians. Though many people tried to obtain instruments at no cost in exchange for publicity, the company never gave their product away for free. During the 1880s, when the company only built several dozen instruments per month, the free promotional advertising would have put a heavy

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that had been placed on Martin guitars since 1833. While no Martins had actually been made in New York since 1839, they had still bore the original stamp, a move most likely meant to give prestige to a company that sold guitars from a rural area of Pennsylvania rather than a bustling city. The campaign in the 1880s was directed particularly at New York luthier, G. Robert Martin who was attempting to pass off his instruments as (C. F.) Martin's. Carter, *The Martin Book,* 21, 24.

[30] C. F. Martin & Co., *Martin Guitars and Mandolins* (Nazareth: C. F. Martin & Co., 1898; repr. Catalog Vault, n.d.), MIMA.

[31] *The Pulaski Democrat* (Pulaski, NY), December 15, 1909, 8.

[32] C. F. Martin & Co., *Martin String Instruments* (Nazareth, PA: C. F. Martin & Co., 1923), 7, MIMA.

financial burden on the small firm. Requests came from individuals and groups, such as the Brown University Glee, Banjo, and Mandolin Club, who offered Martin advertising space in their program for the price of two free guitars in 1892.[33] Despite the wishes of these enterprising consumers, Martin chose business relationships over individual price incentives for selling their products.

Using an approach that valued quality over quantity, Martin guitars contributed greatly to the design, manufacture, and distribution of American acoustic guitars. Though C. F. Martin, Sr. would never fully realize the impact of his X-bracing on steel-string guitars, he did put in place the methods and shop practices by which his offspring would continue to honor his legacy with their products. Martin increased its output in the 1870s thanks to steam-powered machines, but the company never fully committed to the streamlined mass production approach. Instead, they preferred to do business through personal connections, directly marketing their products to consumers and filling advanced orders through the flexible-batch production paradigm. A blend of European craft practices and industrialized manufacturing, Martin guitars sold to consumers who valued the company's reputation as a maker of fine instruments over all other qualities. They proved that it was possible to resist the allure of assembly line production and still be a successful force in the market.

Turning Out Stringed Instruments Like Automobiles: The Lyon & Healy Line of Washburn Guitars

Marketed as an industrialized commodity and adorned with dazzling decoration, Washburn guitars represented a different approach to making and selling

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[33] Washburn and Johnston, *Martin Guitars*, 65.

guitars in the late nineteenth century, one that favored quantity over quality. Lyon & Healy was already an established place where consumers purchased sheet music and musical instruments when they decided to get into the business of manufacturing guitars in the 1880s with the foundation of the Washburn line. Unlike the approach of C. F. Martin, Lyon & Healy adopted the strategy of generating a cheaper product to be sold in large quantities to a consumer public who they believed valued appearance over sound when it came to choosing a guitar. In the first half of the twentieth century, Henry Ford's name became synonymous with mass production and the Model-T. No single person can be credited with that honor in the guitar industry. However, one could make a good case that Lyon & Healy came close to achieving it. George Washburn Lyon and Patrick J. Healy became the architects of a new way to build Old World crafted guitars in large numbers at a lower cost to both the consumer and the producer.

In 1864, using the overarching advertising slogan, "Everything known in music," George Washburn Lyon, a talented multi-instrumentalist, and Patrick Joseph Healy, a young Irish immigrant and guitar maker founded the Lyon & Healy firm in Chicago.[34] Both were following orders from Oliver Ditson & Company, a recognized East Coast music house, who wanted to create a Midwest retail branch in the waning years of the Civil War.[35] Scouting locations for the new business, Healy traveled to

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[34] Lyon & Healy, *The Latest Vocal and Instrumental "Hits"* (Chicago: Lyon & Healy, n.d.), box 4, Warshaw Collection of Business Americana, AC; Teagle, 14-15; Tom Wheeler, *American Guitars, An Illustrated History*, rev. ed. (New York: Harper Perennial, 1992), 359.

[35] Oliver Ditson & Company began selling sheet music in the early 1830s and later ventured into music publishing and instrument manufacture. Ditson created two companies to build musical instruments, one, the John Church Company in Cincinnati

San Francisco and St. Louis before settling on Chicago. As the pair prepared to depart for the Midwest, Ditson saw them off saying, "If you have good luck, in ten years you will do a business of $100,000 a year." The men managed to exceed that number in only a year's time.[36] On October 14, 1864, they opened their first store in downtown Chicago, a city with access to the extensive Midwest rail networks as well as to the shipping ports of the Great Lakes. Lyon & Healy wisely took out a number of insurance policies that saved the company from disaster when their buildings burned down in 1870 and again a year later in the Great Chicago Fire. Despite these early difficulties, the company grew to be a major wholesaler, importing instruments from Europe and expanding their already large retail space in the downtown area.[37] The store sold just about every instrument imaginable, including a number of acoustic guitar brands, even offering Martin models in the early 1870s.[38]

By 1880, Lyon & Healy decided to build a new factory to market a new "Washburn" line of instruments in order to lower expenses and gain more control over their products. These plans came to fruition in January 1882, with the opening of a six-

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in 1860 and another, John C. Haynes, in Boston in 1865. He also founded two new publishing houses in New York and Philadelphia, in 1867 and 1875, both run by his sons. Teagle, 14.

[36] Healy had ten years of experience in the business despite his youth as he had worked as a clerk for a competitor of Ditson's in Boston. Oliver Ditson, quoted in Teagle, 15; Wheeler, *American Guitars,* 359.

[37] Teagle, 16-18; An 1881 catalog featured all six sites that Lyon & Healy utilized during its short existence, complete with two burning buildings, representative of the company's losses by fire. Lyon & Healy, *Lyon & Healy Band Instruments, Uniforms, Trimmings* (Chicago: Lyon & Healy, 1881), 187, NTCC.

[38] Gura, *C. F. Martin*, 177.

story building at Michigan Avenue and Madison Street that included manufacturing and warehouse facilities for the new Washburn line.[39] Beginning with guitars, and then later adding mandolins, zithers, and eventually banjos, the Washburn label represented Lyon & Healy's attempt to reap greater profits out of the instruments that they sold. With their own line, they could cut costs, set prices, and create unique instruments of their own brand.[40] Moving from the batch production methods (of firms like Martin) to bulk and mass production, Lyon & Healy manufactured instruments in large numbers without advanced orders, instead relying on a projection of market demand for their goods.[41]

Drawing comparisons to the auto industry, Lyon & Healy continued to expand production in order to supply additional requests from mail-order firms. The company built a brand new 5-story factory in 1889.[42] Relying on a large labor force, Lyon & Healy moved entire groups of workers between departments (and floors) to deal with the seasonal peaks in instrument manufacture. The large-scale production (100,000 instruments annually according to the company) enabled the company to supply mail-order houses such as Montgomery Ward with an ample stock of musical instruments to be shipped throughout the country. The success of the company helped put Chicago

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[39] Hubert Pleijsier, *Washburn Prewar Instrument Styles: Guitars, Mandolins, Banjos and Ukuleles 1883-1940* (Anaheim Hills, CA: Centerstream Publishing LLC, 2008), 7.

[40] The name of the new line referenced George Lyon's middle name. Teagle, 15, 18.

[41] Gura, *C. F. Martin*, 183; For batch production, see Philip Scranton, *Endless Novelty: Specialty Production and American Industrialization, 1865-1925* (Princeton: Princeton University Press, 1997).

[42] Pleijsier, 9.

on the map as an ideal location for the production of musical instruments and would later encourage other guitar manufacturers like National and Harmony to set up shop in the Windy City in the following decades.[43] Similar to other corporations of the period, Lyon & Healy expanded their role in the musical instrument market through horizontal integration by purchasing the Regal Manufacturing Company of Indianapolis, Indiana in 1904.[44] Almost 40 years after the factory opened, trade magazines still drew parallels between Lyon & Healy and booming industry of Detroit stating, "Modern methods of production incorporating standardization and elimination of waste have enabled the company to turn out string instruments like automobiles."[45]

Depictions of the nineteenth century Lyon & Healy factory display scenes reminiscent of other American manufacturing locations at the time with male workers using belt driven tools to produce large quantities of nearly identical instruments. Through special purpose machinery, Lyon & Healy streamlined the production of

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[43] Teagle, 25, 28; Wheeler, *American Guitars*, 359.

[44] The initial acquisition included "thousands of Regal guitars, mandolins, and banjos, besides several carloads of Twentieth Century and Universal guitars, mandolins, and banjos." Lyon & Healy gained the names and trademarks to the Regal brands and incorporated them into their musical empire. At the time of the sale, the company also obtained the raw materials and unfinished Regal instruments from their factories. "Lyon & Healy Buy Out the Regal Manufacturing Co.," *The Music Trades*, November 26, 1904, 43; This is indicative of the popular business strategy during industrialization of horizontal combination or integration wherein a business would merge with or acquire competitors in order to control the production and prices of a certain commodity. For a larger discussion of this practice see Alfred D., Jr. Chandler, *The Visible Hand: The Managerial Revolution in American Business* (Cambridge: Harvard University Press, 1977), 315-316, 334-336.

[45] "New Lyon & Healy Plant Doubles Capacity," *Music Trade Review* 84, no. 8 (February 19, 1927): 31.

musical instruments, placing a great emphasis on trying to make high quality instruments faster and at a lower cost than their competitors.[46] These new machine tools allowed makers to replicate the same commodity to exacting standards in a way that would have been impossible to turn out thousands of identical guitars in a traditional workshop. Male workers, both young and old, inspected instruments in a room stacked floor to ceiling with guitars, presumably assembled and ready for sale or shipment. Another workroom prominently featured a number of machine tools alongside piles of cellos, basses, and drums, denoting the variety of instruments constructed and stored in the same factory spaces. The workers stood at their machines underneath at least four or five belts. Some were given the luxury of stools to lean on while sanding, cutting, drilling, and bending pieces of wood, but most of the labor force stood on the floor for long periods of the day.[47] The company encouraged loyalty, a trait demonstrated by the fact that by the turn of the twentieth century, over 100 workers boasted at least ten years of experience, with some possessing between twenty and forty years of service to the firm.[48]

Starting in the 1880s, Lyon & Healy turned to George B. Durkee, a mechanical engineer, to craft their new instrument lines. Durkee is credited with designing the Washburn instruments produced through the early 1910s. Applying technical knowledge to instrument design, Durkee would be followed by other engineers such as

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[46] Pleijsier, 3.

[47] Ken Achard's book offers a glimpse inside the 19th century Lyon & Healy factory through several photographs. Achard, 4.

[48] Teagle, 28.

Lloyd Loar and Charles Kaman who used their training to profoundly shape the design of acoustic guitars. From ornately decorated guitars to improved banjos and mandolins, Durkee built signature instruments for the Washburn label and patented at least twenty different innovations for stringed instruments. Walter I. Kirk, who arrived at Lyon & Healy in the early 1890s and trained under Durkee, eventually took over for him after his death in 1913.[49]

Contrary to the original stated motivations of the company, the Washburn line ended up featuring both moderately priced and top-of-the-line models, aimed at competing with the finest quality guitars offered by C. F. Martin & Company. The instruments proved to be successful from the start and the line expanded to include more models by the 1890s.[50] Despite being produced in large numbers, the Washburn line featured opulent models decorated extensively with inlaid mother-of-pearl. When placed side by side with Martin models, the Washburn guitars would have visually stood out to consumers due to their decoration. This also meant that the high-end Washburn models required a large amount of skilled handiwork, some of which was performed by Joseph Zorzi, an Italian immigrant violinmaker.[51] In 1897, Lyon &

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[49] Durkee, a factory superintendent, joined the company in 1885. The contributions of Lloyd Loar and Charles Kaman will be discussed in later chapters of this dissertation. Pleijsier, 15-16.

[50] The company trademarked the word "Washburn" in 1887 and 1888, though there is some confusion about when exactly the Washburn line of instruments began. One source points to their debut as early as November 1883. The Washburn label was featured on seven guitars in 1889. Teagle, 18; Pleijsier, 7; Achard, 5.

[51] Teagle, 25; Zorzi would later design arch-top guitars for Kay, most notably an unconventional body shape known as the Venetian. Darcy Kuronen, Lenny Kaye, and Carl Tremblay, *Dangerous Curves: The Art of the Guitar* (Boston: MFA Publications, 2000), 101.

Healy differentiated between its budget line of guitars priced at $5.63 to $22.50 and its Washburn line that featured nine guitars. The more moderately priced Style Nos. 123 ¾-423 sported a modest amount of decoration including a colored wood rosette and pearl inlay position markers on the fingerboard. The priciest Washburn model cost $220 boasting ornately inlaid vines along the fingerboard in a "tree-of-life" pattern.[52] A similar model featured in the 1898-1899 catalog described it as being "the Richest Washburn Guitar yet offered" a slogan that could apply to both its appearance and sound.[53] By 1899, this elaborate style was dropped and prices were slashed until the entire Washburn line ranged from $20 to $100. Due to the effects of several economic downturns in the first decade of the twentieth century, Lyon & Healy reduced their advertising efforts for the Washburn products, but sales remained steady due to the lower cost of the instruments. Despite the financial concerns of the market, lavish Washburn models continued to be produced, a good example being the 1913 model 3150 that was priced at $237.50 due to the fact that it was covered in pearl and abalone accents.[54]

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[52] #65.0749 Washburn Guitar, Lyon & Healy, 1897, DCA; NMM 10655, Guitar by Lyon & Healy, Chicago, IL, 1897, Washburn model, National Music Museum, The University of South Dakota, Vermillion; Lyon & Healy, *Catalogue of Musical Merchandise Imported and Manufactured by Lyon & Healy, Chicago. 1898-9* (Chicago: W. B. Conkey Company, 1897), 9, 35, Curatorial Files, DCA; Wheeler, *American Guitars*, 360.

[53] Lyon & Healy, *Catalogue of Musical Merchandise Imported and Manufactured by Lyon & Healy, Chicago. 1898-9* (Chicago: W. B. Conkey Company, 1897), 41, Curatorial Files, DCA.

[54] Pleijsier, 12; Wheeler, *American Guitars*, 360-361.

Capitalizing on new distribution connections, a large dealer network, and thousands of teachers/salespersons, Lyon & Healy engaged consumers across the country. As a manufacturer and distributor, Lyon & Healy promoted their own lines of instruments while still profiting from the sales of other companies' products, something that Martin could not do. The company drew on its connections with the Ditson music houses in the East along with a new "Pacific Coast alliance" to attract instrument orders from around the country.[55] The firm did not sell merchandise directly through the mail, but instead worked with a network of several thousand dealers to reach customers. Lyon & Healy often gave dealers an array of Washburn merchandise including picks and decks of cards to give out as souvenirs to potential customers.[56] Through the Washburn Premium Plan, which began in the 1890s, teachers could receive instruments for free if they instructed pupils to purchase Washburn instruments from local dealers. This would influence other manufacturers, namely Gibson to enlist teachers as salespersons.[57]

Lyon & Healy took full advantage of print advertisements to market Washburn guitars, in some cases offering misleading information to help boost sales. Devoting a substantial portion of company resources to the task, Patrick Healy embarked on major advertising campaigns designed to make the firm a household name.[58] According to

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[55] "Lyon & Healy Predict Record-Breaking Season," *The Music Trades*, October 28, 1905, 47.

[56] Pleijsier, 11, 12, 19.

[57] "Lyon & Healy Predict Record-Breaking Season," *The Music Trades*, October 28, 1905, 47; Pleijsier, 19.

[58] Pleijsier, 7; Teagle, 19.

one Washburn historian, Lyon & Healy was the first company, in April 1889, to run a guitar advertisement in *The Music Trades* magazine, a periodical that had been dominated by the piano industry to that point.[59] Initiated in 1887, the in-house advertising department was a new and innovative component to a musical instrument business and ultimately aided in the marketing of Lyon & Healy instruments. Some of the confusion over exact dates and instrument totals comes from inaccurate information released by this department. It is not entirely clear whether or not the company knowingly manipulated the facts, though it is certain that the company was a major producer and distributor of musical instruments during the period even if their output was not as prodigious as they claimed.[60]

Beginning in the 1880s, Lyon & Healy used performers and consumer endorsements to sell guitars. An 1897 ad for "The Washburn Book" (the bound and illustrated product catalog) stated that it included "portraits and testimonials of over 100 artists."[61] The marketing campaign invited consumers to request a "beautifully illustrated souvenir catalogue with portraits of famous artists" mailed free to anyone who asked for one. It is unclear who these famous artists were, but nevertheless, Lyon

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[59] By the end of the year, others followed suit including C. F. Martin who began advertising in the magazine through their distributor C. A. Zoebisch & Sons. Teagle, 20.

[60] For example, in 1906, the company claimed to have produced over 300,000 guitars. Lyon & Healy, *Lyon & Healy's Musical Handbook* (Chicago: Lyon & Healy, 1906), 72, MIMA; Teagle, 18.

[61] Lyon & Healy, "That's My Washburn!" (advertisement), 1897, quoted in Teagle, 21.

& Healy played off of the appeal of early celebrity endorsements to sell instruments.[62] Another advertisement from the period does list a few names in the catalog including "Photos of noted artists, the DeRezkes, Calve, Nordica, Eames, etc."[63] The 1892 Washburn Souvenir catalog featured nine two-page spreads with a guitar model on the left-hand page opposite a framed photo surrounded by flowers and a personal note from a Washburn endorser on the right-hand page. Included in this catalog was a photo of William Foden, known as the "Wizard of the Guitar," who gained nationwide acclaim as one of America's foremost guitarists of the Gilded Age.[64] Next to his photo was a signed quote endorsing Washburn guitars that, in his opinion, "[had] no equal."[65] By 1902, the catalog included a "dark green leatherette cover" to complement the "very strong testimonials" from consumers in support of the Washburn line of guitars.[66]

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[62] Lyon & Healy, "Washburn Guitars, Mandolins, & Zithers," (advertisement), n.d., quoted in Teagle, 19.

[63] Lyon & Healy "It's a Washburn" (advertisement), n.d., quoted in Teagle, 21.

[64] Foden gained great acclaim as America's premier guitarist of the late nineteenth and early twentieth centuries. As a teacher, performer, composer, and writer, he helped to elevate the status of the guitar in American musical culture. For a more in-depth discussion of Foden and his achievements see Noonan, 138-145, 157.

[65] Lyon & Healy, *Washburn Souvenir, Catalogue of the Washburn Guitars, Mandolins, and Zithers* (Chicago: Lyon & Healy, 1892), box 4, Warshaw Collection of Business Americana, AC; Pleijsier, 12; Foden also had a close relationship with C. F. Martin & Co. Johnston, Boak, and Longworth, *Martin Guitars: A History*, 50.

[66] "Lyon & Healy's Latest, The Fortieth Year of Their Business History is Marked by a Magnificent Catalogue," *The Music Trades*, August 30, 1902, 35.

The company appealed to novice musicians by offering low-cost correspondence lessons with the purchase of an instrument. Consumers who purchased a mandolin, guitar, or violin received a certificate that was good for 50 or 100 lessons. The lessons would be mailed to the musicians for a "nominal charge for postage and stationary," rather than one on one instruction in a studio. Aspiring musicians would have needed some additional money as well as the ability to read in order to take advantage of these lessons, something that may have excluded people of lower economic and social status. The company claimed that while this was an "exceedingly radical" idea, it would help persuade consumers who would not normally purchase an instrument due to "the difficulty or expense of learning to play."[67] An article in *The Music Trades* pointed to this system as being "the greatest feeder for business" for the company.[68]

The advertising literature for Washburn guitar echoed the contemporary narrative of industrial progress through mass production, at times offering misleading information to consumers.[69] Advertisements claimed that "[Lyon & Healy] carry in stock at least five times the amount of seasoned material, and have in process of construction, five times the number of instruments, of any other makers in the

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[67] "Free Tuition Offered by Lyon & Healy," *The Music Trades,* May 20, 1905, 55.

[68] "Lyon & Healy Work Large Night Shift," *The Music Trades*, November 11, 1905, 51.

[69] Guaranteeing their manufacturing methods, Washburn catalogs became, as one scholar described them, "manifestoes of the Industrial Revolution." Wheeler, *American Guitars*, 359.

world."[70] An 1899 catalog claimed that consumers were playing 20,000 Washburn instruments at the time.[71] Depictions of the factory in the late 1890s featured the "Washburn" name on the front rather than "Lyon & Healy." The slogan "Annual production upward of 100,000 Musical Instruments" was attached to the catalog in a misleading advertising gambit, as this number would have included brass, woodwind, and string instruments.[72] Advertisements in the 1890s claimed that the factory "turn[ed] out more musical instruments annually than any *six* similar factories in the country."[73] The advertising also asserted that Washburn made better guitars than everyone else. For example, the 1892 Souvenir Catalog claimed that "with special machinery...it is possible for the manufacturers of the Washburns to more accurately duplicate their instruments than for other makers, the others depending to a large extent on their workmen, are more or less at their mercy, and never certain of the result of their labors."[74] A 1906 catalog accused any maker who claimed their guitars were "hand-made" of lying as "they *all* use machinery more or less" and that any consumer who believed otherwise was "far behind the times." According to the

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[70] Trade Card from the Columbian Exposition for "Washburn Guitars, Mandolins, Zithers" 1893, box 4, Warshaw Collection of Business Americana, AC.

[71] Wheeler, *American Guitars*, 359.

[72] Teagle, 25.

[73] Lyon & Healy, *1891-1892 Catalogue of Musical Merchandise* (Chicago: The Henry O. Shepard Co., 1891), 340, NTCC.

[74] Lyon & Healy, *Washburn Souvenir, Catalogue of the Washburn Guitars, Mandolins, and Zithers* (Chicago: Lyon & Healy, 1892), box 4, Warshaw Collection of Business Americana, AC; Wheeler, *American Guitars*, 359.

marketing, the use of this "modern automatic machinery" in the construction of Washburn guitars represented progress.[75]

Lyon & Healy took their Washburn products to the world stage, gaining notoriety and awards at expositions in Chicago in 1893 and Antwerp in 1894, accolades that would appear in successive company marketing campaigns. At the 1893 World's Columbian Exposition, Lyon & Healy built an elaborate two-story display that prominently featured its full line of instruments. Guitars of all shapes and sizes filled the exterior display areas and windows of the exhibit. The company paid for daily concerts over a six-month period, inviting consumers to come, listen, and sign their guest register. Plooma Boyd, a visitor to the Columbian exposition offered an impressive endorsement of the display:

> "The Lyon & Healy of Chicago had a neat and tasty display, it being a small temple built of oak…At each of the four corners were large glass windows, or cases, and we filled with stringed instruments. These were made of the finest wood of all kinds, that such instruments are ever made of. It made a very pretty showing."[76]

Overall, the company received twelve medals for instruments, including one for "Supreme Excellence" awarded to its Washburn line, but the quality and merits of the competition were questionable at best.[77] The following year, the Washburn line took highest honors at the 1894 Universal Exposition in Antwerp, Belgium. Company

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[75] Lyon & Healy, *Lyon & Healy's Musical Handbook* (Chicago: Lyon & Healy, 1906), 72, MIMA.

[76] September 8, 1893, Plooma M. Boyd Diary of the 1893 Columbian Exposition, 1893, Archives Center, National Museum of American History. Gift of Jane Tusch Mayer.

[77] Teagle, 26; Pleijsier, 11.

advertisements made note of the awards given at both expositions until the late 1910s.[78]

Lyon & Healy made it a point to produce as many instruments as possible, relying on the burgeoning manufacturing techniques and distribution networks of the time to create a successful line of Washburn guitars. With its reliance on factory tools and facilities, the Washburn line proved to be a profitable use of mass-production in the musical instrument industry. Its success (and that of the larger Lyon & Healy company) inspired other manufacturers to adopt the same methods.[79] Industrialization, rather than tradition, became the hallmark of Lyon & Healy and their Washburn guitars, though it came at a cost. Lyon & Healy produced many flashy instruments, but they sacrificed quality in the process, with few of their products standing the test of time. They may have flooded the market at the turn of the century, but far fewer examples of Washburn guitars exist today, as opposed to Martin and Gibson models from the period.[80]

The "Road to Happiness" is a Gibson: The Gibson Mandolin-Guitar Company

The Gibson Mandolin-Guitar Company represents a middle ground between the family-owned workshop-turned-batch production of Martin and the mass-produced

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[78] Pleijsier, 12; Teagle, 26.

[79] The Harmony Company, founded in 1892, eventually competed with Lyon & Healy by making affordable guitars in large number for amateur musicians, manufacturing and selling them to consumers in rural areas through mail-order houses. Harmony and its role in the rise of mail-order guitar sales and the diversification of the guitar market will be discussed in more detail in chapter 5 of this dissertation. Achard, 3.

[80] Kuronen, Kaye, and Tremblay, 89.

Washburns. Orville Gibson, the son of an English immigrant, made his mark by developing carved-top instruments, an innovation that initially bore dividends for his mandolins. What started out as a small shop opened by a woodworker trained in craft traditions later became a corporation led by a board of directors, a move that left Orville Gibson on the outside. Like the emergence of countless other corporations during this period, the name of Gibson became a widely accepted brand of musical instruments, beginning with mandolins and acoustic guitars and later adding electric guitars to the lineup.[81] The Gibson story demonstrates the evolution from craft shop to organized factory and from a sole proprietorship to a publicly held company. Ideally situated in the marketing networks of the Midwest, at first Gibson competed heavily with the firms in Chicago such as Lyon & Healy before eventually surpassing them by the 1920s.

Drawing on his woodworking skills and musical talents, Orville H. Gibson (1856-1918) established a shop in Kalamazoo, Michigan and produced carved-top instruments unlike anything Martin or Washburn offered for sale. He became a talented musician and woodcarver at an early age and, similar to the instrumentalist turned luthier George Washburn Lyon, his proficiency on guitar led him to take an interest in building instruments. While Martin patterned his work on the traditional methods of the workshops in Vienna and Saxony, Gibson instead turned to the techniques of Italian violinmaking. He began carving the bodies of his instruments,

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[81] Wheeler, *American Guitars*, 94; Producers revolutionized the ways in which Americans bought goods through the increasing use of brand names to advertise consumer products ranging from biscuits to soaps in the early decades of the twentieth century. Strasser, 19, 29-31.

imitating the techniques espoused in the violin world, instead of the flat tops and backs favored by most guitarists and luthiers. For materials, he used just about anything he could get his hands on, including discarded furniture, a supply that offered Gibson the unintended consequence of seasoned lumber perfect for building instruments.[82] Sometime in or before 1881, Gibson had moved to Kalamazoo, a bustling manufacturing town with easy rail access to Detroit. He set up shop in 1896 and turned his hobby into a business.[83]

Orville Gibson's initial carved designs truly were revolutionary for their time and would later influence the guitar and mandolin industry in several important ways. Building his guitars required rigorous work, carving the tops and backs of the instruments and tapping them every so often until their resonant frequencies matched. This was a process done completely by ear, without any instruments to measure the vibrations of the wood. He carved both the inside and outside of the tops on his earliest models, with the backs carved only on the inside.[84] For example, a 1902 Style 03 made by Gibson used one piece of walnut for the back, ribs, and neck along with an arched top soundboard made of spruce. The guitar did not use any internal bracing,

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[82] Supposedly he carved a violin from wood once used in the old Town Hall in Boston. Achard, 2.

[83] 1890s Kalamazoo boasted a diverse array of production facilities including cigar makers, a foundry, and even an organ company. By the end of the decade McCormick Harvesting Machine Company and American Playing Card Company had also set up factories in the town. Walter Carter "The Big Village: Kalamazoo, 1880s-1890s," in Walter Carter, *Gibson Guitars: 100 Years of An American Icon* (Los Angeles: General Publishing Group, 1994), 12-13; and Roger H. Siminoff, "A Man With a Vision: Orville H. Gibson," in Carter, *Gibson Guitars*, 14.

[84] Achard, 3.

something that distinguished it from just about every other guitar at the time.[85] These large, rounded guitars produced a unique tone and a louder volume than the standard guitar of the day. Each instrument was unique, earning Gibson a reputation for fine, innovative work in musical instrument craftsmanship.[86] Though the Gibson Company moved away from the founder's designs in its early decades, the carved-top models of Orville Gibson did end up influencing some of the most successful instruments made by the company, most notably the F-style and A-style mandolins. By the 1920s, makers of arch-top jazz guitars drew inspiration from the rounded tops of Gibson's first instruments in order to construct guitars that offered greater volume in ensembles.[87] In the 1950s, the company launched its successful line of Les Paul electric guitars with carved tops, partly to differentiate them from the flat solid-bodied guitars of their chief competitor, Fender. In some ways, Gibson (the man) may have been ahead of his time, but it is clear that he contributed more than a name to the acoustic guitar industry.[88]

Orville Gibson turned his small business into a limited partnership, leading to a company that not only grew quickly but also distanced itself from its founder and namesake. In 1902, five enterprising Kalamazoo businessmen approached Orville Gibson with a lucrative offer. It is not clear whether Orville lacked the capital to

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[85] NMM 10855, Guitar by Orville Gibson, Kalamazoo, 1902, Style 03 (18″), National Music Museum, The University of South Dakota, Vermillion.

[86] Achard, 3.

[87] Gibson mandolins and arch-top guitars will be discussed in more detail in Chapters 2 and 4, respectively, of this dissertation.

[88] Kuronen, Kaye, and Tremblay, 97, 123, 130.

expand his business or if others saw his innovative approach as a profitable venture. Formalized on October 11, the Gibson Mandolin-Guitar Manufacturing Company, Limited was a joint initiative between John W. Adams, Samuel H. Van Horn, Sylvo Reams, Lewis Williams, and Leroy Hornbeck.[89] The men paid Orville Gibson, in a separate contract, a lump sum of $2500 for his name and creative expertise, though Orville did buy 60 shares of stock in the company. He never became a partner, but instead became a consultant teaching workers the craft of instrument construction.[90] The new partnership focused on "manufacturing, buying, selling, and dealing in guitars, mandolins, mandolas, violins, lutes, and all other kinds of stringed instruments."[91] As the company prospered, it shifted its focus away from the initial creations of Gibson as its namesake devoted less and less time to advising the company. It is not known what caused this split, whether it was financial disputes, opinions over the company direction, or the deteriorating health of the founder.[92] The company name changed several times over the course of its early existence. In May 1904, it became the Gibson Mandolin-Guitar Manufacturing Company, omitting the

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[89] All of these men served as company leaders in its formative years. Wheeler, *American Guitars*, 95.

[90] One scholar describes this as a tumultuous arrangement between Orville Gibson and the board of managers. Walter Carter, "An Uneasy Relationship: Orville and the Board of Managers," in Carter, *Gibson Guitars*, 36-37; Wheeler, *American Guitars*, 96.

[91] Articles of Association, Gibson Mandolin-Guitar Mfg. Co. May 24, 1904, MIMA.

[92] Orville Gibson was in and out of the hospital receiving treatment from 1909 until his death in 1918. Roger H. Siminoff, "A Man With a Vision: Orville H. Gibson," in Carter, *Gibson Guitars*, 14-15.

"Limited" from its previous title and in 1906 changed again to the Gibson Mandolin-Guitar Company.[93] By 1915 the Gibson Company's investment increased to $100,000, proof of a budding enterprise.[94]

The company used pre-existing factories for its production before constructing a plant of its own. From its incorporation in 1902 until November 1906, the Gibson Mandolin-Guitar Company operated out of the former Witwer Bakery. Desiring more production space and fewer cockroaches, the company moved to a new facility in late 1906. Though the original factory and the subsequent second location were both located in the downtown Kalamazoo business district, they lacked access to the nearby railroads, a major obstacle for the delivery of raw materials and for the shipping of instruments. In 1911, Gibson moved its operation again, leasing a building a half-mile away from the former factory. A brick structure with wooden floors featuring two stories and large windows, the new location offered enough space to divide up the different manufacturing processes. The Michigan Central Railroad ran along the north side of the building. Despite these qualities, the Gibson Company wanted to construct a factory of their own, designed especially for their needs as an emerging manufacturer of guitars and mandolins.[95]

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[93] Articles of Association, Gibson Mandolin-Guitar Mfg. Co. May 24, 1904, MIMA; Wheeler, *American Guitars*, 96.

[94] Eventually, by April 1915, Orville Gibson negotiated a new contract that provided a monthly royalty check, payable until his death. Wheeler, *American Guitars*, 96, 98.

[95] After years of processing foods, the building had acquired a sizeable population of cockroaches, enough so that one former sales manager, Lewis A. Williams, cited them as one of the main reasons Gibson moved to a new facility (in addition to its need for more production space). Joseph E. Spann, *Spann's Guide to Gibson, 1902-1941* (Anaheim Hills, CA: Centerstream Publishing, LLC, 2011), 1-2.

Completed in 1916 (and opened in July 1917), the new Gibson factory at 225 Parsons Street resembled the industrial architecture of the Motor City that employed new building materials and patterns for efficient production. It was designed in the early twentieth century style of a "daylight factory." Using reinforced concrete, glass, and steel, the factory featured large open spaces between support columns and the exterior walls featured large windows. This architectural style was initially developed by Ernest Ransome, but was heavily utilized by Albert Kahn, who designed a number of "daylight factory" buildings in Detroit including ones for the Ford Motor Company. It is unclear if Kahn designed the Parsons Street factory, but the building as a whole is representative of the style of many early twentieth century industrial factories.[96] The 1920 catalog featured a photograph of the factory that highlighted large rows of windows on all three floors of the plant. A car is parked outside the main entrance to the plant, perhaps in a subtle nod to similarly built factories for the automobile industry.[97]

The company considered cost cutting measures, fire prevention techniques and the proximity to transportation networks when designing the building. With daylight streaming in to the floors, Gibson could save money on electricity. The generous use of concrete and steel helped to essentially fireproof the building, a wise move for a

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[96] The factory is specifically referred to as "The Daylight Plant of the Gibson Mandolin-Guitar Company" in company literature. Gibson Mandolin-Guitar Company, *Gibson Mandolins, Mandolas, Mando-cellos, Mando-basses, Guitars, Harp Guitars, Catalog L* (Grand Rapids, MI: The Cargill Company, 1920), 2, MIMA; Spann, 2-3.

[97] Gibson Mandolin-Guitar Company, *Gibson Mandolins, Mandolas, Mando-cellos, Mando-basses, Guitars, Harp Guitars, Catalog L* (Grand Rapids, MI: The Cargill Company, 1920), 2, MIMA.

company whose products were made chiefly out of flammable materials (namely wood, but also varnish and lacquer). The three floors of open spaces also allowed the smells of the factory like fresh cut timber and hide glue to seep throughout the building. An elevator on the building's west side enabled large materials and instruments to be transported from one level to another. Perfectly placed tracks for the Grand Rapids & Indiana Railway (which eventually became part of the Pennsylvania Railroad) on the building's eastern side allowed for easy transportation of instruments to distributors. As the company grew along with the demand for more instruments, Gibson expanded the Parsons Street factory and added new equipment, sometimes repurposing old machines for new manufacturing tasks.[98]

The experience of working for Gibson in the first two decades of the twentieth century was not unlike other American manufacturing industries in that it featured a largely immigrant labor force that worked long hours in potentially dangerous conditions. In 1902, Gibson employed 13 people and by 1915 that figure had risen to 61.[99] Like Martin, another example of immigrant labor in the guitar industry can be found in Gibson's workforce, many of whom came from the neighborhood surrounding the Parsons Street factory.[100] A large portion of the employees prior to World War II were either from the Netherlands or were the children of Dutch immigrants to America. This close-knit immigrant community formed a barrier for

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[98] Spann, 2-3.

[99] Ibid., 13-14.

[100] Walter Carter, "The Ghost of Gibson: Kalamazoo, 1993," in Carter, *Gibson Guitars*, 65.

outsiders to gain entry onto the Gibson floor.[101] During the early years of the company, employees often worked nine-hour days, six days a week, with the only holidays being Thanksgiving, Christmas and the Fourth of July (for the annual employee picnic).[102] Images of the Parsons Street factory used in Gibson catalogs show male workers dressed in white shirts with aprons or overalls standing at workstations surrounded by racks of instrument components.[103] Some of the most senior plant workers were often missing digits, a testament to the dangers of machine tools and factory working conditions.[104] The factory did not unionize prior to World War II and there was a high rate of turnover in the company, partly due plentiful jobs in the array of industries and services found in Kalamazoo at the time.[105]

While the first two decades of its existence were heavily influenced by the demand for mandolins, Gibson offered a small, but significant line of guitar models to consumers that blended traditional techniques with new innovations.[106] In 1903,

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[101] There are instances of multiple family members working in the plant at the same time, including several who had three generations employed by Gibson. Spann, 13.

[102] Ibid., 13-14.

[103] William Ivey, ed. *The Gibson 1921 Catalog*, Historical Instrument Series No. 1 (Grand Rapids, MI: The Cargill Company, 1921; repr., Nashville, TN: The Country Music Foundation Press, 1973), 17, MIMA.

[104] Spann, 15; Arwen P. Mohun, *Risk: Negotiating Safety in America* (Baltimore: Johns Hopkins University Press, 2013), 117-118.

[105]A typical factory worker earned $0.15 an hour in 1915, while his supervisors brought in, on average, $0.40 an hour with the main designer, Ted McHugh being the highest paid employee. Spann, 14-15.

[106] A more detailed exploration of Gibson's mandolins can be found in Chapter 2 of this dissertation.

Gibson produced eight different guitars that cost between $44.32 and $212.17. Many of the models featured arched-tops with fixed bridges and oval or round soundholes, incorporating ideas from both the traditional techniques of lutherie (the use of round soundholes and fixed bridges similar to Martin and Washburn) with the innovative approaches (arched-tops) Orville brought to the company. Following this catalog, Gibson reduced the number of guitar styles in favor of adding more mandolins. By 1906, the catalog featured only three guitars. A fourth was added in the subsequent catalog and this lineup stayed the same until after the close of World War I when two discounted models appeared in the literature.[107] The Gibson-Mandolin Company designers tinkered with the construction of its early models and secured patents in 1909 for an intonation-adjustable bridge and an elevated pickguard (with clamp), features that would have distinguished them from competitors' models.[108]

Gibson relied on an assortment of materials, suppliers, and vendors to build components of their guitars. By dealing with wholesale firms who catered to furniture and piano makers, Gibson was able to purchase its hardwood in bulk from a global supply. Many of Gibson's instruments featured beautiful and ornate mother-of-pearl inlays on the fingerboards and pegheads, though much of this work was done by outside contractors.[109] The final step in the process of building a guitar often involves

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[107] Wheeler, *American Guitars*, 102.

[108] Ibid., 96.

[109] With the exception of small dots, Gibson's pearl inlay work was outsourced to Aumann Brothers Pearl, a family company in Detroit that supplied the majority of pearl and pearl inlay work for Gibson between 1903 and 1930. The factory shipped out fingerboard and peghead blanks to the vendor, who installed the inlays, and returned them to Gibson. Spann, 52, 57-59.

placing a protective coating or finish on the instrument. Gibson performed this work in the factory. Before 1923 and the advent of fast-drying, sprayable nitrocellulose lacquer, the company varnished the instruments by hand, a practice that led to a significant difference in quality from one instrument to the next.[110]

Gibson's network of "teacher-agents" sold instruments directly to their students in exchange for the ability to profit off the sale of instruments. This approach, though similar to Washburn's Premium Plan, greatly expanded the use of teachers as company agents. The idea originated in Orville Gibson's first Kalamazoo shop. Working out of studios or private homes rather than music stores, teacher-agents could buy instruments for the wholesale price directly from Gibson, which they then sold to students for a higher price. If a teacher could not afford one right away, they could purchase an instrument on an installment plan. Gibson offered its best teacher-agents performance bonuses as well. The first general manager of the company, Sylvo Reams and sales manager Lewis A. Williams saw the value in the system, both having prior experience with this method as a retail partner and music teacher, respectively.[111] Gibson saved on the cost of sending traveling salesmen to dealers. In addition, teacher-agents did not need to entice customers to enter their stores as people willingly

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[110] Ibid., 48.

[111] The "studios" referred to here are for musical instruction, not for sound recording. Two years after the inception of the dealer network, the company revamped the periodical into *Mastertone Magazine* that appealed to both teacher-agents and dealers. Walter Carter, "Sales Without Sales Reps: The Gibson Teacher-Agent," in Carter, *Gibson Guitars*, 49, 51; Spann, 225-226.

came seeking music lessons. The detailed Gibson catalog became a go-to manual for the teacher-agents to use in persuading customers to buy Gibson instruments.[112]

In addition to the catalog, the corporation supported the individual teacher-agents by supplying them with a company magazine entitled, *Sounding Board Salesman*. The name played off of both the idea of a community discussion regarding Gibson sales as well as the resonant top or soundboard of a fretted musical instrument. Published monthly from 1902-1926, the magazine offered tips on making sales and information about Gibson product lines. In January 1924, the company's general manager Harry L. Ferris publicized the formation of a new association of dealers. When the company introduced this change, they did not end the teacher-agent system, but instead utilized both networks in hopes of increasing sales.[113]

The company used the language of religion and folksy proverbs in its catalogs to preach the "Gospel of Gibson" to its customers. The catalog writers, led by Lewis A. Williams, utilized what Tom Wheeler has described as "missionary zeal" to attract consumers to the Gibson brand.[114] Through parables and lessons, the catalog text displayed similar techniques of argument as to what customers might hear in the pews

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[112] Carter, "Sales Without Sales Reps," 49; Walter Carter, "Come Let Us Reason Together: A Tour of Catalog H," in Carter, *Gibson Guitars*, 52.

[113] Spann, 193, 225-226.

[114] Wheeler, *American Guitars*, 97-98; This strategy of equating religion and advertising is similar to one used by Bruce Barton in the 1920s. See Warren I. Susman, *Culture as History: The Transformation of American Society in the Twentieth Century* (New York: Pantheon, 1984), 122-131; It also speaks to the use of morality lessons in advertising as examined in Roland Marchand, *Advertising the American Dream: Making Way for Modernity, 1920-1940* (Berkeley: University of California Press, 1985), 206-233.

on Sunday morning. The 1909 catalog opened with a "Prayer of the Non-conformist" written from the perspective of one of their competitor's customers.[115] The company acknowledged that some musicians might not be happy with their purchase of a Gibson, as "Christ Himself did not please everybody."[116] For those who sought less expensive instruments, the catalog writers chided the consumer with the proverb, "Cheapness Diggeth the Pit; the Unwary Fall Therein."[117]

Unlike Martin's reliance on its reputation or Lyon & Healy's use of flashy decoration, Gibson felt the need to educate its consumers on how to buy a guitar. Gibson's 1909 Catalogue "F" provides a number of examples that attempt to persuade consumers that their guitars were the best on the market. The catalog spends 6 full pages detailing why Gibson wood, varnish, necks, frets, action, workmanship, and ornamentation are all better than their competitors. For example, Gibson warned its consumers away from its competitors such as Washburn, explaining, "Whenever you find an instrument covered with pearl and ornamentation, spend your time in admiring the workmanship but not the tone. An instrument cannot be judged by its outward appearance."[118] By using terms like "evolutionized" to describe how Gibson

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[115] Gibson Mandolin-Guitar Company, *The Gibson Mandolins, Mandolas, Mando-cellos, Guitars, Harp-guitars, Supplies, Catalogue "F"* (Kalamazoo, MI: Gibson Mandolin-Guitar Company, 1909), 1, NTCC.

[116] Ibid., 43.

[117] Gibson Mandolin-Guitar Company, *The Gibson Catalog "J"* (Battle Creek, MI: Gage Printing Co., Ltd., 1917), 12, MIMA.

[118] Gibson Mandolin-Guitar Company, *The Gibson Mandolins, Mandolas, Mando-cellos, Guitars, Harp-guitars, Supplies, Catalogue "F"* (Kalamazoo, MI: Gibson Mandolin-Guitar Company, 1909), 4-7, 9-10, NTCC; A similar overview of the 1912 catalog is discussed in Carter, "Come Let Us Reason," 52-55.

transformed the industry with its innovative designs, the corporation attempted to distance itself from the "old construction" of Martin and instead place their instruments in a class above everyone else.[119] Gibson also wanted to teach consumers how to buy, play, and take care of stringed instruments. One such catalog suggestion involved using "a little gasoline or benzene" to remove marks left by the oils and dirt from a player's fingers. From practical maintenance tips to arguments in favor of the purchase of a Gibson, the verbose catalog aimed to do more than just sell guitars.[120]

From music teachers to vaudeville performers, Gibson's followers became a part of the visual culture used in company advertising. People across the country assembled groups filled with players using only Gibson instruments. They fashioned names that conformed to the company strategy: Gibsonians, Gibsonites, and even Gibson Girls. Photographs and personal testimonials featured prominently in the Gibson catalogs of the era, a testament to their growing consumer fan base.[121] These personal accounts were an early form of celebrity endorsements for the company.[122] Gibson received hundreds, if not thousands of photographs and personal quotes from devoted consumers, some of whom performed and taught for a living. Many graced

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[119] The 1908 Gibson catalog, quoted in Wheeler, *American Guitars*, 98.

[120] Gibson Mandolin-Guitar Company, *The Gibson Mandolins, Mandolas, Mando-cellos, Guitars, Harp-guitars, Supplies, Catalogue "F"* (Kalamazoo, MI: Gibson Mandolin-Guitar Company, 1909), 46, NTCC.

[121] Wheeler, *American Guitars*, 98.

[122] Siminoff, "A Man With a Vision," 15.

the pages of the catalogs with no apparent credentials or qualifications determining who made the cut.[123]

The photographs in the catalog represent musicians performing in a variety of venues, costumes, and musical styles, proof of the acoustic guitar's dissemination into American musical culture. Clearly, Gibson was not simply selling instruments to musicians who were only operating out of their own parlor. For example, 1909 catalog contained photographs of 34 different solo musicians or ensembles. The pattern expanded to 69 in 1912 and 68 in 1917. The endorsements in 1912 featured men and women, both young and old, including several ensembles with children. The acts hailed from all over the country, including the territories (at the time) of Alaska and Hawaii. Several international ensembles also appeared in the catalog. Most were dressed in formal attire of tuxedos, suits or dresses, though acts such as "The Five Musical Nosses" and "Three Masqueria Sisters" (from Chicago) sported costumes that evoked an exotic, vaguely ethnic appearance. The catalog addressed how Gibson instruments would "command attention and admiration the minute the performer steps before his audience," regardless of whether it was a vaudeville act or a concert hall performance. The solo musicians were listed with prominent titles, usually two or three at a time such as "virtuoso," "teacher," "publisher," or "composer." How they garnered this prestige is unclear, but surely this would have been an impressive array of artists for the consumer who was using the catalog to decide whether or not to purchase a Gibson. The company also published correspondence from customers,

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[123] Spann, 240.

again offering consumers the chance to be a part of a future catalog, whether through a photograph or in the form of a reprinted letter.[124]

Using an early form of aspirational marketing, the Gibson catalogs showcased men and women from all over the country who performed on Gibson brand instruments. The photographs in the catalog surely excited young aspiring musicians who dreamed of gracing the pages of the catalog someday. As later chapters will further demonstrate, this was a consistent marketing approach employed by producers that enticed consumers to purchase guitars in order to fulfill their own musical fantasies. Many of the early company brochures even stated that the "Road to Happiness" is a Gibson.[125] Aspirational marketing appealed to a large portion of consumers regardless of their gender, economic status, or age. For some of the poorest in America, these photos represented a chance to escape poverty through the notoriety gained as a musician. All one needed was a musical instrument, in this case, a Gibson guitar.

The Gibson Company, first as a limited partnership, and later as a corporation utilized new production methods and distribution networks to sell quality instruments to performers throughout the country. By relying on teacher-agents, testimonials, and persuasively written catalogs, the company built upon and adapted the methods used by Martin and Lyon & Healy to sell guitars to a growing consumer public. While the

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[124] Gibson Mandolin-Guitar Company, *The Gibson Catalogue "H"* (Chicago: Hammond Press/W. B. Conkey Company, 1912), 9, MIMA; Gibson Mandolin-Guitar Company, *The Gibson Catalog "J"* (Battle Creek, MI: Gage Printing Co., Ltd., 1917), 13, MIMA; The exotic costumes and the popularity of ethnic music movements in America will be discussed in Chapters 2 and 3 of this dissertation.
[125] Spann, 294.

majority of their early guitars bore little resemblance to Orville Gibson's innovative designs, the company profited from his name and expertise as it expanded during the early part of the twentieth century.

Conclusion

In the end, these companies demonstrated that there were multiple ways to buy and sell an acoustic guitar in the period of industrialization. All three makers successfully utilized unique production techniques and marketing strategies, each suited to the strength and mission of the guitar maker. Though the companies ridiculed and discounted the products of their competitors, in truth, they all made guitars that brought in a steady income to a growing American musical instrument industry. Gibson and Washburn advertisements point to their new production methods and how they were vastly superior to the workmen employed by Martin.[126] Yet, Martin did not concede to "progress" as demonstrated by their competitors, but instead remained a family-owned business that placed an emphasis on quality over quantity, retaining its craft roots and traditions. One of the most telling aspects of this brief comparative study is that the same tenets still hold true today for the trade as acoustic guitars continue to be manufactured simultaneously in different ways for a diverse group of consumers.[127]

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[126] Washburn and Johnston, *Martin Guitars,* 7.

[127] For example, while C. F. Martin and Gibson continue to produce 10,000+ acoustic guitars per year, others like Wayne Henderson, a rural mailman in Virginia who builds some of the finest guitars in the world at a glacial pace of no more than a few per year, are still highly sought after by musicians ranging from amateurs to the likes of Eric Clapton. This is something that I will discuss at the conclusion of the dissertation. Allen St. John, *Clapton's Guitar: Watching Wayne Henderson Build the Perfect Instrument* (New York: Free Press, 2006).

The strides made by these manufacturers of acoustic guitars and the musicians who acquired them represent an important first step in the instrument's widespread adoption in American musical culture. This was a pivotal moment where new technologies of industrialization combined with Old World craftsmanship to produce a flexible and versatile instrument that would find its way into almost every genre of music in mainstream American culture during the first half of the twentieth century. Through aggressive marketing strategies and aided by distribution networks, Martin, Lyon & Healy, and Gibson placed their products in the hands of a wide range of musicians, many of whom performed outside the confines of the parlor.

H. P. Sutorius, a German immigrant, gained fame and recognition as a guitar teacher and performer who had been featured in the catalogs of Gibson and Washburn. After coming to America, he taught guitar and mandolin in Minneapolis in his own studio and through classes at the local Y.M.C.A.[128] Immigrants, like Sutorius, played a vital role in the success of companies such as Martin, Lyon & Healy, and Gibson both as workers and as consumers. In addition, the millions of people who crossed the Atlantic Ocean in the later half of the nineteenth century to live and work in America brought with them the musical traditions and instruments of their homeland. Before his endorsement appeared in catalogs, Sutorius participated in a group that called

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[128] Sutorius is also spelled Sutorious in some instances. Amy Kreitzer, "Sweet Harmonies from Little Boxes: Mandolin Playing in Minneapolis and St. Paul," *Minnesota History* 57, no. 5 (Spring 2001): 221, 235; "Will Open Friday Y.M.C.A. Department Offers Many Educational Courses," *Minneapolis Journal*, September 27, 1904; Lyon & Healy, *Washburn Souvenir, Catalogue of the Washburn Guitars, Mandolins, and Zithers* (Chicago: Lyon & Healy, 1892), box 4, Warshaw Collection of Business Americana, AC; Gibson Mandolin-Guitar Company, *The Gibson Mandolins, Mandolas, Mando-cellos, Guitars, Harp-guitars, Supplies, Catalogue "F"* (Kalamazoo, MI: Gibson Mandolin-Guitar Company, 1909), 7, NTCC.

themselves the “Spanish Students,” a fretted stringed instrument ensemble that cashed in on a growing popular trend sweeping the country in the 1880s. As more and more Americans became fascinated with the musical culture of both real and imagined far away lands, musicians and manufacturers participated in a tide of new ethnic music movements, the first of which revolved around a smaller cousin of the acoustic guitar: the mandolin.

Chapter 2

OF TEARDROPS, FLORENTINES, AND BOWLBACKS: THE MANDOLIN MOVEMENT AND ITS EFFECTS ON THE ACOUSTIC GUITAR (1880-1930)

Dressed in matching outfits, ten members of the Georgia Tech Mandolin Club posed for their yearbook photo in 1909 holding their small stringed instruments. Each member of the front row cradled a wooden teardrop-shaped mandolin with eight strings and a body that resembled a gourd. In the back row, though the bulk of the instruments were hidden, it is clear that several of the musicians held six-string guitars, while one man grasped the neck of a banjo.[1] Boasting a repertoire that included "anything from Barcarolle to Alexander's Ragtime Band" and "enough classical music...to add the requisite dignity to the program," the club regularly serenaded anyone who passed by the campus dormitory where they practiced.[2]

The mandolin club featured in this photograph and article capture a moment in American culture where it was fashionable to form musical groups using the instrumentation of the "plectral family" of banjos, mandolins, and guitars. The surviving images of these ensembles, found in everything from college yearbooks to instrument manufacturer catalogs, showcase how the American public experienced the first in a succession of ethnic music movements involving stringed instruments. What

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[1] *Blue Print 1909* (Atlanta: Georgia Institute of Technology, 1909), 79.

[2] "Mandolin Club is a Hummer," *Technique*, December 8, 1911.

is left out of the picture is the distinctive sound of the mandolin, which played a key role in its enormous popularity in America for almost fifty years.

Amateur and professional musicians, eager to participate in what contemporaries called the "mandolin craze," fueled a growing demand for the instrument in the late nineteenth century.[3] Traveling ensembles of Spanish musicians and their imitators inspired Americans to form collegiate and community mandolin clubs and orchestras. Recognizing an emerging market for the instrument in the 1880s, guitar makers incorporated new models of mandolins into their existing string instrument inventory, initially marketing them to immigrants and later expanding to a broader consumer audience.

The mandolin itself underwent stylistic transformations during this period as companies experimented with new ways to produce and market instruments to meet consumer demand. In addition, beginning in the 1910s, luthiers adapted innovative techniques used originally on mandolins such as carved body styles to the production of acoustic guitars in order to increase their volume. As the acoustic guitar's popularity surpassed the mandolin by the 1920s, its emergence can be partly attributed to the growth of the mandolin industry and the exposure that mandolin clubs and orchestras provided in the first decades of the twentieth century.

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[3] One contemporary example of the term can be found in an 1888 article that noted the "progress of the mandolin craze" in the Milwaukee area. *Sentinel Milwaukee*, May 22, 1888, quoted in Paul Ruppa, "The Mandolin in America after 1880 and the History of the Mandolin Orchestras in Milwaukee, Wisconsin" (master's thesis, University of Wisconsin-Milwaukee, 1988), 32.

Anatomy of an Ethnic Music Movement

As successive chapters of this dissertation will show, a series of ethnic music movements became popular in American culture from the 1880s until World War II.[4] The instruments and music associated with these movements greatly affected the development of the American acoustic guitar and introduced wider audiences to the appeal of fretted stringed instruments. Why did these instruments become so popular that they created crazes in American culture? In general, the movements followed a similar pattern. Each consisted of several main ingredients that led to their popularity in America: a receptive cultural context, celebrity performers who introduced audiences to the sound, homegrown ensembles who spread the movement, and the development of tools by which amateur and professional players could replicate the sound of instruments they had heard in concerts and, beginning in the late 1880s, sound recordings.

The first factor in the success of these ethnic music movements was a critical mass of middle class music lovers and musicians who were receptive to the new sounds. In the end, it was the plucky, high-pitched, melodic sound of instruments like the mandolin that caught people's attention, especially American audiences in urban areas. The music resonated with already existing cultural fascinations and allowed listeners to vicariously travel to foreign destinations, whether it was the idyllic hills of Tuscany or the spectacular shores of Hawaii. Prior to the advent of a mass market for commercially recorded music, if a person desired to hear and reproduce that sound

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[4] Most scholars have referred to these as "crazes" or "fads" but I choose to describe them as ethnic music movements, something I will explain in more detail in the following pages.

again, he or she would have to buy an instrument and learn how to play it. Since mandolins and ukuleles were both small instruments, roughly the size of a melon, it took a group of them together to produce a loud enough sound to resonate on street corners and in concert halls. Employing the musical technique of tremolo, the players rapidly picked the strings to sustain melody lines, offering a new and attractive sound to the music they made. Utilizing arrangements of older pieces written for other instruments such as the violin, musicians thrilled audiences with familiar tunes flavored with the sweet strums of a mandolin or ukulele.

Increasing globalization and the emergence of a middle class consumer culture in the late nineteenth century facilitated the transformation of these movements. In addition, Americans came into contact with new ethnic traditions (including music and instruments) thanks to larger social and cultural factors such as immigration and imperialism. The increasing ease and speed with which performers, instruments, and music could travel around the globe enabled these ethnic music movements to grow in popularity far from their places of origin (whether real or imagined in the minds of consumers). This was a moment where it was cheaper, faster, and easier to move people, goods, and ideas from one location to another thanks, in part, to the explosion of print media and international transportation networks such as steamship lines. These innovations enabled groups like the "Estudiantes Españoles" to tour the world, spreading their music to areas and audiences spanning the globe.

Many Americans initially encountered these sounds through specific celebrity performers and ensembles that became closely identified with the instruments. Originators such as Joseph Kekuku captured the public's attention and planted seeds in the minds (and ears) of audiences that cultivated a taste for new sounds. Dressed in

clothing that appeared foreign and exotic, they became celebrities whose very names were synonymous with the sounds they produced.[5] As they enchanted audiences on stages throughout the country, the musicians gained notoriety thanks to the American press. In some cases, those consumers who fell under the spell of these striking new sounds aspired to play like their celebrity idols, helping to fuel interest in the instruments, repertoire, and groups associated with the new sounds.

Homegrown American ensembles played a significant role in the spread of these movements. Inspired by ethnic/non-American performers who initially popularized the sound, the successive imitators were the key to solidifying the mass appeal of the movement. These ensembles took up the instruments and instrumentation (and sometimes ethnic costumes) of the originator groups, exploited the growing popularity of the music, and ultimately disseminated the strains of the movement throughout the country. From professional orchestras to college glee clubs, community ensembles to individuals performing in their homes, various musicians rode the crest of the ethnic music wave as it traveled across America.

The final ingredient needed was access to instruments and the knowledge of how to play them. Listeners latched onto the exotic sounds heard in concert halls or at international expositions and sought ways to make their own music in this style. Initially, this required a person to obtain new instruments and the necessary skillsets to become at least a rudimentarily proficient player. As manufacturers increased the supply of the instrument, publishers and composers also added to the available repertoire. By changing the instrumentation of already existing ensembles or playing

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[5] Joseph Kekuku and his innovative Hawaiian guitar playing will be discussed in Chapter 3 of this dissertation.

familiar tunes on new instruments, performers wowed audiences with music that was still familiar, but infused with a delightfully exotic flavor.

In the era of industrialization, manufacturers learned valuable lessons from these cultural trends, found ways to capitalize on them through instrument production, and created patterns to follow to ensure profits from subsequent movements. Initially the demand far outweighed the supply, but over time, American manufacturers responded by churning out thousands of new instruments. A process of mutual shaping took place wherein consumers adapted the instruments and music to already existing genres while producers experimented with new stylistic changes to the ways the instruments were crafted.

During the early decades of the twentieth century, the taste for these exotic sounds and the nature of commodification changed as consumers purchased recordings in addition to musical instruments to satisfy their cravings. With the growth of commercially recorded music, consumers could replicate the sounds of the movement in their own living rooms without the need of an instrument or the skills to play it. The recordings also played a role in the spread of the ethnic music movements by introducing audiences around the country (and world for that matter) to the exotic flavors of instruments such as the ukulele and Hawaiian steel guitar.

My discussion of these instruments and their cultural context builds on the work of a number of scholars.[6] However, this dissertation differs from the previous

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[6] My work is greatly aided by Scott Hambly's thorough exploration of the mandolin in America, one of the first academic studies on the subject. Written from the perspective of a folklorist, Hambly carefully analyzes the evolution of the mandolin both in form and function in American culture. This chapter expands upon Hambly's initial forays into the "social and cultural ramifications" of the instrument while further exploring the production and marketing of the instrument. In addition, works by Joseph Johnson,

scholarship with respect to the characterization of these eras as crazes and the process through which these movements became popular in America. I refer to these cultural trends as ethnic music movements. They are often called "crazes," "fads," or "booms" but the terminology is misleading. These denote a period that is just a "flash in the pan" – suddenly appearing in the American cultural landscape, achieving a bright, but brief apex, and then disappearing like smoke into thin air. However, instead of just being popular for a few years or a decade, each of these movements lasted almost a half-century, with continuing implications that reach into our present day. Even as the tide of public enthusiasm ebbed, the currents of these ethnic music movements and their associated instruments did not die out completely, but instead survived and surfaced in parts of American musical culture that were not intended by the earliest adopters of the instrument and its music. As for the popularization of the ethnic movements, I contend that celebrity groups or individuals alone did not create American interest in ethnic musical instruments such as the mandolin or ukulele and the music they produced. Specifically for the case of the mandolin, while the "Estudiantes Españoles" played a role in popularizing the instrument, as did later

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Jeffrey Noonan, and Paul Ruppa have investigated the origins of the American interest in mandolins in the late nineteenth century. Scott Hambly, "Mandolins in the United States Since 1880: An Industrial and Sociocultural History of Form" (PhD diss., University of Pennsylvania, 1977); Joseph R. Johnson, "Mandolin Clubs and Orchestras in the United States (1880-1925): Their Origin, History, and Instruments" (master's thesis, University of South Dakota, 1987); Jeffrey J. Noonan, *The Guitar in America: Victorian Era to Jazz Age* (Jackson, MS: University Press of Mississippi, 2008); Paul Ruppa, "The Mandolin in America after 1880 and the History of the Mandolin Orchestras in Milwaukee, Wisconsin" (master's thesis, University of Wisconsin-Milwaukee, 1988).

celebrity performers and groups, the process involved other factors including Southern European immigration and an American romantic fascination with Italy.

Historical Context of the Mandolin Movement

Although white, middle class, native-born Americans (who came to constitute the core group of consumers for the large-scale production of mandolins) primarily identified the instrument as Italian, their ideas of "Italian-ness" easily became conflated with other forms of Southern European ethnicity. In fact, many late nineteenth century Americans encountered the mandolin, an Italian instrument, in an ensemble that was not Italian at all. Known in Europe as the "Estudiantes Figaro," or "Estudiantes Españoles" (Spanish Students) the group was comprised of musicians from Madrid, Spain. Touring around the world, the troupe performed at the 1878 Paris Exhibition, where they are also credited with sparking a French interest in the mandolin. The ensemble came to the United States in January 1880 and helped inspire audiences to take up the mandolin and guitar. They were part of a global interest in *estudiantinas*, or small string bands, that performed at a variety of venues including everything from street corners to World's Fairs.[7] Typically consisting of less than a dozen people, these string bands performed using various instrumentations of small, plucked chordophones.

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[7] *Estudiantinas* were musical ensembles in Spain, usually formed by students in university towns who would play traditional songs on guitar and bandurria while in costume with the hope that it would bring them luck on their exams. Inspired by the Estudiantes Españoles, musical ensembles formed throughout Europe calling themselves *Estudiantinas*. Paul Sparks, *The Classical Mandolin* (Oxford: Clarendon Press, 1995), 22-27.

The "Estudiantes Españoles" left a lasting impression on audiences everywhere, encouraging musicians in the U.S. to follow in their footsteps, though they did so mistakenly using different instruments than the original performers. Making their American debut in Boston and then traveling to New York City, the group performed on bandurrias, an instrument that many in the audience mistook for mandolins. Both are wooden, small in size, played with a plectrum or pick, and produce a high-pitched sound.[8] It is difficult to paint an exact and accurate picture of just who these Spanish Students really were, but the ideal that this group espoused is more important than the reality.[9] What is significant is that the Spanish Students inspired a host of touring groups who looked and sounded enough alike that people often lumped them all together.

Wishing to mimic the success of the "Estudiantes Españoles," a number of imitators, both amateur and professional, formed their own ensembles roughly

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[8] The bandurria is essentially the Spanish version of the mandolin and is often used for performing the melody with guitar accompaniment. One key distinction is that the bandurria has six courses (or sets) of paired strings tuned in fourths as opposed to four courses tuned in fifths on the mandolin. Jeremy Montagu, "bandurria," *The Oxford Companion to Music*, accessed April 29, 2013, *Oxford Music Online*.

[9] Paul Ruppa, Scott Hambly, Joseph Johnson, Jeffrey Noonan and others all point to the Spanish Students as being responsible for making the mandolin popular in America. Hambly and Ruppa in particular provide a detailed look at the large amount of confusion in American newspapers and periodicals surrounding the arrival and performances of the Spanish Students. While the exact details of the group may be hard to distinguish, it is clear that their arrival is heralded as a legendary event for the mandolin in America. See Walter Carter, *The Martin Book: A Complete History of Martin Guitars* (San Francisco: Backbeat, 2006), 21; Hambly, 55-72; Johnson, "Mandolin Clubs and Orchestras," 3-10; Noonan, 77-79; Ruppa, 20-27.

fashioned on what they remembered or had heard about the Spanish Students.[10] What was originally a bandurria became a mandolin and from a distance, in a dark performance venue, it is not at all surprising that American audiences would mistake one for the other. The same phenomena occurred with the costumes worn by the players. It did not matter if it was an exact replica of a Spanish-style outfit. It just had to be different, exotic, and characteristic of the foreign flavor epitomized by the tours of the Figaro group.

In a similar fashion to later celebrity endorsers of other acoustic stringed instruments, the Estudiantes Figaro and the instruments they played both exhibited a cultural valence that evoked romantic images of Europe. At the same time, they detached the instrument from its original vernacular context and any unsavory association with Southern European immigrants. These romanticized associations, in turn, became a central part of the marketing of instruments and sheet music during this period. The music and the instruments of the Spanish Students by and large became a commodity that producers of mandolins and sheet music used to their advantage as the public's fascination grew. The visual representation did not have to match what was conjured up in the imagination of the consumer. The selling point was the sound and its powerful effects on the listener. However, this only partly answers the question of what possessed these consumers to decide that the mandolin was the perfect instrument for them. Even though many in the country detested the presence of Mediterranean immigrants, the high-pitched sound of the mandolin resonated with a

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[10] These groups helped to make "Spanish Students" a generic term referring to a small ensemble playing mandolins, usually decked out in some sort of ethnic attire. Hambly, 76-78.

larger American cultural infatuation with an imagined version of the idyllic Italian countryside.

In an attempt to capture some of the fame of the Figaro ensemble, homegrown "Spanish Students" appeared on the musical scene. The first imitator of the Spanish Students was a group started in 1880 by mandolinist, composer, and conductor Carlos Curti who rounded up Italian immigrant musicians to join him in the venture. As early as March 1, 1880, an imposter Spanish Students had formed in New York as the first Spanish Students dropped the "European" aspect from their advertising to instead state that they were the "only and original" Spanish Students. Regardless of the true reason behind the change, it is clear that Americans wasted little time in cashing in on the success and popularity of the Spanish Students. According to articles appearing in *Cadenza*, this ensemble appropriated the entire original Spanish Students' act including the names of their personnel. Touring the country using mandolins instead of bandurrias, the group helped to spread the popularity of the instrument.[11] Similar to the European musical scene, amateur players, drawn mainly from the middle class, bolstered the ranks of professional mandolinists. One of the supposed imposter Spanish Students was H. P. Sutorius, the guitarist and mandolinist featured in catalogs

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[11] Paul Ruppa references two articles concerning the imitators of the Spanish Students: Clarence L. Partee, "The Mandolin," *Cadenza*, April 1902, 18, and Samuel Adelstein, "Mandolin Memories: A Descriptive and Practical Treatise on the Mandolin and Kindred Instruments," *Cadenza*, January 1901, 4. Ruppa found advertisements in the *New York Times* "Amusement" section that place the original Spanish Students at Booth's Theatre as part of the "Humpty Dumpty" variety show from February 3, 1880 to April 1, 1880. Even Ruppa admits that the evidence of the change in advertising slogans is circumstantial at best. Ruppa, 27-28.

from Gibson and Washburn who appeared in the previous chapter.[12] These everyday players focused on "recreational music-making" playing both serious pieces along with patriotic marches and ethnic folk tunes.[13] In addition, the growing international popularity of Italian opera beginning in the 1890s added numerous pieces to the repertoire that further linked the mandolin to the music of Italy.[14] The groups that emulated the Spanish Students bought into the aspirational marketing idea that would later come to dominate the guitar industry. Buy a mandolin and you and your ensemble could grace both performance stages and manufacturer's catalogs.

The middle class audiences that flocked to see the Spanish Students in 1880 could be forgiven for thinking they were Italian because their tour came at a ripe moment, capitalizing on American audiences' familiarity with Italy through works of art and literature.[15] The melodic strums of the mandolin helped to add an aural

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[12] Amy Kreitzer, "Sweet Harmonies from Little Boxes: Mandolin Playing in Minneapolis and St. Paul," *Minnesota History* 57, no. 5 (Spring 2001): 221, 235; "Will Open Friday Y.M.C.A. Department Offers Many Educational Courses," *Minneapolis Journal*, September 27, 1904.

[13] Sparks, 121, 125-126.

[14] Ibid., 44-45.

[15] Though historians have focused little attention on this cultural attraction, scholars in the fields of literature, film, and art history have studied the effects of Italy on writers and artists. See Giorgio Bertellini, *Italy in Early American Cinema: Race, Landscape, and the Picturesque* (Bloomington: Indiana University Press, 2010); Van Wyck Brooks, *The Dream of Arcadia: American Writers and Artists in Italy 1760-1915* (New York: E. P. Dutton & Co., Inc., 1958); Leonardo Buonomo, *Backward Glances: Exploring Italy, Reinterpreting America (1831-1866)* (Madison, NJ: Fairleigh Dickinson University Press, 1996; Annamaria Formichella Elsden, *Roman Fever: Domesticity and Nationalism in Nineteenth-Century American Women's Writing* (Columbus: Ohio State University Press, 2004); Robert K. Martin and Leland S. Person, eds., *Roman Holidays: American Writers and Artists in Nineteenth-Century*

element to this imagined landscape. Especially during the nineteenth century, American artists from painters to novelists left the comforts of the familiar to voyage to distant Italian shores in search of inspiration. Some stayed for a few months while others never left, electing to take up residence abroad. Those who documented their journeys offered enticing travelogues for Americans to learn about the exotic, yet charming idealized version of rustic Arcadia in the form of the country of Italy.[16]

Many middle and upper class educated people might have been familiar with the work of Thomas Cole, one of several American painters who intertwined imagery of Italian culture and the mandolin. The famed landscape artist included a minstrel playing a stringed instrument similar to a mandolin in the foreground of his 1837 work *View of Florence from San Miniato.* The painting juxtaposes the grand cityscape of Florence and its iconic Duomo with a pastoral scene featuring a goatherd alongside the minstrel serenading two women with his stringed instrument. The real Italy and imagined Arcadia come together within the elements of the painting.[17] Margaret Fuller remarked in one of her dispatches to the *New York Tribune* in 1847 that Thomas Hicks, an American artist working in Rome, was in the midst of finishing a portrait of

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Italy (Iowa City: University of Iowa Press, 2002); Theodore E. Stebbins, Jr. and William H. Gerdts, *The Lure of Italy: American Artists and the Italian Experience, 1760-1914* (Boston: Museum of Fine Arts, Boston, 1992); William L. Vance, *America's Rome*, *Volumes I and II* (New Haven: Yale University Press, 1989); and Nathalia Wright, *American Novelists in Italy, The Discoverers: Allston to James* (Philadelphia: University of Pennsylvania Press, 1965).

