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I, Andrew Wittenberg, hereby submit this original work as part of the requirements for the degree of Doctor of Philosophy in Theory.

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The Improvisation and Preservation of Barbershop Harmony: Parsimonious Voice Leading and the Harmonic Highway

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The Improvisation and Preservation of Barbershop Harmony: Parsimonious Voice Leading and the Harmonic Highway

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Abstract

The Improvisation and Preservation of Barbershop Harmony: Parsimonious Voice Leading and the Harmonic Highway

This dissertation explores the tension between improvisation and preservation in the development of the barbershop style. Barbershop music is an American genre of a cappella vocal music originating in improvisational singing by African Americans in the late 19th century. Barbershop singing was widespread in the first two decades of the 20th century, but later declined in popularity until a group of Midwesterners founded the Society for the Preservation and Encouragement of Barbershop Quartet Singing in America (SPEBSQSA) in 1938. This Society was built on nostalgia and a desire to preserve "the old songs" and the practice of barbershop quartet singing. Preservation was primarily accomplished through contest rules, which outlined the mandatory elements of the barbershop style. In this dissertation, I emphasize the importance of improvisation in the formation of barbershop music. I explore the role Society preservation efforts played in codifying certain elements of contemporary practice and provide detailed explication and analysis of SPEBSQSA music theoretical sources. I identify weaknesses in existing barbershop theory for explaining certain chromatic progressions that are idiomatic to the style and suggest that these progressions are evidence of the Black improvised origin of the style. By applying modern neo-Riemannian theory methodologies, I demonstrate that parsimonious voice leading is a key organizing principle of barbershop music that can be visualized through graphical representations of seventh chord harmonic spaces. These findings allow me to present a comprehensive theory of barbershop harmonic practice, which I employ in a thorough study of harmony and voice leading in barbershop endings, called tags.

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Table of Contents

Introduction

Barbershop music is an American genre of vocal music that has been sung since the late 19th century and continues to be performed today. For many, the term "barbershop music" evokes images of four white men in old-timey costumes, singing nostalgic songs in small town America, as portrayed in various pop culture settings like the popular musical and film *The Music Man*. This image reflects the values of the founders of the Society for the Preservation and Encouragement of Barber Shop Quartet Singing in America (SPEBSQSA). Since its founding in 1938, SPEBSQSA (now called the Barbershop Harmony Society or BHS and hereafter called the Society) has been the self-appointed guardians of the style, shaping the narrative, history, and musical characteristics of contemporary practice. However, this caricature of barbershop music does not reflect either the practice of barbershop singing around the turn of the 20th century or the current practice of barbershop singing across the world. Scholars have shown that the origin of barbershop music can be traced to Black improvised harmony in the late 19th century. In this dissertation, I draw connections between that improvised singing and the more rigid harmony and voice leading that arose through the Society's preservationist impulse throughout its history.

The preservation efforts made by the Society have resulted in a cohesive and highly systematized genre of music. Modern barbershop music is unaccompanied, four-part vocal music with the melody in an inner voice. Each melodic note is harmonized with a consonant[1], complete, four-part chord in a primarily homorhythmic texture. Seventh chords, especially those containing a tritone, are featured prominently, and major-minor sevenths are the most stylistic

[1] In barbershop theory, consonance is relative, and may include all tertian sonorities that occur naturally in the diatonic scale.

sonority in the style. These major-minor seventh chords often resolve by descending fifth as secondary dominants, while making use of other non-dominant resolutions.

Due to some of the characteristics of the style, I have chosen to analyze the harmonies with Arabic numerals, following most of the conventions of the Nashville number system[2], rather than traditional Roman numerals with figured bass. This decision was made for a few reasons – first, because every melodic note is harmonized with a chord, there are many sixth and ninth chords. The use of a superscript 6, then, refers to a sixth chord, not a first inversion triad. Second, inversion is rarely of significance in this music, since root position and second inversion are used interchangeably to ensure a minimum of doubled notes. Third, there are many non-functional uses of chromatic harmonies, especially the major-minor seventh. By avoiding Roman numerals, we can avoid assigning function to these harmonies and focus on the quality, root, and voice leading instead.

TABLE 1. Chord Symbols

Symbol	Meaning
1	Major triad built on scale degree 1
4m, 4+, 4°	Minor, augmented, and diminished triad built on scale degree 4
2^7, $2m^7$	Major-minor seventh and minor seventh built on scale degree 2
$6°^7$, $6ø^7$, 6^{M7}	Fully diminished, half-diminished, and major sevenths built on scale degree 6
5^6	Sixth chord built on scale degree 5
4^9, 4^{add9}	Dominant ninth and major triad with added ninth built on scale degree 4

[2] This system is used primarily by country musicians and uses Arabic numerals to denote the scale degree of the root of each harmony.

$\flat 6^7$, $\sharp 2^7$	Major-minor sevenths built on non-diatonic roots

This dissertation examines the tension between improvisational and preservational forces throughout the history of barbershop practice. Chapter 1 summarizes the early history of barbershop singing in America, highlighting the role that improvisation played in the formation of the style. Chapter 2 provides a detailed explanation of the features of the modern barbershop style and investigates the role that the Society played in shaping the musical features of the style through contest rules, music theoretical texts, and arranging instruction. Chapter 3 discusses the features of modern barbershop harmony and voice leading that stem from its improvisational origin and uses neo-Riemannian theory to understand and visualize many of the chromatic progressions found in this music. Chapter 4 provides detailed analysis of the unique harmonic practices found in barbershop endings, called tags, which are central to both the musical and social harmony of barbershop singers. Each chapter concludes with a case study, which includes an analysis of a complete barbershop arrangement that reinforces key concepts from the chapter.

Chapter 1: The History, Origin, and Early Development of the Barbershop Style

Like much of the popular music in the United States in the late 19th and early 20th century, barbershop music has a complicated history and origin. Academia's primary interest in barbershop music concerns questions of the beginnings of this American musical style. That interest can be credited in large part to the pioneering work of Lynn Abbott in his 1992 article "'Play that Barbershop Chord:' A Case for the African American Origins of Barbershop," which challenged the prevailing view that barbershop music was a genre with white European origins and was practiced primarily by white Americans in the early 1900s. Abbott, along with Jim Henry and Gage Averill, among others, have since demonstrated that African American musical practice is a vital component of the history and origins of barbershop music, stretching back to the late 1800s. This chapter summarizes the narratives of a white origin of barbershop put forth by barbershop revivalists, particularly leaders of SPEBSQSA, and the scholarly rebuttals made by Abbott and others, emphasizing the role improvisation played in the early history of barbershop singing and in the development of a unique harmonic style. I argue that improvised harmony by both white and Black quartets before the 1940s exhibited looser approaches to doubling and voice leading. I also find numerous accounts that indicate that the chromatic, "unusual" and non-functional use of harmony in barbershop music around the turn of the 20th century was unique to the Black improvised tradition.

The Myth of White Origins

One of the greatest myths created by early barbershop revivalists was that of the white origins of barbershop quartet singing. According to Lynn Abbott, this myth was primarily proposed by three significant sources: popular-music historian Sigmund Spaeth, singer C.T. Deac Martin, and musicologist Percy A. Sholes.[1] All three referred to mentions of "barber's music" in Elizabethan-era England as the predecessor to barbershop music in America. However, none of the sources they cited discussed vocal music of any kind.

In 1925, thirteen years before the formation of SPEBSQSA, Spaeth published a collection of popular songs called *Barber Shop Ballads*. This book was the first to propose a white European origin of barbershop harmony, making casual allusions to barbers in England, and the only credit given to the African American contribution was the mention of taking some of the repertoire from Black singers. Though Spaeth was a barbershop "insider" as an eventual member of the Society, he was also a music scholar. In 1929, Spaeth published a book entitled "They Still Sing of Love." This book was not geared specifically towards barbershoppers, but in it, he eschews the Elizabethan England origin of barbershop and instead points to Black barbershops in Jacksonville, Florida, where Black men formed quartets and harmonized by ear. Unfortunately, this book made no significant impact on the barbershop revivalists. In the second edition of *Barber Shop Ballads* in 1940, Spaeth joked about how little research went into the first edition, noting that he "dragged in far-fetched references to tonsorial details which really had nothing to do with the subject."[2] In this edition of *Barber Shop Ballads*, he plays the middle ground, mentioning Jacksonville and England as equally plausible origins of the style.

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[1] Lynn Abbott, "'Play that Barber Shop Chord': A Case for the African American Origin of Barbershop Harmony," *American Music* 10 (1992): 293.

[2] Sigmund Spaeth, Barber Shop Ballads (rev. 2d ed.) (New York: Prentice-Hall, 1940), vii.

Singer C.T. Deac Martin published a popular song book in 1932 called *A Handbook for Adeline Addicts*. This book included a brief history of the style and assumed a white origin of barbershop harmony. Martin noted that while barbershop revivalists owe a debt to African Americans for their contribution of singing and blending harmonies, the term "barber shop music" is originated from small town (white) America. Nearly 50 years after this book, Martin admitted in his memoirs that he first heard barbershop harmony from a Black quartet in his hometown. Finally, this myth made its way to a scholarly publication. In 1938, the very year the BHS was founded, Percy A. Scholes wrote an entry on barbershop music for the *Oxford Companion to Music*. In this entry, Scholes compiled several period literary references from England which alluded to barber's music and suggested that though barber's music ended in the early 18th century in England, it continued for much longer in America. The myth of the white origins of barbershop music was thus cemented.

In 1936, four white men singing in a barbershop were featured in a Norman Rockwell painting for the cover of the Saturday Evening Post. This iconic photo shows that by the mid-1930s, barbershop singing was already associated primarily with white singers. Two years later, in 1938, the Society for Preservation and Encouragement of Barbershop Quartet Singing in America was founded. In its early days, the Society systematically erased African Americans from their version of the history of barbershop singing. The myth of the white origins of barbershop quartet singing was perpetuated by Society historians and widely accepted for more than the next 50 years.

Early History of SPEBSQSA

Henry and Averill trace the early history and formation of SPEBSQSA, which came about from a movement that Averill calls the "barbershop revival."[3] This revival was found most prominently in two regions: New York City, and across the midwestern United States. Starting in 1935, New York's parks and recreation department held the American Ballad Contest for Amateur Barber Shop Quartets. Mayor Fiorello La Guardia, parks commissioner Robert Moses, and Democratic President candidate and former governor Alfred E. Smith were all involved in the administration and adjudication of these contests, which were held until the 1960s. These contests were promoted as nostalgic events, with contestants and judges arriving in antique vehicles, and requirements of period costumes and songs written before 1905. Judges evaluated performances based on musical ability, interpretation, and physical appearance.

To the west, another resurgence of barbershop activity began in Tulsa, Oklahoma. OC Cash, a Tulsa businessman, had been forming impromptu quartets in hotel lobbies across the country, and together with Rupert Hall, hosted an evening of barbershop singing at the local Tulsa Club in 1938. This was the first meeting of the Society for the Preservation and Propagation of Barber Shop Quartet Singing in the United States (SPPBSQSUS), which quickly became the Society for the Preservation and Encouragement of Barber Shop Quartet Singing in America (SPEBSQSA), and later was renamed the Barbershop Harmony Society (BHS) in 2004. This society emphasized Neo-Victorian ideals, with a focus on fellowship, character, nostalgic old-time songs, and the idealized small-town America.

[3] Gage Averill, *Four Parts, No Waiting: A Social History of American Barbershop Harmony*, (New York: Oxford University Press, 2003), 87.

Cash convinced the organizers of the American Ballad Contest to become the first chapter of SPEBSQSA and named La Guardia, Moses, and Smith chairmen of the chapter, asserting that SPEBSQSA should be the umbrella society for all barbershop quartet activity in the United States. The New York chapter and the Tulsa contingent decided to collaborate to run another quartet contest at the 1940 World's Fair in New York City. Unfortunately, this collaboration only lasted one year. In 1941, the first and second place finishers at the New York contest were African American quartets. The first-place finishers, the Grand Central Redcaps, won the opportunity to represent New York City at the national contest in St. Louis. However, OC Cash suggested in a letter to the New York chapter that African American quartets would not be allowed to compete at the St. Louis contest to "keep down any embarrassment."[4] The leadership of the New York chapter, led by Moses and Al Smith, denounced the decision by SPEBSQSA, resigned from their positions, and severed their connections with the Society. The American Ballad Contest returned to its status as an unaffiliated event. Robert Moses pointed out the irony of the decision to exclude Black members and competitors from SPEBSQSA, noting that "if American ballads of Negro origin are to be ruled out of barber shop singing, most of the best songs we have will be blacklisted."[5]

This case of racial discrimination has been well-documented in the literature. Henry's dissertation publishes a series of correspondences between O.C. Cash and Robert Moses outlining the reasons the Red Caps were not invited to participate in the St. Louis contest. The two principal arguments used by Cash would continue to be used to exclude Black singers from

[4] James Henry, "The Origins of Barbershop Harmony: A Study of Barbershop's Musical Link to Other African American Musics as Evidenced Through Recordings and Arrangements of Early Black and White Quartets." Ph.D. diss., (Washington University of St. Louis, 2000): 37.
[5] Ibid, 38.

the Society for the next 25 years. First, Cash argues that their Society is a social organization, not primarily a competition, and as such, has the right to decide who to accept and who to exclude. The second is a pseudo-musical reason: Cash claims that the Red Caps do not sing barbershop music. “Contestants... must sing barber shop harmony (not Negro spirituals).”[6]

Society leadership commonly used this strategy of claiming that Black quartets did not (or could not) sing barbershop music. In a letter written in the aftermath of the Red Caps’ exclusion, Society president Carroll P. Adams wrote “I still have a deep-seated conviction that there is something about the Negro spiritual that a white person cannot completely master...I have always felt the same way about a group of Negros [sic] attempting what we call American barbershop harmony. It has always impressed me that they lack some little touch that we have.”[7] Notably, Sigmund Spaeth, Deac Martin, and Joseph Stern all firmly oppose Adams on this point, noting the Black Americans certainly sang barbershop harmony. However, these same men refused to acknowledge that Black ensembles of the 1940s were singing authentic barbershop music. Stern writes “The Mills Brothers and Ink Spots, are a later development and bear no relation to the old time Negro Barbershop quartets.”[8] In a Harmonizer article from 1949, Martin writes “I like the harmony of the Andrews Sisters, DiMarco Sisters, Mills Brothers, and the Ink Spots, but it is not 'barbershop' even though it is close harmony.”[9] According to Averill, “race became – at least to many of the heartland revivalists – a distinguishing factor in determining whether a performance actually was ‘barbershop.’” To this group of individuals, barbershop was four-part unaccompanied singing with the lead in an inner voice and sung by white men.

[6] Ibid, 40.
[7] Ibid, 47.
[8] Ibid, 49.
[9] Deac Martin, "The Way I See It," Harmonizer 8, no. 3 (March 1949): 42.

Clifton Boyd notes that the case of the Red Caps is the only occurrence of racial segregation by the Society regularly cited in the literature. He observes, however, that the Society had a long and troubled history with racial segregation until eventual integration in 1963. Through his archival research at Harmony Hall, Boyd discovers and brings to light the particularly disturbing "Project N." In 1958, the Society assembled a Special Advisory Committee to discuss its bylaws relating to race. This effort, dubbed "Project N" by Deac Martin, was "the Society's attempt to write its bylaws in such a way that in print they seemed to be welcoming to men of all races, while it maintained an unwritten rule to bar Black Americans from joining the Society."[10] Boyd notes that many Society chapters admitted non-Black people of color in the 1950s, and that the Society committee wanted to change its "white only" policy to "keep only Black Americans out of the Society with as few social and political repercussions as possible."[11] Boyd's research demonstrates that Black Americans were intentionally excluded from membership in the Society and were erased from the history of the style in favor of a fabricated white origins myth.

Scholarly Arguments for the African American Origin of Barbershop Music

In 1992, Lynn Abbott shattered this myth and argued persuasively for the African American origin of barbershop harmony. Abbott compiled a copious number of sources, including newspaper articles, autobiographies, and first-person accounts that confirmed the prevalence of Black quartets in the last couple of decades of the 19th century. Abbott cited James Wheldon Johnson, the civil rights activist, who wrote about growing up in Jacksonville in the 1880s. "In the days when such

[10] Clifton Boyd, "Keep It Barbershop: Stylistic Preservation and Whiteness in the Barbershop Harmony Society," PhD diss., (Yale University, 2022): 26-27.
[11] Ibid, 45.

a thing as a white barber was unknown in the South, every barber shop had its quartet, and the men spent their leisure time playing on the guitar ... and 'harmonizing.'"[12]

This recreational singing often took place in Black-owned barbershops. Abbott noted that the barber profession in America was made up nearly entirely of Black men until the turn of the 20th century.[13] The barbershop was often linked to recreation and relaxation, and many singers and quartets had connections with the barber trade. The famous American quartet, the Mills Brothers, were the sons of John Mills Sr., a barber in Piqua, Ohio who was an accomplished quartet singer in his own right.[14] The Mills Brothers were instrumental in the formation of the vocal harmony genre called doo-wop in the 1940s. They were clearly influenced by barbershop quartet practice from earlier in the century. Their first two albums were entitled *Famous Barber Shop Ballads Volumes I and II*, and feature songs that were very popular among the white quartetters of the Society, such as "Sweet Adeline," "My Gal Sal," and "You Tell Me Your Dream and I'll Tell You Mine."

Abbott showed that improvised close harmony was widespread throughout African American communities in the United States long before the Mills Brothers. James Wheldon Johnson and American educator Laurence C. Jones separately suggested that in the 1880s-90s "any four colored boys were a quartet."[15] Vaudeville actor and comedian Billy McClain expressed a similar sentiment about his experiences in Kansas City.[16] In an interview with Abbott, Dr. Laddie Melton, a New Orleans native, described experiences he had as a child at

[12] Lynn Abbott, "'Play that Barber Shop Chord': A Case for the African American Origin of Barbershop Harmony," 299.
[13] Ibid, 291.
[14] Ibid, 291.
[15] Ibid, 290.
[16] Ibid, 290.

school around 1910, where three or four of his friends would gather and say "Let's crack up a chord! Let's hit a note!"[17] By the 1870s, quartet singing was very popular in African American communities across America. Not restricted to the south or rural areas, there are records from the 1870s of Black northern urban quartets apart from minstrelsy, including the Arion quartet in Cincinnati, Ohio.[18] Many African American musicians who are considered fundamental to genres of music in the early 20th century sang in barbershop quartets. These include Scott Joplin in ragtime, the "Father of Blues" WC Handy, and jazz musicians Jelly Roll Morton and Louis Armstrong.[19]

Lynn Abbott's pioneering work set the stage for more scholars to follow. Whereas Abbott investigates the genesis of barbershop harmony through archival research and interviews, Henry studies early recordings of quartet singers to find the roots of this style. Henry observes a phenomenon that he hopes to explain in his research: "Thus we are presented with the true enigma of barbershop: it is associated with and practiced today mostly by whites, yet most signs indicate that it is primarily a product of the African American culture."[20] He demonstrates that barbershop music is derived from African American music by using early white and Black quartet recordings showing a musical link between barbershop and Black American music.

This musical connection is made by using early recordings of Black vocal groups as points of reference while showing the same traits in recorded performances of white quartets. He notes that though many of the earliest recordings he draws from are by white quartets, that does not confirm any origin in white European music. Instead, we see that white quartets were privileged

[17] Ibid, 290.
[18] Averill, *Four Parts, No Waiting,* 42.
[19] Ibid, 43-44.
[20] Henry, *The Origins of Barbershop Harmony*, 4.

over Black ones in the early recording industry. Henry proposes that there was a robust preexisting tradition of close harmony singing by African Americans which was recorded for profit by white groups. Because this Black music was being recorded by white quartets, it is likely that hybridization was taking place. Limitations in recording technology and the musical sensibilities of white performers may have resulted in music that sounded quite a bit different than Black quartet music. [21] Henry notes that a full-voiced tenor was often used by white quartets, as opposed to the falsetto tenor which was more indicative of Black vocal style. These recordings also removed Black vocal stylizations such as portamento in the interest of cleaner recordings. However, those recordings did not have a lasting impact on amateur singers. Henry writes that "the recreational singer, white and black, was influenced more by the black style of close harmony than by the manufactured studio version."[22]

The most comprehensive academic project on barbershop harmony was written by Gage Averill. His monograph, *Four Parts, No Waiting: A Social History of American Barbershop Harmony*, published in 2003, thoroughly explores the rise in popularity of close harmony singing in the United States, and the complex ways that barbershop music shaped and was shaped by American culture. Averill traces the roots of close harmony through the nineteenth and early twentieth centuries and argues that barbershop harmonic practice developed from a convergence of many styles and influences. He observes that close harmony quartet singing was popular in America throughout the nineteenth century. He writes "In the face of this profusion of harmonies – black and white, a cappella and accompanied, through-harmonized and verse-and-chorus, professional and amateur, improvised and scored – America was increasingly passionate about its

[21] Ibid, 20.
[22] Ibid, 20.

multipart (especially four-part) vernacular harmonies." Averill contends that barbershop has "trod a hybrid path between black and white expressive cultural forms."[23]

Averill lays out a history of close harmony singing in America, noting that influences from Europe were instrumental in its popularity in America. For example, German part-songs became popular, such as those composed by Franz Schubert and Carl Maria von Weber.[24] European singing troupes rose in popularity in the 1830s, including the influential Rainer family, whose troupe, The Tyrolese Minstrels, toured across America and impressed their audiences with close harmony and a seamless blending of voices.[25]

The Rainer Family inspired a spate of singing families who created troupes of their own. These included the Hutchinson Family Singers, one of the most popular groups of entertainers in America in the 1840s. The Hutchinsons were abolitionists and activists, and toured with the Luca Family Singers, an African American family who also achieved a great deal of popularity in the forties.[26] Though Abbott and Henry both acknowledge the role that singing families played in popularizing close harmony in America, both note the dissimilarities between the music of these family troupes and that of early Black barbershop music. "The early Tyrolese families,[27] however, certainly did not sing songs whose harmonies resembled those of barbershop music, and we can assume that their more gentile, mannered style of singing would not have been associated with the improvisational, guttural character of the early barbershop quartet."[28]

[23] Averill, *Four Parts, No Waiting*, 4.
[24] Ibid, 22.
[25] Ibid, 23.
[26] Ibid, 24-26.
[27] Henry refers here to the many singing families from Switzerland and Austria.
[28] Henry, "The Origins of Barbershop Harmony," 14.

Averill suggests a more concrete connection between the singing families and the beginnings of barbershop singing. "There is good reason to believe that the singing Hutchinson Family had a strong influence on quartet singing of the early minstrel show."[29] Clifton Boyd agrees with this assessment, "with this cultural appropriation and even with the exchange between the European... Tyrolese Minstrels and the American Hutchinson Family Singers, it is important to note that this racially and ethnically complex history makes it impossible for one particular group to take credit for the invention of barbershop harmony.... Therefore, close harmony—and by extension, barbershop harmony—is a distinctly American phenomenon precisely because of the close contact between diverse musical cultures."[30] In other words, barbershop music's origins are a result of a complex interplay between Black and white musical cultures.

If barbershop music is a highly syncretic American idiom, how did it become associated primarily with white singers so quickly? Henry believes the widespread recording of barbershop music played a pivotal role in shaping the public perception of their origins. He hypothesizes the steps that may have occurred to move the association of barbershop music so completely from Black music to white music in just a few decades.[31] The following is a summary of Henry's theory of transmission:[32] Black recreational singers improvised harmonies of popular songs, and idiosyncratic musical qualities arose. Those idiosyncrasies were parodied by white minstrel quartets and became so popular that they were widely recorded. White professional quartets recorded many of these songs and were more broadly recorded and distributed than their black

[29] Averill, *Four Parts, No Waiting*, 35.
[30] Boyd, "Keep it Barbershop," 9-10.
[31] Henry, "The Origins of Barbershop Harmony," 33.
[32] Ibid, 33.

counterparts. Hybridization occurred in these recordings and many of the African American qualities of this music were lost in transmission by white quartets. Finally, the widespread white recordings caused the sound of close harmony quartets to be associated with white music ensembles. The creation of SPEBSQSA in 1938 further reinforced this association by prohibiting Black membership for nearly 25 years.

Henry concedes that this theory of transmission of the style from Black to white, is somewhat over-simplistic, but it is a compelling framework for beginning to understand how this migration may have occurred. He notes that African Americans sang popular songs and improvised the harmonies. He suggests that this practice led to "idiosyncratic musical qualities that are the hallmarks of what we now consider the barbershop style."[33] The use of "idiosyncratic" suggests that the music was noticeably different from other close harmony singing styles of the 1800s, such as the professional singing families. These differences may have included vocal timbre and style, and improvisation may have led to harmony and voice leading outside of Western functional tonality.

The unique sound of this Black recreational singing was imitated and parodied by white singers in minstrel shows, and later, in early studio recordings. Averill notes the importance that professional singing groups and the stage played in the formation and popularization of barbershop harmony, particularly in minstrel shows. Averill proposes the use of the term "blackvoice," the sound analog to "blackface," where white performers simulated African American speech, dialect, and vocal mannerisms, in a crude or derogatory way.[34] These minstrel shows often also used stereotypically African American instruments such as the bones, fiddle,

[33] Ibid, 33.
[34] Averill, *Four Parts, No Waiting*, 33.

and banjo. Stephen Foster wrote many of the most popular minstrel songs performed on these shows and popularized the use of the verse-chorus form, where a solo verse was followed by a chorus in four-part harmony. Minstrel troupes traveled around the country and spread caricatures of African American close harmony singing extensively.

Many of the most popular minstrel quartets had great success as studio recording groups in the burgeoning music recording scene. Averill outlines the commercial success of close harmony and quartet singing in the "Golden Era" of barbershop music from 1890-1920. Close-harmony quartets had commercial success through their association with Tin Pan Alley, their omnipresence on the vaudeville stage, and their suitability for early recording technology. This period was marked by an enthusiasm for amateur recreational singing, a boom in songwriting through Tin Pan Alley, and the popularity of vaudeville variety shows, which nearly always featured a barbershop quartet. Many of the songs written in this era would end up in collections of popular barbershop tunes during the barbershop revival of the 1930s.

The invention of recording technologies initially contributed to the growth in popularity of barbershop quartets. Early recording technologies demanded a strong sound with limited instrumentation. Range was also a concern, as the wax cylinder recording devices could not pick up sounds that were too high or too low very well. For these reasons, male quartets were some of the most easily recordable music groups.[35] Averill points out three quartets in particular, the Haydn, American, and Peerless quartets, that were wildly popular, and had many of the best-selling recordings throughout the first two decades of the twentieth century.[36] Many songs popularized by these three quartets were beloved by the 1930s barbershop revivalists. These

[35] Ibid, 61.
[36] Ibid, 64.

included “My Wild Irish Rose,” “Let Me Call You Sweetheart,” “Take Me Out to the Ball Game,” and “Mr. Jefferson Lord, Play that Barbershop Chord,” the song that popularized the term “barbershop.”

Though there are some records of Black quartet recordings from the early 20th century, white groups were more widely recorded and distributed. Henry notes that a hybridization of white and Black music styles occurred through these white recordings. He finds that extensive use of portamento was common in recordings of Black quartets around the turn of the 20th century. However, the use of scoops, slurs, and slides[37] for expressive purposes was much less frequent in white studio quartets. He writes that the adoption of the style by white studio quartets and later by a Society which did not accept African Americans as members resulted in a hybridized style which lacked the “improvisational abandon” of music from Black-owned barbershops of the 19th century.[38]

In his dissertation, Henry demonstrates the hybridization that took place in his study of early recordings of barbershop music by both white and Black quartets. Through this study, he draws connections between early barbershop music and contemporary practice of the modern style, noting that these connections point to a Black origin of the style. Frédéric Döhl distinguishes between the practice of barbershop singing around the turn of the 20th century and the practice since the mid-1900s.[39] He suggests that barbershop music began as a harmonic style around 1890 but did not become a genre until sometime between 1940-1950. Though the genre, which he calls “modern barbershop,” uses the barbershop harmonic style of the “golden age” of

[37] Scoops, slurs, and slides are three different ways to use vocal expression to approach or exit a note.
[38] Henry, “The Origins of the Barbershop Style,” 209.
[39] Döhl, Frederic. “From Harmonic Style to Genre: The Early History (1890s-1940s) of the Uniquely American Musical Term Barbershop.” American Music 32, no. 2 (2014): 123–71.

barbershop around 1900, it has many additional characteristics that were not always present in earlier practice, such as melody in an inner voice, close-voiced chords, and just intonation. Despite the differences between harmonic style and modern genre, Henry finds many musical characteristics that are associated with African American music and that can be found both in early 20th century quartet recordings and modern barbershop performances. Henry discusses five of these musical characteristics specifically: (1) Call and Response Patterns, (2) Rhythmic Character and Primarily Horizontal Texture, (3) Mode, Scale, and Harmony, (4) Timbre, and (5) Extensive Use of Portamento.[40]

Call and Response Patterns

Call-and-response is one of the most fundamental features of Black vocal music. Call-and-response is characterized by alternation between a soloist (or leader) and a chorus (or congregation), often with overlapping phrases. A specific type of call-and-response that is commonly found in early quartet music is what Sigmund Spaeth calls "echo songs."[41] In an echo song, the lead sings a phrase, and the three harmony parts echo the lyrics verbatim. Many of the songs in Spaeth's *Barbershop Ballads* are echo songs, including one of the most iconic barbershop songs, "You're the Flower of My Heart, Sweet Adeline." Closely related to call-and-response patterns is the lead-in, where the lead begins the phrase before being joined by the remaining parts. Henry says that "nearly every recorded example of early black a cappella quartets includes the technique."[42]

Rhythmic Character and Primarily Horizontal Texture

[40] Henry, "The Origins of the Barbershop Style," 69.
[41] Ibid, 87.
[42] Ibid, 99.

The rhythmic character of African American music is noted by Henry, who "is immediately drawn to its metrical foundation and its unrelenting regularity of pulse."[43] Henry suggests that the steady pulse is important for dance music in Western African culture, and that the underlying meter often has a variety of uneven rhythms over it. Averill echoes this idea, saying, "European songs had their metrical structures 'ragged' by African American performers, who interjected crossing and contrasting rhythmic accents."[44] Modern barbershop music often does not have this steady pulse, as many songs are sung with lavish rubato. However, Henry suggests that the development of some musical embellishments is a result of the desire for unrelenting rhythm.[45] Without instruments, quartets needed to find a way to provide the feeling of percussion and meter. These quartets used rhythmic propellants,[46] such as echoes and swipes, to provide forward motion and rhythm in the empty spaces between phrases. These rhythmic propellants are ubiquitous in modern barbershop music.

Mode, Scale, and Harmony

Mode, scale, and harmony play a strong role in connecting modern barbershop to earlier Black musical practice. The blues scale, which uses lowered 3rd, 5th, and 7th scale degrees within a major key context, is a European tempering of a Black musical practice of pitch bending. In actual practice, "blue notes" can have varying degrees of microtonality, especially around the scale degrees 3 and 7. Henry argues that heterophonic singing involving these blue notes gave rise to two common barbershop seventh chords built on roots of scale degree 1 (using the lowered 7th degree) and scale degree 4 (using the lowered 3rd degree).[47] Unlike the many dominant and

[43] Ibid, 106.
[44] Averill, *Four Parts, No Waiting*, 33.
[45] Henry, "The Origins of the Barbershop Style," 106.
[46] Ibid, 107.
[47] Ibid, 181.

secondary dominant functioning barbershop seventh chords, the seventh chords built on scale degrees 1 and 4 typically do not function as dominants. Instead, they are the result of improvised lowered blue notes.

Some scholars have speculated that the secondary dominant sequence found in barbershop music was popularized by Black improvisational singing. Henry notes that the secondary dominants that are so integral to the barbershop harmonic style can be attributed to harmonic implementation of the blues scale.[48] Averill writes that the blues scale is an American adaptation of common African scalar models that are incongruent with Western diatonicism.[49] He suggests that barbershop harmony is a product of these pitch areas, expressed through chromatic voice leading.[50] Averill counters that the secondary dominant resolutions found in barbershop music are at least somewhat indicative of European influences. However, he agrees that "African American aesthetic preferences for shading a tone or for sliding between neighboring tones has in all likelihood played a role in the evolution of barbershop harmony and in the cultural preference for secondary dominant progressions."[51]

Averill continues: "Given the prevalent play with close harmony in African American communities of the mid to late nineteenth century and the practice of 'snaking' chords (moving from one chord to another by changing one or more non-melody notes), it is reasonable to assume that one of the most common techniques for snaking chords was to substitute alternative pitches within these 'African pitch areas' to produce new chords. This would have given to Black improvised harmonizing of the period a chromatic tint that could be readily evoked within the

[48] Ibid, 162.
[49] Averill, *Four Parts, No Waiting*," 32.
[50] Ibid, 32.
[51] Ibid, 32-33

sequences of secondary dominant chords that eventually became known as 'ragtime progressions.'"[52] Note that Averill emphasizes that this "snaking" is an improvisational practice that could be used to "produce new chords." These new chords found through improvisation are often chromatic and are chosen for their sound qualities rather than their harmonic function. In other words, they are brought about by linear, chromatic voice leading. This chromatic voice leading will be investigated further in Chapter 3.

Improvisation, Woodshedding, and Discovery

Scholars often associate improvisation with the Black origins of barbershop singing. This improvisation has a vertical (harmonic) and horizontal (voice leading) dimension. Henry notes the importance of horizontal texture in African American music.[53] How does that interact with barbershop music? Is barbershop harmony primarily vertically or horizontally oriented? Is improvisation a linear, horizontal practice, as suggested above, or a vertical one? Henry and Averill both mention heterophony as a significant component of improvisation in this style. Averill defines heterophonic singing as "in which two or more voices sing the same text using similar melodies but diverge appreciably in interpretation."[54] He cites an account of heterophonic slave singing, which writes that singers would diverge from the melody to other notes that "chord" with (are consonant with) the melody note. Averill writes, "I suspect that 'hitting some other note that chords' may be an apt description for the variety of harmonization that flourished in black communities in the nineteenth century outside of the domain of Western functional tonality."[55]

[52] Ibid, 33.
[53] Henry, "The Origins of the Barbershop Style," 69.
[54] Averill, *Four Parts, No Waiting*, 31.
[55] Ibid, 31.

Henry writes, "In black music, the dominant seventh chord often arises as a result of the blues scale coloration on an otherwise major chord. In these circumstances, the harmony may not progress according to its dominant function, but rather according to its function as a simple diatonic chord. Such non-dominant major-minor seventh chords are the result of a horizontal, rather than a vertical approach to music."[56] This perspective explains harmonies such as major-minor seventh chords built on the tonic and subdominant used in non-functional ways. Both Averill and Henry view heterophony, a distinctly horizontal practice, as a major contributor towards improvising new harmonies, and both note that these harmonies are outside of functional tonality. Henry provides a further example: "One particularly unusual chord that has persisted among barbershop groups is the flat-VI or flat-VI^7 with the barbershopper's chord of choice, a major chord. When one adds the blue fifth to this sonority the result is the even more irresistible secondary dominant chord."[57] In Chapter 3, I will show how the ♭6^7 and other non-functional harmonies may be a result of linear improvisational processes.

Another melodic and horizontal perspective on improvisation's role in early barbershop singing comes from jazz scholar, Vic Hobson. Hobson demonstrates that Louis Armstrong and many other pioneers of jazz played their instruments as if they were playing a part in a barbershop quartet. Armstrong mused that "I figure singing and playing is the same."[58] The simultaneous improvisation of melodic lines on their instruments by jazz players drew inspiration from a barbershop performance practice that was likely very similar. Hobson argues that jazz counterpoint

[56] Henry, "The Origins of the Barbershop Style," 180.
[57] Ibid, 197.
[58] Vic Hobson, "'I Figure Singing and Playing Is the Same': Louis Armstrong and Barbershop Harmony," *Jazz Perspectives* 10, no. 1, (2017): 100.

is derived from improvised barbershop singing. He gives this account of a recorded interview with Armstrong from the Hogan Jazz Archive:

> [Armstrong] continued, "So we'd go down to the music store, in the days before radios, and new piano copies, tunes that just come in New Orleans, and all you'd do is just run the lead down once." Once the lead part was mastered, "We'd woodshed on the weekend just blowing." He went on to explain how the other instruments would find their parts. "If you'd sing in a quartet, you ordinarily get your harmony, if you sing baritone, you sing tenor, and I'm gonna sing the lead, you bass. Do you understand? So if I sing 'Sweet Adeline'," (sings the melody), "right now you gonna sing 'Sweet Adeline'," proceeding to sing a harmony part.[59]

This account shows the strong connection between barbershop harmony and jazz counterpoint. Amstrong describes assigning vocal parts to other instruments, and even uses the barbershop standard, "Sweet Adeline," as an example. He also refers to "woodshedding" on the weekend, which is a common colloquialism among barbershop singers for working out parts by ear.[60] This comment by Armstrong suggests much time was spent working out the harmony parts through improvisation. I speculate that this contrapuntal conception of improvised harmony is one of the reasons for the melody's location in an inner voice, since harmonizing in thirds above the melody is common in many vocal improvisational styles.

In contrast to the horizontal orientation of improvisation through heterophony and counterpoint, improvisational practice may have come about by vertically focused processes. Robert G. Hopkins, a musicologist and former president of the society, traces the differences in performance styles in the society between the 1950s and today. He writes that musical interpretation by top quartets in 1958 "perform every chord [to] draw attention to the vertical rather

[59] Ibid, 99.