[16] Buonomo, 11; These "Dreams of Arcadia," as Van Wyck Brooks put it, even translated to the name of at least one mandolin orchestra in Wisconsin, the Arcadian Club formed around 1898. Ruppa, 50.

[17] Stebbins and Gerdts, 331-332.

an Italian girl holding a mandolin. She noted that it would be well received, as "his pictures are full of life."[18] Even the noted American Impressionist Mary Cassatt used the instrument in her drypoint print, *Mandolin Player*. The work from 1889-1890 features a seated young woman playing a bowlback mandolin.[19]

Another way that middle and upper class Americans encountered romantic images of the culture and scenery of Italy was through literature. American writers used both fiction and non-fiction works to depict their visions of Italy, though it was often done through an interpretive lens. While some are more realistic than others, these stories and accounts offered the American public a glimpse of Italian life. For the average reader in Philadelphia or Chicago who lived vicariously through the pages of book or journal, these depictions of Italy became the only ones that mattered, regardless of their authenticity. James Fenimore Cooper, Julia Ward Howe and others served as cultural interpreters for the American public, mediating the experience of visiting Italy and structuring the view of Italy in American popular culture for their readers. Most did this with little knowledge of the Italian language and a minimal understanding of Italian culture and history. Their observations generalized and often lumped together numerous regional and local traditions into one amalgam of Italian

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[18] Margaret Fuller, Larry J. Reynolds, and Susan Belasco Smith. *"These Sad but Glorious Days": Dispatches from Europe, 1846-1850* (New Haven: Yale University Press, 1991), 134.

[19] Mary Cassatt, *Mandolin Player*, (1889-1890), ARTstor, accessed August 14, 2013, http://www.artstor.org/; The first piece Cassatt presented at the Paris Salon in 1868 was a painting entitled *The Mandolin Player* that also featured a woman holding a bowlback mandolin. H. Barbara Weinberg, "Mary Stevenson Cassatt (1844–1926)," Heilbrunn Timeline of Art History, The Metropolitan Museum of Art, October 2004, accessed August 14, 2013, www.metmuseum.org/toah/hd/cast/hd_cast.htm.

culture. Some authors even viewed their work as an opportunity to preserve the cultural heritage of this picturesque land so that it would not be lost in the midst of modernization and nation building.[20]

William Wetmore Story paints one of the most vivid pictures of Italian musicians and mandolinists in particular in his 1887 book, *Roba di Roma*. While observing the customs of the Romans, Story describes several scenes involving mandolin players. Often paired with guitarists, men and women plucking the mandolin wander through the *osterias* serenading the patrons. During a dinner party with friends, Story was particularly taken by the alluring sound of a player asking, "Was there ever a better mandolin? – how it tingled and quivered as it nervously rang out the air, with its stinging vibrations and tense silvery shakes, while the soft woolly throb of the guitar kept up a constant accompaniment below."[21] The way that Story tells it, Americans would not be surprised to see a mandolinist or guitarist on every street corner in Rome.

These interpretations of Italy often led to a distorted view of the country and culture. To the male authors that William Vance studied, the "Eternal City" was more of a dream of Rome rather than the real, physical city.[22] Even some American writers who ventured to Italy found disappointment in Arcadia. William Dean Howells

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[20] Buonomo, 12-15.

[21] This particular passage also involved Story and his party riding in carriages to the Colosseum with a guitarist and mandolinist playing as they rode through the Forum. William Wetmore Story, *Roba di Roma* (Boston: Houghton, Mifflin and Company, 1887), 16, 19, 30-31, 33, 283-284.

[22] William L. Vance, *America's Rome* (New Haven: Yale University Press, 1989), II:78.

expressed regret in his work entitled *Venetian Life* that his initial impressions of Italy, gleaned from the pages of a book, did not live up to his expectations upon arrival. His firsthand look at Venice caused him to "doubt the exact fidelity" of the images he had pictured. He specifically remarked how he never once encountered "an Italian sitting upon the ground, and strumming the guitar, while two gayly dressed peasants danced to the music," a romantic Italian image conjured up in the cultural works of the period.[23] As this example shows, the pages of a novel or travel diary could only paint a mental picture of the idyllic Italian countryside.

By the time mandolins started to become popular in America during the 1880s, these images were commonplace not only in high art, but also in the prescriptive literature of the day. For instance, the writers and editors of *Godey's Lady's Book*, one of the most popular women's magazines of the era, exposed their readers to multiple facets of the movement.[24] In an article entitled, "Requisites of a Mandolinist," the author describes the adaptability of the instrument, "its beautiful proportions and elegant shape," and how it produces a "pure, sweet, and mellow tone." The article, interspersed with illustrations and manufacturer advertisements, goes on to detail the history of the instrument and outline steps by which the reader could become an accomplished mandolinist. This advice was aimed at the aspiring amateur musicians who wished to be a part of the latest craze in American musical culture.[25]

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[23] William Dean Howells, *Venetian Life* (Boston: James R. Osgood and Company, 1878), 339.

[24] The Wolfram Guitar Co., "Mandolins and Guitars" (advertisement), *Godey's Lady's Book*, December 1894.

[25] Paul Cessna Gerhart, "Requisites of a Mandolinist," *Godey's Lady's Book,* September 1897, 255-261.

Even an African-American newspaper, *The Christian Recorder*, discussed the mandolin's popularity in America. The periodical noted the status of the instrument in 1886 and acknowledged that there were few instructors available to meet the demand.[26] In 1900, an article in the newspaper commented on one of the many collegiate mandolin clubs of the time. During a description of a conference in Baltimore, a writer was entertained on board a ship by the Glee Club of John Hopkins College of Baltimore. He recounted that the band played "until nearly midnight, such a time as we did have! They had banjoes, fiddles, guitars and mandolins until you could not count them, and then such songs and singing you never heard; but as all things end, so at last the boys quit, and gave us a chance to go to sleep."[27]

And when aspiring mandolinists and other musicians sat down to play "Italian" music, illustrations on the sheet music itself further reinforced the popular trope of idyllic and romanticized images of Italy. Francesco Pennino, a musician and songwriter, published sheet music in the early twentieth century that bore a logo depicting this picturesque view of Italy juxtaposed with one of America. The logo featured two diamonds with idealized views of Mount Vesuvius on the right and the Statue of Liberty on the left. Bringing together two iconic symbols (one of Southern Italy and the other of New York City and America), the sheet music published by Pennino offered consumers a visual cue that linked the Old World and the New. This nostalgic connection spoke to both American and Italian audiences, forging both real

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[26] *Christian Recorder* (Philadelphia), March 4, 1886.

[27] T. W. Henderson, "Manager's Weekly Letter. Closing of the Virginian Conference," *Christian Recorder* (Philadelphia), April 26, 1900.

and idealized associations while giving authenticity to the Italian music that bore the logo.[28]

Two other vivid examples of romanticized imagery associated with the mandolin in sheet music include "There's A Garden In Old Italy (Flower Of Italy)" (1916) and Irving Berlin's "Pick, Pick, Pick, Pick on the Mandolin, Antonio" (1912) both arranged for piano and voice. The former featured a mandolinist with a beautiful Neapolitan style instrument serenading a woman on a gondola while traversing the Grand Canal in Venice while the latter showcased the striking singer Belle Blanche positioned next to a Neapolitan model mandolin [Figure 3].[29] Even the Gibson Company used the term "Florentine" in its instrument nomenclature, associating the name of one of Italy's famous cities with the instruments that were partially inspired by objects and vistas of the foreign country.[30]

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[28] Pennino may also have been the maternal grandfather of Francis Ford Coppola who used similar imagery in a scene involving a play in *The Godfather, Part II.* Bertellini, 13.

[29] 32278009993506: Jack Glogau and Joe McCarthy, "There's A Garden In Old Italy (Flower Of Italy)" (New York: Leo Feist, 1916), CTSMC; 32278009356233: Irving Berlin, "Pick, Pick, Pick, Pick on the Mandolin, Antonio" (New York: Ted Snyder Co., 1912), CTSMC.

[30] This may have also been done to compare their instruments with those produced by renowned Cremona craftsman Antonio Stradivari, considered one of, if not, the most famous violin and instrument makers of all time. Jonathan Kellerman, *With Strings Attached* (New York: Ballantine Books, 2008), 106; Another example of this can be seen in Gibson's Florentine model banjos that featured scenery on the fingerboards depicting the city of Venice beginning in 1926. Joseph Spann argued that Venice was a more recognizable Italian city for Americans than Florence. Either way, it illustrates a physical attempt at connecting the idealized Italian landscape with a Gibson instrument. Joseph E. Spann, *Spann's Guide to Gibson, 1902-1941* (Anaheim Hills, CA: Centerstream Publishing, LLC, 2011), 18.

Figure 3 32278009993506: Jack Glogau and Joe McCarthy, "There's A Garden In Old Italy (Flower Of Italy)" (New York: Leo Feist, 1916), Charles H. Templeton, Sr. sheet music collection, Special Collections, Mississippi State University Libraries.

The mandolin movement and the interest in an imagined Italian landscape might not have been possible without the new innovations in the mechanical reproduction of imagery and sound in the decades of the late nineteenth and early twentieth centuries. These processes introduced new media such as sound recordings, photographs, and motion pictures to mass audiences in America. Whether listening to records at home, interacting with peers at a dance hall, or attending a concert in a theater, Americans of the period consumed music in ways never before seen in our society.[31] Performances transcended boundaries of time and space as audiences could partake in recorded sounds instead of relying on live concerts. The mass culture of entertainment brought regional and ethnic music traditions to larger audiences through a process of cultural diffusion that cut across lines of race, class, and ethnicity.[32] The media associated with the reproduction of sound were shaped by the social and economic conditions of the day such as corporate capitalism and mass consumption.[33] The mass production of periodicals, newspapers, advertisements, and sheet music reinforced popular tropes, connecting the sounds with the images. The striking visual imagery of motion pictures introduced American audiences to far away places inhabited by star-studded personalities, offering an escape from the hustle and bustle of modern life in the darkness of a crowded theater. These celebrities offered

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[31] David Suisman, *Selling Sounds: The Commercial Revolution in American Music* (Cambridge: Harvard University Press, 2009), 9-13.

[32] André Millard, *America on Record: A History of Recorded Sound* (New York: Cambridge University Press, 1995), 11-12, 108-109.

[33] Jonathan Sterne, *The Audible Past: Cultural Origins of Sound Reproduction* (Durham: Duke University Press, 2003), 213-214.

possibilities for American consumers to aspire to when they purchased goods and pursued potential careers. Taken together, the sights, sounds, and images offered by the new mass culture entertained audiences across the country and fueled consumer interest in cultural movements such as the one surrounding the mandolin.

The use of the picturesque style in art helped to transform the vernacular and archaic landscape of Italy into an exotic and romanticized countryside. As Giorgio Bertellini argues in his book on the portrayal of Italy in early American cinema, this effect began in Europe and crossed the Atlantic, eventually influencing American visual depictions from paintings to photographs and, eventually, to motion pictures. Northern Europeans used the picturesque to tame the Italian landscape in prints and illustrations, erasing poverty-stricken people and turning desolate scenery into charming panoramas that were both exotic and enchanting. Bandits and volcanoes were stripped of their savagery in order to make them more appealing to the traveler or reader. Italy became a country of landscapes scattered with ancient ruins that conveyed a place in time and space frozen in history, especially in the face of the rapid industrial changes taking place in northern Europe and America.[34] American artists and writers were quite familiar with both the real Italy and the romanticized fictional depictions of the country when thousands of Italian immigrants began pouring into the United States in the 1880s.[35] In the decades that followed, this nostalgic view of Italy and its people transformed from being a high culture view to a popular trope

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[34] Bertellini, 4-6; Buonomo, 16.

[35] Bertellini, 95.

introduced to the masses through new media such as sound recordings, photographs, and motion pictures.[36]

The Mandolin and Italian Immigration

While imagined Italians took one form, more and more Americans living in urban areas during the late nineteenth century came into contact with real Italians thanks to the enormous wave of immigrants from countries bordering the Mediterranean that accelerated after 1880.[37] Before 1860 there was not a clearly identifiable Italian community in the United States, but that changed dramatically in the post-Civil War period, in some cases eliciting a negative response from Americans. Following the conclusion of hostilities and the abatement of the Financial Panics of 1869 and 1873, the United States became an attractive destination for those

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[36] For an in-depth description of this transition see Bertellini Chapter 2. Bertellini refers to both the official and popular culture that depicted the nostalgic view of Southern Italy as "Southernism." He compares this to the ideas expressed by Edward Said in his groundbreaking work *Orientalism* (1978) in that the practice of Southernism takes an inferior people (Neapolitans and other residents of Southern Italy) and domesticates their cultural traits into a more acceptable and pleasing package of exoticism. Leonardo Buonomo also compares the depiction of Italy by American writers to Said's "Orientalism" in that they described the culture from a distance, providing an unrealistic, but more palatable take on Italian culture for American audiences. Bertellini, 6-7; Buonomo, 15.

[37] Between 1880 and 1890, 5.2 million people came to America, the majority from Southern and Eastern Europe, areas of the continent that had failed to industrialize as heavily as the northern and western parts. Between 1861 and 1900, immigrants from southeastern Europe comprised 22 percent of the total. Susan F. Martin, *A Nation of Immigrants* (New York: Cambridge University Press, 2011), 105, 107; Roger Daniels, *Not Like Us: Immigrants and Minorities in America, 1890-1924* (Chicago: Ivan R. Dee, Inc., 1997), 63.

desiring new economic opportunities.[38] Italians comprised a significant number of the immigrants to America from 1880 onward. Regional differences in Italian immigration played a role as well with the majority of immigrants after 1880 coming from the impoverished areas of Southern Italy.[39] Once here, the majority made a living in the northeastern United States, though some found their way to California and other parts of the country.[40] Southern and Eastern Europeans had a difficult time defining themselves in nineteenth-century America. Though legally considered white, they

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[38] American companies looked to fill the labor demand of factories during the period of Industrialization. Immigrants proved to be the perfect solution of cheap and available employment as they were ready and willing to work long hours in harsh conditions. Utilizing a broader framework of networks, immigrants looked to those who had already arrived to provide them with information prior to their voyage. They relied on kinship ties, acquaintances and fellow workers. In addition, a faster transportation system, the steamship line, carried 95 percent of the immigrants by the middle of the 1870s. Daniels, *Not Like Us,* 38-40; Charles Tilly, "Transplanted Networks," in Virginia Yans-McLaughlin, ed., *Immigration Reconsidered: History, Sociology, and Politics* (New York: Oxford University Press, 1990), 84.

[39] To put this in perspective, less than 30,000 Italians immigrated to America before 1870. 50,000 came in the following decade, followed by 300,000 in the 1880s. That number of Italians more than doubled to 650,000 in the 1890s and rose again to 2 million between 1900 and 1910. Despite its unification in 1870, the country's economic opportunities were not evenly divided among its regions. Therefore, regional points of origin also experienced a shift with the majority of immigrants hailing from northern Italy before 1880 and from southern Italy afterward as provinces in the south of the country were wracked with poverty. Overall, Italians comprised the largest group of immigrants to stream through Ellis Island, with over 4 million coming to America from 1880 to 1920. Though they had high return rates, according to the U.S. census, the number of Americas who had been born in Italy rose from 44,230 to 182,580 between 1880 and 1890. By 1910, the number climbed to 1,343,125. Daniels, *Not Like Us,* 68; Emmy E. Werner, *Passages to America: Oral Histories of Child Immigrants from Ellis Island and Angel Island* (Washington, D.C.: Potomac Books, Inc., 2009), 37; Martin, *A Nation of Immigrants*, 111.

[40] Daniels, *Not Like Us*, 68-69; Werner, 37.

were viewed as exotic and different and not a part of the so-called Anglo-Saxon population. Americans placed conflicting identities upon them, viewing them publicly as an unappealing element of society while simultaneously buying into the cultural representations created in the minds of artists that pictured them as characters hailing from a strange picturesque landscape.[41]

Though immigrants to America often brought only a few possessions, they overwhelmingly transplanted the cultural traditions that originated in their homeland. These often included the songs and instruments of their hometowns, regions and native countries.[42] In a strange land, music brought communities of immigrants together, forging bonds that transcended the distance separating them from their homeland. The ethnic Italian neighborhoods in American cities functioned as community gathering spaces with music serving as a common bond between strangers. Homes became performance spaces where family and friends would congregate and perform Italian folk songs and classical pieces. Though the instrumentation often varied in these makeshift ensembles, the guitar and mandolin were two of the cheapest and most readily available instruments to Italian immigrants, some of whom brought mandolins with them from the Old World.

For native-born Americans interested in the mandolin, immigrants provided some of the initial ways to procure an instrument and learn how to play it, long before manufacturers caught up with the movement. Immigrants such as Giuseppe Pettine, who came in 1888 at age 12 from Isernia to Providence, Rhode Island, toured the

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[41] Bertellini, 5.

[42] Samuel Adelstein, "Mandolin Memories," *Cadenza*, January 1901, 15, quoted in Hambly, 285.

country, taught students and later wrote method books, helping to promote the instrument in his new country.[43] Italian immigration in itself did not provide sufficient impetus for a broader adoption of the mandolin. This was especially true among native-borne, Anglo Americans who often viewed immigrants and their cultural customs in a negative light. However, it did offer an avenue where the instrument and its Italian cultural associations interacted with the American public.[44]

Making Music in the Late Nineteenth Century

The introduction of the mandolin coincided with an extraordinary efflorescence of middle-class music-making culture that focused on amateur and semi-amateur production of music in parlors, community ensembles, and college campuses. Consumers could count on an already existing infrastructure that produced and sold instruments and music to satiate the appetite of those who hungered for the novel sound of this foreign commodity.[45] The mandolin, like the guitar, was a mobile instrument that was relatively easy to play. Musicians who were already proficient in playing the violin could translate many of their skills onto the mandolin (as opposed to the bandurria). As the mandolin grew in popularity in the 1880s and 1890s, sheet music producers capitalized on the opportunity to recycle tunes that had been

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[43] Sparks, 121; Philip James Bone, *The Guitar and Mandolin: Biographies of Celebrated Players and Composers* (London: Schott & Co., 1972), 279-280.

[44] Scott Hambly surmised this as well and noted other ethnic instruments brought by immigrants such as the Russian balalaika did not suddenly create a huge consumer demand in America. Hambly, 289.

[45] Richard Crawford, *America's Musical Life: A History* (New York: W. W. Norton, 2001), 469-470; Hambly, 281.

previously published for piano and transpose and arrange them for mandolins and the new mandolin orchestras. In addition, mandolinists with advanced playing abilities often included pieces by the great classical masters in their repertoire, whether in concert halls or on the vaudeville circuit.[46]

The burgeoning Banjo/Mandolin/Guitar (or BMG) community, so-named for the artificial musical family of three different stringed instruments played by its members, connected musicians, composers, critics, and businesses through their shared interest in acoustic stringed instruments. The individual popularity of the three instruments in the triumvirate changed over time, with the banjo being the most popular in the mid-to-late nineteenth century. The mandolin became the primary instrument from the late nineteenth century until the 1910s until the guitar displaced the other two by the 1920s. The community was an active network of both amateur and professional musicians from all walks of life performing music in a range of venues. Most members aspired to perform the works of classical masters rather than vernacular folk music. Businesses, such as instrument manufacturers and music publishers, played a significant role in the formation of this fictional family of instruments. Print publications connected members of the community and provided venues for advertising music, instruments, and teachers. The mandolin orchestras, made up of both professionals and amateurs, highlighted the American fascination with an imagined Italy and an interest in ethnic cultures through their costume and repertoire. These ensembles comprised of both male and female musicians featured

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[46] Paul Sparks argues that the mandolin actually carried less cultural baggage than traditional orchestral instruments such as the violin, making it an easier instrument to pursue for new players. Sparks, 27, 45; Ruppa, 31.

guitars as accompaniment and served as forerunners to the ukulele orchestras and island ensembles that would appear with the Hawaiian movement beginning in the 1910s.[47]

Aided by the proliferation of printing technologies in the late nineteenth century, the BMG community stayed connected through several major periodicals, namely *Cadenza, Crescendo, and S.S. Stewart's Banjo and Guitar Journal*. These publications contained articles by critics, musicians, and aficionados covering topics such as compositions, proper technique, and teaching methods. The journals also served as an ideal place for sheet music along with advertisements for instruments and instructors. These periodicals offered national exposure for stringed instrument makers who hoped to reach wider audiences of consumers through ever-increasing distribution networks. In many ways the publications fit with the prescriptive literature of the day such as *Godey's Lady's Book* offering practical advice next to fictional stories all surrounded by advertisements relevant to the reader.[48]

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[47] This chapter (and the entire dissertation for that matter) seeks to answer Jeffrey Noonan's call for more research that places the guitar in the context of the broader musical history of America. His in-depth study of BMG culture and the periodicals associated with its height in popularity during the late nineteenth and early twentieth centuries is the definitive work on the subject. He points to the collusion between manufacturers and publishers in the creation of the BMG "trio" which they based on the similar playing styles of the three instruments. See Noonan, 21, 176. Also relevant to this is Philip F. Gura and James F. Bollman, *America's Instrument: The Banjo in the Nineteenth Century* (Chapel Hill: The University of North Carolina Press, 1999).

[48] Noonan argues that despite their interest in pedagogy and the arts, businesses were the primary driving force behind the magazines of the BMG community. Noonan, 21-23.

In the wake of the original Spanish Students, the first distinct American ensemble that gained attention in the national press was the Boston Ideal Banjo, Mandolin and Guitar Club founded in 1887. Originally founded four years previously as the Ideal Banjo Quartette, the club's change in name and instrumentation highlights the growing popularity of the mandolin and the waning interest in five-string banjo. Despite their name, the group never performed using both banjos and mandolins, only in combinations of mandolins and guitars or banjos and guitars. The group dropped the reliance on ethnic appeal previously used by the Spanish Students and their imitators. Performing for over twenty-five years, the group became quite famous thanks in part to its connections to popular compositions of the day.[49]

While the mandolin found a home with professional groups like the Spanish Students, plenty of amateur ensembles began to utilize the mandolin as well. The college campus became a prime location for the formation of mandolin groups. Glee clubs, a staple musical extracurricular activity at many colleges and universities, often added banjos, mandolins, and guitars to accompany vocal performances. From the Ivy League to heartland, these clubs and orchestras helped to further disseminate the popularity of the mandolin (and other fretted stringed instruments) to wider audiences of amateur musicians. The members of the University of Pennsylvania Mandolin, Banjo and Guitar Club were featured in an 1898 H. A. Weymann & Son catalog. Accompanying a photograph of the ensemble was an endorsement for Weymann

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[49] Albert D. Grover, one of the founders of the Ideal Club, went on to start the Grover Company, a major American manufacturer of fretted instrument tuning gears. George L. Lansing, a founding member of the Ideal Club, was an adept composer who gained fame with "The Darkie's Dream." The group's name was even used in an 1897 composition by Samuel Siegel, "The Boston Ideal March." Ruppa, 29-30.

instruments from the acting director of the group, Hugh Baker. The club members, all dressed in tuxedos, posed with instruments placed in front of them, though it would be difficult for any consumer to tell whether or not they all used Weymann instruments.[50] Even youth ensembles such as Webber's Juvenile Mandolin Orchestra joined the fray allowing boys and girls to learn the instruments at an early age.[51]

Figure 4 Miami University Mandolin Club, n.d., Frank Snyder Photograph Collection, Miami University Archives, Oxford, Ohio.

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[50] H. A. Weymann & Son, *Illustrated Descriptive Catalogue of the Weymann and Keystone State Mandolins, Guitars, Banjos, Zithers, etc.* (Philadelphia: Press of Maurice H. Power, 1898), 4, box 7, Warshaw Collection of Business Americana, AC.

[51] A 1912 photograph of the orchestra features the group members posed in front of a bust of (presumably) J. S. Bach. Gibson Mandolin-Guitar Company, *The Gibson Catalogue "H"* (Chicago: Hammond Press/W. B. Conkey Company, 1912), 6, MIMA.

Both men and women participated in BMG ensembles, though the role of females as conductors was often diminished by the publications of the period. Most female ensembles would be pictured below the image of the group's male director and the descriptions would concentrate on the director more frequently than the ensemble members. For example, the caption for a photograph of the Canadian Aeolian Mandolin and Guitar Orchestra in a Gibson catalog only referred to the male director, John J. Levert, though the group pictured was composed entirely of females.[52] Some ensembles were co-ed such as the Noss Jollity Company and the Lewistown Mandolin and Guitar Club from Lewistown, Pennsylvania.[53] Mandolin clubs also became associated with bicycle riding clubs in the late 1890s, another meeting place that enabled unmarried men and women to meet recreationally.[54]

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[52] Gibson Mandolin-Guitar Company, *The Gibson Catalog "J"* (Battle Creek, MI: Gage Printing Co., Ltd., 1917), 13, MIMA.

[53] Lyon & Healy, *Washburn Souvenir, Catalogue of the Washburn Guitars, Mandolins, and Zithers* (Chicago: Lyon & Healy, 1892), box 4, Warshaw Collection of Business Americana, AC; H. A. Weymann & Son, *Illustrated Descriptive Catalogue of the Weymann and Keystone State Mandolins, Guitars, Banjos, Zithers, etc.* (Philadelphia: Press of Maurice H. Power, 1898), 24, box 7, Warshaw Collection of Business Americana, AC.

[54] Hambly, 10, 12.

Figure 5 Oxford College Mandolin Club, February 1917, Frank Snyder Photograph Collection, Miami University Archives, Oxford, Ohio.

The acoustic guitar served as a backup instrument in most mandolin clubs and orchestras. While mandolins carried the melody lines, the guitars were often relegated to playing chords and providing accompaniment.[55] One writer, William Place Jr., suggested that though guitars are essential to a mandolin orchestra, their number must be limited. He cautioned against guitarists using thumb picks in the ensemble as, "a

[55] Johnson, "Mandolin Clubs and Orchestras," 60; Noonan, 124-125.

guitarist, armed with a thumb pick and steel strings, is bound to be the nemesis of any mandolin orchestra he may enter, but the guitarist who is willing to play musically, as the director wishes, is a joy forever."[56] With the advent of arch-top guitars in the late 1910s, players began to emulate the plectrum techniques of mandolinists by incorporating rhythmic styles and single-line melodies into their ensemble playing. This allowed the guitarist to become both an accompanying player and one that could carry a melody line as well when performing with a group, a trait that would later aid in the instrument's growing popularity.[57] By 1929, pamphlets promoting the formation of fretted stringed instrument orchestras reflected this changing dynamic, encouraging the formation of guitar ensembles and citing the celebration of "a national "Guitar Week" [that] has been observed for several years, especially with radio programs and with exhibits of guitars in music store windows."[58]

Mandolin Production/Innovations by Guitar Companies

In order to meet the growing consumer demand for mandolins, manufacturers utilized new production methods and ultimately learned valuable lessons that would affect the way they designed and manufactured other stringed instruments for the mass market. While the exact number of mandolins produced by companies such as Gibson

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[56] William Place, Jr., *The Organization, Direction and Maintenance of the Mandolin Orchestra* (Kalamazoo, Michigan: Gibson Mandolin-Guitar Company, 1917), 31-32; Johnson, "Mandolin Clubs and Orchestras," 62-63.

[57] Noonan, 125, 136.

[58] *Fretted Instrument Orchestras: A Guide to Procedure on Organizing and Maintaining Ensembles of Banjos, Mandolins, Guitars and Other Plectrum Instruments* (National Bureau for the Advancement of Music: New York, 1929), 24-25, Curatorial Files, Division of Smithsonian, National Museum of American History.

and Lyon & Healy are hard to come by, it is clear that they produced a multitude of these small, wooden instruments.[59] From only a handful of luthiers in the early 1880s, the number of mandolin producers grew quickly over the next two decades. Makers figured out how to adapt their businesses to accommodate ethnic music trends in American culture. Some, like Gibson, adapted more quickly than others, but the industry found ways to produce and market mandolins to a consumer public aspiring to be the next Spanish Students.

By changing the appearance of the instrument and the way it was crafted, American luthiers pioneered innovative production techniques that made it easier to successfully build and sell larger quantities of the instrument. These same methods would also later influence the way they made acoustic guitars. The transition from the traditional bowlback form to the new carved top and back model offered both practical and stylistic advantages. Lastly, the addition of mandolins to their catalogs gave businesses such as Martin the opportunity to learn how to diversify their product lines and, at the same time, increase the size of their production runs. Over a relatively short period of time, producers radically altered the production, appearance, and availability of mandolins in America.

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[59] One example would be that by 1894, Lyon & Healy produced 7000 mandolins per year. Sparks, 129; Company catalogs and records are notoriously inaccurate for this period, making it difficult to pinpoint exact amounts for each production run. Gibson, for instance, did not do a good job of keeping track of serial numbers, sometimes re-using ones for multiple instruments. The instruments advertised in catalogs sometimes differed in appearance and design from the actual instruments produced. Nevertheless, thousands of these instruments found their way into the hands of American consumers. Kellerman, 99.

Prior to the 1880s, there were relatively few ways that Americans could purchase a mandolin. One could buy an imported model from Italian makers such as Vinaccia or Calace but the cost and availability would have hindered most American consumers from procuring one.[60] Large instrument distributors such as C. Bruno & Son sold only limited quantities in the early 1880s.[61] As the decade progressed, more producers joined the fold. In Chicago, Joseph Bohmann, a well-known guitar maker, began attracting attention for his mandolins. Angelo Mannello arrived in New York in 1886, built a factory, and was producing thousands of stringed instruments each month by the turn of the century, the majority of which were mandolins and mandolas.[62] Other makers such as August Gemünder and Sons offered both imported and American-made models for sale.[63] By 1890, the established instrument maker John F. Stratton and Company opened a mandolin and guitar factory in New York City.[64]

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[60] Hambly, 282; Washburn and Johnston, *Martin Guitars,* 66.

[61] The 1883 C. Bruno & Son catalog featured three "mandoline" models. C. Bruno & Son. C. Bruno & Son, *Illustrated Catalogue C. Bruno & Son, Importers and Wholesale Dealers in Musical Instruments, Strings, Etc., 1883-84* (New York: C. Bruno & Son, 1883), 95, MIMA.

[62] In 1900, Mannello's operation consisted of a five-story factory with 61 employees. Michael Holmes, "Gibson and the Rest: The Mandolin Makers," in Walter Carter, *Gibson Guitars: 100 Years of An American Icon* (Los Angeles: General Publishing Group, 1994), 40.

[63] August Gemünder & Sons, *Descriptive Catalogue of Violins, Bows, Guitars, Mandolins, Zithers, Strings, Etc.* (New York: August Gemünder & Sons, 1892), 38, 41-42, Curatorial Files, DCA.

[64] Stratton had been making American band instruments since 1859, including more than 60,000 trumpets and bugles for the U.S. government during the Civil War. Martin Krivin, "A Century of Wind Instrument Manufacturing in the United States: 1860-1960," (PhD diss., State University of Iowa, 1961), 32-33, 36.

Even mail-order catalogs like Montgomery Ward & Company offered mandolins of foreign and domestic nature for sale, each model complete with an instruction book in their Fall 1891-Winter 1892 catalog.[65] It was clear by the 1890s that luthiers and musical instrument companies had gotten on board with the mandolin movement.[66]

The earliest types of mandolins, known as Neapolitan models, gourds, or bowlbacks required a great deal of time and effort to produce. To create the back of the mandolin, a worker painstakingly bent multiple wooden ribs and glued them into place. For example, on an early Martin model, the back consisted of 42 separate pieces of wood. The luthier made a predominantly flat top for the instrument, which featured a bent portion below the bridge.[67] In addition, on some models, after completing the shape of the bowl, a worker fluted or scalloped the ribs by hand, a labor-intensive process done more to enhance the appearance rather than the sound of the instrument.[68] The more ribs in the bowl, the more expensive the model. For example, Philadelphia manufacturer Weymann offered three models in his 1898 catalog. The cheapest "Keystone" style sold for $7.50 and its bowl consisted of 11 ribs. The most expensive "Weymann" model sold for $100 and contained 42 ribs (each separated by

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[65] Hambly, 291.

[66] Another good example of this is the J. Howard Foote Company whose catalogs from 1880 did not offer mandolins for sale, but by 1899 showcased several models. J. Howard Foote, *J. Howard Foote's Descriptive Catalogue of Musical Instruments, Strings, Etc.* (New York: J. Howard Foote, 1880), MIMA; J. Howard Foote, *J. Howard Foote Catalogue of Musical Instruments, 1899* (New York: J. Howard Foote, 1899), 81-83, NTCC.

[67] Carter, *The Martin Book*, 24.

[68] Washburn and Johnston, *Martin Guitars,* 67.

inlaid white holly) in its bowl.[69] The Lyon & Healy Company may have produced the largest number of Neapolitan style mandolins under the Washburn label during this period in a diverse product line that also contained American-made bandurrias (of Spanish Student fame) [Figure 6].[70] While these models may have been nice to look at, luthiers sought new, cheaper ways to mass-produce the small instrument whose popularity continued to grow into the twentieth century.

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[69] H. A. Weymann & Son, *Illustrated Descriptive Catalogue of the Weymann and Keystone State Mandolins, Guitars, Banjos, Zithers, etc.* (Philadelphia: Press of Maurice H. Power, 1898), 5, 17, box 7, Warshaw Collection of Business Americana, AC.

[70] To add even more confusion to the Spanish Students story, a 1903 Lyon & Healy catalog featured three bandurria models touting "The Bandurria is used extensively by the Native Spanish Mandolin Clubs, in both solo and concerted music." Pleijsier, 7, 210.

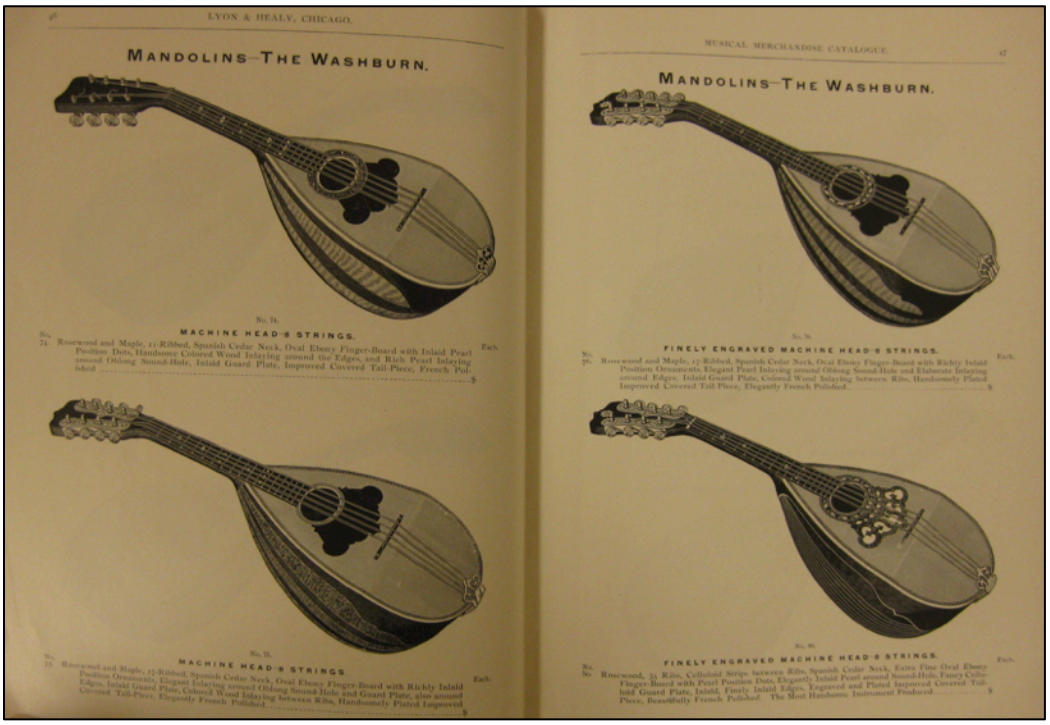

Figure 6 Neapolitan or bowlback Washburn mandolins. Lyon & Healy, *1891-1892 Catalogue of Musical Merchandise* (Chicago: The Henry O. Shepard Co., 1891), 46-47. Courtesy of the Smithsonian Libraries, Washington, D. C.

Changing the body shape of the instrument had a dramatic impact on the cost and labor involved in making a mandolin. Some producers in the 1880s, such as Neil Merrill and C.W. Hutchins, initially approached the problem with bowlbacks by incorporating the new material of aluminum into their lines of guitars, mandolins, and banjos.[71] Yet it was the use of new construction techniques rather than alternate

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[71] This would foreshadow later attempts at mechanical amplification through material changes to fretted stringed instruments, a topic which will be discussed in Chapter 4. The instruments were not entirely made of metal, but instead incorporated both traditional techniques of lutherie with new advancements in aluminum materials. Merrill's instruments used aluminum for the backs and sides while the tops and necks were still made of wood. Hutchins' instruments consisted primarily of aluminum with

materials that transformed the instrument. As discussed in Chapter 1, Orville H. Gibson used his knowledge of woodworking to come up with the idea of carving the curved body of mandolins out of a small number of pieces of wood, something familiar to makers of violins. Carved top and back mandolins marked the transition away from bowlbacks. In fact, for all of his innovative production methods and pioneering stringed instrument models, Orville Gibson only applied for one patent during his lifetime and that was for a mandolin.[72] The F-model (Florentine) [Figure 7] and A-model (or teardrop) mandolins that Gibson (and his namesake company) produced at the turn of the century became the main standard for mandolin manufacture, something that was often imitated as other luthiers and companies strove to cash in on Orville's initial success.[73] It took less shaping and bending of the wood to produce a teardrop or Florentine-style mandolin as opposed to a bowlback. Gibson also correctly guessed that a solid wooden back (and soundboard for that matter) would resonate much more effectively than one made of bent, glued strips. The new

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wood used for the neck and bridge. Michael Holmes, "Gibson and the Rest," 40. See also Hambly, 402-407; and Sparks, 129.

[72] O. H. Gibson. Mandolin. US Patent 598,245 A, filed May 11, 1895, and issued February 1, 1898.

[73] In Scott Hambly's thorough study on Gibson's innovative techniques, he also uses the term pyriform or pear-shaped to describe the symmetrical A-style mandolin body shape. Hambly, 439-447; George Gruhn and Walter Carter, *Acoustic Guitars and Other Fretted Instruments: A Photographic History* (San Francisco: GPI Books, 1993), 70-72.

body shapes marked a drastic change from the Neapolitan style and became an attractive option, both in price and playability, for consumers.[74]

Figure 7 Mandolin by Gibson Mandolin-Guitar Company, Kalamazoo, MI, 1916, F-Style or Florentine Mandolin, Model F-4. "Gibson mandolin" photograph by Anita Ritenour is licensed under CC BY 2.0 (http://creativecommons.org/licenses/by/2.0/).

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[74] Stylistically, the F-style or Florentine models, in particular, featured scrollwork on one bout and points in the body shape. These design accents reinforced the connection between the visual appearance of a violin and Gibson's mandolin. The later addition of *f*-holes by Lloyd Loar on the 1922 F-5 model further cemented this visual relationship. Gruhn and Carter, *Acoustic Guitars,* 84; Gibson Mandolin-Guitar Company, *The Gibson Catalog "J"* (Battle Creek, MI: Gage Printing Co., Ltd., 1917), 32, MIMA.

These innovative designs featured practical advantages for musicians that would later be applied to guitar manufacture. The primary advantage is that they were louder mandolins. A musician could hold a carved top mandolin closer to his or her body, making it easier to handle than rounded a bowlback model. However, for mandolinists who were used to the older designs, there was a bit of a learning curve, something even the manufacturers acknowledged.[75] In addition, the F-style and A-style mandolins enlarged the size of the resonant chamber inside the instrument, allowing players to achieve a greater volume than with a Neapolitan model.[76] As Hambly points out, this increased amplification came at a cost as the carved top and back mandolins did not quite resonate with the same sweet, delicate sound of their Neapolitan predecessors. Nevertheless, the new Florentine models surpassed the bowlbacks in popularity as performers demanded powerful instruments to be heard amidst ensembles and in increasingly larger venues.[77] Gibson would incorporate these new production techniques in the design of their arch-top model guitars in the late 1910s.[78] However, not all makers immediately chose to imitate Gibson's new styles as they strove to capture the popularity of the mandolin in America.

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[75] The Martin's flat-back model, like the Gibson carved top style, proved to be easier to hold than a traditional bowlback mandolin. Washburn and Johnston, *Martin Guitars,* 87; Practicality and comfort can be just as influential as aesthetic decoration and sound quality when choosing a musical instrument. Later producers such as Ovation (which will be covered in Chapter 6) faced unforeseen problems with musicians trying to hold their roundback guitars.

[76] Hambly, 448.

[77] Ibid., 456.

[78] Arch-top style guitars will be further discussed in Chapter 3 as one attempt at increasing the volume of acoustic instruments in the Jazz Age. Noonan, 124.

The introduction of mandolin models tested the manufacturing abilities of C. F. Martin & Company and served as a trial run for capitalizing on future instrument trends. For some manufacturers, trying to take advantage of an ethnic instrument movement posed quite a challenge. Primarily a guitar maker at the time, Martin began producing mandolins in 1895 putting out approximately 150 to 250 bowlback mandolins per year through 1913, a figure comparable to their output in guitars. Featuring mother-of-pearl and abalone inlays, these mandolins were the first stock Martin instruments to incorporate such decorations on the peghead and fingerboard. Bowing to the popularity of Gibson mandolins with carved tops and backs, Martin redesigned some of their mandolin models in 1914 giving them flat backs, a change that made them more similar to guitars and bandurrias. The company sold around 500 per year in the second half of the decade, though that was only half of the number of guitars they were producing at the same time.[79] The sheer notion of learning how to expand their production to accommodate a popular cultural movement paid dividends for Martin when the Hawaiian music wave hit in the 1910s and the demand for ukuleles grew. Though Martin never challenged Gibson for supremacy in the

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[79] C. F. Martin & Company did not join the mandolin craze at first, instead choosing to concentrate on guitars. Part of the reason behind this decision may have been a result of the business partnership between Martin (run by Frank Henry Martin, grandson of the founder) and C. A. Zoebisch & Sons, the latter acting as sole distributor for Martin instruments in New York City. In the early 1890s, Frank Henry Martin decided that the company should throw their hat in the mandolin ring. When Zoebisch disagreed, Martin ended the partnership and began producing mandolins in 1895. Carter, *The Martin Book*, 21, 24; Other scholars dispute this notion and point instead to Frank Henry Martin's impatience to keep the company afloat during the aftermath of the Financial Panic of 1893. See Washburn and Johnston, *Martin Guitars,* 67-68, 87.

mandolin market, the experience prepared the company for an increase in its overall instrument output.

Manufacturers tried to make it easier for ensembles to form by offering mandolin-hybrid variations on the traditional instruments of a string quartet. Learning from banjo makers who followed a similar strategy, mandolin producers created plectral counterparts to their bowed-string predecessors such as the mandola (an equivalent to a viola) in an attempt to harness what people already knew how to play and the music they were accustomed to performing. This aided composers with arranging already existing string quartet pieces for mandolin orchestras. According to Noonan, as clubs added instrumentation, they identified more closely with the traditional string ensembles and started thinking of themselves as "orchestras."[80] One publication hinted at this evolution, with the author William Place Jr. cautioning "Directors should not attempt the old-fashioned club, with only mandolins and guitars. The club is now a relic of bygone days; show your progressiveness by organizing an orchestra with balanced instrumentation."[81] A Gibson catalog published three years later touted the flexibility of its full line of mandolin instruments stating the "Gibson choir of Mandolins, Mandolas, Mando-cellos, Mando-bass and Guitars...have the range of voicing required for the performance of concert works – a tonal mass rich in variety of coloring and shading – complete in itself, yet offering unlimited

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[80] Noonan, 79, 90.

[81] William Place, Jr., *The Organization, Direction and Maintenance of the Mandolin Orchestra* (Kalamazoo, Michigan: Gibson Mandolin-Guitar Company, 1917), 31-32, quoted in Johnson, "Mandolin Clubs," 62-63.

opportunities in combination with other orchestral instruments."[82] This is reflective of several common themes in late nineteenth century manufacturing. One way to create a larger market is to produce variations on a theme so that it is easier for consumers to acquire the different instrument models. It is also indicative of the proliferation of styles seen in other industrial commodities during the period.[83]

Marketing the Mandolin

When it came to marketing mandolins to the American public, manufacturers produced innovative advertising that highlighted distinction, appearance, and quality while washing away aspects of the instrument's Old World appeal that did not fit in with their view of a modern mandolin. The visual look of the instrument was important to all manufacturers, whether it meant the gratuitous use of mother of pearl inlay on a bowlback model or the hand carved scrollwork of an F-style. Makers wanted the American public to associate the craftsmanship of a mandolin with that of a violin and the master builder Stradivarius. Companies played into the same cultural appeal of an imagined, romantic Italy as well as the aspirational desires of consumers. In addition, the depictions of alluring female mandolinists introduced a gendered marketing angle to compliment the newly designed styles of mandolins.

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[82] Gibson Mandolin-Guitar Company, *Gibson Mandolins, Mandolas, Mando-cellos, Mando-basses, Guitars, Harp Guitars, Catalog L* (Grand Rapids, MI: The Cargill Company, 1920), 9, MIMA.

[83] Philip Scranton's work highlights the complexity of late nineteenth century manufacturing and the multiple ways that businesses produced goods to meet consumer demand. Philip Scranton, *Endless Novelty: Specialty Production and American Industrialization, 1865-1925* (Princeton: Princeton University Press, 1997), 10-11, 17-18, 21.

The initial approach for advertising mandolins in the 1880s and 1890s emphasized the ornate decoration of the instrument. Advertisements focused on the look of the instrument, rather than the sound. The number of ribs and the amount of mother of pearl inlays became the main focus of advertisers who sought to win consumers over with their eyes rather than their ears. In an era before the advent of mass-produced sound recordings, consumers often purchased instruments through catalogs and in store windows without knowing what sounded good and what did not. The beautiful (sometimes color) illustrations in catalogs had to suffice when it came down to choosing which instrument to buy. Featuring such adornments as intricately detailed inlay work on fingerboards that included exotic birds and butterflies, Washburn attempted to make instruments that would stand out from the competition.[84]

Producers used the advertising text and illustrations to solidify the connection between the mandolin and picturesque Italy. The 1892 Washburn catalog featured a prominent story involving this subject on the inside back cover. Harry Palmer, a press representative travelling abroad with American baseball teams, brought a Washburn mandolin with him on a trip in 1889. He remarked, "As to tone, the Washburn is superior to anything I heard in Italy, and Italians seemed to think so too. I remember at Brindisi, at Rome, and at Naples, handing it to Italian musicians who played for us while we dined. They tried it in place of their own instruments, and became quite enthusiastic over it."[85] One catalog displayed a photograph of a statue depicting the

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[84] John Teagle, *Washburn: Over One-Hundred Years of Fine Stringed Instruments* (New York: Music Sales Corp., 1996), 82-84.

[85] *Chicago Evening Journal,* July 6, 1889, quoted in Lyon & Healy, *Washburn Souvenir, Catalogue of the Washburn Guitars, Mandolins, and Zithers* (Chicago: Lyon & Healy, 1892), box 4, Warshaw Collection of Business Americana, AC.

mythical god Pan playing a Gibson mandolin. An exchange of letters between a representative of the Gibson Mandolin-Guitar Company and the sculptor P. Sned-Janson are featured next to the sculpture on the same page. The text highlights how Pan has "dropped syrinx or pan pipes, and taken the "Gibson" Mandolin in preference."[86] The prominent BMG publication *S. S. Stewart's Banjo and Guitar Journal* published a poem connecting the mandolin with Italy, proclaiming,

> "When'er I hear the mandolin trilling its tuneful lay,
>
> To me brings thoughts of Italy o'er seas, far, far away.
>
> 'Tis the home of the instruments tho' it strayed beyond its call,
>
> There are many fine players there, but the U.S. leads all."[87]

These connections persisted even in the waning days of the mandolin movement with catalog text such as, "Fretted instruments born in Italy and Spain – the sunny lands of romance and music."[88]

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[86] Though Pan is part of the Greek pantheon, this minor detail would most likely not have mattered to consumers who would have identified this sculpture with the prevalent (imagined) Italian landscapes of white columned ruins found in contemporary art and literature. This statue shows up in later Gibson catalogs as well highlighting the connection between ancient mythical Arcadia and Gibson instruments. Gibson Mandolin-Guitar Company, *The Gibson Catalog "J"* (Battle Creek, MI: Gage Printing Co., Ltd., 1917), 4, MIMA; Gibson Mandolin-Guitar Company, *Gibson Mandolins, Mandolas, Mando-cellos, Mando-basses, Guitars, Harp Guitars, Catalog L* (Grand Rapids, MI: The Cargill Company, 1920), 6, MIMA.

[87] Noonan briefly notes that the poem seems to attack how the mandolin, in a similar fashion to the wave of Italian immigration to America, had "strayed beyond its call." C. S. Patty "U.S. LEADS ALL," *S. S. Stewart's Banjo and Guitar Journal* 16, no. 2 (June-July 1899), quoted in Noonan, 101-102.

[88] Gibson Mandolin-Guitar Company, *Gibson Instruments, The Music Pals of the Nation* (Grand Rapids, MI: The Cargill Company, 1922; repr., Platteville, WI: Vintage Paper, n.d.), 2, MIMA.

Breaking with tradition, Gibson used a new approach when it debuted its new F-style and A-style mandolins, one that attacked the bowlback and its producers. Advertisements focused on the "outdated" look of bowlbacks in marketing campaigns that derided the Old-World style of "potatobug" shaped mandolins and players of bowlbacks as "potato-buggists."[89] Not only did the anthropomorphized bowlback characters of the advertisements look antiquated, but also referring to them as potatobugs must have been unsettling to consumers. In some ways, this could also be seen as an attempt to connect the infestation of "potatobug" bowlbacks with the unwashed southern European immigrants that brought the instruments with them to America. One particular illustration from 1908, a piece of sheet music by Walter A. Boehm entitled, "New Era (Gibson Era) March," shows the Gibson Florentine model sweeping "potatobug" Neapolitan models into the "The Dead Sea" from atop the platform of "Eternal Progress" like vermin being brushed into the ocean from the docks.[90] Another negative perception came from the instrument's association with Colorado beetles, whose markings resembled the alternating color patterns in the ribs of bowlback mandolins. Since the beetle attacked potato crops, the "taterbug" mandolins could be viewed as a plague on the musical instrument community.[91]

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[89] Walter Carter, "Come Let Us Reason Together: A Tour of Catalog H," in Carter, *Gibson Guitars*, 52.

[90] As Michael Holmes points out, Gibson was confident enough in their mandolin designs to take shots at their competitors by placing company names on the potatobug mandolins drowning in the "Dead Sea." This included Bay State and Regal. Holmes, "Gibson and the Rest," 41; Hambly, 442.

[91] Sparks, 131.

As Scott Hambly persuasively argues, Gibson advertising posed a sharp dichotomy between bowlbacks and the new Florentine and A-model mandolins beginning in 1903. The copy writing of Lewis A. Williams used a style of logic that presented a "binary opposition" to its readers. Consumers who were smart and sophisticated played F- and A-style mandolins. Those who used bowlbacks were clearly less cultured and intelligent. This strategy must have alienated some consumers, but overall it proved to be quite successful for the company.[92] In fact, from the very title page of their first catalog, Gibson boldly declared their offerings to be "the first serious mandolins and guitars ever manufactured."[93] Orville Gibson's original designs focused on form and function with subtle details such as the scroll on the F-style rather than the visual assault of mother of pearl, celluloid, and tortoiseshell found on his competitors' bowlback mandolins. This in itself also provided a stark visual contrast for consumers to choose between when shopping for a new instrument.[94]

Another marketing approach involved connecting the mandolin to the violin (and its master craftsman Stradivarius), both for playability and for aesthetic reasons. As previously discussed, Orville Gibson's carved-wood designs for the mandolin

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[92] It is also important to note that part of Gibson's success in marketing its mandolins should also be attributed to its system of Teacher-Agents situated throughout the country who were given catalogs and subscriptions to *The Sounding Board Salesman* in order to reach a broad range of consumers. Hambly, 449.

[93] Gibson Mandolin-Guitar Manufacturing Co., Ltd., *The Gibson Mandolins and Guitars* (Kalamazoo, MI: Gibson Mandolin-Guitar Manufacturing Co., Ltd., 1903), MIMA.

[94] Scott Hambly argues that Gibson may have been inspired by Art Nouveau designs when he came up with the design for the F-style mandolins. Hambly, 451-455.

echoed violin craftsmanship, evident in both the scrollwork on Florentine models and the addition of f-holes to the top of the instrument. Mandolin solos were easily adapted from the repertoire of violin masterworks, further cementing the connection between the two instruments in the minds of both players and manufacturers.[95] A 1905 Washburn catalog described the process of designing the latest line of mandolins that produce "a tone that would musically approach as nearly as possible that rich and desirable tone quality, so strong yet so mellow, found in its fullest expression in the violins of Cremona."[96] The verbose Gibson catalogs of the 1910s and 1920s also made this connection explicit in the text with subheadings such as "The Momentous Importance of Stradivarius Arching" and phrases like the "principles of Stradivarian construction."[97]

Producers utilized aspirational marketing in their catalogs by featuring photos and profiles of amateur and professional musicians and groups. A consumer who bought a particular maker's mandolin might have envisioned himself or herself gracing the pages of a future catalog as a solo artist or as part of a larger musical ensemble. One particular group, the Salt Lake Spanish Guitar & Mandolin Club, featured in an 1892 Washburn Catalog, showcased both the variety of stringed

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[95] Noonan, 119.

[96] Lyon & Healy, *Revised Catalogue of the Washburn Instruments* (Chicago: C. N. Post, 1905), 5. The Center for Popular Music, Middle Tennessee State University, Murfreesboro, TN.

[97] Gibson Mandolin-Guitar Company, *The Gibson Catalog "J"* (Battle Creek, MI: Gage Printing Co., Ltd., 1917), 23, MIMA; Gibson Mandolin-Guitar Company, *Gibson Instruments, The Music Pals of the Nation* (Grand Rapids, MI: The Cargill Company, 1922; repr., Platteville, WI: Vintage Paper, n.d.), 2, MIMA.

instruments they used as well as the ethnic costumes including hats with tassels, short ties and jackets with embroidered lapels that could be interpreted as a mixture of Italian, Spanish, and Mexican attire.[98] The display of these photographs also allowed musicians across the country to feel connected to a larger community. Gibson's advertising (both for mandolins and other instruments) emphasized the idea that one who purchased a Gibson became a Gibson'-ite. If you aspire to be a good player, you too want to be considered a Gibson'-ite. Groups who played with all Gibson instrument might have found themselves highlighted in the catalog for their brand loyalty.[99]

Indicative of the new age of advertising and trends in the BMG community, Gibson used prominent depictions of young, attractive female mandolin players in its catalogs to distinguish their products from their competitors. The very first catalog for

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[98] It is also possible that this catalog was distributed at the 1893 World's Columbian Exposition in Chicago, Illinois. With the distinct ethnic displays found on the Midway Plaisance, the Salt Lake club's attire would have resonated with similar images seen at the fair. Lyon & Healy, *Washburn Souvenir, Catalogue of the Washburn Guitars, Mandolins, and Zithers* (Chicago: Lyon & Healy, 1892), box 4, Warshaw Collection of Business Americana, AC; For a discussion of the Midway Plaisance, see Gail Bederman, *Manliness & Civilization: A Cultural History of Gender and Race in the United States, 1880-1917* (Chicago: University of Chicago Press, 1995), 34-37; and Robert Rydell, *All the World's A Fair: Visions of Empire at American International Expositions, 1876-1916* (Chicago: University of Chicago Press, 1984), 61-62.

[99] Walter Carter, "Sales Without Sales Reps: The Gibson Teacher-Agent," in Carter, *Gibson Guitars*, 51; See also the numerous photographs of groups in Gibson catalogs of the 1910s touting "Everyone a Gibson'-ite" in photograph captions. Gibson Mandolin-Guitar Company, *The Gibson Catalogue "H"* (Chicago: Hammond Press/W. B. Conkey Company, 1912), 9, MIMA; Gibson Mandolin-Guitar Company, *The Gibson Catalog "J"* (Battle Creek, MI: Gage Printing Co., Ltd., 1917), 12, MIMA.

the Gibson Mandolin-Guitar Company in 1903 featured an illustration of a woman in a white dress holding Orville Gibson's new Florentine (or F-style) mandolin. Upon opening to the next page, a photograph of a different woman in a white dress greeted the viewer; her right sleeve seductively sitting below her shoulder while her left arm grasped a Gibson mandolin.[100] In many ways, these images bear a striking resemblance to the romantic vistas of Italy that featured women playing mandolins. Though there is no direct evidence to suggest that these pictures influenced Gibson marketers, the woman from the catalog could easily have been the subject of a Mary Cassatt painting. When compared with other contemporary guitar manufacturer catalogs, these images stand out from among the competition. Regardless of whether these pictures were meant to target female players or to attract male consumers, Gibson chose to open their first publication by connecting its new mandolin designs with female players. This parallels the use of attractive females on the cover of the BMG publications of the day as well as other periodicals in American culture.[101]

The role of women in catalog illustrations changed in the 1910s and 1920s, coinciding with a larger cultural movement in the early twentieth century that emphasized the guitar as an instrument associated with male players in the concert hall and in rural areas as opposed to female players in white, middle class parlors.[102] The

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[100] Hambly, 436; Gibson Mandolin-Guitar Manufacturing Co., Ltd., *Gibson Mandolins and Guitars* (Kalamazoo, MI: Gibson Mandolin-Guitar Manufacturing Co., Ltd., 1903), MIMA.

[101] Noonan discusses the evolution of female depictions in *Cadenza* during the same period. Noonan, 110-116.

[102] John Louis Salsini, "The Guitar and the Ideal of Femininity in Nineteenth Century America" (master's thesis, University of Minnesota, 1990), 5-6, 71-72.

feminine imagery on the front cover all but disappeared during the 1910s, though it resurfaced in a different form in the following decade. The 1920 cover displays a female playing a mandolin, with only her profile visible to the viewer while the main focus is shifted to her male musical partner, a guitarist, as the two play a duet together.[103] The company also placed similar advertisements in *Crescendo* with text that played on themes of courtship, intimacy, and a shared experience of learning to make music together (both literally and figuratively).[104]

Conclusion

As with most cultural trends, the popularity of the mandolin could not be sustained indefinitely, and there were signs in the 1910s that the end was on the horizon. The emerging popularity of ensembles (particularly in jazz) that included wind instruments placed the unamplified mandolin at a disadvantage with regards to its volume.[105] Early radio stations did not feature mandolin orchestras but instead focused on traditional orchestral music and instruments along with the new genre of jazz.[106] The tenor banjo, a four-string version of the instrument tuned in fifths,

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[103] Gibson Mandolin-Guitar Company, *Gibson Mandolins, Mandolas, Mando-cellos, Mando-basses, Guitars, Harp Guitars, Catalog L* (Grand Rapids, MI: The Cargill Company, 1920), 2, MIMA.

[104] Noonan, 115-116.

[105] Ruppa theorizes, based on several mandolin club histories, that jazz might be one of the reasons for its decline, along with the effects of World War I on manufacturing, and the decline of the mandolin as an instrument of courting. Ruppa, 105.

[106] Susan Smulyan, *Selling Radio: The Commercialization of American Broadcasting, 1920-1934* (Washington, D.C.: Smithsonian Institution Press, 1994), 96-97.

enjoyed a growth in popularity from the conclusion of World War I to the Depression. Popularized by its connection to the Argentine tango (introduced to America in 1910) and eventually picked up by jazz bands, the tenor banjo was an easy, attractive choice for mandolin players who desired more volume but could appreciate its similar tuning and style of play (plectrum on steel strings).[107]

By the 1920s, American consumer interest in mandolins was gradually diminishing and makers began to adjust accordingly. Some, such as Gibson, focused more of their efforts on the guitar and tenor banjo market, a change reflected in their catalogs. The variety of mandolin models that had dominated previous issues was scaled back in the catalogs of the late 1920s.[108] C. F. Martin correctly identified the mandolin movement as something worth investing in during the first decade of the twentieth century. Recognizing that the mandolin's popularity was fading away proved harder for the company to discern. Long after consumers had lost interest in bowlback models, Martin still carried them in the 1923 catalog. They also twice attempted to reinvigorate the mandolin's popularity in 1929 and 1936, both times introducing models that featured advancements made by their competitors decades

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[107] Gruhn and Carter, Acoustic Guitars, 104-107.

[108] For comparison, the 1917 catalog devoted 13 pages to mandolins and related instruments (mandolas, mando-cellos, mando-basses) while only 5 pages for guitars. By 1929, mandolins (and related instruments) and guitars received 6 pages each, reflecting the changing roles of the instruments in the company's inventory. Gibson Mandolin-Guitar Company, *The Gibson Catalog "J"* (Battle Creek, MI: Gage Printing Co., Ltd., 1917), 12, MIMA; Gibson, Inc., *Gibson Mandolins, Guitars, Ukuleles, The Music Pals of the Nation, Catalog R* (Gibson, Inc., 1929), MIMA.

earlier.[109] Despite these missteps, Martin used the mandolin movement as a proving ground to try out new ideas in the burgeoning acoustic stringed instrument industry.

The mandolin's popularity following the 1920s became relegated primarily to a section of the market that none of the makers originally intended: bluegrass. It is difficult to trace the exact roots of mandolin playing in southern string bands, but there are some examples prior to World War II of players using the instrument in ensembles that included a 5-string banjo, fiddle, mandolin, and guitar. One possible way that rural musicians chose the mandolin was that the instrument was easier to obtain and more readily available after the movement had declined in urban areas. When Bill Monroe, often regarded as the father of bluegrass music, captured audiences, in person, over the airwaves, and through recordings, he would help to secure a new home for the instrument in the burgeoning genre dominated by hillbilly string bands.[110] Making his first appearance on the Grand Ole Opry in 1939, Monroe, along with a handful of other musicians in the 1930s, established a percussive style of mandolin playing that would become a key component of the bluegrass genre.[111] In addition, Monroe's instrument of choice, a 1920s Gibson F-5 mandolin, became highly sought after by aspiring bluegrass players. Monroe chose this instrument, part

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[109] C. F. Martin & Co., *Martin String Instruments* (Nazareth, PA: C. F. Martin & Co., 1923), 6, MIMA; Washburn and Johnston, *Martin Guitars,* 88-89.

[110] Hambly, 463-480.

[111] Other musicians who contributed to the popularity of mandolin outside of the BMG culture include Red Rector, Kenneth Burns (Jethro of Homer and Jethro), Joe Shelton, Leo Raley, and Paul Buskirk. Bill C. Malone and Jocelyn R. Neal, *Country Music, U.S.A.*, 3rd ed. (Austin: University of Texas Press, 2010), 96, 125-126, 328-329; See also Robert Cantwell, *Bluegrass Breakdown: The Making of the Old Southern Sound* (Urbana: University of Illinois Press, 1984), 222-223.

of the Master Model Line designed by performer and acoustical engineer Lloyd Loar, because of its ability to be heard above the rest of his band.[112] This was not a market that any of the companies involved in the mandolin movement could have envisioned in the late nineteenth century. It reflects the changing musical culture in twentieth century America and the adaptability of stringed instruments to meet the demands of aspiring musicians.

The complex story of the mandolin and the first major ethnic music movement highlights the profound role of the instrument in shaping the American acoustic guitar. Through a combination of factors, the mandolin gained prominence in American musical culture between 1880 and 1920. The large influx of southern European immigrants in the late nineteenth century coupled with an American fascination with a romanticized version of Italy set the stage for the mandolin's cultural appeal. Inspired by travelling musicians playing novel-looking instruments and dressed in ethnically ambiguous attire, American musicians, both in local communities and college campuses, formed clubs and later orchestras based around the instrument. The multitude of ensembles functioning within the BMG culture exposed Americans across the country to the music of the plectral family of stringed instruments and facilitated the expanding role of the guitar in America.

On the production side, manufacturers responded by making new models to meet the demand from aspiring mandolinists, ultimately producing an unexpected market for the instrument. The innovative work of Gibson dramatically changed the

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[112] Lloyd Loar's instruments are highly sought after by musicians and collectors. He also had a profound impact on the design of acoustic guitars in the 1920s, both during and after his tenure at Gibson. Kellerman, 103; See also Hambly, 480, 482-483.

design of the mandolin, adapting it to meet the performance demands of twentieth century musicians. Luthiers learned valuable lessons as they devised new ways to make and market instruments geared towards a trend in popular culture, something that they had not previously done. Makers later adapted the techniques used in carving the top and back of a mandolin as they sought new ways to increase the volume of the acoustic guitar. Marketing the instrument to consumers meant highlighting some aspects of its Old World persona, while jettisoning others in favor of advocating a modern mandolin. Though not originally intended by manufacturers, bluegrass musicians adopted the mandolin after the movement had faded, giving the instrument a home in twentieth century American musical culture devoid of its original ethnic appeal.

Beginning in the 1910s, breezy island melodies and mesmerizing hula dancers slowly turned the attention of Americans away from the imagined landscapes of sunny Italy. So too did musicians start to focus on the sounds associated with a new ethnic music movement as consumers and manufacturers adapted and re-tooled their instrumentations, compositions, and costumes based on the culture of the recently annexed U.S. territory of Hawaii.

Chapter 3

ACOUSTIC ALOHA: THE HAWAIIAN MUSIC MOVEMENT, EVERYDAY OBJECTS, AND THE ADAPTABILITY OF THE ACOUSTIC GUITAR (1898-1941)

In 1926, a young Vaudeville musician from New York named Roy Smeck demonstrated his skills on several instruments for one of the first motion pictures with synchronized sound. As his fingers flew up and down the fretboards of a banjo, ukulele, and Hawaiian style guitar, Smeck showcased the skills that earned him the nickname "Wizard of the Strings." Laying a guitar across his lap and a pick on the end of each finger, Smeck offered a varied musical performance that pieced together several instrumental styles, all of which would have been familiar to an audience of the day. From the delicate tones of a slow romantic intro, Smeck quickly transitioned into a rousing solo at breakneck pace, his left hand sliding an accessory called a guitar steel across the strings while the fingers of his right hand rapidly picked the individual strings in a coordinated pattern. Roy Smeck exemplified the type of celebrity musician who expanded both the repertoire and audience for the acoustic guitar by dazzling listeners through performances, recordings, and broadcasts.[1]

In the short film, Smeck demonstrated a remarkable proficiency with the ukulele and Hawaiian style guitar despite the fact that he was not from the island of Hawaii. In fact, he had never even been to the Hawaiian Islands, yet he became an

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[1] *Roy Smeck, the Wizard of the String, in His Pastimes* (Vitaphone, Warner Brothers Pictures, 1926).

ambassador for the instruments and styles associated with the Paradise of the Pacific.[2] Roy Smeck is just one of many musicians who fueled the popularity of the Hawaiian ethnic music movement in America from the time of the territory's annexation through the Second World War. Men and women purchased the instruments of the islands, adapted new ways of playing the guitar, and arranged the popular music of the day to mimic the breezy sounds of the Pacific. In a similar fashion to the mandolin movement, manufacturers adapted existing models and infused their inventories with new instruments to meet the demands of a nation eager to participate in the Hawaiian music sensation.

With the incorporation of Hawaii into the United States, new musical traditions and instruments affected both the design of the acoustic guitar and the traditional playing styles of guitarists. Hawaiian musicians toured the country introducing instruments such as the ukulele and styles such as slack-key and Hawaiian steel guitar to audiences throughout America. Audiences latched on to the exotic sound that carried with it dreams of island vistas. Consumers eagerly bought into the movement, buying records and sheet music, both of Hawaiian music and non-Hawaiian songs adapted to the new island style. Similar to the mandolin movement discussed in the previous chapter, aspiring musicians participated in the movement by forming community and collegiate ukulele and Hawaiian guitar orchestras around the country. Having learned valuable lessons from the previous ethnic music movement, guitar

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[2] Smeck did not like to travel by airplane. His first trip overseas involved shows in the United Kingdom and Ireland in 1937. As the Hawaiian music movement had all but faded from American culture, Smeck made his first trip to Hawaii in 1951 performing on a world tour for the U.S.O. Vincent Cortese, *Roy Smeck, The Wizard of the Strings in His Life and Times* (Lincoln, NE: iUniverse, Inc., 2004), 65-66, 77.

makers once again adapted their inventories to capitalize on a popular consumer fad. Offering new Hawaiian style guitars and performer-endorsed models, manufacturers answered the demand for all things Hawaiian. The Hawaiian music movement expanded the acoustic guitar's role in American musical culture.

By sliding a steel or glass object across the strings of a guitar, players like Roy Smeck connected Honolulu to Nashville and the Mississippi Delta through the adaptable tool of the acoustic guitar. The peculiar accessory on Smeck's hand was a relative novelty in 1928, but later generations of country and blues musicians (and their audiences) would become intimately familiar with the distinctive sound of slide and steel guitar playing. The integration and adaptation of everyday objects into guitar playing created new musical directions that utilized accessories in order to create fresh aural experiences. What began as knives and whiskey bottles later became commodified as steels and slides, allowing aspiring musicians to adopt the same playing techniques introduced by innovators from the islands. By the mid-1930s, consumers could choose from an array of accessories to compliment this style including steels and finger picks. Ambassadors such as Sol Hoopii, Roy Smeck, and Jerry Byrd carried the playing techniques and signature sounds of the islands from clubs to recordings and eventually to radio and film. Long after Hawaiian records had gone out of fashion, the changes brought about by guitar manufacturers and musicians prominently remained in American musical culture in some of the most unlikely places, namely blues and country music. From Hawaiian islanders to poor bluesmen to country artists, this chapter examines the influences and material adaptations of the Hawaiian ethnic music movement that significantly altered the ways people produced and used acoustic guitars in America.

The Origins of the "Hawaiian Style"/Hawaiian Music Movement

Scholars credit the 1915 Pan-Pacific Exposition with being the catalyst for the Hawaiian music movement, but Americans had been dreaming of tropical island scenery for decades before hula girls and guitar players wearing leis graced the stages in San Francisco.[3] From prescriptive literature to books written about the islands to popular songs and sheet music, middle and upper class Americans had been exposed to the alluring scenery and culture of the newest U.S. territory for decades prior to the 1915 Exposition.

As with the mandolin music movement, the images that Americans conjured up in their heads did not always match the reality of life in the Pacific paradise. Contemporary notions of white supremacy meant that native Hawaiians were often viewed as inferior, uncivilized people, who needed to be lifted up by the burgeoning world power of the United States. At the same time, the island melodies and visages could be commodified and enjoyed by consumers on the mainland, allowing people from Cleveland, Boston, and New York to take a mental trip to Hawaii without ever boarding a boat. The irony of this musical export is that what many in the United States and around the world came to recognize as music performed in the Hawaiian

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[3] Though George Gruhn and Walter Carter acknowledge the early music of Joseph Kekuku, they claim "the boom can be pinpointed to the Panama-Pacific International Exposition of 1915." Recent work by John King, John Troutman, and Tom Walsh and has acknowledged the gradual dissemination of Hawaiian music on the mainland prior to the 1915 Exposition. George Gruhn and Walter Carter, *Acoustic Guitars and Other Fretted Instruments: A Photographic History* (San Francisco: GPI Books, 1993), 151; John W. Troutman, "Steelin' the Slide: Hawai'i and the Birth of the Blues Guitar," *Southern Cultures* 19, no. 1 (Spring 2013): 32-38; Tom Walsh and John King*, The Martin Ukulele: The Little Instrument That Helped Create a Guitar Giant* (Milwaukee: Hal Leonard, 2013), 8-9.

style did not exist in the islands prior to the nineteenth century. The origins of the Hawaiian style and its incorporation of the guitar and ukulele are integrally connected with the social, cultural, political history of the islands namely the trans-Pacific trade and American territorial expansion.

The sound of the Hawaiian music movement and its associated instruments was socially constructed through a process that involved Hawaiians, immigrants, and the exchange of musical styles. Both groups played a role in the development of the instruments, with immigrants bringing stringed instruments to the island and the Hawaiians adapting them to fit their own musical culture. The flexibility of the guitar allowed Hawaiian performers to create new sounds from the same basic instrument found in BMG ensembles and middle-class mainland parlors. While these new island rhythms contained aspects found in Hawaii prior to the arrival of European and North American immigrants, it was not an authentically indigenous sound, though many Americans would mistake it for such a thing in the twentieth century. As in the case of the mandolin movement, the truth about the origins of the style did not matter to most Americans as long as it conjured up images of the islands in their minds. This process ultimately replaced the native percussion instruments and chants of Hawaii with the ukulele and Hawaiian guitar as the symbols and tools of the Hawaiian style sound.[4]

Though small is size, the commodity most closely associated with the sound of Hawaii is the ukulele, an instrument that like the laborers who brought it, was an import to the islands. During the second half of the nineteenth century, the growth of

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[4] Lynn J. Martin, ed., *Folklife Hawai'i, A Festival in Celebration of the 25th Anniversary of the State Foundation on Culture and the Arts, October 18-21, 1990* (Honolulu: The State Foundation on Culture and the Arts, 1990), 17.

the Hawaiian sugar industry necessitated a huge need for laborers to work the plantation fields. Several waves of immigrants came to Hawaii beginning in the 1860s to satisfy the demand for labor. One of the groups, the Portuguese, introduced several new instruments to the islands including the viola, the *rajão*, the machete, and the *branguiha*. Among the Portuguese immigrants who arrived in 1879 were three cabinetmakers that, like other luthiers such as C. F. Martin, also crafted musical instruments. They made guitars and developed innovative designs based on the traditional Portuguese *rajão* and machete. These small instruments featured four gut strings and came to be known in the islands as ukuleles. Almost a quarter of the size of a guitar, the sound of high-pitched rhythmic strumming on a ukulele quickly became synonymous with the Hawaiian style sound. The Hawaiians affectionately referred to the instrument as the "bouncing" or "jumping flea." Unlike the "potato bug" mandolins, musicians and manufacturers embraced this musical "insect" and its sweet melodic sound.[5]

The guitar, another import to Hawaii, proved to be an adaptable instrument when placed in the hands of the Hawaiians, leading to the emergence of a new style known as slack-key. While no specific evidence exists at present to place the exact

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[5] The ukulele is a fascinating instrument in terms of its importation and adaptation by the Hawaiians and, later, adoption by audiences around the world. Yet as Tranquada and Walsh argue in their recent thorough study of the instrument, the ukulele, despite all of its cultural impacts, is still not considered a serious instrument. Martin, *Folklife Hawai'i*, 17; Miro A. Maximchuk, "Music in Hawai'i Before the Steel Guitar," in Lorene Ruymar, ed., The Hawaiian Steel Guitar and Its Great Hawaiian Musicians (Anaheim Hills, CA: Centerstream Publishing, 1996), 1; Jim Tranquada and John King, *The Ukulele: A History* (Honolulu: University of Hawai'i Press, 2012) 1-4, 37-41; Wayne S. Wooden, Return to Paradise: Continuity and Change in Hawaii (Lanham, MD: University Press of America, Inc., 1995), 21.

moment the guitar came to the Hawaii, scholars generally agree that it was a nineteenth century arrival to the island chain. One story posits that the instrument appeared through contact with whalers in the early 1800s. Another starts in the 1830s and 1840s when, under the auspices of King Kamehameha III, owners of Hawaiian ranches contracted immigrant *vaqueros* (Spanish, Mexican, and American Indian cowboys) to aid in the growth of the islands' cattle industry by training Hawaiians to cowboys, a group known as *paniolos*. The *vaqueros* are also credited with bringing the guitar to the islands, an object that would have sounded quite unique when compared with Hawaiian instrumentation, which was mostly percussive at the time.[6] Hawaiian newspapers provide evidence of guitars and accessories in the islands as early as the 1840s with the first guitars manufactured out of woods indigenous to Hawaii by 1870.[7]

When the *vaqueros* left the islands, the *paniolos* used their limited knowledge of the guitar to create a new style of guitar playing referred to as slack-key guitar (*ki ho 'alu*) for the so-called "slacking" or loosening of the strings in their tuning. Without much instruction, the Hawaiians retuned the guitars to make it easier to form more enjoyable sounding major chords. The strings of slack key guitars are tuned to form a major triad (most commonly the notes DGDGBD) rather than the traditional EADGBE tuning associated with Spanish guitar. The musicians held the guitar in the standard upright position with the soundhole facing away from the body and plucked the strings individually rather than strumming them. The plucked bass notes kept the

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[6] Keola Beamer, *Hawaiian Slack Key Guitar* (New York: Oak Publications, 1977), 8; Maximchuk, "Music in Hawai'i," 1.

[7] Troutman, "Steelin' the Slide," 29-30.

rhythm while the guitarist would use the higher strings to play the melody in a style that imitated the falsetto voices of traditional Hawaiian singers.[8] This tuning and style made the instrument more adaptable to the native Hawaiian rhythms and harmonies and soon established a new rural musical tradition in the islands.[9]

The second Hawaiian innovation involving the guitar, and arguably the more popular export to the mainland, is known as "steel guitar" supposedly "invented" by Joseph Kekuku. Building on the open tuning utilized in slack key guitar, Hawaiian steel guitar appeared on the islands around the turn of the twentieth century. The innovator most often credited with developing the technique of Hawaiian steel guitar, Joseph Kekuku, is an almost mythical figure. A number of different stories exist which denote Kekuku as a young musician, perhaps only 11 at the time, who in 1885 "invented" the playing style. Some point to his accidental dropping of a comb or a metal bolt/railroad spike on the strings of his guitar as the inspiration for the technique. Others say the object was a knife that screeched as it hit the strings. Regardless of exactly how the event transpired, Kekuku became one of the first Hawaiian musicians to popularize the innovative technique of sliding a piece of metal along the strings of the guitar forming notes and chords with the guitar resting firmly in the player's lap. An alternative origin story highlights the infusion of multiple playing styles in the roots of the steel guitar technique. Hawaiian composer Charles E. King claimed that as a 10-year-old he observed a group of Honolulu musicians that included Gabriel Davion. Born in India, Davion played a type of slide technique on

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[8] Beamer, 9; Maximchuk, "Music in Hawai'i," 1.

[9] Martin, *Folklife Hawai'i,* 17.

one string of his guitar. One scholar intimates that Davion could have been influenced by the technique for playing the gōttuvādyam, an Indian instrument that consists of eight-strings and incorporates a bar of glass or ebony as a slide.[10]

A musician must adapt the way he or she holds the guitar and manipulates the strings in order to play in the steel guitar or Hawaiian style. Traditionally guitars were played with the right bout resting on the player's knee and the soundhole facing away from the musician's body. The neck would be held by the left hand and the player would press on the strings to form chords on the fingerboard with their left hand and pick the strings using their right hand (though this could be reversed for left-handed players). For the Hawaiian style, the guitar is held horizontally and supported by the player's legs, with some balancing the body of the instrument on right leg and the neck on the other. The soundhole and strings of the guitar faced upward instead of outward from the player's body. The performer holds a heavy steel bar in his or her left hand and plucks the individual strings (usually with specialized thumb and finger picks) with the opposite hand. By sliding the steel bar up and down the fretboard, the player is able to change the pitch of the string that is played.[11] In order for the steel to

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[10] Gruhn and Carter, *Acoustic Guitars,* 150; Gary Y. Okihiro, Island World: A History of Hawai'i and the United States (Berkeley: University of California Press, 2008), 178.

[11] It is not clear when people started referring to the Hawaiian style as steel guitar. The 1917 Sears catalog used it to refer to a type of instrument, but for the most part before the advent of resonator guitars in the 1920s, "steel guitar" and "Hawaiian style guitar" as a type of music went hand in hand. By the 1940s "steel guitar" often referred to a type of instrument rather than the style of music played on it. Guy Logsdon, "Steel Guitar," *Mugwumps, The Magazine of Folk Instruments*, May 1974, 12; Lorene Ruymar, ed., *The Hawaiian Steel Guitar and Its Great Hawaiian Musicians* (Anaheim Hills, CA: Centerstream Publishing, 1996), xi.

more easily slide along the strings and not cause excess buzzing (or distortion of the sound produced when the force of a string's vibrations cause it to come into contact with the top of the instrument), Hawaiian style guitars featured a raised nut. This piece of bone or plastic elevates the strings at the headstock and is located between the tuning pegs (or machine-head tuners) and the top of the neck. The increased height of the strings above the fretboard is referred to as raising the "action" on a guitar. This new style became known by a number of names including Hawaiian guitar, Hawaiian style guitar, and steel guitar, while the native Hawaiians called it *kika kila.*[12]

By the turn of the century, Hawaiian steel guitarists traveled the world performing from Asia to North America, starting music schools and appearing on sound recordings and radio broadcasts. Some of the early acts to appear in the United States included July Paka who debuted in 1899 and Frank Ferera in 1902. In 1904, Kekuku left the Kamehameha School, embarking on a life as a performer and teacher bringing his music to both Europe and the United States. These musicians appeared in a variety of venues including theaters, Chautauqua tents, and vaudeville circuits.[13]

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[12] When lap-style electric guitar models appeared in the 1930s, some came with separate supporting legs attached the guitar, a precursor of the pedal steel. For a brief discussion of pedal steel guitars see Gordon Ross, "The Guitar in Country Music," in Victor Anand Coelho, ed., *The Cambridge Companion to the Guitar* (New York: Cambridge University Press, 2003), 140-142.

[13] Okihiro, 180, 182; Logsdon, "Steel Guitar," 12; Influenced by the Chautauqua Institute of New York, the travelling tent shows of the late nineteenth and early twentieth centuries offered educational content along with various forms of entertainment. Charlotte Canning, "Traveling Culture: Circuit Chautauqua in the Twentieth Century," University of Texas at Austin, Special Collections and University Archives-The University of Iowa Libraries, December 2000, accessed February 5, 2015, http://www.lib.uiowa.edu/sc/tc/.

The prescriptive literature of the 1890s highlighted the benefits of visiting the paradise of Hawaii, such as partaking in its cultural traditions. The popular women's magazine *Godey's Lady's Book* ran a particularly flattering article on Hawaii complete with several images of the tropical locale. Offering a brief look at the scenery, people, and customs of the territory, the article claimed that in Hawaii, "all is peace, beauty, and joy, pleasant to the senses beyond expression." In describing the land, the author states how "the coasts of the islands are wonderfully picturesque and beautiful...beauty not to be compared with other scenery." The article makes it seem like a person would have to visit Hawaii in order to gain an authentic island experience claiming "no painter's brush can do adequate justice to the beauty." Combing powerful imagery with sexual exoticism, the author notes that the "hula dancing-girl wore a wreath of flowers about her abundant dark hair" and "was usually nude to the waist, wearing a grass skirt which came to the knees." Her rhythmic dancing was "accompanied by doleful music on the guitar, or a small native instrument called the 'Taro-patch-fiddle.'" The author also remarked "the natives are very fond of music" and "the guitar, on account of the softness of its tone, [was] their favorite instrument."[14]

Non-fiction literature published around the time of Hawaii's annexation also painted a mesmerizing picture of the islands for those who could not afford to visit. An 1899 book by Caspar Whitney on Hawaii states that "the charm of the Hawaiian Islands lies in their physical characteristics – the suggestion of strength and gentleness given by their broken peaks and slumbering volcanoes, and the velvety verdure that tempts you to the hills, and begets an impulse to plunge your nose deep down in the

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[14] John R. Musick, "Four Months In Paradise," *Godey's Lady's Book*, October 1897, 342, 347, 351.

grass for one long inhalation of wholesome earth." Another eloquent passage describes arriving in Honolulu by saying, "enchanted, expectant, you stand at the ship rail while the sensuous beauties of Oahu materialize before your sympathetic gaze." Describing the hula dancing and singing of the Hawaiians, the author acknowledged that the hula dance "thrives these days chiefly to satisfy the curiosity of tourists." However, Whitney alludes to a time when the dance "implied women dancing practically naked and a night of gin and general dissipation." The book also described the Hawaiian music as "melodious."[15]

Prior to Hawaii's annexation by the United States in 1898, Hawaiian musicians performed at World's Fairs introducing audiences to the new sounds of ukulele and Hawaiian guitar. The Midway Plaisance at the 1893 World's Columbian Exposition offered viewers a voyeuristic, almost zoo-like display of world cultures, including a pavilion for the islands of Hawaii.[16] The marquee feature of the area was a cyclorama painting of the Kilauea volcano. A group of male performers called the Volcano Singers serenaded visitors to this panoramic display using ukuleles. The Royal Hawaiian Band and a hula dancer named Kini Wilson appeared there as well.[17] In addition, Hawaiian musicians performed at expositions in 1894, 1899, 1901, 1905, and

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[15] Caspar Whitney, *Hawaiian America: Something of its History, Resources, and Prospects* (New York: Harper & Brothers Publishers, 1899), 31, 36, 233.

[16] Gail Bederman, *Manliness & Civilization: A Cultural History of Gender and Race in the United States, 1880-1917* (Chicago: University of Chicago Press, 1995), 34-37. See also Robert Rydell, *All the World's A Fair: Visions of Empire at American International Expositions, 1876-1916* (Chicago: University of Chicago Press, 1984), 61-62.

[17] Okihiro, 185; Walsh and King, *The Martin Ukulele,* 8-9.

1909, greeting audiences from Omaha to Buffalo with the melodic strains of the Pacific.[18]

While the 1915 San Francisco Panama-Pacific International Exposition was not the start of the Hawaiian music movement, it clearly demonstrated the growing mainland popularity of the music and sounds associated with the Islands. Hawaiian performers, including musicians and dancers, played to a diverse audience. Like the other World's Fairs that came before it, the 1915 Exposition brought together people from all over the globe to celebrate the latest in cultural and industrial offerings of the major powers. This particular exhibition was staged to "commemorate the discovery of the Pacific Ocean and the construction of the Panama Canal." While this was not the first time that an exposition audience had been exposed to Hawaiian music, the 1915 fair garnered the most attention.[19] Most importantly, in the minds of the fairgoers, the slack-key guitar, steel guitar, and ukulele became an authentic sound that was synonymous with the territory, despite the fact that this so-called Hawaiian style had only existed for less than fifty years.

The Hawaiian building at the exposition was erected to drum up tourism using music and scenery from the islands to fuel the desire for people to travel there and experience Hawaii firsthand. Instead of a large and ornate pavilion, the designers chose other means than architectural flair to promote business for the islands. In order

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[18] Walsh and King, *The Martin Ukulele,* 9.

[19] Gary Okihiro points out the irony in an exposition that was meant to commemorate how a European (Balboa) claimed and subsequently tried to subjugate the Pacific Ocean, while this fair became a watershed moment for the indigenous people of Hawaii to conquer American culture through their music. Okihiro, 184-185.

to attract visitors, the territory's promotion committee used examples of Hawaiian music, flowers, and fish. The layout of the building sought to immerse visitors in the scenery of the island using giant ferns and palm trees brought directly from the volcanic forests of Kilauea. George E. K. Awa'i's Royal Hawaiian Quartet regularly played shows in the pavilion. Steel guitar innovator Joseph Kekuku and fellow guitarist Frank Ferera also dazzled audiences. Songs such as "On the Beach at Waikiki" premiered at the exposition eliciting enthusiastic responses from the estimated 34,000 people each day that visited the Hawaiian building.[20]

Hawaiian musicians, like Joseph Kekuku, planted seeds for a second wave of the Hawaiian music movement by founding studios in major cities such as New York, Boston, and Chicago. This played a key role in helping non-Hawaiians participate in the movement, expanding its outreach beyond its originators. In addition these artists became well known in American culture through sound recordings, films, and sheet music. A good example of this was Mike Keli'iahonui Hanapi, a Hawaiian who moved to New York City, gained formal training in voice at the New York Conservatory of Music and performed in groups like Bill Kalama's Quartet. He went on to record for Okeh and Edison Records in the late 1920s and eventually started a music studio in Hartford, Connecticut. In addition to teaching, he performed weekly the radio with his band.[21]

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[20] Okihiro, 184-187.

[21] Hanapi is also credited with being one of the earliest recorded Hawaiian falsetto singers, a style similar to yodeling. Okihiro, 182.

One has to look no further than New York City during the 1910s to examine how people participated in the Hawaiian music movement in mainland American cities. In November 1916, a Hawaiian tourism magazine entitled *Paradise of the Pacific* proclaimed that the music of the islands had spread throughout the continental United States. The article specifically made note of a number of venues where audiences heard Hawaiian music and pointed out the wildly popular themed "Hawaiian room" in a New York café on Broadway that was decorated with images of the territory and featured an in-house Hawaiian orchestra and hula dancers.[22] The Greenwich Village neighborhood, a flourishing Bohemian community of the 1910s and 1920s, showed signs of the spread of the Hawaiian movement as well. In the small, non-descript cafe called The Crumperie, the owner, Miss Crump, serenaded diners with tunes on her ukulele.[23] Another Washington Square establishment, the Garrett Coffee House, hosted Bobby Edwards, known as "The Village Troubadour," as he performed on his homemade ukulele for a crowd of working class men and women.[24]

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[22] Okihiro, 186.

[23] 93.91.36, Jessie Tarbox Beals, *Miss Crump of the Crumperie [holding a ukulele]*, photograph, ca. 1908-1916, Jessie Tarbox Beals Collection, Museum of the City of New York; 93.91.4, Jessie Tarbox Beals, *Miss Crump, The Crumperie, 55 Christopher St*, photograph, ca. 1908-1916, Jessie Tarbox Beals Collection, Museum of the City of New York; George Chauncey, *Gay New York: Gender, Urban Culture, and the Makings of the Gay Male World, 1890-1940* (New York: Basic Books, 1994), 228-229.

[24] PC60-62-20, Jessie Tarbox Beals, Photograph, *Group portrait, indoors, of people gathered at the Garrett Coffee House. Men and women are both seated at tables and standing at the back of the room, including: Grace Godwin, café owner (first row, far right); musician Bobby Edwards (left side, rear, playing ukulele); and Jenny Criswell (? seated on bench behind the man with round eyeglasses)*, ca. 1912-1917, Jessie

Following in the footsteps of the originators were a number Hawaiian style guitarists, the most prominent being Solomon Hoopii (or Sol Hoopi'i) the "King of Steel Guitar." Born in Honolulu in 1902, Hoopii grew up idolizing Joseph Kekuku and began playing professionally in San Francisco in 1919 after he traveled there as a stowaway on a ship. Through a connection with rodeo and film star Hoot Gibson, he found his way to Hollywood in the early 1920s and played every style from Hawaiian to jazz. Thanks to his fame and widespread endorsements of acoustic and electric guitars, Hoopii inspired many young musicians to perform lap-style Hawaiian guitar. Hoopii formed the Novelty Trio and played in Los Angeles nightclubs and on radio in addition to recording albums [Figure 8]. His later career was deeply influenced by his decision in 1938 to commit himself to a life of gospel music and evangelism until his death at age 51. Many steel guitarists have cited Hoopii as an influence on their playing. To Jerry Byrd who grew up idolizing him, Sol Hoopii was as significant to steel guitar as Django Reinhardt was to the jazz. Hoopii served as one of the first and possibly most influential ambassadors of the burgeoning interest in Hawaiian music during the 1910s.[25]

Tarbox Beals Photographs, 1896-1941, Schlesinger Library Radcliffe Institute, Harvard University.

[25] Hoopii is purported to have paid for his passage by charming the crew of the ship he stowed away on with his music. "The Story of Hawaiian Steel Guitar as told by Jerry Byrd and Barney Issacs with the Honolulu Skylark and the Music of the Masters of Steel Guitar," *The Heritage Series: The Story of Hawai'i's Foremost Musical Artists*, aired December 26, 1982, on KCCN, KCCN Hawaiian Radio/Bank of Hawaii Heritage Series Collection, Part I, AFC; Ruymar, 90.

Figure 8 Sol Hoopii posing with his engraved National Tri-cone guitar. National Dobro Corp., *Modern National Guitars Catalogue No. 41* (Chicago: National Dobro Corp., 1940), 20. Courtesy of the Smithsonian Libraries, Washington, D.C.

Just like H. P. Sutorius and the imposter groups of Spanish Students, non-native Hawaiian musicians came to be associated with the Hawaiian style through their costume, music, and notoriety. Two of the best examples of this phenomenon were Betty "Trojo" Kaimano and Roy Smeck, "The Wizard of the Strings." Barefoot and dressed in a grass-like skirt with long curly black hair, Trojo was featured on some of the first catalogs of the National String Instrument Corporation, the makers of the first resophonic guitars. Nicknamed "Queen of the South Sea Flappers," Kaimano entertained audiences on the Keith-Albee Vaudeville Circuit.[26] With an alluring gaze

[26] Resonator or resophonic guitars, an innovative method for mechanically amplifying the sound of the instrument, will be discussed in more detail in Chapter 4 of this dissertation. Bob Brozman et al., *The History and Artistry of National Resonator*

directed at the viewer, Trojo appealed to audiences as a representative of two of the most popular cultural trends of the decade: flappers and Hawaiian music.[27]

Though he had no formal connection to the islands, Roy Smeck epitomized the participation of white musicians in the Hawaiian music movement. A vaudeville musician and later star of radio, film, and television, Smeck was a virtuoso at playing the banjo, ukulele, and Hawaiian guitar.[28] Born in Reading, Pennsylvania, and raised in Binghamton, New York, Roy Smeck first learned how to play music from his family. His uncle taught him the Jew's harp, harmonica, and Autoharp while his father acquired a Stella guitar and passed on his limited knowledge of the instrument to his son. Despite the fact that Binghamton did not have any guitar teachers at the time, the aspiring musician went to the local music store and purchased the only method book available to teach himself. After dropping out of school to work in a shoe factory at the age of fifteen, Smeck played banjo and mandolin in small groups with friends from the factory and worked weddings accompanying accordion and mandolin players.

Instruments (Fullerton, CA: Centerstream Publishing, 1993), 140; National String Instrument Corp., *The National Silver String Instruments, The Greatest Musical Sensation of the Age*, (Los Angeles, CA: National String Instrument Corp., 1930), accessed February 1, 2015, http://www.notecannons.com/index.html.

[27] A popular culture trend of the 1920s, "flappers" generally consisted of empowered middle class women who rebelled against established sexual and social mores through suggestive dancing, revealing clothing styles, and frequent drinking. See Angela J. Latham. *Posing a Threat: Flappers, Chorus Girls, and Other Brazen Performers of the American 1920s.* (Hanover, NH: Published by University Press of New England [for] Wesleyan University Press, 2000).

[28] A good demonstration of Smeck's instrumental skills can be found on the compilation recording, Roy Smeck, *Roy Smeck plays Hawaiian guitar, banjo, ukulele and guitar 1926-1949* (Newton, NJ: YaZoo, 1992).

When he picked up the ukulele, it became almost a constant companion to him, taking it to work, and even to bed. Despite his lack of formal training, Smeck devoted himself to mastering his instruments by playing and practicing for up to seven hours a day, a habit that at the age of 16 drove him into a nervous breakdown. As Smeck later recalled, "It takes a lifetime to master one instrument, and I was trying to master five; that's how I got sick." After a 6-month break, he returned to his musical studies. Incorporating popular tunes like "St. Louis Blues" and Hawaiian pieces such as "Hilo March" into his repertoire, Smeck sought a career in the music business. He got his break around 1926 when he was given a 26-week contract to perform shows around the country in RKO theaters for $250 per week.[29] Since Smeck was strictly an instrumentalist (lacking vocals he was considered, in vaudeville terms, a "dummy act"), he developed a series of tricks involving visual and aural gimmicks to make his act unique. This entailed intricate fingerpicking techniques and strumming patterns to fool the audience into thinking more than one musician was playing. Smeck found ways to play both the background and the melody simultaneously.[30]

Already a skilled musician, Roy Smeck became part of film history when he performed for one of the first motion pictures with synchronized sound. Having moved to New York City, Smeck took up residence at the Knickerbocker Hotel.

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[29] His father owned a Stella guitar but only knew how to play three chords on the instrument. The method book that Smeck purchased, *Guckett's*, also only demonstrated three chords: C, F, and G7. James Sallis, *The Guitar Players: One Instrument and Its Masters in American Music* (Lincoln: University of Nebraska Press, 1994), 79-81.

[30] Robert Yellin, "Sixty Years of Instrumental Wizardry: Roy Smeck," *Frets*, September 1979, 32.

There, he received an unusual late night request. He had become friends with the manager Eddie Bell, who often visited Smeck's room to play music with Roy. Bell knew Harry Warner of Warner Pictures, who was preparing to film one of the first motion pictures with synchronized sound. Bell suggested Smeck and called him for a 2:00am audition at the hotel's Green Room in front of Warner. Smeck subsequently starred in a 12-minute movie recorded at the Manhattan Opera House that highlighted Smeck's virtuosity on octachorda (a custom 8-string Hawaiian guitar), ukulele, and tenor banjo. *Roy Smeck in His Pastime*, the "Vitaphone" film, made Smeck $350, but eventually resulted in a big boost for his vaudeville career, putting his name prominently on marquees and greatly increasing both his earnings and notoriety.[31]

Smeck was influenced by a number of Hawaiian musicians early in his career, including the legendary Sol Hoopii. Smeck cited the 1918 RCA recordings of the Irene West Royal Hawaiians, a group that included famed steel guitarist Sam Ku West, as helping to "teach" him how to play Hawaiian guitar. He also gave credit to the Hawaiian-born steel guitarist, Sol Hoopii. Over the course of his career, Smeck became a prolific recording artist on the Hawaiian guitar with over 140 records and ten full albums to his name.[32] Many aspiring musicians came to know him through the

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[31] Sallis, 89; Cortese, 21-23.

[32] Yellin, "Sixty Years," 33; Brozman et al., 129; Sallis, 87-88; Both Roy Smeck and Sol Hoopi can be heard on the 2 CD compilation album that accompanies Steve Roden, John Jacob Niles, Edward W. Clayborn, and Ernest Thompson, *...I Listen to the Wind That Obliterates My Traces: Music in Vernacular Photographs, 1880-1955* (Atlanta: Dust to Digial, 2011); Roy Smeck Trio, "Reaching for the Moon," by Irving Berlin, recorded 1931, on *...I Listen to the Wind That Obliterates My Traces,* Dust to Digital DTD-20, 2011, CD; Sol Hoopi's Novelty Trio, "Stack O'Lee Blues," recorded 1926, on *...I Listen to the Wind That Obliterates My Traces,* Dust to Digital DTD-20, 2011, CD.

countless instruments, instruction books, and musical accessories that bore his name, a topic that will be further discussed later in this chapter.

Sheet music for Hawaiian music appeared beginning in the late 1890s, predating the 1915 Exposition. Charles A. K. Hopkins published a collection of songs dedicated to the Hawaiian Kawaihau Quartet in 1899 that contained songs arranged for piano and voice by Hawaiians including Queen Liliuokalani and non-Hawaiians.[33] A 1902 folio entitled *Song of Hawaii* offered a page long introduction to the music and native instruments of Hawaii with only a scant mention of the ukulele and guitar. The passage does speak to the unique qualities of Hawaiian music that parallel the "beauty and grandeur" of the islands. The author beckons visitors by describing "the land of sunshine and perpetual springtime, with the sea stretching far to the horizon and the mountains pointing towards the skies amidst a display of coloring that has never failed to delight the eye of the artist."[34]

Sheet music from Tin Pan Alley and sound recordings from major labels such as Victor helped to feed consumers a steady diet of Hawaiian songs and popular tunes arranged in the Hawaiian style during the 1910s. Tin Pan Alley composers churned out songs arranged for piano, voice, Hawaiian guitar, and ukulele, while Victor Records claimed in 1916 that Hawaiian music was the best selling genre of popular

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[33] *Aloha Collection of Hawaiian Songs* (Honolulu: Charles A. K. Hopkins, 1899), 8.14 box 15, folder AA, The Sam DeVincent Collection of Illustrated American Sheet Music, AC.

[34] The music was arranged for piano and voice with no mention of ukulele or guitar tablature. Allan Dunn, A.R. Cunha, W.H. Coney, and Soloman Hiram, *Songs of Hawaii* (Honolulu: Bergstrom Music Company, 1902), 3, 8.14 box 16, folder EE, The Sam DeVincent Collection of Illustrated American Sheet Music, AC.

music. The company put out 146 Hawaiian records that same year, including the wildly popular "Good-bye Honolulu" which won over audiences in Europe. Broadway musicals also rode the wave of the Hawaiian music movement. The run of *Robinson Crusoe, Jr.*, which started in 1916, featured Al Jolson singing "Yaaka Hula Hickey Dula."[35] Native Hawaiian players performed in *Bird of Paradise*, which made its Broadway premiere in 1912. Touring the country, the show became quite popular with audiences and exposed listeners on the mainland to the guitars and ukuleles of the Hawaiian sound.[36]

In a similar fashion to the music of the mandolin movement, Hawaiian sheet music promoted the beauty of the islands through images and lyrics, though often in an imagined sense. Prominent visuals of beaches and palm trees along with hula girls in seductive poses became synonymous with Hawaiian music and non-Hawaiian music played on Hawaiian style instruments. In some cases the sheet music offered confusing images and lyrics that seemed to lump depictions of indigenous Hawaiians along with other "exotic" or foreign peoples such as belly dancers from the Middle East and Native Americans. To further complicate matters, American audiences, such as ones in Philadelphia in the first decade of the twentieth century, also encountered Hawaiian performers dressed as Native Americans. This would have been confusing

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[35] Okihiro, 187-188; Located in New York City, Tin Pan Alley was the collective term for the song writing industry that evolved in the early twentieth century producing commercialized music for a variety of genres. David Suisman, *Selling Sounds: The Commercial Revolution in American Music* (Cambridge: Harvard University Press, 2009), 21-22.

[36] Walsh and King, *The Martin Ukulele*, 9.

to audiences who were not familiar with either Hawaiian or Native American culture, potentially fueling imagined notions of what Hawaii both looked and sounded like.[37]

The Hawaiian guitar and ukulele added an exotic and novel sound to popular music of the period, a phenomenon that spawned countless arrangements done in the Hawaiian style. Arranger Charles A. K. Hopkins alluded to this possibility in an 1899 folio of sheet music stating that with annexation the Hawaiian people "will soon entune their natural musical capabilities to the songs of other lands."[38] A good example of this process can be seen in the sheet music for the Irish melody, "I'll Take You Home Again Kathleen." Devoid of island imagery, the front cover featured a photo of Mark Fisher, who with his 22-piece orchestra was a popular recording artist. The song contained music and lyrics along with guitar chords, ukulele chords, and a Hawaiian guitar chorus. In addition to the song, the last page and back cover advertised sheet music available from the Calumet Music Company including sixty-six similar Hawaiian style arrangements for distinctly non-Hawaiian songs such as "Home on the Range," "La Cucaracha," "Londonderry Air" and "Swing Low, Sweet

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[37] Gary Okihiro's book offers an excellent overview of the confusing ethnic identities as presented in Hawaiian sheet music in the early decades of the twentieth century. He also highlights the mixing of American Indian and Hawaiian tropes in sheet music as well as performances by the Carlisle Indian School band at the 1893 World's Columbian Exposition. Okihiro, 189-190.

[38] *Aloha Collection of Hawaiian Songs* (Honolulu: Charles A. K. Hopkins, 1899), 3, 8.14 box 15, folder AA, The Sam DeVincent Collection of Illustrated American Sheet Music, AC.

Chariot." The back cover advertised songbooks featuring music by famous recording artists (Gene Autry, Tom Mix), spiritual hymns, and collegiate fight songs.[39]

Many similarities can be found between the introduction of the mandolin and ukulele in America, though the BMG community was split over whether the instruments were equal. Both are high-pitched instruments that have a unique, exotic sound. As a 1902 book of sheet music proclaimed "There is in it an inexplicable something which never fails to charm."[40] The unique tonal qualities of the ukulele, like the mandolin, help to add a certain flavor to music, sometimes evoking far away places in the minds of the listener. Even traditional pieces such as a Stephen Foster ballad are given a different musical feel when played on the ukulele. They are extremely portable and have a low acquisition cost. Indicative of some divisions within the musical community, the BMG magazines treated the Hawaiian music movement (along with jazz music) as a fad and did not critically endorse the new instruments and techniques that it produced. Despite the lack of critical acceptance by BMG members, the literature of the community was packed with advertisements and

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[39] Thomas P. Westendorf, "I'll Take You Home Again Kathleen" (Chicago: Calumet Music Co., 1935), in author's possession.

[40] Interestingly, the same passage parallels the imagined Italian landscape as described in Chapter 2 of this dissertation when it describes the Hawaiian sound as being "like the music of the Italian boatman as he sends his gondola along, is never forgotten, whether heard on native soil or foreign shore." Allan Dunn, A.R. Cunha, W.H. Coney, and Soloman Hiram, *Songs of Hawaii* (Honolulu: Bergstrom Music Company, 1902), 3, 8.14 box 16, folder EE, The Sam DeVincent Collection of Illustrated American Sheet Music, AC.

articles concerning Hawaiian music, steel guitars, and ukuleles, a testament to the popularity of the movement with the readership of the BMG magazines.[41]

Hawaiian style orchestras and ensembles that included ukuleles and Hawaiian guitars began to grow throughout the country by the 1910s, modeled in a similar fashion to the mandolin and BMG ensembles and orchestras that had been popular since the late nineteenth century. The trendy and popular ukulele replaced the mandolin as the lead instrument in these ensembles. As before, college campuses embraced the ukulele.[42] The diminutive instruments worked well for playing the melody or solo lines in the music with guitars functioning as rhythm accompaniments for the ensemble. Hawaiian guitar groups also popped up around the country. Manufacturers even tried to get consumers to form their own ensembles, presumably to outfit each one with their own line of instruments. The Gibson Company advertised the possibility of starting a Hawaiian guitar orchestra with your friends. "Such a group can be quickly trained and developed to where it will be the center of popularity in your locality. You will receive many more invitations than you can accept." The instrument was flexible enough to be used both performing in the community or

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[41] Jeffrey J. Noonan, *The Guitar in America: Victorian Era to Jazz Age* (Jackson, MS: University Press of Mississippi, 2008), 129.

[42] Advertisements in *The Technique*, the student newspaper of Georgia Tech, mention ukuleles several times during the height of the Hawaiian music movement. One in 1917 for the Cable Piano Company in Atlanta offered "Genuine Hawaiian Ukuleles" for sale. The other ad from 1926 for local Atlanta clothing store Pollock & Berg discussed the upcoming football game between interstate rivals Georgia and Georgia Tech. The advertisement featured a supposed conversation between female dates attending the game with one remarking, "strum a little good luck tune on your Uke for Tech for me." Cable Piano Company, (advertisement), *Technique*, October 16, 1917; Pollock & Berg, (advertisement), *Technique*, November 12, 1926.

within the confines of your own home, advertised as "very popular for social affairs and for playing in the home."[43]

Producing Hawaiian Style Instruments and Accessories

In order to perform the new lap-style Hawaiian method of playing, the first innovators adapted their guitars by re-engineering already existing models, ideas that led producers to commodify these changes in their inventories. By manually raising the strings and using metal steels (everything from knives to nails), musicians demonstrated a degree of interpretive flexibility in modifying their instruments in ways not originally intended by the manufacturers.[44] Eventually, companies such as Martin and Lyon & Healy recognized the potential in creating new Hawaiian style guitars, though it took until the late 1910s and early 1920s before makers fully embraced the Hawaiian music movement.[45]

A good example of the flexibility of the acoustic guitar can be seen in the use of an accessory that allowed guitarists to easily switch the setup of their guitar

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[43] Gibson, Inc., *Gibson Banjos, Guitars, Mandolins, Ukuleles* (Grand Rapids, MI: The Jaqua Company, 1930), 42, MIMA; See Chapter 2 of this dissertation for a more detailed discussion of the ethnic music movement involving the mandolin and the rise of mandolin ensembles and orchestras beginning in the 1880s.

[44] The concept of interpretive flexibility explores how users adapted certain technological innovations for uses not originally intended or marketed by the manufacturer. One of the best examples of interpretive flexibility is seen in Kline and Pinch's examination of how rural automobile owners adapted their cars for use with agricultural work as tractors and wood splitters. Ronald Kline and Trevor Pinch, "Users as Agents of Technological Change: The Social Construction of the Automobile in the Rural United States," *Technology and Culture* 37, no. 4 (October 1996): 763-795.

[45] Volk, 9.

between Spanish and Hawaiian styles in a matter of minutes. Manufacturers first offered accessories often called "adjusters" or "nut adjusters" to replace the jury-rigged models used by the first Hawaiian style guitarists. Joseph Kekuku figured out that if he raised the strings on his guitar, he could more easily slide the steel bar across them. He also preferred using steel strings to gut strings as the material offered more sustain.[46] Gibson advertised their Hawaiian guitars (as early as 1921) as being flexible instruments that could be easily modified to play in both Spanish and Hawaiian style, essentially two instruments in one. Seeking to lure customers with the practicality of this accessory, the company assured consumers that "with a very simple device, any "Gibson" Guitar may be equipped for steel playing and as readily changed back to the regular style."[47] In 1923, Martin offered a guitar "specially built for Hawaiian playing" made of koa and mahogany complete with a nut adjuster to change back and forth between Spanish and lap style playing.[48] The new cheap accessories made by manufacturers could quickly convert a standard guitar to a Hawaiian style instrument

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[46] Okihiro, 179.

[47] William Ivey, ed. *The Gibson 1921 Catalog*, Historical Instrument Series No. 1 (Grand Rapids, MI: The Cargill Company, 1921; repr. Nashville, TN: The Country Music Foundation Press, 1973), 15, MIMA; Gibson, Inc., *Gibson Instruments, Catalog N* (Grand Rapids, MI: The Jaqua Company, 1923), 30, MIMA.

[48] C. F. Martin & Co., *Martin String Instruments* (Nazareth, PA: C. F. Martin & Co., 1923), 20-21, MIMA.

for as little as $0.25.[49] Even in 1939, makers such as Epiphone still marketed a "Hawaiian Guitar Nut Adjuster" for $0.35.[50]

With the growth in popularity of Hawaiian music and instruments, guitar manufacturers, in addition to retrofitting existing guitars for Hawaiian playing, developed distinctly Hawaiian style guitars that could only be used for that particular musical technique. In order to accommodate players resting the guitar on their lap, producers had to change several aspects of the instrument. The neck of a Hawaiian style guitar was often made to be square, rather than the smooth, rounded edge of parlor guitars. This allowed the player to more easily set the neck of the guitar on his or her knee with the top of the guitar positioned parallel to the player's lap. Lyon & Healy introduced several models of steel string guitars made of new types of wood, including koa, with higher action and raised nuts to complement the slack-key style. These instruments featured innovative designs, materials, and fostered the interest in performing music in the exotic island style.[51] Introduced in 1915, the Washburn Style 1522 was the first Hawaiian guitar for the Lyon & Healy line. It is possible that some of these models may have come with steel strings as early as 1915, though they became standard by 1919.[52] The Fall 1917 Sears-Roebuck catalog featured the first

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[49] Gibson, Inc., *Guitars, Banjos, Mandolins, Ukuleles by Gibson, Catalog W* (Kalamazoo, MI: Gibson, Inc., 1934), 74, MIMA.

[50] Epiphone, Inc., *Epiphone Musical Instruments* (New York: Epiphone, Inc., 1939; repr., Washington Mills, NY: Gilded Age Reprints, n.d.), 40, MIMA.

[51] John Teagle, *Washburn: Over One-Hundred Years of Fine Stringed Instruments* (New York: Music Sales Corp., 1996), 107.

[52] The impact of steel strings on the acoustic guitar will be discussed further in Chapter 4 of this dissertation. They were particularly well suited to Hawaiian style

two Hawaiian models from the mail-order house, a "Hawaiian (Steel) Guitar Set" and a "Hawaiian Style (Steel) Guitar."[53]

Another important aspect of the Hawaiian music movement was the introduction of a celebrity endorsed signature model Hawaiian style guitar. In 1934, Roy Smeck endorsed one of the first signature models of guitars thereby enabling the Gibson Company to distinguish its instruments from the competition by adding the cultural value associated with Smeck's popularity.[54] These instruments branded specific models with performers' names on the headstock of the instrument, offering aspiring musicians of all ages the chance to play the same guitar as their musical idols.[55] The introduction of these guitars also represented a shift in the way companies built and marketed performer endorsed instruments. While Nick Lucas was the first

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playing. Steel strings played an essential role in the development of arch-top and resophonic guitars. Hubert Pleijsier, *Washburn Prewar Instrument Styles: Guitars, Mandolins, Banjos and Ukuleles 1883-1940* (Anaheim Hills, CA: Centerstream Publishing LLC, 2008), 55.

[53] Logsdon, "Steel Guitar," 12.

[54] Gibson's first artists' series guitar was a Nick Lucas model. Gibson hailed him as a "popular vaudeville, recording, radio, and "talkie" headliner. Gibson, Inc., *Gibson Guitars, Banjos, Mandolins, Ukuleles Catalog U* (Kalamazoo, MI: Ihling Bros. Everard Co., 1932; repr.), 11, MIMA; Sallis, 77.

[55] The use of brand names also conveyed a sense of trust or goodwill between the consumer and the product endorser, though it is difficult to tell if consumers equated branded products with something of high quality. Fans of Smeck might say to themselves, "If it was good enough for Roy Smeck to play and lend his name to, it must be good enough for me!" This idea was widely promulgated by companies such as Eastman Kodak in the early decades of the twentieth century. Susan Strasser, *Satisfaction Guaranteed: The Making of the American Mass Market* (New York: Pantheon, 1988), 46-47, 52.

Gibson artist to get the signature series treatment, it is significant that Roy Smeck, strictly an instrumentalist rather than a singer, and a Hawaiian guitar became the second celebrity endorsed signature model produced.

Although catalogs had featured celebrity endorsements of musicians since the 1890s, the Gibson artist series represented a new way to capitalize on the name of a famous player in order to sell instruments. Guitar makers were no different than companies such as General Mills that used Babe Ruth's cultural capital to put Wheaties cereal on breakfast tables nationwide.[56] The practice of supplying well known musicians with custom instruments was not a new idea. William Foden, Vadah Olcott-Bickford, and other prominent guitarists at the turn of the century received personalized instruments built by Martin in the 1910s. The "Foden Specials," for example, were sold exclusively to his students, but only in an extremely limited number. Olcott-Bickford's was not available to the general public at first and only later as "Style 44" through exclusive dealers.[57] The shift by Gibson entailed marketing and producing these custom models in large numbers available to the general public.

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[56] Cultural capital is a concept formulated by social theorist Pierre Bourdieu that refers to the symbolic collection of skills, attributes, and traits acquired by an individual. Pierre Bourdieu, "The Forms of Capital," in John Richardson ed. *Handbook of Theory and Research for the Sociology of Education* (New York: Greenwood Press, 1986), 241-258; For an explanation of branding, see Roland Marchand, *Advertising the American Dream: Making Way for Modernity, 1920-1940* (Berkeley: University of California Press, 1985); Strasser, 19, 29-31; For using celebrity endorsements to sell products, see Warren I. Susman, *Culture as History: The Transformation of American Society in the Twentieth Century* (New York: Pantheon, 1984), 147.

[57] Richard Johnston, Dick Boak, and Mike Longworth, *Martin Guitars: A History*, rev. ed. (New York: Hal Leonard, 2008), 50-51.

They hoped to increase sales by combining the name of a famous performer with a particular model emblazoned with their name on the headstock.

Roy Smeck was no stranger to endorsing musical instruments having lent his name to both the Bacon & Day Company and the Harmony Company in the 1920s. Part of his contract for a Bacon & Day Roy Smeck Tenor Banjo model in 1926 stipulated that he would promote the instrument by demonstrating it in music stores in wherever he happened to be playing at the time.[58] One of Smeck's longest lasting endorsement deals came from the Harmony Company of Chicago starting in either 1928 or 1929. Capitalizing off of his success in the "Vitaphone" film, the company put out a line of guitars, banjos, mandolins, ukuleles, and eventually electric Hawaiian guitars with the Roy Smeck name. While he did not participate in the design of the Harmony instruments, Smeck did give them feedback on the models they brought to him.[59]

To connect Roy Smeck's notoriety with a model best suited for Hawaiian style playing, Gibson created a two models in March 1934 that bore his name. Smeck's proficiency in performing on Hawaiian style guitar led to him being chosen as the second artist to market a line of Gibson guitars. Consumers had the option of choosing a high-end version, the Roy Smeck Radio Grande for $100 or a low-end model, the

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[58] Sallis, 85; Both C. F. Martin & Company and Mario Maccaferri (a maker of plastic instruments) tried to get Smeck to add his name to their brands but he refused. Cortese, 60.

[59] He endorsed instruments for them until 1971. Sallis, 89-90; Concerned with the "ease of playing an instrument," Smeck brought his old Bacon & Day banjo model out to Harmony because he liked how it played. Harmony then copied the design to use on its own brand of Roy Smeck banjos. Roy Smeck, quoted in Yellin, "Sixty Years," 33.

Roy Smeck Stage De Luxe for $50. The catalog assured customers that this was the same exact guitar used by Smeck for his performances stating, "The Roy Smeck Gibson Hawaiian Guitars are really duplicates of instruments made for Mr. Smeck to use professionally in all his professional work."[60] The Hawaiian style dreadnought guitars were set up for lap style playing with high action.[61] A key difference between the two models was that each contained a different combination of wood. The Stage De Luxe had a spruce top and mahogany body. The body of the Radio Grande came from Brazilian rosewood. The guitars featured ivoroid fret markers that were set flush with the guitar neck to allow for ease of playing lap-style with a steel.[62] The top of the Stage De Luxe came in a sunburst finish, an eye-catching shade that could be found on many fretted stringed instruments in the 1930s.[63] Smeck recalled, "[Gibson] brought

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[60] Gibson, Inc., *Guitars, Banjos, Mandolins, Ukuleles by Gibson, Catalog W* (Kalamazoo, MI: Gibson, Inc., 1934), 24-25, MIMA.

[61] A dreadnought is a large acoustic guitar with a strong bass response produced starting in the 1910s by Martin and Lyon & Healy. These guitars and their development will be discussed in more detail in Chapter 4 of this dissertation.

[62] Ivoroid is a kind of celluloid plastic used in guitars made after World War I to simulate the look of ivory. Frank Ford, "Ivoroid," Illustrated Glossary, *Frets.com*, October 8, 1998, accessed April 30, 2009, http://www.frets.com/FretsPages/General/Glossary/Ivoroid/ivoroid.html; Gibson, Inc., *Gibson Instruments*, *Catalog Y* (Kalamazoo, MI: Gibson, Inc., 1937), 31, MIMA; NMM 10033, Hawaiian Guitar by Gibson, Inc., Kalamazoo, MI, 1942, Roy Smeck Stage De Luxe, National Music Museum, The University of South Dakota, Vermillion.

[63] Gibson, Inc., *Guitars, Banjos, Mandolins, Ukuleles by Gibson, Catalog W* (Kalamazoo, MI: Gibson, Inc., 1934), 24-25, MIMA; NMM 10033, Hawaiian Guitar by Gibson, Inc., Kalamazoo, MI, 1942, Roy Smeck Stage De Luxe, National Music Museum, The University of South Dakota, Vermillion; Cortese, 61.

them to me and they asked me how I liked them. That was it. I made all my Hawaiian records on those instruments. They had that big tone."[64]

Despite its relatively short run, the Roy Smeck line of Gibson Hawaiian guitars not only became prized collector's items, but also marked one of the earliest attempts by a manufacturer to tie the popularity of a commercial recording artist to a signature branded guitar. [65] Unfortunately, bad timing had a disastrous effect on the Roy Smeck models as the effects of the Great Depression and changes on the Home Front during World War II negatively impacted sales. Releasing an expensive guitar model during the height of the Depression could not have helped, as most Americans would have been scared away by the sticker price, especially for the Radio Grande model. Gibson discontinued both models by the 1940s (the Radio Grande in 1939 and the Stage De Luxe in 1943), due in part to the wartime contraction of the market and the limits placed on manufacturers, especially Gibson's use of steel.[66] A commercial

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[64] Roy Smeck, quoted in Cortese, 61.

[65] Folk musician-turned-country/rocker Jerry Jeff Walker, who penned "Mr. Bojangles," wrote a song about buying a Stage De Luxe in a pawnshop in Ohio for $90 sometime prior to 1972. Outside of its folk status, the guitar still has value amongst collectors for its powerful sound. To take full advantage of this, many existing Smeck models have been converted for Spanish style playing. Jerry Jeff Walker, "That Old Beat Up Guitar," recorded 1972, New York, on *Jerry Jeff Walker*, Raven Records RVCD-320, 2011, CD, originally released in 1972; For a brief discussion of converted vs. original Smeck models, see Jonathan Kellerman, *With Strings Attached* (New York: Ballantine Books, 2008), 121.

[66] George Gruhn, and Walter Carter, *Gruhn's Guide to Vintage Guitars, An Identification Guide for American Fretted Instruments* (San Francisco: Miller Freeman Books, 1999), 155; Cortese, 60-61; According to the former president of Gibson, Ted McCarty, the company stopped manufacturing instruments during World War II and stored away many of the tools, dies, and fixtures that had been used to produce guitars,

disappointment, only about 200 mahogany Stage De Luxes and fewer than a hundred rosewood Radio Grandes were produced.[67] The Roy Smeck models helped pave the way for future Gibson artist series, such as the Les Paul electric guitar, probably one of, if not the most, successful celebrity branded guitar ever to be produced.

Starting out as everyday objects such as combs or pieces of metal from the railroad, guitar steels became standard issue accessories by the start of the 1920s, for musicians who wanted to learn to play Hawaiian style guitar. Even before the dissemination of commercially available steel bars, some players, like Speedy West, resorted to using a knife handle instead of a bar when he learned to play slide guitar as a child.[68] Manufacturers offered Hawaiian guitar steels in an assortment of sizes and varieties. Some resembled combs while others looked simply like a non-descript piece of rolled metal. Joseph Kekuku fashioned his own cylindrical steel in the machine shop of the Kamehameha School.[69] Players would typically hold the steel in their left hand and press it firmly against the string to form notes and chords. The sliding of the steel up and down the fingerboard produced the recognizable glissandos that epitomized the Hawaiian style of guitar playing.

Guitar steels came in all sorts of shapes and varieties [Figure 9]. By the mid-1930s, Gibson offered eight different types of steels with catchy, island-themed names

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due to the government rationing of metal during wartime. Ted McCarty, November 15, 1996, video interview, box 12, Electric Guitar Video Documentation, 11/9/96-11/16/96, AC.

[67] Kellerman, 120.

[68] Logsdon, "Steel Guitar," 13.

[69] Okihiro, 179.

such as “Hilo Beach” and “Hawaiian moon.” The basic steel bar was simply a 3” rounded, polished cylinder with flat ends stamped with a company logo. The bullet nosed steel, so named for having one rounded end to form a bullet-like head, was another popular model. Other guitar steels resembled combs, typically 3” x 1” x ¼” thin rectangular pieces of metal. Some were designed with ergonomic grips that were “embodied with comfort while others offered such features as “a double groove...designed for utility and ease of execution.” Players had the option of purchasing one steel or a dozen of the same model.[70] By the 1930s, these accessories offered manufacturers another opportunity to cash in on the celebrity status of musicians by marketing steels stamped with the name of players such as Nick Manoloff and Roy Smeck. In-store displays featured photos of the musicians endorsing their brand of steels. Makers such as Regal often sold complete outfits that included a set of accessories consisting of a guitar steel, fingerpicks and an instruction book with the purchase of Hawaiian style guitars.[71]

Hawaiian style players utilized new types of guitar picks that attached to a player’s fingers. Instead of the flat, plastic or celluloid picks which would be held between the thumb and fingers of the player’s strumming hand, Hawaiian style players

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[70] Gibson, Inc., *Guitars, Banjos, Mandolins, Ukuleles by Gibson, Catalog W* (Kalamazoo, MI: Gibson, Inc., 1934), 74-76, MIMA; Fred Gretsch Mfg. Co. *Gretsch Musical Merchandise Catalog Number 40* (Chicago: Fred Gretsch Mfg. Co., 1939), 97, NMTCC.

[71] Tonk Bros. Co., *Musical Merchandise Catalog No. 49* (Chicago: Tonk Bros. Co., 1935), 98, MIMA; Buegeleisen & Jacobson, Inc., *B and J Counter Book of Musical Merchandise No. 851* (New York: Buegeleisen & Jacobson, Inc., n.d.), 69, MIMA; NMM 3468 Hawaiian Guitar, Regal, Chicago, IL, [ca. 1930], National Music Museum, The University of South Dakota, Vermillion; Cortese, 63.

used thumb and fingerpicks that fit securely over each finger. These accessories acted as an extension of the player's fingernails and allowed the player to pluck multiple strings at the same time without strumming. While thumb picks for guitars predate the Hawaiian music movement, finger picks became popular by the 1920s, thanks to players who relied on them to play Hawaiian steel guitar.[72] Just about every manufacturer offered a variety of picks for sale at a nominal price [Figure 9]. In 1925, Lyon & Healy sold thumb and finger picks ranging from $0.50 to $2.40 each or $0.32 for a set of three at wholesale prices. National-Dobro offered metal finger picks for $0.10 in the 1930s. The picks came in several types of materials including nickel-plated metal, nickel-silver, tortoise shell, and celluloid. Consumers could even purchase picks endorsed by their favorite celebrity players including Roy Smeck.[73]

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[72] Will Hoover, *Picks! The Colorful Saga of Vintage Celluloid Guitar Plectrums* (San Francisco: Miller Freeman Books, 1995), 88-90.

[73] Lyon & Healy, Inc., *Lyon & Healy Musical Merchandise Catalog, 62nd Year Edition* (Chicago: Lyon & Healy, Inc., 1925), 126, MIMA; Metropolitan Music Co., *Musical Merchandise Wholesale Catalogue No. 10* (Orange, CT: Wilson H. Lee Company, 1935), 151, Curatorial Files, DCA; National-Dobro Corp., *National, The Line of Champions* (Chicago: National-Dobro Corp., n.d.), 48, NMTCC; Hoover, 90-92; Grossman Music Co., *Grossman Music Co. Catalog 15* (Cleveland: Grossman Music, Co., 1935), 102-103, MIMA.

GUITAR PICKS AND STEELS

No. 4005 No. 4008 No. 4009

No. 4009C No. 40E17 No. 40N19

GUITAR THUMB PICKS

No. 4006—Nickel-silver thumb pick; standard pattern.....Dozen, $0.40 Gross, $5.75

No. 4008—Tortoise-celluloid thumb pick; medium size.....Dozen, $0.40 Gross, $5.00

No. 4009—Ivory celluloid thumb pick; extra heavy; polished....Dozen, $0.80 Gross, $9.00

No. 4009C—Large size thumb picks, extra heavy, made of 2-color celluloid, polished. Dozen, $0.90 Gross, $9.60

No. 40E17—Roy Smeck thumb pick, special design. Heavy tortoise-celluloid...Doz. $1.75

No. 40S20—STEVENS all-metal thumb pick. An improved style. Doz. $1.00 Gross, $10.80

No. 40N19—NATIONAL all-metal thumb pick. The patented perforations give secure grip.....Dozen, $1.50 Gross, $15.00

No. 70

No. 903

No. 905

No. 72—Guitar steel, minimum priced, for student use. 3¼-inch size. Nickel-plated with knurled sides.....Doz., $1.80

No. 903—Elton round guitar steel, nickel-plated and highly polished. Choice of ¾" diameter, 2⅝" length or ¾" diameter, ⅞" length. Price, either style, packed one dozen in a box.....Doz., $3.90

No. 905—Elton "Diamond Grip" 3⅜ in. guitar steel. Heavy weight; knurled grip; polished edge. Chromium-plated, packed one dozen in a box.....Doz., $3.90

DOBRO TRANSPARENT PICKS

Fit snugly but don't hurt the fingers, and give sweet, non-metallic tone.

No. 40D23—Dobro Guitar Pick Assortment, on display card; 18 finger picks and 12 thumb picks in assortment sizes. Card, $5.60

No. 40D24—Finger picks ...Doz., $1.44

No. 40D25—Thumb picks ...Doz., $1.44

No. 4004

GROVER "BULLET" PATTERN HAWAIIAN GUITAR STEELS

Finer technique and performance come easy when you use the new "bullet-end" Grover Steel. Superior construction throughout.

STAINLESS STEEL

The hardest, finest steel made. No plating to wear off under the file-like action of wound strings. In fact, almost wear-proof.

No. 27G50—Stainless Steel, ⅝". Dz., $12.00

No. 27G51—Stainless Steel, ¾". Dz., 15.00

BLUE STEEL

No. 27G52—Blued Steel, ⅝". ...Doz., $4.80

No. 27G51—Blued Steel, ¾". ...Doz., 6.00

PLASTIC OVER STEEL CORE

A colorful steel for the electric guitar player. Eliminates all string noises.

No. 27G55—Plastic, ⅝". .....Doz., $9.00

No. 27G56—Plastic, ¾". .....Doz., 12.00

GROVER STEEL DISPLAY

No. 27G59—Eight assorted Grover "BULLET" Steels with a total retail value of $6.00 put up on hardwood easel .... Each, $6.60

No. 4007 No. 40E17 No. 4012

No. 40S21 No. 40N22

GUITAR FINGER PICKS

No. 4007—Nickel-silver guitar finger picks. A favorite pattern. Doz., $0.40 Gross, $5.75

No. 40E17—ROY SMECK finger picks. Polished nickel-silver. A special shape designed by Mr. Smeck.....Dozen, $1.75

No. 4012—Transparent celluloid finger picks, polished finish. Very comfortable and give nice tone.....Doz., $1.00 Gross, $10.00

No. 40S21—STEVENS guitar finger picks; polished nickel-silver. Doz., $1.00 Gross, $10.80

No. 40N22—NATIONAL finger picks; polished nickel-silver. The patented perforations give easy fit.....Doz., $1.50 Gross, $16.20

"JEWEL" CELLULOID GUITAR SET

No. 4004—Consists of large, extra heavy celluloid thumb pick and two transparent celluloid finger picks mounted on card. Very popular because of their fine tone-production and easy, comfortable fit.....Doz. Sets, $3.00

No. 904

No. 900

No. 75

No. 904—Roy Smeck round Hawaiian guitar steel, made of hardened bronze, finished in gold color. Diam. ⅝", length 3½; nice concaved end for easy handling. Packed each in individual box.....Doz., $6.75

No. 900—Elton "Professional" guitar steel. Polished nickel-plated finish. Grooved on each side to fit the natural grip of thumb and fingers. Each in leather pocket case. Doz., $9.60

No. 75—STEVENS patented "Interchangeable" steel, fits the three playing fingers and gives free, easy motion. Finished in polished chromium-plate. Packed individually. Doz., $10.80

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Chicago THE FRED. GRETSCH MFG. CO. Brooklyn

Figure 9 Consumers could choose from a wide variety of guitar picks and steels. Fred Gretsch Mfg. Co. *Gretsch Musical Merchandise Catalog Number 40* (Chicago: Fred Gretsch Mfg. Co., 1939), 97. Courtesy of the Smithsonian Libraries, Washington, D.C.

Using lessons learned from the mandolin movement, guitar makers supplied mainland consumers with ukuleles so they could participate in the Hawaiian music movement. With an increasing number of musicians playing the ukulele in orchestras, fretted instrument manufacturing companies needed to change their production plans to accommodate this demand. As Martin's own catalog attested, "The Ukulele is a miniature guitar; therefore the logical way to build ukuleles is to use and adapt guitar

principles."[74] C. F. Martin & Company had initially attempted to produce and sell ukuleles in 1907, but the instruments did not prove to be profitable. It turns out that Martin was a bit ahead of the curve when it came to consumer interests in the islands. After starting production again in 1915 making models for Ditson to sell, they officially re-introduced a line of Hawaiian ukuleles in 1917. The products became so popular that Martin decided to expand its factory to accommodate the orders. The company again expanded in 1924 and 1925. By 1926, Martin reached its peak production of 14,000 ukuleles. The ukulele gave Martin a new avenue by which to survive potential economic downturns or the rise and fall of the guitar's popularity by adding another marketable commodity to its flexible batch production.[75]

Ukuleles represented a relatively cheap, easy to produce commodity that guitar manufacturers could sell to low-end buyers. In 1922, anyone with access to the Montgomery Ward catalog could get a ukulele for as low as $1.06 including shipping.[76] Some even made their own ukuleles out of everyday objects, such as Bobby Edwards, "The Village Troubadour," a Greenwich Village painter and

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[74] C. F. Martin & Co., *Martin String Instruments* (Nazareth, PA: C. F. Martin & Co., 1923), 39, MIMA.

[75] Walsh and King, *The Martin Ukulele*, 11-13, 16-31, 36-53, 56-71, 78-79, 85, 88-92; Jim Washburn and Richard Johnston, *Martin Guitars: An Illustrated Celebration of America's Premier Guitarmaker* (Emmaus, PA: Rodale Press, Inc., 1997), 69, 95.

[76] Montgomery Ward & Co., *Montgomery Ward & Co. Catalog* (Chicago: Montgomery Ward & Co., 1922), 87, 102, NTCC.

instrument maker in New York City who fashioned the island instrument out of a cigar box.[77]

The size and versatility of the ukulele made it easy to sell in large quantities to a wide range of consumers. Between 1929 and 1931, ukulele production increased from 142,896 to 203,116. Despite the onset of the Depression, over 50,000 more ukuleles were produced in 1931 than guitars.[78] Manufacturers like Lyon & Healy touted it to be "Everybody's Instrument."[79] It could be marketed as a serious adult musical instrument (in the fashion of Hawaiian and vaudeville performers) or as a novelty (something that could be placed in the hands of a child). The small size of the instrument made it easier for children to grasp. Likened to a toy version of a guitar, the ukulele was more affordable than a guitar and even more portable. Simultaneously, popular musicians such as Roy Smeck (and later Arthur Godfrey and Tiny Tim) made the ukulele attractive to adults as a serious musical instrument that was also easy to play.[80]

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[77] Jessie Tarbox Beals, *Three-quarter length portrait of Bobby Edwards standing indoors, in front of photographer's backcloth. Edwards is holding a ukulele he made from a cigar box; he is dressed in a painter's smock*, photograph, ca. 1912-1918, Jessie Tarbox Beals Photographs, 1896-1941, Schlesinger Library Radcliffe Institute, Harvard University; 95.127.44, Jessie Tarbox Beals, *Bobby Edwards, The Village Troubador*, photograph, ca. 1910s - 1920s, Museum of the City of New York.

[78] American Society of Composers, Authors and Publishers, *Who Uses Music and Why* (New York: ASCAP, 1934), 12, NTCC.

[79] Lyon & Healy, Inc., *Band and Orchestra Instruments* (Chicago: Lyon & Healy, 1930), 31, MIMA.

[80] Tranquada and King, *The Ukulele,* 3.

Ukuleles often featured elaborate paint schemes or decorative decals or "decalcomania" to visually enhance the appearance of the small instrument. From traditional Hawaiian island motifs to Egyptian themed ornamentation, ukuleles were marketed in ways that connected their exotic origins with the physical appearance of the instrument. Ukuleles often straddled the line as objects that were viewed as serious instruments by some and childish or toy instruments by others. From Harmony models that featured cartoons of Harold Teen on the headstock, a ukulele-playing comic character, to the textured crystalline green finish on the top of a P'Mico Collegiate model, consumers could choose from a wide array of colors and decorations [Figure 10].[81] In a curious exchange of visual imagery embodied in the ethnic music movements, some ukuleles were adorned with Italian imagery. For example, Lyon & Healy sold a "Venetian Uke" in 1925 with a body shape that resembled an A-style or teardrop mandolin.[82] The wholesaler G.W. Huntley & Company offered a "La Venicia" ukulele in two styles for either $7.80 or $14 in 1928. The Hawaiian instrument featured an image of a gondolier between the bridge and soundhole on the top of the ukulele.[83] In addition, Gibson produced a Florentine ukulele model available as a special order that came with a hand painted Venetian scene on the top and back of

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[81] Walsh and King, *The Martin Ukulele,* 87; NMM 14147. Ukulele attributed to the Harmony Company, Chicago, ca. 1930-1940, P'Mico brand, National Music Museum, The University of South Dakota, Vermillion.

[82] Lyon & Healy, Inc., *Lyon & Healy Musical Merchandise Catalog, 62nd Year Edition* (Chicago: Lyon & Healy, Inc., 1925), 126, MIMA.

[83] G.W. Huntley & Co., *Wholesale Catalog*, (Chicago: G.W. Huntley & Co., 1928), 735, NTCC.

the instrument.[84] These models all highlight the tricky notion of authenticity relating to instruments of the ethnic music movement. It often did not matter if the decoration matched the right ethnic origin for the instrument, so long as it produced an exotic sounding tone.

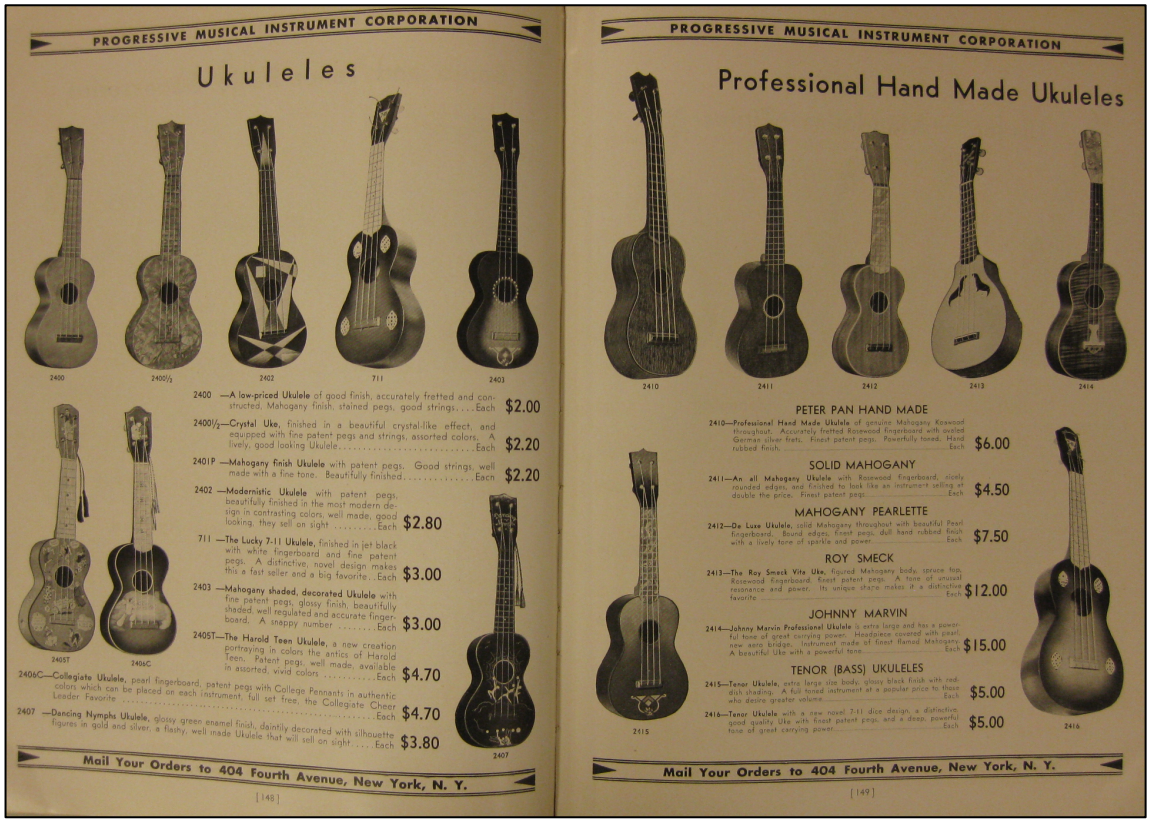

Figure 10 An assortment of ukuleles including Roy Smeck and Harold Teen models. Progressive Musical Instrument Corp., *Musical Merchandise Catalog No. 78* (New York: Progressive Musical Instrument Corp., 1931), 148-149. Courtesy of the Smithsonian Libraries, Washington, D.C.

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[84] Walsh and King, *The Martin* Ukulele, 77.