[60] There is a small group of singers within the Society called the Ancient and Harmonious Society of Woodshedders, who gather at Society conventions to practice woodshedding together.

than the horizontal aspects of the music."[61] Hopkins cites Val Hicks's declaration that "the chord was king."[62] Hopkins argues that the performance style and delivery of music changed as the Society moved towards an emphasis on entertaining audiences and away from focusing on singing in private, as a participant-driven rather than audience-driven art form. In a private setting, barbershop singers often treat the vertical texture with greater reverence than the horizontal, pausing to "worship" chords, basking in the perfectly tuned sonorities. Often, the musical line is subservient to the individual chords in that line. Liz Garnett writes that when chord-worship "refers to the private act of singing for the pleasure of the participants, the term is generally positive; when it is used to describe a performance, on the other hand, it tends to denote a self-indulgence on the part of the singers, and is thus a term of disapprobation."[63]

Liz Garnett suggests a link between chord-worship and barbershop's tradition of improvising chords. "The practice of woodshedding necessitates singing rather slowly, with many pauses for the harmony parts to hear what each other are doing and to adjust."[64] She argues that the Society has "considerably exaggerated" the role of improvisation played in its origins, but that the discovery process seen in accounts of woodshedding to find new chords can still be observed in contemporary practice. Lynn Abbott provides a wonderful quote from James Wheldon Johnson of his experience listening to barbershop singers in Jacksonville in the 1880s:

> I have witnessed some of these explorations in the field of harmony and the scenes of hilarity and backslapping when a new and rich chord was discovered. There would be demands for repetitions and cries of, "Hold it! Hold it!" until it was firmly mastered. And well it was, for some of these chords were so new and strange for voices that, like Sullivan's

[61] Robert Hopkins, "From 'the Chord Was King' to 'a Dynamic Journey': Changes in the Barbershop Quartet Style in Contests Since the 1950s," *American Music* 38, no. 1, (2020): 85.
[62] Ibid, 85.
[63] Liz Garnett, *The British Barbershopper: A Study in Socio-musical Ideals*, (Burlington, VT: Ashgate): 126.
[64] Ibid, 126.

> Lost Chord, they would have never been found again except for the celerity in which they were recaptured. In this way was born the famous but much abused "barber-shop chord."[65]

This quote illustrates how harmonies were often improvised or discovered. In his dissertation on the musical origins of the barbershop style, Jim Henry wrote, "Blacks harmonized recreationally the popular songs of the day as well as spirituals and folk songs, improvising harmonies according to long-standing African American musical practice."[66] In a discussion of Black quartet singing in the late 1890s and early 1900s, Abbott wrote, "At the heart of this all-absorbing quartet activity was a spontaneous and highly infectious approach to harmonizing, or 'cracking up a chord.' Ballads and sentimental tunes were most susceptible to it, but no song, religious or secular, traditional or Tin Pan Alley, was immune. The basic idea was to improvise, linger on, and bask in the immediate warmth of hair-raisingly unusual close-harmony chords."[67] Averill notes that "many contemporaneous accounts speak of the improvised search for new harmonies obtainable by 'cracking a chord,' with its image of... breaking open a harmony and exposing it (as in cracking corn or a nut)."[68]

Abbott notes that this type of harmony was distinct from the close harmony of singing family and minstrel quartets of the 1840s, which lacked "the rakish 'minors,' 'swipes,' and 'snakes'[69] that characterized black recreational male quartets. The art of 'cracking up a chord' was born in unabashed celebrations of the 'weird,' organically blended harmonies that first distinguished the group singing traditions of plantation slavery."[70] All these accounts speak of the

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[65] Abbott, "Play That Barbershop Chord," 299.
[66] Henry, "The Origins of Barbershop Harmony," 33.
[67] Abbott, "Play That Barbershop Chord," 290.
[68] Averill, *Four Parts, No Waiting*, 45.
[69] Abbott clarifies these terms in a footnote: "These are slang terms used by recreational close harmony quartet singers. "Minors" are not necessarily minor chords in the musicological sense; rather they refer to any particularly "ripe" chord. "Swipes" and "snakes" describe the methodology involved in producing "minors."
[70] Abbott, "Play That Barbershop Chord," 290.

act of chord-worship and improvisation as an activity of discovery. Roland Hayes recalled, "Our harmonies were personal discoveries, although a good deal of our musical improvisation perhaps was illegitimate."[71] In addition to "illegitimate," these chords are described as new, unusual, strange, and weird harmonies. In Chapter 3, I will argue that these "strange" harmonies discovered through improvisation are difficult to analyze with traditional harmonic analysis, but that by using improvisation as a starting point, we can apply the principles of Neo-Riemannian theory to better understand these chromatic harmonies.

The Impact of Notated Arrangements and Contest Rules on an Improvisational Style

This chapter has shown the complex history of barbershop music as a hybridized musical style. Since Abbott's seminal work, scholars agree that Black improvised singing in the late 19th century is a central pillar of the style. Henry, Averill, Boyd, and others note a variety of influences, including traveling singing families, Tin Pan Alley, minstrelsy, and the recording industry, that contributed to the proliferation of barbershop quartet singing in the early 20th century. However, there is disagreement on the extent to which the Society's version of barbershop music resembles the practice of improvised barbershop harmonizing in its heyday around the turn of the century.

BHS historians tend to emphasize the style's roots in woodshedding harmonies. In his dissertation, Henry, notably a multiple-time BHS gold medalist quartet singer and chorus director, argues that many features of modern barbershop can be found in the earliest quartet recordings available, which often use improvised or semi-improvised harmonies. He consistently ascribes improvisational elements of the style to the Black musical tradition: "Improvisation... is a

[71] Ibid, 314.

fundamental aspect of black music and one that further distinguishes black music from Western music."[72] On the other hand, he suggests that hybridization with white musical culture has resulted in the loss of some of the improvisational character of early Black quartet recordings. Speaking of that hybridization, Henry says, "The coupling of the two traditions may have gone a long way toward effecting [sic] the manner of barbershop as it is practiced today. Black harmony... when notated for the sake of preservation or refined for studio quartets may have relieved barbershop of many of its original, improvisational qualities."[73] Henry observes that notational practices and white studio quartet recordings resulted in a significant decrease in improvisational vocal devices and portamento.

Garnett, Boyd, and Döhl suggest that the role of improvisation in the development of modern barbershop is overexaggerated. Döhl asserts that though every feature of what he calls the modern genre of barbershop can be found in some turn-of-the-century practice, the term "barbershop" was used to refer to a wide variety of music, very little of which closely resembles modern barbershop. "Due to the coherent aesthetic concept of modern barbershop, it is highly unlikely that it existed as an improvising practice."[74] I agree with Döhl that the genre of modern barbershop in its strictly codified form cannot be found consistently in early 20th century music. However, I propose that there is a strong connection between modern barbershop music and much of the improvised woodshedding that came before it.

The introduction of contest rules and the gradual shift from fully improvised songs to written arrangements codified voice leading and doubling rules which are not present in transcriptions of quartet music from before the 1930s. An examination of these transcriptions, such

[72] Henry, "The Origins of Barbershop Harmony," 181.
[73] Ibid, 204.
[74] Döhl, "From Harmonic Style to Genre," 152.

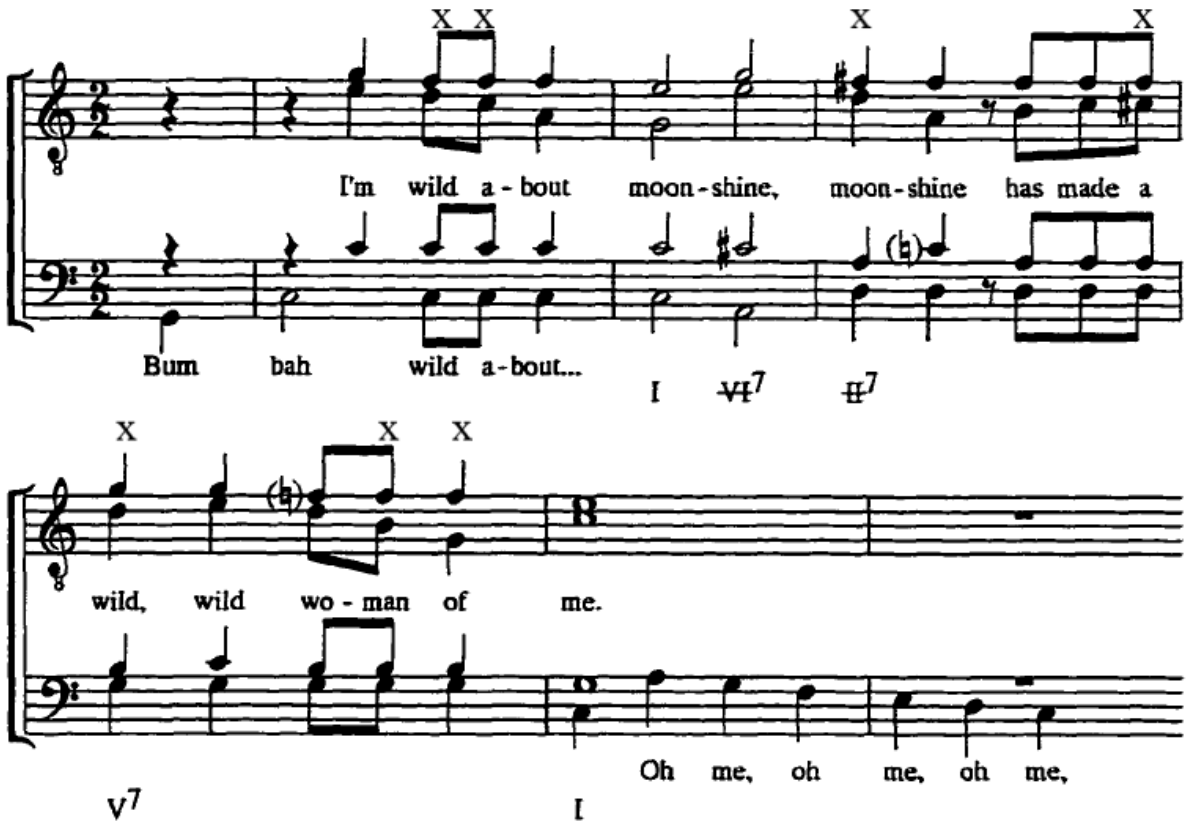
as those found in Henry's dissertation and Spaeth's *Barbershop Ballads*, shows a more flexible approach to harmonization of melodic notes and doubling of chord tones. Contest rules, starting with Joseph Stern's judging guidelines in 1941, prescribed the use of complete, four-part consonant chords on every melody note. As one might expect of improvised harmony, the transcriptions of both Black and white quartets from 1890s well into the 1940s often contain incomplete chords, doubling of notes, and non-chord tones in the melody. Example 1.1 shows Henry's transcription and Roman Numeral analysis of a 1921 recording of a Black quartet, the Columbia Colored Quartet, singing "I'm Wild About Moonshine." I have placed an "X" over each instance of incomplete chord, missing seventh, or unharmonized non-chord tone. For example, the chords on the downbeats of both measures three and four are missing a seventh[75] which is added later in the measure. Additionally, as the lead arpeggiates down the 5^7 harmony on the lyrics "woman of," the harmony parts do not change notes to avoid doubling, resulting in a doubled third (B) of the 5^7 on the penultimate chord and doubled root (G) on the final chord, with an omitted fifth in both cases. This illustrates the bass's propensity to always sing the root of the chord in this early improvised harmony, regardless of doubling. In the codified barbershop arranging style used today, it is standard for the bass to sing the fifth of the chord to avoid doubling another voice on the root. The desire for complete seventh chords is likely the reason that 5^7 appears in second inversion as often if not more often than in root position, since the inversion allows a complete 5^7 to resolve both the leading tone and the seventh according to their tendencies when moving to a root position, complete tonic triad.[76] I argue that many of the significant differences between early improvised harmonizations and later arranged ones can be explained by the preferred musical aesthetics of

[75] Barbershop seventh chords are preferred over major triads.

[76] In common practice voice leading, a 5^7 to 1 resolution usually omits a chord tone in one or both harmonies to avoid parallel fifths while resolving the chordal seventh down and the leading tone up to the tonic.

Stern and other early SPEBSQSA leadership, who wanted every melodic note to be harmonized with a consonant four-part harmony, with a minimum of doubling. These differences can be clearly demonstrated in the following case study, which compares two versions of the barbershop classic, "You're the Flower of My Heart, Sweet Adeline."

EXAMPLE 1.1. Composer unknown, "I'm Wild About Moonshine," Transcribed by Jim Henry.



Chapter 1 Case Study – "You're the Flower of My Heart, Sweet Adeline"

This chapter describes how barbershop music began as Black improvised music and evolved into a distinctive style through the interplay of many racial and cultural influences. This evolution from improvisation to genre can be seen in the following case study, which compares two different versions of "You're the Flower of My Heart, Sweet Adeline." This song is the most famous and emblematic barbershop song, and the namesake of the Sweet Adelines International organization. By the time Sigmund Spaeth included it in his "Barbershop Ballads" in 1925, it was already considered "the Old Faithful of all harmonic geysers."[77] This case study will compare Spaeth's 1925 version with the Society arrangement published in 1973 in the Barberpole Cat Songbook. The arrangements are highly similar and are clearly influenced by Black improvisational practice. The notable differences between the two versions point to the highly codified genre of barbershop developed by the Society in the nearly 50-year span between arrangements.

The Barberpole Cat songbook is a collection of simple, classic barbershop arrangements, often called "polecats." In 1971, Society leadership launched the Barberpole Cat program with four purposes in mind: (1) "to encourage quartet activity at chapter meetings," (2) "to enable Barbershoppers to gain confidence in performing in a quartet in an informal, supportive atmosphere," (3) "To provide Barbershoppers with a common repertoire of songs that they can sing together, with any three other Society members, at inter-chapter activities, conventions and other barbershopping events," and (4) "to teach Barbershoppers a repertoire of easy arrangements that a beginning quartet can perform."[78] The 12 songs in this songbook were written in the late 19th or early 20th century and contain lyrical themes that were very common in

[77] Spaeth, "Barbershop Ballads," 30.
[78] Barberpole Cat Program and Songbook

the first several decades of Society history: nostalgia, sentimentality, and love. An analysis of these songs provides insight into the most representative examples of traditional barbershop harmonization and arrangement methods.

"You're the Flower of My Heart, Sweet Adeline" is an example of an "echo song," in which the lead sings a line, and those lyrics are repeated by the harmony parts. Henry argued that this is common in early barbershop arrangements and is closely related to African American responsorial singing. "Barbershop Ballads" contains several instances of echo songs and several songs that are almost entirely homorhythmic. The echo song, then, was a popular type of barbershop song when the book was written in 1925. However, this type of song has fallen out of favor in the modern barbershop genre, likely due to restrictions imposed by Society theorists and contest rules. "Barbershop harmony is a style of unaccompanied vocal music characterized by consonant four-part chords *for every melody note in a primarily homorhythmic texture*."[79] Because of this, "Sweet Adeline" is the only echo song in the Barberpole Cat songbook, perhaps because of its legendary status in barbershop history rather than its musical features.

Let us now compare the two versions of the song, noting the differences that may be explained by the development of contest rules and vernacular theory. The "Barbershop Ballads" version is not an arrangement per se. Spaeth suggests that his quartet worked out the parts for these songs by ear through trial and error, and he reproduced those parts in this songbook. This "woodshedding" or improvisational approach is evident in the resulting harmonies, particularly when compared to the carefully arranged polecat version. Though the basic harmonization is the

[79] "Contest and Judging Handbook," 2-1 (italics are mine).

same, Spaeth's version has several instances of incomplete chords with doubled notes, whereas the polecat version never doubles or omits notes in its seventh chords.

The characteristic progression in the polecat version of this song is the 1^{7} - $\sharp 2^{\circ 7}$ - $2^{\varnothing 7}$ - 1 swipe. This progression, which is suggested in the older version of the song but uses incomplete harmonies, is so idiomatic of this song that it is often called the "Sweet Adeline" swipe. This swipe is used to embellish the tonic three times in the polecat arrangement. While the lead sustains the tonic, the other three voices move to a 1^{7} and then move downward twice by semitone. The parallel diminished triad formed by the harmony parts move through 1^{7}, $\sharp 2^{\circ 7}$, and $2^{\varnothing 7}$, moving by semitone, and then move two voices by semitone and the third voice by whole tone to return to the tonic. This swipe shows how important minimal voice leading and pitch retention is, particularly in improvisation. Note that in the polecat version of the song, the same inversions and voicings of this progression are used all three times in mm. 1, 5, and 8. In the woodshedded version, the bass doubles the lead on the tonic in both mm. 2 and 16. The baritone and tenor swipes are the same, providing the same effect, with descending chromatic semitones in both voices. However, the doubled note means that the 1^{7} is missing a third, the $\sharp 2^{\circ 7}$ is missing a root, making it a $\sharp 4^{\circ}$ diminished triad, and the $2^{\varnothing 7}$ is missing a root, making it a 4m triad. The second instance of the progression in the woodshedded version, appearing in m. 10, moves the bass up to A♭ and the baritone up to D, setting up complete chords through the swipe. This voicing results in the baritone landing on the tonic in a unison with the lead, whereas the lower version in the polecat, which starts the bass on D and the baritone on A♭, doubles the tonic at the octave instead of the unison. The implementation of the "Sweet Adeline" progression in these two versions of the song demonstrates the prioritization of four-part, complete chords in modern barbershop.

The Spaeth version uses several major 2 triads with a doubled root rather than a seventh. In mm. 5 and 13, the baritone resolves its B♮ up to C before moving down to the seventh of the C7 chord. This may point to the instinct of ear singers to resolve the secondary leading tone of the 6^7 up to the tonicized note, and the subsequent move to the B♭ completes the harmony. Similarly, on the downbeat of m. 15, a 2 triad with doubled root is used, and the fermata indicates that the quartet had no issue with sustaining a secondary dominant triad with a doubled root and missing seventh. In the polecat version, all three of these instances use the typical descending parallel tritones between the tenor and baritone within the secondary dominant sequence, moving the B directly to B♭ to provide a complete 2^7 harmony.

There is an interesting difference between the two harmonizations of the lyrics "at night, dear heart." In the woodshedded version, the lead sustains an A for the entirety of the lyric heart, keeping with the typical echo song style. The harmony parts decorate the 5^7 with lower neighbor notes in the baritone and tenor, resulting in a neighbor (half-diminished seventh) chord. In the polecat version, the lead breaks precedence in m. 3, moving down and back up with the harmony parts to create a neighbor (fully diminished seventh) chord. It seems, then, that there is such a strong preference for the fully diminished neighbor chords over the half-diminished neighbor chords that the arranger chose to change the well-known melody and have the lead sing a chromatic lower neighbor note in the middle of a sustained note.

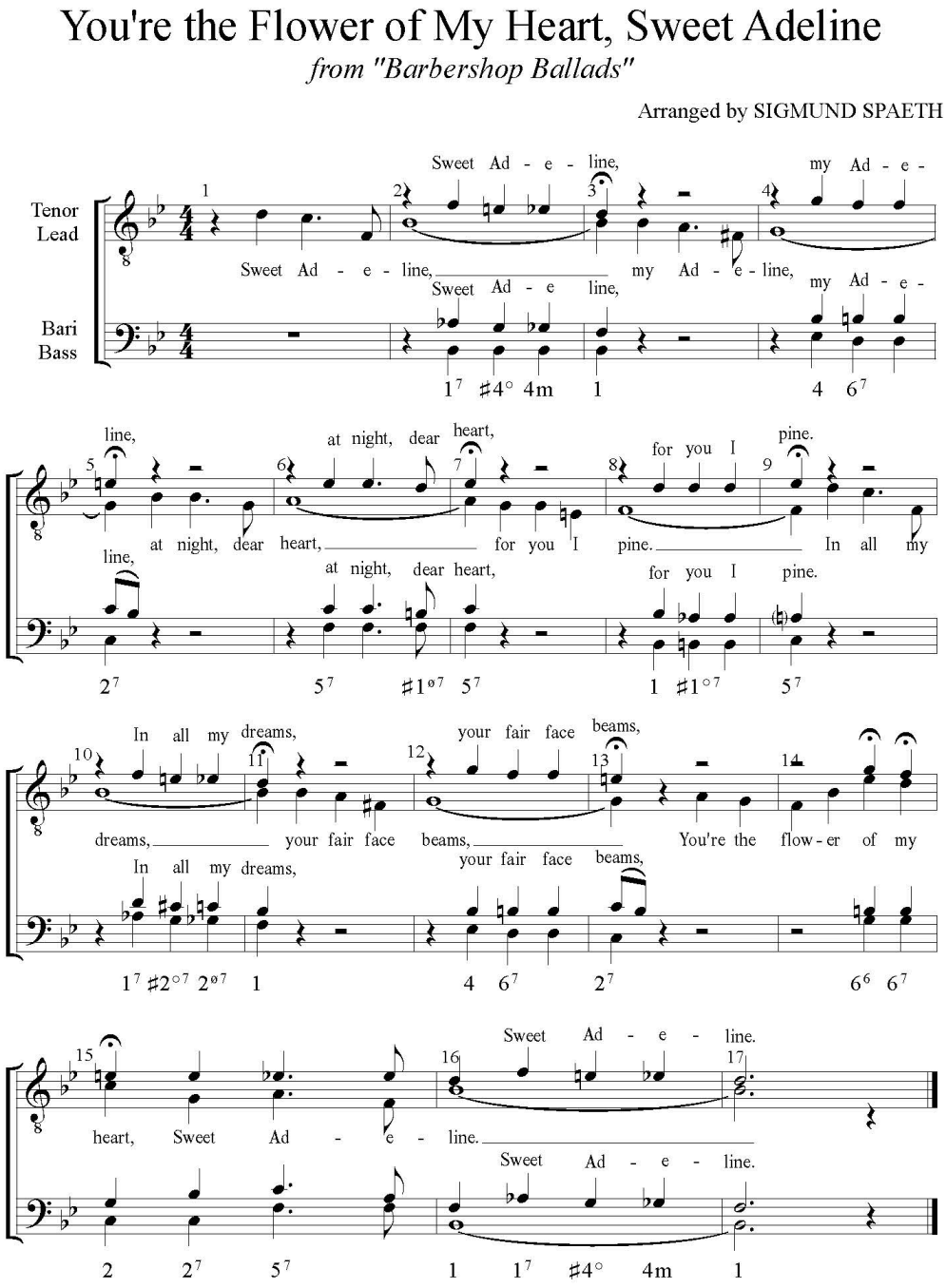
The biggest difference between versions is the treatment of the final phrase. In Spaeth's version, the lyrics "you're the flower" are sung as a solo, even though they are never repeated by the harmony parts. Spaeth proclaims in his discussion of the song: "'You're the flower' is best sung as a solo, with everyone landing on 'of' with a riot of harmony. But have it your own way,

gentlemen. You know the song well enough."[80] The "riot of harmony" is a sixth chord within a 6^7 harmonic area, which spells out an augmented triad. Spaeth discusses this harmony in the intro to the book, noting that the "subdominant chord may be made far more thrilling if the middle voice slides up a half step, and once you get used to this effect, you will always try for it in place of the more conventional subdominant line-up."[81] Spaeth views this chord as a chromatic alteration of a first inversion subdominant triad and calls these augmented triads "exhilarators." The polecat version of the song takes a different approach and uses four-part chords on the lyrics "You're the flower." This makes sense given the mandate for complete chords to harmonize all melody notes, which has already been frequently broken because of the call-and-response technique. "You're the" on scale degrees 7 and 6 are harmonized with the tritone-related 7^7 and 4^7, and "flower" is harmonized with a 1 and 1^7. Rather than the augmented "exhilarator" used by Spaeth on "of," the 1^7 serves as a secondary dominant leading to a 4 triad.

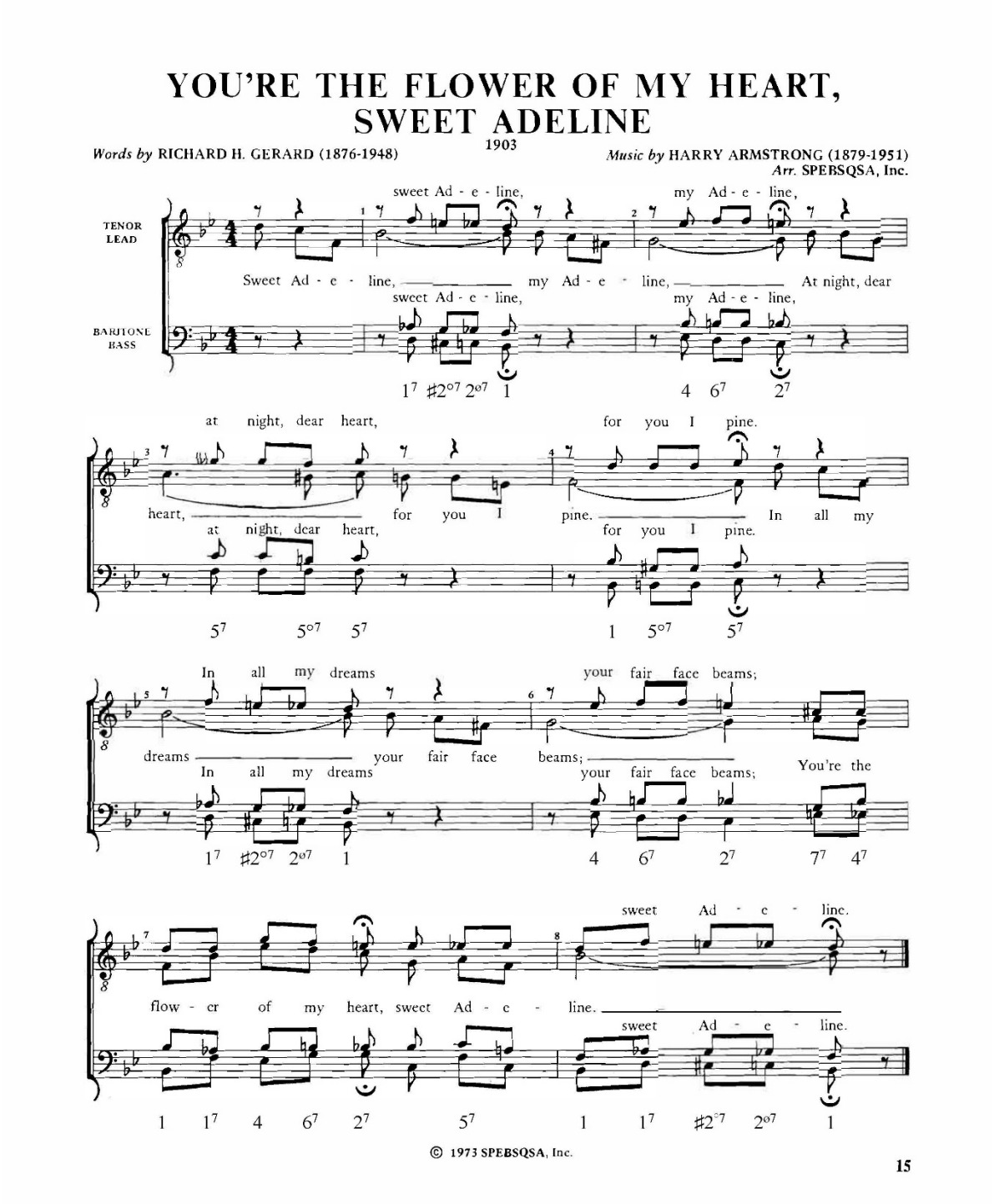
A comparison of these two versions of this song has shown that barbershop music has moved from a style that was clearly improvisational to a highly codified genre governed by contest rules. The Barberpole Cat arrangement of "You're the Flower of My Heart, Sweet Adeline," prioritizes the use of complete, four-part chords on each melody note as much as possible within the bounds of the echo song framework. The version from "Barbershop Ballads," published in 1925, is over a decade older than the Society, and is more of a transcription of an improvised song than an arrangement. It often features incomplete chords, doubled notes at either the octave or unison, and is more likely to give the bass the root of the chord instead of the fifth, even if doubling results.

[80] Spaeth, "Barbershop Ballads," 31-32.
[81] Ibid, 23.

VERSION 1. Harry Armstrong and Richard H. Gerard. “You’re the Flower of My Heart, Sweet Adeline.” *Barber Shop Ballads,* Sigmund Spaeth. NY: Simon and Schuster, 1925.



VERSION 2. Harry Armstrong and Richard H. Gerard. “You’re the Flower of My Heart, Sweet Adeline.” From *Barberpole Cat Songbook,* Kenosha WI: SPEBSQSA, 1971.



YOU'RE THE FLOWER OF MY HEART, SWEET ADELINE

1903

Words by RICHARD H. GERARD (1876-1948)

Music by HARRY ARMSTRONG (1879-1951)
Arr. SPEBSQSA, Inc.

TENOR LEAD

BARITONE BASS

sweet Ad - e - line, my Ad - e - line,

Sweet Ad - e - line, my Ad - e - line, At night, dear

sweet Ad - e - line, my Ad - e - line,

1^7 $\sharp 2^{\circ 7}$ $2^{\circ 7}$ 1 4 6^7 2^7

at night, dear heart, for you I pine.

heart, for you I pine. In all my

at night, dear heart, for you I pine.

5^7 $5^{\circ 7}$ 5^7 1 $5^{\circ 7}$ 5^7

In all my dreams your fair face beams;

dreams your fair face beams; You're the

In all my dreams your fair face beams;

1^7 $\sharp 2^{\circ 7}$ $2^{\circ 7}$ 1 4 6^7 2^7 7^7 4^7

sweet Ad - e - line.

flow - er of my heart, sweet Ad - e - line.

sweet Ad - e - line.

1 1^7 4 6^7 2^7 5^7 1 1^7 $\sharp 2^{\circ 7}$ $2^{\circ 7}$ 1

15

Chapter 1 Conclusion

This chapter summarizes the origin and history of barbershop singing in America. Since Abbott's seminal work, scholars have shown that barbershop music was sung by amateur Black singers in the southern United States and became highly syncretic through imitation of white singers in minstrelsy, the early recording industry, and the formation of barbershop singing societies. These associations with white singers and writings by barbershop revivalists contributed to the white origin myth, which suggested barbershop singing was a product of white, European practice. This myth was one part of an entire tradition invented by the white founders of SPEBSQSA, whose aesthetic ideals led them to consider certain elements of earlier barbershop quartet singing as the defining features of the style, which they reinforced with contest rules that have shaped barbershop music since the 1940s. As a result, modern barbershop music is a well-defined genre: barbershop music is unaccompanied, four-part vocal music with the melody in an inner voice. Each melodic note is harmonized with a consonant, complete, four-part chord in a primarily homorhythmic texture. Seventh chords, especially those containing a tritone, are featured prominently, and major-minor sevenths are the most stylistic sonority in the style. These major-minor seventh chords often resolve by descending fifth as secondary dominants, while making use of other non-dominant resolutions.

This chapter has drawn attention to the close association in the scholarship between Black singing and improvisation. Henry and Averill find that improvisation played a role in the development of the barbershop harmonic style. Despite the significant change the barbershop style has undergone since the turn of the 19th century, many of the musical features of early Black barbershop quartets can be found in modern barbershop music, as demonstrated by Jim

Henry. I furthered this argument in this chapter's case study, showing the similarities between a "woodshedded" and an arranged version of the same song. The significant differences between the two versions can be attributed to the doubling and harmonization conventions that arose in the barbershop revival.

In the following chapter, I detail the features of modern barbershop music through an investigation of Society publications, such as contest rules, music theory treatises, and arranging guidelines. In Chapter 3, I propose that many of the chromatic progressions in barbershop music come from improvisational practice and argue that parsimonious voice leading is a notable, but unexplored feature of barbershop music and a natural outgrowth of improvisation. I also participate in the continued syncretism of barbershop music, analyzing it with neo-Riemannian methodologies that were originally formed to analyze the chromatic music of the late Romantic period. In Chapter 4, I investigate the unique harmony, voice leading, and syntax of barbershop tags.

Chapter 2: Preservation and Vernacular Music Theory in Barbershop Music

The modern barbershop style is the result of intentional shaping of musical parameters by its practitioners since the barbershop revival of the 1930s. This chapter identifies several musical features that are characteristic of barbershop music. It also explores how music theoretical sources written by barbershop revivalists have been instrumental in crystallizing and preserving a unique American musical vernacular. Most modern music theory, particularly concerning popular and vernacular styles, is descriptive in nature, analyzing music and retroactively developing theories about how music works. However, music theory has played a strongly prescriptive role in influencing the barbershop style since the 1930s. Prescriptive music theory, such as Johann Joseph Fux's *Gradus Ad Parnassum*, is often written to instruct composers on how to write or play a style of music. Barbershop theory tends towards prescriptivism, and these theoretical sources serve three primary purposes. First, to educate its audience (of barbershop singers) about musical fundamentals such as intervals and chord structures, resolution rules, appropriate chord progressions and voicings, and more advanced topics such as harmonic function, harmonic pillars, prolongation, and chromatic voice leading. Second, to teach the readers how to arrange in the barbershop style. The purposes of instruction in music theory and arranging are in service to the third and overarching goal of these treatises: preservation and perpetuation of a highly idiomatic style. Implicit in much of the barbershop theory I examine in this chapter is a fourth goal or agenda: to associate barbershop more closely with the European classical tradition, and by extension, white musical practice. These treatises are examples of what Clifton Boyd calls

"vernacular music theory."[1] This chapter investigates influential vernacular music theory sources that shaped the thoughts of barbershop arrangers for several decades. Special attention will be given to portions of these texts that discuss harmony and voice leading. A close examination of these sources provides insights not only into the music they provide instruction for, but the aesthetic and ideological underpinnings that were common among barbershop practitioners at the time they were written. This examination will also reveal some elements of this style that are omitted from these sources but can be inferred through a close review of the music. I argue that vernacular music theory has been used to create, preserve, and defend the idiosyncratic musical style called barbershop.

Vernacular Music Theory and Invented Tradition

Since the Society was formed in 1938, barbershop harmony has been practiced mainly within the bounds of organized contests. It has held singing contests since 1939, and these contests have employed rules and judging standards that shaped musical and performance practices. Seen as a revival of the "golden age"[2] of barbershop, the rules were created to fit the musical aesthetic tastes of a small group of individuals who were prominent in the Society, rather than an accurate representation of barbershop harmony singing of the late 19th and early 20th centuries. Liz Garnett, Clifton Boyd, Frederic Döhl and others have referred to the brand of close harmony singing practiced within the Society as an invented tradition.[3] Invented traditions claim a connection to the distant past but were created much later than that claimed history.

[1] Clifton Boyd, "Keep It Barbershop: Stylistic Preservation and Whiteness in the Barbershop Harmony Society," PhD diss., (Yale University, 2022).
[2] Scholars agree that the golden age of barbershop music refers to the period between 1890-1920, in which barbershop quartet singing was incredibly popular.
[3] See Hobsbawm, Eric and Terence Ranger. The Invention of Tradition. Cambridge: Cambridge University Press, 1983.

The contest and judging rules, along with other Society-published resources on music theory and arranging, are the apparatuses that the Society has used to build and maintain this invented tradition. The contest and judging system has undergone a tremendous amount of change since 1938.[4] Rules have been changed or modified, category names have changed, and judges have given greater or lesser importance to one element or another of performance. Yet many of the aesthetic preferences that motivated the creation of rules in the 1940s are the same rigid stylistic dogmas barbershop practitioners hold today.

Scholars have shown that most of the features considered essential to modern barbershop music were not always present in close harmony singing around the turn of the 20th century. Musicologist Frederic Döhl notes that before the 1940s, the term "barbershop" was used to describe a harmonic style featuring chromaticism in the form of secondary dominant progressions. This harmonic style was found in instrumental, accompanied, and unaccompanied vocal music, and was not confined to a single race, gender, or culture. Döhl argues that what we think of today as barbershop music is not just a harmonic style, it is "a closed genre, self-defined and protected by a specific group of people devoted to a genre that they themselves defined."[5] He notes that all the features of modern barbershop music were present in early 20th century practice but were never applied rigidly. Döhl concludes that "the people in charge in the 1940s and early 1950s suspended and synthesized different actual as well as constructed historical elements of barbershop, especially with regard to repertory, ensemble format (all-male vocal quartets), performance practice, self-image, social context, race, gender, and of course harmonic

[4] See Society historian Kevin Keller's informative and comprehensive video series. https://www.barbershop.org/education/free-classes-tutorials/the-history-of-the-bhs-contest-judging-system

[5] Frederic Döhl, "From Harmonic Style to Genre: The Early History (1890s–1940s) of the Uniquely American Musical Term Barbershop." American Music 32 no. 2 (2014): 130.

style. In doing so, they cut down—deliberately or accidentally—the rich history of the 'barber shop chord' to one influential and now widespread storyline."[6] In his dissertation, Boyd identifies a particularly harmful part of this invented tradition: the exclusion of black Americans from the history of barbershop singing. Boyd argues that "during the 1950s and '60s the racist ideologies present in the Society (most notably among the leadership) began to be reflected increasingly in various music-theoretical texts, most often under the guise of musical preservationism."[7] It is evident from the scholarship, then, that music theoretical sources have been used to invent and preserve a tradition of music that fits the aesthetic aims of the Society's founders.