Marketing the Hawaiian Style

Catalogs of the late 1920s and early 1930s made an effort to educate consumers about the differences between the new guitars made specifically for Hawaiian style playing and the older adaptable or non-Hawaiian models. Gibson, for instance brought the differences to the attention of consumers who might otherwise not be able to distinguish between two. The catalog noted that "Hawaiian or steel guitars are entirely different in tuning and style of playing from Spanish guitars – therefore, Gibson has made two models especially for Hawaiian playing; the design and construction of these instruments was made with only one thing in mind, and that was a perfect Hawaiian guitar, exclusively for playing with steel bar and thumb and finger picks." Another advertisement differentiated between the emerging Hawaiian guitar and the previous adaptable models by stating, "Those who prefer a distinctive Hawaiian guitar find greater strength, easier action, and firmer tone in these especially constructed Hawaiian guitars." The 1930 Martin String Instruments catalog advertised a similar model, "made for Hawaiian playing only."[85]

The text of the catalogs used vividly descriptive language to explain the foreign and exotic sensations that music played on a Hawaiian guitar evoked in a listener's mind. The 1921 Gibson catalog referred to the "weird, appealing music of

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[85] Gibson, Inc., *Guitars, Banjos, Mandolins, Ukuleles by Gibson, Catalog W* (Kalamazoo, MI: Gibson, Inc., 1934), 7, MIMA; C. F. Martin, & Co., Inc., *Martin String Instruments* (Nazareth, PA: C. F. Martin, & Co., Inc., 1929), box 4, Warshaw Collection of Business Americana, AC; C. F. Martin, & Co., Inc., *Martin Guitars, Mandolins, Ukuleles, Retail Catalogue* (Nazareth, PA: C. F. Martin, & Co., Inc., 1930; repr. Catalog Vault, n.d.), 13, MIMA.

the Hawaiian Guitar."[86] Another Gibson catalog from 1923 touted that "the peculiar, weirdly fascinating music of the Hawaiian guitar" that has a "distinctive charm." It also describes how one who has heard it "can ever entirely forget the haunting, sweet appeal of the music."[87] Almost a decade later, Gibson still referred to the "the alluring tones" of the Hawaiian style as "the romantic music of the South Seas."[88] According to Lyon & Healy, the ukulele is said to be "so sweet and mellow in tone."[89] This aural exoticism mirrored the effects of the mandolin movement decades earlier. If the sweet strains of the mandolin could transport audiences to an imagined Italian country setting, then the glissandos from a Hawaiian guitar swept listeners to the sandy shores of the Pacific in their minds.

In addition to Hawaiian style instruments, some manufacturers even sold clothing accessories for performers to dress the part as "Hawaiians." Manufacturers placed both carefully crafted text and photographs of native Hawaiians and non-Hawaiians dressed in "traditional" clothing alongside images of the instrument models to reinforce the notion of a Hawaiian style. It was easier to "play Hawaiian" with leis and hula skirts than it was to become a version of the Spanish students during the

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86 William Ivey, ed. *The Gibson 1921 Catalog*, Historical Instrument Series No. 1 (Grand Rapids, MI: The Cargill Company, 1921; repr. Nashville, TN: The Country Music Foundation Press, 1973), 15, MIMA.

87 Gibson, Inc., *Gibson Instruments, Catalog N* (Grand Rapids, MI: The Jaqua Company, 1923), 30, MIMA.

88 Gibson, Inc., *Gibson Guitars, Banjos, Mandolins, Ukuleles Catalog U* (Kalamazoo, MI: Ihling Bros. Everard Co., 1932; repr.), 8, 63, MIMA.

89 Lyon & Healy, Inc., *Band and Orchestra Instruments* (Chicago: Lyon & Healy, 1930), 31, MIMA.

mandolin music movement. The Hawaiian style was easily identified and later commodified by objects such as leis and grass skirts that any non-Hawaiian could don in order to appear to be from the islands. This tradition of appropriating the dress and customs of ethnic groups was not a new phenomenon for Americans, especially the numerous groups and individuals who had repurposed the clothing of Native Americans as costumes.[90] When packaged with the imagery of hula girls etched into guitars and leis available for purchase in music stores, the Hawaiian style offered players an opportunity to not only play the music of the islands but to also make themselves appear "authentically" Hawaiian. The Three Masqueria Sisters, who appeared in Gibson catalogs in the 1910s wearing vaguely ethnic costumes, again surfaced in the 1921 catalog. This time they dressed in grass skirts and shared the same page as photos of a Hawaiian guitarist named W. H. Ober and the Hawaiian Club of the Spokane Gibson Orchestra.[91] In 1935, the Oahu Guitar Company advertised leis and "Genuine hand-made hula skirts" that "reflect the true spirit of Hawaiian natives" in the same catalog with its musical instruments. The catalog assured players that these items were "just like those worn by the dusky Hawaiian Beauties of the Island of the Pacific."[92]

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[90] For an examination of how white Americans appropriated some aspects of Native American identity while rejecting others, see Philip Joseph Deloria. *Playing Indian*. (New Haven: Yale University Press, 1998).

[91] William Ivey, ed. *The Gibson 1921 Catalog*, Historical Instrument Series No. 1 (Grand Rapids, MI: The Cargill Company, 1921; repr. Nashville, TN: The Country Music Foundation Press, 1973), 15, MIMA.

[92] Oahu Publishing Co., Inc., *Oahu Publishing Company, Catalog No. 19* (Cleveland: Oahu Publishing Co., Inc., 1935), 17, MIMA.

Using aspirational marketing techniques, the advertisements offered tantalizing future possibilities for students if they took up the Hawaiian guitar. One conservatory advised readers to "start at once and join the band wagon of success and popularity."[93] Another tried to tug at the heartstrings of lovelorn consumers by claiming "You'll never be lonesome with this beautiful Hawaiian guitar."[94] A 1929 Gibson catalog featured a picture of the Miles Hawaiian Guitar Club from Knoxville, Tennessee that consisted of six females in grass skirts and leis and one gentleman dressed in white, all holding Hawaiian style guitars. Below it appeared the line "Who, with the love of music in their hearts can resist the soft, seductive, allure of the Guitar played in the Hawaiian Style."[95]

Ukulele and Hawaiian Guitar Method Books

Method books for teaching Hawaiian style guitar appeared as early as the 1910s, allowing amateur players to learn the basic skills of guitarists they heard on early recordings, in public performances, and, from the 1920s onward, over the airwaves. Correspondence courses and method books were popular options for young musicians who wanted to learn Hawaiian guitar but did not live near an instructor

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[93] Hawaiian Studio No. 569 of New York Academy of Music, "Quickly Learn to Play Hawaiian Guitar, Play Like This Native" (advertisement), *Popular Science*, December 1925, 165, NMAH Library, Smithsonian Libraries.

[94] First Hawaiian Conservatory of Music, Inc., "Play the Hawaiian Guitar Just as the Natives do" (advertisement), *Popular Science*, January 1928, 150, NMAH Library, Smithsonian Libraries.

[95] Gibson, Inc., *Gibson Mandolins, Guitars, Ukuleles, The Music Pals of the Nation, Catalog R* (Gibson, Inc., 1929), 6, MIMA.

versed in the style. William J. Smith was one of the most prominent music publishers of the 1920s, offering students a variety of ways to quickly and easily learn Hawaiian style guitar, including "The Improved Kamiki Hawaiian Guitar Method."[96] One of the company's books even allowed players to cut out and paste a "Hawaiian 'Steel' Guitar Fingerboard" overtop of their guitar fingerboard under the strings to help with learning the notes and chords.[97] Some companies, like Associated Teachers, sold a guitar as a part of their instructional course that included numbers or notes along the fingerboard of the instrument that correlated to the information contained in the method books [Figure 11].[98]

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[96] Okihiro, 194; *Improved Kamiki Hawaiian Guitar Method* (New York: William J. Smith & Co., 1928), Hawaiian Guitar box I, folder "Method Books," The Sam DeVincent Collection of Illustrated American Sheet Music, AC.

[97] "Hawaiian "Steel" Guitar Fingerboard" (New York: William J. Smith, 1922), included with NMM 10275, Guitar by Gibson Mandolin-Guitar Manufacturing Company, Kalamazoo, MI, 1924, Style L-3, National Music Museum, The University of South Dakota, Vermillion.

[98] Gruhn and Carter, *Acoustic Guitars,* 155.

Figure 11 Guitar by Gibson Mandolin-Guitar Co., Kalamazoo, MI, 1924, "The Gibson" L-3 model. There are notes attached to the fingerboard for beginner players. Smithsonian, National Museum of American History.

The misleadingly named Honolulu Conservatory of Music and its subsidiary, the Oahu Publishing Company, helped thousands of young, aspiring musicians to learn how to play Hawaiian guitar and ukulele. Though it originated in Flint, Michigan in 1926, the school relocated to Cleveland in 1930. It is possible that its enrollment was as high as 200,000 students, with many of them later setting up at least 1200 franchise studios throughout North America. The Oahu Publishing Company supplied

books, instruments, and accessories to its students. Like the sheet music of the day, the lessons contained island imagery, further cementing the visual and aural aspects of the Hawaiian music movement.[99] Using mantras such as "THE ARTISTS of today were the Students of Yesterday," Oahu lessons and sheet music tried to motivate pupils to master the techniques of fingerpicking, palm harmonics, and other challenging aspects of Hawaiian style playing.[100] Students learned Hawaiian songs in addition to country, folk, and gospel tunes that could be played in the Hawaiian style.[101]

Beginning in 1927, more than fifty music instruction books for guitar, ukulele and banjo bore the name of Roy Smeck, with the musician providing some of the arrangements. In addition, the "Wizard of the Strings" had a profound impact on the young Mel Bay, who would later go on to a successful career of publishing musical instruction books for generations of beginner students.[102] The irony of Roy Smeck's impact on method books was that, for much of his early career, he was unable to read music. Sometime around 1951 or 1952, he taught himself musical theory. This proved to be a valuable career option, as it allowed him to privately teach students, enabling

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[99] Okihiro, 195.

[100] "Swanee River, Oahu Orchestration for Hawaiian Guitar" (Cleveland: Oahu Publishing Company, 1930), Hawaiian guitar box II, folder S, The Sam DeVincent Collection of Illustrated American Sheet Music, AC.

[101] Okihiro, 195.

[102] Bay taught himself guitar by listening to and imitating records, including many produced by Smeck. He saw a live performance by Smeck in 1928 and cited him as an influence on his own career. Cortese, 36-37, 40.

him to make a living long after his name was no longer gracing marquees around the country.[103]

Advertisements appeared in publications such as *Popular Science* offering low cost ways by which prospective students could learn the Hawaiian guitar. With the bold tagline "Play the Hawaiian Guitar Just Like the Hawaiians," the First Hawaiian Conservatory of Music, Inc. in New York City offered a complete package that included "a beautiful Hawaiian Guitar, all the necessary picks, and steel bar and 52 complete lessons and pieces of music." They claimed that their method was "so simple, plain and easy" that a student could perform the first piece "in half an hour."[104] Another New York Hawaiian studio offered another low cost correspondence course that promised to "Bring the romantic, enchanting, entrancing and melodious strains of the great instrument of the Hawaiian Islands into your soul." This particular course involved using free phonograph records, a "Kno-All Chart" and "many pictures of our professors' playing" so that a student could "imitate the pictures" and "not depend on [their] printed instructions." This approach could have had a greater appeal to those with little or no education, though one would have to have been reading *Popular*

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[103] The performer recalled an embarrassing incident in Chicago that forced him to reconsider his musical training when a fan met him backstage and asked him questions about his guitar method book that Smeck could not understand due to his inability to read music. Cortese, 72-73, 77.

[104] First Hawaiian Conservatory of Music, Inc., "Play the Hawaiian Guitar Just Like the Hawaiians" (advertisement), *Popular Science*, March 1920, 114, NMAH Library, Smithsonian Libraries.

Science to notice the advertisement in the first place.[105] As an added bonus for passing a course, the company would mail a detailed diploma to the student, such as the one Richard Lee Church received on October 27, 1937 for completing a "Professional-Theatrical Course on Hawaiian Steel Guitar" courtesy of the Honolulu Conservatory of Music, Inc.[106]

Figure 12 Stevens "Interchangeable" steel bar along with a thumb and fingerpick both made of celluloid. These accessories were included with a guitar purchased for Fred Wright in the 1930s. Smithsonian, National Museum of American History.

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[105] Hawaiian Studio No. 569 of New York Academy of Music, "Quickly Learn to Play Hawaiian Guitar, Play Like This Native" (advertisement), *Popular Science*, December 1925, 165, NMAH Library, Smithsonian Libraries.

[106] Diploma for Richard Lee Church from the Honolulu Conservatory of Music, Inc, 1937, Hawaiian guitar Box IV, folder "Diploma," The Sam DeVincent Collection of Illustrated American Sheet Music, AC.

Thousands of men and women participated in the Hawaiian music movement by purchasing instruments and seeking training, whether by mail or in person, to learn to play in the Hawaiian style. From "Swanee River" to "When Irish Eyes Are Smiling," consumers could choose from a variety of songs adapted for the island sound. But sheet music only encompasses one aspect of how musicians arranged and adapted the Hawaiian style to fit other genres of music. The popularity of the Hawaiian style and its instruments far outlived the boom years of Hawaiian records. Its incorporation (and in some sense institutionalization) into new instruments and other genres of American music began in the 1920s and 1930s and focused on blues and country.

Island Connections to the Delta and Music City

Where the sound of the Hawaiian style is considered sweet, bottleneck blues is associated with making the guitar cry and wail. Blues musicians developed this style in the Mississippi Delta in the early twentieth century.[107] The act of sliding an object along a taut string or wire to produce a sound was not a twentieth century innovation. On the west coast of Africa and in the Congo region, prior to the advent of the Atlantic slave trade, people had been sliding knives and sticks along one-string "musical bow" instruments (named for hunting bows).[108] In America, many African American

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[107] For a discussion of the influences and musical culture of African-American blues musicians in the Mississippi Delta, see David Evans, *Big Road Blues: Tradition and Creativity in Folk Blues* (Berkeley: University of California Press, 1982); and Lawrence Cohn, ed., *Nothing But the Blues: The Music and the Musicians* (New York: Abbeville Press, 1993).

[108] David Evans, "Afro-American One-Stringed Instruments," *Western Folklore* 29, no. 4 (October 1970), 235-237.

musicians played Diddly Bows, a similar one-stringed instrument made of wire from brooms or hay bales stretched across walls or doors. Just like its African cousin, the Diddly Bow incorporated the use of an object such as a knife or bottle. The player would use one hand to slide the object while the other plucked the string to produce notes. Many Mississippi bottleneck style blues musicians such as Bukka White and Elmore James played Diddly Bows as children, something that clearly influenced their guitar playing later in life.[109]

Sharing many parallels with the sound of the Hawaiian steel guitar, the bottleneck technique originated in the South sometime in the early decades of the twentieth century. Though the fiddle and banjo dominated most Southern musical traditions in the nineteenth century, the guitar became popular especially in the African American community during the beginning of the Jim Crow era. In a burgeoning cash economy, the guitar was a relatively inexpensive instrument that did not carry the demeaning cultural connotations of instruments like the banjo, which reflected notions of slavery or minstrelsy for African-American musicians.[110] The most often cited earliest mention of steel guitar playing in the region comes from the

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[109] The instrument is also alternately spelled "Diddley Bow." Evans, "Afro-American One-Stringed Instruments," 239-240; Mark Humphrey, "Bottlenecking, The Rise of the Slide Guitar," *Frets*, March 1983, 20.

[110] David Evans, "The Guitar in the Blues Music of the Deep South," in Andy Bennett and Kevin Dawe, eds., *Guitar Cultures* (New York: Berg, 2001), 11-14. For a discussion of African Americans, minstrelsy, the banjo, and nineteenth century American musical culture see Philip F. Gura and James F. Bollman, *America's Instrument: The Banjo in the Nineteenth Century* (Chapel Hill: The University of North Carolina Press, 1999); and Karen Linn, *That Half-Barbaric Twang: The Banjo in American Popular Culture* (Urbana: University of Illinois Press, 1994).

great composer W. C. Handy. He describes that while trying to sleep at a train station in Tutwiler, Mississippi in 1903, a "lean, loose-jointed Negro had commenced plunking a guitar beside me...As he played, he pressed a knife on the strings of the guitar in a manner popularized by Hawaiian guitarists who used steel bars." Handy added that it was memorable experience and "the effect was unforgettable."[111] Written almost 40 years after the incident and within the context of the waning days of the Hawaiian music movement, it is conceivable that Handy retroactively gave credit to the Hawaiian style for inspiring his train station troubadour. Blues scholars such as David Evans assert that instead of Hawaiian steel influencing bottleneck blues, it happened the other way around.[112] Recent work by John Troutman points to Native Hawaiians and *kika kila* style guitar as being a substantial influence on slide guitarists in the South during the Jim Crow era.[113] Regardless of its particular origins,

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[111] Elijah Wald also looks at how this story helped to create a stereotypical view of a poor blues musician singing mournful songs. In his work, he points out that much of what has been written about Delta blues players has retroactively made them fit these stereotypes to sell "blues" records. Elijah Wald, *Escaping the Delta: Robert Johnson and the Invention of the Blues* (New York: Amistad, 2004), 4-13; W. C. Handy, *Father of the Blues: An Autobiography*, ed. Arna Bontemps (New York: Da Capo Press, 1991), 74; Humphrey, "Bottlenecking," 20.

[112] While he does not provide much concrete evidence for this theory, Evans questions the major differences in materials, playing style, and repertoire between Hawaiian style and bottleneck blues. Evans, "Afro-American One-Stringed Instruments," 238-239.

[113] John Troutman cites the numerous Hawaiian musicians who traveled through the South in the early decades of the twentieth century and their encounters with African American blues players as more convincing than the evidence of "Africanisms" such as diddley bows and other one-stringed instruments. He will be expanding on this article with a forthcoming book on Native Hawaiian steel guitar. Troutman, "Steelin' the Slide," 26-52.

bottleneck blues shared some commonalities with the steel guitar, while at the same time offering its own distinctive characteristics. Similar to Hawaiian style, bottleneck blues was best played on guitars with open tuning such as G or "Spanish" (D-G-D-G-B-D) and D or "Sebastopol" (D-A-D-F#-A-D).[114] Some played with plectrums while others preferred to fingerpick the strings.[115] Players held the guitar in the traditional manner with the soundhole facing away from the player and the back of the guitar towards the player's chest. Rather than using the weight of a steel to depress the strings, a bottleneck player exerted varying amounts of pressure as he or she moved the slide (which fit around a finger) up and down the fingerboard.[116] Unlike Hawaiian style playing, bottleneck blues did not require a modified or purpose-built guitar. All you needed was a guitar and a slide, be it a knife, neck of a bottle, or commercially made accessory.

Following the success of Bessie Smith and other black female performers in the early 1920s, record companies including Okeh, Columbia and Paramount began recording male blues singers in rural areas of the south. One of the earliest solo blues

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[114] Humphrey, "Bottlenecking," 20; Jas Obrecht, "A Century of Blues Guitar," in Victor Anand Coelho, ed., *The Cambridge Companion to the Guitar* (New York: Cambridge University Press, 2003), 89.

[115] Recent research by Andrew M. Cohen has demonstrated that the way blues players positioned their hands while playing the guitar can be used to discern certain styles of blues music including regional variations. Though much of work is beyond the scope of this study, it does demonstrate how performers adapted the same basic instrument to play in a particular style, specifically in this case through variations in picking patterns and hand positions. Andrew M. Cohen, "The Hands of Blues Guitarists," in David Evans, ed., *Ramblin' on My Mind: New Perspectives on the Blues* (Urbana: University of Illinois Press, 2008), 152-178.

[116] Volk, 9.

recordings is of Sylvester Weaver from Louisville, Kentucky performing "Guitar Blues" in November 1923, though he held the guitar in his lap and used a knife as a slide, echoing the island connections to the style.[117] By 1926, H. C. Speir and other talent scouts traveled to the south to capture artists such as Charley Patton and Son House. These "Race records" sold well but did not pay the performers much beyond a few dollars a session.[118] Hudson "Tampa Red" Whittaker, another bottleneck player, utilized a style that featured damping (using the palm of your hand to mute strings) and slide licks on just one string as opposed to a full chord producing a smoother, sweeter sound, closer to Hawaiian steel. With perfect intonation and hundreds of studio recordings, Tampa Red earned the title "Guitar Wizard" and influenced players from the Delta to the streets of Chicago.[119] Another example of the island influence is Rev. E.W. Clayborn, who was one of the first recorded religious blues singers with his 1926 session "The Gospel Train Is Coming." Billed as "The Guitar Evangelist," his

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[117] Jas Obrecht, "A Century of Blues Guitar," 89.

[118] Tom Evans and Mary Anne Evans, *Guitars: Music, History, Construction and Players, From the Renaissance to Rock* (New York: Paddington Press, Ltd., 1977), 296; Elijah Wald, *Escaping the Delta: Robert Johnson and the Invention of the Blues* (New York: Amistad, 2004), 119-120; Robert Palmer, *Deep Blues* (New York: Viking Press, 1981), 77-124.

[119] Bob Brozman et al., The History and Artistry of National Resonator Instruments (Fullerton, CA: Centerstream Publishing, 1993), 142; Jas Obrecht, "A Century of Blues Guitar," 95-96; The recording "Boogie Woogie Dance" displays Tampa Red's signature style. Tampa Red, "Boogie Woogie Dance," recorded ca. 1927-1933, on *The Atlanta Blues,* Folkways Records RBF 15, 1966, Smithsonian Folkways Recordings, 2006, CD.

precise slide technique echoed the Hawaiian artists of the day more so than his bottleneck blues-playing contemporaries in the Delta.[120]

One of the most influential early Delta blues performers was Robert Johnson, whose brief pre-World War II career makes him one of the only blues players whose recordings that are still popular today. Though he lived a tragically short life, his playing and the instrument that he used (a Gibson L-1 flattop guitar) have become almost legendary.[121] A contemporary of Son House and Charley Patton, he supposedly became a skilled blues musician in a very short period of time, leading some to speculate that he sold his soul to the devil for the ability to play the guitar (and was possibly poisoned by a jealous husband whose wife he stole). Regardless of the scintillating details, Johnson's recordings have had a profound effect long after his death, inspiring guitar players in a variety of genres including rock 'n' roll. His music

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[120] Humphrey, "Bottlenecking," 21.

[121] The particular model used by Johnson was one of the earliest and cheapest flattop guitars that Gibson made. The instrument that gained far less attention at the time when compared to its L-5 arch-top counterpart. In the 1980s, when Steven LaVere published previously undiscovered photos of Johnson with his guitar, it prompted some blues musicians to try and acquire vintage L-1 models to replicate the sound of Johnson. Gibson used this connection to introduce a replica L-1 Robert Johnson model that cost far more than the original, capitalizing on his celebrity notoriety over sixty years after his death. Peter Narvàez, "Unplugged: Blues Guitarists and the Myth of Acousticity," in *Guitar Cultures*, edited by Kevin Dawe and Andy Bennett (New York: Berg, 2001), 34, 42; Eldon Whitford, David Vinopal, and Dan Erlewine, *Gibson's Fabulous Flat-Top Guitars: An Illustrated History & Guide* (San Francisco: Miller Freeman Books, 1994), 28-29; For a sampling of Johnson's music see Robert Johnson, *King of the Delta Blues*, recorded 1936-1937, Sony Music Entertainment, Inc., Columbia/Legacy CK65211, 1997, CD.

led both Americans such as Duane Allman and British guitarists like Eric Clapton and Keith Richards to incorporate the blues into their repertoire.[122]

The first bottleneck style players used everyday objects to make their own slides, primarily from the necks of empty glass bottles, especially ones that held whiskey and wine. In the 1920s Delta, these objects would have been easy to find. The more adventurous (or foolish depending on your opinion) players would simply break the neck off and place the jagged cylinder on their finger. This was a risky proposition for players like Son House who cut their fingers using an old broken bottle.[123] However, most took the time to fashion a slide with smooth edges. To do this, a person wrapped a wire coat hanger around the neck of the bottle and heated it over a fire.[124] As the glass warmed up, the player rotated the wire around the neck to cut into the melting glass. Eventually the wire would make a smooth cut and the glass would harden again once it was removed from the flame. Some players used metal objects such as cut-throat razors, empty cigar tubes, or pocketknives. According to Booker T.

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[122] His music experienced a resurgence in popularity after 1990 when his complete recordings were re-issued and Eric Clapton even paid him homage by recording an album in 2004 covering 14 of his 29 songs. Robert Johnson and Eric Clapton, *Me and Mr. Johnson*, Reprise Records 9362-48423-2, 2004, CD; Elijah Wald's recent book tries to unpack the man from the myth to understand the man, his career, the musical landscape of the Mississippi Delta during his time, and how he has influenced both blues scholars and players in the twentieth century. Elijah Wald, *Escaping the Delta: Robert Johnson and the Invention of the Blues* (New York: Amistad, 2004).

[123] Evans and Evans, *Guitars: Music, History*, 294.

[124] A similar method of heating objects to use as guitar accessories was recommended for celluloid thumb picks for guitar from the 1912 Gibson catalog. The company claimed that they were essentially "one size fits all" and if the purchased pick did not fit to heat it in hot water. Once warmed it could be bent to the right size before the plastic cooled down. Hoover, 90.

Miller, Charley Patton used a brass pipe as a slide. Depending on the player's personal preference, he or she could use varying thicknesses of glass, though the thicker the bottle, the more resonant the sound it would make when slid along the strings. Some constructed short slides that extended only over a few strings on the fretboard, while most slides fit over the entire fretboard enabling the player to fret full chords. Another matter of preference was the finger placement of the slide with most choosing either the pinky or ring finger.[125]

With the popularity of slide playing, especially among blues players and later rock 'n' roll bands, companies produced slides, saving players time and injuries from the old method of making slides. A 1972 Wexler catalog listed 2" to 2¼" steel and nickel-plated slides for $2.75. Interestingly, they advertise that bottleneck slides were "originally used in Country and Western music exclusively on the steel guitar. Recently introduced to Rock and Folk music to be played on the Spanish Acoustic and Electric guitars."[126]

Moving beyond the realm of blues, innovative musicians, beginning in the 1920s, transformed the lap-style steel guitar into one of the most recognizable sounds in country music. Exactly how guitarists playing the Hawaiian style influenced musicians operating in the genre of country music is still a matter of debate. Bill Malone, one of the preeminent scholars of country music surmised that rural Southern

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[125] Booker T. Miller, interview by Gayle Dean Wardlow, Greenwood, MS, 1968, audio recording, Gayle Dean Wardlow Collection, Center for Popular Music, Middle Tennessee State University; Evans and Evans, *Guitars: Music, History*, 292; Humphrey, "Bottlenecking," 24.

[126] David Wexler & Co., *Rapid Index Catalog No. 72* (Chicago: David Wexler & Co., 1972), 86, Curatorial Files, DCA.

audiences may have been exposed to steel guitar through bottleneck blues players, thus making them "preconditioned to enjoy" the smooth sound of steel sliding across strings.[127]

Hawaiian music and performances influenced the styles of Cliff Carlisle and Bob Dunn, two of the earliest performs to blend country and Hawaiian sounds in their music. Some early steel guitarists performed in both styles depending on the audience. For example, Cliff Carlisle, a steel guitarist from Kentucky played shows in the South as either a Hawaiian performer or country act.[128] Another guitarist who helped popularize steel playing in country music was Bob Dunn. He was first struck by the sound of the steel guitar in 1917 when he listened to a travelling Hawaiian show in his home state of Oklahoma. Having learned through a correspondence course, Dunn turned professional in 1927 and performed with a variety of bands playing steel guitar. While playing with Milton Brown in 1934, Dunn demonstrated an innovative steel technique of "jumping" the bar around the fretboard. The punctuated staccato notes mimicked the sound of other instruments like trumpets. This would in turn inspire other steel guitar players, especially those performing with country bands, to adopt the same technique.[129]

In April 1927, Frank Hutchinson used a Hawaiian style guitar for a recording, making him the first such country artist to do so. Jimmy Tarlton and Tom Darby

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[127] Bill C. Malone and Jocelyn R. Neal, *Country Music, U.S.A.* 3rd ed. (Austin: University of Texas Press, 2010), 26.

[128] Chris Comber, "The Early History of the Steel Guitar," *Country Music People* 3 (May 1972), 14.

[129] Ibid., 15.

followed in November of the same year, recording "Birmingham Jail" and "Columbus Stockade Blues." However, Jimmie Rodgers, known as "The Singing Brakeman," gained the most popularity that year, scoring a hit with his signature yodel on "Blue Yodel No. 1 (T for Texas)." Cliff Carlisle, who played a Dobro, a lap-style type single-cone resonator guitar, often accompanied Rodgers on his records. Carlisle's steel playing, which encompassed more blues elements than the Hawaiian style, gained widespread audiences thanks to Rodger's success.[130]

Leon McAuliffe is credited with being one of the first to popularize the sound of the steel guitar in country music. Drawing on influences such as Sol Hoopii and radio stars Jim and Bob, McAuliffe listened to their performances on records and over the airwaves trying to mimic their sound. McAuliffe made a name for himself beginning in 1935 when he joined Bob Wills and the Texas Playboys as the steel guitarist for the group. He was the first such player to hold that position in a country-western band. McAuliffe wrote and recorded "Steel Guitar Rag" with the band, a hit that helped cement the sound of steel guitar in the country-western genre. The song, while played on a Hawaiian steel guitar, was distinctly non-Hawaiian in nature and was later covered by countless artists, including Roy Smeck.[131]

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[130] Evans and Evans, *Guitars: Music, History*, 315-316, 319; Logsdon, "Steel Guitar," 12; Dobro guitars will be discussed in Chapter 4 of this dissertation.

[131]His famous hit can be heard on the compilation album *The Essential Bob Wills.* Leon McAuliffe, "Steel Guitar Rag," recorded September 29, 1936, Chicago, with Bob Wills and His Texas Playboys, On *The Essential Bob Wills, 1935-1947*, Columbia CK 48958, 1992, CD; "The Story of Hawaiian Steel Guitar as told by Jerry Byrd and Barney Issacs with the Honolulu Skylark and the Music of the Masters of Steel Guitar," *The Heritage Series: The Story of Hawai'i's Foremost Musical Artists*, aired December 26, 1982, on KCCN, KCCN Hawaiian Radio/Bank of Hawaii Heritage Series Collection, Part I, AFC; Logsdon, "Steel Guitar," 13; Roy Smeck,

One of the strongest connections between the Hawaiian style of guitar playing and the genre of country music can be traced through the music of the "Master of Touch and Tone," Jerry Byrd. Born in rural Ohio in 1920, he spent his early career accompanying country musicians including Ernest Tubb, Red Foley, and Hank Williams.[132] Yet, Byrd always expressed a deep love and interest in Hawaiian music. Calling the musicians like Sol Hoopii in the 1920s and 1930s "great evangelists of their music," guitarist Jerry Byrd stressed that the steel guitar went hand in hand with the spread of Hawaiian music, making the two nearly synonymous.[133] Whether it was recording duets of Hawaiian songs such as "Beyond the Reef" with cowboy singer Marty Robbins or accompanying the folk musician Burl Ives, Byrd built his reputation on playing electric lap-style steel guitars, direct descendants from the Hawaiian guitars of the 1920s and 1930s. While he performed with country artists, the Hawaiian style of playing and artists such as Sol Hoopii deeply influenced his musical repertoire.[134] He described his style as one that "had the Hawaiian overtones, the Hawaiian feel, a Hawaiian approach, which had not been heard in country music."[135] Preferring the

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"Steel Guitar Rag," recorded ca. late 1930s, on *Roy Smeck Plays Hawaiian Guitar, Banjo, Ukulele and Guitar: 1926-1949*, YaZoo 1052, 1992, CD.

132 Ruymar, 84.

133 "The Story of Hawaiian Steel Guitar as told by Jerry Byrd and Barney Issacs with the Honolulu Skylark and the Music of the Masters of Steel Guitar," *The Heritage Series: The Story of Hawai'i's Foremost Musical Artists*, aired December 26, 1982, on KCCN, KCCN Hawaiian Radio/Bank of Hawaii Heritage Series Collection, Part I, AFC.

134 Ruymar, 84.

135 "The Story of Hawaiian Steel Guitar as told by Jerry Byrd and Barney Issacs with the Honolulu Skylark and the Music of the Masters of Steel Guitar," *The Heritage*

sound of the lap-style steel over the pedal steel guitars that emerged, primarily in Nashville, in the 1940s, Byrd eventually abandoned his country music passion and moved to Hawaii. He devoted his time to recording Hawaiian music and (somewhat ironically) teaching steel guitar to aspiring native Hawaiian musicians.[136] According to Byrd, "the steel bar in the left hand is what makes, to me, the steel guitar the most expressive instrument in the world."[137]

Byrd's music served as a physical connection between the steel sound in Hawaiian and country music for modern country artists such as Junior Brown. For Brown, Byrd's passion for Hawaiian music forced him to think about the connections between his own steel guitar playing in country music and the steel sounds that came from the islands. In an interview, Brown described his three major influences, citing Byrd as the biggest one. Brown felt that people often "underestimate the connection between Hawaiian and country" citing Byrd's guitar work for Hank Williams, Ernest

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Series: The Story of Hawai'i's Foremost Musical Artists, aired December 26, 1982, on KCCN, KCCN Hawaiian Radio/Bank of Hawaii Heritage Series Collection, Part I, AFC.

[136] Ruymar, 84; Supposedly Byrd refused to join the ranks of musicians who switched from the lap steel to the pedal steel guitar and eventually, under pressure from others, he moved to Hawaii, for one reason, to get back to where the lap-style playing originated. This inspired Junior Brown to yank the pedals off of his steel guitar in order to support and emulate his idol. Junior Brown, interview by Matt Watson, November 15, 1996, video recording, box 12, Electric Guitar Video Documentation, 11/9/96-11/16/96, AC.

[137] "The Story of Hawaiian Steel Guitar as told by Jerry Byrd and Barney Issacs with the Honolulu Skylark and the Music of the Masters of Steel Guitar," *The Heritage Series: The Story of Hawai'i's Foremost Musical Artists*, aired December 26, 1982, on KCCN, KCCN Hawaiian Radio/Bank of Hawaii Heritage Series Collection, Part I, AFC.

Tubb and other Nashville greats. Byrd's decision to abandon his country career and move to Hawaii piqued Brown's interest and led him to learn more about the Hawaiian steel and country steel connection and how "one grew out of the other."[138]

Steel or slide guitar playing was not confined to just the genres of Hawaiian, blues, and country as examples of the technique could be found in vaudeville, Cajun, and even Big Band songs in the first half of the twentieth century.[139] One style that highlights the cross-pollination of these playing styles was characterized in the 1940s as "hulabilly." This blending of Hawaiian steel guitar sounds with traditional Appalachian music and blues was a short-lived phenomenon that by 1950 had been renamed "old-time steel guitar."[140]

Conclusion

To the American consumer of the first half of the twentieth century, the sound of a steel gliding across the strings of a guitar or the high-pitched rhythmic strumming of a ukulele offered an instantly recognizable Hawaiian sound. Jerry Byrd described the significance of the islands' style by saying "when you talk about Hawaiian music,

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[138] Junior Brown is a country and rock musician who plays a hybrid instrument called a Guit-Steel that combines a solid-body electric guitar and a lap-style steel guitar in one instrument. Brown, interview.

[139] Volk, 9.

[140] Hulabilly is considered a genre that mixes country (or hillbilly) music with Hawaiian music in a similar fashion that early rock 'n' roll artists such as Carl Perkins were classified under the genre of Rockabilly for mixing rock 'n' roll with country (or hillbilly) styles and playing techniques in their music. Tom Gray, "Dobro, the Resonator Guitar that Refused to Die," *Bluegrass Unlimited*, January 1999, 52.

if it doesn't have a steel guitar in it, it's not Hawaiian."[141] That is a powerful statement coming from someone who became an ambassador of the Hawaiian style, though he was born thousands of miles from the islands. In a matter of only a few decades, the music of Hawaii became synonymous with the steel guitar, a style developed thanks to the introduction of the instrument to the islands and the incorporation of objects of industrialization, namely knives or railroad nails, into the playing style of Hawaiian musicians.

Guitarist Junior Brown cited the beauty of the sound of steel guitar as the quality that attracted him to country and Hawaiian music. "The sassiness and the sweetness. The ability to do both and every range of emotion in between. It's all there, every emotion in the human experience is on that steel guitar. "[142] Brown's words speak to the power of the Hawaiian style and the instruments that are used to produce it. The smooth sounds of a steel guitar and the rhythmic strumming of the ukulele aurally evoked a sense of the rise and fall of the ocean tides on a tropical Pacific beach.

Interest in Hawaiian musical traditions, an outgrowth of Hawaii's 1898 annexation, created a demand for commercial recordings of the island sound, introduced the ukulele to wider audiences, and inspired guitarists to learn to play in the Hawaiian style. Hawaiian musicians toured the country bringing instruments such as

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141 "The Story of Hawaiian Steel Guitar as told by Jerry Byrd and Barney Issacs with the Honolulu Skylark and the Music of the Masters of Steel Guitar," *The Heritage Series: The Story of Hawai'i's Foremost Musical Artists*, aired December 26, 1982, on KCCN, KCCN Hawaiian Radio/Bank of Hawaii Heritage Series Collection, Part I, AFC.

142 Brown, interview.

the ukulele and styles such as slack-key and steel guitar to audiences throughout America. Similar to the mandolin movement discussed in the previous chapter, musicians looked for ways to participate in the phenomenon and developed community and collegiate ukulele orchestras focused on these new instruments and adaptations. Yet strikingly, the sounds most associated with the Hawaiian music movement would not have been possible without the introduction of the ukulele and guitar to the islands in the nineteenth century combined with the connections in trade and communication that expanded due to American imperialism.

In order to participate in the Hawaiian movement, guitar manufacturers flooded the market with the tools by which to make music in the Hawaiian style. The Hawaiian musicians who adapted the acoustic guitar to satisfy their own musical demands also helped (inadvertently) to create consumer products that allowed amateur and professional performers alike to mimic their style. The innovative techniques and accessories used by Joseph Kekuku and other Hawaiian musicians ultimately became commodified objects, giving audiences around the country the chance to "play Hawaiian" in both music and appearance. Beginning in the late 1910s, guitar manufacturers diversified and broadened their product lines to include Hawaiian style instruments and started offering signature models named for celebrity musicians of the day. In conjunction with commercially available steels came new Hawaiian guitar models that incorporated innovative features such as square necks, raised strings and frets flush with the fingerboard so that performers could lay the instrument across their laps in order to accommodate the new playing technique. In a similar fashion to the mandolin, the ukulele, a Hawaiian instrument with Portuguese origins, offered guitar makers a cheap, easily produced instrument that could broaden their product lines and

increase their profits. Consumers could purchase ukuleles decorated with Hawaiian themed motifs and learn to play ukulele or Hawaiian style guitar just like celebrities such as Roy Smeck in his officially endorsed line of method books. Long after Hawaiian records had gone out of fashion, the changes brought about by guitar manufacturers and musicians prominently remained in the music of America.

Musicians and manufacturers both appropriated and tailored the Hawaiian sound and its instruments to suit their own playing styles, ultimately leaving an island legacy in American musical culture. Ambassadors such as Sol Hoopi, Roy Smeck, and Jerry Byrd carried the techniques and signature sounds of the islands from clubs to recordings and eventually to radio and film. Hawaiian recordings enjoyed several decades of widespread popularity before forming a niche in the market, as images of Hawaii became more associated, for a time, with the Japanese attack on Pearl Harbor rather than tropical vistas. Manufacturers gradually phased out large-scale production of Hawaiian style guitars following World War II. In a similar fashion, more and more Americans viewed ukuleles as novelties in the postwar period rather than serious musical instruments. Despite the dwindling market, players still incorporated the sound of the Hawaiian music movement into a variety of styles. Regardless of who actually made the connections between them, Hawaiian, blues, and country music all share common threads, thanks to guitarists experimenting with new tools and innovative uses for their instrument.

Many Hawaiian style musicians including players like Sol Hoopii also became synonymous with new instruments that attempted to amplify the sound of the acoustic guitar. From carving the top of the instrument to experimenting with new materials to mechanically amplify a guitar, luthiers sought ways to make the sound of the guitar

stand out, especially in light of the rising popularity of jazz bands and larger performance venues. The same groups of musicians connected by the growth of the Hawaiian music movement (country, early bluegrass, and blues) also became some of the first adopters of these new resonant acoustic guitars.

Chapter 4

"TO IMPROVE THE ART OF YESTERDAY AND ENRICH THE MUSIC OF TOMORROW": THE QUEST FOR AMPLIFICATION AND THE DEVELOPMENT OF THE RESONATOR GUITAR (1920-1960)

In 1932, during the depths of the Great Depression, a young boy attended a Chautauqua show in the small town of Lima, Ohio. Unable to afford the $1 admission on his own, he luckily found a friend who paid his entrance to the tent. While the educational portion of the program did not impress the boy, the entertainment offered that night became a lasting memory for the budding musician. The featured performers were Bell's Hawaiians, a troupe of musicians performing on shiny, metallic guitars. The boy would later describe how "there was six or eight of them and this one man sat over on one end playing this guitar in his lap and it was silver, you know, and shined in the lights." The unamplified guitars produced a powerful tone that cut through the din of the makeshift tent theater. Interviewed 50 years after the event, Jerry Byrd still vividly remembered that formative moment in his musical career. "[It] was my introduction to the sound of steel guitar. It mesmerized me, it did that day, and it still does."[1] Captivated by both the gleaming instruments and the exotic sounds that echoed from them, he began a lifelong fascination with the guitar. Byrd would go on to become an influential player of country and Hawaiian style music, thanks, in part, to his youthful encounter with an instrument that symbolized a flashy and inventive approach to increasing the volume of an acoustic guitar: the resonator or resophonic guitar.

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[1] "The Story of Hawaiian Steel Guitar as told by Jerry Byrd and Barney Issacs with the Honolulu Skylark and the Music of the Masters of Steel Guitar," *The Heritage Series: The Story of Hawai'i's Foremost Musical Artists*, aired December 26, 1982, on KCCN, KCCN Hawaiian Radio/Bank of Hawaii Heritage Series Collection, Part I, AFC.

During the early decades of the twentieth century, guitarists sought new ways to amplify their instruments in order to compete with the loudness of trumpets and saxophones in jazz orchestras. The design of the instrument changed dramatically during the 1910s and 1920s, with the introduction of steel strings and new body styles such as arch-tops and dreadnoughts, which increased the volume of the guitar. Making the guitar bigger was one attempt that used traditional manufacturing techniques to amplify the sonic output of the instrument.[2] The addition of steel strings both changed the tone of acoustic guitars and offered a material that could produce a sustained increase in volume. This was not necessarily an incremental progression, but a period where these innovations overlapped as musicians and luthiers sought any way possible to increase the volume of the instrument.

Resophonic or ampliphonic guitars (commonly referred to as resonators) represent an innovative and attractive solution to the limitations of an acoustic guitar's volume. This type of instrument offered musicians a tool that looked and sounded unusual, with its gleaming metal construction and striking tone. It answered the desires of performers who wanted greater amplification by producing a volume of sound that overpowered most guitars and banjos of the day.[3] Utilizing the technique of mechanical amplification, the makers of resonator guitars sought to increase the instrument's volume without simply making the body of the guitar larger. Prior to the 1920s, the conventional way to make an acoustic fretted instrument such as a guitar or mandolin meant building the body with wood. This traditional acoustic design produced sound by transferring the vibrations of the strings to the top of the guitar, which, in turn, resonated. The hollow chamber within the body of the instrument amplified the sound and projected it, through

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[2] George Gruhn and Walter Carter, *Acoustic Guitars and Other Fretted Instruments: A Photographic History* (San Francisco: GPI Books, 1993), 164-166.

[3] Ibid., 226.

the soundhole, away from the player. A group of individuals working in California including Slovakian immigrants, a vaudeville performer, and a talented Swiss metalworker tinkered with the materials and construction of the instrument in order to meet performer demands. They forged a new path in lutherie with the creation of resophonic instruments, dramatically altering the two accepted methods of wooden construction and a reliance on a resonant top. Their innovations would also set the stage for the early experiments in electrical amplification of acoustic guitars.[4]

Despite the fact that resonators were considered cutting edge instruments for only a brief time from 1926 to 1933, I argue that the makers of resonator instruments had a profound impact on the guitar in America in three ways. First, resonator guitars were the forerunners to electric guitars and are closely connected to the development of the electrically amplified instruments. Secondly, they represent a dramatic shift in guitar manufacturing by the incorporation of non-wooden materials (in this case spun aluminum, brass and German silver or nickel silver) into the body of a guitar. While metal guitars failed to completely displace wooden models in the market, they still represent an important break with tradition in acoustic guitar design. This paved the way for companies in the 1950s and 1960s, such as Ovation, to experiment with using what were considered to be unconventional materials, namely composites, in building acoustic guitars. Finally, resophonic guitars, proved to be extremely adaptable instruments. Originally intended for vaudeville and jazz guitarists, they eventually became popular with three radically different groups of musicians: Hawaiian style guitarists, blues guitarists, and bluegrass guitarists.[5]

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[4] Ibid., 225.

[5] Gruhn and Carter, two of the foremost figures in the vintage guitar industry only really highlight the brief period of success for the resonator guitar from 1928-1933, but to do so overlooks the larger implications to the overall designs of future acoustic and electric guitars as well as the people involved in the process. Ibid., 226, 228; Bob Brozman et al.,

Steel Strings, Battleships, and Arch-tops

By the 1920s, guitar producers moved away from using traditional gut strings and instead offered a growing number of models equipped with steel strings, a process that changed the construction and sound of the instrument. Without steel strings, the innovations discussed in this chapter, especially in arch-top and resophonic guitars, would not have been possible. In order to withstand the increased tension on the instrument, more acoustic guitars changed their bracing patterns from ladder to X-bracing. Truss rods, which were metal rods inserted into the necks of guitars, also helped to keep the neck and top from buckling and cracking under the tension of tightly wound steel strings.[6] The new steel strings produced a louder, brighter tone than their gut predecessors, wore out less frequently, and were less expensive to produce, making them a standard feature of more and more acoustic guitars by the late 1910s. While gut strings did not fall out of favor completely, they were mostly relegated (along with their twentieth century nylon counterparts) to guitarists of the BMG community using what we now term "classical" guitars.[7] For the most part, steel came to be the primary material for acoustic guitar strings by the 1930s. In some ways, gut strings (and the bracing configurations used to support them) could be viewed reverse salients in that, as a

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The History and Artistry of National Resonator Instruments (Fullerton, CA: Centerstream Publishing, 1993), 4.

[6] Tom Evans and Mary Anne Evans, *Guitars: Music, History, Construction and Players, From the Renaissance to Rock* (New York: Paddington Press, Ltd., 1977), 442; Robert Shaw and Peter Szego, eds., *Inventing the American Guitar: The Pre-Civil War Innovations of C. F. Martin and His Contemporaries* (Milwaukee: Hal Leonard Books, 2013), 269.

[7] Jeffrey J. Noonan, *The Guitar in America: Victorian Era to Jazz Age* (Jackson, MS: University Press of Mississippi, 2008), 135-137; For a brief look at the classical guitar in the twentieth century, see David Tanenbaum, "Perspectives on the Classical Guitar in the Twentieth Century," in Victor Anand Coelho, ed., *The Cambridge Companion to the Guitar* (New York: Cambridge University Press, 2003), 182-206.

primary component of acoustic guitars, they no longer kept up with the material changes to the acoustic guitar.[8] Gut strings gradually lost favor with most consumers, as more musicians wanted louder, more powerful acoustic guitars with steel strings. In part due to the Hawaiian music movement, manufacturers expanded steel strings throughout their inventory. An example of this can be found with C. F. Martin & Company who initially only offered steel strings on its Hawaiian models of the 1920s, but by the beginning of the 1930s steel strings had become standard on almost all of its instruments.[9]

The adoption of X-bracing and steel strings by the major producers was an extremely complex and decidedly uneven process. Martin included X-bracing on its models beginning in the 1850s.[10] Lyon & Healy sold some of the larger styles (namely Sizes 3 and 4) of Washburn guitars with X-bracing prior to 1915.[11] As far as the use steel strings, Orville Gibson, borrowing from his experiments in mandolins, designed his

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[8] Thomas P. Hughes, "The Evolution of Large Technological Systems," in *The Social Construction of Technological Systems: New Directions in the Sociology and History of Technology*, ed. Wiebe E. Bijker, Thomas P. Hughes, and Trevor Pinch (Cambridge: MIT Press, 1987), 73; In a similar fashion, Melvin Kranzberg's Second Law "Invention is the mother of necessity," also fits here as the development of steel strings created what Kranzberg calls a "technological imbalance" where "an improvement in one machine upsets the previous balance and necessitates an effort to right the balance by means of a new innovation." Melvin Kranzberg, "Technology and History: "Kranzberg's Laws"," *Technology and Culture* 27, no. 3 (July 1986): 557-558.

[9] Walter Carter, *The Martin Book: A Complete History of Martin Guitars* (San Francisco: GPI Books, 1995), 31-32.

[10] As discussed in Chapter 1 of this dissertation, C. F. Martin came up with the innovative use of X-bracing to support the soundboard of his guitars beginning in the 1850. Though he used mostly gut strings at the time, this design change would become extremely important once steel strings were widely adopted by players as the X-bracing could withstand a greater amount of tension, keep the neck and top from cracking and bending under pressure.

[11] This included the Style 503 in 1889, the biggest guitar Washburn produced prior tot 1930. Hubert Pleijsier, *Washburn Prewar Instrument Styles: Guitars, Mandolins, Banjos and Ukuleles 1883-1940* (Anaheim Hills, CA: Centerstream Publishing LLC, 2008), 55.

earliest guitars to be used with steel strings, something that set him (and later his company) apart from the field.[12] Lyon & Healy experimented with using steel strings in their Contra Bass and Monster Bass Guitar models in the late 1880s, but these cutting-edge designs were ahead of their time. There was little demand for them as the majority of consumers still preferred gut string instruments.[13] From the late 1880s, Washburn suggested that players use gut and silk wound strings, as steel strings were not covered by the instrument's warranty. Washburns built between 1915 and the early 1920s were advertised as being capable of being strung with either gut or steel strings, but catalogs indicated that the factory shipped them with gut strings and warned against invalidating the warranty by using steel strings, a contradiction that must have confused many consumers. While some Washburn styles after 1915 featured steel strings, as did some lower priced Lyon & Healy guitars starting in 1896, most of the company's guitars through the early 1920s used ladder bracing, a feature that could only withstand the tension of the gut strings that came with them. The first standard Washburn to leave the factory with steel strings was the Style 2123 introduced in 1920.[14]

With the growing popularity of dance bands and jazz ensembles in the 1920s, the need to amplify the sound of an acoustic guitar drove luthiers to experiment with new body styles aimed at increasing the volume of the instrument. The development of dreadnoughts and arch-top guitars represent two major innovations that satisfied this new performer demand while retaining the same traditional materials used in the construction of a guitar. Both styles dramatically increased the size of the acoustic guitar body and,

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[12] Gruhn and Carter, *Acoustic Guitars*, 140.

[13] John Teagle, *Washburn: Over One-Hundred Years of Fine Stringed Instruments* (New York: Music Sales Corp., 1996), 73.

[14] Pleijsier, 55.

coupled with the switch from gut to steel strings, offered a bigger sound to help musicians cut through the din of larger Jazz Age bands.[15]

The dreadnought, a larger guitar with a louder volume, was one solution that makers such as Lyon & Healy and Martin designed to stand out in an ensemble. The model was so-named for its similarity to the shape of a World War I battleship.[16] Though it lacked the firepower of its seaworthy counterpart, the dreadnought guitar produced a booming sound, especially in the lower register thanks to its larger resonant chamber. This was an instrument for a performance hall, not a parlor. There is some debate over which manufacturer first produced the style with Martin claiming to have invented the body shape in response to a request from Oliver Ditson and Company. Lyon & Healy claims to have beat Martin to the punch with their Lakeside model that, while not named a dreadnought, featured similar body dimensions to the first Martin dreadnoughts. The affordably priced Lakeside Style 2740 Jumbo Size guitar debuted in 1912, was 16 ¼ inches wide by 5 ¼ inches deep by 20 ½ inches long, and came set up with steel strings.[17] The body shape contained a mixture of stylistic elements reminiscent of both the later Martin dreadnoughts and grand auditorium sized guitars.[18] This was a drastic increase in

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[15] For a discussion of the acoustic guitar's use in early jazz and ragtime see Graeme M. Boone, "The Guitar in Jazz," in Victor Anand Coelho, ed., *The Cambridge Companion to the Guitar* (New York: Cambridge University Press, 2003), 67-72; and Maurice J. Summerfield, *The Jazz Guitar: Its Evolution and Its Players* (Gateshead, Eng.: Ashley Mark, 1978).

[16] When viewed from above, both the naval vessel and the acoustic guitar style exhibit similar contours.

[17] Oliver Ditson was an authorized Lyon & Healy dealer and may have based some of their early design collaborations with Martin off of the specifications for the Lakeside Jumbo models. This model predates Ditson's earliest dreadnoughts by 5 years and Martin's D-1 and D-2 models by 19 years. Teagle, 73; Pleijsier, 17.

[18] Ladder bracing, named for its resemblance to the rungs of a ladder, was a type of structural bracing for the top of the guitar. This was a more traditional approach as compared with Martin's innovative X-bracing, something that is discussed in Chapter 1

body size when compared with a C. F. Martin Style 2 ½-32 built circa 1852-1862 that measured 11.69 inches wide (at the lower bout) by 3.94 inches deep by 17.88 inches long or an 1897 Washburn guitar that was 12 3/8 inches wide (at the lower bout) x 18 inches long x 3 ½ inches deep.[19]

Despite the competing claims, C. F. Martin & Company's dreadnoughts, first built for Ditson and later as its own lineup of "D-" guitars, would go on to become one of the most popular selling lines of acoustic guitars.[20] Martin benefitted from the rapidly changing retail marketplace of the period by designing exclusive lines of instruments to be sold for the Oliver Ditson Company and Southern California Music. These companies controlled large music stores on both coasts but in the early decades of the twentieth century they began facing competition from an increasing number of local music stores. The smaller, rival retailers could offer their customers a wide range of instruments through wholesalers or "jobbers" that carried a variety of different instrument lines. Ditson wanted to offer its customers something unique, so they contracted with Martin in 1916 to make ukuleles and guitars exclusively for their stores. The instruments often came without markings, making it difficult to tell who was responsible for producing

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of this dissertation. The Lakeside Jumbo survived in catalogs until the mid-1920s, though by 1919 its steel strings had been replaced by gut strings, possibly due to the inability of its ladder bracing to withstand the tension of steel strings. As of 2008, no Lakeside Jumbo models had survived, perhaps due to its original use of steel strings. Pleijsier, 52.

[19] Richard Johnston, "Martin's Evolution to an American Guitar," in *Inventing the American Guitar: The Pre-Civil War Innovations of C. F. Martin and His Contemporaries*, edited by Peter Szego and Robert Shaw (Milwaukee: Hal Leonard Books, 2013), 217; 65.0749 George Washburn guitar, Lyon & Healy, Chicago, IL, ca. 1897, DCA.

[20] Darcy Kuronen, Lenny Kaye, and Carl Tremblay, *Dangerous Curves: The Art of the Guitar* (Boston: MFA Publications, 2000), 90.

these instruments other than Ditson.[21] The most successful of this line was a guitar larger than anything Martin had ever produced: the Dreadnought. Frank Henry Martin, C. F. Martin III, and Harry L. Hunt of Ditson collectively chose the name dreadnought in honor of the large British battleships of the day. Originally equipped with steel strings in a Hawaiian style lap setup, the Ditson dreadnoughts were thought of as bass guitars. Martin also produced standard, Spanish style (as opposed to lap-style) models in the 1920s for Ditson.[22]

In the early 1930s, during what is characterized as the "Golden Era" of Martin, the company began producing their own line of dreadnoughts that became wildly popular and spurred many imitators. When the Ditson Company was sold in February 1931, Martin brought the dreadnought line under their control. The heads of the company at the time, Frank Henry and Frederick Martin, were actually hesitant at first to produce these guitars, which offered a booming lower register, opting to focus on producing instruments with a balanced tone. They did not heavily publicize the models but instead only offered them to a small group of dealers and musicians. Gene Autry, who already owned two Martin guitars at the time, purchased a D-45 model in 1933 with his signature inlaid on the fretboard. The company reaped the benefits of endorsements and publicity from artists such as Autry. The Dreadnought first officially appeared in the 1935 catalog with the D-18 priced at $65 and the D-28 at $100. Despite the economic difficulties of

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[21] Richard Johnston, "Early Martin Guitar Design and Construction: What Survived," in *Inventing the American Guitar: The Pre-Civil War Innovations of C. F. Martin and His Contemporaries* (Milwaukee: Hal Leonard Books, 2013), 265; For a discussion of jobbers/wholesalers, see Alfred D. Chandler, Jr., *The Visible Hand: The Managerial Revolution in American Business* (Cambridge: Harvard University Press, 1977), 220; and Susan Strasser, *Satisfaction Guaranteed: The Making of the American Mass Market* (New York: Pantheon, 1988), 59-60.

[22] Dick Boak, *C. F. Martin & Co.* (Charleston, South Carolina: Arcadia Publishing, 2014), 48-49.

the Great Depression, the D-18 was a hugely successful addition to the Martin inventory and has since become almost synonymous with the Martin name.[23] Other competitors, such as Gibson responded by introducing their own lines of large flat-top guitars such as the Jumbo and, in 1937, the Super Jumbo (or SJ). The SJ-200 model featured a wider lower bout and more decoration than a Martin dreadnought guitar. Singing cowboys also factored into Gibson's SJ- line as Ray Whitley, the composer of Gene Autry's hit "Back in the Saddle Again," received the first SJ-200.[24]

Hearkening back to the early designs of Orville Gibson, arch-top guitars offered another approach to amplifying the sound of an acoustic guitar. Arch-tops shared many of the same characteristics as the mandolin along with its relatives the violin, viola, and cello. All featured carved tops and f-holes, contrary to the traditional soundholes of acoustic guitars. Strung with heavy-gauge steel strings, and finding favor with jazz musicians, arch-tops became some of the first amplified guitars. Often produced in larger, heavier body styles, arch-top guitars of the 1930s were also known for their artistic elements such as art deco flourishes on headstocks and fingerboards of models made by Bacon & Day, Stromberg, and D'Angelico. Thanks to the use of celluloid plastic decorations in headstocks, bindings and pickguards, arch-tops offered attractive and affordable alternatives to guitars adorned with pricey ivory, pearl, and tortoiseshell ornamentation.[25] As the instrument represented a hybrid of the mandolin and guitar, early

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[23] Carter, *The Martin Book*, 44-45, 48; Richard Johnston, Dick Boak, and Mike Longworth, *Martin Guitars: A History*, rev. ed. (New York: Hal Leonard, 2008), 75, 81-84; Gene Autry and his connection to the acoustic guitar in American culture will be explored in more detail in Chapter 5 of this dissertation.

[24] Kuronen, Kaye, and Tremblay, 91.

[25] Ibid., 97; For a detailed exploration into the life and instruments of famed arch-top luthiers John D'Angelico and James L. D'Aquisto see Paul William Schmidt, *Acquired of the Angels: The Lives and Works of Master Guitar Makers John D'Angelico and James L. D'Aquisto* (Lanham, MD: Scarecrow Press, 1998).

arch-top players such as Nick Lucas and Eddie Lang often adopted a similar hybrid technique that included both rhythmic chordal strumming and melodic solo lines, reminiscent of mandolinists in BMG ensembles.[26]

Gibson produced some of the first successful lines of arch-top guitars, most notably the L-5 model designed by Lloyd Loar, another in the line of engineer luthiers. Loar possessed an impressive resume as a composer, musician, former Gibson endorser, and acoustical engineer. He designed his entire line of Master Model instruments with f-holes, as opposed to the conventional round soundholes, and graduated tops and backs with varying thicknesses, differing from instrument to instrument using a carving technique called "Stradivarius arching." Inspired by the acoustics studies of German scientist Hermann von Helmholtz, Loar tirelessly experimented on the air chambers of his instruments attempting to achieve maximum resonance. He famously signed a label on all of the instruments in the line, guaranteeing that he had personally "tried and approved" the instrument. Instead of the normal black or mahogany red sunburst, Loar employed a hand-rubbed "Cremona" finish, a shaded texture that was lighter in the center of the instrument and a dark, almost chocolate-brown around the edges.[27] Originally designed to be part of a mandolin family of instruments, the L-5 (and arch-tops in general) did not become popular in jazz bands until the interest in tenor banjos subsided in the late 1920s. Gibson attempted to convert some tenor banjo players by changing the stylistic appearance of the L-5 by putting large blocks of pearl on the fingerboard as

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[26] As discussed in Chapter 3, Nick Lucas was the first artist to have his own branded Gibson guitar. Noonan, 124-128.

[27] In keeping with the connections to Old World craftsmanship, Cremona is a city in Italy where Stradivarius famously produced violins. Roger H. Siminoff, "Crowning Glories: Mr. Loar's Master Models," in Walter Carter, *Gibson Guitars: 100 Years of An American Icon* (Los Angeles: General Publishing Group, 1994), 82-85; Noonan, 124-125; Lloyd Loar's F-5 mandolin is discussed in Chapter 2 of this dissertation.

opposed to the position marker dots.[28] The L-5 served as a template for countless other arch-top guitar designs sold by Gibson's competitors and provided Gibson with celebrity exposure through its use by jazz guitarist Eddie Lang and country musician Maybelle Carter.[29]

During the 1930s, a number of up and coming makers added to the growing arch-top market, though not every guitar firm found success with these models. Bacon & Day, Epiphone, Gretsch, Harmony and Kay all joined into the fray between 1931 and 1933, as jazz players, following the example of Eddie Lang, looked for bigger and better arch-top models. Some of the models, like the exotic sounding Bacon & Day "Sultana" featured a stylized headstock, large block position markers on the fingerboard and a gold-colored art deco tailpiece. The competition pushed Gibson to release an 18" wide $400 model called the Super 400 in 1934. This particular guitar, while out of the reach of most consumers, set the standard for arch-top guitars, with luthiers such as John D'Angelico and Elmer Stromberg (along with his father Charles) designing their own creations in the late 1930s and early 1940s. Stromberg's Master 400 series attracted jazz musicians such as Irving Ashby, a guitarist with the Lionel Hampton Orchestra, who had his own 19" wide Master 400 model built by the Boston luthier [Figure 13].[30] Not all makers benefitted from

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[28] Walter Carter, "Meanwhile in New York: An Archtop Blitz," in Carter, *Gibson Guitars*, 141; For example, tenor banjos made by Bacon & Day, William Lange, and others featured intricate designs using pearl, silver, and gold-plating, along with wood inlay and brilliant paint colors that certainly stood out. Gruhn and Carter, *Acoustic Guitars*, 104-137.

[29] Kuronen, Kaye, and Tremblay, 98; The Carter Family Trio appears in the 1932 Gibson catalog. Gibson, Inc., *Gibson Guitars, Banjos, Mandolins, Ukuleles Catalog U* (Kalamazoo, MI: Ihling Bros. Everard Co., 1932; repr., n.d.), 8, MIMA.

[30] Gruhn and Carter, *Acoustic Guitars*, 168-169, 183, 188-189, 195-196; NMM 3891 Bacon & Day Sultana Guitar, ca. 1930s, National Music Museum, The University of South Dakota, Vermillion; 1988.0421.01 Guitar by Charles A. Stromberg and Son, Boston, MA, ca. 1939-1941, Master 400 model, DCA.

introducing arch-top models. C. F. Martin, for example, despite its success with dreadnought models, failed to produce arch-tops that sold well for the company. The F-lines introduced in 1931 were all but gone from the catalog by the end of the decade and finally discontinued during World War II in 1944, partially due to the rationing of materials such as brass and steel, a problem that would also affect the makers of resonator guitars.[31]

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[31] Johnston, Boak, and Longworth, *Martin Guitars: A History*, 86, 90.

Figure 13 Guitar by Charles A. Stromberg and Son, Boston, MA, ca. 1939-1941, Master 400 model, owned by Irving Ashby. Smithsonian, National Museum of American History.

The Resophonic Guitar and National

Drawing on the tools and materials of twentieth century American industrial production, an immigrant innovator named John Dopyera created the ampliphonic, or resophonic guitar. Metal became a prominent material symbol of industrialization. From the Iron Bridge to the skyscraper, metal in its various forms such as aluminum, iron or steel, offered strength and rigidity. Brass and woodwind horns like the saxophone, trombone, trumpet, and tuba all represented viable ways to make music with metal instruments. It is only natural to think that when applied to lutherie, it could offer new tonal possibilities. Following this path was a sharp departure from the traditional guitar material of wood, something that luthiers had relied upon for centuries to make the bodies of their instruments. Dopyera filed the initial patents and conceived plans for a guitar that amplified the sound of an acoustic guitar through the use of metal resonators. Instead of hand tools such as chisels and rasps, resonator cones required spinning lathes and stamping presses.[32] Even the talented C. F. Martin could not build a metal resonator cone in his small workshop. With the aid of his four brothers and a vaudeville musician named George Beauchamp, Dopyera created a radically new type of acoustic guitar.

The Dopyera family (and primarily John Dopyera) represents many of the familiar threads found in the story of the American acoustic guitar including immigration craftsmanship, and innovation. The Dopyeras immigrated from Dolna Krupa, Austria-Hungary (now Slovakia) to Los Angeles, California in October 1908. The family included ten children, amongst them then fifteen-year-old John Dopyera and his four younger brothers: Robert, Rudolph (Rudy), Louis and Emil (who was also known as Ed). John was skilled in the trade of cabinet making. Like other luthiers who tinkered with the

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[32] For a comparative look at how similar types of complex metalwork factored into the delay in releasing the Ford Model A, see David Hounshell, *From the American System to Mass Production, 1800-1932: The Development of Manufacturing Technology in the United States* (Baltimore: Johns Hopkins University Press, 1984), 285-286.

design of acoustic guitars, he had a knack for experimenting with instruments and other devices and he dabbled in the hobby of making violins beginning in his early teens.[33] A testament to his business savvy, the eldest Dopyera brother had applied for and received a number of patents including ones for a cartridge-belt, a banjo and a violin before designing his resophonic guitars.[34] In California, John, like C. F. Martin, Orville Gibson and others before him, began to ply his trade at making and repairing guitars and other acoustic fretted instruments. However, unlike his luthier predecessors, Dopyera's vision of the acoustic guitar did not hearken back to the styles of the Old World, but instead incorporated entirely new elements not seen before in the construction of these instruments.[35]

By the 1920s, all of the brothers had established businesses in the state of California, and it was there in the land of "Think different" that the resophonic guitar was created.[36] As noted guitar historian Tom Wheeler once said, "There was electricity in the

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[33] John Dopyera was born in Staze, Slovakia on July 6, 1893. Eleonóra Bartóková and Peter Radványi, *Dobro 1989-1999* (Trnava, 2000), 13, Curatorial Files, DCA; John Dopyera learned to make violins under the instruction of his father Josef Dopyera (or Dopjera) and had built at least two before he came to the United States in 1908. Bob Brozman et al., *The History and Artistry of National Resonator Instruments* (Fullerton, CA: Centerstream Publishing, 1993), 6, 8; Gruhn and Carter, *Acoustic Guitars*, 226;

[34] James Kylianek and John Dopyera. Cartridge-belt. US Patent 1,183,572, filed August 17, 1915, and issued May 16, 1916; John Dopyera. Banjo. US Patent 1,649,101, filed December 12, 1923, and issued November 15, 1927; John Dopyera. Violin. US Patent 1,647,510, filed December 12, 1923, and issued November 1, 1927.

[35] Brozman et al., 8; Dopyera, like C. F. Martin and Orville Gibson before him, used new approaches to acoustic guitar design that were unique when compared with the work of other luthiers. See Chapter 1 of this dissertation for a more detailed discussion of the nineteenth century innovations of Martin and Gibson.

[36] The "Think different" advertising campaign, begun in 1997 became hugely successful for Apple Computers. Rob Siltanen, "The Real Story Behind Apple's 'Think Different' Campaign," *Forbes*, December 14, 2011, accessed January 24, 2015, http://www.forbes.com/sites/onmarketing/2011/12/14/the-real-story-behind-apples-think-different-campaign/.

air, before it got applied to guitars."[37] Emil Dopyera owned a music store near Porterville, California. Louis and Robert ran an auto parts store in Taft, California. Rudolph and John settled in Los Angeles where they owned a shop for making cabinets and repairing musical instruments. In late 1926, the Dopyera brothers trademarked the "National" brand name, initially for their banjo making business, but it would later be used for the establishment of the National String Instrument Corporation, a name that is still synonymous with resophonic instruments.[38] Each of the brothers had a specific job in the business. Robert was in charge of the financial aspects. Rudolph and John handled the mechanical aspects. Louis and Robert were primarily investors. Emil (nicknamed Ed) kept the books and conducted sales. All of the brothers were involved in the firm in some capacity.[39]

The initial demand that inspired the creation of resophonic instruments came from a vaudeville performer and musician on violin and Hawaiian steel guitar named George Beauchamp. There are several versions of the story, but it is certain that John Dopyera began his initial attempts at creating a resophonic instrument shortly after meeting George Beauchamp in 1925. The performer was looking for a way to amplify his guitar so that it could cut through the sound of the orchestra for his act. While he most likely was not the only guitarist to be experiencing such problems, Beauchamp had the good fortune of seeking help from someone who was willing to think outside of the box. He approached John Dopyera at his instrument repair shop located in Orange County where

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[37] Tom Wheeler, interview, November 15, 1996, audio recording, box 15, Electric Guitar Video Documentation, 11/9/96-11/16/96, AC.

[38] Brozman et al., 26-27; Tom Wheeler, *American Guitars, An Illustrated History*, rev. ed. (New York: Harper Perennial, 1992), 287, 300; Gruhn and Carter, *Acoustic Guitars*, 226.

[39] Wheeler, *American Guitars,* 288.

they discussed solving the problem using a variety of different approaches and materials.[40]

The Dopyera brothers and Beauchamp may have been influenced by banjos, aluminum instruments, and metal violins in their efforts to amplify an acoustic guitar. John Dopyera's experience making and repairing banjos would have made him familiar with banjo resonators. According to Victor Smith, a shop manager under the Dopyeras, John and Rudy Dopyera envisioned the resonator cones to be similar to the bowl-like resonator of a banjo.[41] There is also some evidence that two luthiers, Neil Merrill and C. W. Hutchins, incorporated aluminum into fretted stringed instrument designs.[42] Another potential precursor to the resonator guitar is the Stroh violin, named for John Augustus Stroh, a German inventor who along with his British partner Sir Charles Wheatstone, experimented with amplifying the acoustic properties of instruments.[43] In this design, a

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[40] A talented musician and entertaining character, Beauchamp had been using a flat-top Martin guitar with its nut adjusted for Hawaiian style playing prior to his meeting with Dopyera. Brozman et al., 19-20; Wheeler, *American Guitars,* 288.

[41] Wheeler, *American Guitars,* 300.

[42] Michael Holmes, "Gibson and the Rest: The Mandolin Makers," in Carter, *Gibson Guitars*, 40; Hambly, 402-407; Merrill and Hutchins are also briefly discussed in Chapter 2 of this dissertation.

[43] The instrument was intended for use in early acoustical sound recording. Stroh and Wheatstone applied for a British patent in 1899 and it was granted in 1900 (No. 9418, 1899) According to the patent, "In the new instrument the body of the violin with its sounding boards is omitted, and the head, neck and bridge, tailpiece and strings of the violin are mounted on a suitable frame made of aluminum, wood, or other suitable material." This system allows the vibrations of the string to be transmitted through "a diaphragm of wood, glass, metal or other rigid material" which then projects the sound through "a trumpet shaped resonater [sic] or tube, to augment or distribute the sounds emitted by the diaphragm." Initially used for recording and manufactured by George Evans and Co. between 1904 and 1942, they found a home in the 1920s and 1930s in dance orchestras for players who tried to compete with the growing presence and volume of saxophones and trumpets. Julian Pilling, "Fiddles with Horns," *Galpin Society Journal* 28, (April 1975): 86-92.

mica diaphragm and a phonograph horn were attached to the guitar to direct and amplify the sound. Initially, Dopyera produced a Hawaiian guitar combined with a victrola horn, but it did not achieve the desired amplification of sound that Beauchamp desired.[44]

Ultimately, Dopyera settled on a major design change that threw out the standard notion of using the body of the guitar as a resonant chamber to amplify and project the sound of the strings.[45] This decision to abandon using the body of the instrument as an acoustic amplifier would have a profound impact on the course of future guitar innovations. Instead of relying on the traditional design, he built a system that connected the bridge of the guitar to three small aluminum cones or resonators. These cones worked similarly to small megaphones or speaker cones that opened facing the back of the guitar. The three 6-inch spun aluminum cones were configured in the shape of a triangle with two cones placed on the bass side of the strings and one cone oriented on the treble side. The metal bridge, in the shape of a "T", with an inset maple saddle connected the tops of the three cones.[46] When plucked, the strings would vibrate just as they did on traditional guitars. These vibrations, however, would then travel along the strings to the bridge where they would be transferred to the aluminum cones. The cones would in turn resonate and amplify the sound within the body of a guitar. Two grilles or grated

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[44] Brozman et al., 21. 47-48.

[45] Ibid., 21-22; It is uncertain whether or not Beauchamp knew that Stroh had produced such an instrument as the guitar he and Dopyera first envisioned that utilized a phonograph horn. According to John Dopyera, he refused to see an ampliphonic violin that Beauchamp wanted to show him while he worked on the prototype. Wheeler, *American Guitars*, 288.

[46] Wheeler, *American Guitars*, 292-293; Gruhn and Carter, *Acoustic Guitars*, 226.

soundholes placed near the upper bout allowed the sound to be projected outward from the body of the guitar.[47]

In addition to its revolutionary design, the resonator guitar broke with the long-established tradition of using wood as the primary material by which to construct the body of an acoustic guitar and instead substituted "German silver" or nickel silver (an alloy of copper, zinc, and nickel). For the cones he settled on 98 percent pure aluminum. John Dopyera later claimed that he built the first one in approximately six weeks.[48] Pleased with the results, John Dopyera submitted a patent application on April 9, 1927 and began producing the new guitar models [Figure 14].[49] Dopyera finished his prototype and brought it to Beauchamp who "played it and couldn't get over it." He then enlisted Beauchamp and his cousin-in-law Ted Kleinmeyer as business partners in his new venture. The first production model was called the National Tri-Plate or Tri-Cone nickel silver ampliphonic (or resophonic) guitar and cost $125.[50] This was no small sum of money, as a consumer could buy the most expensive Hawaiian guitar offered by Martin (Style 40H for $100), a higher end Martin Grand Concert (Style OO-42 for $115), or a

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[47] George D. Beauchamp, Paul Barth, John Dopyera, and T. E. Kleinmeyer. Stringed musical instrument. US Patent 1,741,453, filed April 9, 1927, and issued December 31, 1929; Gruhn and Carter, *Acoustic Guitars*, 226; Brozman et al., 108-109.

[48] Brozman et al., 107; Wheeler, *American Guitars,* 288.

[49] The typical concentrations of German Silver included 65 percent copper, 10 to 23 percent zinc and 10 to 20 percent nickel. To give the guitar bodies a bright finish, the exterior of the top, back and sides were plated with nickel and polished. Brozman et al., 107; Gruhn and Carter, *Acoustic Guitars*, 226. George D. Beauchamp, Paul Barth, John Dopyera, and T. E. Kleinmeyer. Stringed musical instrument. US Patent 1,741,453, filed April 9, 1927, and issued December 31, 1929.

[50] John Dopyera, quoted in Wheeler, *American Guitars*, 289, 292-293; National String Instrument Corp., *National String Instruments* (Los Angeles: Western Lithograph Co., [1930?]), Curatorial Files, DCA.

Gibson Special Model (Nick Lucas for $125) for the same amount or less.[51] By 1928 these gleaming silver-white triple resonator guitars made of German silver could be purchased for either Hawaiian (lap-style) or Spanish playing.[52]

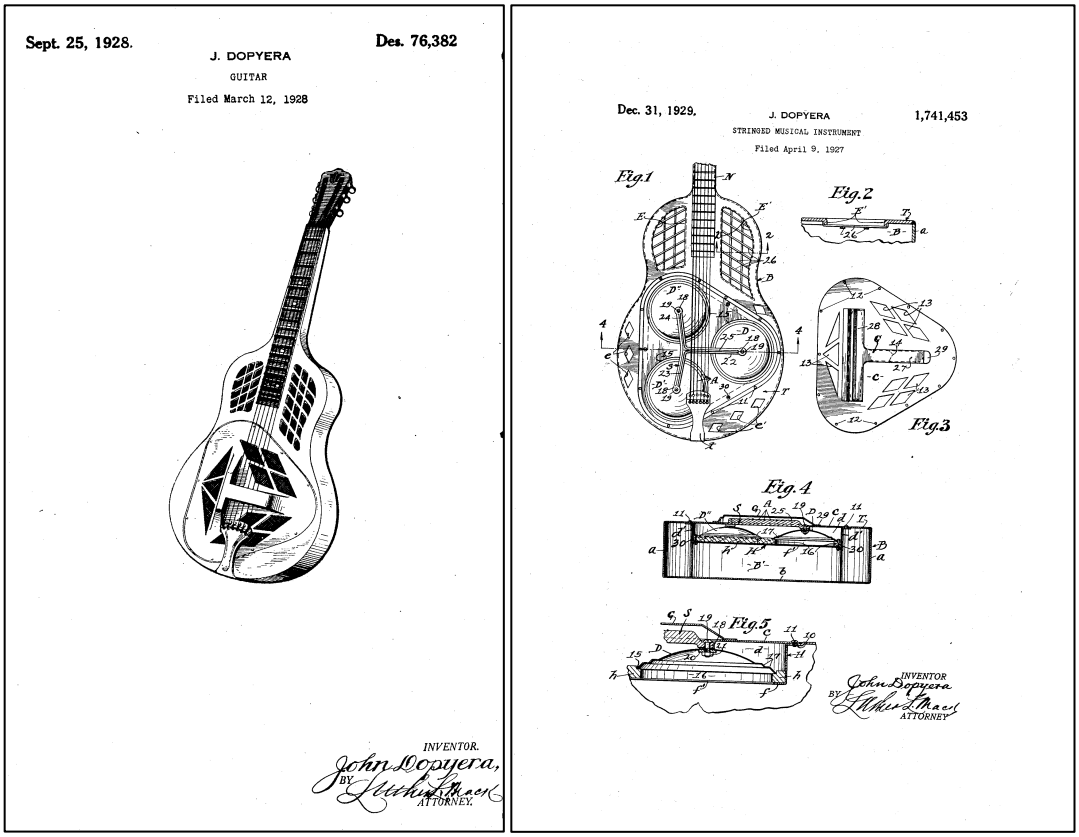

Figure 14 Patent illustrations for Tri-cone guitars produced by John Dopyera. (Left image) John Dopyera. Design for a guitar. US Patent Des. 76,382, filed March 12, 1928, and issued September 25, 1928; (Right image) George D. Beauchamp, Paul Barth, John Dopyera, and T. E. Kleinmeyer. Stringed musical instrument. US Patent 1,741,453, filed April 9, 1927, and issued December 31, 1929.

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[51] Gibson, Inc., *Gibson Mandolins, Guitars, Ukuleles, The Music Pals of the Nation, Catalog R* (Gibson, Inc., 1929), 6, MIMA; C. F. Martin, & Co., Inc., *Martin Guitars, Mandolins, Ukuleles, Retail Catalogue* (Nazareth, PA: C. F. Martin, & Co., Inc., 1930; repr. Catalog Vault, n.d.), 9, 15, MIMA.

[52] Brozman et al., 27; Gruhn and Carter, *Acoustic Guitars*, 227.

This new type of acoustic guitar required additional manufacturing processes in the assembly of the instruments, chief among them metal spinning, so Dopyera, in a similar fashion to Thomas Edison, created a whole new system to make the new guitars. Dopyera owned a lathe for his banjo shop that he converted into a spinning lathe. He sought the help of other spinners, but they were skeptical of his ideas, insisting that the metal Dopyera intended to use would not be thick enough to make the cones. When all else failed, he trained his nephew Paul Barth to use a lathe when he was 17 and brought him into the business.[53] John Dopyera conceived of the manufacturing process for the National shop, constructed a number of the assembly jigs, and even acted as an informal quality control man on the line to inspect the products.[54]

After producing twenty-five or so guitars, Dopyera decided to hire Adolph Rickenbacker to help with the production of metal parts. A Swiss immigrant, Rickenbacker brought his skills as a tool and die worker to the new company stamping out bodies, tailpieces, and other parts for the all-metal National guitar. He owned his own manufacturing company and possessed one of the West Coast's biggest deep drawing presses. His shop produced parts for up to fifty guitars per day, an amount that rivaled some of the factories of the biggest guitar manufacturers of the time. Rickenbacker would

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[53] Dopyera used aluminum that was extremely thin for the cones, somewhere between .005 inch and .008 inch thick. For comparison, the thickness of metals used in National guitar bodies varied from .032 inch to .034 inch. Brozman et al., 107-108; Wheeler, *American Guitars*, 288-289.

[54] Brozman et al., 10; Dopyera is an excellent example of "independent inventor-entrepreneurs" who "invented and developed the coordinated manufacturing process as well as the product" when "established manufacturers" would not provide the necessary means to produce the object. Thomas P. Hughes, "The Evolution of Large Technological Systems," 64-65.

later become one of the most influential individuals in the development of the electric guitar, but he began his career in musical instruments with National.[55]

The heads of National prided themselves on operating as non-traditional guitar makers, producing distinctly different instruments that caught the attention of the competition. The Dopyera brothers were creatively charged individuals who genuinely seemed to be more interested in doing something different rather than simply making money. The business attracted the attention of rival Gibson whose general manager, Guy Hart, visited their factory twice and invited them to join his company. Even though they offered to give the National workers an entire floor at Gibson's Kalamazoo plant, Dopyera and company turned him down.[56] However, company disagreements and financial concerns forced the Dopyeras and their associates to move away from the periphery and towards the center of guitar manufacture in the United States. Disagreements between the heads of the company ultimately led to the breakup of the firm resulting in two similar but competing companies: National (led by Beauchamp) and Dobro (led by John Dopyera).[57]

After the split, National began to produce a new type of single resonator cone guitar that utilized a new style bridge later culminating in the popular Duolian model.

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[55] The fledgling firm had invested a substantial amount of money into the machine tools and equipment for making metal parts for the guitars. For example, by 1926, the company had $94,000 of dies, most of which were made by Rickenbacker. Wheeler, *American Guitars,* 289; Brozman et al., 29; A contemporary definition of a deep drawing press states "The term deep drawing is applied to dies that are employed to produce long shells or deep cups," Howard Monroe Raymond, *Modern Shop Practice: A General Reference Work* (Chicago: American Technical Society, 1916), 3:328.

[56] Wheeler, *American Guitars,* 290.

[57] It is extremely difficult to sort out exactly what happened to split up the business, but the story includes John Dopyera disapproving of Beauchamp's claims to inventing the resonator guitar and wasteful habits at the company. For a more in-depth discussion of the situation, see Brozman et al., 29-33.

National continued to manufacture the all-metal body resonator guitars and, in 1929, introduced a more modestly priced single-cone resonator design that utilized one large convex cone with its large opening facing the back of the guitar. The cone was fitted with a circular bridge support with inset saddle made of wood, nicknamed a "biscuit." This "biscuit" rested in the shallow bowl at the top of the cone (somewhat resembling the shape of a volcano) and transmitted the vibrations of the strings to the resonator cone. The Style O and Triolian were the first new single-cone designs produced by National.[58] Shortly thereafter, around 1930, the company introduced a follow-up to the Triolian known as the Duolian that featured a slotted peghead and f-holes, rather than grills on the upper bouts (as seen on the Tri-cone models).[59] In 1934, the company revised the design and included features such as a 14-fret neck and a solid, rather than slotted, peghead. The Duolian, which could be purchased with either a Hawaiian (square) or Spanish (round) neck, ultimately proved to be a good seller for National.[60]

In 1929, after his departure from National, John Dopyera, along with brothers Emil and Rudolph formed the new the Dobro Manufacturing Company and set to work building their own line of resonators. The name "Dobro" has two meanings that resonated for the family: 1) the word is short for Dopyera Brothers, *Do-Bro*, and 2) its translation in Czech means "good." The company set up shop in part of a building that housed the Los Angeles based Russell Plating Company, which had provided the German silver for the National Corporation. Dopyera enlisted Russell to perform most of the plating work on

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[58] Brozman et al., 109-110; Wheeler, *American Guitars*, 293; An early National catalog (ca. 1929) lists the Style O model starting at $85 and the Triolian for $45. National String Instrument Corp., *National String Instruments* (Los Angeles: Western Lithograph Co., [1930?]), Curatorial Files, DCA.

[59] A Duolian model was quite affordable and cost around $35 in 1930. Wheeler, *American Guitars,* 295.

[60] Ibid., 296.

his instruments as well. Despite the split, Russell continued to supply metal work for both of the rival firms. The first workspace of Dobro was cramped, but it was enough to build bodies, necks, and fingerboards for the guitars. The National String Instrument Corporation was only seven miles from the new Dobro factory and the two companies kept lines of communication open with one another. However, the business environment was far from friendly with legal squabbles over patents and fights concerning distributors and dealers.[61]

John Dopyera used the name of the new company for his version of a single plate/cone resonator, the Dobro, a guitar that was distinctly different from National's latest single cone model. He placed his brother Rudolph's name on the patent, as he feared that the rights of his new guitar, which he had designed at home and not in the shops of his previous company, might go to the now-rival National String Instrument Corporation. All of John Dopyera's original patents for Tri-cone resonators remained with Beauchamp and National.[62] The new Dobro design featured several fundamental

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[61] It would later become the Dobro Corporation, Limited. Brozman et al., 11, 31, 33, 36; Wheeler, *American Guitars*, 301; The company also played on the meaning of their name by crafting the slogan, "Dobro means good in any language." Ed Dopera and Michael Brooks, "The Story of the Dobro: A Personal History," *Guitar Player*, December 1971, 30.

[62] Rudolph Dopyera. Stringed musical instrument. US Patent 1,872,663, filed June 29, 1929, and issued August 16, 1932; Wheeler, *American Guitars*, 290, 292; The Dopyera brothers and their associates vigorously worked to defend their intellectual property. Unlike the mass-produced wooden guitars that had been on the market for decades, resophonic instruments were quite distinct from the competition. Catalogs urged customers not to accept substitutes and only choose patented National/Dobro products. One advertisement assured buyers that "due to the national popularity of the **DOBRO** [emphasis in the original] there are instruments on the market that are similar to the **DOBRO** in appearance. Insist on the **DOBRO SPIDER BRIDGE CONSTRUCTION**." The same catalog also made a similar statement about the National line declaring "this dynamic resonator principle is found only in NATIONAL String Instruments and is fully protected by our patents." Tonk Bros. Co., *Musical Merchandise Catalog No. 49* (Chicago: Tonk Bros. Co., 1935), 85, MIMA; The company was not afraid to go to court to protect their products. For example, in March 1937, the National-Dobro Corporation

differences from the National model. The Dobro guitars utilized a soundwell, or ring that resembled a tambourine with holes around its circumference so that the sound could be distributed throughout the body. The soundwell attached to the top and back of a wooden (not metal) guitar body and the metal resonator cone rested inside the soundwell.[63]

The new body style, resonator, and bridge combined to make the Dobro a distinctly unique take on the single cone resophonic design. Resembling a modern-day speaker cone, the new concave Dobro resonators were made from spun aluminum and resembled a bowl or dish that opened in the direction of the top of the guitar (opposite of the cone shaped National resonators). In the center of the resonator was a raised area that connected to the "spider" or "spider webb" bridge, a wooden bridge that was mounted on an eight-legged metal support piece nicknamed a "spider" for its resemblance to the insect [Figure 15]. This bridge transferred the vibrations of the strings to the resonator cone.[64] The Dobro Manufacturing Company originally obtained their blank aluminum disks from either Rickenbacker at National or from a nearby mill. At first, the designers experimented with how to spin the metal on a modified lathe. The objective was to obtain just the right thickness for the resonators to act in a manner similar to speaker cones, vibrating and amplifying the string vibrations. Dopyera spun resonators for National as

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took legal action and won a patent infringement suit against Schireson Brothers Company over their Schibro resonator guitars. For a discussion of the Schireson case, see Brozman et al., 39.

[63] Wheeler, *American Guitars,* 299, 302.

[64] George Gruhn, and Walter Carter, *Gruhn's Guide to Vintage Guitars, An Identification Guide for American Fretted Instruments* (San Francisco: Miller Freeman Books, 1999), 2, 470; Wheeler, *American Guitars,* 298, 301; Rudolph Dopyera. Musical instrument. US Patent 1,896,484, filed February 1, 1932, and issued February 7, 1933; Dobro Mfg. Co., *"What the Stars Tell!"* (Los Angeles: Locus Stationery & Printing Company, [ca. 1930s]), NTCC.

well as his own company. Eventually, Rickenbacker began stamping the resonators.[65] The bodies of Dobros used birch plywood and featured two mesh soundholes at the upper bouts with three small holes on the body just below the neck. Most came with a dark veneer finish and could be purchased with either a round or square neck [Figure 16].[66]

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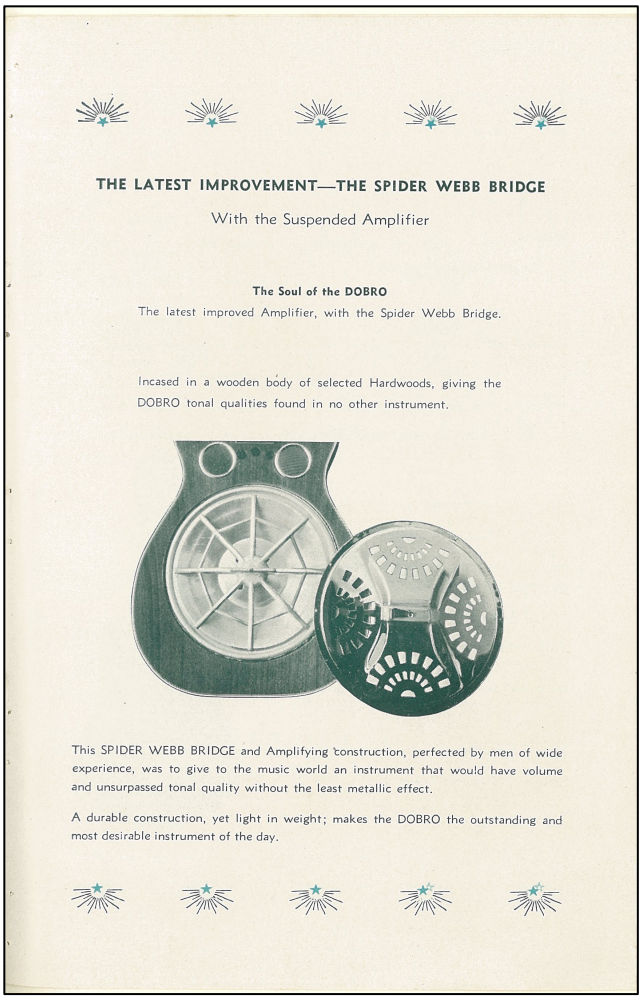
[65] Victor Smith described the process by saying, "He'd [John] have a wooden cone that screwed right into the lathe. He would get the center of the blank disk and punch a hole there. A pin would hold it in place, and then the lathe would spin it. John used a special tool for every little crease in the resonator, and he would make the aluminum follow the wooden form. By using these hand tools and the lathe, he'd turn that flat disk into a cone." Victor Smith, quoted in Wheeler, *American Guitars*, 302.

[66] Robert F. Gear, "Metal Bodied Guitars," *Mugwumps, The Magazine of Folk Instruments*, September 1973, 18.



THE LATEST IMPROVEMENT—THE SPIDER WEBB BRIDGE

With the Suspended Amplifier

The Soul of the DOBRO

The latest improved Amplifier, with the Spider Webb Bridge.

Incased in a wooden body of selected Hardwoods, giving the DOBRO tonal qualities found in no other instrument.

This SPIDER WEBB BRIDGE and Amplifying construction, perfected by men of wide experience, was to give to the music world an instrument that would have volume and unsurpassed tonal quality without the least metallic effect.

A durable construction, yet light in weight; makes the DOBRO the outstanding and most desirable instrument of the day.

Figure 15 Catalog page showcasing the Dobro "spider webb" bridge design. Dobro Mfg. Co., *"What the Stars Tell!"* (Los Angeles: Locus Stationery & Printing Company, [ca. 1930s]). Courtesy of the Smithsonian Libraries, Washington, D.C.

Figure 16 Guitar by National-Dobro Corp., Los Angeles, CA, 1934, Dobro model, owned by Fred Wright. Smithsonian, National Museum of American History.

Rudolph Dopyera built much of the equipment for the Dobro factory, including sanders, as many of the specialized machines that the company needed could not be commercially purchased. Emil again handled the sales end of the business due to his extensive relationships with musical instrument jobbers around the country. National and Dobro did maintain a rule that in small towns there would only be a single distributor for each of the rival companies. In 1929, as the country was on the verge of entering the

Great Depression, Dobro had outgrown its factory. The company built a new production facility on 62nd Place in the southern part of Los Angeles that was five times larger in size than its predecessor and consequently hired more staff to operate it.[67]

The first Dobro lineup contained a diverse array of resonator instruments that featured minor cosmetic differences when compared to their National counterparts, though if a consumer looked "under the hood" they would find some key differences. Reflecting the continuing effect of ethnic music movements, the line included one ukulele and two mandolins in addition to three tenor guitars and three 6-string guitars.[68] The company later added an upright bass with three circular soundholes on the upper bouts and featured a large resonator cone that one author thought resembled a manhole cover. Though primarily known for using wooden bodies, some metal models of Dobros featured an innovative method of joining the tops, backs, and sides. Without using solder, the tops and backs of all-metal body Dobros were fitted together with a Violin or Fiddle edge which, according to the marketing, "eliminates all solder joints." They also experimented with using small circular "window" soundholes instead of f-holes in the upper bouts and utilized alternate metals for the body that included brass alloys, sheet metal, and aluminum. The all-aluminum Dobro earned the nickname "Dobro-lite or Luma-lite."[69]

The Great Depression ultimately reunited the two companies under one roof as the National-Dobro Corporation. During the early years of the Depression, Dobro found

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[67] Wheeler, *American Guitars,* 302-303.

[68] Ibid., 289-299; Robert F. Gear, "Metal Bodied Guitars," *Mugwumps, The Magazine of Folk Instruments*, September 1973, 18.

[69] Tonk Bros. Co., *Musical Merchandise Catalog No. 49* (Chicago: Tonk Bros. Co., 1935), 88, MIMA; Wheeler, *American Guitars,* 299; Gruhn and Carter, *Acoustic Guitars*, 250.

it difficult to pay their workers. At one point, they offered to give employees stock in lieu of a paycheck.[70] An on-going lawsuit by Dobro against National also added to the financial concerns. After George Beauchamp left National, and in light of the Depression, the two companies decided to merge into one. Louis and Robert Dopyera bought a new building with 13,000 square feet of space for a joint factory on McKinley Street in Los Angeles. The two rival companies merged in 1934 and established the National-Dobro Corporation. The company maintained the two distinct product lines, each with its own distributors, despite the fact that they shared the same production facilities and patents.[71]

Capitalizing off of their monopoly on resonator production, the company granted Regal a license in 1933 to manufacture Dobro guitars under both the Dobro and Regal brands, but excluded its National line.[72] National-Dobro made the metal parts, necks, and other pieces in California and then shipped them to Chicago where Regal put together the instruments. Regal featured an expansive line, larger than what Dobro offered, selling lower priced models with minor differences such as f-holes in place of mesh soundholes. Some of the metal-bodied models featured extensive decorative engravings. Similar to the relationship between Martin and the Ditson Company, Regal built resonator guitars under a variety of different labels for wholesalers and mail-order houses. Consumers who

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[70] Though few took advantage of this offer, Victor Smith did. This move would later allow him to grab a stake in the company leading up to his part in the formation of Valco a decade later. Wheeler, *American Guitars*, 303.

[71] John Dopyera's role in the newly reunited company began to diminish as he pulled himself out of the partnership in order to pursue his ideas for inventions, including a new metal ampliphonic violin. He owned a store at 59th and Hoover in Los Angeles and continued to work on and repair instruments while occasionally helping out at National-Dobro. Brozman et al., 38-39; Wheeler, *American Guitars,* 291, 304; Gruhn and Carter, *Acoustic Guitars*, 227-228; Ed Dopera and Michael Brooks, "The Story of the Dobro: A Personal History," *Guitar Player*, December 1971, 31.

[72] Gruhn and Carter, *Acoustic Guitars*, 228.

bought a Kraftsman, Wards, or Broman guitar for example, might in actuality be purchasing a Regal.[73]

Connection to the Electric Guitar

The Los Angeles area proved to be a hotbed for luthiers and tinkerers who threw out the conventional wisdom of guitar manufacture and acoustic amplification in favor of innovative production techniques using new materials. It is not by accident that the metal guitars of the Dopyera brothers, the early electric guitars of Adolph Rickenbacker and the prototypes of Leo Fender all originated in the sunny air of California. The development of the resonator design served as a stepping-stone for several individuals who wanted to explore new ways by which to amplify the sound of a guitar.

Though numerous versions of the story exist surrounding the invention of the first electric guitar, it is clear that former National employees played a key role in the development of the instrument.[74] Rickenbacker's "Frying Pan" guitar (nicknamed for its resemblance to the cookware) utilized cast-aluminum construction and featured a magnetic pickup that electrically transmitted the vibrations of the strings into a vacuum tube amplifier. This pivotal design change followed the innovation of the resonator guitar by not relying on the wooden body to amplify and resonate the vibration of the strings

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[73] This phenomenon will be explored further in Chapter 5 of this dissertation with regards to Kay and Harmony guitars manufactured for mail-order houses. Gear, "Metal Bodied Guitars," 18.

[74] One story posits that after they left National-Dobro, Paul Barth and George Beauchamp designed the electric Hawaiian guitar and gave the idea to Adolph Rickenbacker because both had owed him several thousand dollars for his work at National. When interviewed in 1972, Rickenbacker expressed little love for the Dopyera brothers and credited himself for coming up with the idea for the electric "Frying Pan." He asserted that Beauchamp helped him develop it after he left National. The two together produced and marketed the "Frying Pan" models under their own business, the Electro String Instrument Corporation. Wheeler, *American Guitars,* 291, 331-332; Brozman et al., 30.

and instead used a magnetic pickup, nicknamed a "horseshoe pickup" because of its shape. This setup did not require any part of the guitar to vibrate other than the strings.[75] The Dobro Corporation did produce an electric Spanish model guitar in 1933 but Rickenbacker's "frying pan" was on the market by August 1932. It was the latter that became one of the first commercially successful electric guitars produced in the United States, with Sol Hoopii as one of its earliest adopters.[76] National (and later National-Dobro) employees would go on to help design and manufacture guitars for many prominent electric guitar manufacturers including Rickenbacker, Mosrite, Barth, Magnatone, Supro, and Regal, a testament to how the workshops of National and Dobro served as an environment that encouraged employees to approach the problem of guitar amplification in new and innovative ways.[77] Thirty years after the development of the electrical guitar, an employee policy manual for Valco (a later iteration of National) reinforced this narrative stating, "Pioneering work in the electric guitar field gave Valco

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[75] Wheeler, *American Guitars*, 287, 333-335; For a more detailed analysis surrounding the invention of the electric guitar and its early commercial producers see André Millard, ed., *The Electric Guitar: A History of an American Icon* (Baltimore: Johns Hopkins University Press, 2004).

[76] Victor Smith began working on electronics in his spare time during the early days of the Dobro Corporation when they only made resonator guitars and no electric models. He claimed that Dobro sold electrics before Rickenbacker, but this claim remains unverified. Brozman et al., 41; Wheeler, *American Guitars*, 287, 302-303; "The Story of Hawaiian Steel Guitar as told by Jerry Byrd and Barney Issacs with the Honolulu Skylark and the Music of the Masters of Steel Guitar," *The Heritage Series: The Story of Hawai'i's Foremost Musical Artists*, aired December 26, 1982, on KCCN, KCCN Hawaiian Radio/Bank of Hawaii Heritage Series Collection, Part I, AFC; Lorene Ruymar, ed., *The Hawaiian Steel Guitar and Its Great Hawaiian Musicians* (Anaheim Hills, CA: Centerstream Publishing, 1996), 90.

[77] Wheeler, *American Guitars*, 288.

an envied place in the industry. Valco stimulated most of the early style trends in the electric guitar business."[78]

In February 1936, National-Dobro moved its operations to Chicago, a location that offered a more centralized location for sales, service, and communication.[79] Victor Smith cited two major reasons for the company's decision to move. First, the company's forays into the manufacture of electric guitars produced a need for electronic parts such as vacuum tubes and transformers, most of which were manufactured primarily on the east coast. Secondly, at the time, Chicago could have been considered the musical instrument manufacturing capital of the country, housing a number of prominent guitar makers such as Gibson, Regal, Kay, and Harmony as well as mail-order companies like Sears, Roebuck and Company and two of the big distributors, Chicago Musical Instrument Corporation (CMI) and Tonk Brothers. Carl Barth, a former National employee and the younger brother of Paul Barth, believed that the move also gave the company a chance to start fresh in the wake of all the legal and personnel problems associated with the original National/Dobro split that occurred in 1929. Emil Dopyera rented a floor of an old factory building and set up the assembly area, while Victor Smith hired most of the shop floor workers from Chicago. The move to the Windy City was a gradual one that was finally completed by 1939.[80]

The community of musical instrument makers in Chicago featured an atmosphere of camaraderie and interchange between the different manufacturers. From visiting each other's factories to socializing over dinner, the heads of the major Chicago musical

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[78] *VALCO Guitars, Inc. What VALCO employees should know about their company, their work, their privileges, their responsibilities* (employee manual), 1963, 25, Curatorial Files, DCA.

[79] Ibid.

[80] Brozman et al., 42; Wheeler, *American Guitars*, 304-306.

instrument manufacturers became a tight-knit group. Outside of social activities, the manufacturers often exchanged parts.[81] At the beginning of the move, the National-Dobro operation worked in tandem between the Los Angeles and Chicago factories. Rickenbacker and others spun and stamped the resonators and other parts and sent them to Chicago, as it was only a quarter of the cost to ship the parts as opposed to a fully completed instrument. Once there, these pieces were assembled with bodies bought from other manufacturers including Regal, Kay, Harmony, and Gibson who, at the time, were better equipped to fabricate wooden guitar bodies. As part of their working agreement, National-Dobro sold resonators and electronic parts to these companies. For example, Regal advertised that its amplifying guitars came equipped with a "dobro amplifying unit."[82] Eventually National-Dobro moved into the downstairs of the building and brought in a large amount of heavy machinery for the manufacturing process. As demand for the instruments increased the company eventually outgrew that building and bought a new one on the West Side of the city.[83]

The National-Dobro Corporation benefitted greatly from business relationships with mail-order companies and distributors. They produced electric guitars for Sears before World War II under the name "Silvertone" and a "Kraftsman" line for

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[81] Wheeler, *American Guitars*, 306.

[82] The role of Kay and Harmony in the mass production of acoustic guitars between 1920 and 1960 will be discussed in Chapter 5 of this dissertation. Progressive Musical Instrument Corp., *Wholesalers & Modern Musical Merchandise*, (New York: Progressive Musical Instrument Corp., 1935), 22, Curatorial Files, DCA; Regal Musical Instrument Co., *Regal Fretted Instruments* (Chicago: Regal Musical Instrument Co., 1937), 17-19, MIMA; Wheeler, *American Guitars,* 306.

[83] Wheeler, *American Guitars*, 306, 308; Brozman et al., 42.

Montgomery Ward & Company.[84] Due to their previous experience and efficient means of manufacturing guitars with electronic components, National-Dobro won contracts to build resophonic and electric instruments for several other mail-order houses. In addition to their flagship lines of National, Dobro, and Supro (a budget line of acoustic and electric instruments), the company produced instruments for distributors to sell under their own labels. These guitars differed slightly from their own lines and often had decals with the distributor's name placed on the headstock. A consumer could purchase a guitar that was virtually identical to a National or Dobro, except it carried a distributor's label and often a cheaper price tag.[85]

World War II and the rationing of metals on the Home Front proved to be a decisive turning point for the National-Dobro Corporation, one that ultimately led to a restructuring of the firm. As the country geared up for war, the company, like many others across the country, received letters from the government requiring them to stop production, especially in light of wartime rationing of aluminum and other metals. Ironically, the material that distinguished National-Dobro from its competitors ultimately impacted the firm in a negative way. Company representatives went to Washington, D.C. to secure government contracts producing materials for the war effort. They made the decision to shut down the McKinley Street plant in Los Angeles that had been making resonator parts and consolidate operations in Chicago at the start of the war. The McKinley plant shipped everything to Chicago and even Rickenbacker sent his dies to

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[84] Not to be confused with the "Craftsman" line of tools marketed by Sears Roebuck and Company. Brozman et al., 42; Montgomery Ward, *Montgomery Ward Catalog, 1939-1940* (Chicago: Montgomery Ward, 1939), MIMA; Wheeler, *American Guitars*, 306.

[85] By 1936, the company was also selling several National-Dobro brand electric instruments including two guitar styles and a mandolin. This trend continued through the 1930s and after the postwar period. Wheeler, *American Guitars*, 297-298, 306, 308; The relationships between mail-order companies and acoustic guitar manufacturers will be further explored in Chapter 5 of this dissertation.

the Midwest so they could be used for war production.[86] At the start of the war, Victor Smith, Al Frost, and Louis Dopyera bought everyone else out, dissolved the National-Dobro Corporation and, by October 1943, formed Valco (an amalgamation of the founders' first names (Victor, Al, and Louis) along with "Co" for Company).[87] The war effort forced the employees to work long days often to 8 or 9pm to meet the demand for a number of products including aircraft parts, radio sub-assemblies, coils, and radar component assemblies. Al Frost remarked, "We made parts for probably every plane in the air."[88]

The postwar period proved to be a challenging one for the company as it was difficult to buy parts, especially ones made of metal due to wartime rationing. Victor Smith explained the difficulties by saying "It was rough because we depended on metal much more than the other guitar companies. Fortunately, we did have stacks of stuff stored all during the war, and we were able to make some Tri-Plates and other resonator guitars." Even with the increased production of the postwar period, it took at least six months for the company to get back to its pre-war manufacturing capacity. Most resonator guitars made after World War II were assembled from leftover parts

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[86] General Limitation Order No. L-37 from the War Production Board ordered musical instrument manufacturers to direct materials, especially metal, towards the war effort causing many companies, such as National-Dobro, to drastically reorganize their production. Brozman et al., 43; Wheeler, *American Guitars*, 308, 310; For an in-depth discussion of the war's effects on American musical instrument makers, see Sarah Deters Richardson, "Instruments of War: The Impact of World War II on the American Musical Instrument Industry" (master's thesis, University of South Dakota, 2010).

[87] Brozman et al., 43; Wheeler, *American Guitars*, 300, 310.

[88] Al Frost, quoted in Wheeler, *American Guitars*, 310; Brozman et al., 43; VALCO Guitars, Inc., *What VALCO employees should know about their company, their work, their privileges, their responsibilities* (employee manual), 1963, 25, Curatorial Files, DCA.

manufactured before the war.[89] Increasingly, Valco relied less on resonators and more on electric guitars as their primary commodity. The company shifted its focus to electrics for two reasons. The wartime rationing of metals such as brass, copper, and nickel drove up prices for both the raw materials and the metalwork required for production. In addition, the growing popularity of the electric guitar took away the volume advantage that resonators had enjoyed during the late 1920s and early 1930s.[90] Despite the fact that by the late 1960s Valco went out of business, National and Dobro guitars remained valuable items to blues and bluegrass musicians as well as guitar collectors.[91]

Marketing Resonator Guitars

From its inception, the National String Instrument Corporation and its successors marketed the resophonic guitar as an attractive musical instrument that both looked and sounded different from all other products on the market. Early National catalogs of the late 1920s listed six main advantages to owning one of their new metal guitars. "1) Powerful, rich, dynamic tone; 2) Unequalled tone quality; 3) Perfect intonation; 4) Exquisite finish; 5) Unaffected by weather, water or temperature; and 6) Will not crack or

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[89] Victor Smith, quoted in Wheeler, *American Guitars*, 310; Brozman et al., 43.

[90] Wheeler, *American Guitars*, 310, 312, 314.

[91] Valco, which had switched completely to manufacturing electric guitars and amplifiers, eventually went out of business in the 1960s, but the Dobro and National names came under the banner of the newly incorporated Original Musical Instrument Company (OMI), in 1970. Emil Dopyera founded OMI and eventually passed the leadership to Ron Lazar, a nephew of the Dopyeras, thus continuing the line of Dopyera involvement in the resonator guitar industry. VALCO Guitars, Inc., *What VALCO employees should know about their company, their work, their privileges, their responsibilities* (employee manual), 1963, 25, Curatorial Files, DCA; Brozman et al., 247-249; Gear, "Metal Bodied Guitars," 16; Gruhn, and Carter, *Gruhn's Guide to Vintage Guitars*, 2; Wheeler, *American Guitars*, 316.

warp with ordinary care: guaranteed indefinitely."[92] Now while many of these claims can be considered advertising hyperbole, there is some truth to the assertions of the company.

The guitars produced a louder, more pronounced sound, equaling the company's advertised claim of a "powerful, rich, dynamic tone." Resophonic instruments could amplify the vibration of the strings more than anything else on the market at the time, leading National to claim that "It is impossible to describe the volume and carrying power; the instrument must be heard to be fully appreciated."[93] Previously, the tenor banjo provided one of the loudest sounds possible from an acoustic fretted instrument. National advertising played on this notion by stating that the instruments "retain the sweet tone of the Guitar while yielding the volume of the ordinary banjo."[94] Even John Dopyera explained the popularity of his innovation by saying, "Players wanted a louder sound, and my silver guitar was seven times louder than anything else, and we couldn't make them fast enough."[95]

The makers of resonator guitars addressed the desires of guitarists who sought greater amplification without sacrificing the tone of the instrument. Though resonators were louder than their all-wooden counterparts, they produced a clean, undistorted tone. The mellow tone of the early Tri-cones produced a subtle stereo effect from the placement of one cone under the higher tuned strings and two below the bass strings. The

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[92] National String Instrument Corp., *National String Instruments* (Los Angeles: Western Lithograph Co., [1930?]), Curatorial Files, DCA.

[93] Sherman Clay & Co., *Musical Instrument Catalog of Sherman Clay & Co.* (San Francisco: Sherman Clay & Co., [1928 or 1929?]), 87, Curatorial Files, DCA.

[94] Continental Music Company, *National String Instruments* (Chicago: Continental Music Company, [1931?]), fold-out brochure from a distributor of National products, MIMA.

[95] He was most likely referring to the color of the instrument rather than the precious metal silver. John Dopyera quoted in Wheeler, *American Guitars*, 290.

single cone resonators offered in 1929 offered louder volume, though it came at the expense of producing a sharper tone. The wooden-bodied single cone Dobros produced more volume than their Tri-cone cousins and also featured more sustain. [96] The National Trojan model constructed with a wooden body (an exception as compared to most National models) was marketed as providing "plenty of tone and power without distortion.[97] Even the ukuleles supposedly possessed the "feature of amplifying the volume while retaining all the softness and beauty of tone."[98] All of the marketing hype aside, it is clear that the mechanical amplification achieved the desired effect of producing a louder and more distinct tone than any other acoustic guitars on the market in the late 1920s and early 1930s.

Metal instruments are not nearly as susceptible to potential damage as wooden instruments. Normal wear and tear along with extreme changes in humidity and temperature can lead to warping and cracking of the wood. This is not the case with metal guitars. If left in a humid environment or subjected to rain outside, the guitars could easily rust, but for the most part they lived up to the company claims that "the beautiful body, made from pure German silver carefully gauged and highly polished, will not tarnish, rust or deteriorate in any way, and with ordinary care will last a lifetime."[99] The guitars made sense for touring musicians whose instruments were subjected to wear and tear along the road as well as to constant changes in weather and climate.[100] With regards

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[96] Gear, "Metal Bodied Guitars," 16.

[97] Progressive Musical Instrument Corp., *Wholesalers & Modern Musical Merchandise*, (New York: Progressive Musical Instrument Corp., 1935), 21, Curatorial Files, DCA.

[98] National String Instrument Corp., *National String Instruments* (Los Angeles: Western Lithograph Co., [1930?]), Curatorial Files, DCA.

[99] Ibid.

[100] A testimonial endorsement in one of their catalogs from the Hawaiian guitarist Sam Ku West remarks that "he finds that the power and tone of NATIONAL String

to temperature, metal instruments tend to produce a sharper pitch in cold weather because the metal contracts slightly. Conversely, in warm weather, metal instruments produce a flatter pitch due to a small enlargement of the metal body, but neither variation in temperature damages the instrument. The metal surface of an all-metal resonator guitar would not have been as vulnerable as wood to the negative effects of a musician's repeated downward strokes using a celluloid plectrum or pick. Yet, after 1934, many metal models began featuring pick guards, perhaps to align them more closely with some of the popular arch-top models of the period.[101]

Though not explicitly advertised, the first resonator guitars were heavy, expensive items aimed at established musicians, especially those performing in ensembles, rather than beginners. For the uninitiated guitar player, the weight and high action of the early Tri-cones would have made it difficult to learn how to play the instrument.[102] One aspect that often gets left out the advertising literature is the weight of a resonator guitar. With all of its metal parts, a resonator was a cumbersome instrument compared to its wooden counterparts. A performer had to be able to support 10 to 15 pounds of additional weight in order to hold a resonator guitar properly. Wooden-bodied single cone models did weigh less than Tri-plates or Tri-cones but the metal certainly added an unexpected surprise for a musician used to traditional wooden guitars. Playing a resonator lap-style

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instruments are not affected by the extreme climatic differences," while he toured the world with Irene West's Royal Hawaiians and the *Bird of Paradise*; National String Instrument Corp., *National String Instruments* (Los Angeles: Western Lithograph Co., [1930?]), Curatorial Files, DCA.

[101] Gear, "Metal Bodied Guitars," 17.

[102] One exception to this is Fred Wright whose parents bought him a lap-style squareneck Dobro from a door-to-door salesman. Wright's family paid $5.00 for a package that included thirteen weeks of lessons. As a young child he went to hospitals and entertained wounded veterans wearing a cowboy outfit and playing country songs on the Dobro. Betty R. Wright to Gary Sturm, letter, November 20, 1989, Curatorial Files, DCA.

helped to reduce the wear on a performer's body by shifting the weight to his or her legs.[103] The weight also affected how National shipped its instruments as some of the cardboard boxes proved to be incapable of handling the heft of the metal-bodied resonators.[104] Younger players would have neither the money nor the physical ability to effectively wield the instrument. For example, steel guitarist Speedy West was one of the few players who really learned guitar on a resophonic instrument. He started out on a wooden acoustic model but, after begging his parents, three years later received a gleaming National guitar, though it was a huge financial burden on the family.[105] These economic and physical barriers would later disappear with the introduction of cheaper Dobros, Regal licensed instruments, and lighter, single-cone resonators that could be played in the Spanish style rather than the lap style.

National marketing also prominently touted the benefits of using new materials in the construction of their instruments, though the results did not live up to the hype. In constructing their guitar necks, National experimented with a variety of materials, including pioneering the early use of composites. A Hawaiian connection may have influenced the neck design of the first National guitars. Rudy Dopyera had previously worked with Herman Weissenborn, a well-known luthier of Hawaiian guitars made of koa wood with hollow necks. His influence can be seen in some of the earliest National guitars in 1927 that featured hollow square necks (perfect for Hawaiian style playing).[106]

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[103] This is the weight of a 2010 Style #204 Republic Tri-cone resonator guitar in the author's collection.

[104] Brozman et al., 33.

[105] As discussed in Chapter 3, West also used a knife as a steel when he first started out playing. In order for his parents to buy a National, they had to both save money and trade his father's guitar in to complete the sale. Guy Logsdon, "Steel Guitar," *Mugwumps, The Magazine of Folk Instruments*, May 1974, 13.

[106] Gruhn and Carter, *Acoustic Guitars*, 226-227.

The thinner necks that offered lower action and easier playability were made from mahogany reinforced with steel to lessen the chance of warping. When National began experimenting with composite necks, the catalog boasted, "NATIONAL Triolian Spanish and Hawaiian Guitars embody a unique, advanced type of neck construction, being molded from a composition material possessing the strength of cast iron but weighing no more than wood."[107] Unfortunately, these new necks, made of Bakelite (an early plastic patented by Leo Baekeland), proved to be extremely susceptible to changes in temperature, often causing the guitars to go out of tune. Many of the necks were ultimately replaced with wooden ones and the feature was a short-lived experiment.[108] They would not be the last company to experiment with these types of materials, as thirty years later the Ovation Corporation would successfully use composites to build innovative guitar bodies.[109]

The brilliance of National guitar models made them shiny, eye-catching objects that caught the attention of consumers and aspiring musicians. The first models were even prominently featured on the company stock certificates [Figure 17]. Forty years after they first debuted, their visual reputation still inspired musicians. In his 1986 Grammy winning song, "Graceland," Paul Simon's opening line described the vivid, luminous surface of a resonator guitar stating, "The Mississippi Delta was shining like a

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[107] National String Instrument Corp., *National String Instruments* (Los Angeles: Western Lithograph Co., [1930?]), Curatorial Files, DCA.

[108] A warped neck was a common problem for most National instruments, regardless of the material. Gear, "Metal Bodied Guitars," 19; Brozman et al., 104; For a discussion of the development and use of Bakelite in consumer products, see Jeffrey L. Meikle, *American Plastic: A Cultural History* (New Brunswick: Rutgers University Press, 1995).

[109] The use of composite materials in acoustic guitar construction by Ovation will be discussed in Chapter 6 of this dissertation.

National guitar."[110] Similar to Hawaiian guitars that had been painted with picturesque scenes of island sunsets, palm trees, and volcanoes, National models came etched with comparable motifs.[111] This was an object, a commodity that literally resonated differently with consumers and players than wooden acoustic guitars.

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[110] Paul Simon, "Graceland," recorded 1985, Johannesburg, R.S.A., and Los Angeles, on *Graceland*, Warner Bros. Records 9 46430-2, 1996, CD, originally released in 1986; The album won Album of the Year in 1986 and the title track "Graceland" won 1987 Record of the Year in 1987. "Winners," The Recording Academy, 2015, accessed February 4, 2015, http://www.grammy.com; The British rock band Dire Straits also chose to feature a National Style O guitar owned by band member Mark Knopfler on the cover of their Grammy-winning 1985 album *Brothers in Arms*. Dire Straits, *Brothers in Arms*, recorded 1985, Warner Bros. Records, 2000, CD, originally released in 1985; Mike Springer, "*Guitar Stories*: Mark Knopfler on the Six Guitars That Shaped His Career," Open Culture, July 30, 2013, accessed February 4, 2015, http://www.openculture.com/2013/07/guitar-stories-mark-knopfler-on-the-six-guitars-that-shaped-his-career.html.

[111] A good example of this decorative island motif can be found in the 1940 National catalog. National Dobro Corp., *Modern National Guitars Catalogue No. 41* (Chicago: National Dobro Corp., 1940), 21, NTCC.

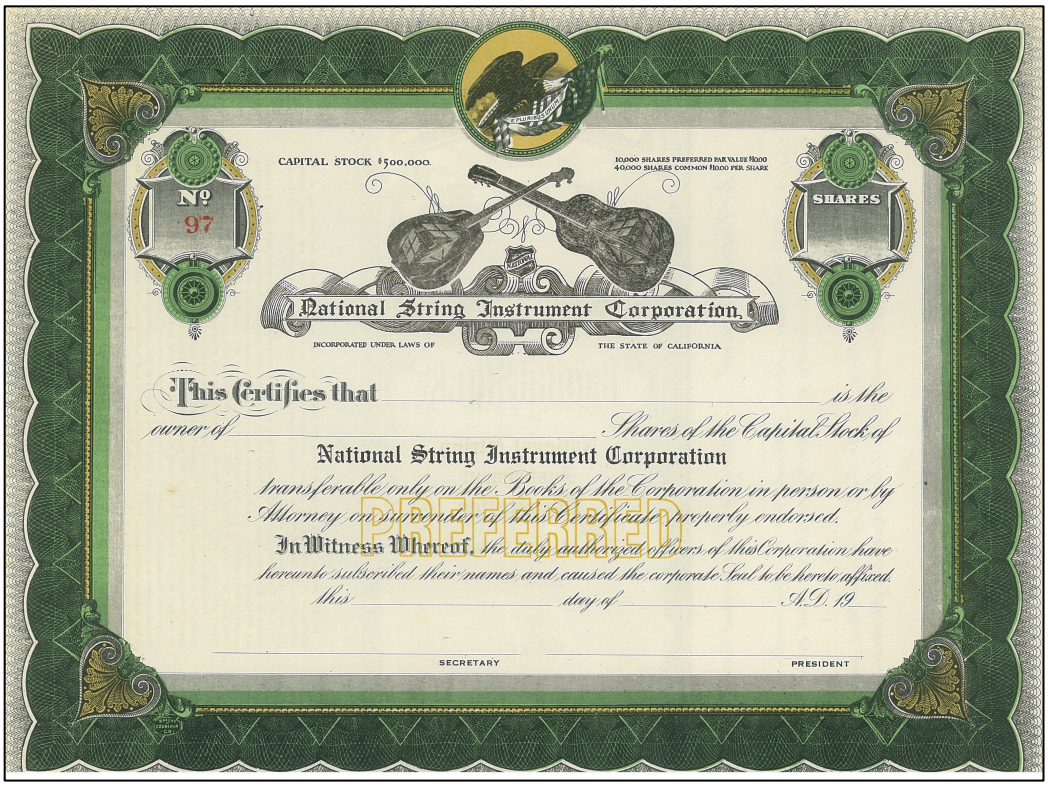

Figure 17 Stock Certificate for the National String Instrument Corporation, n.d. Courtesy of the Smithsonian Libraries, Washington, D.C.

In addition to the obvious use of metal in their construction, resonator guitars could be customized with sandblasted designs and color schemes. The guitars (and eventually ukuleles and mandolins) could be ordered in up to four separate designs, some complete with hand engravings and artistic floral patterns including lilies-of-the-valley and cactus rose.[112] Some of the early 1930s Style O guitars produced by National were adorned with scenes featuring island lagoons and volcanoes surrounded by palm trees. Not all of the imagery was Hawaiian, such as the design of a lute player in medieval costume playing beneath a willow tree. These ornamentations could be ordered in tinted

[112] Gear, "Metal Bodied Guitars," 17; National String Instrument Corp., *National String Instruments* (Los Angeles: Western Lithograph Co., [1930?]), Curatorial Files, DCA.

colors as well. Though marketed as etchings, some of these designs were sandblasted onto the surface.[113] In a material sense, it is easier to etch or sandblast designs into metal than it is in wood. This allowed producers to create alluring visual imagery on the bodies of the instruments, something not possible with the traditional wooden tops and backs. Other models such as the Duolian with its "beautiful two-tone frosted duco" and the Triolian that sported a "prismatic" finish distinguished themselves from the lacquered wood-grain guitars of competitors.[114] Some Triolian models featured a brown sunburst pattern, a look that echoed Gibson guitars and later Fender electric instruments. Another 14 fret Triolian model was painted in such a way that its metal body was made to look wooden, a technique used on contemporary 1930s metal furniture. By the late 1930s, consumers could purchase yellow Collegian models, a testament to the many possible color combinations available on metal-bodied resonator guitars. Regal also marketed an Audiophone model in the late 1930s that was practically a copy of a National Duolian. The guitar was painted two-tone green and sported Hawaiian scenery on the back of the instrument.[115] With its highly polished finish, a musician might actually be able to see his

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[113] John Dopyera felt that too much engraving on the instruments could pose some problems. One of the first National guitars designed by George Beauchamp, the Chrysanthemum, or Style 4, had, in John Dopyera's opinion a number of drawbacks including a high cost and degradation in tone. Wheeler, *American Guitars*, 290, 295; Gear, "Metal Bodied Guitars," 17.

[114] Progressive Musical Instrument Corp., *Wholesalers & Modern Musical Merchandise*, (New York: Progressive Musical Instrument Corp., 1935), 21, Curatorial Files, DCA.

[115] Gear, "Metal Bodied Guitars," 17-18; Gibson incorporated the shaded sunburst pattern to many of its arch-top and flat-top guitars in the 1930s. The look became so popular that the rest of the industry began offering the finish on their guitars, Martin included. Johnston, Boak, and Longworth, *Martin Guitars: A History*, 88.

or her own reflection in the metal body of the guitar, a fact advertised by company brochures.[116]

Unusual in appearance and uncanny in sound, resonator guitars provided an attractive solution to the problem of amplification and represented an alluring commodity to catch the eye of the consumer. The advertising told consumers that the guitars would "never fail to favorably impress an audience" thanks to how the combination of "such rare beauty of tone" and "powerful voicing combine with their attractive and unusual appearance to make them very valuable for stage and concert work."[117] The story that opens this chapter showcases the power of the guitar's look as it "mesmerized" Jerry Byrd, inspiring him to become an accomplished musician on the steel guitar. If a musician wanted to make a statement with the instrument they chose, metal-bodied resonator guitars certainly fit the bill. Tampa Red, one of the first African American blues musicians to record with a National guitar, became known as "The Man with the Gold Guitar." Using a rare gold-plated early Style 4 Tri-cone adorned with a coverplate full of etched chrysanthemums, Tampa Red stood out from other performers as soon as he took the stage.[118]

The makers of resonator guitars also used aspirational marketing to entice consumers to purchase an unforgettable brand new shiny metal guitar, just like the ones that celebrities like Sol Hoopii played. Notably, one of the first performers featured in a catalog was Trojo the "Queen of the South Sea Flappers." She is one of the few female faces in the early National catalogs and the only female solo performer identified by

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[116] National Dobro Corp., *"The Line of Champions," National String Instruments #202* (Chicago: National Dobro Corporation, 1938), 4, MIMA.

[117] National String Instrument Corp., *National String Instruments* (Los Angeles: Western Lithograph Co., [1930?]), Curatorial Files, DCA.

[118] Only one other guitar similar to Tampa Red's is known to exist. Brozman et al., 142.

name with her own exclusive page.[119] Sol Hoopii (or Sol Hoopi'i) brought his celebrity status to National resonator guitars, a connection that gave a boost to company sales and inspired other performers to play National instruments. Known as the "King of Steel Guitar," he began his lap-style playing on a Martin guitar, but later, while living in California, became a familiar face in catalogs and advertisements for National resonator guitars. Hoopii was one of the first prominent endorsees for National guitars and would become a fixture in National catalogs throughout the late 1920s and 1930s.[120] John Dopyera gave him two Tri-cone models (for promotional purposes) including one engraved with his name (an object that is conspicuous in National catalogs). Some of his most prominent photographs feature him next to his shiny all-steel National Tri-Cone model. After becoming a National endorsee, Hoopii used his National Tri-cone guitar in recording sessions, inspiring other Hawaiian artists to do the same. By 1929, at least 90 percent of Hawaiian recording artists used National guitars.[121]

Instead of relying on tradition, the National String Instrument Corporation advertised their products with an emphasis on progress and modernity by connecting the guitar to mass communication networks and scientific testing. One advertisement touted that "the very advanced acoustical principles embodied in NATIONAL instruments are

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[119] National String Instrument Corp., *The National Silver String Instruments, The Greatest Musical Sensation of the Age* (Los Angeles: Western Lithograph Co., [1930?]), accessed February 1, 2015, http://www.notecannons.com/index.html.

[120] Beauchamp persuaded Hoopii to try the prototype at a party held by Ted Kleinmeyer. Not only did Hoopii continue to use the guitar, but his performance at the party also convinced Kleinmeyer to invest in the fledgling company. Brozman et al., 27; Gruhn and Carter, *Acoustic Guitars*, 227; National String Instrument Corp., *National String Instruments* (Los Angeles: Western Lithograph Co., [1930?]), Curatorial Files, DCA; National Dobro Corp.,*"The Line of Champions," National String Instruments #202* (Chicago: National Dobro Corporation, 1938), 4, MIMA.

[121] Brozman et al., 114-116; Hoopii and his connection to the Hawaiian music movement are discussed in Chapter 3 of this dissertation.

keeping fretted instruments in line with the point of progress reached by radio, talking pictures and other such modern inventions." [122] Another advertisement used the concept of amplification to draw parallels between the radio and a resonator guitar asserting "just as the modern dynamic radio amplifies every tone from the highest note of the violin to the lowest note of the mighty organ, the dynamic construction of National String Instruments amplifies the true, sweet tones produced by the strings."[123] The Regal Company, who in 1933 gained a license to produce Dobro instruments, also emphasized the "scientific method of construction."[124] Equating lutherie with science, marketing tied resonators to the research and development laboratories employed by prominent companies such as Bell and General Electric. While the veracity of this statement is in doubt, the catalog claimed "the National Resonator built into the body of the amplifying guitar is the result of developments in laboratories where measurements of its vibratory response were taken with instruments capable of measuring one millionth vibration, for the purpose of determining responsiveness."[125] Scientifically tested and marketed to modern consumers, the manufacturers of resophonic guitars attempted to place their instruments at the cutting edge of instrument innovation. Ovation guitars would later adopt similar practices in the 1960s of using scientific testing to design guitars and

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[122] National String Instrument Corp., *National String Instruments* (Los Angeles: Western Lithograph Co., [1930?]), Curatorial Files, DCA; As discussed in Chapter 1 of this dissertation, "tradition" became the mantra of C. F. Martin & Company when it came to advertising their guitars.

[123] Ibid.

[124] Metropolitan Music Co., *Musical Merchandise Wholesale Catalogue No. 10* (Orange, CT: Wilson H. Lee Company, 1935), 141, Curatorial Files, DCA.

[125] National Dobro Corp., *To Play on a National Amplifying or Electric Instrument is to Improve the Art of Yesterday and Enrich the Music of Tomorrow* (Chicago: National Dobro Corporation, [1936-1937]; repr., Benld, IL: Gima Reprints, 1991), 1, Curatorial Files, DCA.

marketing this fact to consumers as a way to distinguish themselves from their competitors.

Moving from hand chisels to lathes, the makers of resonator guitars represented the shift from Old World craftsmanship to producers working in a modern industrial context. One particular slogan connected the strides made by Dopyera to the traditional methods of guitar manufacture by proclaiming that National's mission was "To improve the art of yesterday and enrich the music of tomorrow."[126] Additionally, National claimed to be doing something exceptional, advertising that their approach was "not only progressive and inventive," but it also contained elements of "distinguished craftsmanship from the Old World" in the form of "men who have spent half a lifetime in the science of musical instrument making – an art handed down from generation to generation."[127] This advertising approach puts a different spin on a common trope in the marketing of the acoustic guitar. From Martin's foundation in tradition to Lyon & Healy's association with industrialized mass production, National positioned themselves as offering the best of both worlds: Old World techniques combined with modern approaches.

Though it was not the intention of its originators, the resonator guitar's durability, amplification, and adaptability to steel and slide playing helped popularize it amongst a varied group of American consumers and musicians. National advertisements portrayed the their guitar models as tools of democratization claiming that it appealed to people from all walks of life. One advertisement boldly declared "...music as produced on

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[126] National Dobro Corp., *To Play on a National Amplifying or Electric Instrument is to Improve the Art of Yesterday and Enrich the Music of Tomorrow* (Chicago: National Dobro Corporation, [1936-1937]; repr., Benld, IL: Gima Reprints, 1991), 1, Curatorial Files, DCA.

[127] Ibid.

NATIONAL String Instruments has power to charm all peoples and all classes, from peasant to royalty."[128] While this statement is impossible to substantiate, it is somewhat reflected in the variety of American musicians that embraced resophonic instruments in their playing.

Adoption in Blues, Hawaiian, and Country Music

Players found that the sound of resophonic guitars was particularly well-suited to using slides and steels, a trait that aided in the adoption of the resonator guitar by three diverse genres of American music: Hawaiian, blues, and bluegrass. The Dopyeras were certainly innovative people, but they were unable to predict how their instruments would be used. When John Dopyera first envisioned using metal in the construction of a guitar, he saw it being played in the hands of white jazz and vaudeville performers like George Beauchamp.[129] Yet it was three entirely different groups of people who embraced these new metal contraptions and welcomed them into their own musical styles – Hawaiian guitarists (both Hawaiian islanders and whites), African-American blues musicians from the rural south and white bluegrass and country music players. This demonstrates how users have the ability to mold and shape the technologies, and in this case, the instruments they obtain. It does not matter that these groups were not the anticipated consumers groups for the resophonic guitar. The musicians performing in these genres found that resonators fit their playing style in a way that other guitars did not. The

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[128] National Dobro Corp., *To Play on a National Amplifying or Electric Instrument is to Improve the Art of Yesterday and Enrich the Music of Tomorrow* (Chicago: National Dobro Corporation, [1936-1937]; repr., Benld, IL: Gima Reprints, 1991), 1, Curatorial Files, DCA.

[129] I have yet to find evidence that any jazz musicians used resonator guitars in any serious fashion.

adoption of resonator instruments by these three groups demonstrates the versatility of the instrument and how its unique style and tone appealed to a variety of musicians.[130]

Popular music often embraces novelty and resonator guitars represented the most original instrument on the market at the time both in terms of sound and appearance. It is not surprising that musicians with drastically different backgrounds and playing styles would embrace resophonic instruments whether they played on Vaudeville circuits or in Delta juke joints. The tinny, metallic tone of the instruments and the flashy, unconventional exteriors made them guitars that were unique both in sound and appearance.[131]

In addition to Sol Hoopii and Trojo, prominent Hawaiian style guitar players such as Jim and Bob adopted the National Tri-cone models and, in turn, inspired other artists in the genre to buy and play resophonic instruments. Jim Holstein and Bob Pauole, known as "The Genial Hawaiians" had a regular radio show on WENR in Chicago during the 1930s and recorded for Bluebird Records in 1934.[132] Sheet music from 1935 for the song "Aloha Oe," one of the most recognizable Hawaiian tunes of all time featured Jim and Bob on the front cover. Both men wear leis around their neck and one is seated

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[130] It is possible to view the use of resonators by these groups of musicians as an "unintended consequence" of the complex network of producers and users of the resophonic guitar. With these users at the center of the "consumption junction" it is possible to examine the ways in which they exerted agency in the acquisition and use of resonator guitars. Ruth Schwartz Cowan, "The Consumption Junction: A Proposal for Research Strategies in the Sociology of Technology," in *The Social Construction of Technological Systems: New Directions in the Sociology and History of Technology*, ed. Thomas P. Hughes, Wiebe E. Bijker, and Trevor Pinch (Cambridge: MIT Press, 1987), 261-280.

[131] David Suisman characterizes the importance of the "unending novelty" in popular music by demonstrating how it is "forever tantalizing consumers with the untasted pleasures of the always-new." David Suisman, *Selling Sounds: The Commercial Revolution in American Music* (Cambridge: Harvard University Press, 2009), 10.

[132] Brozman et al., 133.

clearly performing lap-style guitar with a shiny square neck National Tri-cone. Budding musicians could perform the Hawaiian standard as arranged by Jim and Bob thanks to sheet music like this that featured chords and lyrics for ukulele, standard guitar and Hawaiian guitar.[133] The duo's rendition of "The St. Louis Blues" serves as an example of how artists adapted the acoustic guitar, and in their case the National Tri-cone, to blend stylistic aspects of multiple genres in one song using only one instrument.[134]

The National Single-cone models (such as the Style O, Duolian and Triolian) seemed to be more popular with blues artists such as Son House, Bukka White, and Blind Boy Fuller, perhaps because of the instrument's more affordable price and adaptability for slide guitar techniques.[135] Eddie "Son" House was an influential blues guitarist who inspired the playing of Robert Johnson, Muddy Waters, and a cadre of other musicians who carried his Mississippi blues style to Chicago. House often used single-cone resonator guitars because he needed a loud guitar to provide accompaniment for his booming voice.[136] Booker T. Washington "Bukka" White, an explosive bottleneck Mississippi blues player, spoke of both the amplification capabilities of National guitars as well as their durability. "It is loud! I wouldn't need no mike [sic], and also I play so rough, I would have busted many wood guitars. This one can take rain and punishment – I stomp them."[137] White also kept rhythm by percussively striking his guitar body as he

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[133] Queen Lydia Liluokalni, "Aloha Oe" (Chicago: Calumet Music Co., 1935), 8.14 box 11, folder B, Sam DeVincent Collection of Illustrated American Sheet Music, AC.

[134] Brozman et al., 133.

[135] Tampa Red's use of a Tri-cone model is a notable exception. Gruhn and Carter, *Acoustic Guitars*, 228.

[136] Brozman et al., 145.

[137] Gayle Dean Wardlow, *Chasin' That Devil Music: Searching for the Blues* (San Francisco: Miller Freeman Books, 1998), 42-44; Bukka White, quoted in Brozman et al., 146.

played, a habit that would have been far less damaging to a metal resonator as opposed to a wooden guitar.[138] He acquired his first National guitar at the age of 21 as part of his payment for an 8 song recording session with Victor Records. Even today, blues artists employ National Tri- and Single-cone resonators in their playing.[139]

Dobros proved to be adaptable instruments used by musicians playing in genres such as country and bluegrass music, consumers who were far from the target audience for the first resophonic instruments. When interviewed later in life, Ed (Emil) Dopyera stated that he (and his brothers) did not intend for the instrument to be played in this genre. "We never imagined country music would use a Hawaiian-style guitar."[140] Speedy West, who performed in a style that incorporated elements of country and popular music, was one of the first country artists to use a resophonic guitar.[141] As discussed in Chapter 3, Cliff Carlisle, who accompanied Jimmie Rodgers on many of his records, played a Dobro. The success of "The Singing Brakeman" and his signature style of yodeling certainly introduced the sound of the Dobro to audiences throughout the country.[142] Dave

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[138] Jas Obrecht, "A Century of Blues Guitar," in Victor Anand Coelho, ed., *The Cambridge Companion to the Guitar* (New York: Cambridge University Press, 2003), 93; A good example of White's percussive style can be found on his recording of "Aberdeen Mississippi Blues." Bukka White, "Aberdeen Mississippi Blues," recorded 1940, Chicago, on *Blues Rediscoveries*, Folkways Records RBF 11, 1966, Smithsonian Folkways Recordings, 2007, CD.

[139] Gruhn and Carter, *Acoustic Guitars*, 228-229.

[140] Emil Dopyera, quoted in Tom Gray, "Dobro, the Resonator Guitar that Refused to Die," *Bluegrass Unlimited*, January 1999, 51.

[141] As discussed in Chapter 3, West, like Joseph Kekuku, used a knife as a steel when he first started out playing. Guy Logsdon, "Steel Guitar," *Mugwumps, The Magazine of Folk Instruments*, May 1974, 13.

[142] Tom Evans and Mary Anne Evans, *Guitars: Music, History, Construction and Players, From the Renaissance to Rock* (New York: Paddington Press, Ltd., 1977), 315-316, 319.

Trask, a Hawaiian guitarist represents another connection between the Dobro and country music. When Trask left San Francisco, California for Knoxville, Tennessee sometime during the mid-1930s, he brought along his resonator guitar, a Dobro model. There, he began to teach steel guitar and perform with Alma Cox showing students and audiences alike the unique tone and appearance of a resonator guitar.[143]

The place of the Dobro in country and bluegrass music was further cemented through the music of Dobro player Beecher (Pete) Kirby. Performing under the stage name of Bashful Brother Oswald, Kirby joined Roy Acuff's band in 1939. A member of the Grand Ole Opry in Nashville, Tennessee, Roy Acuff and his band could be heard at the Opry every week during its national broadcast on WSM. Oswald's heavily Hawaiian-influenced playing style inspired a number of country musicians to pick up the Dobro. There are a number of stories about musicians who tried unsuccessfully to duplicate the sound they heard by adjusting different kinds of standard acoustic guitars in different tunings to match Oswald's tone. Apparently, many listeners did not realize Oswald was playing a Dobro until they saw him perform live. Thus the new, amplified, metallic sound of the Dobro offered an enticing challenge to the traditional sound of a wood-body acoustic guitar.[144] Players like Oswald influenced young musicians like Fred Wright who, as a 12-year-old in 1938, received a Dobro and lessons on it as a gift from his parents. Dressed in a cowboy outfit complete with scarf, hat, and shirt, Wright entertained war

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[143] Tom Gray cites research by Gayle Dean Wardlow that points to Trask having brought the first Dobro resonator guitar to Tennessee, but this is almost impossible to verify. Tom Gray, "Dobro, the Resonator Guitar that Refused to Die," *Bluegrass Unlimited*, January 1999, 51.

[144] Ibid., 51-52; A good example of how Kirby added his distinctive solo lines performed on a dobro to Roy Acuff recordings is the track "Fireball Mail." Roy Acuff, "Fireball Mail," by Floyd Jenkins, recorded 1942, with the Smokey Mountain Boys, *Vintage Country & Western A Nostalgic Collection*, Music Collection International, a division of Demon Music Group, 2000, CD.

veterans at local hospitals and competed in school talent shows playing country tunes on his squareneck Dobro [Figure 18].[145] In the 1950s, Flatt and Scruggs' band member Burkett (Uncle Josh) Graves inspired another generation of Dobro players with his unique style that combined blues progressions with finger rolls previously associated with banjo playing.[146]

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[145] #1989.0660.01 Photograph of Frederick John Wright (1926-1985) with "Dobro" guitar, 1938, Curatorial Files, DCA; Betty R. Wright to Gary Sturm, November 20, 1989, Curatorial Files, DCA.

[146] Flatt and Scruggs are probably best known in popular culture for writing and performing the theme song to the television show *The Beverly Hillbillies*. Gruhn and Carter, *Acoustic Guitars*, 228-229; See also Robert Cantwell, *Bluegrass Breakdown: The Making of the Old Southern Sound* (Urbana: University of Illinois Press, 1984), 169.

Figure 18 Photograph of Frederick John Wright (1926-1985) with his Dobro guitar, 1938. Smithsonian, National Museum of American History.