Features of Barbershop Music

In many ways, the Society has been successful in its original founding principles of Preservation and Encouragement of barbershop singing. Nearly 90 years later, barbershop music is still sung across North America under the umbrella of the Society and two other all-female organizations: Sweet Adelines International, and Harmony Incorporated. The Society also has a dozen alliance organizations worldwide, primarily in English-speaking countries.[8] These organizations have thousands of ensembles that still sing barbershop music that contains the defining stylistic musical features that were solidified in the 1940s. This is due largely to the continued emphasis on style preservation through Society-published music theoretical texts. Any study of the musical features of barbershop has a wealth of information available in these texts, which take the form of contest and judging handbooks, arranging manuals, *The Harmonizer*

[6] Ibid, 150.
[7] Boyd, "Keep it Barbershop," 79.
[8] https://www.barbershop.org/about/our-community/alliances

articles[9], and other Society-published resources. The remainder of this chapter will provide an overview of the features of barbershop music as observed through my own study and participation in barbershop ensembles, and through a survey of Society-published texts.

Barbershop music is unaccompanied, four-part singing with the melody in the second-highest voice, called the lead. Barbershop harmony is mostly homophonic, and avoids doubling as much as possible, preferring seventh chords and other four-part chords, especially the major-minor seventh chord. Barbershop singers strive to sing chords that are perfectly blended, balanced, and tuned, using just intonation tuning to produce "lock and ring," a phenomenon in which singers tune all their notes to be partials of the same fundamental, creating a sense of expanded sound and additional overtones above the tenor part. Most of the features of the style, including the harmonic sonorities chosen and the role of each voice part contribute towards this goal. As demonstrated by Hagerman and Sundberg, experienced barbershop singers tune their notes in just intonation to a high degree of accuracy, using the lead as a reference voice.[10]

Scholars have noted that the goal of expanded sound through "lock and ring" is another case of invented tradition. Averill writes that "the first appearance of a theory of overtone production in Society contexts seems to have been in 'Molly' Reagan's 1944 column in *The Harmonizer*, 'Mechanics of Barber Shop Harmony.'"[11] Maurice "Molly" Reagan was an influential Society leader, judge, and arranger who helped write the Society's original definition for barbershop harmony. His series of eight articles in *The Harmonizer* entitled "Mechanics of Barber Shop Harmony" is one of the first examples of Society-published vernacular music

[9] *The Harmonizer* is the Society's periodical that is used to deliver information to their membership base.
[10] B. Hagerman and J. Sundberg, "Fundamental frequency adjustment in barbershop singing," *Speech, Music and Hearing* 21, no. 1 (1980): 28-42.
[11] Gage Averill, *Four Parts, No Waiting: A Social History of American Barbershop Harmony*, (New York: Oxford University Press, 2003), 164.

theory. In his seventh article of the series, Reagan provides a basic explanation of frequencies, harmonics, overtones, and harmonic ratios. He proclaims that "the seventh chord is one of the most satisfying chords in harmony. It consists of Do-Mi-Sol-Ti-Do. In terms of vibrations or cycles Do may be 100 and if so, Mi is 125, Sol is 150, Ti is 175 and the upper octave Do is 200."[12] Considering a fundamental frequency of 25 Hz, the tones listed by Reagan create a 175:150:125:100 ratio, which can be reduced to the simple ratio of the harmonic seventh (7:6:5:4). Reagan observes that, unlike the piano, the human voice is not a fixed-note instrument. Therefore, through unaccompanied barbershop singing, "true harmony" can be attained.

This aesthetic goal of expanded sound has influenced barbershop theory. Barbershop arranging guidelines suggest that each melodic note should be harmonized with a consonant sonority. In other words, non-chord tones do not exist in barbershop music. Instead, the three harmony parts must sing notes that are consonant with the lead part. The barbershop idea of consonance is not a classical conception of the term, which considers only major and minor triads to be consonant chords. To a barbershopper, consonance is a gradient quality that is determined by the chord's potential to ring. The most consonant harmonies are the major triad and major-minor seventh, but all diatonically occurring seventh chords and the dominant ninth are considered consonant.

The barbershop community is particularly fond of the major-minor seventh chord due to its ringing sound in just intonation. The major-minor seventh chord is so important to barbershop that its practitioners call it the "barbershop seventh."[13] Döhl writes that the arrangement "must contain between 35 to 60 percent dominant-seventh chords, with diminished-seventh and major

[12] Maurice E. Reagan, "The Mechanics of Barber Shop Harmony [VII]," *The Harmonizer* 3, no. 3 (1944): 10.
[13] I will generally use the term "barbershop seventh" rather than "dominant seventh" or "major-minor seventh" in this dissertation. "Barbershop seventh" implies a just-intoned seventh chord that may or may not possess a dominant function.

triads covering most of the rest."[14] These barbershop seventh chords often form dominant-seventh sequences around the circle of fifths, the harmonic framework preferred in barbershop music. A song is considered a good "vehicle" for the barbershop style if its harmonic implications allow for dominant seventh sequences around the circle of fifths. Barbershop sevenths may also be used in chromatic descents that use tritone substitutions for every other chord in the circle of fifths sequence. Finally, barbershop sevenths also often appear in non-functional contexts, such as an embellishing 4^7 chord or a neighboring chord.

Other harmonies beyond the major triad and barbershop seventh are often used in the barbershop style. These harmonies are generally used for one of two purposes: either to support a melodic note that cannot easily be harmonized with a major triad or barbershop seventh chord, or to provide tension or embellishment as a passing or neighboring chord. Barbershop theorists and arrangers such as the authors of the Society's *Barbershop Arranging Manual* propose that the melody implies the harmony. In this manual, arrangers are instructed to find the "pillar harmonies" first. Pillar harmonies are the harmonies that prevail over a span of the music, typically one to two measures. Pillar harmonies usually arrive on strong beats, especially the downbeats of strong hypermeasures. Generally, the pillar harmonies are either a major triad (usually built on scale degrees 1 or 4) or a barbershop seventh chord within a descending fifths sequence. The bass part should always sing the root or the fifth of these pillar chords to provide a solid foundation for the other parts. Often when the bass is given the fifth of the chord, the root is already in the lead, and the bass must take the fifth to avoid doubling. The lead often also sings roots and fifths, while the baritone and tenor often fill in the thirds and sevenths. When the lead has a note that is a minor third above the root, this obviously precludes the use of major triads

[14] Döhl, "From Harmonic Style to Genre," 129. This references an outdated rule from an obsolete judging category.

and barbershop sevenths as pillar harmonies. The most common pillar chords in these cases are the minor triad (generally used on scale degree 6), the minor seventh, or the half-diminished seventh, often still built on a root that fits within a descending circle of fifths framework. Since the barbershop seventh is preferred to the minor seventh, I propose that we consider the minor seventh chord to be a substitute harmony that fills in for the barbershop seventh when the melodic note does not allow a barbershop seventh.

Within a pillar harmony area, there may be melodic notes that do not fit the prevailing harmony. These cannot be non-chord tones, which are incompatible with the barbershop style, and must therefore be harmonized with other consonant chords. The first option one might look to is another chord within the "family." In the arranging manual, chord families are those that share the same root. A note a major seventh above the root might be harmonized with a brief major-seventh chord, though arrangers are instructed to use those sparingly. Added-note chords are also common options. If the melodic note is a sixth above the prevailing harmony, the arranger may use an added sixth chord (using root, third, fifth, and sixth) or a sixth chord with omitted fifth and doubled root or third.[15] If the melodic note is a ninth above the root, arrangers often use a ninth chord with omitted root.

Other notes that do not fit the pillar chord require different approaches to harmonization. Within a diatonic context, the root, ninth, third, fifth, sixth, and seventh above the root of the pillar harmony can all be harmonized within the same chord family but the fourth cannot. The fourth is often harmonized by a seventh chord with a root a fifth above the root of the pillar harmony. The last type of notes that need to be harmonized are the chromatic ones. Typically, chromatic melody notes resolve to a chord tone by step: either chromatic passing tones or

[15] This interpretation is preferred over a first inversion triad, since it retains the root of the pillar chord.

complete or incomplete neighbor notes. Like other non-chord tones, these must also be harmonized since non-chord tones are not permitted in the style. In addition to the previously discussed sonorities, these chromatic notes might be harmonized by diminished or half-diminished seventh chords or augmented triads.

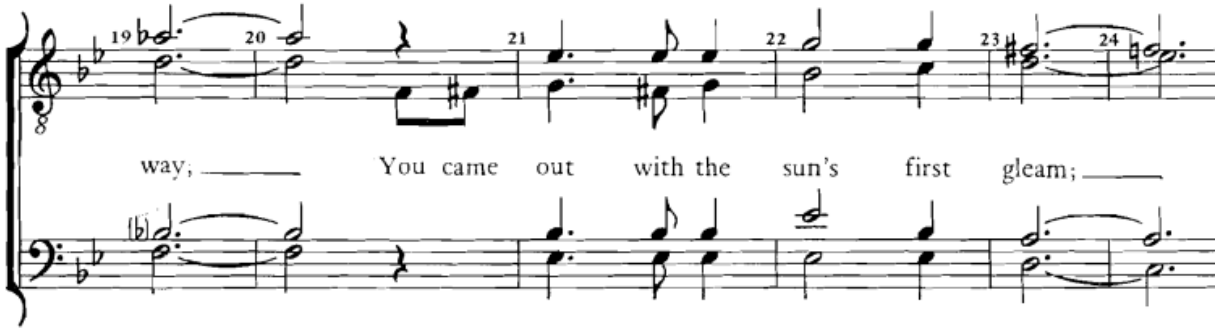
Chromatic non-chord tones in the repertory are typically resolved by half-step to a chord tone. These neighbor notes are often harmonized by neighbor chords. I propose that neighbor chords can be categorized into four types based on the number of neighbor notes and common tones between the neighbor chord and the following chord. Neighbor chords are generally used to embellish pillar harmonies, especially dominant-seventh chords. The proposed types assume a resolution to a dominant-seventh, as resolutions to other sonorities will require either neighboring motions larger than a semitone or incomplete chords.

Chromatic lower neighbor chords are used to harmonize a chromatic lower neighbor note with a consonant harmony. Therefore, we can eliminate all possible combinations of lower neighbor notes that result in dissonant or astylistic harmonic sonorities. Once eliminating all dissonant options, each neighbor chord type is restricted to one kind of sonority. All possible Type I neighbor chords (a chromatic neighbor in one voice) are minor seventh chords, all Type II neighbor chords are half-diminished sevenths, all Type III neighbor chords are fully diminished sevenths, and all Type IV neighbor chords are major-minor sevenths.

Type I neighbor chords have a chromatic lower neighbor note in the melody without changing any other note. This is only possible if the lead is singing the third or seventh of the chord. A lowered third or seventh from a dominant seventh chord is a minor seventh chord, though a lowered seventh would likely be considered an added sixth chord. Example 2.1, “Sweet, Sweet Roses of Morn,” shows a lower neighbor note in the lead and retains all three

other notes as common tones. The pillar harmony, however, is not a dominant seventh chord, but a major triad built on scale degree 4. The brief lowered third in measure 21 (an enharmonic G♭) changes the harmony from E♭ major to E♭ minor.

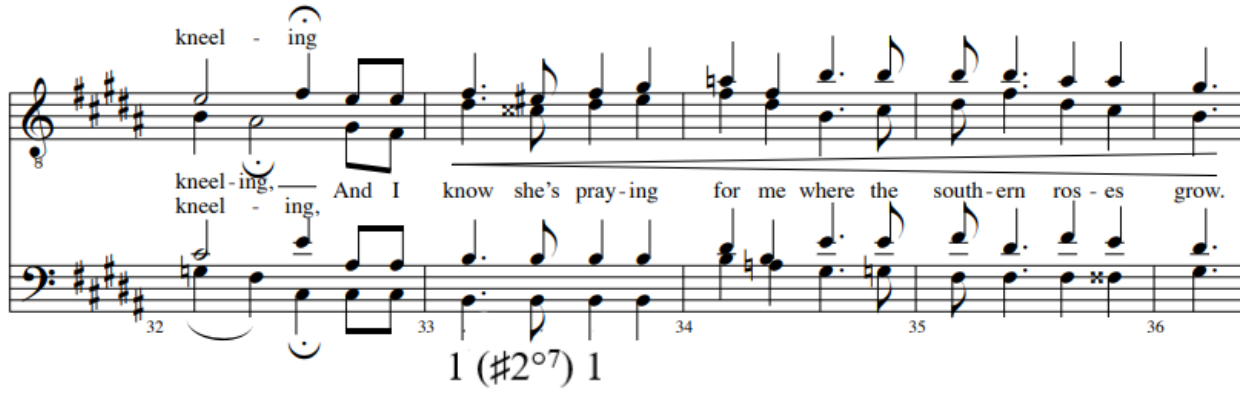
EXAMPLE 2.1. Oscar F. Jones and Martin S. Peake, arranged by Floyd Connett, "Sweet, Sweet Roses of Morn," mm. 19-24



Type II neighbor chords have two chromatic lower neighbor notes and hold two notes as common tones. There are six possible two-note combinations, but each of those involving a move of the root of the dominant seventh chord results in dissonant harmonies. The remaining three allowable harmonizations move some pair of the third, fifth, and seventh of the chord to produce half-diminished seventh chords. Chromatic lower neighbors to the third and fifth result in a half-diminished seventh chord that shares a root with the dominant seventh chord (Gø7 to G7). Chromatic lower neighbors to the third and seventh result in a diminished seventh chord with a root a minor third below the root of the dominant seventh chord (Eø7 to G7). Chromatic lower neighbors to the fifth and seventh result in a half-diminished seventh chord with a root a tritone away from the root of the dominant seventh chord (C♯ø7 to G7). In Case Study 1, we saw an example of this Type II neighbor in the older version of the song, but the polecat arrangement

altered the melody to create a Type III instead. As demonstrated in Example 2.2, two chromatic lower neighbors may also be used to change a major triad into a diminished one, though the spelling might imply a fully diminished seventh, as in measure 33 of "Where the Southern Roses Grow."

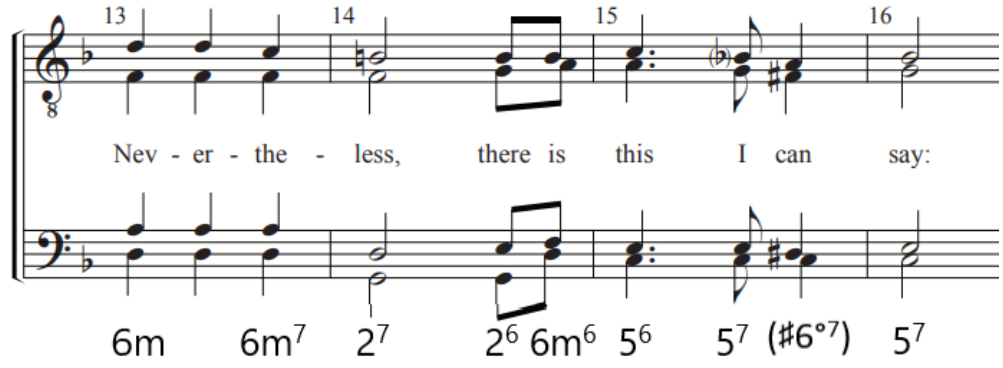
EXAMPLE 2.2, Theodore F. Morse and Richard H. Buck, arranged by David Wright, "Where the Southern Roses Grow," mm. 32-36



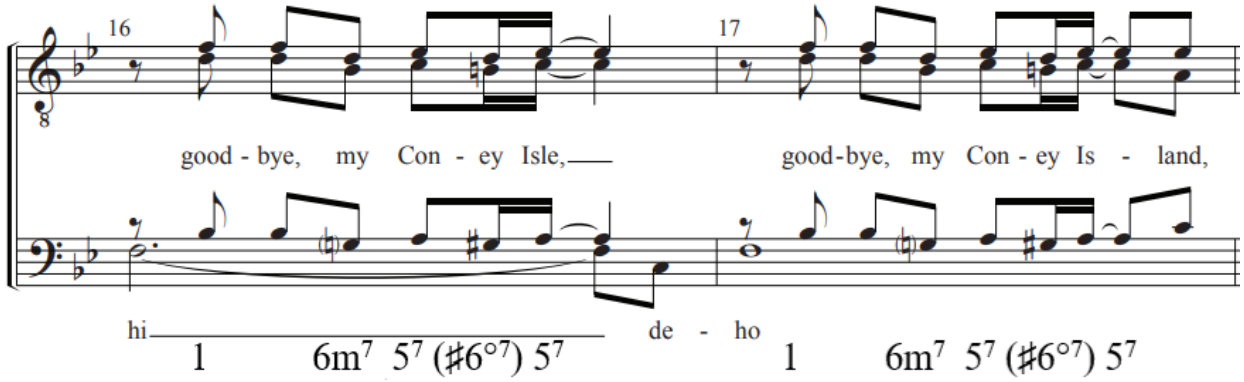
Type III neighbor chords have three chromatic lower neighbors and retain one common tone between chords. Any move involving the root of the dominant seventh pillar chord results in a dissonant sonority, so the only remaining harmonization option is to lower the third, the fifth, and the seventh. The result is a fully diminished seventh chord that shares a root with the dominant seventh chord (G°7 to G7). Example 2.3 shows an example of a Type III neighbor chord in "From the First Hello to the Last Goodbye." A 5^7 chord in F major is embellished in measure 15 with a chromatic lower neighbor (F♯) to the fifth of the chord (G). This is harmonized by moving the third and seventh down a semitone as well, resulting in a C fully diminished seventh chord that embellishes the C7 chord. In Example 4, we see another example of a Type III neighbor chord. This excerpt from "Goodbye, My Coney Island Baby" features dominant pedal notes (posts) in the bass, and the second halves of measures 16 and 17 are F7

harmonic areas. The B♮ in both measures is harmonized by moving the three top voices in parallel motion to achieve a Type III neighbor chord, the F diminished seventh chord.

EXAMPLE 2.3. Johnny Burke, arranged by Lou Perry, “From the First Hello to the Last Goodbye,” mm. 13-16



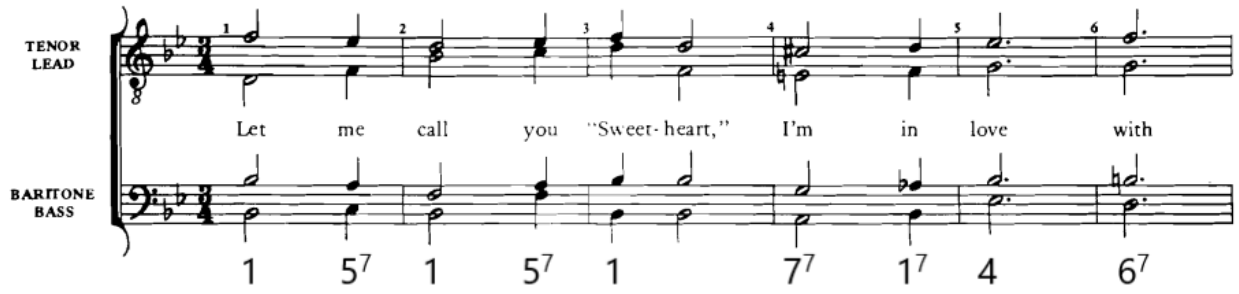
EXAMPLE 2.4. Les Applegate, “Hello, My Coney Island Baby,” mm. 16-17



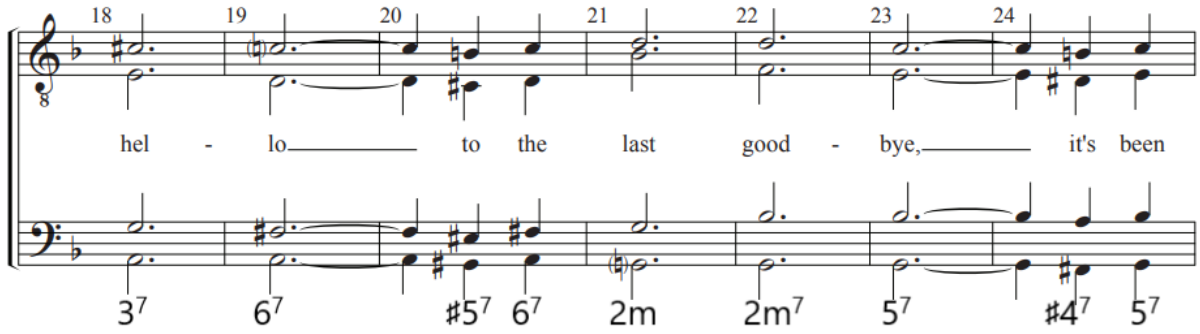
Type IV neighbor chords have four chromatic lower neighbors and do not retain any common tones between chords. Since all four notes move in a Type IV neighbor, the result is a dominant seventh chord whose root is a semitone below the dominant seventh pillar harmony

(F♯7 to G7). Example 2.5 shows the beginning of one of the most popular barbershop arrangements ever: “Let Me Call You Sweetheart.” A 1^7 chord is used in measure 4 to tonicize the 4 chord in the following measure. Within the B♭7 harmonic pillar area, there is an E which does not fit the harmony. This E is harmonized with a Type IV neighboring chord, an A7 which moves all four notes by semitone into the B♭7. The first three types did not allow any neighboring motion involving the root of the pillar dominant seventh chord. Consequently, chromatic lower neighbors to the root of the pillar harmony are often harmonized with a Type IV neighbor chord. Example 2.6 demonstrates this harmonization. In the chorus of “From the First Hello to the Last Goodbye,” an opening F major tonic chord moves into a characteristic circle of fifths sequence. Starting in measure 18, we hear 3^7 followed by 6^7 and $2m^7$ before a half-cadence on 5^7. Within the 6^7 harmonic pillar area in measure 20, there is a C♯ in the melody, a lower neighbor that does not fit the D7 harmony. Because it is a half-step below the root of the prevailing harmony, the only allowable neighbor chord is a Type IV, which moves all four voices by semitone to a barbershop seventh chord built on C♯. Similarly, the 5^7 in m. 24 is decorated with a type IV neighbor chord on ♯ 4^7. Other harmonizations that do not employ neighboring motions in all four voices are possible. One may also harmonize a chromatic lower neighbor to the root of a pillar dominant seventh with its own dominant seventh. For example, a G7 harmonic area that has an F♯ lower neighbor in the melody could be harmonized with a D7, the previous chord in the circle of fifths sequence.

EXAMPLE 2.5. Leo Friedman and Beth Slater Whitson, “Let Me Call You Sweetheart,” mm. 1-6



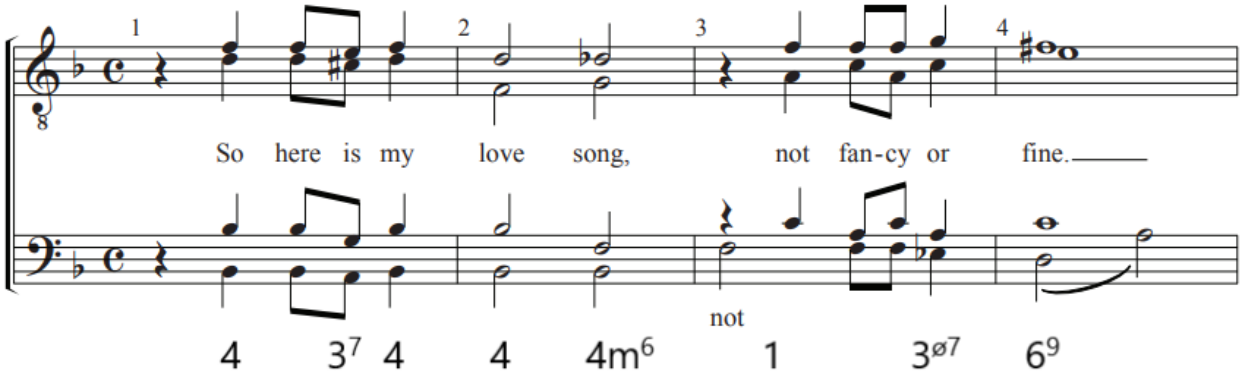
EXAMPLE 2.6. Johnny Burke, arranged by Lou Perry, “From the First Hello to the Last Goodbye,” mm. 18-24



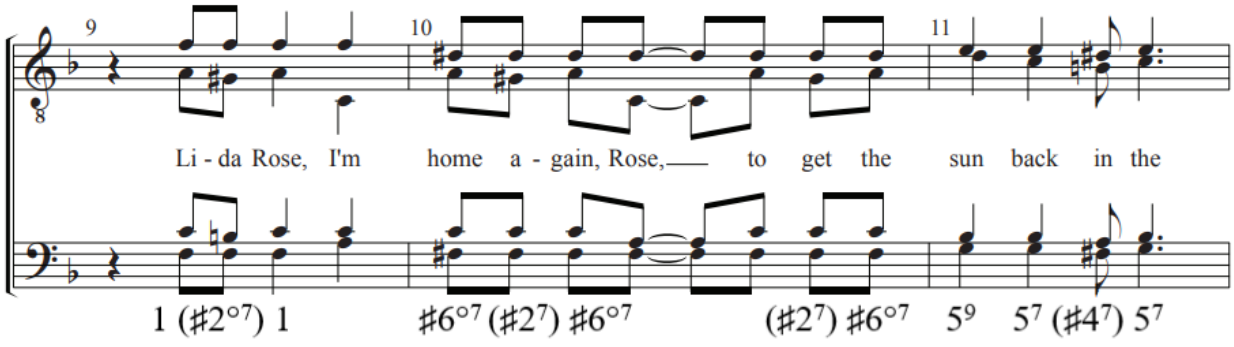
Similar neighboring motions are used to harmonize chromatic lower neighbors in parts of a song with a pillar harmony that is not a dominant seventh chord. These motions generally require melodic intervals larger than a semitone or incomplete harmonies. The Barber Polecat arrangement of “Lida Rose” has several examples of these features in addition to many characteristic uses of Types III and IV neighboring chords. In measure 1, shown in Example 2.7, something resembling a Type IV neighbor chord is used. However, instead of the A7 resolving to a B♭7, the baritone leaps up from a G to a B♭, resulting in a major triad on beat 4. At the beginning of the chorus, shown in Example 2.8, we see two G♯s in the first two measures. The

first, in measure 9, is within an F major harmonic pillar area. The lead and baritone have chromatic lower neighbors, and the resulting chord is enharmonically an F diminished triad. This motion is very similar to a Type III neighbor chord, but the seventh (E♭) is not present and does not offer the opportunity for the lower neighbor of the E♭ (D) to fill out the diminished seventh chord. In the next measure of the same example, the G♯ is now within a fully diminished seventh chord area. Because lowering any note by semitone in a fully diminished seventh chord turns it into a dominant seventh, the arranger does not need to change any other notes to achieve a consonant chord.

EXAMPLE 2.7. Meredith Wilson, arranged by Mo Rector, “Lida Rose,” mm. 1-4



EXAMPLE 2.8. Meredith Wilson, arranged by Mo Rector, “Lida Rose,” mm. 9-11



Use of Seventh Chords in Barbershop Music

Since the beginning of the barbershop revival, all definitions of barbershop music have noted the importance of seventh chords to the style. In 1941, Joseph E. Stern wrote a summary of the features of barbershop music. His first of eleven fundamentals of barbershop harmony says: "1. Real barber shop harmony contemplates four-part harmony, that is to say chords with four different notes, as far as possible."[16] The emphasis on four-part chords has continued throughout the history of the Barbershop Harmony Society. According to the BHS, "Barbershop harmony is a style of unaccompanied vocal music characterized by consonant four-part chords for every melody note in a primarily homorhythmic (the same word sounds at the same time) texture…"[17] Triads, other than the tonic and sometimes the subdominant, are considered incomplete harmonies, especially if they serve as dominants or secondary dominants. A triad sounds incomplete and perhaps even hollow to a trained barbershop ear, much in the same way an open fifth sounds hollow to someone with an ear accustomed to Western tonality.

As previously noted, the barbershop seventh is the characteristic harmony of the barbershop style and is used in a variety of ways both as a dominant-functioning and non-dominant functioning sonority. There have been many guidelines suggested for an appropriate percentage of barbershop sevenths in an arrangement. In the 1980s, the Society's arrangement category, to preserve the style from outside threats, set a benchmark for barbershop sevenths in arrangements. Under this system, quartets and choruses could be penalized in competition for

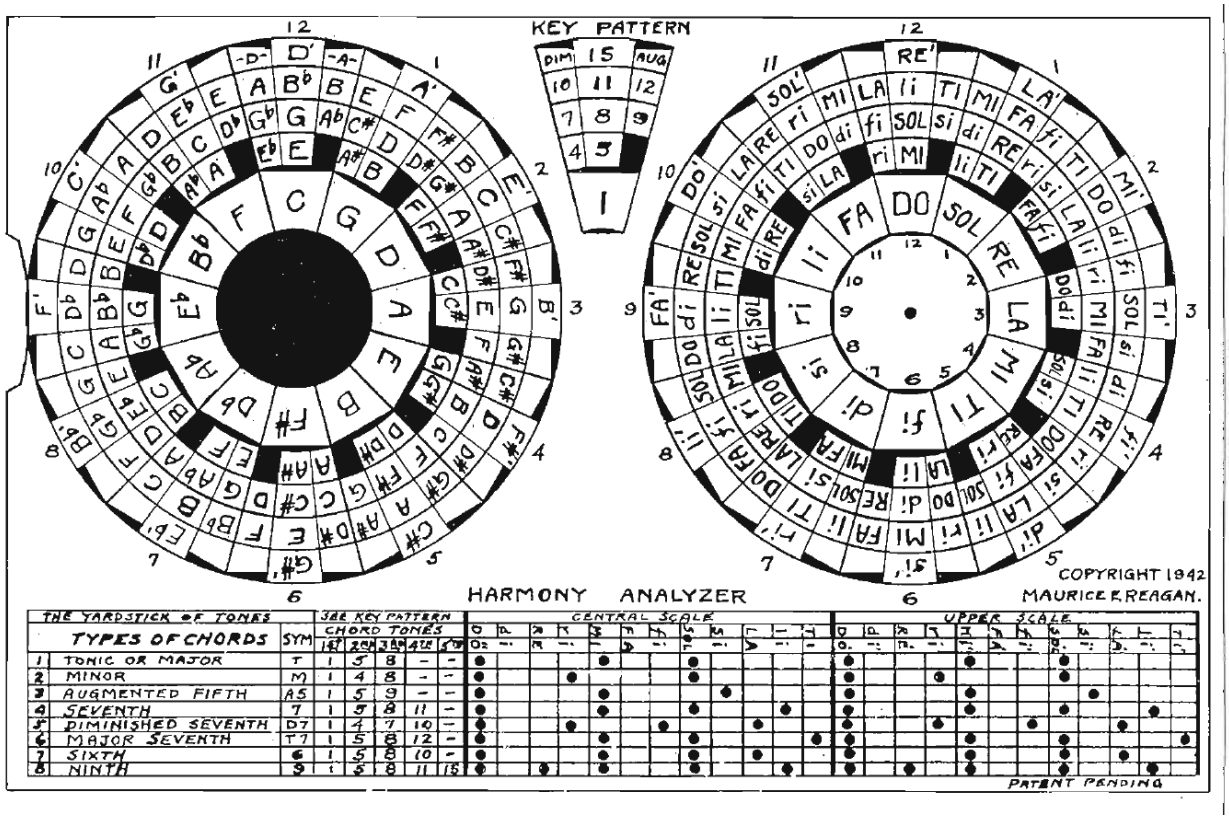
[16] Quoted in Henry, "The Origins of Barbershop Harmony: A Study of Barbershop's Musical Link to Other African American Musics as Evidenced Through Recordings and Arrangements of Early Black and White Quartets." Ph.D. diss., (Washington University of St. Louis, 2000): 3.
[17] Society Contest and Judging Committee, "Contest and Judging Handbook," (Nashville, TN: Barbershop Harmony Society): 2-1.

singing an arrangement that uses barbershop seventh chords for fewer than 33% of the chords. In 1993, the Arrangement category was replaced by the Music category, and moved away from being "harmonic accountants," identifying barbershop sevenths by ear in live performance and estimating the percentage used. Instead, the focus shifted towards recognizing an overall sound of consonant harmony and the use of featured secondary dominant chords. In practice, this means that a song should at the very least feature the 2^7 chord prominently, as it is the dominant seventh one spot further from tonic than the 5^7 chord on the circle of fifths.

Barbershop sevenths are used most frequently in the harmonic style to travel through the circle of fifths by secondary dominant. This type of progression was very common in American popular music of the early 20th century and is sometimes called the ragtime progression.[18] The importance of this progression was noted in barbershop theory as early as 1943, when "Molly" Reagan published a theory of chord relationships in *The Harmonizer.* In his "Mechanics of barbershop harmony" series, Reagan hoped to establish a "Society-wide musical 'Esperanto'"[19] for communicating about barbershop music. Arguably his most significant theoretical contribution was his theory of chord relationships. As shown on the left side of the figure below, Reagan placed the circle of fifths on a clock face and noted that barbershop music often uses harmonic sequences that "jump" from 12 o'clock to a chord from 1 through 5 and move counterclockwise through adjacent position to return to noon.[20] For example, a 12-4-3-2-1-12 progression would be 1-3^7-6^7-2^7-5^7-1. Reagan lists several songs that use these "ragtime progressions."

[18] Peter van der Merwe, *Roots of the Classical: The Popular Origins of Western Music*, (New York: Oxford University Press, 2004), 496.
[19] Esperanto meaning an artificial universal language.
[20] Maurice E. Reagan, "The Mechanics of Barber Shop Harmony [IV] and [V]."

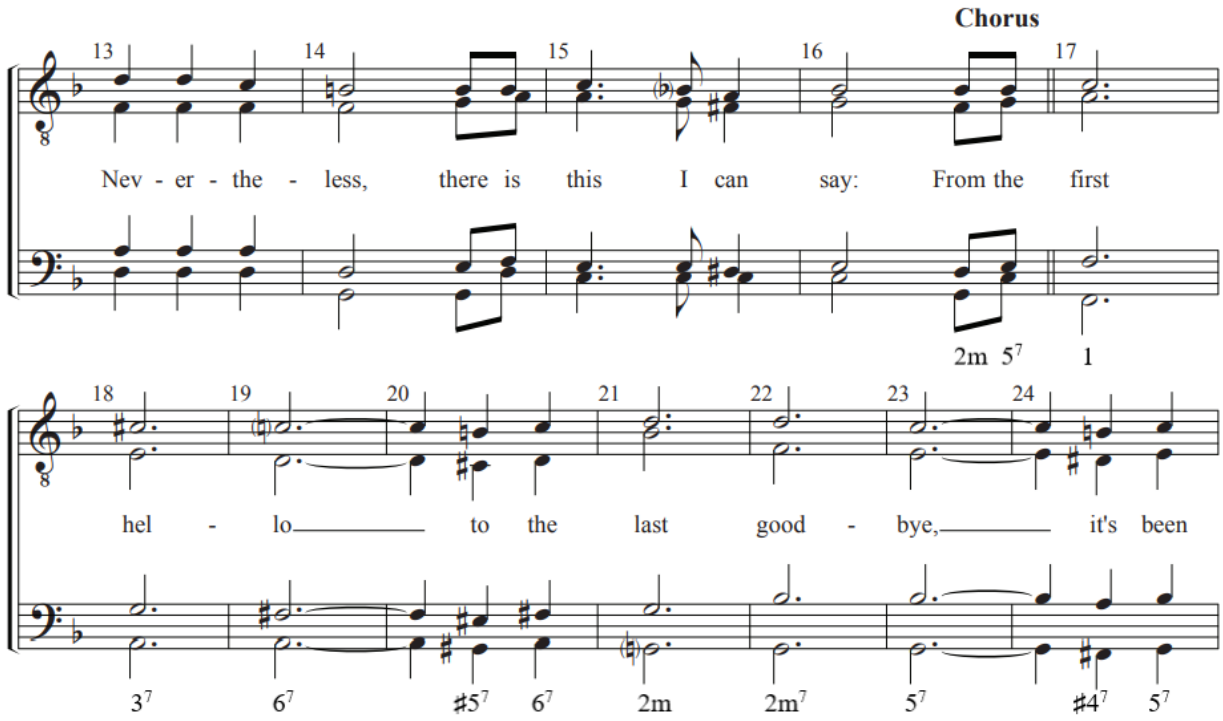
FIGURE 2.1. Maurice “Molly” Reagan. “The Mechanics of Barbershop Harmony – Chord Relationships”



In this progression, root position and second inversion are considered equally stable and ideal options, which often allow smoother voice leading for the bass rather than requiring leaps of fourths or fifths for each chord in the progression. A barbershop seventh chord that gives the root to the lead part must give the fifth of the chord to the bass, since complete chords are desired and the first and third inversions are considered unstable and are difficult to tune well. Example 2.9 shows a typical circle of fifths progression in “From the First Hello to the Last Goodbye,” an arrangement popularized by the 1980 SPEBSQSA international champion quartet, Boston Common. The chorus opens with a tonic chord in m. 17 before moving to an A^7 chord in m. 18, a barbershop seventh built on scale degree 3. That chord resolves to a D^7 chord in second inversion, allowing the bass to keep a common tone from the previous chord and fill out the

chord. The lead is singing the root of the chord, so the bass must sing the fifth. After a chromatic lower neighboring chord, the 6^7 chord resolves to the next stop in the circle of fifths, a chord built on G. However, a barbershop seventh chord, 2^7 cannot be used to harmonize m. 21, since B♭ is in the melody. Instead, a minor 2 chord substitutes for the 2^7 chord before resolving to the 5^7 in m. 23.