Conclusion

Though wartime shortages and the popularity of the electric guitar drastically reduced consumer demand for resophonic instruments, the Dobro took on a new life of its own in the postwar period. The folk and bluegrass boom of the 1950s and 1960s generated some renewed interest in resonator instruments. During this period consumers began to refer to any wooden bodied single-cone resonator guitar as a dobro, despite the fact that not all instruments of this type bore the Dobro label.[147] All Dobros are resonator

[147] While this distinction may have raised the status of the Dobro, it could also have had potentially harmful legal consequences for the brand. This practice, where a brand name is used by consumers to define an entire category of goods, can lead to the trademark on

guitars, but not all resonator guitars are Dobros. To make matters more confusing, there have been National guitars, such as the Trojan model, made of wood, as well as Dobro models made entirely of metal.[148] Nonetheless, in genres of music such as country and bluegrass, the performer using a resonator guitar is still popularly referred to as a dobro player. Not unlike the case of Kleenex (instead of facial tissue) or Jacuzzi (instead of hot tub), the Dobro gained its own identity in some circles as it was considered a completely separate instrument from the acoustic guitar.[149]

Though manufacturers were building few new resonator guitars between World War II and the 1970s, musicians could still find ways to purchase instruments thanks to a secondhand market.[150] Some players obtained instruments in pawnshops and from other consumers through newspaper advertisements. Instruments became available through these new consumption networks from many different types of people ranging from broke musicians who needed quick cash to those who had decided to abandon a hobby. Resonators were no exception and if a player could not buy one directly from National, he or she could look for someone else's discarded Duolian or Tri-cone. Eager consumers like Hugh Hilton of Richland, New York, took out large advertisements in their local newspapers looking for used Dobros.[151] By the 1960s, some original Nationals and early Dobros also became collectors' items reaching values that far exceeded their original

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the brand name being cancelled, a process called genericide. Charles R. Taylor and Michael G. Walsh, "Legal Strategies for Protecting Brands from Genericide: Recent Trends in Evidence Weighted in Court Cases," *Journal of Public Policy & Marketing* 21, no. 1 (Spring 2002): 160-167.

[148] Logsdon, "Steel Guitar," 12; Wheeler, *American Guitars,* 296.

[149] Duncan G. Robertson, "Dobro," *Guitar Player*, October 1968, 50.

[150] The secondhand guitar market of pawnshops and newspaper advertisements will be explored in more detail in Chapter 5.

[151] "WANTED Used Dobro Guitar," *Pulaski Democrat* (Pulaski, NY), October 30, 1969.

prices, a fact that prospective sellers highlighted when advertising ones for sale.[152] For example, by 1968, consumers purchased used dobros for as much as $100, a steep mark-up for something that cost $27.50 during the Depression.[153] Today, the National line is produced by National Reso-phonic Guitars, Incorporated in San Luis Obispo, California and the Dobro brand is produced by Gibson under its Gibson Original and Hound Dog lines at its plant in Nashville, Tennessee.[154]

From the 1910s to the 1930s, the design of the acoustic guitar changed to increase the volume of the instrument in ensembles. The proliferation of steel strings proved to be essential in the development of new body styles such as dreadnoughts and arch-tops. Using a variety of approaches, luthiers attempted to make the instrument produce a louder and more distinctive tone. Some like Martin and Lyon & Healy used the traditional methods of building a guitar, but increased the size of the instrument to produce a booming response in the lower register. Others, beginning with Orville Gibson and Lloyd Loar and later expanded upon by Stromberg and D'Angelico, created a hybrid of the mandolin and guitar, carving the body of the instrument to produce larger and more ornate arch-top models. These bigger, wooden guitars became popular with consumers, whether they were jazz musicians or singing cowboys, who liked what these new models had to offer in terms of volume and tone.

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[152] Wheeler, *American Guitars*, 314; "COLLECTORS ITEM," *Plattsburgh Press-Republican* (Plattsburgh, NY), July 30, 1965.

[153] Robertson, "Dobro," 50.

[154] Brozman et al., 247-249; Gruhn, and Carter, *Gruhn's Guide to Vintage Guitars*, 2, 470-471; "Gibson Tours," Gibson, Inc., accessed February 4, 2015, http://www2.gibson.com/Gibson/Gibson-Tours.aspx; "National Guitars," National Reso-Phonic Guitars, 2010, accessed February 4, 2015, http://www.nationalguitars.com/home.html.

It is the third approach to increase amplification studied in this chapter, resophonic instruments, that represent a dramatic shift in guitar manufacturing and construction, thereby paving the way for new and innovative approaches to American acoustic and electric guitar design. By breaking with tradition, Dopyera and his associates left a deep and lasting impact on American guitar producers and performers by incorporating non-wooden materials and the principles of mechanical amplification into the body of a guitar. The makers of resonators opened the door for companies in the future, such as Ovation, to experiment with new materials and body styles. By marketing their guitars as scientifically designed and tested, National and its successors started a precedent that luthiers such as Charles Kaman would later embrace in designing new acoustic guitars.[155] Yet, metal did not replace wood as the preferred material for acoustic guitar bodies, a fact that speaks to some of the cultural prejudices against non-wooden guitars present in American society. Resophonic instruments created a niche in the market rather than re-making the industry as a whole.

Resonator guitars enjoyed a brief moment of popularity initially, but in the long run came to represent the flexibility of the acoustic guitar through their adoption by musicians operating in three separate genres of American music: Hawaiian style, blues, and country/bluegrass. When paired with a slide or steel, resonator guitars produced a sound that captured the attention of sharecroppers singing the blues and country pickers on dusty Nashville stages. The marketing of resophonic guitars referred to them as modern instruments, aligned with the new technologies of the day. The striking appearance of the instrument and its amplified volume attracted many consumers who appreciated the novel look and sound of the metal objects. Catalogs highlight the ways that resonators were flashier, more durable, and louder than wooden guitars. Celebrities

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[155] Charles Kaman and the development of Ovation guitars will be discussed in Chapter 6 of this dissertation.

such as Sol Hoopii graced the catalogs, prompting aspiring musicians like Speedy West to beg their parents to buy them an expensive new National guitar.

Though resonator guitars offered a shiny and eye-catching option for musicians, not every player could manage to get his or her hands on one. Sometimes a budding musician had to settle for the cheapest guitar available, even if it had a few dents or was missing a string or two. Countless musicians throughout America began their careers or hobbies on an acoustic guitar, thanks to mass-produced models available from mail-order houses, music stores, and places of secondhand consumption. Through radio, film, records, and later television, those young guitarists found heroes to admire and emulate as they learned their favorite songs hoping that one day they too could share the spotlight. And perhaps in the process, they could buy the gleaming new guitar of their dreams.

Chapter 5

PLAYING BY EAR WITH THAT BEAT-UP OLD GUITAR: THE ACOUSTIC GUITAR BECOMES THE INSTRUMENT OF THE MASSES (1920-1960)

Long before he recorded a hit single about a boy who warned his girlfriend not to step on his blue suede shoes, Carl Perkins learned to play the guitar on a beat up instrument that his father bought for a mere three dollars. The son of a poor sharecropper in Lake County, Tennessee, Perkins received an education in both picking cotton and music from a local farmhand and blues guitarist named "Uncle" John Westbrook. It was the combination of melodies and harmonies he listened to in the cotton fields, at home on the radio, and in the pews on Sunday mornings that led Perkins to pursue a musical career.[1] How is it that he went from being a poor kid with a broken guitar to someone who was admired around the world for his music? The humble beginnings of Perkins' guitar playing were not nearly as shiny as the shoes in the song that would make him a star, but they represent an important moment in the history of the American acoustic guitar. Carl Perkins, like many other aspiring musicians from a variety of musical and economic backgrounds, adopted the guitar for its ease of play and low initial cost. He made the instrument his own by combining the sounds of his rural, Baptist upbringing with stylistic elements gleaned from the radio, records, and other musicians.[2]

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[1] Carl Perkins, "Blue Suede Shoes," recorded 1956, Memphis, TN, on *The Sun Story* Rhino Records RNCD 75884, 1987, CD; Carl Perkins, interview by Pete Daniel and Charles McGovern, Memphis, TN, May 20, 1996, video recording, series 4, box 7, Rock 'n' Soul Audiovisual Collection, 1990-2000, AC.

[2] Perkins' music is a good example of what Pete Daniel refers to as the "dynamic and evolving" rural music that combined elements of blues, gospel, and hillbilly music. These "rhythms of the land" developed in this particular social and cultural context of the agricultural South. He also briefly discusses the relationship between Perkins and

Through a combination of increased production in low-end guitar models, mail-order networks and places of secondhand consumption, flexible training methods, and the growing influence of mass-media celebrities, musicians latched onto the guitar as a cheap and readily available instrument by which to craft their own distinctive sound. By the 1920s, the burgeoning guitar industry turned out an enormous number of instruments. For example, the American Society of Composers, Authors, and Publishers (ASCAP) estimated that 162,764 guitars were produced in 1929 alone. That figure was double the number of banjos and 30,000 more than the total amount of pianos made that year.[3] Even the poorest Americans could find a way to access the instrument whether it meant saving up for something in the Sears catalog or waiting by the local pawnshop for a broke musician to trade his Harmony guitar for cash. They aspired to make their own music or fantasized about emerging from obscurity and becoming recording stars. Others looked for a means to contribute to community and family gatherings. In the world of working-class Americans in the 1920s and 1930s, a shortage of music often existed. Children and adults alike who could not afford radios or tickets to performances relied on hearing music performed by friends and family members at local venues including their own front porch. Many, like Carl Perkins, who were simply not satisfied depending on others for their entertainment, found a way to create their own music using an acoustic guitar.

In an era in which the design of commodities increasingly dictated how they might be used, consumers chose the guitar over other musical instruments precisely because they could so easily learn how to play and adapt it to a wide range of musical

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Westbrook. Pete Daniel, *Lost Revolutions: The South in the 1950s* (Chapel Hill: University of North Carolina Press for Smithsonian National Museum of American History, Washington, D.C., 2000), 121, 137-138.

[3] American Society of Composers, Authors and Publishers, *Who Uses Music and Why* (New York: ASCAP, 1934), 12, NTCC.

styles. This flexibility was facilitated by both formal and informal training methods that musicians could receive on the instrument. An aspiring musician might gain a formal education in music theory or instead receive informal lessons through jam sessions with friends and family. Consumers could choose from a variety of commercially available method books, many endorsed by celebrity performers. It was often a hybridization of these approaches that shaped the playing styles of musicians who adopted the guitar as their instrument of choice. Through these methods, guitarists trained their fingers and their ears in order to gain the basic ability to improvise, form chords, and keep rhythm in a variety of musical styles.

By the 1950s, Carl Perkins had created a new style, sold over 500,000 albums, and inspired countless musicians to take up the guitar, thus closing the loop between producers and consumers that began in a Tennessee cotton field. He is just one example of the many musicians who helped make the guitar the instrument of the American masses. As the stories in this chapter show, people acquired the instruments and the skills to play them in many different ways, a testament to the adaptability of the acoustic guitar. By examining several notable manufacturers, consumption networks, instructional techniques, and the impact of the entertainment industry on novice players, it becomes clear why people chose the acoustic guitar. One example in particular, the popularization of cowboy guitars from the 1930s to the 1950s, highlights the intersection between these factors and how the aspirational marketing of an imagined frontier hero helped put instruments in the hands of young musicians throughout the country.

The Rise of "Buick" and "Ford" Classes of Guitars

During this period, the cost of producing and purchasing a guitar decreased substantially as manufacturers figured out how to mass-produce instruments. As discussed in Chapter 1, the lines of Washburn and Gibson guitars in the 1890s ushered in an era of producing cheaper guitars in large batches rather than crafting instruments by

hand, one at a time. The growing demand for acoustic guitars in the late 1910s and early 1920s led to diversification in the guitar market. By the 1940s, Kay and Harmony both produced tens of thousands of acoustic guitars marketed to the consumers with less money to spend on instruments. By supplying guitars to wholesalers (or jobbers) and mail-order houses such as Sears or Montgomery Ward, these companies allowed Americans to more easily obtain acoustic guitars throughout the country at a substantially reduced cost.

Using new construction techniques, the Kay Musical Instrument Company sought to lower manufacturing costs as they marketed a variety of guitars to multiple segments of the market. Originally founded as the Groeschel Company and later the Stromberg-Voisinet Company, the firm had been manufacturing guitars since 1918. In 1931, the company began selling guitars under the Kay moniker. Even in its own advertising, Kay noted that it sold instruments of varying degrees of affordability. "Kay offers a complete line of moderately priced instruments as well as those of professional grade. But regardless of the price, you'll find fundamentally good playing qualities built into every Kay." In 1924, Kay began using "moulded [sic] plywood" for the backs, sides and tops of some of its guitars. They claimed that this material would withstand extreme heat and cold. The advertising also referred a process claiming, "this moisture-temperature-climate proofing eliminates warping, cracking, seam opening, and repair bills." The catalog also asserted that this technique strengthened the rigidity of the wood and amplified the tone of the instrument.[4] What is more likely is that the company attempted to cut costs (for both consumers and themselves) by using cheaper grade plywood over solid wood such as spruce, mahogany and rosewood. This type of cost-cutting measure was typical of many of the manufacturing techniques of other mid-twentieth century guitar makers.

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[4] Kay Musical Instrument Co. *Kay Musical Instrument Co.* (Chicago: Kay Musical Instrument Co., 1944), MIMA; Tom Wheeler, *American Guitars, An Illustrated History*, rev. ed. (New York: Harper Perennial, 1992), 239.

Kay manufactured instruments both under their own brand name and ones labeled to be sold by mail-order houses. Company advertising boasted annually producing nearly 100,000 instruments (guitars, mandolins, banjos and other string instruments) by the middle of the 1930s.[5] A former Kay executive Bob Keyworth explained their place in the 1940s market by saying, "Harmony made the Fords, we made the Buicks, and Gibson made the Cadillacs."[6] Even as a child, guitarist Charlie Byrd hoped to one day own a name brand guitar, despite the fact that his family purchased mostly "generic" brand instruments due to their meager household income. By the time he entered high school, he had acquired a white Kay "Kay Kraft" model guitar, one of the higher priced offerings in the Kay catalog that featured a mother-of-pearl fingerboard with a slight a cutaway [Figure 19]. The guitar had a round soundhole and both an arched top and back. Early in his career, Byrd used this steel-string guitar for his first radio gigs.[7] In the 1950s, under new ownership, Kay produced guitars for Sears under the Silvertone brand name and aggressively competed with Harmony guitars in the lower-end guitar market through dramatically increased production.[8] The company enjoyed a decade-long run of profits

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[5] George Gruhn, and Walter Carter, *Gruhn's Guide to Vintage Guitars, An Identification Guide for American Fretted Instruments* (San Francisco: Miller Freeman Books, 1999), 406.

[6] Bob Keyworth, quoted in Wheeler, *American Guitars*, 240.

[7] A cutaway is a style of body construction whereby the right upper bout is lower than the left upper bout so that a player can more easily reach the higher frets on the fingerboard. This is especially helpful when playing solo guitar lines on the highest notes of the guitar. Charlie Byrd, interview by Tom Cole, Annapolis, MD, June 26, 1998, audio recording, Jazz Oral History Collection, AC; For a more detailed discussion of cutaways see Teja Gerken et al., *Acoustic Guitar: An Historical Look at the Composition, Construction, and Evolution of One of the World's Most Beloved Instruments* (Milwaukee: Hal Leonard Corporation, 2003), 110-111.

[8] Gruhn and Carter, *Gruhn's Guide to Vintage Guitars*, 406.

until the shrinking guitar market of the mid-1960s ultimately led to their bankruptcy in 1969.[9]

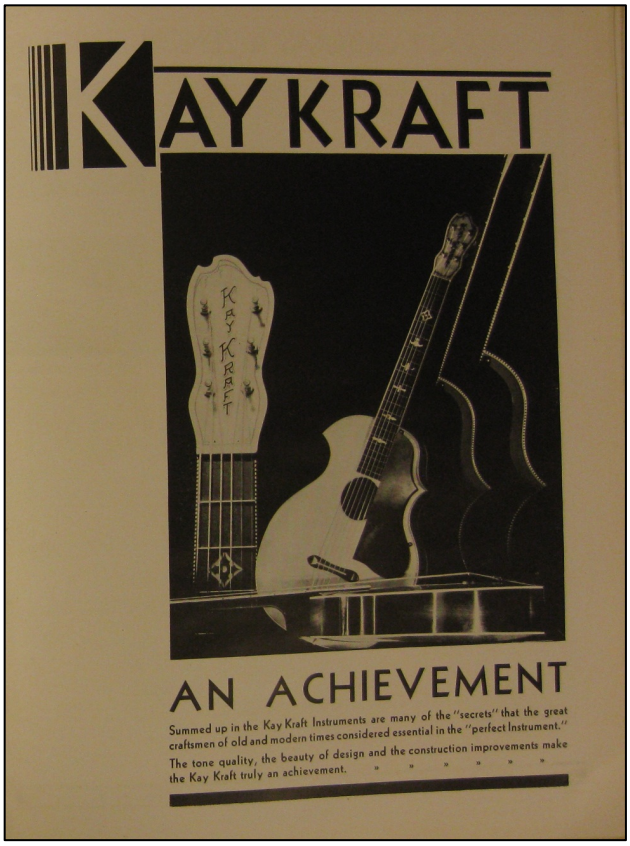

Figure 19 Kay Kraft, "An Achievement" (advertisement), Progressive Musical Instrument Corp., *Musical Merchandise Catalog No. 78* (New York: Progressive Musical Instrument Corp., 1931), 105. Courtesy of the Smithsonian Libraries, Washington, D.C.

Along with Kay, the Harmony Guitar Company was perhaps one of the most prolific manufacturers of American guitars during the first half of the twentieth century. Originally started in 1892 by Wilhelm J. F. Schultz, a Hamburg mechanic who had worked in the musical instrument industry in Chicago, the company was bought by Sears,

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[9] Wheeler, *American Guitars*, 240, 242-243.

Roebuck and Company in 1916 to capitalize on Harmony's strength in mass-producing ukuleles. In the 1920s, Harmony churned out banjos, violins and ukuleles in large numbers and in February 1928 debuted its Roy Smeck endorsed Vita series of guitars and ukuleles. By the following decade, Harmony made acoustic guitars for wholesalers who would buy them for $2.50 a piece and then turnaround and sell the instruments to consumers for $7.50. Prior to World War II, Harmony manufactured over 50 different lines of guitars including the Stella brand name, many sold to wholesalers who offered their own private brands that were in actuality Harmony-made guitars.[10]

Harmony did not build guitars for the high-end part of the market but instead targeted middle and lower class consumers. A 1929 advertisement proclaimed, "Harmony String Instruments are the best medium priced instruments that you can buy."[11] By the 1940s, the company produced annually around 130,000 guitars (out of 250,000 total manufactured by American makers).[12] Harmony catalogs referred to the Stella line as "designed and priced for beginners or students." The advertising also enticed aspiring guitarists by stating, "many of today's top performers got started on a Stella."[13] Like Kay, Harmony enjoyed profitable years in the 1950s through the mid-1960s, but was bankrupt by 1974.[14] These are just two examples of companies who made their mark by selling affordable guitars to students and those with less disposable income, especially in

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[10] Wheeler, *American Guitars*, 230, 232, 234, 236.

[11] The Harmony Company, "Play Sooner, Play Better, Play easier with Harmony String Instruments" (advertisement), *Music Magazine*, February 1929, MIMA.

[12] Wheeler, *American Guitars*, 233.

[13] The Harmony Company (from Ampeg), *Harmony Guitars, Banjos, Ukuleles, and Mandolins* (Elkhart, IN: The Ampeg Company, 1956), 2, MIMA.

[14] Wheeler, *American Guitars*, 236-237.

the depths of the Great Depression.[15] Partnerships with the growing mail-order catalog industry further enabled these companies to reach aspiring musicians throughout the country.

Special Delivery…. A Guitar

The rise of mail-order catalogs opened new opportunities to consumers who did not have brick and mortar stores nearby to supply the particular goods they desired. By the late nineteenth century these consumers used brochures from Sears, Roebuck and Company and Montgomery Ward, among others, to send away for items such as musical instruments in order to have them delivered to their homes. These mail-order firms relied on extensive distribution systems to ship great volumes of consumer goods across the country.[16] Greater numbers of customers living in rural areas benefitted from the possibility of purchasing instruments through the mail. Aspiring guitarists such as the young Glen Campbell, who began his playing days at age 4 in Arkansas, and teenaged St.

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[15] Regal was another company that manufactured guitars both for the public and for wholesalers and mail-order houses. See Chapter 4 for a discussion of Regal guitars, especially single-cone resonator models manufactured by Dobro.

[16] For a more nuanced discussion of the rise of brand name commodities and the mail-order networks that helped supply consumer goods to the emerging national market, see Susan Strasser, *Satisfaction Guaranteed: The Making of the American Mass Market* (New York: Pantheon, 1988) 212-216; Michael Wright "Mail-order guitars" in Tony Bacon, ed., *Echo and Twang: Classic Guitar Music of the '50s* (San Francisco: Backbeat Books, 2001); Bruce Bastin argues that the combination of southern agricultural prosperity and a growing mass market (including mail-order houses) led to a peak in guitar sales in the south in 1905. I argue instead that although sales may have initially decreased for guitars in the south during the first decade of the twentieth century, they were on the rise again in the 1910s and 1920s thanks in part to the Hawaiian ethnic music movement. Bruce Bastin, *Red River Blues: The Blues Tradition in the Southeast* (Urbana: University of Illinois Press, 1986), 14-18.

Louis artist "Rhubarb Red" (better known as Les Paul) bought instruments from Sears, Roebuck & Company and its competitors.[17]

Partnerships and ownership agreements between mail-order companies and guitar manufacturers flooded the market with cheap, readily available instruments. The first major mail-order house, Montgomery Ward and Company offered acoustic guitars starting in the 1890s.[18] The catalogs featured a wide price range of musical goods. For example, the Fall 1930-Winter 1931 brochure presented a variety of guitars to choose from including a student model priced at $6.65 ($8.25 with case), an all-mahogany version that sold for $25, and a $45 concert size instrument that featured rosewood sides and back. [19] During the 1930s, sales to Sears accounted for 35 to 40 percent of the guitars made by Harmony at the time.[20] In a similar fashion, Kay produced a large number of guitars for the Montgomery Ward catalog. By 1936, the Ward's Catalog began to offer fewer Kay models and diversified their selection in favor of brands such as Regal and even Gibson for sale to its customers throughout the country.[21] Through these business arrangements, the guitar makers and the mail-order companies combined the

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[17] Michael Pierce, "Campbell Up!" *Guitar Player*, April 1969, 16; Les Paul purchased a Dobro guitar around 1930 as part of his country act for radio station KMOX in St. Louis where he performed under the moniker "Rhubarb Red." *Property from the Estate of Les Paul* (Beverly Hills, CA: Julien's Auctions, 2012), 91.

[18] Montgomery Ward & Co., *Montgomery Ward & Co. Catalog* (Chicago: Montgomery Ward & Co., 1895), 243, MIMA.

[19] Montgomery Ward & Co., *Ward's Little Catalogue*, *January-February 1931* (Chicago: Montgomery Ward & Co., 1931), 105, MIMA.

[20] This business arrangement ended in 1941 when Sears sold the Harmony Company. Wheeler, *American Guitars*, 236; This was not unusual for Sears to own a firm that supplied them with products for the catalog. By 1906 they owned a major stake in sixteen different manufacturing facilities. Strasser, 77, 213.

[21] Michael Wright, *Guitar Stories, vol. 2, The Histories of Cool Guitars* (Bismarck, ND: Vintage Guitar Books, 2000), 113.

manufacturing and distribution networks to more efficiently produce and sell instruments to American consumers.

Mail-order marketing made extensive use of ethnic music movements to sell American consumers the instruments and accessories needed to play music in the Hawaiian style. By the 1920s, a person living on a rural farm could spend $6.98 plus shipping and learn to play island melodies from the Pacific with a Hawaiian guitar and instruction book.[22] Many guitars came with two instruction books (one for Spanish and one for Hawaiian method) so that new players could use the same versatile instrument to play in multiple styles. A good example comes from the 1931 "Mid-winter" Montgomery Ward catalog that featured two guitar models: a "Regal Two-in-One guitar complete with case and accessories" for $16.25 (or $10.95 without the case) and a "Popular Two-Way Guitar" for $7.95 (or $6.95 without the case). Similar to the beautifully etched resonator guitars featured in Chapter 4, the Regal instrument in Ward's catalog featured a visual representation of the islands with a "top beautifully decorated with scene of Diamond Head, Honolulu."[23] Sears often packaged and sold acoustic guitar "outfits." These bundles included the instrument and several accessories aimed at the beginning guitarist. For $8.65 plus shipping, one could purchase a brand new Sears Supertone guitar that came complete with a "canvas case, two instruction books, three picks, steel bar and metal nut for playing Hawaiian style" or they could choose a lower priced and slightly less-decorated version for $4.75.[24]

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[22] This catalog dates to the 1920s as the included order form features "192_" for customers to fill in the correct year of the decade when ordering. Montgomery Ward & Co. *This Book Combines Our January-February Grocery Catalog and Our regular January-February Sale Catalog* (Chicago: Montgomery Ward & Co., n.d.) 134, NTCC.

[23] Montgomery Ward & Co., *Ward's Little Catalogue*, *January-February 1931* (Chicago: Montgomery Ward & Co., 1931), 105, MIMA.

[24] Sears, Roebuck and Co., *Our Greatest Sale, Sale Closes Feb. 28, 1929* (Chicago: Sears, Roebuck and Co., 1929), 128, NTCC.

Celebrity endorsements by popular recording artists and shows in the 1930s added to the sales appeal of guitars in the Wards catalog. Hoping to catch the attention of aspiring young musicians, the advertising exploited the growing popularity in the 1930s of early country recording artists. The Carson J. Robison Guitar, made with a Honduras Mahogany back and sides with a spruce top, included an instruction book for "regular (Spanish) playing and sold for $9.45.[25] The Robison models also connect with the advent of cowboy guitars in the 1930s that will be discussed later in this chapter. By the 1930s, Sears consumers could choose from more elaborate, yet affordable guitars including a "Concert guitar" with violin style f-holes or a flat-top "Showboat" model that featured scenes from the musical "Showboat." Either guitar sported a price of $3.95 each and both guitars came with instruction books.[26]

Mail-order catalogs offered consumers not only the tools by which to make music, but also the methods to learn how to play the instrument. The Montgomery Ward catalog sold numerous method books for "easy" instruction on guitar all for less than $1 each.[27] In order to facilitate beginners some models in the Sears catalog even came with a fingerboard chart that could be overlaid on the neck of the guitar to help new players more easily learn where to place their fingers on the frets to make notes and chords.[28] In

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[25] Montgomery Ward, *Wards Star Values Catalog* (Chicago: Montgomery Ward, 1934), 25, NTCC.

[26] Sears, Roebuck and Co., *Sears Catalog* (Chicago: Sears, Roebuck and Co., 1936), 55, NTCC.

[27] Depending on a combination of factors including the player's skills, ability to read and write and the musical environment in which they lived, using method books may have not been "easy" for all. Montgomery Ward & Co. *Fall/Winter 1930-1931 Catalog* (Chicago: Montgomery Ward & Co., 1930), 389, MIMA.

[28] Sears, Roebuck and Co., *Midsummer Bargains, Sale Ends Aug. 31. 1924* (Chicago: Sears, Roebuck and Co., 1924), 48, NTCC.

addition, one could buy a certificate for twelve lessons for an extra $1 and both guitars came with instruction books.[29]

Several recollections from rural musicians highlight the price advantage of mail-order guitars over the more expensive offerings from noted makers such as Gibson and Martin. Booker T. Miller, a blues guitarist from Mississippi and contemporary of Charley Patton recalled that in the 1930s or 1940s, he could buy at Stella guitar for around $30, but a Gibson would run at least $47.[30] The steel guitarist Jerry Byrd got his start on a wooden Spanish-style guitar, but he coveted a shiny National resonator guitar that was decorated with palm trees etched into the body and retailed for $125, which, according to Byrd, "could've bought a city block in [his] hometown for that in 1932."[31] For many musicians the cheaper models offered by mail-order catalogs made the instrument an affordable choice even if it was not the exact model that they had their heart set on purchasing.

Ordering by mail also offered practical advantages in travel time over brick and mortar stores, especially for rural consumers.[32] In comparing the prices listed in the

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[29] Sears, Roebuck and Co., *Sears Catalog* (Chicago: Sears, Roebuck and Co., 1936), 55, NTCC.

[30] Booker T. Miller, interview by Gayle Dean Wardlow, Greenwood, MS, 1968, audio recording, Gayle Dean Wardlow Collection, Center for Popular Music, Middle Tennessee State University.

[31] The story of Byrd's childhood fascination with resophonic instruments is discussed in Chapter 4 of this dissertation. "The Story of Hawaiian Steel Guitar as told by Jerry Byrd and Barney Issacs with the Honolulu Skylark and the Music of the Masters of Steel Guitar," *The Heritage Series: The Story of Hawai'i's Foremost Musical Artists*, aired December 26, 1982, on KCCN, KCCN Hawaiian Radio/Bank of Hawaii Heritage Series Collection, Part I, AFC.

[32] Ted Ownby offers several examples of blue musicians in Mississippi who used mail-order catalogs to obtain guitars. Ted Ownby, *American Dreams in Mississippi: Consumers, Poverty, & Culture, 1830-1998* (Chapel Hill: The University of North Carolina Press, 1999), 115, 122.

company catalogs, the cheapest Gibson guitar offered for sale in 1930 was $35.00 for an L-0 model.[33] In 1934, a low end Gibson L-00 listed for $27.50 in the catalog.[34] Someone who wanted to purchase one of these guitars would have to find a music store that sold Gibson guitars. This would require a trip to the nearest big city for those who grew up in rural areas that often lacked general stores within a short distance, let alone specialty stores such as musical instrument shops. Mail-order catalogs offered cheaper models that could be delivered right to a consumer's door thanks to extensive freight networks that brought products from the factory floor to the purchaser's home. Unfortunately, not all would-be musicians could afford to send away for a guitar and instead had to rely on other places of consumption to satisfy their musical desires.

That Beat-Up Old Guitar

For many aspiring musicians, who could not afford even the cheapest of Montgomery Ward's offerings, there were still other ways to acquire an instrument especially after the development of a secondary market. Many well-known (and not so well known) musicians often recount stories of receiving cheap, beat-up guitars as gifts, or saving up their hard earned money to buy the cheapest available instrument. Despite the shoddy condition of these instruments, the performers who owned them went on to learn the tools that would enable them to play music for the rest of their lives. The acoustic guitar was not an item of conspicuous consumption. Instead, it was not the tools that necessarily mattered, but the talented hands that held them. According to musician Joe Louis Walker, the great blues guitarist B.B. King believed that "it's all in your hands.

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[33] Gibson, Inc., *Gibson Banjos, Guitars, Mandolins, Ukuleles* (Kalamazoo, MI: Gibson, Inc., 1930), 47, MIMA.

[34] Gibson, Inc., *Guitars, Banjos, Mandolins, Ukuleles by Gibson, Catalog W* (Kalamazoo, MI: Gibson, Inc., 1934), 22, MIMA.

You know, you could give some guy a great guitar and he can't play squat on it and give some guy a horrible guitar and it sounds way cool and vice versa." It did not necessarily matter what the guitar looked like or how shiny it was because, as Walker stated, "Music comes from the person."[35]

The 1920s represent a moment on the cusp between a do-it-yourself culture of music where people made their own music and one where people consume it through listening to a product such as a recording or broadcast. If you could not afford tickets to a performance or a phonograph (let alone the electricity to power one), people had to rely on their own skills or those of their family and friends in order to have music in their lives. African-American blues musicians in the rural south often could not afford to buy a guitar and instead fashioned their own instruments out of household items, re-appropriating strings, knives, wash tubs, and, most notably, cigar boxes [Figure 20]. Tommy Lee "Legs" Thompson, a blues musician from Rankin County, Mississippi, around the age of 15 in 1930, combined a guitar neck with a cigar box and started playing at parties with the instrument.[36] Other blues musicians such as Big Joe Williams remembered having a two-string cigar box guitar as a child growing up in the 1910s in Crawford, Mississippi.[37]

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[35] Joe Louis Walker, interview by Robert Sanetelli, November 16, 1996, audio recording, box 15, Electric Guitar Video Documentation, 11/9/96-11/16/96, AC.

[36] Tommy Thompson, quoted in Gayle Dean Wardlow, *Chasin' That Devil Music: Searching for the Blues* (San Francisco: Miller Freeman Books, 1998), 115.

[37] David Evans, "Afro-American One-Stringed Instruments," *Western Folklore* 29, no. 4 (October 1970), 231; Barry Lee Pearson covers a number of blues musicians who made their own instruments out of everyday objects because they could not afford a guitar. Barry Lee Pearson, *Jook Right On: Blues Stories and Blues Storytellers* (Knoxville: University of Tennessee Press, 2005), 63-88; This phenomenon is not strictly American as the English musician Jeff Beck also built a cigar-box guitar as a child so he could make music. David Fricke, "Clapton and Beck: The Long and Winding Road," *Rolling Stone*, March 4, 2010, 38.

Figure 20 Cigar Box Guitar, maker unknown, North Carolina, ca. 1875-1899. Smithsonian, National Museum of American History.

When a young musician was lucky enough to acquire a guitar, it was not always in the best of shape, yet many determined players overcame this obstacle in order to master the instrument. Memphis guitarist and songwriter, Steve Cropper of the Mar-keys benefited from an old, imperfect guitar that his uncle used to play.

> "I would go to the closet and get that guitar out, you know, and I'd sit there and pull those strings. Didn't know how to tune it or anything. And, I remember it missing a string. But, I still -- I just loved the sound of it, the vibration of it, the whole thing."[38]

When country musician Malcolm Yelvington received his first guitar, he was "in all heaven," despite the fact that the guitar was in poor condition. At the age of 16, he spent most of his days and nights trying to learn how to play it, especially the songs of

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[38] Cropper was also an important member of Booker T. and the MG's and the Blues Brothers. Steve Cropper, interview by David Less, December 10, 1999, video recording, series 4, box 2, Rock 'n' Soul Audiovisual Collection, 1990-2000, AC.

Jimmie Rodgers.[39] Country guitarist and innovator Junior Brown's first guitar was one that was sitting in a pile of junk alongside an old banjo in his grandparents' attic. Though it only had a few strings (fewer than the normal 6), he played the instrument for quite some time. His initial foray with a broken instrument did not deter him as he later asked for and received a small, cheap Sears Silvertone six-string flat-top guitar with a sunburst finish for Christmas.[40] Joe Louis Walker, who began his musical career in San Francisco, grew up in a musical family and followed around all four of his cousins as a roadie. Walker recalled, "when they got through playing, I could bang around on the instruments." By the time he was 12, he was proficient enough that his mother "went into the family budget and overspent herself" to buy him "[a] old beat up guitar." He eventually began playing alongside his cousins and quit school by the age of 16 to pursue a professional career.[41]

The appearance of a guitar, whether it was missing paint or put together like Frankenstein's monster, often did not matter, as long as it was a usable tool for an aspiring musician. Even as a child, Carl Perkins was ashamed of how his first guitar looked, especially after his 4th grade teacher had asked him to bring it to school and play it, only to have the other children laugh at its appearance. To make it up to the young boy, his teacher had someone fix the body damage and paint it blue (Perkins' favorite color), something that made him "the happiest little old boy in the world." Though most of his rockabilly records featured a full band with electric guitars, bass and drums,

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[39] Malcolm Yelvington, interview by Pete Daniel, Peter Guralnick, and Charles McGovern, Memphis, TN, May 18, 1992, video recording, series 4, box 9, Rock 'n' Soul Audiovisual Collection, 1990-2000, AC.

[40] Junior Brown, interview by Matt Watson, November 15, 1996, video recording, box 12, Electric Guitar Video Documentation, 11/9/96-11/16/96, AC.

[41] Walker, interview.

Perkins' songs were written using "a little old cheap guitar."[42] In a similar fashion, Memphis guitarist and Sun recording artist Billy Lee Riley's first instrument might not have been much to look at, but it still set him on a path to a professional career in music. The guitar originally belonged to his childhood sweetheart. Unfortunately for the 10-year-old poor farm girl, she left the guitar hanging on the wall one day when the house was sprayed with the pesticide DDT, a common practice in the rural South at the time. The spray took all of the finish off of the guitar (and probably more). Riley's father bought it from the girl and that instrument became his first guitar.[43] During Junior Brown's early career, he used an acoustic Gibson J -45 with a pickup placed across the soundhole.[44] The makeshift "electric" guitar featured and tone and volume knobs taped to the front of the guitar. "It was a sight, but it sounded pretty good."[45]

Family connections allowed many young musicians the opportunity to get their hands on an instrument. Mabon "Teenie" Hodges attributed his start on guitar to his father's cousin, a gambler and drunkard named Sammy Winfield who had won a black Stella guitar supposedly in a craps game on a $2 bet. Winfield urged Hodges to learn to play the instrument. Later on, when Hodges started playing professionally, Winfield

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[42] Perkins, interview.

[43] Billy Lee Riley, interview by Pete Daniel and Charles McGovern, Memphis, TN, May 13, 1992, audio recording, series 4, box 8, Rock 'n' Soul Audiovisual Collection, 1990-2000, AC; Daniel, *Lost Revolutions*, 139, 335-336.

[44] The J stands for "Jumbo Dreadnought." See Chapter 4 of this dissertation for a discussion of Gibson's Jumbo guitars, their answer to the popular Martin "D" series of dreadnoughts. Nicknamed "The Workhorse," the J-45 model, first introduced in 1942 is, according to its maker, "Gibson's most popular acoustic." "J-45 Standard," Gibson, accessed October 20, 2014, http://www2.gibson.com/Products/Acoustic-Instruments/Round-Shoulder/Gibson-Acoustic/J-45-Standard.aspx.

[45] Ultimately, the guitar literally met the end of the road when it fell off of the luggage rack of a car he was riding in while hitchhiking along the Santa Monica freeway in California. Brown, interview.

bought him a Gibson acoustic guitar, which was retrofitted with a pickup to play as an electric.[46] Cordell Jackson, a female guitar player, had the fortune of being the daughter of a violinist who led a band. After watching the band for years, she asked for a guitar at age 12 and was given a Kay Supreme f-hole arch-top Orchestra size guitar. She learned to play on that guitar and kept it with her, later giving it a place of honor on the wall of her den. Despite being told, "Little girls don't play guitars," Jackson mastered songs such as "The Red River Valley" and "Wild Irish Rose," with the hopes of someday playing on the radio.[47] Having a musical family also helped classical and jazz guitarist Charlie Byrd. A native of the rural town of Chuckatuck, Virginia, he began his musical career by learning from his family. His father could play the guitar but did not own one. However, Byrd recalled that his Uncle Bill played a flat-top steel-string Stella guitar. Though his family bought cheap instruments, his relatives helped him start down the path towards a career in music.[48]

Aspiring musicians often attempted to emulate their heroes, some enduring early difficulties mastering the guitar in order to pursue their dreams. Stax Records engineer and studio guitarist Bobby Manuel, like a number of other players, idolized Elvis Presley growing up in the 1950s. When asked by his father whether he wanted to take up the saxophone or the guitar, Elvis (and the girls who adored him) made the choice easy for Manuel. With his parents' permission he went to Beale Street with his brother-in-law and purchased a Stella rhythm guitar for $5. The cheap guitar had an extremely high action,

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[46] Mabon "Teenie" Hodges, interview by John Meehan and David Less, April 2, 2000, video recording, series 4, box 4, Rock 'n' Soul Audiovisual Collection, AC.

[47] Cordell Jackson, interview by Pete Daniel, David Less, and Charles McGovern, Memphis, TN, May 19, 1992, video recording, series 4, box 4, Rock 'n' Soul Audiovisual Collection, 1990-2000, AC; Daniel, Lost Revolutions, 148, 153.

[48] Byrd, interview.

possibly configured in a manner suitable for Hawaiian style playing. Manuel recalled the difficulties in playing it at first.

> "I'm telling you, boy, you'd have to have clamps to make a chord on it. [49] Nobody could play that and endure that thing. But I guess I annoyed enough people to where I got a little Fender Music Master. It was a great little blond looking guitar that was kind of strange."[50]

By the age of 12, Manuel began playing guitar, often standing in front of the mirror practicing Elvis' moves in order to show them off to girls at parties. Manuel, who at one time lived on a few blocks away from Presley, would sneak around his house to hear him practicing through his open bedroom window.[51]

The growth of the secondhand guitar market is another major factor in the period as the mass production of cheap acoustic guitars allowed musicians to discard instruments that were no longer wanted in favor of newer models. In the major urban areas, as early as the 1920s, music stores and private individuals advertised "used" musical instruments for sale. For example, a store in Chicago named Tunica offered to accept instruments for exchange, while also selling Hawaiian guitars for $4 a piece.[52] If a consumer had the option of venturing to the city of Atlanta, he or she could visit the Cable Piano Company that advertised used band and orchestra instruments. One particular 1942 newspaper advertisement offered a student model guitar for $8, a Gibson

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[49] In another interview he told a variation of this story by saying "you had to have vice grips to put your fingers on the strings." Bobby Manuel, interview by Pete Daniel, David Less, and Charles McGovern, Memphis, TN, May 19, 1992, video recording, series 4, box 5, Rock 'n' Soul Audiovisual Collection, 1990-2000, AC.

[50] Bobby Manuel, interview by Pete Daniel, David Less, and Charles McGovern, May 15, 1992, tape recording, series 4, box 5, Rock 'n' Soul Audiovisual Collection, 1990-2000, AC; Daniel, Lost Revolutions, 153.

[51] Ibid.

[52] Tunica, "Wind, String, Etc. Say It With Music" (advertisement), *Chicago Daily Tribune*, April 8, 1928.

guitar for $30 or a National Guitar for $50, the latter two models at well below the going rate for a new instrument from either company. Along with the purchase of a guitar came several free lessons that boasted it was so easy that you could play "a beautiful melody by the second lesson."[53] For buyers tight on money, they also offered "Liberal Credit Terms," though how liberal was left undefined.[54]

Similar to other used items, acoustic guitars were featured at or below the original purchase price in classified advertisements of newspapers. Consumers bought and traded secondhand guitars from other musicians as means by which to obtain an instrument at a discounted price. By the late 1960s in Chicago, a musician could find a number of different types of acoustic and electric guitars in the classifieds section of the *Chicago Tribune*. Martin dreadnought models (D28, D21) ranged from $240 to $400, while a 12-string model was advertised for $270. Gibson 6-string and 12-string acoustic models cost between $200 and $250. A generic classical folk guitar was advertised for $125 and a cheaper Kay 6-string guitar was available for $15.[55]

The pawnshop served to supply lower income workers with consumer credit and in some ways became secondhand musical instrument stores, though it is difficult to

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[53] Cable Piano Company (advertisement), *Atlanta Constitution*, May 31, 1942; A National No. 98 "Hawaii" 6-string metal body, square neck Hawaiian guitar retailed for $75 without a case in the 1940-1941 catalog. A Style O would have cost $65 without a case. National Dobro Corp., *Modern National Guitars Catalogue No. 41* (Chicago: National Dobro Corp., 1940), 21, 24-25, NTCC; Gibson offered one model (the L-0) for $29 in 1942 and the rest went from $36.75 up to $325.50. Gibson, Inc. *Gibson Pricelist* (Kalamazoo, MI: Gibson, Inc., 1942), MIMA.

[54] Cable Piano Company (advertisement), *Atlanta Constitution*, November 23, 1941.

[55] Classified Advertisements, *Chicago Tribune*, December 21, 1968; Classified Advertisements, *Chicago Tribune*, December 16, 1968; Classified Advertisements, *Chicago Tribune*, April 18, 1969.

quantify just how many instruments changed hands through pawning.[56] A customer could put down collateral (in the form of jewelry, weapons or even guitars) and receive a cash loan usually worth less than the value of the object pawned. The pawnshop would then turn around and place the item for sale in the shop. If the customer could pay back the shopkeeper before the item was sold, the customer would receive their item back in return. Musicians could go to a pawnshop and obtain a used (or in some cases new) guitar in reasonable condition for a lower amount of money than those for sale at a music store. In the South, rural African-American workers may have spent some of their cash from the sale of crops such as cotton and tobacco at urban pawnshops shopping for items like guitars.[57] "Shot" Jackson bought a 1929 Dobro in a pawnshop in Asheville, North Carolina and eventually traded it to fellow musician Beecher (Pete) Kirby for another guitar. Kirby, better known as Bashful Brother Oswald, used that 1929 Dobro on all of his recordings with Roy Acuff.[58] The jazz guitarist Calvin Newborn acquired his first guitar through a pawnshop. Though he originally started out on piano at age 8, after two years of lessons, his brother took a liking to the instrument and Calvin was forced to switch to guitar. His father had worked as a professional drummer with Nat King Cole and Lionel Hampton. The elder Newborn persuaded the young B.B. King to take Calvin to Beale Street, an area of Memphis known for its music stores and venues, in order to find a guitar. Calvin purchased his first six-string from Nathan's Pawn Shop for five

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[56] Bastin, *Red River Blues*, 18; Pawnshops and secondhand goods stores rarely kept records or advertised. For a discussion of pawnshops during the late eighteenth and early nineteenth centuries in America see Wendy A. Woloson, "In Hock: Pawning in Early America," *Journal of the Early Republic* 27, no. 1 (Spring 2007): 35-81; and Wendy A. Woloson, *In Hock: Pawning in America from Independence through the Great Depression* (Chicago: University Of Chicago Press, 2009).

[57] Bastin, *Red River Blues*, 18.

[58] Dick Blattenberger, "'If resonators could talk!...'," *Bluegrass Unlimited*, May 1997, 26.

dollars. He paid with a $5 bill he had won playing a piano duet with his brother at a local amateur contest at the Palace Theater.[59] One of the signature series Gibson models discussed in Chapter 3 was the subject of a song involving pawnshops. Musician Jerry Jeff Walker fondly wrote about how he purchased a well-traveled Roy Smeck Stage De Luxe in an Ohio pawnshop for $90 in his song "That Beat Up Old Guitar."[60]

Pawnshops also provided a means for customers to get some quick cash. Often this meant that they had to part ways with a beloved possession, fully knowing they might never see it again. Brownie McGhee, a poor African-American blues musician, found out the hard way just how quickly pawnshops turned over merchandise. He had been given Blind Boy Fuller's (another prominent blues musician) brown steel-bodied National guitar as a gift. Unfortunately, economic circumstances forced him to pawn the guitar on a Friday, with the hope of retrieving it on Monday morning. McGhee came back to claim his guitar, but the pawnshop had already sold it to another customer.[61]

Learning to Play the Guitar

Simply acquiring a guitar was only the first step on a long musical journey for many musicians, as they needed to learn how to use it. By the late nineteenth century, guitarists in urban areas did have the option of following the traditional path of instruction in music theory and method from established teachers. Guitar makers such as

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[59] Calvin Newborn, interview by Pete Daniel and Charles McGovern, Memphis, TN, August 7, 1992, video recording, series 4, box 6, Rock 'n' Soul Audiovisual Collection, 1990-2000, AC.

[60] Recorded by folk musician-turned-country/rocker Jerry Jeff Walker whose biggest claim to fame is writing the song, "Mr. Bojangles"; Jerry Jeff Walker, "That Old Beat Up Guitar," recorded 1972, New York, on *Jerry Jeff Walker*, Raven Records RVCD-320, 2011, CD, originally released in 1972.

[61] Bruce Bastin, "Truckin' My Blues Away: East Coast Piedmont Styles," in *Nothing But the Blues: The Music and the Musicians*, edited by Lawrence Cohn (New York: Abbeville Press, 1993), 220.

Gibson noted this in their catalogs that displayed numerous endorsements from guitar teachers around the country.[62] Young players in our nation's capital, for example, learned from Gregoria Fraser Goins, who taught at the Washington Conservatory of Music and School of Expression.[63] In small towns and rural parts of the country, finding a qualified guitar teacher proved to be a larger challenge.

The skill built into an acoustic guitar helped make learning the instrument less of an obstacle than the trumpet or the saxophone. Like the piano, the guitar produces a note with only one simple movement of a finger plucking a string. A player with a rudimentary knowledge of chord formation could quickly demonstrate the talent by which to use the tool. The guitar as an accompanying instrument for folk performers did not always require the player to be a proficient instrumentalist. In fact, one but needs to learn only a few chords to sing over top of in order to master any number of songs. As one critic put it, "The…folk balladeer…is quite satisfied to be an under-achiever on the guitar; that is why folk music often brings out the best in people but the worst in the guitars."[64] Despite, sentiments like these, the adaptability and versatility of the acoustic guitar made it an ideal instrument by which individuals could not only teach themselves a basic set of skills, but it also allowed them to be able to combine various playing styles together all the while using the same basic instrument.

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[62] William Ivey, ed. *The Gibson 1921 Catalog*, Historical Instrument Series No. 1 (Grand Rapids, MI: The Cargill Company, 1921; repr. Nashville, TN: The Country Music Foundation Press, 1973), 17, MIMA; Walter Carter, "Sales Without Sales Reps: The Gibson Teacher-Agent" in Walter Carter, *Gibson Guitars: 100 Years of An American Icon* (Los Angeles: General Publishing Group, 1994), 51; Joseph E. Spann, *Spann's Guide to Gibson, 1902-1941* (Anaheim Hills, CA: Centerstream Publishing, LLC, 2011), 193, 225, 226.

[63] *Goins Music School [Music Arts Studio] Group*, February 1960, photograph, Scurlock Studio Records, ca. 1905-1994, AC.

[64] Frederic V. Grunfeld, *The Art and Times of the Guitar* (New York: Macmillan, 1969), 265.

When examining some of the early blues, country, and rock 'n' roll guitarists, it becomes apparent that many of them learned through a combination of educational methods that included lessons from family members, playing with other musicians, and training their ears to discern notes and chords heard in guitar music over the airwaves and in public performances. These informal teaching networks helped give rise to the blend of playing styles associated with these genres. They broke down the rigid walls of learning one style such as classical or jazz guitar and instead allowed for combinations like the incorporation of blues licks in gospel songs and Hawaiian slide techniques in country music. Learning the proper techniques of reading notes and music often took a back seat to these organically acquired skills. A lack of formal instruction through music theory or method books served as a badge of honor for some guitarists. According to Carl Perkins, the talented guitarist Chet Atkins, when asked about whether or not he could read music, once responded, "Yeah, but not enough to hurt my pickin'."[65]

For musicians like Malcolm Yelvington, family members played an important role in their musical education. His brother not only gave him his first guitar, but also taught him three or four basic chords as a start. [66] Cordell Jackson learned, even before she owned a guitar, by watching the members of her father's band, copying where they put their fingers on the fretboard and attempting to imitate their moves. Her father encouraged her to sit in with the band. It was only a matter of weeks after she got her first guitar that she began to play along instead of just mimicking the chords without actually playing her instrument.

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[65] "Pickin'" is a slang term for playing the guitar (i.e. "picking" or plucking the guitar strings). Perkins, interview; This quote is also referenced in Pete Daniel's work to discuss Perkins' lack of musical literacy. Daniel, *Lost Revolutions*, 139.

[66] Yelvington, interview.

> "And Daddy always encouraged it so, whether I missed a lick or whatever, that wasn't important, I was there attempting to go through and watch their chords and things like that and I just, that's how simple it was for me to learn. I watched, and then after I got my first guitar I was physically doing it, whether it was rough or easy or what. I used to have to pull my fingers to get them on, you know, get to stay on guitar, they'd slip back off and I'd have to put them back on and I think anyone who has first learned to play the guitar knows the struggle you have to go through to get those fingers to go where you want them."[67]

Playing with other musicians became a formative experience in the early music education of guitarists such as Billy Lee Riley who credited his friend Tommy Hamlin with helping him learn to really play his guitar. "I bought a guitar about two years before I met him and I could not play, not one chord, he taught me this one here and that was it."[68] Riley would get together with other sharecroppers, both black and white, on the weekends to play ball and socialize. Music was a key component of these gatherings and they became his informal education on the blues.[69] Growing up in Forrest City, Arkansas proved to be a racially diverse informal educational environment for Riley to learn to play the guitar.

> "I got most of my musical training, if you want to use that word, on the plantation, with the old black blues singers. On weekends we would go together on the back porches or front porches or what have you. I would stand around and watch these guys play these old guitars with the slide bottle-neck guitars, and blow harmonica, and sing the blues. At the age of eleven, I learned to play the guitar. By the time I was twelve years old I was playing guitar with these guys and playing harmonica and singing the blues with right along with them."[70]

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[67] Jackson, interview.

[68] Billy Lee Riley, interview by Pete Daniel and Charles McGovern, May 21, 1992, Newport, AR, video recording, series 4, box 8, Rock 'n' Soul Audiovisual Collection, 1990-2000, AC.

[69] Riley, interview, May 21, 1992; Riley's informal musical training is also briefly discussed in Pete Daniel, "Rhythm of the Land," *Agricultural History Agricultural History* 68, no. 4 (Autumn 1994): 11.

[70] Riley, interview, May 13, 1992.

The introduction to this chapter briefly mentioned that Carl Perkins' first teacher, a cotton picker named Uncle John Westbrook, taught the young boy how to play a few simple chords as well as how to bend notes. These experiences stuck with the budding musician who then incorporated blues riffs into a number of standard country songs including Roy Acuff's "Great Speckled Bird."

> "He did a thing with that third finger. He'd push that string. And it set a chill off again. Because I didn't hear a white man do that. And I wasn't around a lot of players. I was listening, as I said, to the Grand Ole Opry, but wasn't nobody on there doing that. It was a little blues lick. And I got stuck on it so much to everything that I started trying to learn how to play listening to the Grand Ole Opry and listening to country radio stations that my dad listened to."[71]

Perkins went from consuming and emulating the music that his father listened to producing his own versions of the songs, simultaneously preserving some elements, while introducing new ones to a familiar tune. Like many other innovative musicians, Perkins actively participated in the process of social construction by moving from a listener of country music to a pioneer in the genres of rockabilly and rock 'n' roll.

While some musicians sought the help of others to learn the guitar, others proudly eschewed any help from others in favor of teaching themselves. Steve Cropper's mother wanted him to take piano lessons, but he initially rejected the idea of learning by method. He often got bored with the work involved to read and write music, something he regretted later in life.

> "It's sort of like going to a foreign country and not being able to speak the language. So, pretty much, my musical career has been based around me being self-taught, pretty much with some influence and help with some people, and playing by ear -- and just the fact that I loved it." [72]

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[71] While this interpretation of the song upset his father, his mother interceded on his behalf and told his father not to stop him from playing it his way. Perkins, interview; Westbrook's influence and Perkins' upbringing are also briefly discussed in Daniel, *Lost Revolutions*, 137-138; and Daniel, "Rhythm of the Land," 10.

[72] Cropper, interview.

The Silvertone guitar Junior Brown received for Christmas as a child came with an instruction book and a record that he promptly threw away so that he could pursue his own tuning. He eventually did master the standard tuning and picked up a few lessons from a college student who taught him a basic set of chords, but Brown wanted to do things his own way without anyone telling him what to do. He would learn songs featured in the folk magazine *Sing Out!* by ear, rather than following the lyrics and sheet music provided in the issue.[73]

Unlike Brown, countless other budding musicians utilized this medium to gain access to song lyrics through similar mailings. Beginning in the 1930s, many radio stations including WLS in Chicago published magazines such as *Stand By!* that came to listeners throughout the country by mail. These newsletters often featured listener letters, song lyrics, and articles on star performers, giving the public a sneak peak into to the lives and songs of the men and women whose voices filled the airwaves.[74]

Many musicians, like Bobby Manuel, relied on a hybridization of methods that involved a combination of formal and informal training in order to mold his or her own unique guitar style. From the age of 14 on, Manuel listened day and night to guitarists of numerous genres in order to try to pick up on riffs and styles by ear. He took lessons from a teacher named Len Vernon, a popular instructor in the Memphis scene. His affection for the music of Ray Charles and James Brown also led him to play with black musicians who, when combined with his formal training, helped him develop his own distinctive style.[75]

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[73] The other guitarists who were also taking lessons from the college student (who was often hung over while teaching) apparently never knew the difference. Brown, interview.

[74] Diane Pecknold, *The Selling Sound: The Rise of the Country Music Industry* (Durham, NC: Duke University Press, 2007), 39.

[75] Manuel, interview, May 15, 1992.

> "I used to hang out at the Plantation Inn, which was in West Memphis, and listen to those guys play at the back door and that kind of thing and meet them. There was a guitar player named Joe Woods. "You know, can you show me something?" And you know they were tired of, please, not another little white boy over here, we're sick of this. He was really a great guy, really a great guy. Had a good heart, a good spirit, would show me things. Between those influences, the jazz side of what Len taught a lot of guitarists around here, and learning from different guys, anybody would show me anything, I kind of developed a new style."[76]

Calvin Newborn's first teacher was B.B. King, a friend of Newborn's father. Though it was early in King's career, he had already mastered how to play by ear, a skill he imparted to his student. However, Newborn wanted to learn to read music, so he sought out the only classical guitar teacher he could find in Memphis, only to be turned away due to his skin color. Rather than give up, the young musician wrote to a guitar company in New York who supplied him with method books and he was able to teach himself to read music written for the guitar. His father then brought in his friend Thomas Dunlap, another accomplished guitarist, who provided a solid foundation for the young musician. Newborn combined the two approaches in his own playing, improvising figuring out songs such as "Steel Guitar Rag" by ear, while also adding folk songs from the method books to his repertoire. By the time he started playing seriously with his brother, he was well acquainted with improvisational skills.

> "I was improvising pretty well back then but that was because I took piano lessons first. My brother helped me, he knew the chord changes and knew how to improvise because he was improvising on a lot of classical pieces then...He was just phenomenal. And to keep up with him, I had to learn how to improvise. I'm lost for words now."[77]

Through this hybridization of formal and informal musical education, aspiring guitarists could achieve both new and familiar sounds by combining multiple ways of learning to play the instrument. Musician Reggie Young perhaps put it best when

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[76] Manuel, interview, May 15, 1992.

[77] Newborn, interview.

describing how a musician with a limited amount of training could pick up the skills to play rock 'n' roll. "Everybody could play it. I mean, somebody could go buy them a guitar and in a month they could play some of those riffs that's on those records and sound just like those guys did."[78]

Cowboy Guitars

One of the best examples of the intersection of low-end guitar production, mail-order and secondhand sites of consumption, and the impact of the proliferation of sheet music, recordings, radio, film and television shows, is the popularization of cowboy guitars. In 1936, Gene Autry and his trusty sidekick on the silver screen Smiley Burnette starred in *Guns and Guitars*.[79] The title and the lyrics both reinforce the notion of the cowboy on the prairie, driving cattle across the land, out in the elements with his trusty six-shooter and six-string guitar as companions on the journey. While this mythical construct of a cowboy may have never existed, the song, the sheet music, the film and the celebrity star all represent elements of a nostalgic pastime that served as the doorway for countless boys and girls (and even some adults) to live out their own frontier fantasy. During the Depression and World War II, cowboys were elevated as symbols of the good and just in American folklore. Through items such as cowboy guitars and sheet music, young musicians were introduced to the tools and the sounds that would aid them in shaping their own careers.

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[78] Reggie Young, interview by David Less, January 19, 1998, video recording, series 4, box 9, Rock 'n' Soul Audiovisual Collection, 1990-2000, AC.

[79] Gene Autry and Oliver Drake, "Guns and Guitars" (Chicago, M.M. Cole Publishing Co., 1936), series 16.1, box 2, folder I, The Sam DeVincent Illustrated Collection of American Sheet Music, AC; Gene Autry, "Guns and Guitars," by Gene Autry and Oliver Drake, recorded 1936, on Gene Autry, *Back in the Saddle Again,* Acrobat Music, 2008, MP3.

The growth of the hillbilly and country & western music industry along with Hollywood productions both invented and reinforced the notion of the cowboy guitarist at home on the range with a six-string slung over his back. In some ways the creation of the singing cowboy counteracted some of the negative stereotypes and attitudes in the recording industry associated with hillbilly music.[80] Beginning in the 1920s, cowboy music became a regular part of the repertoire of first locally, then nationally broadcast barn dances such as the WLS Barn Dance from Chicago in 1924 and the Grand Ole Opry from WSM in Nashville, Tennessee in 1925. Jack Clement fondly recounted how these performers influenced his early years. "I always liked hillbilly music since I was a kid. I remember in the city I used to come in from play and turn on the cowboys -- the singing cowboys on the radio."[81] Even some of the migrant folk performers whose songs were recorded by Charles Todd and Robert Sonkin in 1940s California, introduced themselves as "singin' cowboys," evidence of the influence and popularity of the radio stars.[82] These migrants, like their cowboy heroes, carried their guitars (and fiddles in some cases) on their backs as they left the Midwest (during the Depression) and later the South (during World War II) as they searched for steady work.[83] By the 1930s, a growing number of "cowboy" guitars adorned with western motifs became available through mail-order outlets such as Sears, Roebuck and Montgomery Ward, guitarists of all ages could fulfill their musical fantasy of being Roy Rogers or Gene Autry, singing and strumming along to the sounds of the range.

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[80] Pecknold, 60-61.

[81] Jack Clement, interview David Less, December 10, 1999, transcript, series 4, box 2, Rock 'n' Soul Audiovisual Collection, AC; Pete Daniel also notes that Carl Perkins and Malcom Yelvington fondly recalled listening to singing cowboys while growing up in the South. Daniel, "Rhythm of the Land," 9.

[82] Pecknold, 38.

[83] Ibid., 54.

The real-life cowboy of the late nineteenth century and his harsh life bore little resemblance to the mythical frontier hero of paintings, dime novels, and Wild West shows that emerged in American popular culture in the late nineteenth and early twentieth centuries. A cowboy would hardly have had time to carry an acoustic guitar with him over the large open expanses of the range as he drove cattle across the plains to the railheads of the Midwest. It was a dirty life, full of hard work, long days, uncertain weather conditions, and low pay. The spread of the railroad helped to usher an end to the era of cowboy-led cattle drives by the turn of the twentieth century. The lack of rhythmic work meant that most did not sing while they labored and few if any would have attempted to finger guitar chords while atop of a moving horse. There are contemporary accounts of cowboys singing to pass the time, but much of the singing cowboy caricature is a work of fiction.[84] Despite this, visual depictions of the cowboy guitarist became almost ubiquitous in the first half of the twentieth century in America. As early as 1888, American artists such as Thomas Eakins painted depictions of riders with guitars. Eakins' painting *Home Ranch* presents a paradoxical frontier cowboy adorned in buckskin playing a guitar in a style that is closer to that of an upper or middle class parlor player with his right pinky finger braced on the top of the guitar.[85] The cowboys in novels and

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[84] Mark Fenster attributes John A. Lomax's book Cowboy Songs and Other Frontier Ballads (1910) and his subsequent lecture tours, along with reviews for the book as laying the foundation for the myth of the singing cowboy that emerges in the 1920s. Mark Fenster, "Preparing the Audience, Informing the Performers: John A. Lomax and Cowboy Songs and Other Frontier Ballads," *American Music* 7, no. 3 (Autumn 1989): 260-261; The compilation Cowboy Songs on Folkways presents a variety of songs that reflect the complex mythology related to the American cowboy. Cowboys would have used some of the music as work songs while others were derived from the fictional heroes of the silver screen. Guy William Logsdon, Liner Notes, *Cowboy Songs on Folkways*, Smithsonian/Folkways Recordings SF 40043, 1991, CD; Douglas B. Green, *Singing in the Saddle: The History of the Singing Cowboy* (Nashville: The Country Music Foundation Press & Vanderbilt University Press, 2002), 6-8, 11-12.

[85] Grunfeld, 257.

movies still rode horses and drove cattle like their real-life counterparts, but now they were endowed with mythical qualities of righteousness set against a backdrop of endless untamed land beneath a cloudless sky where the sun set every night against a dazzling palette of colors in the sky.

This ideal is perhaps best exemplified through two of the most popular singing cowboys of all time to grace the growing mass communication networks of radio, film, and television from the 1930s to the 1950s: Gene Autry and Roy Rogers. The two stars set the mold for countless other singing cowboys on the stage, screen, and airwaves. Building on the success of guitars that featured the names of performers such as Nick Lucas and Roy Smeck (as described in Chapter 3), the celebrity endorsements of Rogers and Autry helped to sell thousands of cowboy guitars. Their easily recognizable voices and faces inspired consumers to buy singing cowboy merchandise, including guitars, in order to re-enact riding the range from the comfort of one's living room or backyard.

Gene Autry, "America's Favorite Singing Cowboy," entertained audiences over the airwaves and on screen, both big and small. Born as Orvon Gene Autry in Tioga, Texas to a livestock dealer and horse trader, the young boy learned guitar from his mother and honed his voice in the church choir under the tutelage of his grandfather, a Baptist minister. He bought his first guitar for eight dollars from the Sears catalog. This was a fitting connection, considering the mail-order giant would one day sell guitars with his name on them. After catching the attention of Will Rogers, he went to New York and began making records, eventually singing on the WLS *National Barn Dance* radio show in Chicago in 1931. By 1934, he had a small role as a singing cowboy in the movie, *In Old Santa Fe.* Not long after, he won the starring role in the film *Tumbling Tumbleweeds,* beginning a string of 93 movies where he starred alongside his sidekicks Smiley Burnette and Pat Buttram. From 1940 to 1956, CBS Radio Network broadcast *Gene Autry's Melody Ranch* every week bringing his mythic version of the American West into households across the country. Beginning in 1950, he could be seen on television on *The*

Gene Autry Show. By the time he retired in 1956 and subsequently moved into other business arenas, he had become one of the most prolific singing cowboy entertainers.[86]

Leonard Slye, later known as Roy Rogers, also helped to popularize the myth of the singing cowboy. He gained national fame in the 1930s as a member of the Pioneer Trio and, later, the Sons of the Pioneers. Audiences came to know the group through radio shows, films, and recordings for Decca Records including the popular tune "Tumbling Tumbleweeds" (1934). In 1937, Slye was given the stage name "Roy Rogers" and began starring in motion pictures billed as the "King of the Cowboys." Rogers was often seen with his faithful horse Trigger riding the trails carrying an acoustic guitar. Like Roy Smeck, Rogers used his stardom to endorse an array of consumer products, including guitars. In the 1950s, the performer made weekly appearances on the small screen starring alongside his wife, Dale Evans, in *The Roy Rogers Show*.[87]

The myth of the singing cowboy who plays guitar became further solidified in American culture through the imagery on sheet music published to complement the popular cowboy recordings of the day. "I'll Go Ridin' Down that Old Texas Trail" features an image of a cowboy with a guitar slung on his back leading a mule along with

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[86] Steve Evans and Ron Middlebrook, *Cowboy Guitars: It's a big roundup of those wonderful cowboy guitars starting with the Gene Autry Model of 1932 through present day* (Anaheim Hills, CA: Centerstream Publishing, 2002), 39; Green, *Singing in the Saddle*, 121-148; As discussed in the previous chapter, Autry, an avid Martin guitar owner, played a role in popularizing the company's dreadnought models in the 1930s.

[87] Green, *Singing in the Saddle*, 38, 79-80, 187-197; See also Robert W. Phillips, *Roy Rogers: A Biography, Radio History, Television Career Chronicle, Discography, Filmography, Comicography, Merchandising and Advertising History, Collectibles Description, Bibliography and Index* (Jefferson, NC: McFarland & Company, Inc., 1995); and Raymond E. White, *King of the Cowboys, Queen of the West: Roy Rogers and Dale Evans* (Madison: The University of Wisconsin Press, 2005).

a photo of Texas Jim Robertson.[88] The 1939 song "Ole Peaceful River" features Gene Autry on the cover playing a Gibson guitar with his name and a horseshoe inlaid in the fretboard. This was by no means a cheaply made instrument to be sold to children, but rather an expensive guitar custom-made by Gibson to compliment Autry's performances as a celebrity endorser of Gibson guitars.[89] Another Autry tune, "Singing a Song of the Saddle" shows him on the front cover atop his horse again playing his Gibson guitar. At the bottom of the page is an illustration of cowboys gathered around a guitar player at the campsite listening to the songs of the prairie.[90] The hit song "Tumbling Tumbleweeds," made famous first by the Sons of the Pioneers presents a vivid image of nomadic life in the west. A 1934 copy displays an illustration of a cowboy on horseback perched atop a cliff at sunset. The music was written for piano and included guitar tablature.[91] Like other genres, the sheet music for cowboy tunes included method books to teach players how to play their favorite hillbilly, country and cowboy songs on guitar.[92]

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[88] Gene Autry and Smiley Burnette, "I'll Go Ridin' Down that Old Texas Trail" (Chicago: M.M. Cole Publishing, Co., 1939), series 16.1, box 3, folder J, The Sam DeVincent Illustrated Collection of American Sheet Music, AC.

[89] Johnny Marvin, "Ole Peaceful River" (Hollywood: Western Music Publishing Co., 1939), series 16.1, box 3, folder J, The Sam DeVincent Illustrated Collection of American Sheet Music, AC.

[90] Frank Harford and Gene Autry, "Singing a Song of the Saddle" (Chicago: M.M. Cole Publishing Co., 1937), series 16.1, box 3, folder K, The Sam DeVincent Illustrated Collection of American Sheet Music, AC.

[91] Bob Nolan, "Tumbling Tumbleweeds" (Cleveland: Sam Fox Publishing Co., 1934), series 16.1, box 3, folder K, The Sam DeVincent Illustrated Collection of American Sheet Music, AC.

[92] The Oahu Publishing Co., "Oahu "Rhythm Style" Note Course" (advertisement), Hawaiian guitar box II, folder L, The Sam DeVincent Illustrated Collection of American Sheet Music, AC.

Sheet music associated with singing cowboys also showcased the flexibility of the guitar as an instrument that could be used to play varying musical styles. Some pieces in particular appear to have been targeted at audiences who shared an interest in both western music and the Hawaiian ethnic music movement. The folio *Gene Autry's Famous Cowboy Songs and Mountain Ballads* featured "melody, ukulele chords, words, piano accompaniment and guitar chords."[93] Even songs such as "Under the Old Apple Tree" whose lyrics do not pertain to cowboys or the American West featured an inset photo of musician Jerry Smith adorned in cowboy gear playing his guitar on the front cover. The sheet music also contained ukulele and Hawaiian guitar chord tablature along with treble and bass notation for piano.[94] These crossovers continue the trend of publishers and manufacturers attempting to capitalize on the distinctive musical flavors of ethnic music movements and their impact on American musical culture.

Though sheet music could help musicians to sing along to their favorite recordings, it was the introduction of cowboy guitars that combined the imagery of the cowboy with an instrument that one could use to play the melodies of the prairie. Mail-order catalogs ranging from Sears Roebuck to Montgomery Wars, Spiegel to Eaton sold the majority of cowboy guitars from the 1930s to the 1950s. In general, these cowboy guitars were generally smaller and more cheaply made than most models produced by Martin, Gibson and other makers. Harmony and Kay provided the backbone of cowboy guitar production. The producers intended these models to be beginner instruments marketed to children and fans of the singing cowboys of radio, film and later television

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[93] *Gene Autry's Famous Cowboy Songs and Mountain Ballads, Book No. 2* (Chicago: M.M. Cole Publishing Co., 1934), series 16.1, box 3, folder L, The Sam DeVincent Illustrated Collection of American Sheet Music, AC.

[94] Gene Autry, "Under the Old Apple Tree" (Chicago: Calumet Music Co., 1932), series 16.1, box 3, folder K, The Sam DeVincent Illustrated Collection of American Sheet Music, AC.

fame. The decorations on the original models depicted hillbilly and country artists from popular radio barn dance shows. These products became the first in a line of decorative, cheap guitars and ukuleles that the cowboy theme would come to dominate by the 1930s. By depicting western motifs and silhouettes or portraits of celebrity cowboy heroes such as Autry and Rogers, the guitars reinforced the mythical western imagery associated with the riders of the range. Most of their value to collectors today comes from the artwork on the guitars rather than the instruments themselves.[95]

Adorned with colorful decals and relying on aspirational marketing involving a celebrity recording artist, the Bradley Kincaid Houn' Dog model guitar is considered the precursor of many cowboy guitars. Appearing in the Sears catalog from 1929 to 1933, the guitar featured a decalcomania with a hound dog running amidst a mountain backdrop and came with an instruction book. As discussed in Chapter 3, beginning in the 1920s, manufacturers decorated instruments with "Decalcomania" or "decals" that depicted everything from Venetian gondolas to playing cards. Bradley Kincaid, "the Kentucky Mountain Boy," was a featured performer on the WLS Chicago (and later) National Barn Dance radio program and would have been a recognizable figure to many consumers.[96] This is yet another example of manufacturers using celebrities to sell guitars.

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[95] There were other ways of getting a cowboy guitar that did not include directly purchasing one. For example, while Sears featured a Gene Autry "Melody Ranch" guitar for sale in its catalog, the American Seed Company offered children the chance to receive their own Gene Autry guitar by selling vegetable and flower seeds instead. Evans and Middlebrook, *Cowboy Guitars*, 7.

[96] Ibid., 12-13; It should be noted that Kincaid thought of himself as a folk revivalist and attempted to educate audiences on how to differentiate "Hilly Billy" of hillbilly songs and traditional folk songs. Despite this affirmation, he explained that his folksy costume represented one theater owner's "conception of what the average mountain boy would look like." In a similar manner, the guitar that bore his name would then also contain the visual tropes associated with hillbilly music. Pecknold, 21. 46-47.

Montgomery Ward countered with their own celebrity model by offering a line of guitars between 1930 and 1941 that bore the name of radio star Carson J. Robison. He became one of the first cowboy singers in the early 1920s and wrote and performed cowboy songs including the popular tune "Carry Me Back to the Lone Prairie." Aimed at aspiring guitarists looking to purchase a package of tools all at once, the catalog offered a "Hill Country Outfit" for $9.95. The set included a decorated guitar, harmonica with holder, neck cord (strap) and instruction books; in other words, everything a young player might need in order to emulate the music of Robison. In a similar fashion to the latest General Motors automobile, the guitar model changed every two years. Gibson took over production of the Robison models in 1936 and offered a "Recording King" model in 1938. Though Gibson produced the guitars, they were sold exclusively in the Wards catalog.[97]

Robison also has the distinction of being used as a conduit to capitalize simultaneously on two major trends in 1930s American popular culture: the interest in singing cowboys and the Hawaiian music movement. While the idea of a cowboy strumming a ukulele might seem anachronistic and out of place, Wards marketed a $2 Carson J. Robison model ukulele from 1936 to 1940 that featured a painted scene of a cowboy on horseback perched at the edge of a cliff overlooking a valley below with a log cabin in the distance.[98] The Hawaiian/country crossover was also represented through the music of Marty Robbins, one of the last singing cowboy artists to have hits both on record and on the big screen. He found success in the genres of country, calypso, pop, and even Hawaiian music, a testament to the commonalities of those musical genres.[99]

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[97] Evans and Middlebrook, *Cowboy Guitars*, 14-16, 19.

[98] Ibid., 18-19.

Both of these artists demonstrate the power of the Hawaiian music movement and its effect on the guitar in America.

Beginning in 1932, the cowboy guitar models solidified into two notable categories: celebrity/character models and models depicting visual representations of the west or songs of the range. By far the most popular category consisted of cowboy guitars that featured celebrities or characters. Sears introduced its first guitar bearing the likeness of Gene Autry in 1932. Made by the Harmony Company, the Gene Autry "Round-up" Guitar sold for $9.75 and featured cowboy imagery on the peghead and top of the guitar. It showcased a cowboy with a lasso above his head on a cattle drive along with Autry's signature. Issued prior to his first movie, this guitar, the first stencil-painted cowboy guitar marketed by Sears, cashed in on Autry's success as a radio star.[100] Before he became known as "The Possum," George Jones cut his teeth on an Autry guitar. "It was a brand new Gene Autry guitar with a horse and lariat on the front," Jones recalled. "I took it home and it hardly ever left my hands. Note by note, I learned to play it. I've owned countless expensive guitars in my life but none of them ever meant any more to me than that little Gene Autry model."[101] Cowboy guitars could be found alongside other guitars in the windows of pawnshops in the 1930s. For example, a pawnshop in Minneapolis prominently displayed a Tom Mix celebrity endorsed cowboy guitar in its shop window in 1939. Similar to the Gene Autry model, the guitar featured a depiction of the movie star atop his horse with his signature along the top of the instrument. Though other

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[99] Robbins starred in several singing-cowboy westerns between 1957 and 1964 and recorded his most successful single "El Paso" on an album entitled *Gunfighter Ballads and Trail Songs*, a hit on both the country and pop charts in 1959. Green, 308-311; He also released an album of Hawaiian favorites in 1963 entitled *Hawaii's Calling Me.*

[100] Evans and Middlebrook, *Cowboy Guitars*, 20-21.

[101] George Jones, *Country Weekly*, March 2, 1999, quoted in Evans and Middlebrook, *Cowboy Guitars*, 22.

musical instruments surrounded it, the guitar hung directly above two shotguns, a visual representation of Autry's song "Guns and Guitars."[102]

The fictional Lone Ranger demonstrated that, to sell guitars, the advertised cowboy did not always have to be a real-life actor. Produced from 1936 to 1941 by Harmony and sold through the Sears catalog, a series of guitars featured the popular cowboy radio (and later television) character of the 1930s. The instruments depicted the Lone Ranger on his trusty horse Silver next to his faithful Native American sidekick Tonto and his horse Scout in the foreground. The figures are set against a backdrop that included a full moon in the sky, and a train rolling along in the distance.[103] Echoing the noble and heroic ideals of cowboys like Autry and Rogers, the Lone Ranger was a masked figure, one that could easily be adopted by a youngster in his or her own backyard. Anyone could wear the mask of the Ranger, a fact not lost on the advertisers. One of the most interesting and ironic aspects of the Lone Ranger model was its visual depiction of the railroad. This modern transportation technology ultimately led to the downfall of cowboy cattle drives, putting the real-life heroes of the range out of work. No other cowboy guitars feature any railroad iconography or other technological devices outside of firearms.

Guitars associated with the songs and scenes of Gene Autry and his films also graced the pages of mail-order catalogs from the Depression era to the postwar period inspiring young would-be cowboy consumers. From 1939 to 1940, Montgomery Ward sold a Ray Whitley "Recording King" guitar made by Gibson. While the Jumbo model (Gibson's answer to the Martin dreadnought as discussed in Chapter 4) did not boast any

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[102] John Valchon, *Pawnshop in Gateway District, Minneapolis, Minnesota*, September 1939, photograph, Farm Security Administration/Office of War Information Black-and-White Negatives, Prints and Photographs Division, Library of Congress.

[103] Evans and Middlebrook, *Cowboy Guitars*, 54-57.

cowboy imagery, it did feature Whitley's signature.[104] Whitley, a singing cowboy star of radio and films co-wrote Gene Autry's 1939 hit "Back in the Saddle Again."[105] One of Sears' most popular Gene Autry models, the "Melody Ranch," was sold between 1941 and 1955. Sears offered a ¾ size specifically for children or ladies, though it was discontinued in 1942. The guitars featured a painted western scene with a "Melody Ranch" signpost on the peghead and the same cattle drive scene from the previous "Round-up" line of guitars. From 1958 to 1959, Sears sold a ¾ size Silvertone model guitar that depicted the same Gene Autry cowboy cattle drive scene, but without his signature. Also produced by Harmony, the Silvertone model was the last cowboy guitar sold by Sears.[106]

The second category of cowboy guitars sold after 1932 featured models that displayed scenes and imagery that connected them to visual representations of the American West or songs of the range. To capitalize on one of the most famous cowboy songs, Wards sold a "Home on the Range" model in 1938 and 1939 that featured an elaborate scene on the top of the instrument with a cowboy strumming his guitar while sitting outside of a frontier building in the foreground. This scene was set against a

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[104] Evans and Middlebrook, *Cowboy Guitars*, 92-93; NMM 13439 Guitar by Gibson, Inc., Kalamazoo, MI, 1939, Recording King Jumbo Ray Whitley, National Music Museum, The University of South Dakota, Vermillion; Montgomery Ward & Co., *Montgomery Ward & Co. Catalog, 1939-1940* (Chicago: Montgomery Ward & Co., 1939), MIMA.

[105] Bill C. Malone and Jocelyn R. Neal, *Country Music, U.S.A.*, 3rd ed. (Austin: University of Texas Press, 2010), 144, 151; Ray Whitley and Gene Autry, "Back in the Saddle Again" (New York: Chappell & Co., 1940), series 16.1, box 2, folder I, The Sam DeVincent Collection of Illustrated American Sheet Music, AC.

[106] Evans and Middlebrook, *Cowboy Guitars*, 29-31, 34; More than 60 years after it was first introduced, the "Melody Ranch" model was still sought after by collectors. For example, the noted guitarist and recording innovator Les Paul received one for his 87th birthday in 2002. *Property from the Estate of Les Paul* (Beverly Hills, CA: Julien's Auctions, 2012), 21.

backdrop of typical western imagery including a horse and a cactus.[107] Another visually detailed product, the "Singing Cowboys" model, manufactured by Harmony and sold by Sears from 1938 to 1943, depicted a campfire scene with a group of five cowboys, two playing guitar and singing next to a chuck wagon and a coffee pot. Marketed by Sears as a bargain guitar that was "in tune with young purses" the model sold for $3.29.[108] A similar scene is depicted on the Gene Autry sheet music for "Singing a Song of the Saddle."[109] The Harmony Company advertised another "Singing Cowboys" model between 1951 and 1963 (though some of these models were sold until the late 1960s) with the same campfire depiction of the Sears guitars.[110]

In the 1950s, some makers began moving away from wooden instruments and experimented with fiberboard and plastic cowboy guitars that were never intended as anything more than toys to be marketed towards children. Unlike previous experiments in non-wooden guitar design such as the resophonic instruments discussed in Chapter 4, it is doubtful that these materials would have produced much resonance when strummed; yet they were a consumer good that could be marketed to the children who grew up watching the many cowboy television shows of the decade.[111] The 1953 Sears Fall-Winter catalog advertised a Western "ge-tar" that a child could play either by crank or by plucking the

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[107] Evans and Middlebrook, *Cowboy Guitars*, 70-71.

[108] Ibid., 81-82.

[109] Frank Harford and Gene Autry, "Singing a Song of the Saddle" (Chicago: M.M. Cole Publishing Co., 1937), series 16.1, box 3, folder K, The Sam DeVincent Illustrated Collection of American Sheet Music, AC.

[110] Evans and Middlebrook, *Cowboy Guitars*, 86-88; The Harmony Company, *Harmony Guitars, Electrics, Amplifiers, Mandolins, Banjos, Ukuleles* (Chicago: The Harmony Company, 1957), M, MIMA.

[111] Evans and Middlebrook, *Cowboy Guitars*, 7, 35, 131.

strings stating, "Even rough'n tough cowhands tote a ge-tar as well as a shootin' iron."[112] In 1955, Wards sold plastic Gene Autry ¾ size child's guitars. The 4-string tenor guitar featured one plastic and three metal strings and was decorated on the top with raised molded ornamentation depicting Gene Autry in various cowboy poses and typical western imagery including the skull of a steer. Whereas a traditional acoustic guitar might feature an inlaid rosette surrounding the soundhole, this model instead sported a western-style belt. The guitar, aimed at teaching children how to play the instrument, came with an instruction book, neck cord, case, and a chord player device (similar to ones sold with Arthur Godfrey ukulele models) that helped to form chords at the press of a button. The model was still produced into the 1960s, dropping Autry's name and replacing it first with "Hootenanny Guitar" and then "Western Guitar" in 1963, eventually being discontinued by 1964.[113] In 1965, Marco Maccaferri offered a nylon string, plastic Western Guitar model, under the Mastro Industries label, decorated with images of singing cowboys and their accoutrements.[114]

Despite several decades of popularity, the late 1950s saw the end of the era of singing cowboys and with it the decline of the production and consumption of cowboy guitars. The Gene Autry television series ended its run in 1955, the popular radio show *Melody Ranch* left the airwaves in 1956, and Roy Rogers' television show was cancelled in 1957. Even Hollywood turned in the 1960s to grittier, more serious (though not necessarily realistic) depictions of cowboy life with films such as *The Magnificent Seven* and the series of "Spaghetti Westerns" directed by Sergio Leone. The rise of rock 'n' roll

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[112] Sears, Roebuck and Co., *Fall-Winter Shoe Catalog, 1953, Division 15* (Chicago: Sears, Roebuck and Co., 1953), 1017, NTCC.

[113] Evans and Middlebrook, *Cowboy Guitars*, 35-38.

[114] Michael Wright, "Maccaferri History, The Guitars of Mario Maccaferri," *Vintage Guitar*, March 5, 2002.

and a waning consumer interest in the products, recordings, shows, and movies meant the end of the trail for the heyday of the singing cowboy.[115] The legacy of the singing cowboys and the guitars associated with them remains a prime example of how increased low-end guitar production, mail-order and secondhand sites of consumption, and the proliferation of sheet music, recordings, radio, film and television shows all combined to put cheap guitars in the hands of thousands of budding musicians.

Conclusion

For those that sought an affordable, relatively easy to learn instrument that was adaptable to music of multiple genres, the acoustic guitar was the answer. By the 1960s, countless blues, country, and rock 'n' roll guitarists attributed their success to their humble start on an acoustic guitar. Like Carl Perkins, they had gone from aspiring young guitarists to admired celebrity performers, closing the loop between consumers and producers of the acoustic guitar. For some young, often poor, musicians, they started off by acquiring beat up, hand-me-down instruments in order to express themselves musically. Others sent money through the mail to Chicago and in time received a new guitar with their cowboy hero's signature and likeness emblazoned on the top of their instrument. Players went to pawnshops with family members, using their meager savings to purchase someone else's discarded guitar. They used a variety of methods by which to learn the skills necessary to craft their own playing styles, whether through sheet music and formal lessons or by sitting on the family front porch or bugging musicians at juke joints and theaters to teach them a trick or two. Musicians found the guitar to be a flexible instrument, a tool that they could use to combine attributes of differing playing styles learned through countless hours of listening, mimicking, and practicing.

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[115] Green, 99, 312.

The rise of mass consumption networks, primarily mail-order companies, coupled with the growth of a secondhand market, flexible instructional methods, and the emergence of a low-end segment of the guitar industry, led by Kay and Harmony, provided an easy means by which to supply the musical desires of rural America. The popular appeal of the mythic singing cowboy and other celebrity recording artists captured the hearts of a generation and through the radio and airwaves introduced them to the a variety of American musical genres. The acoustic guitar became, for many, a musical instrument by which to live out your own fantasy of becoming a popular recording artist.

From the cotton fields outside of Memphis to the farms of the Chesapeake Bay to the Bay Area of California, young, aspiring musicians got their hands on an acoustic guitar, an instrument that offered a variety of musical possibilities to its owner, regardless of their economic background or musical taste. During the post-World War II period, consumers continued to seek ways by which to amplify the sound of an acoustic guitar in performance venues and many turned to the innovative electric guitars being marketed by Fender and Gibson. At the same time, producers tinkered with new advancements in material science and engineering in order to more efficiently construct acoustic guitar models. These two factors would ultimately converge in the development of a Space Age instrument that incorporated both users and producers in the process of constructing a cutting edge acoustic guitar.

Chapter 6

THE SHAPE OF SOUND IS GETTING 'ROUND': OVATION AND THE SOCIAL CONSTRUCTION OF A SPACE AGE ACOUSTIC GUITAR

"The shape of sound is getting 'round'" announced a 1968 advertisement for Ovation guitars. For the new guitar company this slogan alluded to two important ideas: the fact that their initial models had gained a popular following in the first few years on the market and, perhaps more importantly, that Ovation had radically altered the traditional look of acoustic guitars by replacing traditional flat-wooden backs with space-age synthetic fibers molded into a round shape.[1]

From its beginnings as a division of the Kaman Corporation, a cutting-edge Cold War era helicopter manufacturer, Ovation sought to produce a cheaper, more durable guitar that sounded just as good as one made by its chief competitors. The end product became the first commercially successful guitar to use synthetic, non-wooden materials, namely fiberglass, in the construction of the guitar body. The company's founder, Charles Kaman, also paved the way for the first successful integration of electric pick-ups in an acoustic guitar model. The new acoustic-electric hybrid could be used interchangeably as an acoustic or amplified instrument offering a viable performance option for guitarists of all skill levels.

A guitar with a dual acoustic/electric identity proved to be especially relevant during an era where the American public eagerly consumed the loud amplified music of rock 'n' roll. With its durable body construction and the flexible addition of a piezo-

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[1] Ovation Instruments, "Ovation" (advertisement) *Down Beat*, June 27, 1968, 9, NMAH Library, Smithsonian Libraries.

electric pickup, the Ovation roundback represented the perfect touring companion for musicians looking for a workhorse guitar to use on stage. Thanks to rigorous design and testing, a strum of the deep semi-parabolic bowl could fill a room without the aid of electrical amplification, making it an attractive commodity for players who wanted to be heard regardless of whether or not they owned an amplifier. Engineered for sound, the Ovation guitar can simultaneously be viewed as a scientific creation and a consumer product that met the demands of the musicians of the day who sought a guitar that could be versatile enough to appeal to folk pickers, jazz improvisers, and rock shredders alike.

Yet in the end, the rise of Ovation did not result in the death of the wooden acoustic guitars. Though many artists signed on to endorse the instruments, deep cultural prejudices against non-wooden guitar designs negatively affected the market for guitars made of synthetic materials. These constraints led other manufacturers such as Martin and Gibson to improve their acoustic pick-ups to compete with Ovation models. While Ovation became (and remains today) a successful company in the American guitar market, their trademark guitars found a niche in the market, rather than completely remaking all American guitars in their own image. Ultimately, the Ovation saga emphasizes how both the consumer and the producer aided in the social construction of a distinctly American acoustic guitar.

The Guitar Movement

Amidst the social movements of the 1960s, American guitar makers faced a chaotic market of consumer interest in acoustic guitars. Beginning in the late 1950s, artists such as the Kingston Trio traveled the country playing acoustic instruments including guitars and banjos, reciting popular songs from America's past, alongside their own originals, ushering in a folk revival. Thousands of young mostly middle-class men and women aspired to learn the instruments and songs that inspired the folk performers. In order to play these ballads like "Tom Dooley," people began to buy acoustic

instruments, namely guitars, in greater numbers than ever before.[2] Into the 1960s, folk singers lent their music to the cause of civil rights. This acoustic music became a medium to transmit the messages of the burgeoning social movements.[3] Meanwhile, the growth of rock and roll fostered a new series of plugged in electric sounds. The Beatles, the Rolling Stones, the Beach Boys and many other artists carried both acoustic and electric guitars with them as they played to thousands of screaming fans.[4]

Supplying the instruments to this market meant catering to a diverse set of consumer desires. Marketing studies of the guitar market in the early 1960s predicted both short and long-term gains to be had in the guitar market, with an emphasis on younger consumers. From 1960 to 1965 sales of guitars increased 300 percent.[5] Starting in 1965, sales of guitars, and especially electric guitars began to rise dramatically with over 1.5 million guitars (both acoustic and electric) being sold in the U.S. Part of the driving force for this increase was the growing number of guitar-driven records available to the consumers from folk musicians like Bob Dylan to the surf music of Dick Dale and the Ventures.[6]

From the high-end guitars manufactured by C. F. Martin and Gibson to the low-end, cheaply produced instruments of Kay and Harmony, American consumers had an

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[2] Robert Cantwell, *When We Were Good: The Folk Revival* (Cambridge: Harvard University Press, 1996), 2.

[3] Terry H. Anderson, *The Movement and The Sixties* (New York: Oxford University Press, 1995), 94.

[4] Ibid., 245.

[5] "The Tradition of Old World Craftsmanship Meets Modern Aerospace Technology," *Connecticut Industry*, July 1967.

[6] Steve Waksman, *Instruments of Desire: The Electric Guitar and the Shaping of Musical Experience* (Cambridge: Harvard University Press, 1999), 2.

array of products from which to choose.[7] But by the end of the 1960s and early 1970s, over-saturation, rising labor costs, and, an increasing number of European- and Japanese-made guitars forced many of the American manufacturers at the bottom of the market, such as Harmony and Kay, to close up shop.[8] Despite the fact that the Japanese had gained a serious foothold in the U.S. market, they reached their peak in 1966, with many firms going under by 1970.[9] Needless to say, the 1960s and 1970s proved to be a roller coaster ride for anyone in the guitar business.

Space Age Guitars

Many questioned whether Charles Kaman was up to the challenge of starting a fresh guitar business in the 1960s. He used his ample capital, business savvy and passion for innovation to produce a guitar that would not just be another acoustic instrument, but rather one that would redefine the competition. Kaman accomplished this through the work of his engineers and craftsman along with the appeal of a popular musician who regularly entered American homes through the medium of television.[10]

Echoing the backgrounds of other musicians in this dissertation, Charlie Kaman spent his childhood surrounded by music from his talented multi-instrumentalist father. Though Kaman had the chance to become the guitarist for Tommy Dorsey's band, he turned him down in order to pursue his education in the new field of aeronautical

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[7] Walter Carter and Jon Eiche, *The History of the Ovation Guitar* (Milwaukee: Hal Leonard, 1996), 10.

[8] Michael Wright, *Guitar Stories* (Bismarck, ND: Vintage Guitar Books, 1995), 51, 57.

[9] "According to Japanese figures reported in *The Music Trades*, more than 618,000 electric guitars came into the United States...By 1968, the number was approximately 150,000 electric guitars." Wright, *Guitar Stories*, 57.

[10] Ovation Instruments, *Why Round and What's Lyrachord?,* n.d., pamphlet, Curatorial Files, DCA; Tom Wheeler, *American Guitars, An Illustrated History*, rev. ed. (New York: Harper Perennial, 1992), 318; Carter and Eiche, *History of the Ovation Guitar*, 11.

engineering.[11] After attending Catholic University, he went to work on rotor-craft, or helicopters, for United Aircraft, in East Hartford, Connecticut. Kaman distinguished himself as an innovator for his work on propeller efficiency. After a dispute with his superiors at United, he gambled and formed the Kaman Aircraft Corporation on December 1, 1945 to work on a new helicopter design.[12]

Beginning in 1949, Kaman produced its first full helicopters for the Navy. In the following decades, the Corporation worked on the development of a number of different military technologies from parachutes for sonar buoys to parts and vehicles for the Vietnam War. By the 1960s, the contract to produce helicopter blades for rival Bell and their Cobra helicopter brought a steady stream of income alongside the manufacture of Kaman H-43 Huskie helicopters for the conflict in Southeast Asia.[13]

Though he was running a multi-million dollar aerospace corporation, Kaman (along with his board of directors) felt that the company needed to diversify if it planned on staying afloat without the assistance of military contracts. [14] They initially pursued a number of consumer products including motor homes, sailboats and camping gear, but none seemed to be the right fit for the company, until Kaman took a fateful trip to the storied C. F. Martin factory in Nazareth, Pennsylvania to get his guitar repaired.[15]

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[11] Carter and Eiche, *History of the Ovation Guitar*, 12-13.

[12] Ibid., 16.

[13] Ibid.

[14] Wheeler, *American Guitars*, 318; Carter and Eiche, *History of the Ovation Guitar*, 17.

[15] Charles H. Kaman, *Kaman Corporation, An American Story* (New York: The Newcomen Society of the United States, 1983), 16; These products also foreshadow the use of fiberglass in Kaman's new consumer products as boats and motor homes, along with sporting equipment, such as skis and golf clubs, which were already being manufactured using lightweight fiberglass for its structural properties. M.W. Gaylord, *Reinforced Plastics: Theory and Practice* (New York: Cahners Books, 1974), 6-7.

While on a tour with Fred Martin, president of the company at the time and the great-great-grandson of founder C. F. Martin & Company, Kaman deemed Martin's traditional production techniques that included the use of animal glue to be "archaic."[16] During their conversation, Kaman mentioned the accuracy and cost benefits of producing similar wooden rotor blades in his helicopter factory. He made an informal offer to buy the company but Martin rebuffed him explaining that it had always been and would remain a family business. During his second offer, Kaman assured Martin that he intended on entering the guitar market, one way or another, and planned to use his company's technological resources to dominate the industry. Again, Martin refused. Kaman also considered Harmony guitar and Ludwig drums, but decided instead to start from scratch.[17] In hindsight, Charlie Kaman viewed guitars as a seemingly logical step for his company, due to his personal interest in guitars and the company's familiarity with specialized manufacturing techniques using wood (namely in producing wooden rotor blades). Kaman felt that with the company's aerospace background, they could build a better guitar.[18]

Both in helicopters and guitars, the control of vibrations became the key to his business.

> "Well for years the whole problem in helicopters is to not make them shake. And as you're going along, you've got this rotor turning up here

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[16] John S. Rosenberg, "A Lesson in Diversification: Helicopters," *New York Times*, July 5, 1981; Kaman is also quoted as disparagingly saying that "Martin guitars were being made with hammer and chisel and stuck together with animal glue." Kaman, *Kaman Corporation*, 17.

[17] The Martin Guitar Company remains today a family-owned business. Michael Wright, "The Birth of Ovation: The evolution of the roundbacked fiberglass guitar," *Acoustic Guitar*, 1995 p. 35; Kaman, *Kaman Corporation*, 18.

[18] Carter and Eiche, *History of the Ovation Guitar*, 22; John S. Rosenberg, "A Lesson in Diversification: Helicopters," *New York Times*, July 5, 1981.

> with all kinds of harmonics coming down, aerodynamics, dynamics, excitation, that makes it shake. This guitar, to make it good, it must shake. So you do the opposite."[19]

In rotor-craft, vibrations could be detrimental to the performance of the vehicles and had to be eliminated at all costs, while the resonance of a guitar formed the basis of its sound. With its patented Lyrachord bowl, Ovation guitars focused the vibrations of the strings and amplified their resonance in a way that traditional wooden guitars could not. Controlling, manipulating, and amplifying sonic vibrations formed the basis of the development of the Ovation line of guitars.[20]

Charles Kaman wanted his instruments to produce a "clean, uninterrupted sound." The Kaman Corp. engineers initially approached the problem by determining the relationship between construction factors and sound. He and his engineers began with the premise that sound became trapped and possibly absorbed in the tight corners formed between the body and braces of traditional wooden guitar.[21] To understand how these different guitar bodies functioned, they set up a basement workshop and dismantled, reconstructed, x-rayed and tested an array of antique and modern guitars. Using scientific equipment from the Aerospace division including audio oscillators and oscillographs, the engineers amassed statistics to determine the ideal construction and response of a guitar body. By attaching the oscillators to the guitar tops, they generated tones across the spectrum (from 0 to 4,000 cycles-per-second) to measure the vibration characteristics.

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[19] *Unique Voices: 40 Years of Innovation, Ovation USA* (MM-Musik-Media-Verl, 2006).

[20] Paul Wahl, "Science Builds a Guitar with the Now Sound," *Popular Science*, March 1970, 93.

[21] Charles Kaman, quoted in Laurie A. O'Neill, "A Guitar Developed by Space-Age Ideas," *New York Times*, December 6, 1981.

They spent 18 months compiling audio signatures to form a sonic blueprint for the sound they wanted to achieve, applying the same audio tests to over 70 different prototypes.[22]

By May of 1966, they settled on a semi-parabolic body design that produced a tone that "from any given energy input was full, rich, deep, and constant from the bottom to the top of the instrument's range and even beyond the limits of human hearing." Ovation advertising literature even drew connections to the early plucked string instruments including the lute, asserting that stringed instrument makers had abandoned this body shape, not because newer forms produced a better sound, but instead because flat backs and sides were easier to produce with wood.[23] The parabolic shape is also reminiscent of other reflective forms in our world including amphitheaters and even the human ear.[24]

Once they determined that a semi-parabolic shape produced the optimum characteristics, Kaman and his team set about the task of figuring out how to manufacture one. They immediately seized on the fact that wood was not the ideal material due to the difficulty in producing a uniform density and shape. Wooden bodies also require internal bracing, an additional factor that dampens the sound inside of the guitar body. Their tests also revealed that sound reflects more completely from a smooth surface, rather than the

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[22] "The Tradition of Old World Craftsmanship Meets Modern Aerospace Technology," *Connecticut Industry*, July 1967; NASA Ames Research Center, "An Instrumental Innovation," *Spinoff*, 1978, 34; Laurie A. O'Neill, "A Guitar Developed by Space-Age Ideas," *New York Times*, December 6, 1981; Kaman, *Kaman Corporation*, 18; Ovation Instruments, *Why Round and What's Lyrachord?*, n.d., pamphlet, Curatorial Files, DCA.

[23] "The Tradition of Old World Craftsmanship Meets Modern Aerospace Technology," *Connecticut Industry*, July 1967; Ovation Instruments, *Why Round and What's Lyrachord?*, n.d., pamphlet, Curatorial Files, DCA.

[24] Wheeler, *American Guitars*, 320.

porous surface of wood.[25] The Kaman Corporation was already well equipped to tackle the material science problem presented by a semi-parabolic shape. Building missile nosecones and helicopter rotor blades had familiarized the engineers with the material properties of aerospace components, especially when placed under the stress of vibrations. They specifically drew on their experience of helicopter rotor blade design, a trajectory that mirrored their innovations in guitar construction by moving from wood to composites. The company used Sitka spruce (one of the principle woods for making the tops of acoustic guitars) for the rotor blades on the early HTK and HOK helicopter models built for the Marines and the Navy. Kaman engineers possessed the skills and equipment for advanced woodworking to manufacture wooden pieces to specification within tolerances of 0.005 of an inch.[26]

As a defense contractor, Kaman Corp. engineers also knew that wood was susceptible to damage from enemy fire. The Kaman HH-43 "Huskie" (also known as "Pedro") helicopter was used extensively in Vietnam for combat rescue missions, a job it was not originally intended to perform. By 1966, with some of the original HH-43s still in service, pilots at Bien Hoa airbase outside of Saigon, tired of having their rotors shot up during combat, hung a sign that made the best of the situation. It read: "BLADES OF WOOD FLOWN BY MEN OF STEEL." Despite its flaws, the helicopter remained in service throughout the war.[27]

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[25] Ovation Instruments, *Why Round and What's Lyrachord?*, n.d., pamphlet, Curatorial Files, DCA.

[26] Kaman, *Kaman Corporation*, 17.

[27] One particular pilot, Harold "Hal" Salem recalled how his HH-43F helicopter nearly had one of its rotor blades cut in half by enemy fire during a rescue mission on April 11, 1966. Robert F. Dorr, *Chopper: Firsthand Accounts of Helicopter Warfare, World War II to Iraq* (New York: Berkley Books, 2005), 128, 142, 144-145.

To combat this problem, Kaman looked for new ways to bolster the strength of its rotor blades. By the early 1960s, metal rotor blades, which increased the available lift of helicopters and added durability, came to replace wooden blades on some helicopters.[28] However, Kaman took a different approach and experimented with composite materials and in 1961, the company built and flew the first all-composite main rotor blade.[29] By September 1978, Kaman was supplying the U.S. Army with fiberglass rotor blades that could withstand fire from a 23-millimeter cannon for the Cobra helicopters in its fleet.[30] The company took blade production to the next level when it supplied 26,000 pound, 100 foot-long blades for a Department of Energy experimental wind turbine in 1981.[31]

Consequently, Ovation engineers in the 1960s did not have to search far to find an array of materials for its new guitars. The engineers formed the body "from plies of glass fabric pre-impregnated with epoxy resin and laminated to a thickness of approximately 0.036 inch."[32] However, a 1995 report stated that the Ovation guitars originally used a wet layup of fiberglass cloth combined with a polyester resin.[33] Regardless of the resin used (polyester or epoxy), this fiberglass composite enabled the Kaman engineers to produce a semi-parabolic shape in a way that they could not accomplish with matched pieces of wood. By using pre-impregnated materials (also known as "prepregs"), the

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[28] Stanley S. McGowen, *Helicopters: An Illustrated History of their Impact* (Santa Barbara, CA: ABC-CLIO, 2005), 91.

[29] "Kaman Corporate History," Kaman, accessed October 19, 2011, http://www.kaman.com/history/history_p.html (site discontinued).

[30] McGowen, 159.

[31] John S. Rosenberg, "A Lesson in Diversification: Helicopters," *New York Times*, July 5, 1981.

[32] Charles H. Kaman. Guitar construction. US Patent 3,474,697, filed January 27, 1967, and issued on October 28, 1969.

[33] Roger Renstrom, "Composites Perform in Music," *Plastics News*, April 24, 1995, 1.

workers could mass-produce the semi-parabolic "bowls" to uniform specifications, something impossible with wooden guitar manufacture. [34] Ovation even claimed that the interwoven layers of glass filament and bonding resin could be "tuned" at the molecular level to increase the instrument's resonant capabilities. [35]

When comparing traditional wooden materials to reinforced plastics, such as fiberglass, the latter provides several distinct advantages that fit what Kaman sought for its guitars. Fiberglass can be molded into complex shapes for both civilian and military applications including everything from airport seats to missile nosecones.[36] Aerospace and defense research during the post-World War II era helped to fuel the advancement and rapid dissemination of reinforced plastics in numerous aspects of American society.[37] The fibrous reinforcements supply the structural strength to the composite, while the resin encases the fibers in order to separate them, enables the transfer of stress between fibers, and adds corrosion resistance to entire material.[38]

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[34] Herman Reffe, "Prepregs," in *Handbook of Fiberglass and Advanced Plastics Composites*, ed. George Lubin (Huntington, NY: R. E. Krieger Publishing Company, 1975), 421, 423-424.

[35] "Ovation History and Roots of Guitar Design," Ovation Instruments, accessed October 19, 2011, http://www.ovationguitars.com/whyovation/the_history (site discontinued).

[36] By the mid-1970s, there were estimated to be at least 30,000 possible uses for glass-reinforced plastics. The industry had experienced a 3000 percent growth from 1953 to 1973. Gaylord, 12, 19, 23, 26; For more on the advantages of polyester and epoxy prepregs see Herman Reffe, "Prepregs," 425, 427.

[37] Gaylord, 6; Jeffrey L. Meikle, *American Plastic: A Cultural History* (New Brunswick: Rutgers University Press, 1995), 158, 194-196; For a broader discussion of the post-war impact of military scientific and technological development and its impact on consumer products, see Stuart W. Leslie, *The Cold War and American Science: The Military-Industrial-Academic Complex at MIT and Stanford* (New York: Columbia University Press, 1993); and Carol W. Pursell, *Technology in Postwar America: A History* (New York: Columbia University Press, 2007).

[38] Gaylord, 38.

The precision molded fiberglass was strong enough to not require extensive internal bracing, yet could be made thin enough to achieve optimal resonance. The body would no longer be subject to the traditional stresses of wooden guitars that cracked, split, and warped depending on environmental factors such as heat and temperature as well as human factors such as belt buckles and careless musicians, not to mention the wear and tear of performing on the road. The reflective and resonant surface of new "Lyrachord" bowls could be vacuum-formed in a uniform density and thickness, a feat that was nearly impossible with wooden guitars.[39]

The engineers settled on Sitka spruce for the tops, a nod to traditional guitar manufacture. To join the top and bowl of the guitar Ovation used aircraft adhesives, a move that marked a pronounced shift from animal glues. The adhesives were strong enough that the wood fibers would give way before the bond. Similarly, a polyester finish was applied that was previously used to prevent moisture damage and corrosion on aerodynamic surfaces. Ironically in a story that harkens back to industry tales about other non-native luthiers, a Norwegian immigrant woodcarver named John Ringso was responsible for the construction of most of the prototype models.[40]

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[39] Ovation Instruments, *Why Round and What's Lyrachord?*, n.d., pamphlet, Curatorial Files, DCA; Paul Wahl, "Science Builds a Guitar with the Now Sound," *Popular Science*, March 1970, 93; "The Tradition of Old World Craftsmanship Meets Modern Aerospace Technology," *Connecticut Industry*, July 1967.

[40] "The Tradition of Old World Craftsmanship Meets Modern Aerospace Technology," *Connecticut Industry*, July 1967; Carter and Eiche, *History of the Ovation Guitar*, 23-24; As discussed in Chapter 1 of this dissertation, C. F. Martin learned the cabinet-making trade before becoming a master luthier and immigrating to the United States to make and sell guitars. Orville Gibson, the son of immigrants, honed his skills at woodcarving and carpentry before starting his own stringed musical instrument business.

The humidity controlled and vacuum-cleaned atmosphere of the shop was also the site of helicopter rotor blade manufacture for Kaman.[41] The engineers developed specialized jigs and machinery for the guitars that cut the number of man-hours needed to produce a guitar by four-fifths as compared to similar instruments manufactured by their competitors.[42] As a testament to the connection between rotor blades and guitars, the company displayed a side-by-side cross-section comparison of a guitar and a rotor blade as part of the Ovation factory tour.[43]

In September 1966, the company sold some of its first guitars to a group of local folksingers named the Balladeers. At a performance for a local agricultural fair, the group received a standing ovation from the crowd. The team decided to name the line "Ovation" and market four models beginning in November 1966, partly bearing the name of the group that first brought them notoriety: a Standard Balladeer, a Deluxe Balladeer, a Classic, and, in honor of its first endorser, a Josh White model.[44] The company outgrew its original factory and relocated to New Hartford in February of 1967. In a short time, the array of guitars quickly expanded to include 12-string models with Lyrachord bowls in multiple colors (red, green, blue or black). They also began designing electric guitars

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[41] Wheeler, *American Guitars*, 320; "The Tradition of Old World Craftsmanship Meets Modern Aerospace Technology," *Connecticut Industry*, July 1967.

[42] NASA Ames Research Center, "An Instrumental Innovation," *Spinoff*, 1978, 35.

[43] Valerie Cruice, "The View From: New Hartford; From the Ratcheting of Helicopters to a Guitar's Hum," *New York Times*, December 8, 1996.

[44] Wheeler, *American Guitars*, 320; "The Tradition of Old World Craftsmanship Meets Modern Aerospace Technology," *Connecticut Industry*, July 1967; "Helicopter Pioneer to Make Guitars; Kaman Aircraft Corp. unveils radical Ovation line of acoustical guitars." *The Music Trades,* December 1966. Initially, one of the first musicians to help him was jazz guitarist Charlie Byrd. Though Byrd played mainly nylon-string classical guitars, he was impressed. He directed Kaman to next consult with blues and folk musician Josh White who, according to Kaman, "immediately fell in love with it." Charles Kaman, quoted in Carter and Eiche, *History of the Ovation Guitar*, 41.

and amplifiers.[45] Ovation beat the industry standard by bringing an instrument line from the drawing board to production within two years.[46]

After a decade of making guitars that mixed both traditional and cutting edge construction techniques, including the introduction of acoustic-electric guitars, Ovation took things one-step further when they began experimenting with a new design in 1976 called the "Adamas" [Figure 21]. This line incorporated two distinct changes in the design of the body. First, and foremost, Kaman utilized composite wood materials from its aerospace division to construct an ultra-thin top or soundboard that had almost uniform acoustic properties. In a 1983 speech to the annual meeting of the Newcomen Society of North America, Charlie Kaman proudly stated, "We use carbon graphite, derived from palm tree fibres, to make helicopter blades while using the same carbon graphite to make 'rock' guitars."[47] The layered top of an Adamas model, made with a composite of carbon fiber and birch veneer, is 0.050 of an inch thick, one-third of the size of a typical spruce top.[48] Secondly, the designers split and moved the soundhole from its traditional placement in the middle of the body just above the bridge to two smaller holes, one placed at each of the upper bouts. Like previous Ovation models, the Adamas was rigorously tested in order to produce the best sound.[49]

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[45] "The Tradition of Old World Craftsmanship Meets Modern Aerospace Technology," *Connecticut Industry*, July 1967.

[46] Ibid.

[47] Kaman, *Kaman Corporation*, 7.

[48] Renstrom, "Composites Perform in Music," 1.

[49] Ovation Instruments Inc., *Adamas* (Bloomfield, CT: Ovation Instruments Inc., A Kaman Company, n.d.), Curatorial Files, DCA.

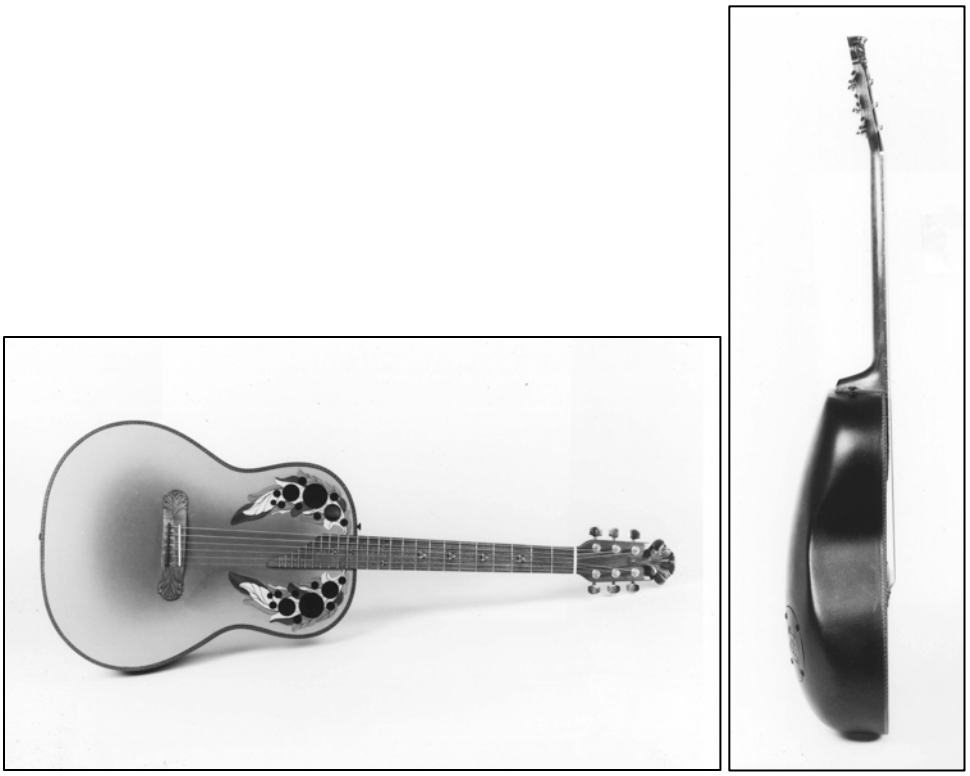

Figure 21 Guitar by Ovation Instruments, Inc., Bloomfield, CT, ca. 1978-1979, Adamas model #1187-8 (Front and Side). Smithsonian, National Museum of American History.

Celebrity Endorsement

As Gibson and Martin had demonstrated decades earlier, one proven method of selling guitars was through celebrity endorsement. From Nick Lucas to Roy Smeck, Johnny Smith to Les Paul, guitars and performers became synonymous. Kaman did not just want an instrument that performed well scientifically. He insisted that musicians also vouch for the quality of the guitar's sound.[50] In a matter of only a few years, Kaman and his guitars managed to attract a diverse lineup of celebrity players performing in numerous musical genres, showcasing the versatility of these new instruments.

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[50] "The Tradition of Old World Craftsmanship Meets Modern Aerospace Technology," *Connecticut Industry*, July 1967.

The biggest coup for Ovation in its early days was to attract the endorsement of rising country star Glen Campbell. Originally from Arkansas, Campbell had already made a name for himself by the mid-1960s as a Los Angeles area studio guitarist.[51] Calling himself "a country boy who sings," Campbell's strength (for both his own musical career and for the benefit of Ovation) was his ability to draw fans from a variety of genres including folk, country and rock and roll.[52] When Kaman showed up at one of his performances in New Jersey with a guitar for Campbell to try, it only took a half-hour of playing to convince him to join. Kaman immediately offered to make him his own signature model. This proved to be a shrewd business decision as Campbell had already climbed the billboard charts with hit songs including "Gentle on My Mind" and "Wichita Lineman." His success led to a CBS offer of a television variety show, "The Glen Campbell Goodtime Hour," which aired for three years starting in 1969. With Campbell performing on an Ovation guitar, his television exposure helped to legitimize the new company's products.[53] Ovation recognized Campbell for his help in promoting the brand, even going so far as to take out a full-page advertisement in *Billboard* magazine in 1970 to congratulate him on his success.[54] Following Campbell, an array of guitarists from

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[51] Carter and Eiche, *History of the Ovation Guitar*, 43-44.

[52] Michael Pierce, "Campbell Up!" *Guitar Player*, April 1969, 16-17.

[53] Campbell had appeared on the Joey Bishop show and the Smothers Brothers prior to gaining his own television show. Carter and Eiche, *History of the Ovation Guitar*, 43-45; Wheeler, *American Guitars*, 321.

[54] The advertisement also featured Campbell holding a 12-string Ovation guitar. Ovation Instruments, "Our Best to the Very Best" (advertisement), *Billboard*, October 10, 1970, C-19, series 16.1, Ephemera box 50, folder C, The Sam DeVincent Collection of Illustrated American Sheet Music, AC.

"Bad, Bad, Leroy Brown" singer Jim Croce to The Bee Gees signed on to endorse the new line.[55]

Ovation touted the working relationship between the people who used their guitars and the workers who built them as one of the contributing factors to the company's rapid growth. Josh White often stopped by the factory to work with Ovation designers. The makers incorporated his personal preferences for a shorter neck and smaller fingerboard into his signature model.[56] Musicians from Charlie Byrd to Bon Jovi offered input on product development, some of which was incorporated into consumer models.[57]

Campbell brought his suggestions such as a guitar with shallower bowl, to Kaman and he listened. This process was typical of the early relationship between musicians, such as Campbell, and Kaman.[58] Campbell's time as a studio musician made him a competent judge of the capabilities of different instruments. Campbell was not the

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[55] One Ovation Instruments advertisement depicts two images of Jim Croce: one with him smiling and holding a cigar while the other showcases him playing an Ovation 12-string guitar. In a somewhat eerie coincidence, this was published 7 days before Croce tragically perished in a plane crash in Louisiana. Ovation Instruments, "Jim Croce Plays the Devil out of an Ovation" (advertisement) *Rolling Stone*, September 13, 1973, 70, NMAH Library, Smithsonian Libraries; Rose-Morris Sponsored Instruments (UK) "Ovation – the world's best. And played by the world's best" (advertisement), accessed October 19, 2011, http://www.ovationtribute.com/Ovation_Ads.html#1970_to_1979.

[56] Ovation not only supplied White with a signature guitar model, but they also helped with one of his health problems. The guitarist's nails were quite brittle, so the subassembly foreman, Al Glemboski, molded a set of fingernails made of fiberglass that were applied with industrial glue (the forerunner to Super Glue). White received a new set each month. Carter and Eiche, *History of the Ovation Guitar*, 41-42.

[57] Valerie Cruice, "The View From: New Hartford; From the Ratcheting of Helicopters to a Guitar's Hum," *New York Times*, December 8, 1996; Charlie Byrd, interview by Tom Cole, Annapolis, MD, June 26, 1998, audio recording, Jazz Oral History Collection, AC.

[58] Carter and Eiche, *History of the Ovation Guitar*, 45-46; NASA Ames Research Center, "An Instrumental Innovation," *Spinoff*, 1978, 34.

exception, but rather the rule. According to Charlie Kaman, "As the years went by, we expanded and I got to know quite a few of the players around and listened to what they had to say."[59]

Introduction of Piezo-Electric Pick-ups/Bridging the Acoustic-Electric Divide

The second major commercial innovation was the introduction of piezo-electric pick-ups or transducers to Ovation guitars. Trying to amplify the sound of an acoustic guitar was not a new quest for musicians. Since the dawn of the Jazz Age, guitarists found themselves in a battle against brass and woodwind instruments to just be heard in a larger ensemble. But one of the trickiest problems was accurately reproducing the sound of an acoustic guitar through an amplifier. Magnetic pick-ups on acoustic guitars often encountered various forms of feedback. Tacked on to the top of the guitar, these add-ons looked unwieldy and had the potential of getting in the musician's way as he or she strummed. Ovation's solution was originally derived to compete with another manufacturer, Baldwin, who primarily sold nylon-string guitars. Ultimately, Ovation bridged the acoustic/electric divide by incorporating the amplification system (pick-up plus pre-amp) directly into the guitar with the goal of producing an instrument that would sound the same, whether you played it acoustically in a small space or if you plugged it into an amplifier for a large audience.

For his television show, Glen Campbell always played in front of a microphone, though he really wanted to be able to walk around the stage. One evening in 1970, Campbell appeared with his friend and fellow guitarist Jerry Reed on *The Tonight Show*. Reed (and possibly Campbell as well) played a nylon-string acoustic-electric classical guitar made by the Baldwin Company. While many manufacturers offered acoustic guitars with magnetic pick-ups (almost identical to the ones used in electric guitars),

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[59] Charlie Kaman, quoted in Carter and Eiche, *History of the Ovation Guitar*, 41.

Baldwin offered a new pick-up that used piezo-electric crystals, an innovation that offered a closer approximation of the sound of an acoustic guitar. As Ovation did not make any acoustic guitars with amplification at the time, Kaman and his staff saw not only the potential for lost sales from the possible departure of Campbell, but they also recognized that Baldwin was onto something with their new type of pick-ups.[60]

For years, manufacturers such as Rowe offered various types of attachable magnetic pickups, similar to those used in electric guitars, which they claimed could "Set Your Guitar Free" from being tethered to a microphone for amplification. Most attached directly to the soundhole of the guitar.[61] Piezo-electric crystal transducers, like the one in Reed's Baldwin guitar, were a relatively new phenomenon. Developed in California, two pickups, the FRAP (flat response acoustic pick-up) and Barcus-Berry units paved the way for this new innovation. The transducers took the vibrations of the surface of the guitar and converted them into a signal that more accurately represented the acoustic timbre of the instrument.[62] Baldwin marketed their Contemporary Classic Guitar model on the premise that it was "an amplified classic guitar" that, using the Baldwin Prismatone Pickup would not alter the "rich, natural sound" of the instrument, but instead make the sound "bigger." Identifying its model as the first Contemporary Classic Guitar, Baldwin claimed "you can whisper in the ears of the top row balcony. Or play crescendos against

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[60] Baldwin, an English company, might have been better known for pianos and organs than guitars, but they had recently acquired the Gretsch Guitar Company, which placed them in direct competition with Ovation. Some of the Ovation employees recall watching Glen Campbell playing a Baldwin guitar that night, though Campbell himself could not remember having ever owned one. Regardless of whether or not he had picked up one, even if it was Reed's, this scared the Ovation brass and raised the potential of losing their top celebrity endorsement. Carter and Eiche, *History of the Ovation Guitar*, 48.

[61] Rowe Industries, Inc., "Set Your Guitar Free With Rowe DeArmond" (advertisement), *Down Beat*, January 8, 1970, 24, NMAH Library, Smithsonian Libraries.

[62] Ken Achard, *The History and Development of the American Guitar* (Westport, Conn: The Bold Strummer, Ltd., 1990), 168.

full accompaniment." By emphasizing a warm tone produced by scientific work, Baldwin attempted to appease musicians who wanted the traditional organic qualities of a classical guitar sound amplified by modern technology.[63]

Baldwin had already gained the celebrity endorsement of players in a variety of genres from Jerry Reed playing country to former Ovation player Charlie Byrd in the jazz world. Baldwin's new standard model entered the market to compete with a few other makers including Guild and Martin. However, Ovation approached the piezo pickup in a different manner, by installing it in the bridge, rather than on the top of the guitar. The nylon-string guitars of Baldwin lacked effective pre-amps (according to Ovation engineers) and limited the number of musicians who would be interested in a non-steel string guitar.[64]

Before the episode on the *Tonight Show*, Ovation designers had been toying with the idea of adding a pick-up to their line of acoustic guitars. Ovation bought a Baldwin pick-up and immediately installed it in one of Glen Campbell's nylon-string models.[65] Kaman and his team then set out to try and mount a challenge to their competitor. During their design process, as a stopgap measure they purchased over 100 Baldwin and Barcus-Berry pick-ups with the intention of putting them in Ovation guitars, but they produced decidedly mixed results as Baldwin manufactured their pickups for use in classical nylon-string guitars. The higher action (string height) and material properties of steel strings made it difficult to simply insert the Baldwin pick-ups into the Ovation guitars. Jim

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[63] Baldwin Piano & Organ Company, "Baldwin, The Sound Investment" (advertisement) *Down Beat*, August 22, 1968, 37, NMAH Library, Smithsonian Libraries.

[64] Achard, 168; Carter and Eiche, *History of the Ovation Guitar*, 49.

[65] Carter and Eiche, *History of the Ovation Guitar*, 49.

Rickard, together with several members of the Aerospace Division, decided to start from scratch and design an Ovation guitar with its own dedicated pick-up.[66]

Some major differences existed between the Baldwin and Ovation pick-ups Baldwin used a channel of aluminum to encase the piezo crystals. Therefore the sound reflected not only the vibrations of the crystals, but also the movement of the aluminum. Ovation filled the channel of crystals with silicon rubber and placed it under the saddle on the bridge of the instrument. While Baldwin's pickup worked well for nylon-string classical guitars, the new Ovation pickup was more amenable to the majority of Ovation's steel string versions.

The Ovation engineers created a device that amplified the best of the vibrations of the instrument while limiting distortion to a minimum. Because it was located in the bridge, the pickup captured the vibrations of the top of the guitar *and* the strings. At half volume, the pickup only translated the sound of the top, while at full volume it carried the sound of the strings, allowing for a 12 decibel difference of volume, a margin that led to less feedback problems for performers. This combination offered an attractive commodity for professional musicians. Add to that the durability of the Lyrachord bowl and Ovation had found a way to not only meet the desires of musicians, but also save on production costs by relying on their knowledge and experience in the aerospace industry.[67]

Initially, 15 percent of the guitars produced by Ovation contained electronics, but demand for the instruments by consumers as well as rival companies adding acoustic-electric models to their lines led Ovation to manufacture 90 percent of their models as acoustic-electrics within ten years of the introduction of the piezo pickup.[68] Since it was

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[66] Carter and Eiche, *History of the Ovation Guitar*, 51.

[67] Ibid., 51-52.

[68] Ibid., 52.

one of the first steel string guitars to offer acoustic-electric capabilities and almost the only one that was mass-produced, Ovation became a popular option in the 1970s for players such as Steve Lukather, a prominent Los Angeles session musician and guitarist of the rock band Toto, who wanted to amplify an acoustic guitar for louder and larger performance venues.[69] Yet despite the successful number of celebrity endorsements, Ovation met with some consumer resistance to its innovative guitar designs.

Reception

While it is difficult to gauge how every consumer felt about the introduction of fiberglass/wood hybrid guitars with pickups, there were signs from the beginning that Ovation faced a skeptical consumer market of guitarists who played primarily wooden instruments and viewed Kaman as a corporate big wig, not a serious luthier.[70] The guitars endured criticism for their unconventional appearance. The first Ovation models featured polished bowls that sported a smooth black finish. While it may have been pleasing to the eye, it was not always practical. Players accustomed to supporting a traditional guitar body shape on his or her knee found that roundback Ovations slipped right off causing an obvious problem for the performer. After attempting a number of other solutions including rubber pads and ground walnut shells mixed into the finish (something that resulted in tearing three pairs of Charlie Byrd's pants during testing),

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[69] Along with the piezo-electric crystals in the bridge, a high impedance preamp was also added to electronically simulate the sound that the guitar produces acoustically. Teja Gerken et al., *Acoustic Guitar: An Historical Look at the Composition, Construction, and Evolution of One of the World's Most Beloved Instruments* (Milwaukee: Hal Leonard Corporation, 2003), 108, 197; according to Steve Lukather, "It's like a great acoustic guitar for guys that play electric guitar." Lukather quoted in *Unique Voices: 40 Years of Innovation, Ovation USA* (MM-Musik-Media-Verl, 2006).

[70] Wheeler, *American Guitars*, 322.

engineers settled on a rougher spackled finish on the bowl that created enough friction against a player's knee to hold it in place.[71]

Even the Ovation advertising sought to dispel fears of this new Space Age guitar. One of Glen Campbell's first ads features his own folksy endorsement of the instrument's capabilities. "Once I wouldn't have believed the sound of my Ovation Roundbacks was possible. It's a full, honest sound that projects faster and farther. The rounded back does make a difference you can hear. And to me it sounds mighty good. I'm glad Ovation was bold enough to question the traditional methods and find a better way to make guitars."[72]

Despite its aerospace origins, Ovation sought to remind its consumers that these guitars could be down-to-earth objects as well. While this new style may have looked different than a traditional wood body guitar, it still retained the same characteristic sound of its predecessors, though in a new, technologically sophisticated package.

Ovation's but a babe in the wood.

Seven years and lookin' good.

Walnut, spruce, and Spanish pine –

Bronze, chrome, and nickel shine.

Fiberglass back and hand-rubbed wood

the sound is true and the seed is good.

Already now the people know

Ovation sound's begun to grow.

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[71] Charlie Byrd, interview by Tom Cole, Annapolis, MD, June 26, 1998, audio recording, Jazz Oral History Collection, AC; Carter and Eiche, *History of the Ovation Guitar*, 45.

[72] Ovation Instruments, "Glen Campbell plays Ovation Roundbacks exclusively" (advertisement), *Down Beat*, January 22, 1970, 22, NMAH Library, Smithsonian Libraries.

This advertisement, which references the mix of traditional and Space Age materials, depicts a hippie girl sitting crossed-legged on the ground playing her Ovation guitar. The tresses of her hair turn into the swirl of a psychedelic mushroom and she sits among flowers and ferns. The poem and the illustration both help to connect the earthy nature of the guitar to the consumers of the counterculture [Figure 22].[73] The most ironic thing about this advertisement is that it encouraged members of the counterculture to buy a guitar that was made by the same people who supplied parts and helicopters to the military in Vietnam.

A similar advertisement featuring former Cream and Derek and the Dominoes member Eric Clapton also highlighted the groovy appeal of Ovation. The text of the ad reads "Just look at the expression on Eric's face and you will know how he feels about his new Ovation. It's got the NEW sound; the ROUND sound. It's in with the people who…dig the best."[74] Clapton, known for his range of skills with a guitar, from screaming electric solos to finger-picked acoustic blues licks, offered an excellent vehicle for Ovation to appeal to both sides of the acoustic-electric divide: one man with multiple talents who can demonstrate his array of skills all on one instrument.

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[73] Ovation Instruments, "Ovation Naturally" (advertisement), *Rolling Stone*, November 22, 1973, 80, NMAH Library, Smithsonian Libraries.

[74] Ovation Instruments, "Clapton Plays Ovation" (advertisement), *Down Beat* June 25, 1970, 22, NMAH Library, Smithsonian Libraries.

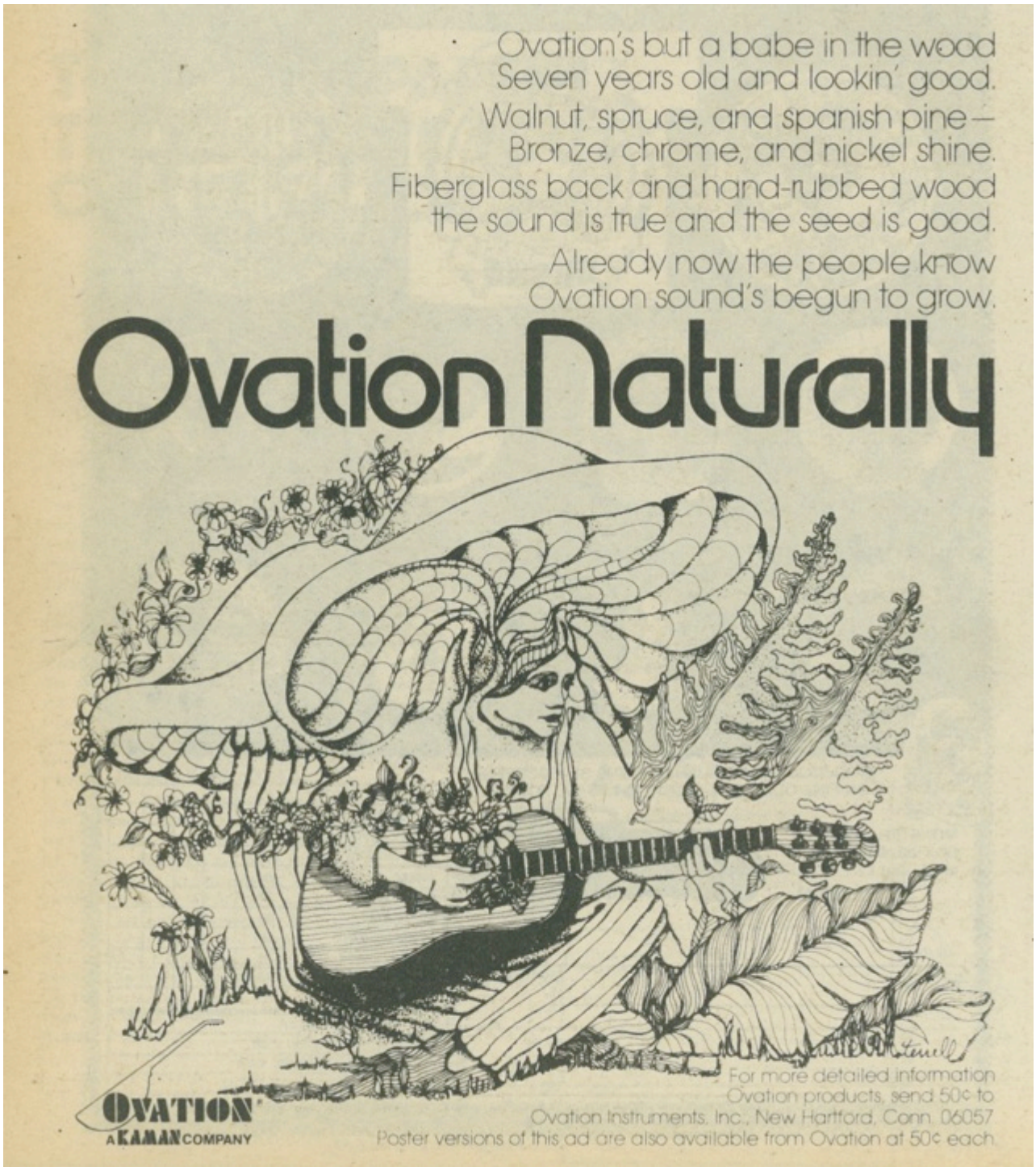

Figure 22 Ovation Instruments, "Ovation Naturally" (advertisement), *Rolling Stone*, November 22, 1973, 80. Courtesy of the Smithsonian Libraries, Washington, D.C.

By 1978, Ovation had gained the attention of the nation by becoming the largest and fasting growing acoustic guitar company in the country. The Ovation Instruments division of Kaman Corporation comprised 21 percent of the total sales for the entire corporation in 1977. That was a marked increase from 1972 when they only accounted for 14 percent of the share of Kaman's sales.[75] By 1981, Ovations Instruments Inc. became the top American guitar manufacturer, accounting for approximately 60 percent of the American acoustic guitar market. While other competitors experienced a downturn in orders during 1980, Ovation enjoyed a rising demand from consumers both in America and abroad, due to record sales in exports.[76] By 1983, Charlie Kaman even claimed that Ovation accounted for 75 percent of the acoustic guitar market.[77] After Charlie's son William "Bill" Kaman II took over the daily operations of Kaman Music in 1985, a number of other musical instrument makers and distributors became part of the corporation including Hamer and Takamine, a Japanese line of guitars.[78] By the mid-1990s, Kaman Music Corporation, driven by its distribution subsidiaries, became the sixth-largest American company selling musical products, though it only accounted for around 30 percent of the acoustic guitars built domestically.[79]

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[75] "Kaman: How to bring aerospace knowhow to the guitar industry," *Business Week* June 26, 1978, 74.

[76] Laurie A. O'Neill, "A Guitar Developed by Space-Age Ideas," *New York Times*, December 6, 1981; John S. Rosenberg, "A Lesson in Diversification: Helicopters," *New York Times*, July 5, 1981.

[77] Kaman, *Kaman Corporation*, 18.

[78] According to the company, by 1990, Kaman Music had manufactured approximately 600,000 guitars, 400,000 of which were Ovation-brand roundbacks produced domestically. Additionally, the company established an Asian manufacturing division, producing almost 300,000 roundbacks in their Korean and Japanese factories. Wheeler, *American Guitars*, 318.

[79] Valerie Cruice, "The View From: New Hartford; From the Ratcheting of Helicopters to a Guitar's Hum," *New York Times*, December 8, 1996.

Ovation knew that many consumers were skeptical of acoustic guitars made of non-traditional synthetic materials. Jim Rickard, the managing engineer of the original core group of Ovation workers, acknowledged that initially many of them thought the concept was a joke. Musicians often talk about the "warmth" of tone that an instrument produces. Andy Ellis, an associate editor of Guitar Player magazine, used that metaphor in 1995 to describe the divide among musicians over synthetic guitar materials. "Traditionalists can be a tough sell. The sounds from a resonant wooden instrument and "a synthetic guitar" are as different as the light from a warm glowing candle and a harsh fluorescent tube."[80]

Though Charlie Kaman did follow through with his promise to Fred Martin, Ovation guitars did not render all traditionally made wooden guitars obsolete. In all music matters, sound is in the ear of the beholder. Regardless of subjective criticism, the fact remains that Ovation turned a profit in short order and proved that they could not only compete with the established firms like Martin and Gibson, they could also succeed.[81] Additionally, Ovation inspired a number of manufacturers including RainSong, Parker, and Modulus Graphite, Inc. to incorporate composites such as carbon graphite in their acoustic guitars.[82] Similar to Ovation's advertising, these manufactures

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[80] Andy Ellis, quoted in Renstrom, "Composites Perform in Music," 1.

[81] Wheeler, *American Guitars*, 318, 320; The Fender Musical Instrument Corporation, known for its popular electric guitars, purchased Kaman Music Corporation for $117 million in 2007. "Fender Musical Instruments Corp. to Acquire Kaman Music Corp.," *Business Wire,* October 29, 2007.

[82] Comprised of carbon fiber graphite, RainSong guitars layer the carbon fiber in a process they call "projection tuned layering" that makes use of the composite material's strength and requires no internal bracing. Teja Gerken et al., *Acoustic Guitar*, 199; Kuau Technology, Ltd. was founded by physicist John Decker in Wailuku, Hawaii. Using materials such as carbon graphite and Kevlar, Decker worked with master luthier Lorenzo Pimentel and composite sailboard fabricator George Clayton to develop the RainSong guitars. Renstrom, "Composites Perform in Music," 1.

tout how using synthetic materials such as carbon graphite makes the instruments cheaper, lighter, and more durable, able to take the wear and tear of shows on the road, long flights packed in cramped cargo holds and years of use and abuse by musicians.[83]

Conclusion

Following in the line of American acoustic guitar innovations that began with C. F. Martin, Kaman wanted to build a better acoustic guitar. Being an engineer *and* a guitarist, he approached the problem from the perspectives of science and music, a combination that became a big part of his success. Charlie Kaman possessed a great deal of business savvy as well as ample capital to venture into the uncertain, but potentially promising seas of the 1960s guitar market. His early career as a roto-craft innovator proved that he was willing to take risks (albeit calculated ones) to achieve success in his own way. In many ways, defense contracts and Cold War science and engineering helped to fuel this new revolution in acoustic guitar design. Even NASA cited Ovation as a successful "spinoff" that turned technology originally developed for the aerospace industry into an unanticipated, though fortuitous, secondary application with economic benefits for both the producer and the consumer.[84]

Ovation also benefited from its versatility, exhibited both in its instruments and its choice of celebrity endorsements. The steel-string Ovation roundback, and later its acoustic-electric counterpart, appealed to musicians from across a number of genres, as did its first main spokesman, Glen Campbell. From there, Ovation guitars became the trusted workhorse instruments for people playing in jazz (Al DiMeola, Charlie Byrd), blues (Josh White), folk (Janis Ian), country (Tom T. Hall, Shania Twain), and rock 'n'

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[83] Ron Forbes-Roberts, "Carbon-Fiber Guitars, An Examination of the guitars and construction methods of carbon-fiber guitar builders," *Acoustic Guitar*, July 2008.

[84] NASA Ames Research Center, "An Instrumental Innovation," *Spinoff*, 1978, 35.

roll (Toto, Bon Jovi).[85] Ovation met the demands of musicians who needed guitars that could sound like an acoustic, but yet be amplified for an arena audience.

For all its successes, Ovation could not convince all musicians that non-traditional materials and body shapes were the wave of the future for guitars. While the innovative use of fiberglass transformed acoustic guitar construction, not every player was willing to trade in his or her wooden flat-backed guitar for a roundback Ovation fiberglass/wood hybrid or composite instrument. This speaks to the larger social and cultural factors that have shaped American acoustic guitar innovation over the last century.[86] Nevertheless, Kaman and his engineers used their experience with rotor blades and composite materials to establish a new commercially viable product that met the performance demands of a variety of musicians who wanted resonant instruments that could withstand the wear and tear of shows on the road. From its background forged in aerospace engineering to its adaptability, the Ovation guitar and its place in the American guitar market was ultimately the result of the interplay between engineers, musicians, businessmen, and consumers.

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[85] Valerie Cruice, "The View From: New Hartford; From the Ratcheting of Helicopters to a Guitar's Hum," *New York Times*, December 8, 1996; Cover image of Tom T. Hall, *Friends,* January 1977, series 16.10, Ephemera box 65, folder V, The Sam DeVincent Collection of Illustrated American Sheet Music, AC; Ovation Instruments, "The word's getting around. "Ovation" (advertisement), *Down Beat* April 4, 1968, 5, NMAH Library, Smithsonian Libraries.