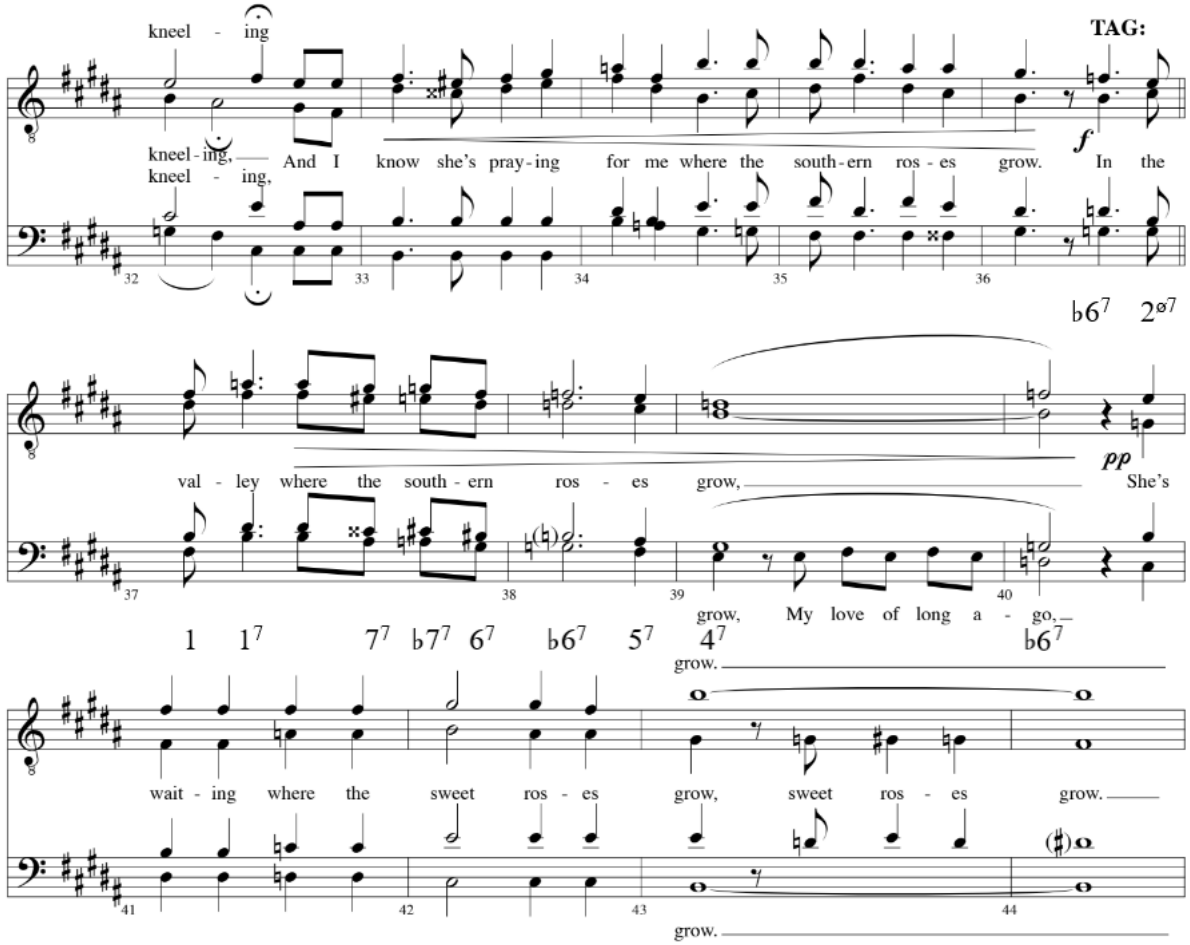
EXAMPLE 2.9. Johnny Burke, arranged by Lou Perry, "From the First Hello to the Last Goodbye," mm. 13-24



Barbershop sevenths are also used in non-dominant-functioning contexts. As seen in the example above, chromatic lower neighbors in a melody are often harmonized with chromatic lower neighbors in all harmony voices, resulting in a Type IV neighboring barbershop seventh chord a half-step lower than the pillar harmony. A minor seventh is often added to the

subdominant triad to create a barbershop seventh chord. This 4^7 chord is often used in a variety of music from the late 19th and early 20th centuries, most notably in the blues. Barbershop seventh chords are also used to descend through chromatic space via planing (moving all four voices in parallel motion). Example 2.10 shows the tag of "Where the Southern Roses Grow," a song popularized by the 1993 SPEBSQSA international champion quartet, Gas House Gang.

EXAMPLE 2.10, Theodore F. Morse and Richard H. Buck, arranged by David Wright, "Where the Southern Roses Grow," mm. 32-44



This example occurs in the tag of the song, so the arranger, David Wright, wrote this original material. Because the arranger is not constrained by a preexisting melody, he wrote a new melodic line which gave an opportunity for the desired harmonization. The melody line descends by half-step from scale degree 5 to 2 before a whole step down to the tonic. This was harmonized in parallel motion with all barbershop seventh chords, using tritone substitutions to create this chromatic descending progression. Scale degree 1 is sustained by the lead, while the other three voices move from a 4^7 chord to $\flat 6^7$. This type of move between barbershop sevenths using chromatic voice leading is quite typical in barbershop music and will be discussed in greater length in Chapter 3.

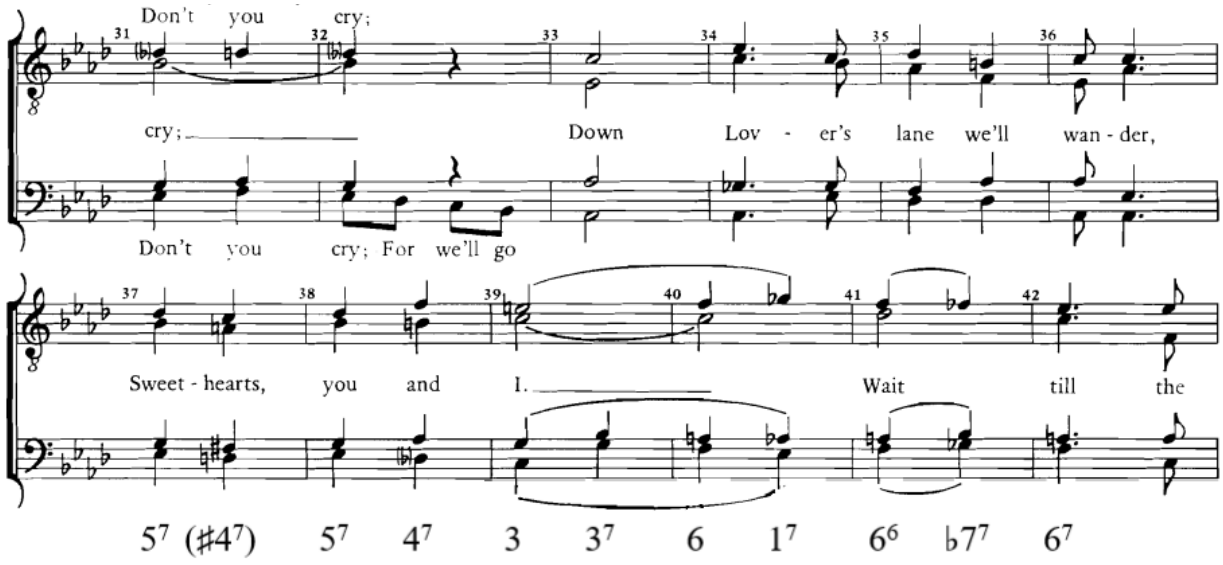
Use of Common Tones in Barbershop Music

A common tone is a note shared by two different adjacent harmonies. Barbershop music (and tonal music in general) often uses common tones to connect consecutive chords in harmonic progressions. One particular use of common tones in barbershop is a sustained pitch. The lead voice often sustains pitches while one or more of the three harmony parts change notes. This technique can be broadly divided into three categories: swipes, echoes, and posts. Swipes are used to provide rhythmic and harmonic embellishments to an arrangement. Often found at the end of a phrase, a swipe occurs when one voice, typically the lead, sustains a melodic note while one or more harmonic voices change notes. The lack of instrumental accompaniment in barbershop requires an arranger to use rhythmic propellants[21], which are arranging devices that use rhythmic and harmonic changes to keep a song from sounding stagnant. Swipes are often used as rhythmic propellants to fill in rhythmic space from the end of one phrase to the

[21] Henry, "The Origins of Barbershop Harmony," 107.

beginning of the next. Swipes are also used as harmonic embellishments. Swipes add harmonic interest to a passage through a variety of passing and neighboring motions, often using chords with tritones such as diminished or barbershop seventh chords, which could be considered a harmonic propellant, either to prolong the pillar harmony or connect to the next harmony. Example 2.11 shows a swipe from "Wait Till the Sun Shines, Nellie." In mm. 39-40, the harmonic voices move on the lyric "I" while the lead sustains a C. This swipe provides rhythmic momentum and changes harmonies to drive the music forward.

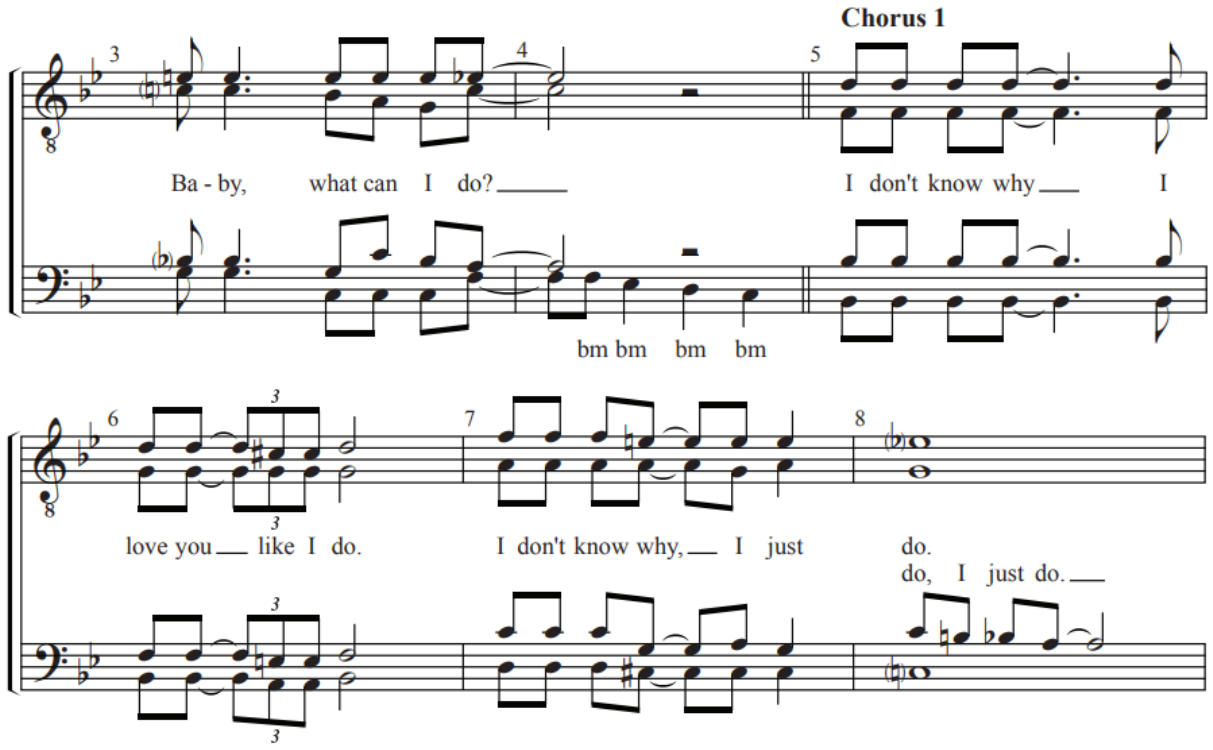
EXAMPLE 11. Andrew B. Sterling and Harry Von Tilzer, arranged by Warren "Buzz" Haeger, "Wait Till the Sun Shines, Nellie," mm. 31-42



Echoes are like swipes in that they often involve a sustained melodic note and movement by the harmonic voices. The chief difference is the repetition of text. After the conclusion of a line of text, one or more of the bass, baritone, and tenor echo all or part of the lyrics from that line. As previously discussed, Henry proposes that the echoes used so commonly in barbershop music are strong evidence of an African American origin of barbershop harmony, reminiscent of

the call and response pattern found in African American music.[22] An echo, like a swipe, is certainly a rhythmic propellant. In fact, echoes tend to have more of a rhythmic effect than a harmonic one. Where swipes often propel the harmony forward, echoes often prolong the pillar harmony through plagal motion, arpeggiation, or no harmonic change at all. The most substantial difference between swipes and echoes, of course, is the repeated text in an echo. Echoes are an opportunity for an arranger to tell the performer, and thus the audience, that the repeated text is important by giving it added emphasis or weight with a repetition. Example 2.12 shows an example of an echo in m. 8. Though echoes are often found in multiple harmony voices, this example shows an echo that features a solo baritone part.

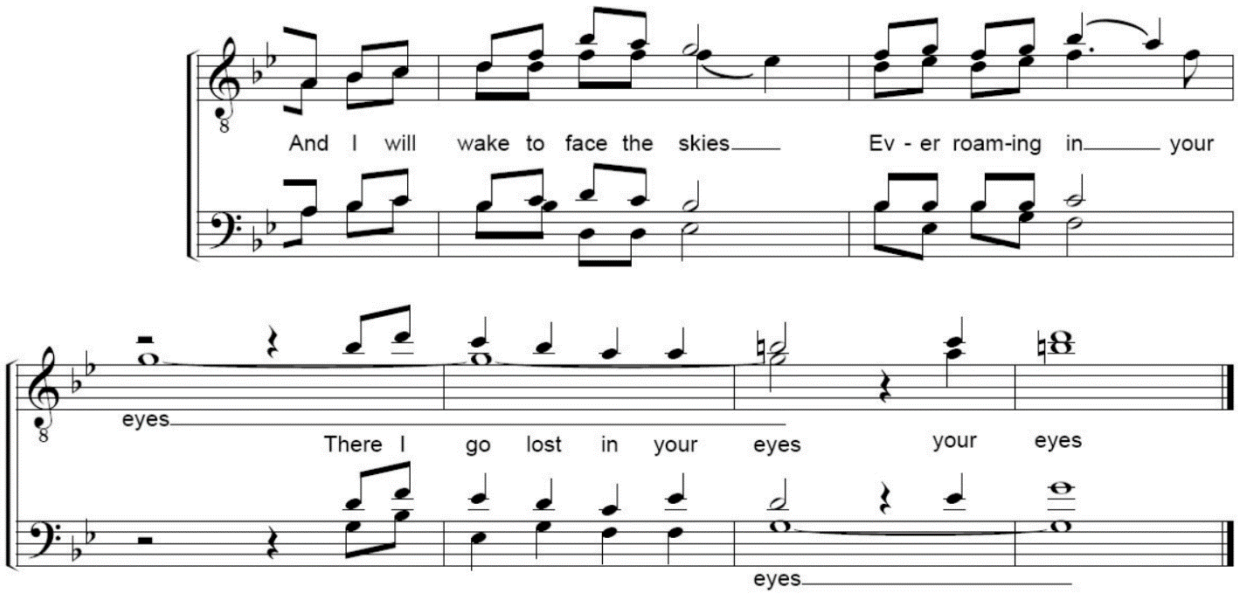
EXAMPLE 2.12. Fred E. Ahlert, arranged by Mel Knight, "I Don't Know Why," mm. 3-8



[22] Henry, "The Origins of Barbershop Harmony," 108.

Posts are longer sustained notes and are a defining feature of barbershop tags. A tag is a post-cadential codetta-like section at the end of a song and is originally-composed material by the arranger. A tag may contain some harmonic progressions and melodic motives that were used throughout the arrangement, but these original sections give an arranger a chance to show off their skill and provide a satisfying conclusion to the arrangement. Tags often feature posts in one of the voices. A voice will hold out a long note (the tonic is most common, but the dominant is used occasionally), while the three remaining voices go through a series of harmonies which all contain that post note as a common tone. Example 2.13 shows a post in the lead voice of one of the most popular tags to be sung independent of its arrangement. This post is unusual in that it is on scale degree 6 of B♭ and initiates a surprising modulation to G major at the end.

EXAMPLE 2.13. Soren Wohlers, “Lost (In Your Eyes)” Tag



Chapter four will delve deeply into tags and the harmonic choices arrangers make in them.

Theory of Barbershop Harmony

The 1976 treatise, *Theory of Barbershop Harmony,* is a fascinating piece of vernacular music theory. It was written by Burt Szabo, a prolific barbershop arranger and long-time member of the Society, who also was a professor with a doctorate in theory and composition. Szabo writes with all the expertise of an educated musician through the lens of a long-time barbershop practitioner and is celebrated in the book's foreword for demonstrating "the enviable combination of ear singer and trained musician." He begins the treatise with a declaration that "Barbershop harmony, as practiced throughout the history of barbershop singing, and throughout the history of SPEBSQSA, is based on harmonic practices of 19th Century European and American classical music."[23] This assumption was a reinforcement of the belief that barbershop music was a white European practice, rather than a complex interaction of race and musical practices in the 19th century, as later demonstrated by Lynne Abbott, Gage Averill, and others.

Szabo suggests that the basis of the barbershop harmonic system is chords of superimposed major and/or minor thirds to create triads, seventh chords, and ninth chords. Chords built with thirds are considered "most satisfying" because our ears have been conditioned to find those chords appealing and because of the natural overtones and expanded sound they produce. Szabo's appeal to historical practice is also used to justify the use of descending fifth progressions. He writes that most chords (other than 1 and 4, which are "free" chords) tend to progress to a chord whose root lies a perfect fifth below its own. Szabo claims that this type of progression "has served as the basis of much of the teaching of music theory and harmony for decades. The vast majority of musicians has studied harmony based on this principle for about 200 years."[24] Szabo's assertion, then, is that not only does barbershop music follow two

[23] Burt Szabo, *Theory of Barbershop Harmony*, (Kenosha, WI: SPEBSQSA, 1976), 1.
[24] Ibid, 3.

centuries' worth of harmonic practice, but that this treatise is aligned with decades, if not centuries, of music theoretical teaching. This language seems to point to a desire to legitimize barbershop music by connecting it to white classical, rather than black vernacular music.

Most of this treatise is on the harmonies allowed and disallowed in barbershop music, with some brief descriptions of how each permissible chord might be used. Each is demonstrated by generating different combinations of major and minor thirds. All types of triads are allowed but are considered rare other than the tonic triad or as a passing harmony, because a triad is considered "too colorless for barbershop singing."[25] Major and minor triads could have an added (major) sixth, with or without the fifth. Szabo pairs all four triad types with major, minor, and diminished sevenths to show 12 possible seventh chord qualities before eliminating six outright. He keeps only the five diatonic sevenths (Mm7, MM7, mm7, ø7, and °7) in addition to the augmented triad with minor seventh (augmented dominant seventh). Szabo also notes that only four of these chords appear naturally in the major scale. The allowable chords listed by Szabo are nearly identical to the chords that "Molly" Reagan considered "acceptable to the Barber Shop Fraternity"[26] in 1942, who listed all but the augmented seventh chord.

Szabo's discussion of the major minor seventh chord is curious. He suggests that if a Mm7 is built on scale degree 5, then we should call it a dominant seventh. If it is built on any other note, regardless of resolution or function, we should call it a secondary dominant. Szabo writes that effective avoidance of a perfect fifth resolution of a barbershop seventh is a feature of the barbershop style. The provided examples of this avoidance use chords with root relationships of major thirds, tritones, or semitones. Despite their alternative resolutions, Szabo still calls these chords secondary dominants. I agree with Szabo's assessment that alternative uses of the

[25] Ibid, 5.
[26] Reagan, "Mechanics of Barbershop Harmony [III]."

barbershop seventh is a primary feature of the style, which is why I prefer the term "barbershop seventh" over "secondary dominant." Given that these non-dominant uses of barbershop sevenths likely developed through Black improvised practices, calling these chords secondary dominants erases the Black contribution to the style in favor of a term developed for Western tonal music.

According to Szabo, major sevenths and sixths are only to be used to accommodate the melody, specifically within the context of a 1 or 4 prevailing harmony. Szabo later discusses minor and augmented triads as embellishing chords to the dominant seventh. These chords are used to harmonize a sixth above the root of a dominant seventh by doubling the root and omitting the fifth and seventh. I argue that the resulting harmony is a sixth chord, not a first inversion minor or augmented triad. Szabo does take this approach to labelling chords when it is built on the fifth scale degree. Rather than a first inversion minor chord, he labels this a dominant thirteenth.

The diminished seventh chord is introduced as an alteration of the dominant seventh, either by raising the root or lowering the third, fifth, and seventh a semitone. Though the tonicizing function and root ambiguity of the diminished seventh is explained, the author notes that the diminished seventh is most often used as a neighboring chord, as discussed previously in this chapter. These neighboring chords typically embellish barbershop seventh chords.

Added ninth chords and dominant ninth chords are allowed, but minor ninths are not. Dominant ninth chords usually omit either the fifth or the root. Szabo explains the relationship between rootless dominant ninths, minor added sixths, and half-diminished sevenths, which all share the same notes, but can be differentiated and assigned harmonic function in relation to the approach and resolution. This ambiguity will be addressed at length in Chapter 3.

Szabo closes his treatise with chords that are not used in traditional barbershop harmony. These include eleventh and thirteenth chords (except the dominant thirteenth with omitted seventh), and classical non-chord tones. His closing remarks once again attempt to position barbershop music as a relative to the Western classical tradition. He writes: "harmonic function and harmonic movement operate on certain basic 'laws' whether we are discussing a fugue by Bach, a symphony by Mozart, or a barbershop arrangement by the current International Champions."[27] This comment is indicative of the perspective of barbershop revivalists, who, until Lynne Abbott's groundbreaking research, completely ignored African American contributions to the style. Instead, they attempted to gain credibility with "trained musicians" by positioning barbershop music as one with European origins completely rooted in a Western classical tradition. The alternative resolutions of barbershop sevenths pointed out by Szabo as differing from classical music is evidence of the African American contribution to the origins of this style.

Barbershop Arranging Manual

Burt Szabo was one of the primary authors and editors of the *Barbershop Arranging Manual published in 1980*. This manual contains an enormous amount of information about arranging in the barbershop style, and it takes a decidedly preservationist tone. Near the end of the manual, the authors note the current trend in the Society of "convincing singing units that it is important to 'keep it barbershop.'"[28] The "Keep it Barbershop" slogan was adopted by the Society in 1957 and was a point of emphasis for the following decades in a Society that was increasingly afraid of the threat of "modern harmony." The rest of this chapter discusses the

[27] Szabo, *Theory of Barbershop Harmony*, 34.
[28]Burt Szabo and Dave Stephens, eds. *Barbershop Arranging Manual,* (Kenosha, WI: SPEBSQSA, 1980), 403.

manual's contents, with headings corresponding directly to sections in the manual. This exploration will provide insights into the theory of barbershop harmony from the perspectives of experienced practitioners of the style.

A Bit of History

The "bit of history" at the beginning of the manual suggests that woodshedding (improvisation or "ear-singing") was the origin of barbershop harmony, and the best arrangements still use the ear approach, since the harmony implied by the melody is the best option according to the authors. Following Szabo's *Theory of Barbershop Harmony*, the authors suggest that "the harmonies used by Mozart, Beethoven and other musical giants provided the chords 'ear singers' love to sing."[29] The irony of this "Bit of History" in the manual is that the authors closely associate the origin of the style with improvised singing but fail to acknowledge the role of African Americans in the development of that improvised tradition.

The authors consider ear-singing of implied harmonies to be the highest level of talent and ability, and the necessity for written arrangements only came about because "not all are blessed with sufficient talent to work out satisfying treatments of songs by ear!"[13] This emphasis on ear singing suggests that barbershop music is inherently an improvised art form and that arrangements are simply an idealized realization of woodshedded harmonies. This echoes a similar sentiment expressed by Reagan in his "Mechanics of Barbershop Harmony" series that arrangements are just a realization of the best ear singing.[30] He expresses a desire to create a

[29] Ibid, 1.

[30] Reagan, "Mechanics of Barbershop Harmony [I]."
"There has been some feeling expressed that barber shop harmony is developed wholly by some intangible thing called "feel" or "ear". There is no doubt but that the "typical" barber shopper has some ability to create a pleasing chord change and, beyond that, ability to remember it and express it. Yet some of the most pleasing quartettes in

common terminology so that "Chord combinations... can be written down easily and understood readily."[31] His hope is that this knowledge "will add to your harmonizing pleasures and that new and better arrangements will result."[32] The authors of the manual note that written down arrangements naturally led to more complexity and the evolution of the musical style, but performers, chorus directors, arrangers, and judges are warned to "be constantly on guard against practices which dilute the style."[33] It is apparent, then, that this manual is intended to instruct arrangers on the important features of the style for the sake of preservation.

Definitions of Barbershop Harmony

The arranging manual opens with a line-by-line explication of the definition of 8barbershop harmony adopted by the BHS in 1977. This definition shares many similarities and a few key differences with earlier and later definitions of barbershop harmony. This section will compare and contrast three definitions of barbershop harmony written by the Society: the first set of defining rules written by Joseph Stern in 1941, the definition written in 1977 and published in the arranging manual in 1980, and the definition written in 2008 that appears in the current *Contest and Judging Handbook.* These three definitions can be found in Appendix A.

Though Stern's rules were never officially endorsed by the BHS, he wrote them around the time that the Society's contests were looking for consistency in judging standards, and many of the features identified by Stern can be found in the later definitions above. Stern's rules can be grouped into a few broader categories. Four of the rules relate directly to note-doubling.

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the Society have members in them who are not strong on the creative side, but can remember and express what they hear."

[31] Reagan, "Mechanics of Barbershop Harmony [I]."

[32] Reagan, "Mechanics of Barbershop Harmony [IV]."

[33] *Barbershop Arranging Manual*, 2.

According to Stern, each chord should have four different notes, as in seventh and added sixth chords. When triads are used, doubling at the unison should always be avoided, while doubling at the octave should be minimized. Doubling at the octave should always involve the bass rather than two upper voices. Three rules relate directly to the pitch and voicing of the song. Stern claims that a medium-high key will prevent a muddy sound and vocal strain. Additionally, close harmonies are preferred. In other words, neither the bass nor tenor should be divorced from the rest of the quartet. Stern's remaining rules permit changing the melody of a song to better serve the harmony, prohibit instrumental accompaniment, suggest showmanship as an appropriate judging category, and note the importance of vocal blend. These rules did not reflect all prior practice of barbershop music throughout the late-19th and early-20th centuries, but they were influential in shaping barbershop music from the 1940s to present.

Stern's ninth rule, prohibiting accompaniment, later became one of the most important stylistic rules. In the later definitions of barbershop, unaccompanied vocal music is the first mandate. This is curious, given that the lack of instrumental accompaniment did not seem to be of most importance to Stern. His given reasons for disallowing accompaniment are simply that it covers up the "rough spots" of the quartet, who should work out those sections till they get it right, and that instruments "detract from the ability of the quartette." Nevertheless, this rule has become imperative in every BHS definition of barbershop harmony.

The 1977 definition discussed in the Arranging Manual includes this mandate for unaccompanied vocal music. Like Stern, this definition notes the importance of four-note chords, and further specifies that these chords should be consonant and should harmonize every melodic note. This definition further details the role of each vocal part and the permitted and unpermitted harmonies. It also discusses form, interpretation of rhythmic values, and a number of parameters

that are used to create “expanded sound,” such as just intonation tuning, vowel match, blending and balancing of voices. As previously discussed, expanded sound was not considered a vital aesthetic goal of barbershop music until at least the mid-1940s.

Much of the 1977 definition has remained unchanged, though a comparison between the 1977 definition and the 2008 definition, which is written in the current Contest and Judging Handbook, reveals a few changes in emphasis. A significant addition near the beginning of the definition is that of a primarily homorhythmic texture. The aesthetic goal of ringing chords is best accomplished when all voices are singing the same lyrics at the same time, so homorhythm is prioritized. The current definition also suggests an ideal performance. Rather than providing a list of elements that are not allowed, it tells us what the most stylistic and artistic performances contain. The basic harmonization of the song is embellished to support the song’s theme. High-level singers artistically achieve expanded sound through vocal skill, ensemble unity, and accurate intonation. Ideally, the best performers seem genuine and effortless in conveying an “emotionally satisfying and entertaining experience,” while combining visual and musical aspects to “create and sustain the illusions suggested by the music.”

We can see how performances of barbershop harmony have been shaped by these three definitions. Joseph Stern’s rules attempted to codify his ideal of barbershop harmonic practices, which strongly influenced the budding revival of barbershop music. The 1977 definition is mostly prescriptive and proscriptive, laying out exactly what is and is not allowed in harmonizing, voicing, tuning, and other facets of arranging and singing. The 2008 definition is filtered through the lens of an ideal and artistic performance, even noting the impact on the audience.

The Barbershop Song

"The barbershop song forms the basis of our hobby, is the reason for the existence of our Society, and is the foundation of our style!"[34] The authors of the Arranging Manual believe that picking the right song is vitally important for arrangers. The preservation mindset of the Society in 1980 was such that these authors wanted arrangers to pick songs that were appropriate for the style rather than "attempting to force our style on songs that cannot be given a barbershop setting or imposing a genius for engineering on songs that never come out whole because of surgery."[35] This section describes the elements of an appropriate song for arrangement in the barbershop style.

Inherent in these guidelines are many assumptions about the intended performers and audiences. For example, the melody should be easily singable (by an amateur male singer), which means a specific range, use of mostly conjunct motion and avoidance of chromaticism on strong beats. The lyrics should be easy to understand, simple, sincere, and often sentimental. The implication is that everyone should be able to sing the melody and every audience member should be able to understand and enjoy the song.

The suggestions for implied harmony, rhythm, meter, and form, also seem to be suggested for enjoyment by amateur singers and lay audiences. Complex forms, meters, and rhythms are discouraged. The harmony should be implied by the melody, and those implied harmonies should follow the harmonic rules discussed earlier. Minor keys should be avoided, and harmonic motion from 4 and 5 is considered unusual. This is one of the significant differences between typical barbershop progression and common practice music: in the barbershop style, 5^7 is nearly always preceded by 2^7, not by 4. In recent years, minor keys have

[34] Ibid, 27.
[35] Ibid, 27.

become much more acceptable on the barbershop contest stage, as arrangers have been creative in incorporating secondary dominant sequences in minor keys.

Harmonic Rhythm

Before the authors move into the substantial section on harmonization, they establish some fundamentals of harmonic rhythm. They introduce the concept of pillar harmonies (also called signposts or primary harmonies) and contrast them with non-primary harmonies. Pillar harmonies are the essential harmonies that often cover more than one measure and create the backbone of the basic harmonization. They can be further embellished with non-primary harmonies to provide consonant harmonies for a melodic note. These pillar harmonies usually change on strong beats, and arrangers are instructed that if the harmony is changed on a weak beat, it should change again on the following strong beat. Finally, the authors observe that harmonic rhythm tends to speed up near the end of the phrase to add intensity, and that fast songs tend to have slow harmonic rhythms and slow songs tend to have fast harmonic rhythms.

Three Approaches to Harmonization

The Arranging Manual makes an interesting distinction between an arrangement and a harmonization. The harmonization is "the basic harmonic foundation on which we build a barbershop arrangement."[36] Once the harmonization is in place, the arranger adds embellishments, introductions, tags, and other arranging devices to turn the harmonization into an artistic and stylistic arrangement. The Arranging Manual provides three distinct approaches to harmonization, each of which will be summarized and evaluated.

[36] Ibid, 68.

Approach 1

The first approach is prescriptive, though it offers some general principles of harmonization. These principles include staying within the appropriate range and vocal ordering of each part, giving the bass the roots and fifths of chords, using smooth voice leading for baritone and tenor voices when possible, and a preference for changing chords and voicings on the beat rather than off the beat. These principles should be used to harmonize in four voices all the melodic notes that fit the pillar harmonies of the song.

What follows is a highly detailed method for harmonizing melodic notes that do not fit the pillar harmonies. These non-chord tones are taxonomized into diatonic and non-diatonic non-chord tones. Diatonic non-chord tones are melodic notes that belong to the key but not the primary harmony. For seventh chords, that includes a ninth, sixth, or fourth above the root, and for triads, the seventh above the root is also included. The remaining five pitch classes that are outside the key are all non-diatonic non-chord tones. Starting with the diatonic non-chord tones, the authors provide specific ways to harmonize each non-chord tone when the pillar harmony is either a barbershop or minor seventh, or a major or minor triad, which are the most common qualities of pillar chords. This method distinguishes between chord alterations (such as ninth and sixth chords) and substitutions (such as harmonizing fourths above the root). For example, when a melodic note is a fourth above the root of a barbershop seventh pillar chord, "substitute the minor (or barbershop) seventh whose root is a fifth above the root of the prevailing chord."[37] All this information is distilled onto a table shown below:

[37] Ibid, 90.

FIGURE 2.2. Harmonization of Diatonic Non-Chord Notes. From *Barbershop Arranging Manual*, 90.

Table No. 1

with reference to prevailing chord

Non-Chord Diatonic Melody Notes

Prevailing Chord	Ninth*	Sixth*	Fourth	Major Seventh
Barbershop seventh	Replaces the root ①	Replaces the fifth. Replace the seventh with second root ②	Substitute the minor (or barbershop) seventh whose root is a fifth above the root of prevailing chord ③	**
Minor seventh	Substitute the barbershop seventh, or minor seventh whose root is a fifth above the prevailing chord ④	**	Substitute the barbershop seventh, or minor seventh, whose root is a fifth above root of prevailing chord ⑤	**
Major Triad	Replaces root if bass can sing root an octave lower ⑥ Or use the barbershop seventh chord whose root is a fifth above root of prevailing chord ⑦	Replaces the fifth ⑧	I: substitute the V7 ⑨ IV: substitute the diminished chord ⑩ or the III7 ⑪	Replaces root if bass can sing root a Major seventh lower ⑫ Or use the barbershop seventh chord whose root is a fifth above root of prevailing chord ⑬
Minor triad	VImin & IImin: substitute the barbershop seventh chord whose root is a fifth above root of prevailing chord ⑭ ⑮ IIImin (♭9)**	VImin: substitute IV7 ⑯ or ♭VII7 ⑰ IImin: substitute V7 ⑱ IIImin: substitute IV7 ⑲	Substitute barbershop seventh chord whose root is a fifth above root of prevailing chord ⑳	Substitute barbershop seventh chord whose root is a fifth above root of prevailing chord ㉑ or try to delay, thus avoiding!

* In some cases, the lowered 9 and lowered 6 (the lowered sixth often called raised or augmented fifth and shown by + sign)

** Rarely, if ever, encountered

A similar approach is taken to harmonizing non-diatonic non-chord tones. The authors note that in most melodies that are used by barbershop arrangers, non-diatonic non-chord tones are typically preceded and/or followed by notes in the prevailing chord. They suggest that all five non-diatonic notes are within a half-step of one of the chord tones in the four barbershop seventh

chords that are used most often: 5^7, 2^7, 6^7, and 3^7. This is technically untrue for the 3^7 chord. For example, in C Major, F♯ is more than a half-step away from every note in E7 (3^7). The authors give ways to harmonize every non-diatonic non-chord tone that is a half-step above or below the root, third, fifth, and seventh, of a major triad and barbershop seventh chord. Most often, the altered notes are treated as the third of a barbershop seventh chord. Those guidelines are distilled into two more tables shown below.[38]

FIGURE 2.3. Harmonization Tables for Chromatic Non-Chord Notes. From *Barbershop Arranging Manual*, 90.

Table No. 2

with reference to *previous* chord, if **Lead Note Is ½-Step Below the:**

Previous Chord	Root	Third	Fifth	Seventh	Sixth	Ninth
Major triad	Leave other notes unchanged [1] or substitute barbershop seventh whose root is a Major third below the altered note [2] (see also Table no. 1)	Lower accompanying fifth/third by ½-step, retaining both roots* [3] or lower accompanying fifth/third ½-step, retain one root, move other root down a minor third to make fully diminished chord [4] or substitute barbershop seventh whose root is a fifth (or a Major third) below the altered note [5]		Not applicable	Leave other notes unchanged [6] or substitute barbershop seventh whose root is a Major third below the altered note [7]	Very rare, try using diminished chord of which the altered note is a part [8]
Barbershop seventh	Lower other notes ½-step [9] or substitute barbershop seventh whose root is a Major third below the altered note [10]	Lower accompanying notes, including [11] or excepting [12] the root, as desired, ½-step			Not applicable	Leave other notes unchanged [13] or substitute barbershop seventh whose root is a fifth below the altered note [14]

* Incomplete diminished chord, used only in special circumstances. *(See Example 39.)*

[38] Ibid 94 and 96.

Table No. 3

with reference to previous chord, if
Lead Note Is ½-Step Above the:

Previous Chord	Root	Third	Fifth	Seventh	Sixth	Ninth
Major triad	Requires a substitute chord, most often the barbershop seventh whose root is a Major third below altered note [15]	Substitute barbershop seventh whose root is a fifth above the root of previous chord [16] (see Table no. 1 for fourth)	Leave other notes unchanged [17] or substitute barbershop seventh whose root is a Major third below altered note [18]	Not applicable	Treat as a barbershop seventh chord. Add the fifth for a full chord [19] or substitute barbershop seventh whose root is a Major third below altered note [20]	Not applicable
Barbershop seventh	Leave other notes unchanged [21] or substitute barbershop seventh whose root is a fifth below the altered note [22]	Substitute barbershop seventh whose root is a fifth above the root of previous chord [23] (see also Table no. 1 for fourth)	Leave other notes unchanged [24] or substitute barbershop seventh whose root is a Major third (or fifth) below altered note [25] or move the seventh to second root [26]	Substitute barbershop seventh whose root is a fifth below the altered note [27]	Not applicable	Substitute barbershop seventh whose root is a Major third below altered note [28]

After an explanation of harmonizing non-chord tones, the authors note that progressions may be further embellished, and they specifically mention the embellishing function of the fully diminished and half-diminished seventh chords. “One of the most common ways in which an arranger dresses up his work is by using half-diminished seventh chords.”[39] An interesting explanation ensues about the “triple purpose”[40] of half-diminished seventh chords, which may also be rootless ninth chords or minor triads with added sixths in certain contexts. However, they

[39] Ibid, 110.
[40] An entire section of Chapter 3 is dedicated to this ”triple purpose.”

suggest that we should consider a half-diminished function when the chord resolves to a barbershop seventh whose root lies a fifth below.