[86] According to *The Music Trades*, in 1995, only 8 percent of the 985,000 guitars produced around the world were produced with composite materials. Roger Renstrom, "Composites Perform in Music," 1.

CONCLUSION

> "Kay is proud to have a part in this twentieth century flowering of music enjoyment, as major producers of the one instrument particularly suited to bring music-making within the realm of everyone ...the one easily portable, complete solo instrument ... the GUITAR."[1]

Though it comes from the advertising of one specific manufacturer, the assertion by the Kay Musical Instrument Company that the guitar was *the* democratizing instrument of the twentieth century lies at the heart of this dissertation. As the preceding chapters have shown, the acoustic guitar became the instrument of the American masses thanks to its affordability, portability, and versatility. A girl from Chicago could "play Hawaiian" with a grass skirt, a steel, and a guitar on her lap. A young boy could live out his Wild West fantasies in the backyard with his Melody Ranch guitar slung across his back. Whether it was fingerpicked, strummed, or used in conjunction with a slide, the acoustic guitar could be adapted to perform in a variety of musical styles. An artist could play chords and sing simultaneously. Alternately, a player's fingers might fly up and down the fingerboard as he or she created a melodic instrumental solo. All of these possibilities and more existed in the form of a small object that could be easily acquired, transported, and mastered by countless Americans regardless of ethnicity, race, class, or gender.

The users of acoustic guitars exercised a fair amount of agency in how guitars were used and played during the course of this dissertation. Whether it was a louder guitar, a metal model etched with island scenery, or one developed by the same designers

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[1] Distributed by a prominent maker of affordable guitars, the advertising pamphlet outlined the manufacturing process of a Kay acoustic guitar. Kay Musical Instrument Co., *The Story of a Guitar* (Elk Grove Village, IL: Kay Musical Instrument Co., 1964), 2, MIMA.

that engineered aerospace vehicles, the instrument could be adapted to fit the desires of American consumers and musicians. Long before nut adjusters and steels appeared in catalogs, Joseph Kekuku raised the strings of his guitar and fashioned his own steel in a workshop so that he could play his instrument in what would later be termed the Hawaiian style. George Beauchamp, like many other vaudeville and jazz players, needed a louder guitar. Fortunately, he found John Dopyera who took his ideas into consideration as he designed the resophonic guitar. Prior to the commodification of glass and steel slides, Son House cut his fingers on a broken bottle so that he could master the technique of slide guitar playing. Country, folk, and rock 'n' roll musicians embraced the dreadnought for its booming sound, long after it had been originally developed to address the volume impediments for the guitar in jazz ensembles. Artists offered feedback on models and some like Madame De Goni, Glen Campbell, and Charlie Byrd participated in the design process.[2] These are just a few of the examples that highlight the role of users.

The ways that people acquired the skills to play guitar, in a similar fashion to the instrument's production, also resisted standardization. In the era prior to the advent of commercially reproduced sound recordings, Americans had few choices when it came to experiencing music in their lives. A person either attended a live performance or they had to make their own music. Some were fortunate enough to have musically-inclined friends and family who passed on instruments and lessons by the fireplace or at church. Others answered newspaper advertisements for local music teachers, taking lessons in private studios. Some of those studio instructors might have been Gibson teacher-agents who included healthy sermons on why students should purchase a Gibson instrument along

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[2] Madame De Goni, like William Foden, received guitars designed to her specifications from C. F. Martin & Company, for her own use. Richard Johnston, Dick Boak, and Mike Longworth, *Martin Guitars: A History*, rev. ed. (New York: Hal Leonard, 2008), 21; The input of Glen Campbell and Charlie Byrd is discussed in Chapter 6 of this dissertation.

with the lessons on scales and chords. Those like Roy Smeck, who could not find a teacher, let alone afford one, utilized other methods such as tracking down performers after shows to pick their brains. Along with the phenomenal growth of sheet music, method books flooded the market in the first few decades of the twentieth century, allowing those who were literate to learn how to read and play music on the guitar. Sound recordings, radio broadcasts, and television all brought music into the home, giving aspiring players the chance to learn from celebrities. Yet the development of method books and recorded music did not do away with the processes of imitation and personal instruction from friends and family when it came to learning an instrument. Like guitar production, different people learned how to play the instrument in different ways at different times. Part of the beauty of the guitar it that it has some skill built into it, yet it is an adaptable tool that can fit the desires of the player who holds it.

Endorsed by celebrities, the acoustic guitar influenced aspiring musicians to chase their dreams through the use of a simple wooden box with metal strings. Initially producers used the burgeoning print culture of the late nineteenth century and early twentieth century to entice consumers to buy their particular brand of guitar. The catalogs of Gibson offered performers from all over the world, solo artists and ensembles, men and women, young and old, the chance to grace the pages of the publication. No recording contract was required, no starring role in a major motion picture needed. The advent of recorded sound changed this style of advertising and paved the way for new methods of aspirational marketing by connecting guitars to those people listed on record labels. By the 1920s and 1930s, specially made guitars for the stars to use in publicity photos featured the names of performers inlaid or sandblasted onto the fingerboard. Later, the moniker moved to the headstock on models available not only to performers, but also to the general public. Decals and designs highlighted specific performers like Roy Rogers as well as island and cowboy scenes, connecting consumer desires with

commodified objects. All of these steps made it possible for consumers to purchase the same instruments used by their heroes.

The acoustic guitar market was a remarkably complex system that was shaped by both producers and consumers. Consumers exhibited a wide range of tastes when it came to choosing an instrument. Those tastes, in turn, helped to shape what guitars became popular and which ones ended up on the chopping block. Gibson prospered by making new styles of mandolins while Lyon & Healy and Martin changed from "potato bugs" to ones that echoed their competition in Kalamazoo. Martin tried producing ukuleles before the Hawaiian music movement had fully taken hold. Once they gauged the market correctly, the company capitalized on the economic opportunity of producing "jumping fleas" more so than most of their competition. Gibson played catch-up to Martin when consumers embraced the dreadnoughts. At the same time, Gibson's arch-tops inspired other makers to emulate their styles, while Martin struggled with their own attempts at succeeding in that style. Resophonic instruments, embraced by an assortment of performers, never fully recovered from the material shortages of World War II. Mario Maccaferri, a luthier who had designed some of Django Reinhardt's guitars, embraced the idea of modern science enhancing guitar production, but in the end his own resources and his choice of material, namely plastic, limited his possibility for success. Though he initially lined up several big name artists, his ukulele and guitar models did not pass muster with most working musicians [Figure 23].[3] In many ways, Maccaferri's plastic creations served as an example both of the material possibilities of twentieth century

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[3] Dick Boak, "Living Legend: The revolutionary designs of Mario Maccaferri from Django Reinhardt's guitar to the plastic clothespin," *Acoustic Guitar*, March/April 1992, 51-58; Michael Wright, "Maccaferri History, The Guitars of Mario Maccaferri," *Vintage Guitar*, March 5, 2002.

science and the cultural perception of plastic as a cheap throwaway substance.[4] All of this illustrates the fact that not every company could succeed from constructing the same exact instrument.

Figure 23 Guitar by French American Reeds Manufacturing Company, Mount Vernon, NY, 1954, Model G-40. The instrument, made primarily of Dow Styron plastic, was designed by Mario Maccaferri. Smithsonian, National Museum of American History.

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[4] Jeffrey Meikle described this dichotomy by stating how "our culture's ambivalent relationship with plastics… perceived variously as high-tech miracle materials and as cheap substitutes or imitations - the word plastic has taken on metaphoric significance beyond any direct reference to particular chemical substances used in manufacturing or construction or packaging." Jeffrey L. Meikle, *American Plastic: A Cultural History* (New Brunswick: Rutgers University Press, 1995), xiii-xiv.

In order to reach as many customers as possible, makers enlisted a variety of strategies, something that still holds true today. Some manufacturers favored producing them en masse with the aid of machine tools and a carefully organized division of labor. Others were built in small batches. Still many more were painstakingly crafted by hand, one at a time, by individual luthiers. All three of these modes existed at the same time, without one overtaking the others or becoming obsolescent, a characteristic not often found in American consumer products in the twentieth century. As I discussed in Chapter 1, one of the most interesting aspects of studying the guitar trade is how the instrument continues to be manufactured simultaneously in different ways and marketed to a diverse group of consumers. Today producers still churn out cheap, but usable mass-produced guitars for less than $50 each. Marketed to aspiring musicians wishing to emulate the acoustic playing of John Mayer, Martin sells a Mayer 00-42C signature model. Still other luthiers like Wayne Henderson, who operates out of his tiny shop in rural Virginia, fill orders at a snail's pace. Henderson, long revered for his guitar making skills, can take years to build one instrument. Nevertheless, he has a long waiting list of consumers, including high profile clients who swear by his craftsmanship, no matter how long it takes to get their guitar.[5]

While its roots were firmly in the Old World, innovative luthiers used the tools of the 2nd Industrial Revolution to fashion instruments to meet the changing needs of performers. The adoption of technology in the process of constructing guitars has been and remains today a negotiated process. When Martin favored "tradition" over mass production, it did so because the family heads of the company decided that to make their

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[5] Henderson does not have any employees and works on several guitars at the same time, often constructing one part and then not coming back to it for months or years. For a detailed look at the process Wayne Henderson goes through in building acoustic guitars for Eric Clapton and other select clientele, see Allen St. John, *Clapton's Guitar: Watching Wayne Henderson Build the Perfect Instrument* (New York: Free Press, 2006).

guitars sound good some parts of the process required the work of human hands. That could range from executing beautiful inlay to carving pieces by hand to tapping on bookmatched pieces of wood to determine if together they would be suitable to be shaped into the top of an instrument.[6] Concern for quality over quantity meant Martin was willing to sacrifice selling higher numbers of guitars than their competitors in favor of making what they (and their loyal customers) believed to be better instruments. Science and engineering informed the work of Lloyd Loar and Charles Kaman, both musicians-turned-luthiers, who dramatically altered the construction of guitars and infused new technologies into the manufacturing process. Yet neither completely abandoned some of the time-honored principles of lutherie. Taylor Guitars, a San Diego company founded in the 1970s ran an advertisement in 2010 that continued this idea of "Old World craftsmanship meets new technology." The tagline proclaimed that Taylor guitars embodied "the kind of age old craftsmanship that can only come from an age old craftsman. And his helper robot." The advertisement featured a background of wood grains with a photo of a mechanical bender shaping the wooden sides of a guitar. It also prompted consumers to "Meet some of Taylor's little helpers, including our mechanical side bender, at TaylorGuitars.com." Taylor, like many of the companies in this study, wanted consumers to think of technology as simply being "little helpers" to the human master craftsman.[7]

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[6] Bookmatched refers to one piece of wood, cut in half with the grain of the wood perfectly joined together as if it were a mirror image. This is the common process for creating the top or soundboard of a guitar. Tom Evans and Mary Anne Evans, *Guitars: Music, History, Construction and Players, From the Renaissance to Rock* (New York: Paddington Press, Ltd., 1977), 437; Teja Gerken et al., *Acoustic Guitar: An Historical Look at the Composition, Construction, and Evolution of One of the World's Most Beloved Instruments* (Milwaukee: Hal Leonard Corporation, 2003), 127, 203.

[7] Taylor Guitars, "Always to our own tune" (advertisement), *Acoustic Guitar*, July 2010; Taylor and Martin were some of the first few guitar makers to use Computer Numerical Control (CNC) machines in their factories. Though the machines are expensive with a price tag of several hundred thousand dollars or more, they can quickly shape the

The quest to amplify the sound of the instrument was shaped by both innovative luthiers experimenting with new guitar designs and musicians negotiating with available goods in the market. As the guitar gained popularity among musicians across a widespread spectrum of genres and more people started playing the instrument in groups, not just by themselves in a parlor, the limitations on the instrument's volume became an impediment. The strategies varied depending on the maker and the time period, with some thinking outside of the "wooden" box and others re-tooling the package altogether. Lyon & Healy and Martin chose to use traditional methods and materials but changed the size and contour of the acoustic guitar, resulting in dreadnoughts. Gibson went back to the original ideas of their founder and carved the body of the instrument, resulting in arch-tops. John Dopyera and Charles Kaman threw out parts of the book on how to make an acoustic guitar and instead experimented with cutting-edge materials, namely metals and composites. The electric guitar answered the volume question, but it did not cause guitarists to immediately trade in their acoustic models for electrified ones. Instead, users shaped the system by continuing to buy acoustic models and, in some cases, resisting non-traditional body designs and materials. Ovation's hybrid acoustic-electric guitars bridged the gap for users who desired to have the best of both worlds: the tonal attributes of an acoustic guitar combined with the amplification of an electric.

Musicians continue to seek hard-to-find vintage models, leading companies like C. F. Martin & Company to use twenty-first century technology to try to replicate the sound, construction, and look of historic instruments. Martin recently started a new "Retro" series, releasing reproductions of some of the company's most sought after

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surfaces of the guitar with precise accuracy, eliminating tasks formerly done by hand over long periods of time. The CNC machines also work well for cutting design artwork for inlays. Teja Gerken et al., *Acoustic Guitar: An Historical Look at the Composition, Construction, and Evolution of One of the World's Most Beloved Instruments* (Milwaukee: Hal Leonard Corporation, 2003), 360.

models. In addition, they consulted recordings of how the original guitars sounded used vintage microphones to record vintage models. Engineers then mixed these sounds and added them into the onboard electronics. When plugged in to an amplifier, the sound produced combines both the resonance of the physical instrument and the tonal characteristics of the same model guitar recorded 80 years ago. Furthermore, the company has added a Vintage Tone System (VTS) that allows them to age the wooden tops and braces of a guitar to match the cellular characteristics of a historic Martin model, reproducing the sound and appearance of classic instruments from the catalog that are beyond the reach of most consumers in the secondhand vintage market.[8]

The acoustic guitar has been, and continues to be shaped by social and cultural issues in America. Materiality, an important issue for those who contested the merits of non-wooden guitars in the past, is still very much on the minds of luthiers and consumers today. Environmental concerns abound in the acoustic guitar world as Brazilian rosewood, a material used extensively on the tops and sides of many models discussed throughout the course of this dissertation, is now an endangered species. Martin has partnered with artists such as Wilco's Jeff Tweedy to produce environmentally conscious guitar models. Today, luthiers gladly pay for boxes of scraps leftover from competitors and defunct manufacturers, searching for some of the last legal bits of the prized woods. Consumers, who favor these types of traditional woods over Adirondack spruce and other

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[8] These guitars are far outside the price range of most consumers, yet they represent that same idea of trying to reproduce the sound and appearance of the supposed "Golden Era" of Martin instruments, an aesthetic quality that is a matter of debate among players and collectors. "Introducing Martin Guitar's Vintage Tone System," C. F. Martin & Co., Inc., last modified 2013, accessed February 4, 2015, http://www.martinguitar.com/guitars/featuresmaterials/vintage-tone-system-vts.html; "Martin Guitar Travels Back in Time with Forward-Thinking New Retro Series," C. F. Martin & Co., Inc., last modified 2013, accessed February 4, 2015, http://www.martinguitar.com/news/press-releases/743-martin-guitar-travels-back-in-time-with-forward-thinking-new-retro-series.html.

sustainable materials used in today's guitars, are also willing to pay exorbitant prices for guitars made with the endangered materials. A black market for highly sought after pieces of (now protected) Brazilian rosewood poses new questions and challenges to producers and consumers. Recently, the U.S. Fish & Wildlife Service and the Department of Justice have targeted Gibson for allegedly importing illegal wood. Musicians have had to deal with new travel restrictions that target the movement across borders of endangered wood supplies, leading to some having antique instruments confiscated because they could not produce the paperwork to prove where the wood or ivory in their vintage Gibson originated. While much of this goes beyond the scope of this study, it does highlight how materiality has played a role in the design of the acoustic guitar and how it will undoubtedly continue to impact both consumers and producers of the instrument for years to come.[9] It is not surprising that the environmental concerns so prominent in today's society are affecting the current guitar market considering how major societal issues have deeply influenced the makers and users of guitars examined throughout this dissertation.

From economic downturns to the Cold War, it is impossible to separate the evolution of the acoustic guitar from the major events of the past 135 years of American history. The Great Depression may have forced companies into bankruptcy and disrupted consumer spending patterns, but Americans did not simply stop buying guitars during

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[9] James C. McKinley, Jr., "Gibson Guitar Settles Claim Over Imported Ebony," *New York Times*, August 6, 2012; James C. McKinley, Jr., "Famed Guitar Maker Raided by Federal Agents," *New York Times*, August 21, 2011; "Passports for 'endangered' musical instruments," Phys.org, March 13, 2013, accessed February 4, 2015, http://phys.org/news/2013-03-passports-endangered-musical-instruments.html; Lance Williams, "New Gibson guitar uses wood seized in raids," *Tennessean*, February 4, 2014, accessed February 4, 2015, http://www.tennessean.com/article/20140204/BUSINESS06/302040043; "00-DB Jeff Tweedy," C. F. Martin & Co., Inc., last modified 2013, accessed February 4, 2015, https://www.martinguitar.com/model/item/949-00-db-jeff-tweedy.html.

this crisis. Instead they embraced new avenues by which to obtain the instruments. Economic concerns directed consumers towards the lower end guitars made by Harmony, Kay, and others as the $100 and up price tags on a Martin or Gibson model became unobtainable. Secondhand sites of consumption including pawnshops and classifieds flourished as practical means for those of the lowest income brackets to procure an instrument. World War II and the material shortages brought about by the conflict dramatically affected manufacturers, even putting some like National-Dobro on the road to ruin. Space Age research in science and engineering, originally intended to fight communist conflicts and put astronauts in orbit, resulted in new materials and construction methods for acoustic guitars. Ironically, members of the counterculture that railed against military intervention in Vietnam bought Ovation guitars not realizing that the same company supplied helicopters to the armed forces.

The mandolin and Hawaiian ethnic music movements profoundly affected the social shaping of the acoustic guitar. The mass migration of people from Europe and the imperialist annexation of Hawaii in the late nineteenth century played a role in introducing the instruments and musical traditions of these movements. For middle and upper class spectators in American cities, it did not matter whether or not the music was truly an authentic representation of the culture associated with it. Live performances, sheet music, and sound recordings offered audiences a chance to dream of faraway idyllic places both real and imagined. These same listeners participated in the movements by purchasing instruments, forming ensembles, and arranging popular tunes with the flavors of the mandolin, ukulele, and Hawaiian guitar. Manufacturers rode the waves of these trends, adapting their inventories and marketing the tools consumers could use to add a touch of exotic flavor to whatever music they wanted to play. Through cultural diffusion, the playing styles and instruments produced by these movements disseminated throughout American music, from furiously picked mandolin solos in bluegrass to soulful slide licks in rock ’n’ roll songs.

As Kay so eloquently stated in 1964, the acoustic guitar was, and still is, the "one instrument particularly suited to bring music-making within the realm of everyone." The instrument served as a conduit for the American masses. It provided a musical voice for both the famous and the obscure. For the lucky few, it was the ticket out of poverty. On the other hand, there are plenty of Americans whose guitar sits collecting dust in the back of their closet, the ambitions and desires of mastering it having long faded away. For others, it was an object of art to be displayed on a wall, never to resonate with music again. Some paired the acoustic guitar with knives, bottles, and plectrums to produce unique and innovative sounds. The instrument reflected the currents of change, from industrialization to imperialism, from the depths of the Depression to the vibrant cries of the counterculture. The many different groups and classes that make up this country embraced the instrument over trumpets and saxophones. If the population of America is an amalgamation of multiple cultures and ethnicities, the acoustic guitar is the speaker that transmits its many musical sounds. The hands of a Delta drifter, a Hawaiian fisherman, a professional recording artist, a poor sharecropper, and a preacher's daughter all reached for it, making the acoustic guitar the instrument of twentieth century America. Why? Because it was cheap. It was portable. It was easy to learn. And above all, it allowed each of these people to play the music that was in their heart.

BIBLIOGRAPHY

Manuscript and Object Collections

Center for Popular Music, Middle Tennessee State University, Murfreesboro, TN

- Gayle Dean Wardlow Collection
- Music Trade Catalogs

Library of Congress, Washington, D.C.

- American Folklife Center
  - KCCN Hawaiian Radio/Bank of Hawaii Heritage Series Collection, Part I
- Prints and Photographs Division
  - Farm Security Administration/Office of War Information Black-and-White Negatives

Miami University Archives, Oxford, OH

- Frank Snyder Photograph Collection

Mississippi State University Libraries, Mississippi State, MS

- Special Collections, Charles H. Templeton, Sr. sheet music collection

Museum of the City of New York, New York, NY

- Jessie Tarbox Beals Collection

National Museum of American History, Smithsonian Institution, Washington, D.C.

- Curatorial Files, Division of Culture and the Arts
- Electric Guitar Video Documentation, 11/9/96-11/16/96, Archives Center

Jazz Oral History Collection, Archives Center

Musical Instruments Collection, Division of Culture and the Arts

NMAH Library, Smithsonian Libraries

NMAH Trade Catalog Collection, Smithsonian Libraries

Plooma M. Boyd Diary of the 1893 Columbian Exposition, Archives Center

Rock 'n' Soul Audiovisual Collection, 1990-2000, Archives Center

The Sam DeVincent Collection of Illustrated American Sheet Music, Archives Center

Scurlock Studio Records, ca. 1905-1994, Archives Center

Warshaw Collection of Business Americana, Archives Center

National Music Museum, The University of South Dakota, Vermillion, SD

Musical Instrument Manufacturers' Archive

Plucked Stringed Instrument Collections

Radcliffe Institute for Advanced Study, Harvard University, Cambridge, MA

Jessie Tarbox Beals, Photographs, 1896-1941, Arthur and Elizabeth Schlesinger Library on the History of Women in America

Published Works

Primary Sources

Catalogs

August Gemünder & Sons. *Descriptive Catalogue of Violins, Bows, Guitars, Mandolins, Zithers, Strings, Etc.* New York: August Gemünder & Sons, 1892.

Buegeleisen & Jacobson, Inc. *B and J Counter Book of Musical Merchandise No. 851.* New York: Buegeleisen & Jacobson, Inc., n.d.

C. Bruno & Son. *Illustrated Catalogue C. Bruno & Son, Importers and Wholesale Dealers in Musical Instruments, Strings, Etc., 1883-84.* New York: C. Bruno & Son, 1883.

C. F. Martin & Co. *Martin Guitars and Mandolins.* Nazareth: C. F. Martin & Co., 1898. Reprint, Catalog Vault, n.d.

———. *Martin String Instruments.* Nazareth, PA: C. F. Martin & Co., 1923.

C. F. Martin, & Co., Inc. *Martin Guitars, Mandolins, Ukuleles, Retail Catalogue.* Nazareth, PA: C. F. Martin, & Co., Inc., 1930. Reprint, Catalog Vault, n.d.

———. *Martin String Instruments.* Nazareth, PA: C. F. Martin, & Co., Inc., 1929.

David Wexler & Co. *Rapid Index Catalog No. 72.* Chicago: David Wexler & Co., 1972.

Dobro Mfg. Co. *"What the Stars Tell!"* Los Angeles: Locus Stationery & Printing Company, [ca. 1930s].

Epiphone, Inc. *Epiphone Musical Instruments.* New York: Epiphone, Inc., 1939. Reprint, Washington Mills, NY: Gilded Age Reprints, n.d.

Fred Gretsch Mfg. Co. *Gretsch Musical Merchandise Catalog Number 40.* Chicago: Fred Gretsch Mfg. Co., 1939.

Gibson, Inc. *Gibson Banjos, Guitars, Mandolins, Ukuleles*. Kalamazoo, MI: Gibson, Inc., 1930.

———. *Gibson Guitars, Banjos, Mandolins, Ukuleles Catalog U.* Kalamazoo, MI: Ihling Bros. Everard Co., 1932. Reprint, n.d.

———. *Gibson Instruments, Catalog N.* Grand Rapids, MI: The Jaqua Company, 1923.

———. *Gibson Instruments*, *Catalog Y.* Kalamazoo, MI: Gibson, Inc., 1937.

———. *Gibson Mandolins, Guitars, Ukuleles, The Music Pals of the Nation, Catalog R.* Kalamazoo, MI: Gibson, Inc., 1929.

———. *Gibson Pricelist.* Kalamazoo, MI: Gibson, Inc., 1942.

———. *Guitars, Banjos, Mandolins, Ukuleles by Gibson, Catalog W.* Kalamazoo, MI: Gibson, Inc., 1934.

Gibson Mandolin-Guitar Company. *The Gibson 1921 Catalog*. Edited by William Ivey. Historical Instrument Series No. 1, edited by William Ivey. Grand Rapids, MI: The Cargill Company, 1921. Reprint, Nashville, TN: The Country Music Foundation Press, 1973.

———. *The Gibson Catalog "J"*. Battle Creek, MI: Gage Printing Co., Ltd., 1917.

———. *The Gibson Catalogue "H"*. Chicago: Hammond Press/W. B. Conkey Company, 1912.

———. *Gibson Instruments, The Music Pals of the Nation.* Grand Rapids, MI: The Cargill Company, 1922. Reprint, Platteville, WI: Vintage Paper, n.d.

———. *Gibson Mandolins, Mandolas, Mando-cellos, Mando-basses, Guitars, Harp Guitars, Catalog L.* Grand Rapids, MI: The Cargill Company, 1920.

———. *The Gibson Mandolins, Mandolas, Mando-cellos, Guitars, Harp-guitars, Supplies, Catalogue "F"*. Kalamazoo, MI: Gibson Mandolin-Guitar Company, 1909.

Gibson Mandolin-Guitar Manufacturing Co., Ltd. *Gibson Mandolins and Guitars.* Kalamazoo, MI: Gibson Mandolin-Guitar Manufacturing Co., Ltd., 1903.

Grossman Music Co. *Grossman Music Co. Catalog 15.* Cleveland: Grossman Music, Co., 1935.

H. A. Weymann & Son. *Illustrated Descriptive Catalogue of the Weymann and Keystone State Mandolins, Guitars, Banjos, Zithers, etc.* Philadelphia: Press of Maurice H. Power, 1898.

Harmony Company, *Harmony Guitars, Electrics, Amplifiers, Mandolins, Banjos, Ukuleles.* Chicago: The Harmony Company, 1957.

Harmony Company (from Ampeg). *Harmony Guitars, Banjos, Ukuleles, and Mandolins.* Elkhart, IN: The Ampeg Company, 1956.

J. Howard Foote. *J. Howard Foote Catalogue of Musical Instruments, 1899.* New York: J. Howard Foote, 1899.

———. *J. Howard Foote's Descriptive Catalogue of Musical Instruments, Strings, Etc.* New York: J. Howard Foote, 1880.

Kay Musical Instrument Co. *Kay Musical Instrument Co.* Chicago: Kay Musical Instrument Co., 1944.

Lyon & Healy. *1891-1892 Catalogue of Musical Merchandise*. Chicago: The Henry O. Shepard Co., 1891.

———. *Catalogue of Musical Merchandise Imported and Manufactured by Lyon & Healy, Chicago. 1898-9*. Chicago: W. B. Conkey Company, 1897.

———. *The Latest Vocal and Instrumental "Hits"*. Chicago: Lyon & Healy, n.d.

———. *Lyon & Healy Band Instruments, Uniforms, Trimmings.* Chicago: Lyon & Healy, 1881.

———. *Lyon & Healy's Musical Handbook*. Chicago: Lyon & Healy, 1906.

———. *Revised Catalogue of the Washburn Instruments.* Chicago: C. N. Post, 1905.

———. *Washburn Souvenir, Catalogue of the Washburn Guitars, Mandolins, and Zithers.* Chicago: Lyon & Healy, 1892.

Lyon & Healy, Inc. *Band and Orchestra Instruments.* Chicago: Lyon & Healy, Inc., 1930.

———. *Lyon & Healy Musical Merchandise Catalog, 62nd Year Edition.* Chicago: Lyon & Healy, Inc., 1925.

Metropolitan Music Co. *Musical Merchandise Wholesale Catalogue No. 10.* Orange, CT: Wilson H. Lee Company, 1935.

Montgomery Ward. *Montgomery Ward Catalog, 1939-1940.* Chicago: Montgomery Ward, 1939.

———. *Wards Star Values Catalog*. Chicago: Montgomery Ward, 1934.

Montgomery Ward & Co. *Fall/Winter 1930-1931 Catalog.* Chicago: Montgomery Ward & Co., 1930.

———. *Montgomery Ward & Co. Catalog.* Chicago: Montgomery Ward & Co., 1895.

———. *This Book Combines Our January-February Grocery Catalog and Our regular January-February SALE Catalog.* Chicago: Montgomery Ward & Co., n.d.

———. *Ward's Little Catalogue*, *January-February 1931.* Chicago: Montgomery Ward & Co., 1931.

National Dobro Corp. *Modern National Guitars Catalogue No. 41.* Chicago: National Dobro Corp., 1940.

———.*"The Line of Champions," National String Instruments #202.* Chicago: National Dobro Corp., 1938.

———. *To Play on a National Amplifying or Electric Instrument is to Improve the Art of Yesterday and Enrich the Music of Tomorrow.* Chicago: National Dobro Corporation, [1936-1937]. Reprint, Benld, IL: Gima Reprints, 1991.

National-Dobro Corp. *National, The Line of Champions.* Chicago: National-Dobro Corp., n.d.

National String Instrument Corp., *National String Instruments*. Los Angeles: Western Lithograph Co., [1930?].

Oahu Publishing Co., Inc. *Oahu Publishing Company, Catalog No. 19.* Cleveland: Oahu Publishing Co., Inc., 1935.

Progressive Musical Instrument Corp. *Musical Merchandise Catalog No. 78.* New York: Progressive Musical Instrument Corp., 1931.

———. *Wholesalers & Modern Musical Merchandise*. New York: Progressive Musical Instrument Corp., 1935.

Regal Musical Instrument Co. *Regal Fretted Instruments.* Chicago: Regal Musical Instrument Co., 1937.

Sears, Roebuck and Co. *Fall-Winter Shoe Catalog, 1953, Division 15.* Chicago: Sears, Roebuck and Co., 1953.

———. *Midsummer Bargains, Sale Ends Aug. 31. 1924.* Chicago: Sears, Roebuck and Co., 1924.

———. *Our Greatest Sale, Sale Closes Feb. 28, 1929.* Chicago: Sears, Roebuck and Co., 1929.

———. *Sears Catalog.* Chicago: Sears, Roebuck and Co., 1936.

Sherman Clay & Co. *Musical Instrument Catalog of Sherman Clay & Co.* San Francisco: Sherman Clay & Co., [1928 or 1929?].

Tonk Bros. Co. *Musical Merchandise Catalog No. 49.* Chicago: Tonk Bros. Co., 1935.

Periodicals

The Atlanta Constitution, 1941-1942.
Billboard, 1970.
Chicago Daily Tribune, 1928.
Chicago Tribune, 1965, 1968-1969.
The Christian Recorder (Philadelphia), 1886, 1900.
Down Beat, 1968, 1970.
Friends, 1970.
The Minneapolis Journal, 1904.
Music Magazine, 1929.
The New York Times, 1981.
Plattsburgh Press-Republican (Plattsburgh, NY), 1965.
Popular Science, 1920, 1923, 1925, 1928, 1970.
The Pulaski Democrat (Pulaski, NY), 1909, 1969.
Rolling Stone, 1973.
The Technique (Atlanta), 1911, 1917, 1926.
The Washington Post, 1936.

Books and Pamphlets

American Society of Composers, Authors and Publishers. *Who Uses Music and Why.* New York: ASCAP, 1934.

Blue Print 1909. Atlanta: Georgia Institute of Technology, 1909.

Handy, W.C. *Father of the Blues: An Autobiography*. Edited by Arna Bontemps. New York: Da Capo Press, 1991.

Howells, William Dean. *Venetian Life*. Boston: James R. Osgood and Company, 1878.

Kaman, Charles H. *Kaman Corporation, An American Story*. New York: The Newcomen Society of the United States, 1983.

Kay Musical Instrument Co. *The Story of a Guitar.* Elk Grove Village, IL: Kay Musical Instrument Co., 1964.

Property from the Estate of Les Paul. Beverly Hills, CA: Julien's Auctions, 2012.

Raymond, Howard Monroe. *Modern Shop Practice: A General Reference Work*, Vol. 3. Chicago: American Technical Society, 1916.

Story, William Wetmore. *Roba di Roma*. Boston: Houghton, Mifflin and Company, 1887.

Whitney, Caspar. *Hawaiian America: Something of its History, Resources, and Prospects*. New York: Harper & Brothers Publishers, 1899.

Articles

Dopera, Ed and Michael Brooks. "The Story of the Dobro: A Personal History." *Guitar Player*, December 1971.

"Free Tuition Offered by Lyon & Healy." *The Music Trades,* May 20, 1905.

Gerhart, Paul Cessna. "Requisites of a Mandolinist." *Godey's Lady's Book,* September 1897.

"Helicopter Pioneer to Make Guitars; Kaman Aircraft Corp. unveils radical Ovation line of acoustical guitars." *The Music Trades,* December 1966.

"Kaman: How to bring aerospace knowhow to the guitar industry." *Business Week,* June 26, 1978.

"Lyon & Healy Buy Out the Regal Manufacturing Co." *The Music Trades*, November 26, 1904.

"Lyon & Healy Predict Record-Breaking Season." *The Music Trades*, October 28, 1905.

"Lyon & Healy Work Large Night Shift." *The Music Trades*, November 11, 1905.

"Lyon & Healy's Latest, The Fortieth Year of Their Business History is Marked by a Magnificent Catalogue." *The Music Trades*, August 30, 1902.

Musick, John R. "Four Months In Paradise." *Godey's Lady's Book*, October 1897.

NASA Ames Research Center. "An Instrumental Innovation." *Spinoff*, 1978.

"New Lyon & Healy Plant Doubles Capacity." *Music Trade Review* 84, no. 8 (February 19, 1927): 31.

Pierce, Michael. "Campbell Up!" *Guitar Player*, April 1969.

Renstrom, Roger. "Composites Perform in Music." *Plastics News*, April 24, 1995.

Robertson, Duncan G. “Dobro.” *Guitar Player*, October 1968.

“The Tradition of Old World Craftsmanship Meets Modern Aerospace Technology.” *Connecticut Industry*, July 1967.

Patents

Beauchamp, George D., John Dopyera, Paul Barth, and T. E. Kleinmeyer. Stringed musical instrument. US Patent 1,741,453, filed April 9, 1927, and issued December 31, 1929.

Dopyera, John. Banjo. US Patent 1,649,101, filed December 12, 1923, and issued November 15, 1927.

Dopyera, John. Design for a guitar. US Patent Des. 76,382, filed March 12, 1928, and issued September 25, 1928.

———. Violin. US Patent 1,647,510, filed December 12, 1923, and issued November 1, 1927.

Dopyera, Rudolph. Musical instrument. US Patent 1,896,484, filed February 1, 1932, and issued February 7, 1933.

———. Stringed musical instrument. US Patent 1,872,663, filed June 29, 1929, and issued August 16, 1932.

Gibson, O. H. Mandolin. US Patent 598,245, filed May 11, 1895, and issued February 1, 1898.

Kaman, Charles H. Guitar construction. US Patent 3,474,697, filed January 27, 1967, and issued on October 28, 1969.

Kylianek, James and John Dopyera. Cartridge-belt. US Patent 1,183,572, filed August 17, 1915, and issued May 16, 1916.

Sound Recordings

Acuff, Roy. “Fireball Mail.” By Floyd Jenkins. Recorded 1942, with the Smokey Mountain Boys. *Vintage Country & Western A Nostalgic Collection*. Music Collection International, a division of Demon Music Group, 2000, CD.

Autry, Gene. "Guns and Guitars." Recorded 1936. On *Back in the Saddle Again.* Acrobat Music, 2008, MP3.

Dire Straits. *Brothers in Arms*. Recorded 1985. Warner Bros. Records 9 47773-2, 2000, CD. Originally released 1985.

Johnson, Robert. *King of the Delta Blues*. Recorded 1936-1937, Columbia/Legacy CK65211, 1997, CD.

Johnson, Robert, and Eric Clapton. *Me and Mr. Johnson*. Reprise Records 9362-48423-2, 2004, CD.

Logsdon, Guy William. Liner Notes. *Cowboy Songs on Folkways*. Smithsonian/Folkways Recordings SF 40043, 1991, CD.

McAuliffe, Leon. "Steel Guitar Rag." Recorded September 29, 1936, Chicago, with Bob Wills and His Texas Playboys. On *The Essential Bob Wills, 1935-1947*. Columbia CK 48958, 1992, CD.

Perkins, Carl. "Blue Suede Shoes." Recorded 1956, Memphis, TN. On *The Sun Story.* Rhino Records RNCD 75884, 1987, CD.

Roy Smeck Trio. "Reaching for the Moon." By Irving Berlin. Recorded 1931. On *...I Listen to the Wind That Obliterates My Traces.* Dust to Digital DTD-20, 2011, CD.

Simon, Paul. "Graceland." Recorded 1985, Johannesburg, R.S.A., and Los Angeles. On *Graceland*. Warner Bros. Records 9 46430-2, 1996, CD. Originally released 1986.

Smeck, Roy. *Roy Smeck plays Hawaiian Guitar, Banjo, Ukulele and Guitar, 1926-1949*. YaZoo 1052, 1992, CD.

Sol Hoopi's Novelty Trio. "Stack O'Lee Blues." Recorded 1926. On *...I Listen to the Wind That Obliterates My Traces.* Dust to Digital DTD-20, 2011, CD.

Tampa Red. "Boogie Woogie Dance." Recorded ca. 1927-1933. On *The Atlanta Blues.* Smithsonian Folkways Recordings RBF 15, 2006, CD. Originally released 1966.

Walker, Jerry Jeff. "That Old Beat Up Guitar." Recorded 1972, New York. On *Jerry Jeff Walker*. Raven Records RVCD-320, 2011, CD. Originally released 1972.

White, Bukka. "Aberdeen Mississippi Blues." Recorded 1940, Chicago. On *Blues Rediscoveries.* Smithsonian Folkways Recordings RBF 11, 2007, CD. Originally released 1966.

Films

DaCosta, Morton, dir. *The Music Man,* Warner Brothers Pictures, 1962. DVD. Warner Home Video, 1999.

Roy Smeck, the Wizard of the String, in His Pastimes. Vitaphone, Warner Brothers Pictures, 1926.

Unique Voices: 40 Years of Innovation, Ovation USA. MM-Musik-Media-Verl, 2006.

Secondary Sources

Books

Achard, Ken. *The History and Development of the American Guitar*. Westport, Conn: The Bold Strummer, Ltd., 1990.

Anderson, Terry H. *The Movement and The Sixties*. New York: Oxford University Press, 1995.

Bacon, Tony, ed. *Echo and Twang: Classic Guitar music of the '50s*. San Francisco: Backbeat Books, 2001.

Banks, Margaret Downie. *Elkhart's Brass Roots: An Exhibition to Commemorate the 150th Anniversary of C. G. Conn's Birth and the 120th Anniversary of the Conn Company*. Vermillion, SD: The Shrine to Music Museum, College of Fine Arts, University of South Dakota, 1994.

Bastin, Bruce. *Red River Blues: The Blues Tradition in the Southeast*. Urbana: University of Illinois Press, 1986.

Beamer, Keola. *Hawaiian Slack Key Guitar*. New York: Oak Publications, 1977.

Bederman, Gail. *Manliness & Civilization: A Cultural History of Gender and Race in the United States, 1880-1917*. Chicago: The University of Chicago Press, 1995.

Bennett, Andy, and Kevin Dawe, eds. *Guitar Cultures*. New York: Berg, 2001.

Bertellini, Giorgio. *Italy in Early American Cinema: Race, Landscape, and the Picturesque*. Bloomington: Indiana University Press, 2010.

Bijker, Wiebe E., Thomas P. Hughes, and Trevor Pinch, eds. *The Social Construction of Technological Systems: New Directions in the Sociology and History of Technology*. Cambridge, MA: MIT Press, 1987.

Boak, Dick. *C. F. Martin & Co.* Charleston, South Carolina: Arcadia Publishing, 2014.

Bone, Philip James. *The Guitar and Mandolin: Biographies of Celebrated Players and Composers*. London: Schott & Co., 1972.

Borg, Kevin L. *Auto Mechanics: Technology and Expertise in Twentieth-Century America.* Baltimore: Johns Hopkins University Press, 2007.

Brookes, Tim. *Guitar: An American Life*. New York: Grove Press, 2005.

Brooks, Van Wyck. *The Dream of Arcadia: American Writers and Artists in Italy 1760-1915*. New York: E. P. Dutton & Co., Inc., 1958.

Brozman, Bob, John Dopyera, Jr., Richard A. Smith, and Gary Atkinson. *The History and Artistry of National Resonator Instruments*. Fullerton, CA: Centerstream Publishing, 1993.

Buonomo, Leonardo. *Backward Glances: Exploring Italy, Reinterpreting America (1831-1866)*. Madison, NJ: Fairleigh Dickinson University Press, 1996.

Cantwell, Robert. *Bluegrass Breakdown: The Making of the Old Southern Sound*. Urbana: University of Illinois Press, 1984.

———. *When We Were Good: The Folk Revival*. Cambridge: Harvard University Press, 1996.

Carter, Walter. *Epiphone: The Complete History*. Milwaukee, WI: Hal Leonard Corporation, 1995.

———. *Gibson Guitars: 100 Years of An American Icon*. Los Angeles: General Publishing Group, 1994.

———. *The Martin Book: A Complete History of Martin Guitars*. San Francisco: Backbeat, 2006.

Carter, Walter, and Jon Eiche. *The History of the Ovation Guitar*. Milwaukee: Hal Leonard, 1996.

Chandler, Alfred D., Jr. *The Visible Hand: The Managerial Revolution in American Business*. Cambridge: Harvard University Press, 1977.

Chauncey, George. *Gay New York: Gender, Urban Culture, and the Makings of the Gay Male World, 1890-1940*. New York: Basic Books, 1994.

Coelho, Victor Anand, ed. *The Cambridge Companion to the Guitar*. New York: Cambridge University Press, 2003.

Cohn, Laurence, ed. *Nothing But the Blues: The Music and the Musicians*. New York: Abbeville Press, 1993.

Corn, Joseph J. *User Unfriendly: Consumer Struggles with Personal Technologies, from Clocks and Sewing Machines to Cars and Computers.* Baltimore: Johns Hopkins University Press, 2011.

Cortese, Vincent. *Roy Smeck, The Wizard of the Strings in His Life and Times*. Lincoln, NE: iUniverse, Inc., 2004.

Crawford, Richard. *America's Musical Life: A History*. New York: W. W. Norton, 2001.

Daniel, Pete. *Lost Revolutions: The South in the 1950s*. Chapel Hill: University of North Carolina Press for Smithsonian National Museum of American History, Washington, D.C., 2000.

Daniels, Roger. *Not Like Us: Immigrants and Minorities in America, 1890-1924*. Chicago: Ivan R. Dee, Inc., 1997.

Deloria, Philip Joseph. *Playing Indian*. New Haven: Yale University Press, 1998.

Dorr, Robert F. *Chopper: Firsthand Accounts of Helicopter Warfare, World War II to Iraq*. New York: Berkley Books, 2005.

Eliason, Robert E. *Keyed Bugles in the United States*. Washington, D.C.: Smithsonian Institution Press, 1972.

Elsden, Annamaria Formichella. *Roman Fever: Domesticity and Nationalism in Nineteenth-Century American Women's Writing*. Columbus: Ohio State University Press, 2004.

Evans, David. *Big Road Blues: Tradition and Creativity in Folk Blues*. Berkeley: University of California Press, 1982.

———, ed. *Ramblin' on My Mind: New Perspectives on the Blues*. Urbana: University of Illinois Press, 2008.

Evans, Steve, and Ron Middlebrook. *Cowboy Guitars: It's a big roundup of those wonderful cowboy guitars starting with the Gene Autry Model of 1932 through present day*. Anaheim Hills, CA: Centerstream Publishing, 2002.

Evans, Tom, and Mary Anne Evans. *Guitars: Music, History, Construction and Players, From the Renaissance to Rock*. New York: Paddington Press, Ltd., 1977.

Fuller, Margaret, Larry J. Reynolds, and Susan Belasco Smith. *"These Sad but Glorious Days": Dispatches from Europe, 1846-1850.* New Haven: Yale University Press, 1991.

Gaylord, M.W. *Reinforced Plastics: Theory and Practice*. New York: Cahners Books, 1974.

Gerken, Teja, Michael Simmons, Frank Ford, and Richard Johnston. *Acoustic Guitar: An Historical Look at the Composition, Construction, and Evolution of One of the World's Most Beloved Instruments*. Milwaukee: Hal Leonard Corporation, 2003.

Green, Douglas B. *Singing in the Saddle: The History of the Singing Cowboy*. Nashville: The Country Music Foundation Press & Vanderbilt University Press, 2002.

Groce, Nancy. *Musical Instrument Makers of New York: A Directory of Eighteenth- and Nineteenth-Century Urban Craftsmen*. Stuyvesant, New York: Pendragon Press, 1991.

Gruhn, George, and Walter Carter. *Acoustic Guitars and Other Fretted Instruments: A Photographic History*. San Francisco: GPI Books, 1993.

———. *Gruhn's Guide to Vintage Guitars, An Identification Guide for American Fretted Instruments*. San Francisco: Miller Freeman Books, 1999.

Grunfeld, Frederic V. *The Art and Times of the Guitar*. New York: Macmillan, 1969.

Gura, Philip F. *C. F. Martin and His Guitars, 1796-1873*. Chapel Hill: The University of North Carolina Press, 2003.

Gura, Philip F., and James F. Bollman. *America's Instrument: The Banjo in the Nineteenth Century*. Chapel Hill: The University of North Carolina Press, 1999.

Hazen, Margaret Hindle Hazen and Robert M. *The Music Men: An Illustrated History of Brass Bands in America, 1800-1920*. Washington, D.C.: Smithsonian Institution Press, 1987.

Hoover, Will. *Picks! The Colorful Saga of Vintage Celluloid Guitar Plectrums*. San Francisco: Miller Freeman Books, 1995.

Hounshell, David. *From the American System to Mass Production, 1800-1932: The Development of Manufacturing Technology in the United States*. Baltimore: Johns Hopkins University Press, 1984.

John, Allen St. *Clapton's Guitar: Watching Wayne Henderson Build the Perfect Instrument*. New York: Free Press, 2006.

Johnston, Richard, Dick Boak, and Mike Longworth. *Martin Guitars: A History*. Rev. ed. New York: Hal Leonard, 2008.

Kellerman, Jonathan. *With Strings Attached*. New York: Ballantine Books, 2008.

Kuronen, Darcy, Lenny Kaye, and Carl Tremblay. *Dangerous Curves: The Art of the Guitar*. Boston: MFA Publications, 2000.

Laird, Pamela Walker. *Advertising Progress: American Business and the Rise of Consumer Marketing*. Baltimore: Johns Hopkins University Press, 1998.

Latham, Angela J. *Posing a Threat: Flappers, Chorus Girls, and Other Brazen Performers of the American 1920s.* Hanover, NH: Published by University Press of New England [for] Wesleyan University Press, 2000.

Leach, William. *Land of Desire: Merchants, Power, and the Rise of a New American Culture*. New York: Pantheon, 1993.

Lears, T. J. Jackson. *Fables of Abundance: A Cultural History of Advertising in America*. New York: Basic Books, 1994.

Leslie, Stuart W. *The Cold War and American Science: The Military-Industrial-Academic Complex at MIT and Stanford*. New York: Columbia University Press, 1993.

Linn, Karen. *That Half-Barbaric Twang: The Banjo in American Popular Culture*. Urbana: University of Illinois Press, 1994.

Loesser, Arthur. *Men, Women and Pianos: A Social History*. New York: Dover Publications, Inc., 1990.

MacKenzie, Donald A., and Judy Wajcman, eds. *The Social Shaping of Technology*. Philadelphia: Open University Press, 1985.

Malone, Bill C., and Jocelyn R. Neal. *Country Music, U.S.A.* 3rd ed. Austin: University of Texas Press, 2010.

Marchand, Roland. *Advertising the American Dream: Making Way for Modernity, 1920-1940*. Berkeley: University of California Press, 1985.

Martin, Lynn J., ed. *Folklife Hawai'i, A Festival in Celebration of the 25th Anniversary of the State Foundation on Culture and the Arts, October 18-21, 1990*. Honolulu: The State Foundation on Culture and the Arts, 1990.

Martin, Robert K., and Leland S. Person, eds. *Roman Holidays: American Writers and Artists in Nineteenth-Century Italy*. Iowa City: University of Iowa Press, 2002.

Martin, Susan F. *A Nation of Immigrants*. New York: Cambridge University Press, 2011.

McGowen, Stanley S. *Helicopters: An Illustrated History of their Impact*. Santa Barbara, CA: ABC-CLIO, 2005.

Meikle, Jeffrey L. *American Plastic: A Cultural History*. New Brunswick: Rutgers University Press, 1995.

Millard, André. *America on Record: A History of Recorded Sound*. New York: Cambridge University Press, 1995.

———, ed. *The Electric Guitar: A History of an American Icon*. Baltimore: Johns Hopkins University Press, 2004.

Mohun, Arwen P. *Risk: Negotiating Safety in America*. Baltimore: Johns Hopkins University Press, 2013.

Noonan, Jeffrey J. *The Guitar in America: Victorian Era to Jazz Age*. Jackson: University Press of Mississippi, 2008.

Okihiro, Gary Y. *Island World: A History of Hawai'i and the United States*. Berkeley: University of California Press, 2008.

Oudshoorn, Nelly and Trevor Pinch, eds., *How Users Matter: The Co-Construction of Users and Technology*. Cambridge, MA: The MIT Press, 2003.

Ownby, Ted. *American Dreams in Mississippi: Consumers, Poverty, & Culture, 1830-1998*. Chapel Hill: The University of North Carolina Press, 1999.

Palmer, Robert. *Deep Blues*. New York: Viking Press, 1981.

Parakilas, James. *Piano Roles: Three Hundred Years of Life with the Piano*. New Haven: Yale University Press, 1999.

Pearson, Barry Lee. *Jook Right On: Blues Stories and Blues Storytellers*. Knoxville: University of Tennessee Press, 2005.

Pecknold, Diane. *The Selling Sound: The Rise of the Country Music Industry*. Durham, NC: Duke University Press, 2007.

Phillips, Robert W. *Roy Rogers: A Biography, Radio History, Television Career Chronicle, Discography, Filmography, Comicography, Merchandising and Advertising History, Collectibles Description, Bibliography and Index*. Jefferson, NC: McFarland & Company, Inc., 1995.

Pleijsier, Hubert. *Washburn Prewar Instrument Styles: Guitars, Mandolins, Banjos and Ukuleles 1883-1940*. Anaheim Hills, CA: Centerstream Publishing LLC, 2008.

Pope, Daniel. *The Making of Modern Advertising*. New York: Basic Books, 1983.

Pursell, Carol W. *Technology in Postwar America: A History*. New York: Columbia University Press, 2007.

Robinson, Larry. *The Art of Inlay: Design & Technique for Fine Woodworking*. San Francisco: Backbeat Books, 2005.

Roden, Steve. *I Listen to the Wind That Obliterates My Traces: Music in Vernacular Photographs, 1880-1955*. Atlanta, GA: Dust to Digital, 2011.

Roell, Craig H. *The Piano in America, 1890-1940*. Chapel Hill: The University of North Carolina Press, 1989.

Ruymar, Lorene, ed. *The Hawaiian Steel Guitar and Its Great Hawaiian Musicians*. Anaheim Hills, CA: Centerstream Publishing, 1996.

Rydell, Robert. *All the World's A Fair: Visions of Empire at American International Expositions, 1876-1916*. Chicago: University of Chicago Press, 1984.

Sallis, James. *The Guitar Players: One Instrument and Its Masters in American Music*. Lincoln: University of Nebraska Press, 1994.

Schmidt, Paul William. *Acquired of the Angels: The Lives and Works of Master Guitar Makers John D'Angelico and James L. D'Aquisto*. Lanham, MD: Scarecrow Press, 1998.

Scranton, Philip. *Endless Novelty: Specialty Production and American Industrialization, 1865-1925*. Princeton: Princeton University Press, 1997.

Shaw, Robert, and Peter Szego, eds. *Inventing the American Guitar: The Pre-Civil War Innovations of C. F. Martin and His Contemporaries*. Milwaukee: Hal Leonard Books, 2013.

Smulyan, Susan. *Selling Radio: The Commercialization of American Broadcasting, 1920-1934*. Washington, D.C.: Smithsonian Institution Press, 1994.

Spann, Joseph E. *Spann's Guide to Gibson, 1902-1941*. Anaheim Hills, CA: Centerstream Publishing, LLC, 2011.

Sparks, Paul. *The Classical Mandolin*. Oxford: Clarendon Press, 1995.

Stebbins, Theodore E., Jr., and William H. Gerdts. *The Lure of Italy: American Artists and the Italian Experience, 1760-1914.* Boston: Museum of Fine Arts, Boston, 1992.

Sterne, Jonathan. *The Audible Past: Cultural Origins of Sound Reproduction*. Durham: Duke University Press, 2003.

Strasser, Susan. *Satisfaction Guaranteed: The Making of the American Mass Market.*. New York: Pantheon, 1988.

Suisman, David. *Selling Sounds: The Commercial Revolution in American Music*. Cambridge: Harvard University Press, 2009.

Summerfield, Maurice J. *The Jazz Guitar: Its Evolution and Its Players*. Gateshead, Eng.: Ashley Mark, 1978.

Susman, Warren I. *Culture as History: The Transformation of American Society in the Twentieth Century*. New York: Pantheon, 1984.

Teagle, John. *Washburn: Over One-Hundred Years of Fine Stringed Instruments*. New York: Music Sales Corp., 1996.

Tranquada, Jim, and John King. *The Ukulele: A History*. Honolulu: University of Hawai'i Press, 2012.

Ulrich, Laurel Thatcher. *The Age of Homespun: Objects and Stories in the Creation of an American Myth*. New York: Alfred A. Knopf, 2001.

Vance, William L. *America's Rome*. Vol. II. New Haven: Yale University Press, 1989.

Volk, Andy. *Lap Steel Guitar*. Anaheim, CA: Centerstream Publications, 2003.

Waksman, Steve. *Instruments of Desire: The Electric Guitar and the Shaping of Musical Experience*. Cambridge: Harvard University Press, 1999.

Wald, Elijah. *Escaping the Delta: Robert Johnson and the Invention of the Blues*. New York: Amistad, 2004.

Walsh, Tom, and John King. *The Martin Ukulele: The Little Instrument That Helped Create a Guitar Giant*. Milwaukee: Hal Leonard, 2013.

Wardlow, Gayle Dean. *Chasin' That Devil Music: Searching for the Blues*. San Francisco: Miller Freeman Books, 1998.

Washburn, Jim, and Richard Johnston. *Martin Guitars: An Illustrated Celebration of America's Premier Guitarmaker*. Emmaus, PA: Rodale Press, Inc., 1997.

Waterhouse, William. *The New Langwill Index: A Dictionary of Musical Wind-Instrument Makers and Inventors*. London: Tony Bingham, 1993.

Werner, Emmy E. *Passages to America: Oral Histories of Child Immigrants from Ellis Island and Angel Island*. Washington, D.C.: Potomac Books, Inc., 2009.

Wheeler, Tom. *American Guitars, An Illustrated History*. Rev. ed. New York: Harper Perennial, 1992.

White, Raymond E. *King of the Cowboys, Queen of the West: Roy Rogers and Dale Evans*. Madison: The University of Wisconsin Press, 2005.

Whitford, Eldon, David Vinopal, and Dan Erlewine. *Gibson's Fabulous Flat-Top Guitars: An Illustrated History & Guide*. San Francisco: Miller Freeman Books, 1994.

Woloson, Wendy A. *In Hock: Pawning in America from Independence through the Great Depression*. Chicago: University Of Chicago Press, 2009.

Wooden, Wayne S. *Return to Paradise: Continuity and Change in Hawaii*. Lanham, MD: University Press of America, Inc., 1995.

Wright, Michael. *Guitar Stories*. Bismarck, ND: Vintage Guitar Books, 1995.

———. *Guitar Stories*. Vol. 2, *The Histories of Cool Guitars.* Bismarck, ND: Vintage Guitar Books, 2000.

Wright, Nathalia. *American Novelists in Italy, The Discoverers: Allston to James*. Philadelphia: University of Pennsylvania Press, 1965.

Yans-McLaughlin, Virginia, ed. *Immigration Reconsidered: History, Sociology, and Politics*. New York: Oxford University Press, 1990.

Articles and Book Chapters

Bastin, Bruce. "Truckin' My Blues Away: East Coast Piedmont Styles." In *Nothing But the Blues: The Music and the Musicians*, edited by Lawrence Cohn, 205-231. New York: Abbeville Press, 1993.

Blattenberger, Dick. "'If resonators could talk!...'." *Bluegrass Unlimited*, May 1997.

Boak, Dick "Living Legend: The revolutionary designs of Mario Maccaferri from Django Reinhardt's guitar to the plastic clothespin." *Acoustic Guitar*, March/April 1992, 51-58.

Carter, Walter. "An Uneasy Relationship: Orville and the Board of Managers." In Carter, *Gibson Guitars*, 34-37.

———. "The Big Village: Kalamazoo, 1880s-1890s." In Carter, *Gibson Guitars*, 12-13.

———. "Come Let Us Reason Together: A Tour of Catalog H." In Carter, *Gibson Guitars*, 52-55.

———. "The Ghost of Gibson: Kalamazoo, 1993." In Carter, *Gibson Guitars*, 60-65.

———. "Meanwhile in New York: An Archtop Blitz." In Carter, *Gibson Guitars*, 140-145.

———. "Sales Without Sales Reps: The Gibson Teacher-Agent." In Carter, *Gibson Guitars*, 49-51.

Comber, Chris. "The Early History of the Steel Guitar." *Country Music People* 3, May 1972.

Cowan, Ruth Schwartz. “The Consumption Junction: A Proposal for Research Strategies in the Sociology of Technology.” In Bijker, Hughes, and Pinch, 261-280.

Cruice, Valerie. “The View From: New Hartford; From the Ratcheting of Helicopters to a Guitar's Hum.” *New York Times*, December 8, 1996.

Daniel, Pete. “Rhythm of the Land.” *Agricultural History* 68, no. 4 (Autumn 1994): 1-22.

Dawe, Kevin, and Moira Dawe. “Handmade in Spain: The Culture of Guitar Making.” In Dawe and Bennett, 63-87.

Evans, David. “Afro-American One-Stringed Instruments.” *Western Folklore* 29, no. 4 (October 1970): 229-245.

Fenster, Mark. “Preparing the Audience, Informing the Performers: John A. Lomax and Cowboy Songs and Other Frontier Ballads.” *American Music* 7, no. 3 (Autumn 1989): 260-261.

Forbes-Roberts, Ron. “Carbon-Fiber Guitars, An Examination of the guitars and construction methods of carbon-fiber guitar builders.” *Acoustic Guitar*, July 2008.

Fricke, David. “Clapton and Beck: The Long and Winding Road.” *Rolling Stone*, March 4, 2010.

Gear, Robert F. “Metal Bodied Guitars.” *Mugwumps, The Magazine of Folk Instruments*, September 1973.

Gray, Tom. “Dobro, the Resonator Guitar that Refused to Die.” *Bluegrass Unlimited*, January 1999.

Hines, Geoffrey. “The Curator: Traditional country music is in good hands with Marty Stuart.” *The Fretboard Journal*, no. 21, 2011.

Holmes, Michael. “Gibson and the Rest: The Mandolin Makers.” In Carter, *Gibson Guitars*, 40.

Hughes, Thomas P. “The Evolution of Large Technological Systems.” In Bijker, Hughes, and Pinch, 51-82.

Humphrey, Mark. “Bottlenecking, The Rise of the Slide Guitar.” *Frets*, March 1983, 20-24.

Johnston, Richard. “C. F. Martin in New York, 1833-1839.” In Shaw and Szego, 28-45.

———. “Early Martin Guitar Design and Construction: What Survived.” In Shaw and Szego, 222-234.

———. “Martin’s Evolution to an American Guitar.” In Shaw and Szego, 190-206.

Kline, Ronald and Trevor Pinch. “Users as Agents of Technological Change: The Social Construction of the Automobile in the Rural United States.” *Technology and Culture* 37, no. 4 (October 1996): 763-795

Kopytoff, Igor. “The Cultural Biography of Things: Commoditization as Process.” In *The Social Life of Things: Commodities in Cultural Perspective*, edited by Arjun Appadurai, 64-91. Cambridge: Cambridge University Press, 1986.

Kranzberg, Melvin. “Technology and History: “Kranzberg's Laws”.” *Technology and Culture* 27, no. 3 (July 1986): 557-558.

Kreitzer, Amy. “Sweet Harmonies from Little Boxes: Mandolin Playing in Minneapolis and St. Paul.” *Minnesota History* 57, no. 5 (Spring 2001): 218-237.

Logsdon, Guy. “Steel Guitar.” *Mugwumps, The Magazine of Folk Instruments*, May 1974.

Martin, Darryl. “Innovation and the Development of the Modern Six-string Guitar.” *Galpin Society Journal* 51, (July 1998): 86-109.

Narvàez, Peter. “Unplugged: Blues Guitarists and the Myth of Acousticity.” In Dawe and Bennett, 27-44.

Pilling, Julian. “Fiddles with Horns.” *Galpin Society Journal* 28, (April 1975): 86-92.

Reffe, Herman. “Prepregs.” In *Handbook of Fiberglass and Advanced Plastics Composites*, edited by George Lubin, 421-437. Huntington, NY: R. E. Krieger Publishing Company, 1975.

Roberts, Ron Forbes. “Carbon-Fiber Guitars, An Examination of the guitars and construction methods of carbon-fiber guitar builders.” *Acoustic Guitar*, July 2008.

Siminoff, Roger H. “A Man With a Vision: Orville H. Gibson.” In Carter, *Gibson Guitars*, 14-15.

———. “Crowning Glories: Mr. Loar’s Master Models.” In Carter, *Gibson Guitars*, 82-85.

Taylor, Charles R., and Michael G. Walsh. “Legal Strategies for Protecting Brands from Genericide: Recent Trends in Evidence Weighted in Court Cases.” *Journal of Public Policy & Marketing* 21, no. 1 (Spring 2002): 160-167.

Tilly, Charles. “Transplanted Networks.” In Yans-McLaughlin, 79-85.

Troutman, John W. “Steelin’ the Slide: Hawai’i and the Birth of the Blues Guitar.” *Southern Cultures* 19, no. 1 (Spring 2013): 26-52.

Woloson, Wendy. “In Hock: Pawning in Early America.” *Journal of the Early Republic* 27, no. 1 (Spring 2007): 35-81.

Wright, Michael. “Maccaferri History, The Guitars of Mario Maccaferri.” *Vintage Guitar*, March 5, 2002.

———. “Mail-order Guitars.” In *Echo and Twang: Classic Guitar Music of the ‘50s,* edited by Tony Bacon, 52-57. San Francisco: Backbeat Books, 2001.

Yellin, Robert. “Sixty Years of Instrumental Wizardry: Roy Smeck.” *Frets*, September 1979, 32-34.

Unpublished Theses and Dissertations

Bro, Paul Alan. “The Development of the American-made Saxophone: A Study of Saxophones made by Buescher, Conn, Holton, Martin, and H. N. White.” PhD diss., Northwestern University, 1993.

Hambly, Scott. “Mandolins in the United States Since 1880: An Industrial and Sociocultural History of Form.” PhD diss., University of Pennsylvania, 1977.

Johnson, Joseph R. “Mandolin Clubs and Orchestras in the United States (1880-1925): Their Origin, History, and Instruments.” Master’s thesis, University of South Dakota, 1987.

Krivin, Martin. “A Century of Wind Instrument Manufacturing in the United States: 1860-1960.” PhD diss., State University of Iowa, 1961.

Noonan, Jeffrey James. “The Guitar in America as Reflected in Topical Periodicals, 1882-1933.” PhD diss., Washington University, 2004.

Richardson, Sarah Deters. "Instruments of War: The Impact of World War II on the American Musical Instrument Industry." Master's thesis, University of South Dakota, 2010.

Ruppa, Paul. "The Mandolin in America after 1880 and the History of the Mandolin Orchestras in Milwaukee, Wisconsin." Master's thesis, University of Wisconsin-Milwaukee, 1988.

Salsini, John Louis. "The Guitar and the Ideal of Femininity in Nineteenth Century America." Master's thesis, University of Minnesota, 1990.

Internet Sources

C. F. Martin & Co., Inc. "00-DB Jeff Tweedy." Last modified 2013. Accessed February 4, 2015. https://www.martinguitar.com/model/item/949-00-db-jeff-tweedy.html.

———. "Introducing Martin Guitar's Vintage Tone System." Last modified 2013. Accessed February 4, 2015. http://www.martinguitar.com/guitars/featuresmaterials/vintage-tone-system-vts.html.

———. "Martin Guitar Travels Back in Time with Forward-Thinking New Retro Series." Last modified 2013. Accessed February 4, 2015. http://www.martinguitar.com/news/press-releases/743-martin-guitar-travels-back-in-time-with-forward-thinking-new-retro-series.html.

Canning, Charlotte. "Traveling Culture: Circuit Chautauqua in the Twentieth Century." University of Texas at Austin, Special Collections and University Archives-The University of Iowa Libraries. December 2000. Accessed February 5, 2015. http://www.lib.uiowa.edu/sc/tc/.

Gibson, Inc. "Gibson Tours." Accessed February 4, 2015. http://www2.gibson.com/Gibson/Gibson-Tours.aspx.

———. "J-45 Standard." Accessed October 20, 2014. http://www2.gibson.com/Products/Acoustic-Instruments/Round-Shoulder/Gibson-Acoustic/J-45-Standard.aspx.

Kaman. "Kaman Corporate History." Accessed October 19, 2011. http://www.kaman.com/history/history_p.html (site discontinued).

"National Guitars." National Reso-Phonic Guitars. Last modified 2010. Accessed February 4, 2015. http://www.nationalguitars.com/home.html.

"Ovation History and Roots of Guitar Design." Ovation Instruments. Accessed October 19, 2011. http://www.ovationguitars.com/whyovation/the_history (site discontinued).

Phys.org. "Passports for 'endangered' musical instruments." March 13, 2013. Accessed February 4, 2015. http://phys.org/news/2013-03-passports-endangered-musical-instruments.html

Siltanen, Rob. "The Real Story Behind Apple's 'Think Different' Campaign." *Forbes*, December 14, 2011. Accessed January 24, 2015. http://www.forbes.com/sites/onmarketing/2011/12/14/the-real-story-behind-apples-think-different-campaign/.

Springer, Mike. "*Guitar Stories*: Mark Knopfler on the Six Guitars That Shaped His Career." Open Culture. July 30, 2013. Accessed February 4, 2015. http://www.openculture.com/2013/07/guitar-stories-mark-knopfler-on-the-six-guitars-that-shaped-his-career.html

Weinberg, H. Barbara. "Mary Stevenson Cassatt (1844–1926)." Heilbrunn Timeline of Art History, The Metropolitan Museum of Art. October 2004. Accessed August 14, 2013. www.metmuseum.org/toah/hd/cast/hd_cast.htm.

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Dear Stacey,
I am a Ph.D. candidate in history at the University of Delaware where I am finishing up my dissertation entitled, "The Acoustic Guitar in American Culture, 1880-1980." I'm not sure if you remember me, but I was fortunate enough to be a Smithsonian Predoctoral fellow in 2010 and researched extensively in the Musical Instrument Collections of the Division of Culture and the Arts. I'm currently working on obtaining image permissions for my dissertation. Though it will not be published for profit, it will be scanned into the ProQuest database (UMI Dissertations Publishing) so I want to make sure that I have covered my bases prior to submitting my final dissertation draft later this spring. As part of the submission process, I have to include letters of permission pertaining to any potentially copyrighted images I use in the dissertation. I'm not sure if you're the right person to talk to but I hope at the very least you can point me in the right direction.

There are several images (~12) that I took my own photos of while researching in the Musical Instrument collections that I would be interested in using in my dissertation. Some of these images are of unprocessed materials (pamphlets, catalog pages, etc) in the curatorial files. I would also like to use some of the photographs of instruments that you provided me with during my fellowship. How would I go about seeking permission to use them? Is there a fee for their use if I use my own photos or do I need to have them scanned by the SI Library staff before they can be used? I'm happy to supply you with a complete list including thumbnails (or full image files if you prefer) but I wanted to first ask about the process before I submitted a detailed list.

This is my first time seeking image permissions for a publication and I appreciate all that you did to assist me during my time as a fellow. Please let me know if you have any questions and thanks in advance for your time.

Sincerely,
Andy Bozanic

Andrew D. A. Bozanic
Ph.D. Candidate
Dept. of History/UD-Hagley Program
abozanic@udel.edu

From: "Kluck , Stacey" <klucks@si.edu>
Subject: RE: Help with image permissions for a dissertation
Date: April 16, 2015 at 12:53:35 PM EDT
To: "'Andrew D. A. Bozanic'" <abozanic@udel.edu>

Hi Andy,

Attached is a high res image of Frederick John Wright (1926-1985) with "Dobro" guitar, 1938, that you may use. There are no copyright restrictions to use the image. It's fine to use your image of the guitar picks and slide.

All the best on your dissertation. Let me know if I can be of further assistance. Thanks!

Stacey Kluck
Chair
Division of Culture and the Arts
National Museum of American History
Smithsonian Institution
202.633.3588

From: Andrew D. A. Bozanic [mailto:abozanic@udel.edu]
Sent: Wednesday, April 15, 2015 5:08 PM
To: Kluck , Stacey
Subject: Re: Help with image permissions for a dissertation

Dear Stacey,
Thank you so much for your accommodating response. I'm sorry it's taken me so long to get back to you. Right after I sent you my initial email, I shifted gears to concentrate on my defense and tabled the permissions issues until that was over. Now that I've successfully defended my dissertation, I'm picking back up on the status of image permissions as I'm in the process of editing the final draft of my dissertation.

I sincerely appreciate you allowing me to include images from the Smithsonian collections in the dissertation and I used the text you provided for each of the credits. I have high quality images of all of the instruments that I would like to include as you made 3 CDs worth of files available to me right before I finished my fellowship in July 2010.

My only additional question is in regards to several items associated with the Dobro guitar (#1989.0660.01). One is a photograph of "Frederick John Wright (1926-1985) with “Dobro” guitar, 1938," that I found in the curatorial files for the Dobro instrument his wife donated to the museum. I also took photos of the fingerpicks and steel that came with the guitar. I have included some compressed images of both that I took while I was researching at the NMAH.

I would like to use a photo of each, but I wasn’t sure a) if you had a higher quality image available of either and b) if I need to seek permission from any other copyright holders with regards to these items.

They are not essential to the dissertation but I would like to include them if possible. Thanks again for all of your help. I couldn’t have written this dissertation without it!

Best,
Andy

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