This approach starts from the harmonic foundation of pillars and works towards the musical surface through harmonization of non-chord tones, adding embellishing chords, and fortifying the sound of the arrangement by substituting barbershop seventh chords for minor seventh chords.

Approach 2

Approach 2 offers a step-by-step approach to harmonization. This approach has a unique perspective on harmony. The author writes: "all chords in the barbershop chord vocabulary are built on the root of the prevailing primary chord except the diminished seventh."[41] Chords are grouped into "chord families," which are chords that share a root and are one of the allowable harmonic choices: major, minor, and augmented triads, major add 9, major and minor add 6, major seventh, barbershop seventh, half-diminished seventh, and dominant ninth with or without its root. Diminished sevenths are not included since they are rarely prevailing harmonies.

This method of harmonization starts with listening to the song and humming along by ear to find a basic bass part, which will become the roots of the pillar chords. According to the author, a piano accompaniment of the song may be consulted, but the ear should make the final decision on the important bass notes. Then, the tune is divided into primary and secondary melody notes. A primary melody note is one that is the root, third, or fifth of the pillar harmony. In this step-by-step approach, arrangers are instructed to harmonize all the primary melody notes and as many of the secondary melody notes as possible with chords from the primary chord

[41] Ibid, 169.

family (the chord family built on the root of the prevailing harmony). Those notes that cannot be harmonized with a chord from the primary chord family should use chords from the secondary chord families. The author lists six groups of secondary chord families, with the implication that they are ordered from most to least preferred. For example, the first group is the chord family with a root a fifth above the pillar harmony, reinforcing the desire for fifth-related progression in the style, even among embellishing harmonies. The remaining steps all rely a good deal on intuition and trial and error. The arranger is instructed to strengthen and adjust weak or astylistic spots by trying harmonies from the chord family of the following chord, adding circle-of-fifths progressions, trying out other chords from secondary chord families, and adding swipes and other arranging devices.

Whereas the first approach was highly prescriptive and technical, offering exact solutions for each possible melodic note, the second approach assumes a level of intuition within the barbershop style. From relying on ear-singing to determine the bass part to a reliance on recognizing weak or astylistic sections, this approach teaches that trial and error through listening is the most effective method for arranging in the barbershop style. It provides basic categories for melodic notes and chord families as potential options for the arranger to try out.

Approach 3

Instead of taking a prescriptive or process-oriented approach, the third approach is centered on harmonic function and progression. "The underlying principle in this section of the chapter is where the harmony is going. To what harmonic pillar is progression being made? What is the target or 'goal' harmony?"[42] The section on harmonic function in barbershop music is

[42] Ibid, 206.

more theoretical and offers some fascinating insights into a barbershop expert's perspective on harmony.

The author portrays a song as a "harmonic highway," which moves from an opening root position tonic to a final closing root position tonic. The path from the beginning to the end is guided by rules of progression, and the melody implies the harmony and directs listeners along the harmonic highway. Though "the tonic and subdominant chords are free to move anywhere,"[43] other harmonies must follow these rules for harmonic progression. First is the root by perfect fifth, typically descending, though ascending fifth progressions (an example of retrogression) can often be used to harmonize melody notes outside the pillar harmony.

The second rule of progression is root motion by ascending or descending semitone. The author suggests that these progressions almost always involve a barbershop seventh or ninth chord resolving by semitone. I argue that like the fifth progressions, descending semitone movements achieve harmonic progression, but ascending semitone motions either embellish or prolong harmonies, and often are used to increase intensity rather than progress towards the tonic on the harmonic highway. The topic of ascending and descending semitonal motions will be discussed further in Chapter 3.

The third progression rule is for chords (especially barbershop sevenths) whose roots are a tritone apart. This is not actually progression at all, but something that the author calls a "harmonic holding pattern" and some music theorists call prolongation. These tritone-related chords can both move by semitone or fifth to the same chords and may be used when the melody is on the third, seventh, raised root, or lowered fifth of the prevailing harmony. These moves

[43] Ibid, 206. This echoes Szabo's assertion from *Theory of Barbershop Harmony.*

between tritone-related chords, called counterpart harmony in the text and tritone substitutes in jazz theory, are discussed further in Chapter 3.

The fourth progression rule proposes three uses for the fully diminished seventh chord. The first is progression when it moves by root motion of fifth or semitone. The author observes that diminished sevenths moving down by semitone seem to imply root motion by fifth, and that diminished sevenths often resolve by ascending semitone. The author does not consider that this is simply a secondary leading tone resolution which tonicizes the root of resolution. The second use of diminished seventh is an anticipation of the following harmony. A diminished seventh can be used to connect to the following harmony through a common tone. The third use is a "harmonic holding pattern." This prolongation use of the diminished seventh retains the root of the prevailing harmony and uses a fully diminished seventh chord to embellish the pillar harmony. Both the second and third uses suggested by the author are labelled as common tone diminished sevenths by many music theorists.

The final progression rule is as follows: "a harmonic target containing no seventh may be approached from a barbershop seventh rooted a Major third below."[44] The examples provided are the most common use of $\flat 6^7$ moving to the tonic major, especially in a tag, and $\flat 3^7$ resolving to 5, where the root and seventh of $\flat 3^7$ move in contrary motion into octaves on scale degree 2, the fifth of the dominant triad.

This approach is rooted in a theoretical perspective that views chord progressions through the lens of harmonic function and the "harmonic highway." An arranger should decide which chord to use by figuring out the prevailing harmonies and then ensuring correct rules of progression and harmonic holding are used. The author makes an important distinction between

[44] Ibid, 243.

progression and prolongation that other approaches lacked, saying "The sequential interchange of harmonies that progress to the same harmonic goal does not constitute progression. It is merely substitution to achieve variety, color, rhythmic motion, and/or the ability to harmonize problem notes in the melody."[45] The author also observes that the tonic and subdominant triads play a significant role in anchoring progressions and provide a stable foundation from which progressions can move wherever they need.

Chapter 2 Case Study – "You Tell Me Your Dream"

The case study in this chapter looks at the Barberpole Cat arrangement of "You Tell Me Your Dream." This arrangement exemplifies many of the idiomatic features of barbershop theory and arranging discussed in this chapter, particularly the use of barbershop sevenths with and without (secondary) dominant function and harmonizing a variety of diatonic and chromatic notes that do not fit the pillar harmony. The following harmonic analysis will show two levels: the surface level and the underlying pillar harmony level. In this way, we can reverse engineer the process of harmonization suggested by the Manual.

"You Tell Me Your Dream" uses a variety of barbershop seventh chords built on many different roots, with or without functioning as dominants or secondary dominants. Dominant functioning sevenths may be observed throughout the arrangement, as shown in the pillar harmony layer. The tonic jumps out to 6^7 and moves by descending fifth through 2^7 and 5^7 before returning to the tonic. This harmonic framework is foundational to the barbershop style.

[45] Ibid, 243.

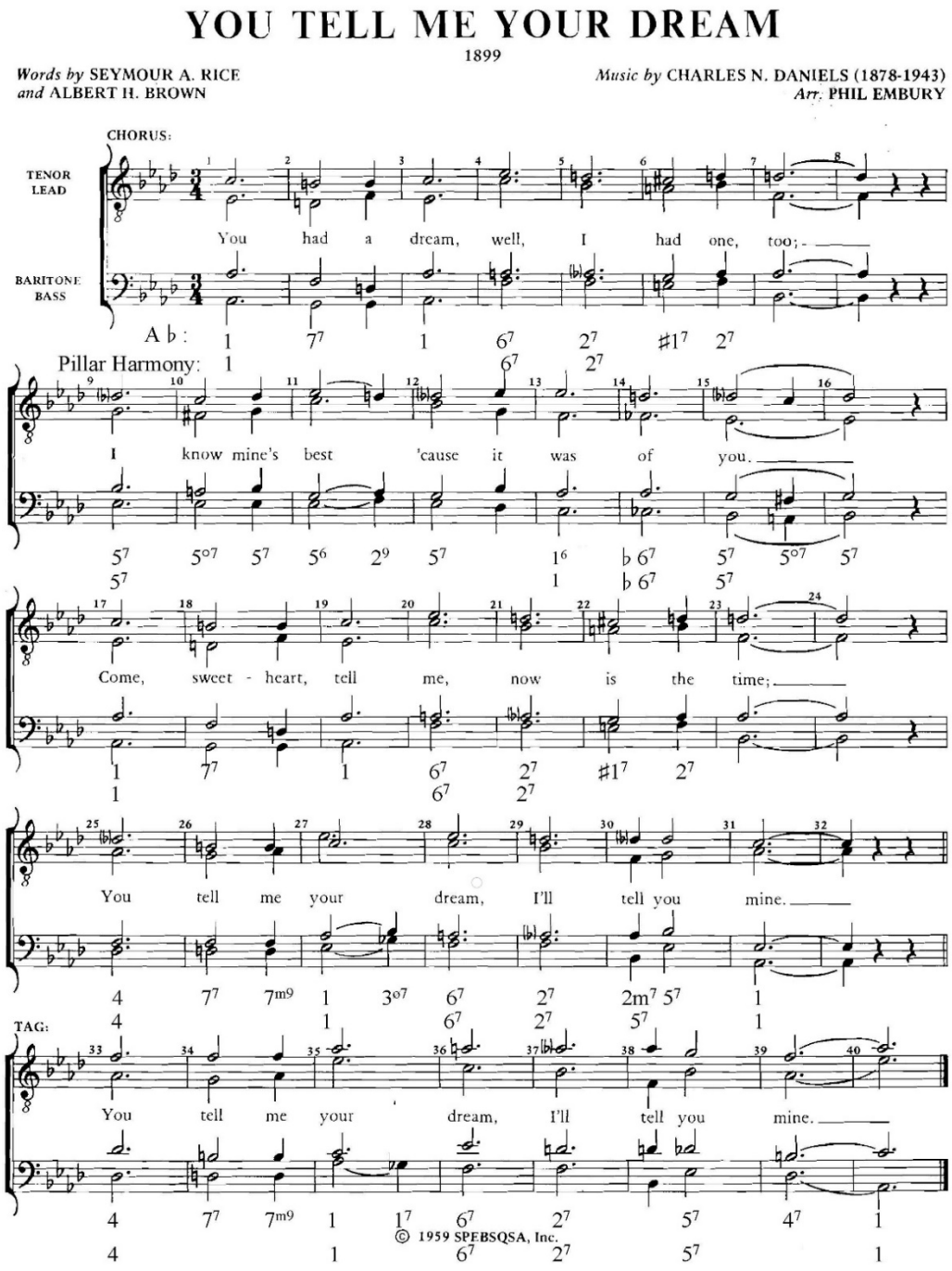
This framework is further embellished with a variety of harmonies, most notably with non-dominant functioning barbershop sevenths. One common use is the Type IV neighbor chord. In measures 6 and 22, the chromatic lower neighbor A♮ within the 2^7 pillar harmony is embellished with an A7 chord, which resolves back to 2^7 by moving all voices up a semitone. A variation of the Type IV neighbor chord is used in measures 2 and 18 to decorate the tonic triad with a 7^7 lower neighbor, but the melodic shape and lack of seventh on the 1 triad do not allow for an upward semitone resolution in all four voices. M. 14 contains a $\flat 6^7$ chord, serving as a tritone substitute. Rather than precede the 5^7 in m. 15 with a typical 2^7, the tritone substitute is used to accommodate the F♭ in the melody. M. 39 shows the most common non-dominant functioning use of the barbershop seventh. The 4^7 is often used in a plagal motion back to 1. The minor seventh is often respelled as an augmented sixth to draw attention to its upward resolution to scale degree 3. The move from 5^7 to 4^7, particularly at the end of an arrangement, was used frequently in the first several decades of the Society, but this harmonic retrogression has fallen out of use in the last couple of decades of barbershop arrangements. In m. 35, the 1^7 is used without dominant function. Rather than move to the expected subdominant harmony, the 1^7 moves to a 6^7 to set up one final secondary dominant chain. The 1^7 is considered weakly voiced, since the seventh of the 1^7 is in the bass. The move by the bass is instead used to facilitate parsimonious voice leading to the 6^7, which is only two semitones away from 1^7. This interesting use of minor third-related barbershop sevenths will be explored in more detail in Chapter 3.

This arrangement shows common strategies for harmonization of notes that do not fit the pillar harmony. We have already discussed several uses of neighbor chords to harmonize chromatic lower neighbors, but there are a few additional neighbor chords that are notable. In m. 10, a Type III neighbor is used to decorate the 5^7, and that same fully diminished seventh is used

as an embellishment in the swipe at the end of the phrase. A further abstraction of the 7^7 to 1 neighbor chord is used in measures 26 and 34. Within a subdominant pillar harmony, the tritone related 7^7 is used to harmonize scale degree 7. When the melody moves from G to A♭, the resulting harmony is a fully diminished seventh chord, which I suggest is more productively called a rootless 7^{m9}. Though there are no examples in this arrangement, it is common for a melodic move from the root to the ninth of the pillar harmony to simply be arranged as a seventh chord moving to a rootless dominant ninth. In the same way, a melodic tone a sixth above the harmonic pillar is often harmonized as a sixth chord, such as the 5^6 in m. 11. Interestingly, in m.11, that 5^6 swipes to a rootless 2^9, perhaps to add some harmonic tension and variety to the four full measures of 5^7 as a harmonic pillar. This retrogressive use of a chord a fifth higher than the pillar harmony is commonly used to create variety and motion in barbershop harmonizations, particularly in instances where the melodic note does not fit the pillar harmony.

This case study shows the preferences of barbershop arrangers for harmonizing a melody. The pillar harmonies, which are typically either secondary dominants, tonic, or subdominant harmonies, fit many of the melodic notes. Sixths and ninths above the pillar harmony are harmonized with sixth chords and (often rootless) ninth chords. All other melodic notes are harmonized with either a chord rooted a fifth above the pillar harmony or with various neighbor chords.

CASE STUDY 2. Charles N. Daniels, Seymour A. Rice, and Albert H. Brown. "You Tell Me Your Dream," Arranged by Phil Embury. *Barberpole Cat Songbook*, Kenosha WI: SPEBSQSA, 1971.



Chapter 2 Conclusion

Barbershop practitioners have a long history of using music theory to describe their own music. In fact, vernacular music theory written early in the Society's history shaped the formation of the genre. Society-published sources such as *Barbershop Arranging Manual* were written with the intent of protecting barbershop from outside threats. The manual closes with the following three paragraphs.

> So what will happen? Wouldn't it be encouraging to visit a barbershop group of the future and hear familiar sounds? In fact, isn't it imperative? Otherwise, it means that the style as we understand it will have become ancient history.
>
> Is preservation compatible with evolution? Can changes in the barbershop style continue to take place without destroying it? We say it's still possible, but certainly at an increasingly slower rate. With fewer and fewer opportunities for innovation, we must face up to the time when further changes mean we have to call it (barbershop) something else.
>
> This, then, is the challenge to the arranger: to accept that 1) some elements of barbershop are predictable, and should be; 2) the characteristic harmonic texture is the barbershop seventh, and must be; 3) nostalgia is an essential ingredient of barbershop, and always will be.[46]

This chapter has investigated some of the primary features of the genre of barbershop harmony which represent an invented tradition created by the Society and preserved and perpetuated through vernacular sources like *Theory of Barbershop Harmony* and *Barbershop Arranging Manual.* The following chapter examines the harmonic highway of barbershop music discussed in this chapter through the lens of Black improvisational singing discussed in Chapter

[46] Ibid, 406.

1. I argue that improvisational practices are often paired with parsimonious voice leading, and I borrow from the subfield of neo-Riemannian theory to explain and visually represent many of the common chromatic progressions idiomatic to the barbershop style.

Chapter 3: Visualizing Parsimonious Voice Leading: Barbershop Music's Harmonic Highway

Barbershop harmony has been formed and preserved by its practitioners based on a harmonic style born of a complex interplay of race and culture around the turn of the 20th century. The idiomatic features of this music are a confluence of this myriad of influences. Though it is not my intent in this chapter to unravel this intricate web, assigning particular musical features to specific races, locations, or cultures, I suggest that a convincing analysis of this music must consider a variety of perspectives. Of particular interest to me is harmony, which is at the heart of all barbershop singing. Barbershop harmony is highly rooted in tonality and yet contains many chromatic chords which cannot be easily explained by the perspectives of Western classical practice. As discussed in Chapter 1, I argue that Black improvisation has contributed a lexicon of rich chromatic chords that are idiomatic of barbershop harmony. Since this tradition was improvised rather than written, there is no existing evidence of the precise nature of these improvised harmonies. However, many of the accounts of Black improvisation cited in Chapter 1 alludes to the discovery of "strange," "illegitimate," or "unusual" harmonies. This implies that the harmonies were outside the scope of common practice tonality. I therefore argue that the many non-functional uses of chromatic harmonies found in barbershop music throughout its history largely arose through improvisational processes. I do not argue that all other functional uses of harmony, such as the secondary dominant sequence are purely a result of white European culture. Instead, I recognize the complicated history and development of the style, observing that Black and white musical cultures both played a significant part in that development. This chapter examines barbershop harmonic practice, identifying both functional and non-functional uses of

harmony. I investigate how non-functional harmonies may have developed through improvisation and apply Neo-Riemannian theoretical methodologies to model the improvisational process and the preferred paths of barbershop progressions. I expand the analogy of the "harmonic highway" found in barbershop theory by integrating the progressions discussed in this chapter into that analogy and providing graphical representations of many of these concepts. These graphs not only model may of the progressions found in barbershop music, they also serve as a useful tool for arrangers to visualize and utilize the parsimonious voice leading potential of the chromatic harmonies discussed in this chapter.

The Harmonic Highway: Functional Tonality

A discussion of functional tonality in barbershop music is necessary before investigating its use of non-functional chromatic harmonies. The BHS's Contest and Judging Handbook (CJHB) notes that "Barbershop music features songs… whose tones clearly define a tonal center and imply major and minor chords and barbershop (dominant and secondary dominant) seventh chords that often resolve around the circle of fifths, while also making use of other resolutions."[1] There is a tension, then, between functional chord progressions, such as dominant resolutions, and non-functional progressions, such as some of the "other resolutions" of barbershop seventh chords. As noted previously, secondary dominants and their resolutions around the circle of fifths towards the tonic are highly characteristic of the style. This harmonic sequence can substitute other harmonies within the circle of fifths framework to accommodate melodic notes that do not support a barbershop seventh harmonization. This includes the use of minor triads (most often in

[1] "Contest and Judging Handbook," 2-1.

3^7 to 6m), minor seventh chords (especially $2m^7$), and dominant ninths with omitted roots or fifths.

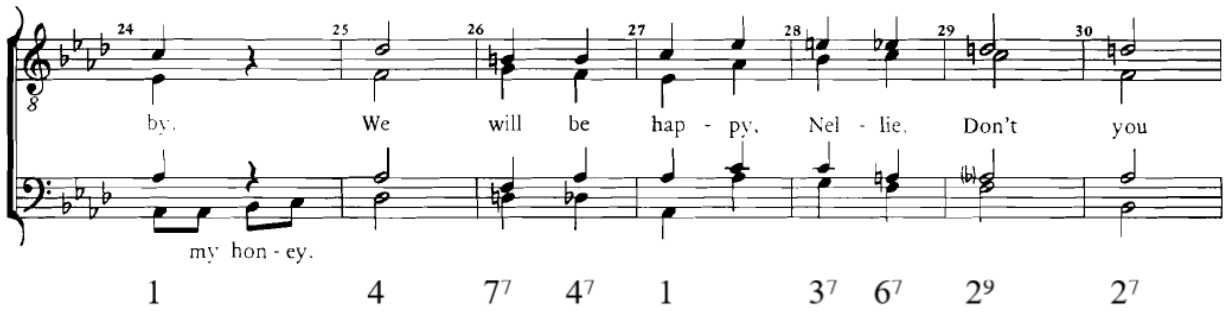
Moving by root motion of descending fifths towards the tonic is an example of centripetal harmony, a term which evokes notions of spiral motion and movement towards the (tonal) center. Barbershop vernacular theorists have often used analogies of movement through spaces to describe harmonic progression. As briefly mentioned in Chapter 2, the "Barbershop Arranging Manual" includes a discussion of the "harmonic highway." It suggests that all other chords besides the tonic are moving the music forward towards resolution. The tonic is the destination, and the chords along the highway direct us towards it. The secondary dominants resolving around the circle of fifths serve as the "signposts" or the harmonic pillars which provide the foundation for this highway. A similar conception was held by "Molly" Reagan in his "Mechanics of Barbershop Harmony."[2] As shown in Figure 2.1, he placed the circle of fifths on a clock face and noted that the harmony jumped from 12 o'clock to a new position on the clock, and then returned by counter-clockwise motion back to noon (via secondary dominants).

A further alteration of the secondary dominant sequence is the introduction of tritone substitutes. The concept of tritone substitution comes from jazz theory, and that term has only recently been adopted by barbershop theorists.[3] However, the 1980 *Barbershop Arranging Manual* discusses tritone-related dominant sevenths at length. It notes that chords whose roots are a tritone a part are counterpart harmonies which are interchangeable "because they move to the same chords!"[4] The authors also recognize the common tone relationship between the thirds

[2] Maurice E. Reagan, "The Mechanics of Barber Shop Harmony [IV]."
[3] The renaming of the Music category as "Musicality" in 2023 included an updated category description. This update includes mention of "tritone substitutions functioning as secondary dominants."
[4] *Barbershop Arranging Manual*, 210.

and sevenths of tritone related seventh chords, which are held invariant but switch functions. Barbershop sevenths may either move to its tritone-related seventh, resulting in a "harmonic holding pattern,"[5] or move down by semitone to enact harmonic progression (towards the tonic). Example 3.1 shows an example of a harmonic holding pattern in "Wait Till the Sun Shines, Nellie." Mm. 24-27 contain a common 1-4^7-1 plagal motion. However, the G in the melody in m. 26 does not fit the 4^7 pillar chord. The arranger chooses the tritone-related 7^7 to harmonize this note, since the two harmonies are considered interchangeable.

EXAMPLE 3.1. Andrew B. Sterling and Harry Von Tilzer, arranged by Warren "Buzz" Haeger, "Wait Till the Sun Shines, Nellie," mm. 31-42

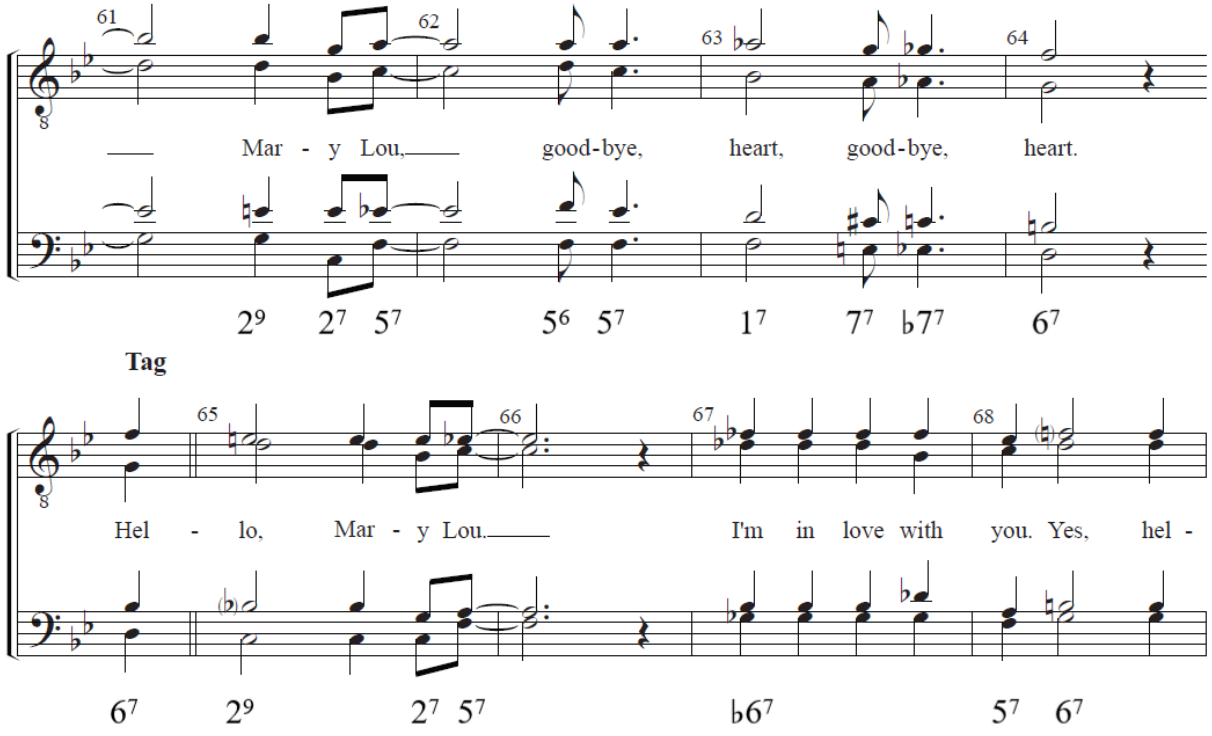


Example 3.2 shows tritone substitutes that allow for parallel descending barbershop sevenths. Rather than resolving the 5^7 in m. 62 to a root position 1, the arrangement continues the secondary dominant sequence, adding a seventh in the tenor to make a second inversion 1^7. This sets up a gesture in mm. 63-64 that often initiates the beginning of the tag. All voices descend by semitone in parallel motion, moving from 1^7 to 7^7 to $\flat 7^7$ to 6^7. That 6^7 continues by fifth motion to 2^7 and 5^7 in the following measures. In m. 63, the $\flat 7^7$ is substituting for the tritone-related 3^7

[5] Ibid, 210.

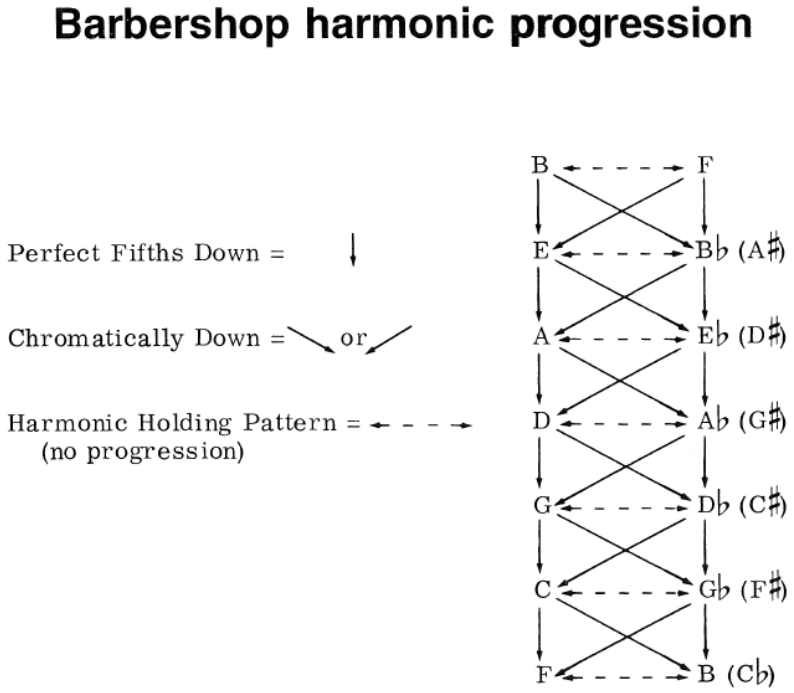
chord, which is between 7^7 and 6^7 on the circle of fifths. The substitution of the $\flat 7^7$ allows for smooth parallel voice leading. Given the semitone relationship between 1^7 and 7^7, one might also argue that 1^7 is substituting for $\sharp 4^7$ at the beginning of this sequence, while simultaneously acting as the destination tonic for the preceding sequence, though in practice, secondary dominant chains do not start with a jump all the way to $\sharp 4^7$. Another tritone substitution is used in m. 67. There is a retrogression from the 5^7 in the previous measure to a $\flat 6^7$, a tritone away from 2^7, which is V7/V. Perhaps the smooth parallel voice leading up to $\flat 6^7$ allows the ear to accept the retrogression more readily.

EXAMPLE 3.2. Gene Pitney and Cayet Mangiaracina, arranged by David Wright, "Hello Mary Lou," mm. 61-68



In theory, barbershop sevenths may descend by fifth or semitone, and both resolutions are given equal status as progress towards the eventual goal of tonic. The *Barbershop Arranging Manual* has a table that illustrates this point, reproduced in Figure 3.1.[6]

FIGURE 3.1. Barbershop Harmonic Progression. From *Barbershop Arranging Manual.*

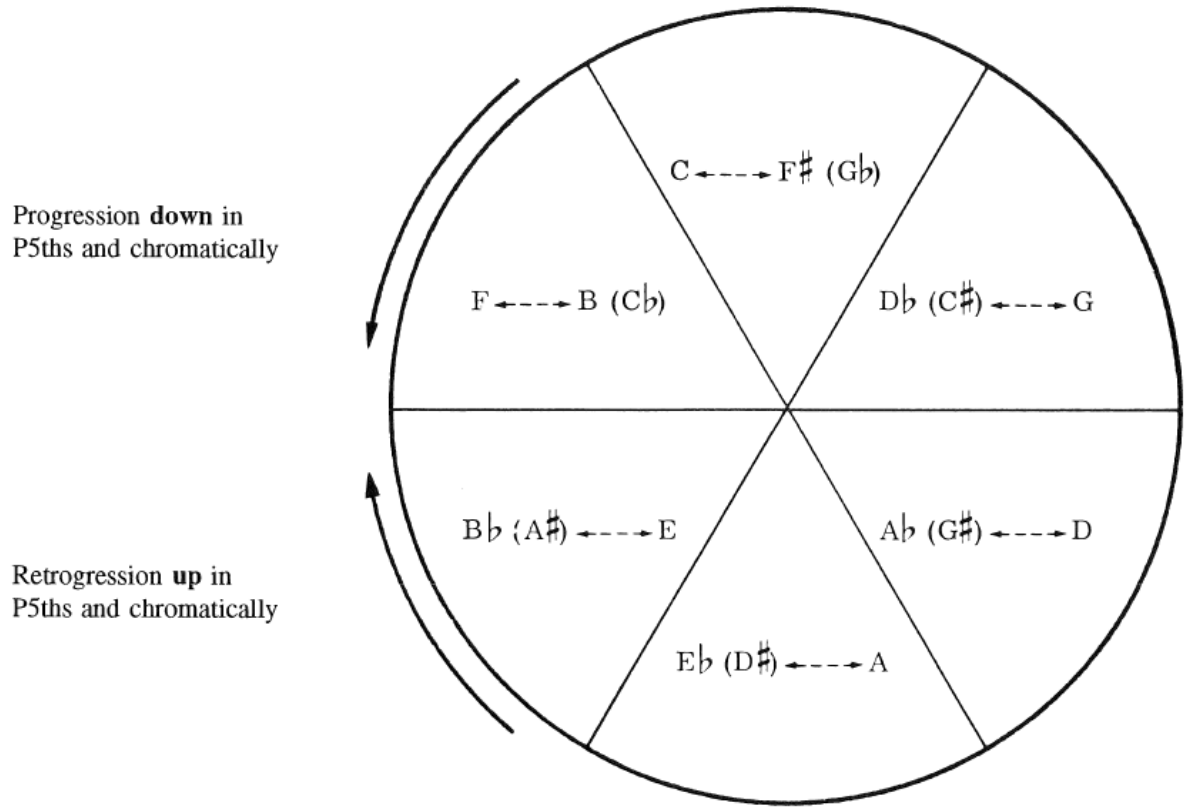


This table shows that chords may either progress down by fifth or by semitone or may avoid progression by moving horizontally to a tritone-related harmony. The authors consider how

[6] Ibid, 213.

this conception of equivalent harmonies may be shown graphically. Figure 3.2 shows the manual's "Family Circle."[7]

FIGURE 3.2. The Family Circle. From *Barbershop Arranging Manual*.



Though the authors show that tritone-related chords have the same harmonic function, fifth progressions and semitone progressions actually have distinct uses and strikingly different effects on the listener. The smooth voice leading facilitated by tritone substitutes allows for the

[7] Ibid, 215.

music to progress through harmonies much faster than fifth-related progressions, which tend to have slower harmonic rhythm. Moving quickly through the circle of fifths often sounds jarring. On the other hand, the semitonal descents allowed by tritone substitution tend to sound as if they are accelerating rapidly through space. This technique is often used near the end of an arrangement to add excitement and a feeling of accelerated motion in the transition into the tag. Descending semitonal progressions will be further discussed later in the chapter.

Tritone substitutes are often seen as the jazz term equivalent to the classical augmented sixth chord. However, as demonstrated by Nicole Biamonte, tritone substitutes differ from augmented sixths in both function and voice leading. She notes that the augmented sixth normatively resolves outward by semitone to create an octave. In contrast, "Tritone substitutes that progress to dominants characteristically resolve downward by semitone in parallel motion."[8] Though there are exceptions to these voice leading conventions, this distinction is helpful, and may be further generalized to this rule: sixths tend to resolve up, sevenths tend to resolve down. Further discussion of augmented sixth chords in barbershop music will be had in the following chapter.

The secondary dominant progression and tritone substitution within that sequence has been closely linked to improvisational practice. As noted in Chapter 1, Averill suggests that the practice of shading tones and sliding between notes played a role in the preference for secondary dominant sequences. Tritone substitution has long been considered an important feature of jazz improvisation. These progressions have certain qualities that make them highly suitable for a style rooted in sung improvised harmonies: retention of common tones and minimal voice

[8] Nicole Biamonte, "Augmented-Sixth Chords vs. Tritone Substitutes," *Music Theory Online* 14, no. 2 (2008): 15.

leading movement. The Society website quotes an "old woodshedding rule" for improvised harmonies: "Don't move unless you have to (or if the melody takes your note), and if you must move, move the smallest distance you need to move to complete the chord."[9] These two qualities – retention of common tones and efficient, minimal voice leading, are often combined and collectively called "parsimonious voice leading." Barbershop music's parsimony will allow us to apply neo-Riemannian theoretical models later in the chapter.

We see this parsimony played out in the ragtime progression and the use of tritone substitutes. A move from D7 to G7 involves retaining one common tone, moving one voice down a whole step, and moving two voices down a half step. Moving from D7 to D♭7, the tritone substitute of G7, moves all four voices down by semitone. The "harmonic holding pattern," a move from one seventh chord to another rooted a tritone away, retains two common tones and moves two voices in contrary motion by semitone. Tritone substitution is primarily a linear chromatic motion, and these barbershop seventh harmonies are not functioning as dominants or secondary dominants. There are many other non-dominant uses of the barbershop seventh and other chromatic harmonies used in barbershop music that follow similar principles of pitch retention and minimal voice leading and are clearly the result of improvisational forces.

Non-Dominant Uses of the Barbershop Seventh

It is well-established that barbershop sevenths are integral to the style and are used both with and without dominant function and resolution. "Molly" Reagan notes that barbershop sevenths normally move around the circle of fifths (counterclockwise on his clock face), but "it

[9] https://www.barbershop.org/8-ways-to-start-arranging-barbershop

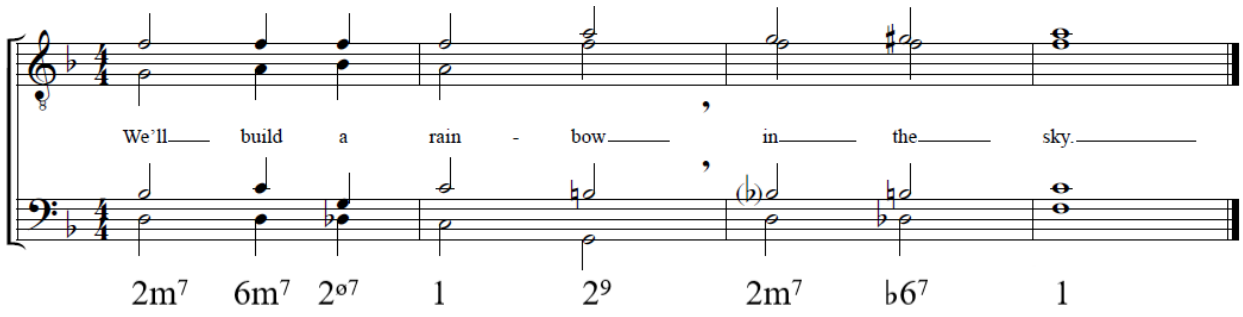
can be used to jump three, four, even five positions. The only recognized use for stepping two positions, counterclockwise is from the one o'clock to 11 o'clock position."[10] A jump of three positions (three fifths) moves to a root a minor third higher, four positions to a root a major third lower, and five positions to a root a semitone higher. The move of two positions from one o'clock to 11 o'clock is the move from 5^7 to 4^7. Reagan also notes that the 8 o'clock harmony ($\flat 6^7$) is regularly employed in barbershop music and is "often referred to as the Barbershop chord as in 'Mister Jefferson Lo-o-rd.'"[11] I argue that many of the non-dominant resolutions of barbershop sevenths are used because they were easily improvised due to their relationships which allowed parsimonious voice leading.

The most cited non-dominant uses of barbershop sevenths are the 1^7, 4^7, and $\flat 6^7$. As Averill and Henry argued, 1^7 and 4^7 likely result from linear improvisation through heterophonic singing and the addition of blue notes to major triads. The $\flat 6^7$ is a more curious case, since it is not a straightforward example of a blue note added to a common diatonic triad. Though $\flat 6^7$ often appears as a tritone substitute for 2^7 it also commonly resolves directly to 1, particularly at the end of a tag. This resolution likely originated from improvisational singing. Of course, $\flat 6^7$ is enharmonically equivalent to the German augmented sixth chord, but $\flat 6^7$ usually resolves to a root position, not second inversion, tonic triad. Imagine a quartet improvising chords to move to 1. One singer may sustain scale degree one, while two other singers sing the fifth and seventh of a $\flat 6^7$, which are chromatic lower neighbors to scale degrees three and five. The bass needs only add the lowered sixth degree to produce a barbershop seventh chord. It seems then, that this

[10] Reagan, "Mechanics of Barbershop Harmony [V]."
[11] A reference to the song that popularized the term "barbershop": "Play that Barbershop Chord, Mr. Jefferson Lord."

resolution of the $\flat 6^7$ is all about the shared pitch with the tonic triad and the chromatic lower neighbor notes. Because of this, perhaps it could be viewed as an altered neighbor chord. It shares two common tones with the 7^7 and three with the $1^{\circ 7}$, which are often used as lower neighbor chords to embellish the tonic. Arrangers tend to draw attention to the upward resolution of the fifth and seventh of the $\flat 6^7$ with enharmonic spellings, as shown in Example 3.3. The lead sings scale degree one in each of the last three chords, but the baritone and tenor move up a half-step each from the $2m^7$ to the $\flat 6^7$ and another half-step to 1. Their notes are spelled to reflect this upward resolution.

EXAMPLE 3.3. Earl Moon, "We'll Build a Rainbow"



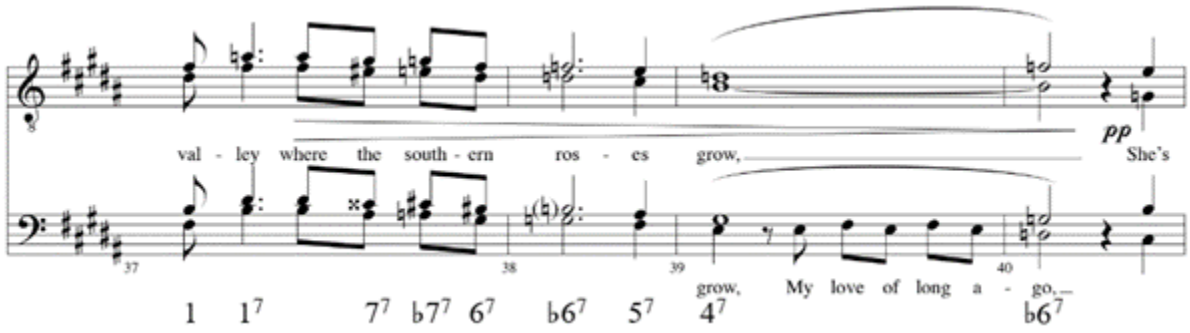
An interesting subclass of non-dominant uses of barbershop sevenths is movement between barbershop sevenths. One common example discussed in Chapter 2 is the use of Type IV neighbor chords. In the world of improvisational singing, a chromatic lower neighbor note within a barbershop seventh harmonic area was often harmonized by another barbershop seventh a semitone lower, resulting in lower neighbors in all four voices. A barbershop seventh may move to any other barbershop seventh by either two or four semitones of voice leading. The closest in voice leading space are chords related by root distance of a tritone or a minor third,

which can be reached by contrary motion of two voices by semitone. Though the relationship between tritone-related seventh chords is well established through the theory of tritone substitution and is clearly the result of improvisation, minor third-related seventh chords may be employed the same way, yet they lack a theoretical basis in barbershop theory. Dmitri Tymoczko's scholarly work on this subject will be explored later in this chapter. For now, suffice to say that these third-related harmonies do not share a harmonic function like tritone substitutes, yet we see these relationships employed in barbershop music.[12]

In Example 3.4, descending parallel barbershop sevenths are used until the 4^7 in m. 39. The arranger takes advantage of the minor third relationship to move from 4^7 to $\flat 6^7$. The closest voice leading manifestation of this progression would have moved the bass up a half-step to F and kept the tenor on D, but that would have resulted in a third inversion seventh chord, a much weaker voicing. All minor-third related dominant sevenths require either weaker inversions or inefficient voice leading. Tritone substitutes are ideal for barbershop music because the tritone is retained as common tones, swapping the third and seventh of the chord, and the IC5 in the chord moves to another IC5: either a P4 expands into a P5, or a P5 contracts into a P4. This means that the bass can move from fifth to root or vice versa. Minor-third related dominant sevenths, however, retain a minor third, changing the position of that third in the chord, and the IC2 expands to the IC4 or the IC4 contracts to the IC2. The result of this is that no voice moves from a root to a fifth or vice versa in parsimonious voice leading between these two chords.

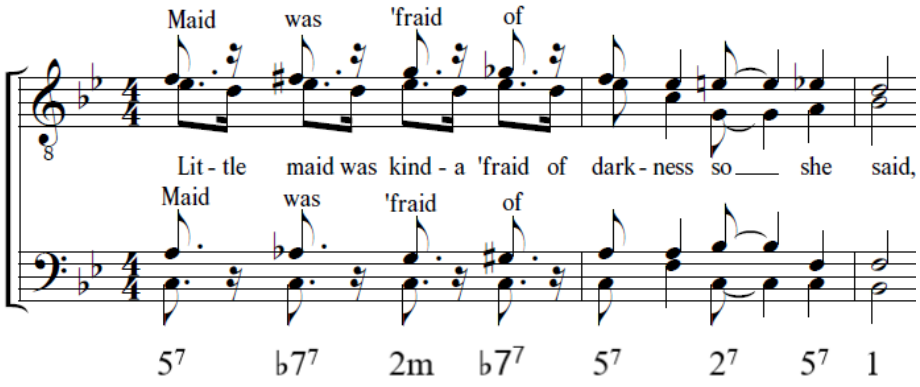
[12] In addition to the examples below, minor-third related barbershop sevenths also appear in the arrangements discussed in the case studies of each of the previous chapters. "You Had a Dream," mm. 35-36, features 1^7 to 6^7 with parsimonious voice leading in pitch space. "Sweet Adeline" (polecat version), m. 6, features 2^7 to 7^7, but doesn't use parsimonious voice leading.

EXAMPLE 3.4. Richard H. Buck and Theodore F. Morse, Arranged by David Wright, “Where the Southern Roses Grow,” mm. 37-40.



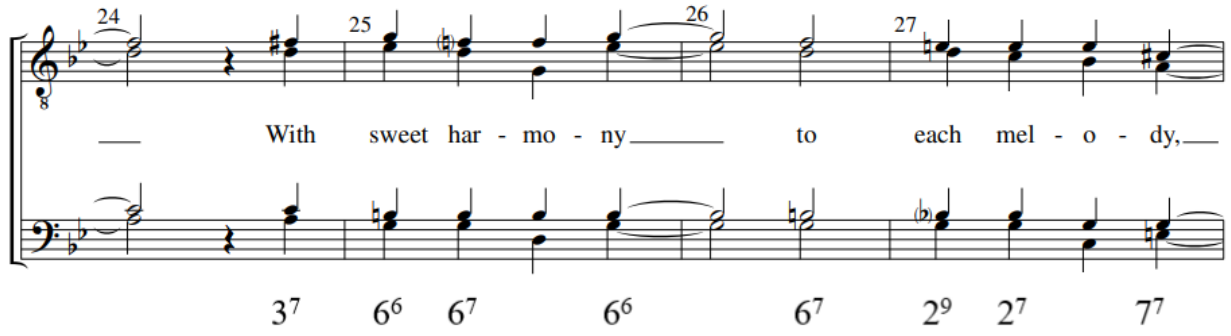
I propose that the set of relations formed by movement between dominant seventh chords a minor third apart be called “third exchanges,” since the third that is retained as a common tone between the harmonies exchanges locations in the harmony from the third and fifth to the fifth and seventh or vice versa. Example 3.5 shows an uncommon case of truly parsimonious voice leading in pitch space in a third exchange progression. In “Shine On, Harvest Moon,” the bass is retained as a common tone. In m. 13 of “Shine On, Harvest Moon,” the lead sings a repeated pattern of E♭ and D. The first E♭ is harmonized with a 5^7, but the baritone and tenor move in contrary motion by semitone to create an enharmonically spelled A♭7 ($♭7^7$). Both voices continue in the same direction by half-step to octave Gs in the 2m triad, before reversing the process, moving back through $♭7^7$ to 5^7. Note that this third exchange keeps the common tone in the bass, resulting in a first inversion A♭7 chord. The A♭7 is a result of linear processes, and as such is clearly not functioning as a dominant.

EXAMPLE 3.5. Nora Bayes-Norworth and Jack Norworth, Arranged by Val Hicks and Earl Moon, “Shine On, Harvest Moon, mm. 13-15

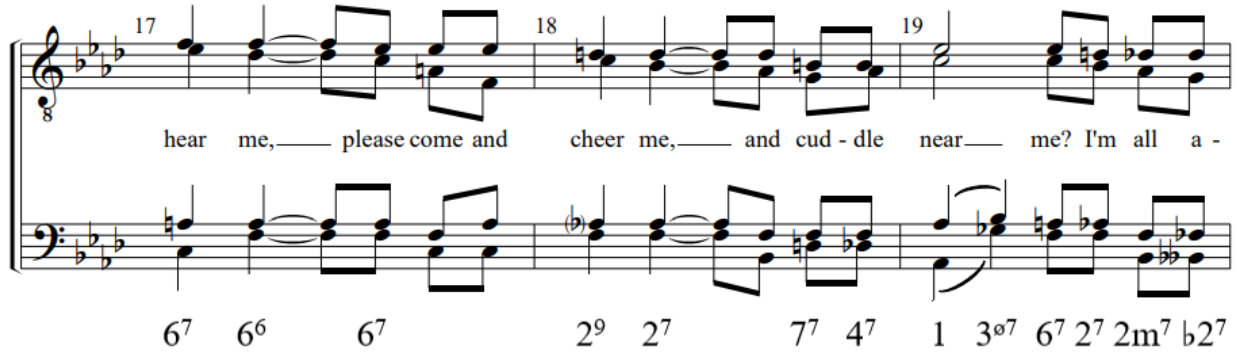


Because certain resolutions of dominant sevenths are standard practice in barbershop arrangements, some third exchanges can be used to substitute for a chord that might be used more typically. In Example 3.6, a typical circle of fifths progression is interrupted by a third exchange. The music traverses through 3^7, 6^7, and 2^7, but instead of the expected 5^7, a third exchange is used to move to 7^7. The 7^7 is often used as a neighboring chord to 1, and this use occurs in the following measure. Rather than using the 5^7, or even the tritone-related $\flat 2^7$, each of which resolve to 1, a third exchange is used to move to the neighboring 7^7. Similarly, in Example 3.7, a third exchange is again used to move from 2^7 to 7^7. In m. 18, a root position 2^7 moves to a second inversion 7^7 by third exchange. The baritone keeps a common tone, the bass takes over the tenor’s note, allowing for a strong voicing, and the B♭ and A♭ move in contrary motion to B and G. Interestingly, rather than resolving directly to 1, the 7^7 moves to its tritone substitute, 4^7, which is an even more common chord that resolves to 1. Note that 2^7 can move by third exchange to 4^7, but in this particular case, the G in the melody disallowed 4^7 but allowed 7^7.

EXAMPLE 3.6. Einar N. Pedersen and Joe Liles, “Welcome Song,” mm. 24-27



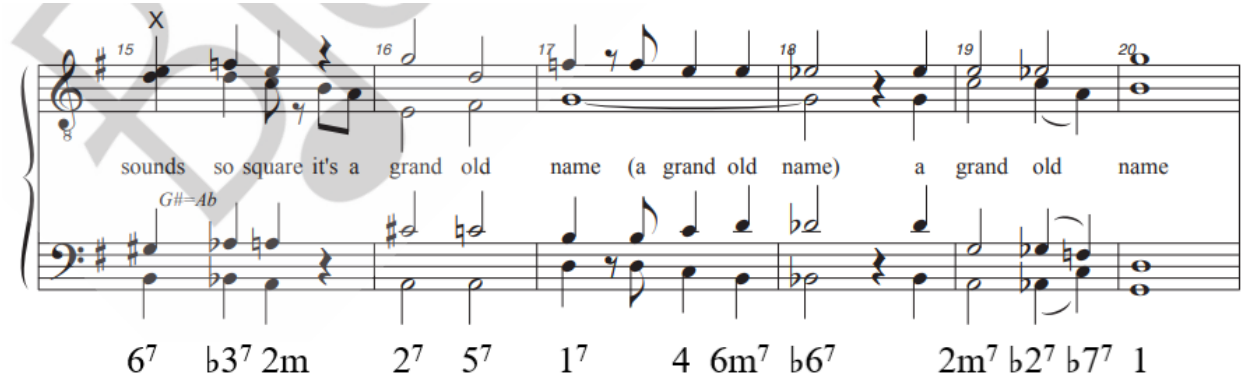
EXAMPLE 3.7. Jack Coale and Frank Anderson, Arranged by Floyd Connett, I’m All Alone, mm. 17-19



Example 3.8 shows a different use of third exchange in the tag of “Mary’s a Grand Old Name.” In m. 19, a $2m^7$ moves to a $\flat 2^7$, which is expected to resolve to 1. Instead, the bass skips up to scale degree 4, taking over for the lead, which swipes down to scale degree 2. The tenor stays on the lowered sixth degree and the baritone, rather than resolving the enharmonically spelled leading tone to the tonic, moves down by semitone. The resultant harmony after this third

exchange is a $\flat 7^7$, which is closely related to the common penultimate harmonies, the $4m^6$ and $\flat 7^9$, which will be discussed at length in the following chapter on tags.

EXAMPLE 3.8. George M. Cohan, Arranged by Clay Hine, "Mary's a Grand Old Name," mm. 15-20



Third exchanges are not functional but appear frequently in the chromatic music of the 19th century.[13] I propose that the ear only accepts these progressions readily because of the efficient voice leading and shared common tones between these chords, which allow for satisfying harmonic motion whether or not the common tones are retained in the same voice. The principles of efficient voice leading and common tone retention, which are often grouped together under the umbrella of the term "parsimony," are core tenets both of "woodshedding" and of the music theory subfield of neo-Riemannian Theory. The ideas explored in the neo-

[13] Dmitri Tymoczko, *A Geometry of Music: Harmony and Counterpoint in the Extended Common Practice*, (New York: Oxford University Press, 2011), 97.

Riemannian literature have some unique applications for analysis and modeling of barbershop harmony.

Neo-Riemannian Theory

Neo-Riemannian theory was originally developed to analyze the highly chromatic music of the late 19th century.[14] Since it was often difficult to relate harmonies directly to the tonic, scholars looked to relate harmonies directly to one another, particularly through the lens of parsimonious voice leading. David Lewin, Brian Hyer, and Richard Cohn revived ideas from the 19th century music theorist, Hugo Riemann, to create a system of triadic transformations. The PLR operations may be used to move between major and minor triads by retaining two common tones and moving one note by semitone (with P or L) or whole tone (with R). Cohn demonstrated that the major and minor triads have certain properties that allow them to use this efficient voice leading. The triads are one semitone displaced from the augmented triad, the tripartite equal division of the octave. This property is called the minimal perturbation of the octave by Cohn and near-evenness by Dmitri Tymoczko. Neo-Riemannian scholars have often used graphical representations and geometric spaces to demonstrate their theories, starting with the modernization of the *Tonnetz*, a plane of pitches that may be used to visualize the parsimonious voice leading potential of the PLR operations. This approach fits well with barbershop vernacular theory, who often use visualizations such as those in Figures 3.1 and 3.2 to show relationships between chords.

[14] Some applications of neo-Riemannian methodologies in popular music include Capuzzo 2004 and Heetderks 2015.

Many scholars have sought to build on these ideas by applying them to seventh chords. Three articles published in the 1998 issue of *Journal of Music Theory* were influential in applying parsimonious voice leading to seventh chords. Edward Gollin and Adrian Childs consider sonorities from set class (0258), the major-minor and half-diminished seventh chords. Like the major and minor triad, the dominant and half-diminished seventh are inversionally-related and are one semitone displaced from the quadripartite equal division of the octave, the diminished seventh. Jack Douthett and Peter Steinbach add other seventh chords and relate all diatonic seventh chords by single semitone. In their graph of seventh chord relationships, "Power Towers," they connect major-minor, half- and fully diminished, and minor seventh chords.[15] Barbershop music is a unique fit for application of these sources because of the emphasis on seventh chords, particularly the ones discussed in these three articles.

Adrian Childs creates a model of parsimonious voice leading between all members of set class (0258), comprised of the major-minor and half-diminished seventh chords.[16] As noted by Cohn, these seventh chords are minimal perturbations of the octave for a four-note sonority, just as the major and minor triads are for a three-note sonority.[17] Also like the major and minor triads, the major-minor and half-diminished seventh chords are inversions of one another. These properties allow for semitonal voice leading to other members of the group. Childs proposes two seventh chord transformation types; C transforms, which preserve the quality of the chord and move two notes in contrary motion by semitone, and S transforms, which change the chord quality and move two notes by similar motion by semitone. As shown in the figure below, there

[15] They also note that major sevenths may be used as coupling chords instead of diminished sevenths. Since major sevenths are seldom used in barbershop music, this chapter will focus only on the sonorities in the graph.
[16] Adrian Childs, "Moving beyond Neo-Riemannian Triads: Exploring a Transformational Model for Seventh Chords," *Journal of Music Theory* 42, no. 2 (1998): 181-193.
[17] Richard Cohn, "Maximally Smooth Cycles, Hexatonic Systems, and the Analysis of Late-Romantic Triadic Progressions," *Music Analysis* 15, no. 1 (1996): 39.

are 6 possible S transforms and 3 possible C transforms. In each case, two common tones are preserved, and two notes are moved by semitone.

FIGURE 3.3. S- and C transforms of Seventh Chords. From Adrian Childs, “Moving beyond Neo-Riemannian Triads.”[18]

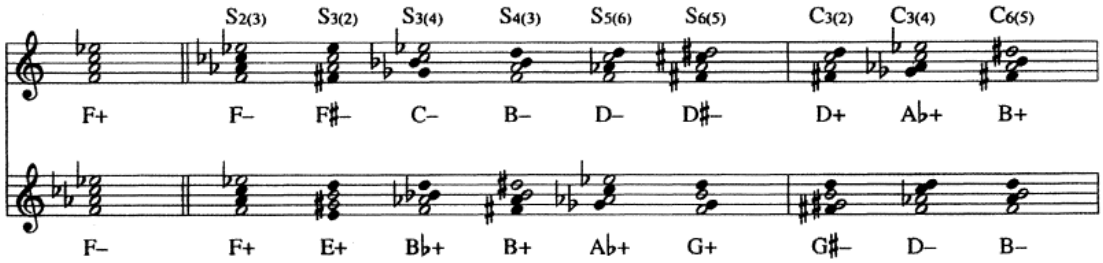


Figure 5. A system of transformations for dominant and half-diminished seventh chords (set class 4-27). + and – refer to dominant and half-diminished qualities, respectively. F+ and F– are taken as the initial chords in each example. Notes which are held constant have open noteheads, while those that move are represented by filled-in noteheads.

These transformations are labelled with the transformation type (S or C), followed by the interval class held invariant and, in parentheses, the interval class that moves. For example, applying S2(3) to an F7 chord keeps the IC2 (the minor seventh between the root and the seventh) as common tones, and moves the remaining IC3 (the minor third between the third and fifth) down by semitone, resulting in Fø7. S transforms and C6(5) are involutions, meaning that when applied twice, they return to the original chord. Since S transforms change the quality of the harmony, applying any combination of two S transforms to a harmony results in a harmony with the same quality. A single transformation changes a dominant seventh into a half-diminished seventh, and a second transformation changes the half-diminished seventh into a new dominant seventh. Childs observes that two S transforms can combine to move to any transposition of the

[18] Childs, "Moving beyond Neo-Riemannian Triads,” 186.

original harmony. Figure 3.4 shows all possible double applications of S. The combinations resulting in downward transposition of dominant sevenths by semitone or fifth are particularly relevant to barbershop theory and will be discussed at length in the next section.

FIGURE 3.4. Double-S Transformations Applied to C7. From Childs.[19]

(a) Dominant seventh chords resulting from the application of a double-S transformation to a dominant seventh on C

	$S_{2(3)}$	$S_{3(2)}$	$S_{3(4)}$	$S_{4(3)}$	$S_{5(6)}$	$S_{6(5)}$
$S_{2(3)}$	C	B	F	F♯	E♭	D
$S_{3(2)}$	C♯	C	F♯	G	E	E♭
$S_{3(4)}$	G	F♯	C	C♯	B♭	A
$S_{4(3)}$	F♯	F	B	C	A	A♭
$S_{5(6)}$	A	A♭	D	E♭	C	B
$S_{6(5)}$	B♭	A	E♭	E	C♯	C

Before discussing S transforms and their relevance for barbershop music, let us explore the C transforms further. The three C transforms move two voices in contrary motion and do not change the chord quality. Note that when applied to dominant sevenths, C6(5) is a tritone substitute and C3(2) and C3(4) are the third exchanges discussed in the previous section. Dominant sevenths become groups of four chords related by minor third or the tritone, two minor thirds. Tymoczko calls these groups "minor-third systems,"[20] and notes that the efficient voice leading movement between members of this system is caused by dominant seventh's property of

[19] Ibid, 189.
[20] Tymoczko, *A Geometry of Music*, 99.

near evenness. He observes that "the more chromatic music of the nineteenth century"[21] often uses minor-third related dominant sevenths, and highlights Chopin and Schubert as two composers who employ these relationships in their music.[22]

The Triple Purpose of the Half-Diminished Seventh

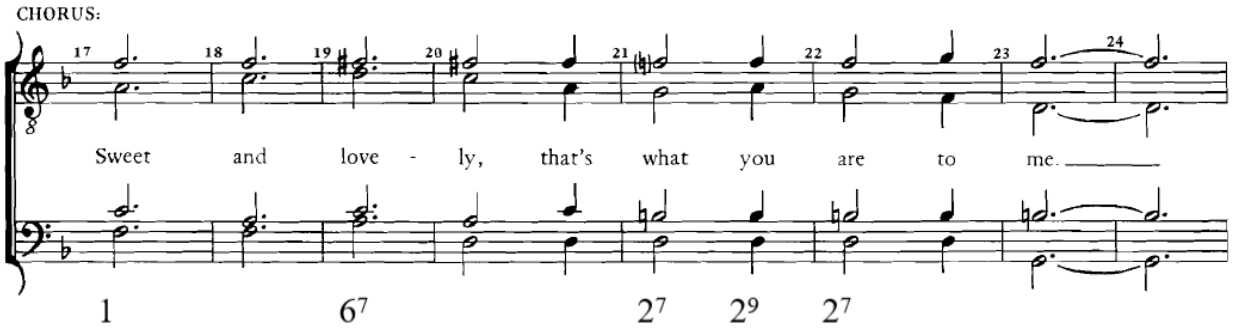
Half-diminished seventh chords are a versatile and undertheorized harmony in barbershop vernacular theory. The *Barbershop Arranging Manual* notes that this harmony might be identified as a minor sixth or rootless dominant ninth chord instead. These three chords all share the same intervals, but "the context in which they are used (the approach, resolution, and key) usually removes the ambiguity, and this 'triple purpose' chord is identified as a half-diminished seventh when it resolves to the barbershop seventh rooted a fifth below."[23] Beyond this explanation, very little is said about how to distinguish between these three harmonies. According to the Manual, the single determining factor for whether a chord may be called "half-diminished" is its resolution. If it does not resolve down by fifth to a barbershop seventh, it must have a different purpose, either as a minor sixth or rootless dominant ninth chord.[24] I propose a significant expansion of allowable uses on half-diminished seventh and set forth some clearer guidelines for understanding both the minor sixth and rootless dominant ninth chords. The two most important factors for distinguishing these three chords are the harmonic context and the bass note. Considering the stylistic norms, analysts should prioritize descending fifth and

[21] Ibid, 97.
[22] Ibid, 99.
[23] *Barbershop Arranging Manual*, 110.
[24] This resonates with Jean-Phillipe Rameau's concept of *double emploi* (double usage). Rameau argues that a chord should be interpreted as a subdominant sixth chord if it progresses to the tonic, or as a ii^6_5 if it progresses to V.

semitone progressions and root position or second inversion chords when interpreting these harmonies.

Rootless dominant ninth chords are generally used to harmonize a ninth above the pillar chord in a secondary dominant sequence. Example 3.9 shows the opening phrase of the chorus of "Sweet and Lovely." The chorus opens with two bars on the tonic, then jumps out to a 6^7 for two bars. The pillar chord of mm. 21-24 is the 2^7, and the lead sings an A in m. 21, which is a ninth above the root of the 2^7. This chord should be considered a rootless dominant ninth instead of a half-diminished seventh, because that interpretation stays within the 2^7 harmony, and gives preference to the strong second inversion rather than the weaker first inversion half-diminished seventh.

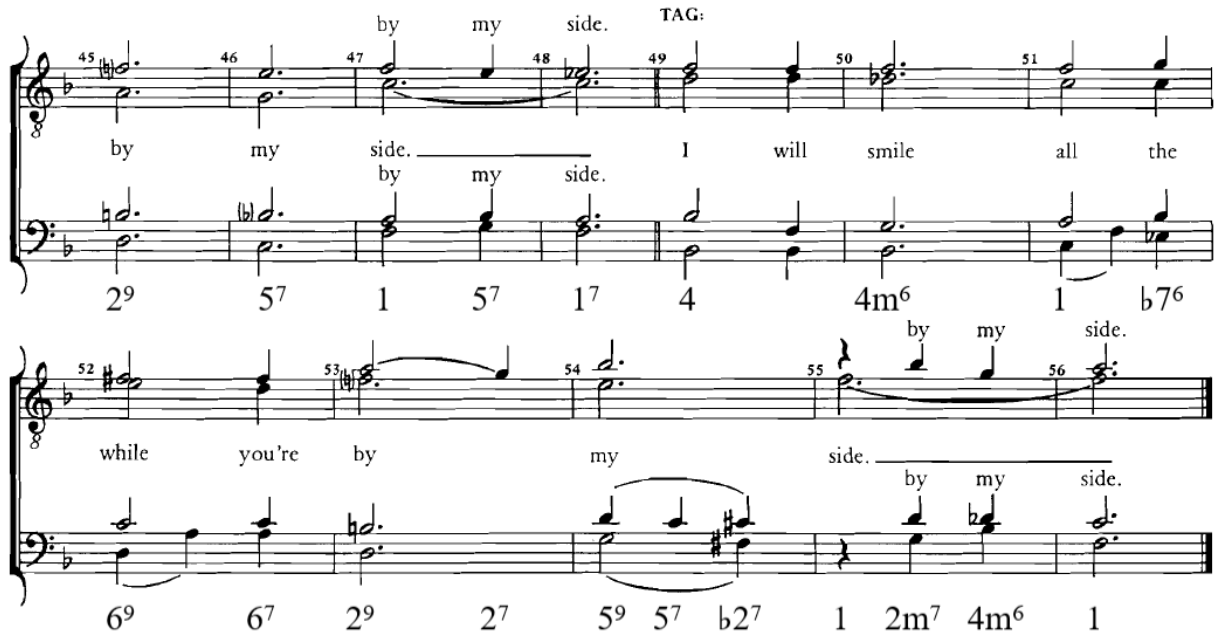
EXAMPLE 3.9. Gus Arnheim, Charles N. Daniels, and Harry Tobias, Arranged by Mac Huff, "Sweet and Lovely," mm. 17-24



Example 3.10 shows several more examples of rootless dominant ninths and a couple minor sixth chords in "Sweet and Lovely." In the previous example, we saw a dominant seventh

that momentarily had a ninth in the melody. In Example 3.10, a secondary dominant sequence uses the dominant ninth chord as a standalone harmony. In m. 45, scale degree 3 is harmonized with a rootless 2^9 as part of a greater sequence from 6^7 in the previous measure to 5^7 in the following measure. The arranger continues along the circle to a 1^7 to set up a move to the subdominant at the beginning of the tag. The subdominant pillar chord in m. 49 is colored by the introduction of the D♭ in m. 50. Prioritizing the subdominant harmony as the pillar chord suggests a root position $4m^6$ interpretation, rather than a first inversion $2^{ø7}$ or second inversion $♭7^9$. M. 52 provides an interesting use of a dominant ninth chord. The downbeat is clearly a dominant ninth with an omitted root, and on the third beat, moves the bass up to the fifth to create the rootless version of the harmony. Arpeggiating the bass from the root to the fifth or vice versa is a common strategy for using four voices to sound the five notes of a dominant ninth sonority. In mm. 53-54, dominant ninths are used to provide instability and drive forward motion rather than to harmonize a melodic ninth. Rather than use the stable and consonant second inversion 2^7 on the downbeat of m. 53, the tenor has an appoggiatura-like leap to the ninth to create and resolve dissonance with the swipe from the ninth to the root on the third beat. The same gesture is performed by the baritone in the following measure to embellish the 5^7, which in turn moves to its tritone substitute, $♭2^7$.

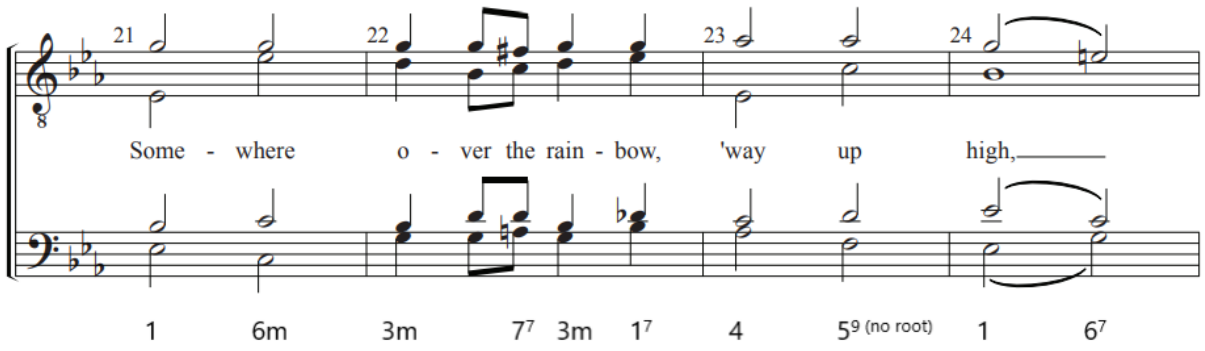
EXAMPLE 3.10. Gus Arnheim, Charles N. Daniels, and Harry Tobias, Arranged by Mac Huff, "Sweet and Lovely," mm. 17-24



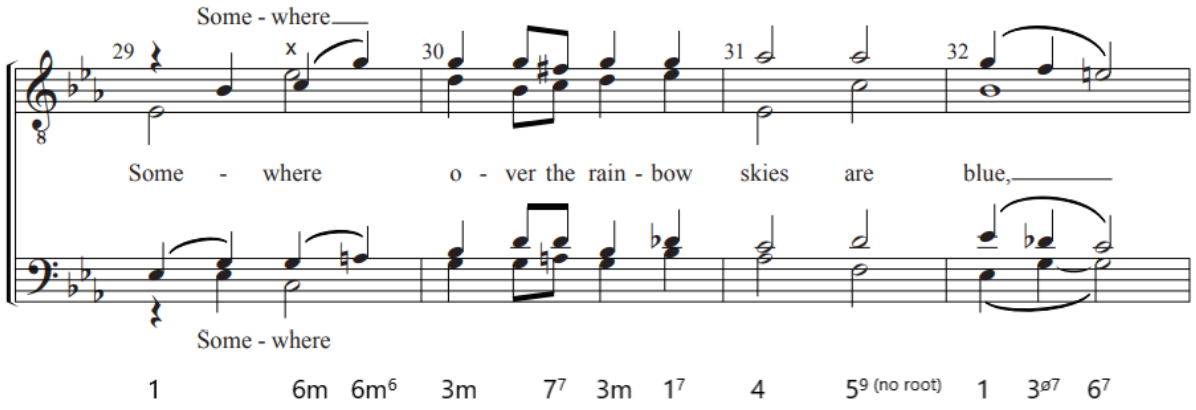
Minor sixth chords are used to add harmonic tension to a pillar triad. The subdominant triad is often enhanced with both a lowered third and added sixth, as seen in the previous example. The resulting $4m^6$ contains a tritone between the third and sixth, creating a need for resolution. Chapter 4 will explore the most common use of minor sixth chords: the use of $4m^6$ as the penultimate chord of a tag. Another common use of the minor sixth is an embellishment of the 6m triad. Since the $6m^6$ shares the same notes as the rootless 2^9, the harmonic context should be carefully examined to decide the function of such chords. Example 11 shows the harmonization of three different A sections in "Over the Rainbow." In the first harmonization of the A section, shown in Example 3.11A, the tonic moves to a submediant triad, which is followed by a 3m triad. This simple harmonization is stable and consonant, with three consecutive root

position triads. In the second pass through this material, shown in Example 3.11B, the arranger adds variety using polyphonic entrances and a swipe on the fourth beat from 6m to $6m^6$ in m. 29. The addition of the sixth, an A♮ in the baritone, adds tension through the introduction of the tritone interval against the melodic note. A $6m^6$ label is logical here, because the same melody was previously harmonized with 6m, and the chord is not followed by a 5^7, which one would expect to follow a rootless 2^9. The third pass through the A material in the song follows a modulation of a minor third. The key change adds energy and forward momentum, and the arranger continues that momentum in the harmonization in Example 3.11C. In m. 45, the tonic lasts only one beat, and the $6m^6$ is introduced on beat two without being preceded by the minor triad. The arrival of the minor sixth on the second beat creates a strong sense of harmonic tension and forward momentum.

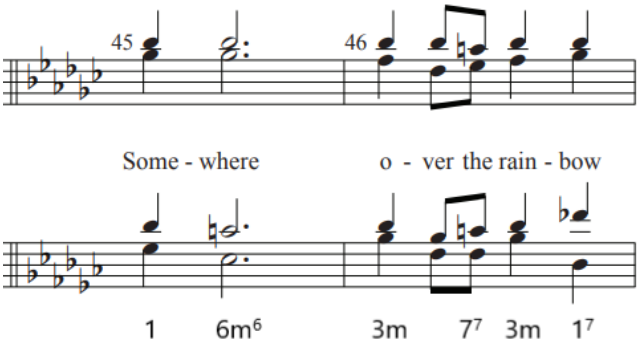
EXAMPLE 3.11A. Harold Arlen and E.Y. Harburg, Arrangement by Ed Waesche, "Over the Rainbow," mm. 21-24



EXAMPLE 3.11B. “Over the Rainbow,” mm. 29-32



EXAMPLE 3.11C. “Over the Rainbow,” mm. 45-46



Half-diminished sevenths tend to sound less stable than minor sixths and rootless dominant ninths. Minor sixth chords contain a perfect fifth above the bass, and root position and second inversion dominant ninths contain a perfect fourth or fifth above the bass. On the other hand, half-diminished seventh chords in root position and second inversion do not have perfect intervals involving the bass. This unstable harmony is often used as a chromatic linking chord.

The half-diminished seventh is often used to link two barbershop sevenths via parsimonious voice leading, made possible by the properties of this chord observed by Childs and others.

"One of Our Most Useful Linking Chords": Parsimonious Voice Leading, the Half-Diminished Seventh, and Barbershop Music's Preferred Paths

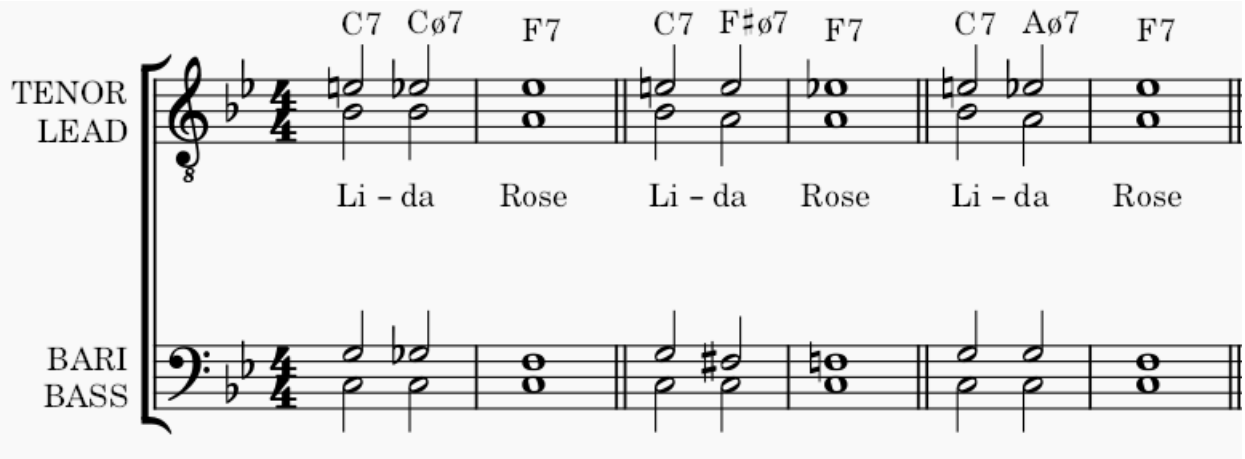
The *Barbershop Arranging Manual* writes, "Notice the variety of ways the half-diminished seventh can be used-it's one of our most useful linking chords."[25] However, an examination of all uses of the half-diminished seventh in the Manual reveals very little variety in its usage. In all cases, the half-diminished seventh resolves by descending fifth to a barbershop seventh built on scale degrees 6, 2, or 5. Additionally, no further explanation is given to the term "linking chords." The term "linking" implies a connection between two objects, yet it seems that the Manual has no rules for what comes before the linking half-diminished seventh, only what comes after. I argue that the half-diminished seventh has unexplored potential as a linking chord that goes beyond descending fifth resolution to a barbershop seventh.

The most common linking half-diminished sevenths are embellishments of secondary dominant sequences. These chords may have been "discovered" through improvisation. Recall that Averill argues that improvisation, and particularly the practice of "snaking," or substituting notes within "African pitch areas," gave a chromatic tint to harmonizing, leading to new chords within secondary dominant sequence. A quartet experimenting with substituting notes or shading tones might have discovered certain chords that occur in chromatic space between two secondary dominants. Consider the following examples in 3.12: each example has two of the upper voices moving down by semitone on the middle chord before all voices resolve to the F7 on the last

[25] *Barbershop Arranging Manual,* 111.

chord, and each middle chord is a different half-diminished seventh. One can imagine, then, how these chords may have been discovered in improvisation in one of "these explorations in the field of harmony."[26]

EXAMPLE 3.12. Half-Diminished Seventh Linking Chords Between Fifth-Related Barbershop Sevenths.



Some of these chord relationships have already been formalized as transformations by Childs. The first two progressions in Example 3.12 use the two double-S transforms that result in descending fifth progression when applied to barbershop sevenths. The first progression uses S2(3)/S3(4) to move C7 to $C^{ø7}$ and $C^{ø7}$ to F7. The second progression uses S4(3)/S3(2) to move C7 to $F♯^{ø7}$ and $F♯^{ø7}$ to F7. The third progression does not use two S transforms. S5(6) is used to move C7 to $A^{ø7}$, and three voices are kept as common tones while the baritone descends a whole step from G to A to arrive on F7. This progression moves a single voice by step rather than two

[26] Abbott, "Play That Barbershop Chord," 299.

voices by semitone and is therefore not an S transform. I call this transformation O (Oblique), since it moves a single voice in oblique motion to the three stationary voices.[27] This transformation is analogous to the Relative transformation of triadic Neo-Riemannian Theory. Inclusion of the S5(6)/O double transformation completes the set of possible linking half-diminished sevenths within the circle of fifths. Douthett and Steinbach's "Power Towers," reproduced in Figure 3.5, shows that three different half-diminished sevenths may divide the distance between fifth-related barbershop sevenths into two moves of two semitones.

Figure 3.5. "Power Towers." From Douthett and Steinbach.[28]

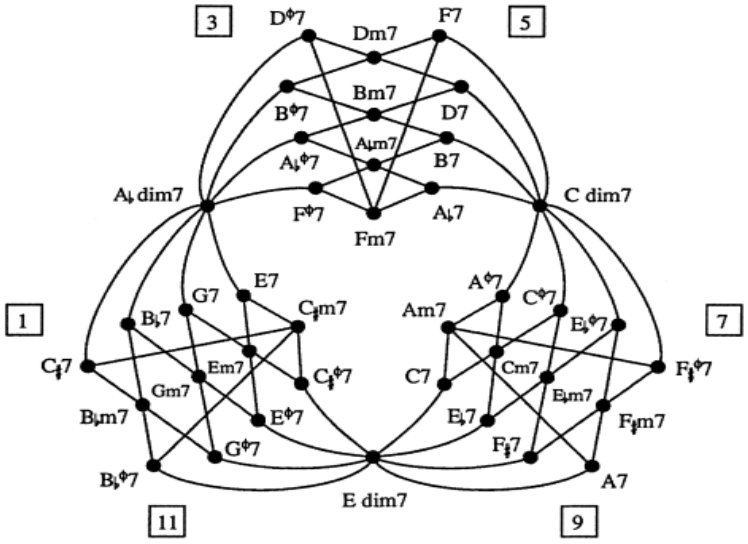


Figure 10. Power Towers

[27] Phillip Lambert shows this possible resolution as one of three ways a half-diminished seventh can move to a dominant seventh while retaining its root. He also notes the potential rootless dominant ninth interpretation of the half-diminished seventh in this case.

[28] Jack Douthett and Peter Steinbach, "Parsimonious Graphs: A Study in Parsimony, Contextual Transformations, and Modes of Limited Transposition," *Journal of Music Theory* 42, no. 2 (1998): 256.

"Power Towers" demonstrates the chromatic distance between all major-minor, minor, half-diminished, and fully diminished sevenths. Each node represents a seventh chord, and each line connects chords that share three semitones and move the fourth voice by semitone, either up with clockwise motion through the space, or down with counterclockwise motion. Note that one can move twice from C7 to arrive on either C, A, or F♯ø7, then proceed two additional moves (by semitone) through C°7 to F7, the next barbershop seventh in the circle of fifths. Childs's S transforms move *circularly* by two semitones through "Power Towers," resulting in a change of quality from dominant seventh to half-diminished seventh or vice versa. C transforms, on the other hand, move *radially* (towards or away from the center along a radius) in the space, moving one semitone up and one semitone down, and therefore do not change quality.

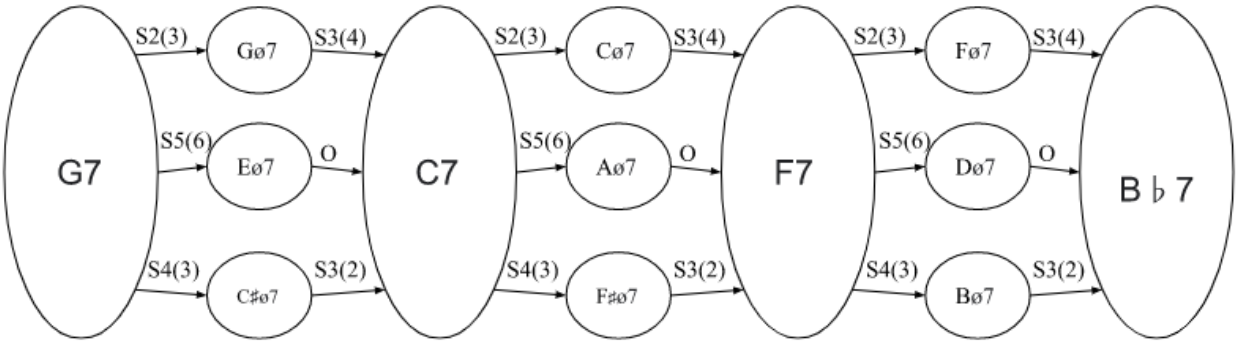
This graph reminds us why major-minor and half-diminished sevenths are related by parsimonious voice leading: they are the minimal perturbation of the equal division of the octave. The fully diminished seventh divides the octave equally into four minor thirds, and one may move any note in the diminished seventh a semitone down to produce four different dominant sevenths, or a semitone up to produce four different half-diminished sevenths. Though useful for visualizing seventh chord relationships, "Power Towers" is not particularly helpful for modeling seventh chord transformations in barbershop music. The authors created this graph to show how one can move between octatonic collections through the fully diminished seventh, which serves as "an intermediate coupling chord."[29]

"Power Towers" is comprehensive in its modeling of all minor sevenths, dominant sevenths, half-diminished sevenths, and diminished sevenths. It is organized to draw attention to

[29] Douthett and Steinbach, "Parsimonious Graphs," 253.

the single-semitone displacement between each harmony and the role that diminished sevenths play in linking together four discrete octatonic collections. It proves unwieldy, however, for barbershop analysis, because barbershop music does not routinely use semitonal displacements in a single voice to move through this space. “Power Towers” is an open map with no prescriptive instructions or direction. A graph created to model common seventh chord progressions in barbershop music would use a different intermediate coupling chord, the half-diminished seventh, to connect fifth-related barbershop sevenths. Figure 3.6 shows the three possible intermediary half-diminished sevenths that link chords in the ragtime progression, and their associated transformations. Each node represents a seventh chord, and each line represents two semitones in distance. This graph shows how geometrical representations can be made to highlight certain relationships that are salient for analysis in a specific style or even a single piece of music. This graph is incidentally a subset of “Power Towers,” since both graphs draw from the broad theoretical pitch space that includes all seventh chords possible. The strength of my graph is in its suitability to barbershop music. By limiting the harmonic vocabulary to just the barbershop seventh and half-diminished seventh, we can see three different paths along the harmonic highway emerge and investigate how often these paths are used. Note that the arrows also indicate that these paths are unidirectional.

FIGURE 3.6. Linking Half-Diminished Seventh Chords in the Circle of Fifths.



The top path through Figure 3.6 is the preferred path between fifth-related dominant sevenths, and the most common use of the half-diminished seventh in barbershop music. This is the only use of the half-diminished seventh recognized by the Manual: the half-diminished that moves to a barbershop seventh with a root a fifth below. This progression may be viewed as an extension of tonicization of a secondary dominant, serving as a localized ii^{ø7}-V7. The middle path involves a chord that is spelled like a half-diminished seventh but would generally be considered a rootless dominant ninth instead.[30] O-related harmonies, such as E^{ø7} and C7, share the same harmonic function. They could be seen as vii^{ø7} and V7 in F major, but often when these chords are seen together in barbershop music, the two-semitone motion occurs in the lead voice, suggesting a rootless C9 to C7 interpretation. Nevertheless, given its identical pitch content to the half-diminished seventh, the rootless ninth may be used to facilitate parsimonious voice leading between barbershop sevenths. Whereas the preferred path of Figure 3.6, the top path, adds tension with the half-diminished seventh, the middle path sounds like a harmonic arrival because of the rootless dominant ninth that shares a root with the following harmony. The bottom

[30] In his dissertation, Enoch Jacobus observes the ability for whole-tone movement in a single voice to be included to create fifth-cycles of alternating dominant and half-diminished sevenths.

path through Figure 3.6 is rarely taken in barbershop progressions but is an interesting possible use of the linking half-diminished seventh for future arrangements in the style.

Figure 3.6 may be used to visualize specific progressions in barbershop music. In the intro of "The Way You Look Tonight," shown in Example 3.13, a variety of half-diminished sevenths and dominant ninths are used to facilitate parsimonious voice leading. The tonic jumps out to a 3^7, and an S2(3)/S3(4) pair moves through $3^{ø7}$ to 6^7. The 6^6 is used on beat 4 of m. 2 to accommodate the melody, but the progression of 6^7 on beat 3 of m. 2 to 2^9 on the downbeat of m. 3 involves an S5(6) move, and the step down in the lead on the following beat is an O transform that brings the harmony to 2^7. If the lead notes on the third and fourth beats of m. 3 were switched, we would see another S5(6)/O pair moving from 2^7 to 5^7. If we follow this progression on Figure 3.6, we begin at G7, move by the top path to C7, the middle path to F7, and then move directly to B♭7.

EXAMPLE 3.13. Introduction by Mark Hale, “The Way You Look Tonight, mm. 1-5

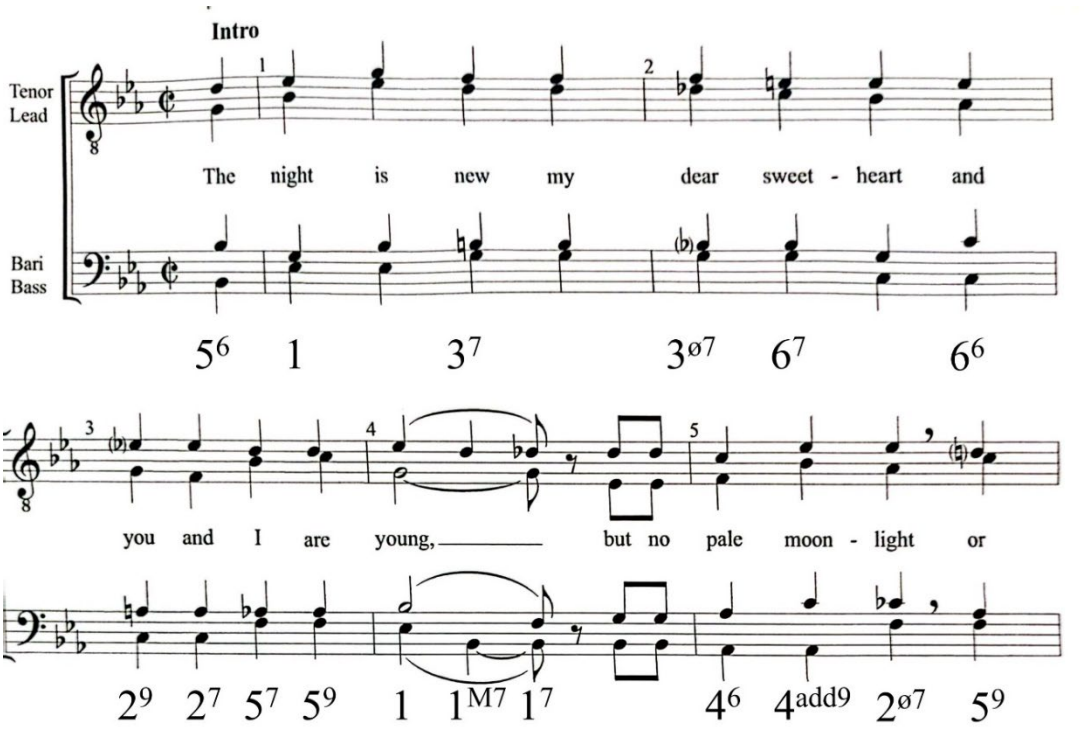
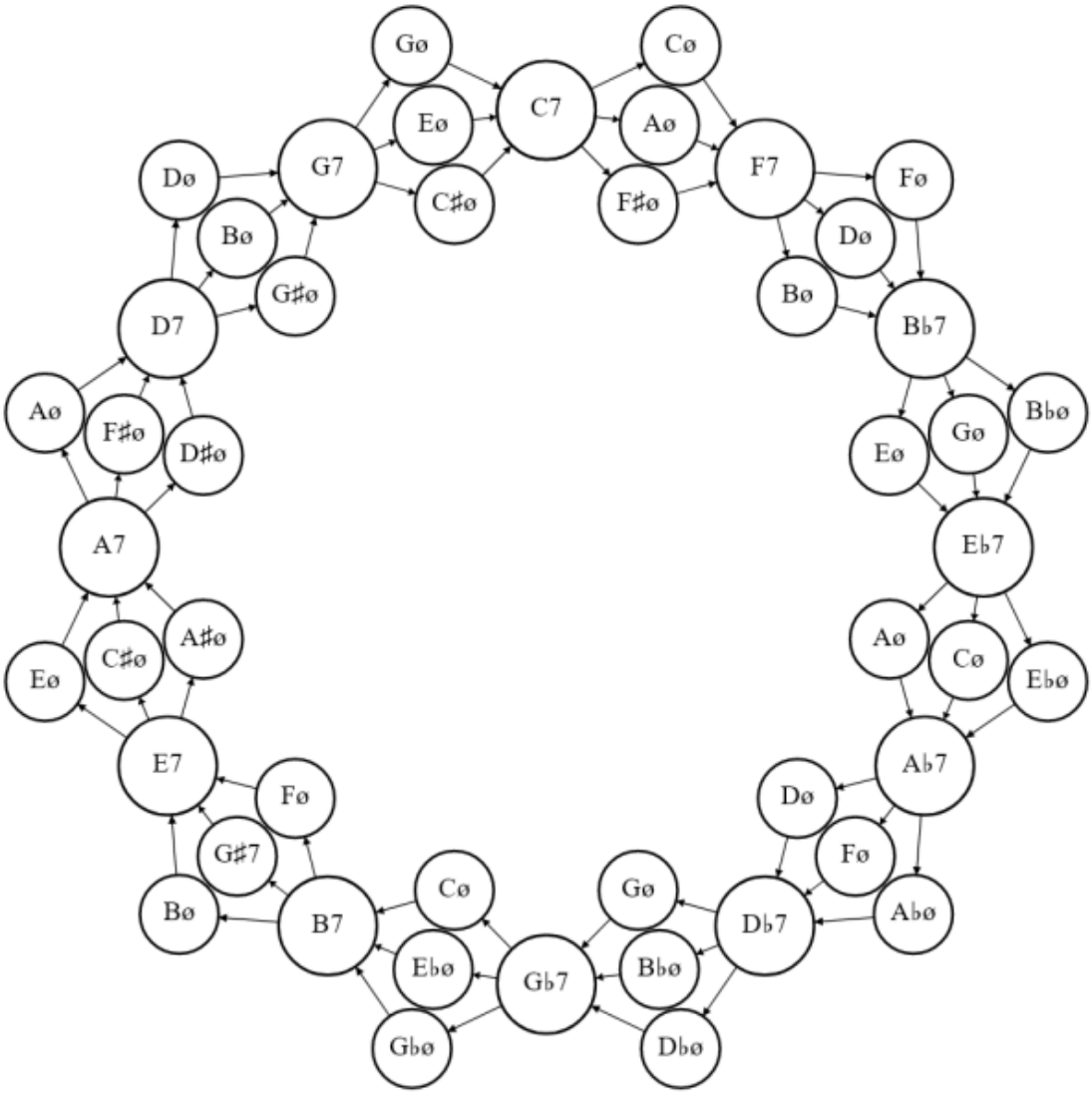


Figure 3.6 is a segment of a larger closed system. The entire system, shown in Figure 3.7, starts with barbershop sevenths arranged in the circle of fifths, and shows the three possible intermediary half-diminished sevenths that allow for parsimonious voice leading of two semitones. By closing this system into a circle, we have turned our harmonic highway into a beltway that has no beginning or end. This is a one-way road, since barbershop music progresses clockwise through this graph, and may take the outer, middle, or inner path through a half-diminished seventh via parsimonious voice leading or may proceed by a double transform directly from one barbershop seventh to the next. Counterclockwise motion is occasionally seen in barbershop music and, much like driving the wrong way on a one-way road would, it adds intensity and excitement, rather than a sense of progression.

FIGURE 3.7. Barbershop Seventh Circle of Fifths with Three Paths Containing Intermediary Half-Diminished Seventh Chords[31]



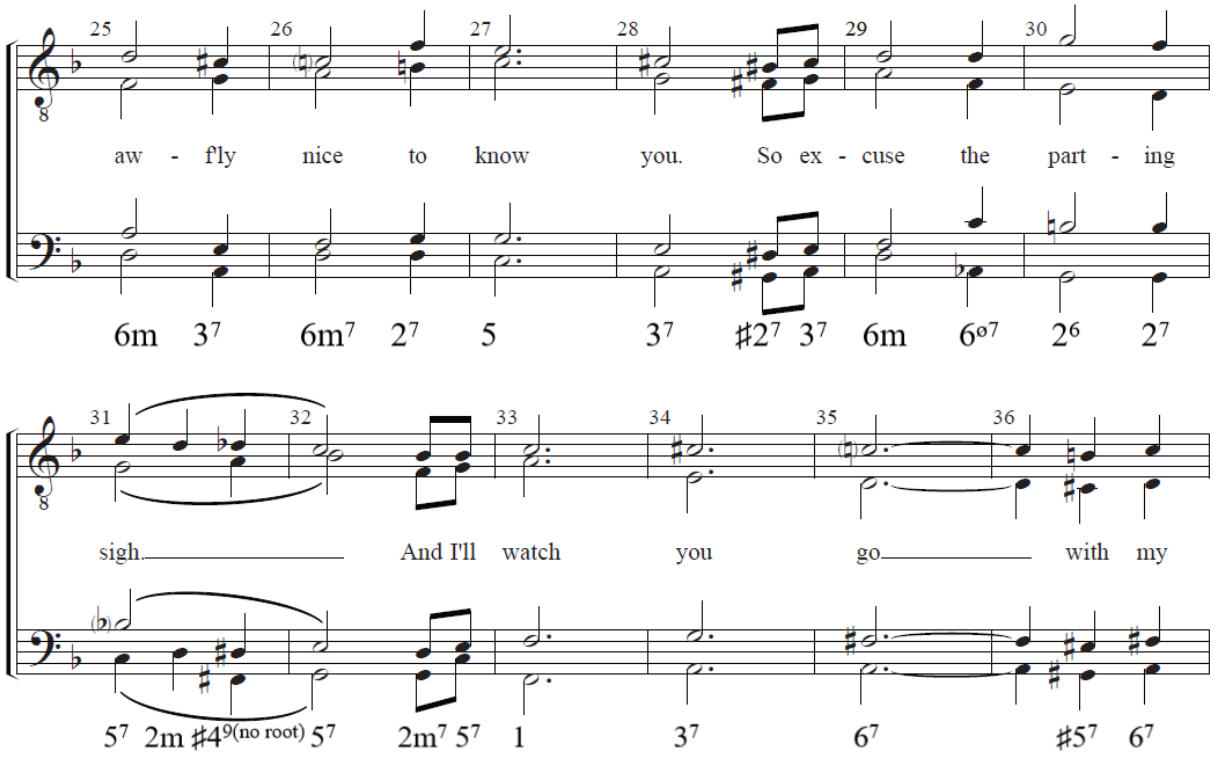
This graph only shows the three half-diminished sevenths that are two semitones away from both adjacent barbershop sevenths. As observed by Childs, a dominant seventh may move

[31] Many thanks to Ryan Pitasky, who took my crudely constructed version of this graph and generated one that looks significantly better.

by S transforms to seven different half-diminished sevenths. This can be observed clearly on "Power Towers," where any dominant seventh may move clockwise by ascending semitone motion through a fully diminished seventh to four different half-diminished sevenths, or counterclockwise by two descending semitone motions to three different half-diminished sevenths. Note that dominant sevenths cannot move to all four half-diminished sevenths within its own octatonic region by two semitone movement. Each dominant seventh may not move by parsimonious voice leading to the half-diminished seventh with a root a minor third higher, since those two chords (e.g., C7 and E♭^{ø7}) share no common tones but are complementary chords, called octatonic poles, that contain that generate the octatonic collection. Therefore, a move between these harmonies would take both an S transform to move circularly and a C transform to move radially, resulting in four voices moving by semitone, three in one direction and one in the opposite direction.

Example 3.14 shows an instance of movement between octatonic poles. In measure 31, an (enharmonically spelled) D♯^{ø7} moves three voices up by semitone and the fourth down by semitone to its octatonic complement, C7. Considering the context, I would choose to label the apparent D♯^{ø7} as a rootless B9. Type IV neighbor chords are a prominent feature of this arrangement (e.g., mm. 28, 36), so I suggest that the chord in question in m. 31 is a creative alteration of the common lower neighbor chord. B7 is used as a lower neighbor to C7, harmonizing the A in the lead, and the arranger writes the chordal ninth in the tenor to avoid parallel major seconds between the tenor and lead, which can be difficult to execute accurately. The enharmonic spelling as D♭ in the tenor shows the prioritization of its resolution downward to C over the note's function as the chordal ninth.

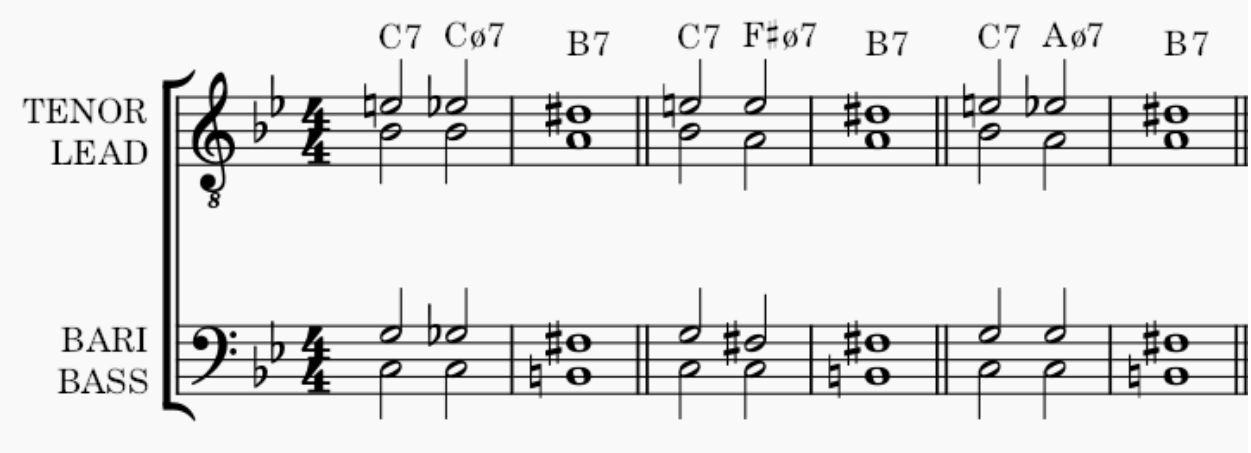
EXAMPLE 3.14. Johnny Burke, arranged by Lou Perry, “From the First Hello to the Last Goodbye,” mm. 25-36



Because dominant sevenths are four semitones displaced from their octatonic poles, parsimonious paths through seventh chord spaces that descend in pitch class space, such as counterclockwise movement on “Power Towers” and clockwise motion on Figure 3.7, are confined to three of the four possible half-diminished sevenths in each octatonic collection. However, descending motion from a half-diminished seventh moves through the fully diminished seventh, allowing movement to four possible dominant sevenths. This feature has an interesting application for the use of tritone substitution in barbershop music. Because a fully diminished seventh may move to tritone-related barbershop sevenths, the same three intermediary half-diminished sevenths may be used to connect fifth-related and semitone-related

barbershop sevenths. Example 3.15 uses the same linking half-diminished sevenths seen in Example 3.12 to connect C7 to B7 by parsimonious voice leading. The progressions used in this example use the three double-S transforms that transpose a dominant seventh down a semitone. S2(3)/3(2) moves from C7 through Cø7 to B7, S4(3)/S3(4) moves through F♯ø7 to B7, and S5(6)/S6(5) moves through $A^{ø7}$ to B7.

EXAMPLE 15. Half-Diminished Seventh Linking Chords Between Semitone-Related Barbershop Sevenths



The implication of this application is that half-diminished sevenths can be used not only to create further chromaticism through parsimonious voice leading in the secondary dominant sequence but can also serve as linking chords through the other type of barbershop progression: descending semitone progressions using tritone substitution. This application of linking chords is untheorized so far, but there are interesting examples of it in some classic barbershop arrangements. Example 3.16 shows the insertion of a tritone substitute into a typical 2^7 - $2^{ø7}$ – 5^7

progression in "Where the Southern Roses Grow." After moving from 2^7 to $\flat 6^7$ by C6(5), two S transforms are used to move through a linking half-diminished seventh to the arrival on 5^7. The S4(3) move from G7 to C♯ø7 is the same transformation that starts the bottom path in Figure 6. The tritone interval between the roots of these harmonies makes the bottom path an unusual choice for linking chords within the circle of fifths but opens up interesting possibilities for linking within chromatic space.

EXAMPLE 3.16. Richard H. Buck and Theodore F. Morse, Arranged by David Wright, "Where the Southern Roses Grow," mm. 29-32.

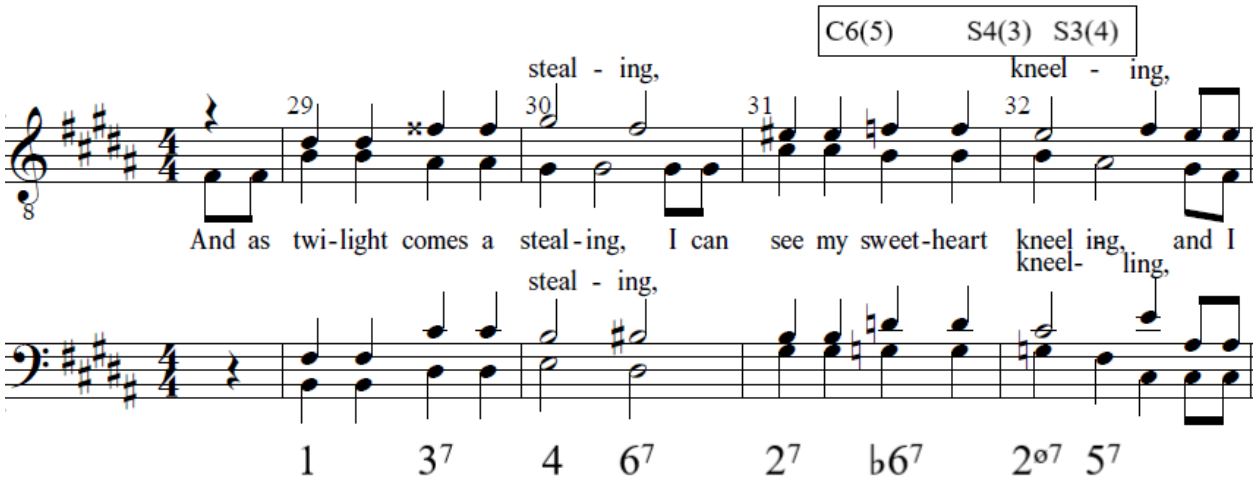
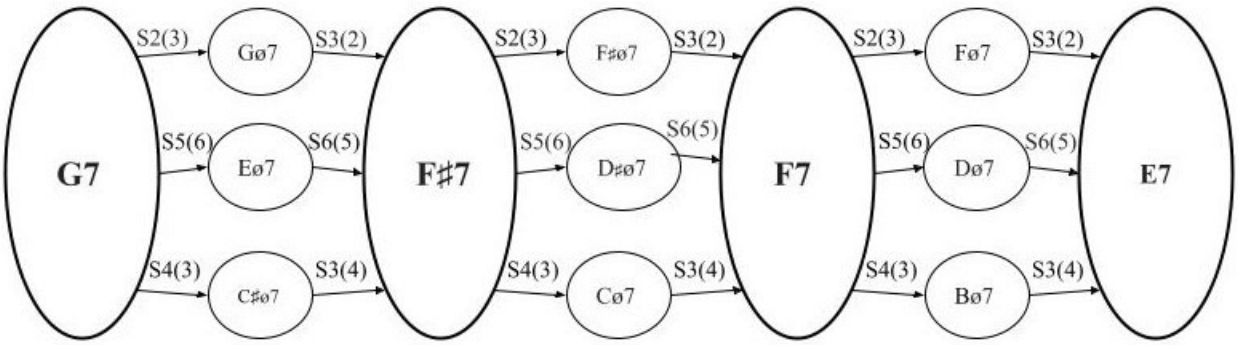


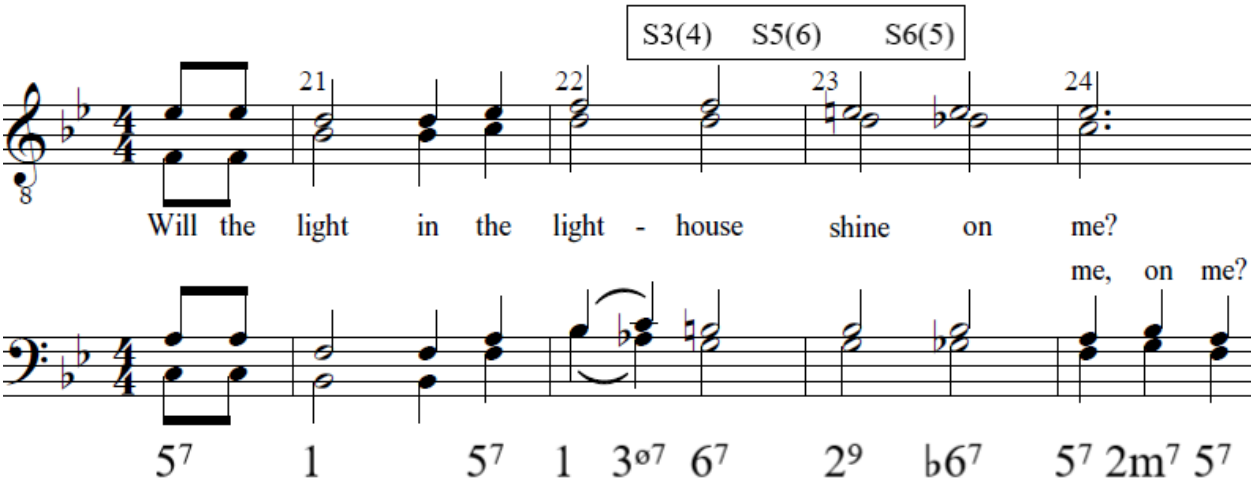
Figure 3.8 is analogous to Figure 3.6 but shows the linking chords cutting through chromatic space rather than fifth space. Note that the first half of each double-S pair is identical to Figure 3.6. However, since the tritone substitutes result in a semitone descent in all four voices, each initial S transform must be paired with its complement, reversing the interval classes that are retained and moved. Example 3.17 shows an example of these complementary S

transforms in a classic arrangement one of the oldest songs in the barbershop repertoire, a Black spiritual called “Shine on Me.” In m. 22 of “Shine on Me,” a tonic triad splits its root to create a $3^{ø7}$ which proceeds by parsimonious voice leading through the final chord in m. 23. The move from 6^7 to $♭6^7$ is divided in half by a linking Eø7. In context, it may sound like a rootless dominant ninth built on C, suggesting that the move to $♭6^7$ is just an alteration of the common tritone substitution. However, that analysis misses the use of three consecutive pairs of descending semitones in this passage. Perhaps even more than the circle of fifths examples, the linking chords connecting tritone substitutes, which are already closely identified with improvisation, sound as if they are steeped in improvisation because of the winding chromaticism and parsimonious voice leading.

FIGURE 3.8. Linking Half-Diminished Seventh Chords in Chromatic Space.



EXAMPLE 3.17. B.B. McKinney, Arranged by Floyd Connett, “Shine on Me,” mm. 21-24



Tymoczko associates some intriguingly similar progressions with improvisation in the music of Chopin. In his analysis of Chopin’s Mazurka Op. 68 No. 4, he shows that the opening measures gradually move down from a G7 to G♭7, then to F7, and finally to E7. The intervening chords between the dominant sevenths (which we might call pillar chords), always descend by either one or two semitones, and are limited to dominant sevenths, diminished sevenths, minor sevenths, half-diminished sevenths, or French sixth chords. Tymoczko muses that “the music seems to embody what twentieth-century composers would call an “open form,” a set of rules that only partially determine the musical result, of the sort that might be used as a basis for improvisation.”[32] He suggests that the tension between “freedom and constraint” resembles a musical game. Figure 3.9 shows Tymoczko’s rules for this game and a geometrical representation of those rules. These figures show how improvisation within the constraints of certain rules may result in interesting chromatic progressions. Like Chopin’s improvisational game, early

[32] Tymoczko, *A Geometry of Music*, 285.

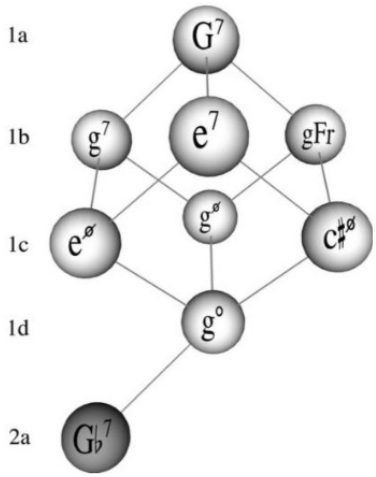
barbershop woodshedders were constrained to a certain harmonic vocabulary but may have used improvisation to find interesting harmonies and explore chromatic space between pillar chords.

FIGURE 3.9. Directions for Improvisation in Chopin. From Tymoczko.[33]

Figure 8.5.3 The "directions for improvisation" that might produce Chopin's F minor Mazurka.

F Minor Mazurka
1. Begin with a dominant seventh chord.
2. Successively lower the third, fifth, and seventh of the chord by semitone, in any order, eventually producing a diminished seventh chord.
3. Lower the note of diminished seventh chord that was the root of the initial dominant seventh, producing a new dominant seventh chord a semitone lower than the original.
4. Repeat.
Bonus rule: it is possible to eliminate one or more chords in the resulting sequence, lowering multiple notes by semitone at the same time.

Figure 8.5.4 A geometrical representation of Chopin's "directions for improvisation."



Notice how remarkably similar the geometrical representation is to Figure 3.8. Both show potential improvisatory paths from G7 to G♭7 through C♯ø7, Eø7, and Gø7. Tymoczko's figure draws attention to the single-semitone movements used in the Mazurka. My figure instead emphasizes the two-semitone movements commonly found in barbershop and the privileged position of the half-diminished seventh as a linking chord.

Earlier in this chapter, I noted that tritone substitution allowed for much quicker harmonic motion, and that the use of several consecutive barbershop sevenths descending by semitone has a different sound and sensation than progression by fifths. Semitone-descending

[33] Ibid, 286.

parallel barbershop sevenths feel as if they are cutting quickly across or through space. The linking half-diminished sevenths that connect these barbershop sevenths together contribute to that feeling of winding or moving sidewise, rather than straightforward circle of fifths motion. Figure 7 shows the linking half-diminished sevenths on the circle of fifths, but we have now explored that each trio of half-diminished sevenths in that figure may also move to a different barbershop seventh a tritone away from the clockwise adjacent barbershop seventh. This is because of the fully diminished seventh's ability to move to four unique dominant sevenths by descending semitone. Tymoczko observes the flexibility of the diminished seventh within both chromatic and descending fifth sequences. He shows that Chopin uses a similar improvisatory practice in his F Minor Mazurka and E Minor Prelude.

> The similarities are striking: in both cases, the third, fifth, and seventh of the dominant seventh chord move down by semitone until they produce a diminished seventh chord. At this point, one of the notes of the diminished seventh moves down to produce another dominant seventh. The chief difference lies here: in the F minor Mazurka, Chopin always lowers the note in the voice that contained the root of the original dominant seventh chord, producing a semitonally descending sequence; in the E minor Prelude, Chopin lowers the note that is in the voice that contained the fifth of the dominant seventh chord. This small change is enough to make the difference between descending semitones and descending fifths.[34]

How fascinating that these two cases use descending semitone and descending fifth sequences, the two foundational progressions of barbershop harmonic practice! I am not arguing that Chopin had any impact on the development of barbershop harmony in America. On the contrary, I propose that this is strong evidence that the variety of chromatic harmonies, and especially the use of linking half-diminished sevenths used in barbershop music to connect pillar

[34] Tymoczko, *A Geometry of Music*, 288.

dominant sevenths, are a direct outgrowth of improvisational practice. In the mid- to late-19th century, two discrete traditions on opposite sides of the Atlantic were exploring the chromatic space between pillar dominant seventh chords by improvising within both descending semitone and descending fifth sequences.

The differences between these two improvisatory traditions are striking. One is European; the other is American. One is a single keyboard player; the other is four individuals woodshedding together. One is at the pinnacle of Romantic classical music, the other is a vernacular, popular style. The separate traditions arrived at a similar musical place because their improvisation and exploration of seventh chord space with parsimonious voice leading inevitably leads through the fully diminished seventh chord due to its ability to closely relate the half-diminished and dominant seventh chords.

Enoch Jacobus observes the fully diminished seventh's ability to cut across seventh chord space in unique ways. His Figure 3.16, shown as Figure 3.10 below, demonstrates the middle path of Figures 3.6 and 3.7, involving the S5(6) and O transformations. The inner ring shows the fully diminished seventh chords and uses lines to connect the enharmonically equivalent diminished sevenths. Jacobus proposes that fully diminished seventh chords act as "wormholes" used to shortcut longer paths.[35] He quotes physicist Richard F. Holman, who says,

> Wormholes are solutions to the Einstein field equations for gravity that act as "tunnels," connecting points in space-time in such a way that the trip between the points through the wormhole could take much less time than the trip through normal space.[36]

[35] Enoch Jacobus, "A New Geometric Model and Methodology for Understanding Parsimonious Seventh-Sonority Pitchclass Space," Ph.D. diss., (University of Kentucky, 2012): 64.
[36] Richard F. Holman, "Follow-Up: What exactly is a 'wormhole'? Have wormholes been proven to exist or are they still theoretical?," Scientific

Tritone substitutes and their further connection through linking chords use fully diminished sevenths as wormholes to cut quickly through space, and the term “wormhole” is a fitting name for the sound of these fascinating progressions.

FIGURE 3.10. Whole-tone Cycles of Dominant and Half-diminished Seventh Chords. From Jacobus.[37]

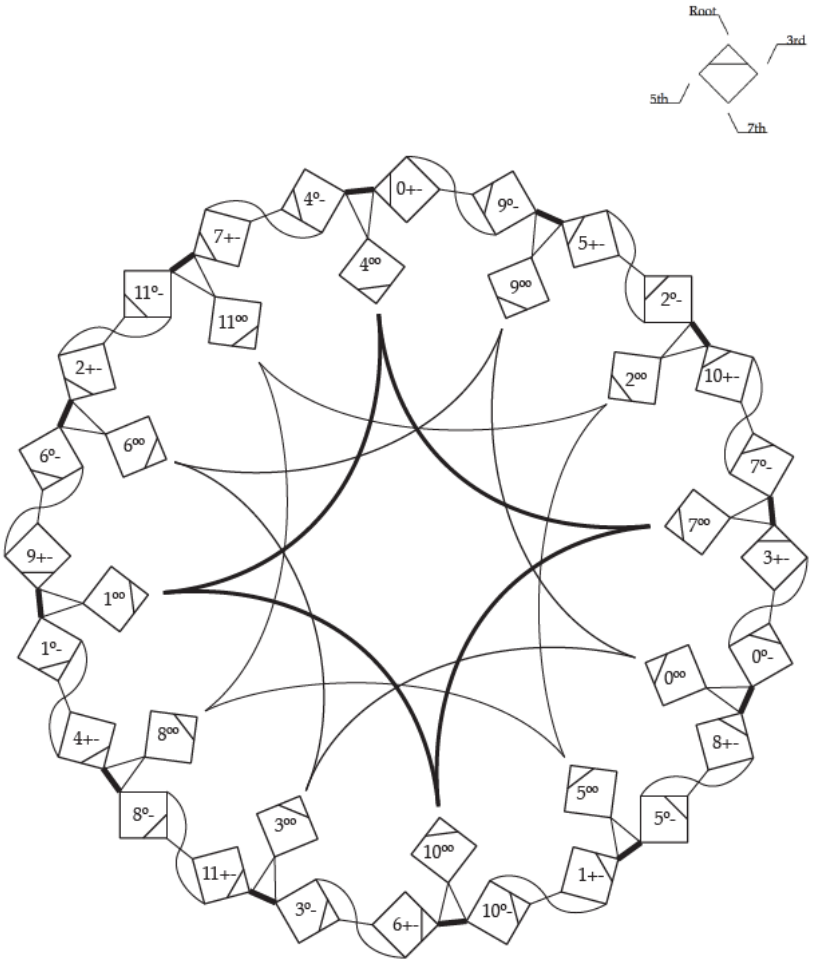


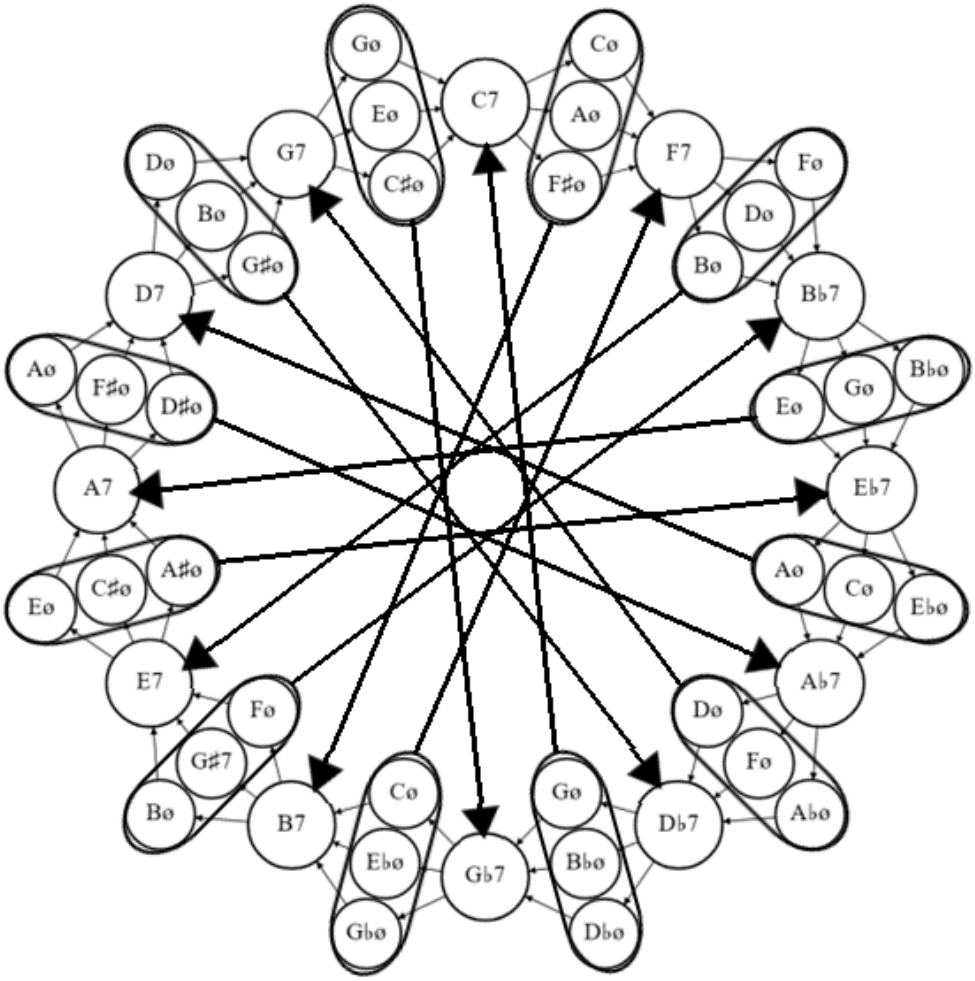
Figure 3.16: Whole-tone cycle of +– and °– seventh chords

American (September 15, 1997), http:// www.scientificamerican.com/article.cfm?id=follow-up-what-exactly-is

[37] Jacobus, “A New Geometric Model,” 63.

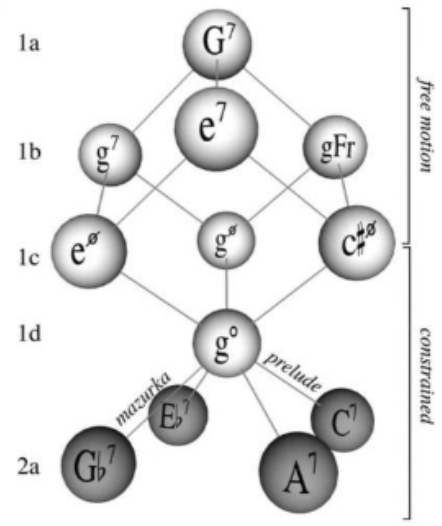
If we imagine traveling through seventh chord space, then, we can now imagine new possibilities not afforded by Figure 3.7. Moving clockwise from a dominant seventh into one of the three linking half-diminished sevenths may allow us to move through the fully diminished seventh wormhole, rapidly flying across the space to the tritone substitute. Figure 3.11 adds paths through the center of Figure 3.7, showing the possibilities for parsimonious voice leading using half-diminished seventh linking chords for progressions using tritone substitution.

FIGURE 3.11. Barbershop Seventh Circle of Fifths with Linking Half-Diminished Seventh Chords Using Wormholes Within Tritone Substitution Progressions.



This graph demonstrates six different uses of half-diminished sevenths as linking chords within the barbershop harmonic framework. One may progress clockwise around the circle by fifth motion using three different paths or use any of the three half-diminished sevenths in each oval to cut across the space, linking barbershop sevenths with roots a semitone apart. Any of the three half-diminished may move to the fully diminished seventh, which allows movement to the tritone substitute across the space. Theoretically, one may also use the fully diminished seventh as a wormhole to move to two other dominant sevenths, each a minor third apart from the tritone-related harmonies that are included in Figure 3.11, rounding out Tymoczko's minor-third system. This is because one may move any note of a diminished seventh down by semitone to produce four different dominant sevenths. For example, C7 may move through F♯°7 to F7 (descending fifth), B7 (tritone substitute, descending semitone), D7 (ascending whole tone), or A♭7 (descending major third). In each case, three different half-diminished sevenths may connect C7 to its destination by parsimonious voice leading of two discrete moves of two semitones. Key to this phenomenon is that each of the half-diminished seventh chords get funneled through the single diminished seventh serving as a wormhole to the next group of dominant sevenths that share a minor thirds system. Figure 3.12 shows Tymoczko's expanded version of the geometrical representation in Figure 3.9. Just as in barbershop music, though a variety of paths may be used, such as using linking half-diminished sevenths, eventually one must move into the diminished seventh, which may serve as a wormhole to reach one of four different dominant sevenths. Though transposition of a barbershop seventh up a tone or down a major third is unusual in barbershop music, this speculative application of linking chords may be useful to barbershop arrangers in some contexts, particularly related to modulation.

FIGURE 3.12. Four Possible Paths Between Dominant Sevenths Through the Fully Diminished Wormhole.[38]

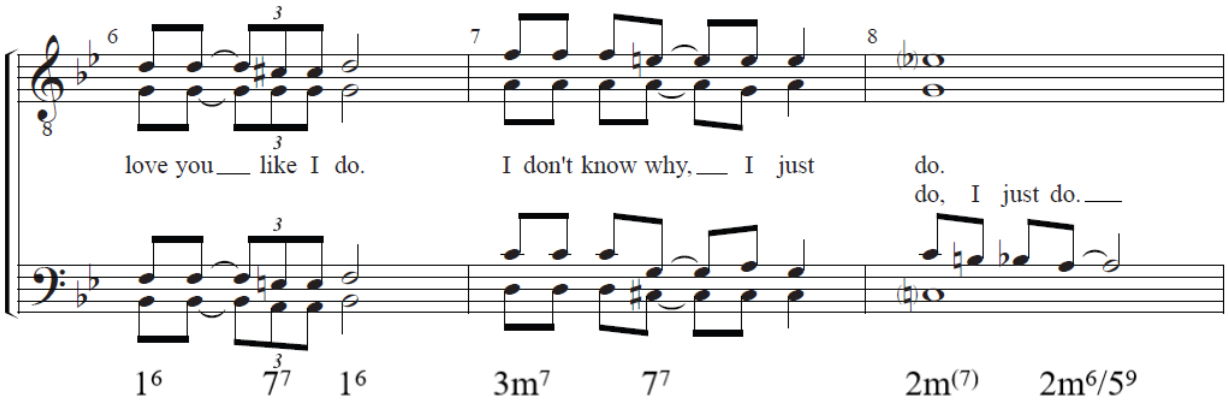


One (almost) instance of the descending major third application can be found in Example 3.18. In mm. 7-8, I hear $3m^7$ and $2m^7$ as important pillar chords. The expected harmony in the second half of m. 7 is a submediant harmony of some kind, resulting in a root progression by fifth of 3-6-2-5. The 7^7 that is used instead appears in first inversion, and this weaker voicing results in a lack of dominant seventh sound. The more salient aural feature of mm. 7-8 is the descending minor thirds between the bass and tenor. This descending chromatic motion, particularly in the bass, makes the 7^7 sound like an altered tritone substitute, where the C♯ in the bass is really a D♭, the root of a ♭3 harmony. The echo in the baritone in m. 8 moves through notes an octave, major seventh, minor seventh, and major sixth above the bass, so the sonority at the end of the measure may sound like either a $2m^6$ or a (rootless) 5^9. However, the next phrase begins with a root position 5^7, so I prefer the $2m^6$ interpretation. An interpretation of this passage

[38] Tymoczko, "A Geometry of Music," 289.

that is less sensitive to the tritone-substitute resemblance of the 7^7 could see a linking half-diminished seventh connecting the 7^7 pillar harmony to the 5^7 at the beginning of m. 9. That interpretation would ignore the first three notes in the baritone and use an S2(3) to move from an A7 in m. 7 to an $A^{ø7}$ in m. 8, before using an O transform to the F7 to begin the following phrase. Ultimately, this example suffers the same fate as Adrian Childs's third-transposing C transforms. The preference for fifth and semitone progressions and root and second inversion voicings in barbershop music makes it difficult to use these transformations stylistically. In each case, one of the barbershop sevenths would need to appear in first or third inversion if smooth voice leading in pitch space is used.

EXAMPLE 3.18. Fred E. Ahlert and Roy Turk, Arranged by Mel Knight, "I Don't Know Why," mm. 6-8



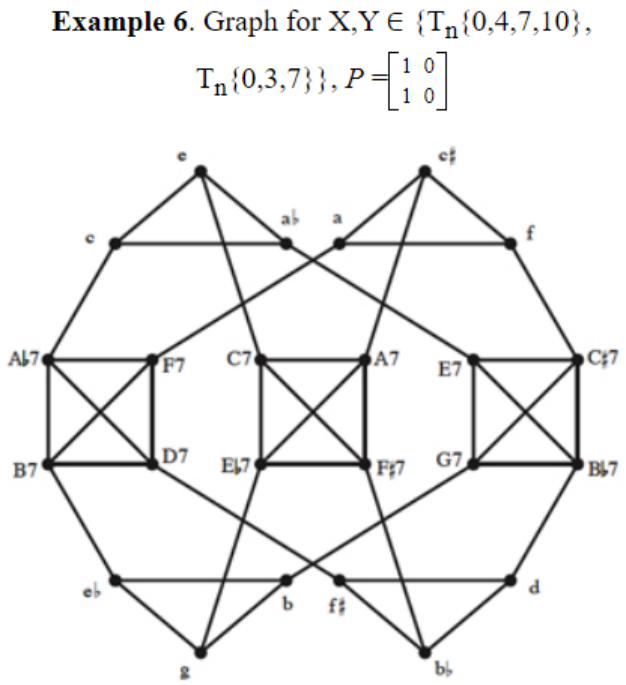
Splitting and Fusing

Though barbershop music prioritizes the use of seventh chords, major and minor triads are still regularly employed as harmonic pillars in the style. Parsimonious voice leading between sets of different cardinalities was first explored by Clifton Callender in his seminal article.[39] Callender proposes that a pitch may split into the two pitches a semitone above and below to create a larger set, or two pitches a major second apart may fuse into a single note by moving by semitone towards each other[40]. He suggests that this "split relation" may be used to relate members of set class (037) and (0258). "Splitting the root of a major triad yields a half-diminished seventh, while splitting the fifth of a minor triad yields a dominant seventh."[41] Joti Rockwell generalizes Callender's work to include all trichords and expands the definition of parsimonious movement between these sets to include any stepwise movements that sum to three or fewer semitones. His study models this voice leading with a "parsimonious voice leading matrix,"[42] shown to the right, which displays the number of voices that move up by semitone (*u1*) and whole tone (*u2*), and down by semitone (*d1*) and whole tone (*d2*). His "birdcage graph" shown in Figure 3.13 below, displays the relationships between all minor triads and dominant sevenths using semitone motion in contrary motion (*u1* = 1, *d1* = 1).

$$\begin{bmatrix} u_1 & u_2 \\ d_1 & d_2 \end{bmatrix}$$

[39] For other work relating triads and seventh chords, see Cook 2005 and Hook 2007.
[40] Callender's work is generalized to pitch space.
[41] Clifton Callender, "Voice leading Parsimony in the Music of Alexander Scriabin." *Journal of Music Theory* 42, no. 2 (1998): 229.
[42] Joti Rockwell, "Birdcage Flights: A Perspective on Inter-Cardinality Voice Leading," *Music Theory Online* 15, no. 5 (2009): 7.

FIGURE 3.13. Birdcage Graph of Semitone Movement in Contrary Motion. From Rockwell.[43]



On this graph, we can see groups of three minor triads connected LP cycles, groups of four dominant sevenths connected by Childs's C transforms, and Callender's split-related minor triads and dominant sevenths. Callender's and Rockwell's methodologies may be adapted for application to common voice leading patterns found in barbershop music. Splitting and fusing often occurs between triads and seventh chords in barbershop music. Given the four-part texture of this music, splitting may occur between two parts singing in unison, or more often, between

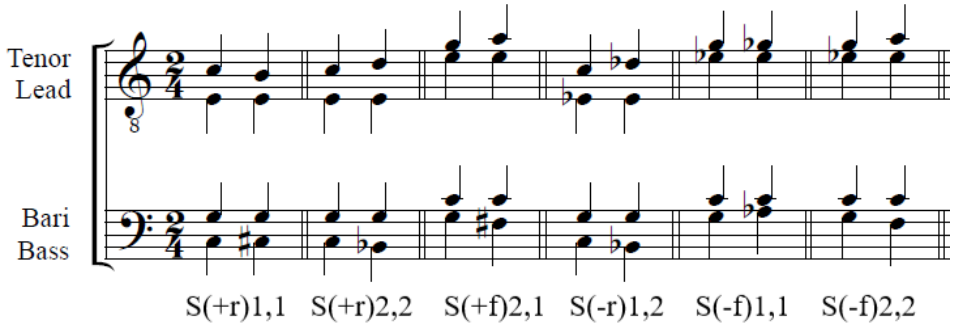
[43] Ibid, 14.

notes singing an octave apart. The following section will further explore splitting and fusing and will develop a useful notational shorthand for these voice leading occurrences.

If one thinks about the descending fifths progression "around the circle"[44] as the preferred path in barbershop, and tritone substitutes using wormholes to cut across the middle of the space, then splitting and fusing are analogous to on-ramps and off-ramps for our harmonic highway. Splitting a triad into a seventh chord enters the circle, and fusing a seventh chord into a triad exits the circle. In barbershop music, triads nearly always occur in root position or second inversion, and the bass is nearly always doubled in an upper voice. This means that it is typical for the root or fifth, not the third, to split to produce a seventh chord. Though Callender notes that the root of a major triad may split to produce a half-diminished seventh and a fifth of a minor triad may split to produce a dominant seventh, he limits the split function to specific chord tones of each triad and movement of only a semitone in either direction. In Rockwell's nomenclature, splitting is always a $P\begin{bmatrix}1 & 0\\ 1 & 0\end{bmatrix}$ occurrence. However, if we allow splitting to include movement up to a whole tone in either direction and may split either roots or fifths of either triad type, we may relate the triads to many more seventh chords. Figure 3.14 shows all possible splits of the root or fifth of a major or minor triad that result in a dominant or half-diminished seventh. In this figure, the bass moves in the direction that allows the resulting seventh chord to be in either root position or second inversion. Note that in each case, major triads split into half-diminished sevenths and minor triads split into dominant sevenths.

[44] It is common to hear barbershop practitioners use the phrase "around the circle" to refer to secondary dominant resolutions. More informally, one might say "that circles" to note that a song or arrangement contains an appropriate and stylistic amount of secondary dominant resolutions.

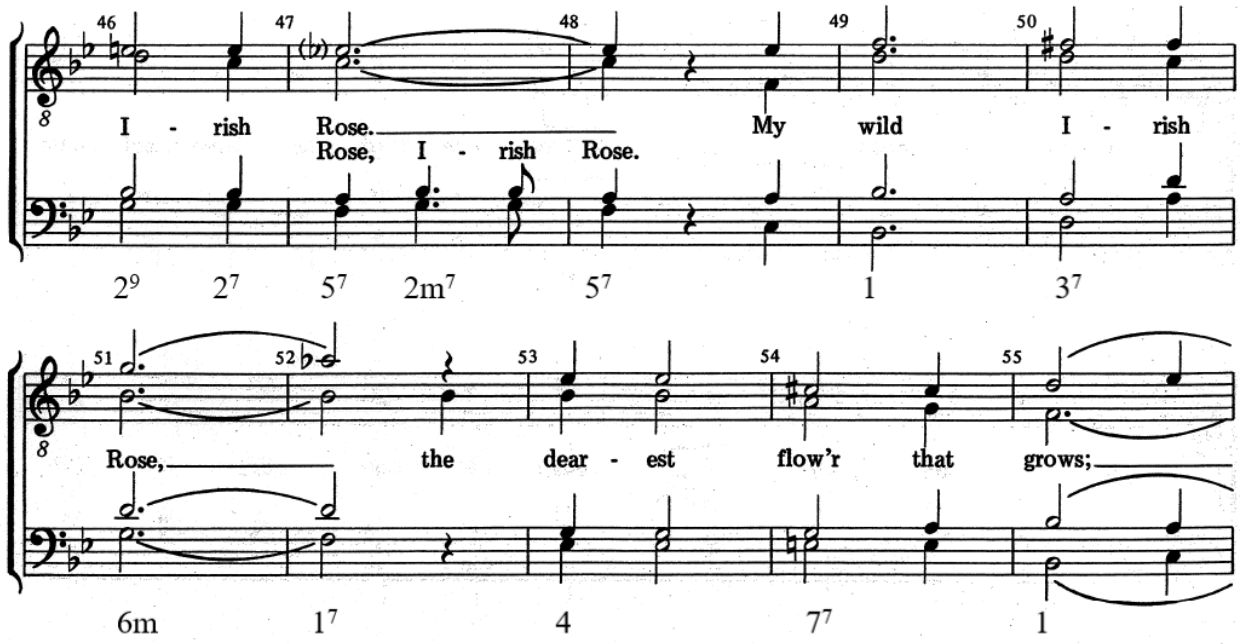
FIGURE 3.14. Expanded Application of Split Relations Between Set Classes (037) and (0258)



Key	
S	Split
r	Root
f	Fifth
+	Major Triad
-	Minor Triad
In x,y:	
x	number of semitones up
y	number of semitones down

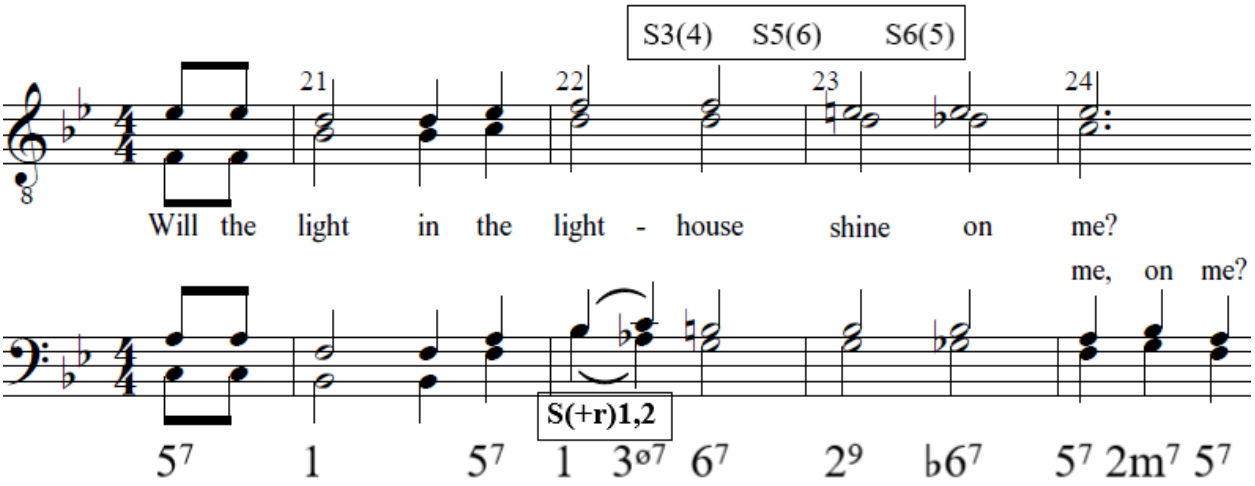
These split functions provide a labelling system for voice leading paradigms that occur regularly in barbershop music. These splits occur in pitch space and usually involve the bass. Because of this, the split from a unison or octave into a different interval is a salient feature of the music that is especially notable to the listener because of the significant shift from triad to seventh chord. The most common example in the style is the S(-r)1,2, which typically moves from 6m to 1^7. Example 3.19 shows part of the chorus of "My Wild Irish Rose." In m. 50, the tonic jumps out to a 3^7, presumably starting a secondary dominant sequence. Instead, the 3^7 tonicizes the 6 minor triad, and a S(-r)1,2 thwarts the fifths sequence, splitting the minor triad out to 1^7 to tonicize the subdominant in the following bar. The octave is placed between the bass and tenor, so the split function is highly apparent to the listen as the outer voices spread out in contrary motion into the barbershop seventh.

EXAMPLE 3.19. Chauncey Olcott, Arranged by Don Gray, “My Wild Irish Rose,” mm. 46-55

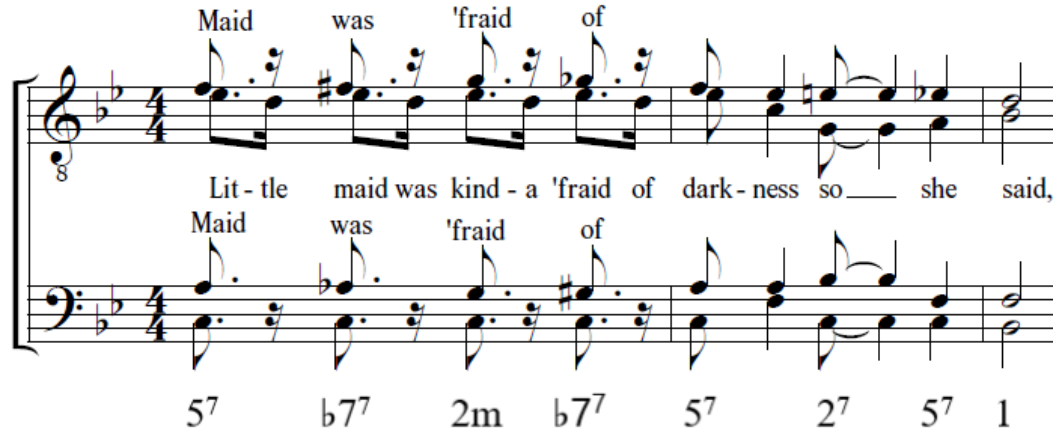


Let us return to a couple previous examples with our newfound labelling methodology for relating triads and seventh chords. Example 3.17 used S-transforms to connect the seventh chords in mm. 22-23 in “Shine on Me.” In Example 3.20, we now may add the split function to show the move from the tonic in m. 22 to the $3^{\emptyset 7}$. In this case, the bass and baritone are doubling at the unison, and split out from a three-part triad to the half-diminished seventh by moving up a semitone in the baritone and down a whole tone in the bass.

EXAMPLE 20. B.B. McKinney, Arranged by Floyd Connett, “Shine on Me,” mm. 21-24



EXAMPLE 21. Nora Bayes-Norworth and Jack Norworth, Arranged by Val Hicks and Earl Moon, “Shine On, Harvest Moon, mm. 13-15



Example 2.5 is a particularly fascinating case, reproduced as Example 3.21. We previously discussed the third exchanges in m. 13, which allowed for parsimonious voice leading from 5^7 to $\flat 7^7$ via a C3(4). The contrary motion between the baritone and tenor continues, and fuses into octaves on the fifth of the 2m triad. We may label this move as F(-f)1,1, since the dominant seventh fuses two notes into the fifth of a minor triad by moving one semitone in each direction. The process is then reversed from beat three to beat four, going from 2m to $\flat 7^7$ by S(-f)1,1, and back to 5^7 by C3(2). Note that while C6(5) is an involution, C3(2) and C3(4) are not. C3(4) moves the root of a dominant seventh up a minor third, and C3(2) must be used to move the root down a minor third to the original harmony. In the same way, Split and Fuse functions are inverse functions. For example, F(-f)1,1 and S(-f)1,1 have opposite effects, as seen in Example 3.21.

Chapter 3 Case Study – "Sweet, Sweet Roses of Morn"

This chapter explored how certain harmonic progressions in barbershop music arose out of improvisational approaches. These progressions rely on parsimonious voice leading to relate chords to each other rather than typical tonal relationships. The parsimonious nature of these chord relationships allowed for fruitful application of Neo-Riemannian methodologies. Though this chapter discussed, labelled, and graphed many typical barbershop progressions, it is important to note that the chord patterns discussed are not comprehensive. The following case study will show many uses of parsimonious voice leading discussed in this chapter, and many chord progressions that may follow similar principles but do not neatly fit one of the restrictive transformations previously mentioned.

This case study investigates the parsimonious voice leading used in another song from the Barberpole Cat Songbook, "Sweet, Sweet Roses of Morn." This arrangement contains several half-diminished sevenths, and in each case they follow the preferred path on the harmonic highway, moving to the dominant seventh rooted a fifth below. Earlier in this chapter, we saw a tonic split its root into notes above and below to produce a $3^{ø7}$ on its way to 6^7. A similar progression occurs here in mm. 3, 11, and 27, but the use of the sixth in the melody prevents this from being a true split function, since the remaining two voices do not have retained common tones. The progression is certainly derived from the typical split of tonic into the $3^{ø7}$ to move to 6^7, though. The most normative use of intermediary linking chords occurs in mm. 5-6, and again in mm. 29-30, connecting 2^7 to 5^7 via $2^{ø7}$. An interesting variation of that parsimonious move occurs in mm. 14-15. On the third beat of m. 14, the bass moves from a G to a G♭ within a 2^7 pillar harmony. The raised leading tone, E♮ in the tenor, does not move with the bass to create the typical $2^{ø7}$. The resulting harmony is a 2^7 with a lowered fifth. I have observed that linking half-diminished sevenths often occur on metrically strong beats. Because this bass move happens on a weak beat, it is likely that the cancellation of the E♮ through the introduction of the E♭ would too strongly anticipate the change of pillar harmony. Therefore, the arranger chose to introduce tension solely through the chromatic movement of the bass.

This arrangement uses barbershop sevenths in a variety of ways, as is characteristic of the style. In addition to the numerous uses of secondary dominants, and the most common non-dominant functioning seventh, the 4^7, parsimonious voice leading is used to introduce and resolve a variety of seventh chords. This is most noticeable at the end of the arrangement, as the arranger looks for opportunities for excitement and harmonic development in the tag. In the final phrase, there are two instances of tritone substitution, and the parsimonious voice leading is

realized once in pitch space ($\flat 6^7$ to 2^7), and once in pitch class space (5^7 to $\flat 2^7$), with the tenor and baritone participating in a voice exchange. Mm. 42-45 contain a run of eight consecutive barbershop sevenths moving in parallel motion by semitone. We have seen several instances of consecutive barbershop sevenths descending by half step, which we argued was a result of tritone substitution. This progression allows the arranger to move quickly through the circle of fifths, giving an effect of accelerated motion. I suggest that though descending parallel barbershop sevenths create a sense of progression, ascending parallel barbershop sevenths create a sense of tension and excitement. The descent by semitone from 1^7 to 6^7 is a typical way to signal that the end of a song is near, and that 6^7 generally proceeds by secondary dominant to the final authentic cadence of the song. In "Sweet Roses of Morn," the 6^7 is initially reached on the downbeat of m. 44, but the climb through $\flat 7^7$ and 7^7 back to 1^7 surprises the listener and introduces more excitement and anticipation.

After three full measures of parallel motion through a dizzying journey of consecutive sevenths, the excitement is further intensified in m. 45. The harmonic goal is still 6^7, but rather than continuing by parallel motion back down to 6^7, the baritone and lead sustain their notes, and the tenor and bass move in contrary motion by semitone, creating further tension and exhilaration. This progression can be easily modeled by combining a couple of methodologies discussed in this chapter. The root and seventh of the 1^7 trade places by moving outward by semitone, first fusing into the fifth of a minor triad, and then splitting again. In other words, the B♭7 uses F(-f)1,1 to get to a D minor triad and S(-f)1,1 to return to B♭7. Though these functions are inverses of one another, the pitch space realization results in the tenor and bass trading notes rather than returning to their previous ones. The final move from 1^7 to 6^7 is a clear example of a third exchange. The tenor and bass move by semitone in contrary motion, keeping the minor

third in the inner voices as common tones. Because the B♭7 is in third inversion, the third exchange can use parsimonious voice leading in pitch space to arrive on a strongly voiced root position G7 on the downbeat of m. 46. The move from root position to third inversion 1^7 was intentionally done to facilitate this two-semitone voice leading between the 1^7 and the 6^7, and the arranger cleverly extended that parsimonious voice leading and contrary motion between outer voices by fusing to and splitting from the passing minor triad. This progression is beautifully constructed and can now be fully understood thanks to application of Neo-Riemannian methodologies rooted in an understanding of barbershop's origin in improvisational singing and its preference for major-minor seventh chords, irrespective of dominant function.

The methodologies employed in this chapter have potent explanatory power for many common progressions in barbershop music, but fall short in explaining other progressions, particularly when more than two voices move. This is apparent in a few unusual progressions in this song which straddle the line between splitting and third exchange. The arranger of this song uses major triads where we might expect seventh chords or minor triads instead. For example, in mm. 17-21, we see a variation of a common barbershop progression. When the tonic jumps out to a 3^7, that 3^7 normatively resolves to either 6^7 or a 6m triad, or to a subdominant triad. When the 3^7 resolves to 6m, that 6m often uses S(-r)1,2 to move to 1^7, particularly when the next phrase has a subdominant pillar, as is the case in m. 21. But that is not what happens here. There are a couple unusual uses of major triads in this section of the song. First, the 3 triad initially appears without its seventh, which is introduced on beat two of the measure. That 3^7 does not move to either a seventh chord or minor triad built on scale degree six, but a major 6 triad. This is particularly unusual, since the next chord is 1^7 and that 1^7 is followed by 4. The 6m is used almost exclusively in these cases, because of the two common tones shared with the following 1^7

and the strength of that split progression. Alternatively, the 6^7 could have been used, which would have allowed for a third exchange from 6^7 to 1^7, retaining the D and F as common tones. Instead, the 6 major triad was used, requiring three voices to move: the bass and tenor outward as in the typical splitting progression, and the baritone down from B♮ to B♭ as in the third exchange relationship. This is an idiosyncrasy of this arrangement but is clearly a variation of the typical 1-3^7-6m-1^7 progression that is regularly used to move to a significant subdominant pillar chord.

That subdominant pillar chord in m. 22 moves to a major triad built on 3. Though at surface level, this progression may seem unusual, the addition of the 6^{th} in the melody above the subdominant may explain why this progression sounds appropriate. The C in the melody allows this chord to be respelled as a Cm7 chord. In classical practice, this 4^6 to 3 could be analyzed as iv^6 to V in the relative minor (G minor).[45] In other words, this progression is a Phrygian half cadence in the relative minor. Curiously, the exact relationship between 6 and 1^7 seen in mm. 18-19, a major triad moving to a dominant seventh rooted a minor third higher, is used in another context in mm. 23-24. In this case, the 3 triad swipes to a 5^7 to set up a return to the tonic at the start of the following phrase. As before, one may see this as a combination of S(-r)1,2, splitting the bass and lead out to C and E♭, and the third of the major triad, the F♯ in the tenor, moving down by half-step to F. This relationship sits between the split relation (Dm and F7) and the third exchange relation (D7 and F7), containing elements of both.

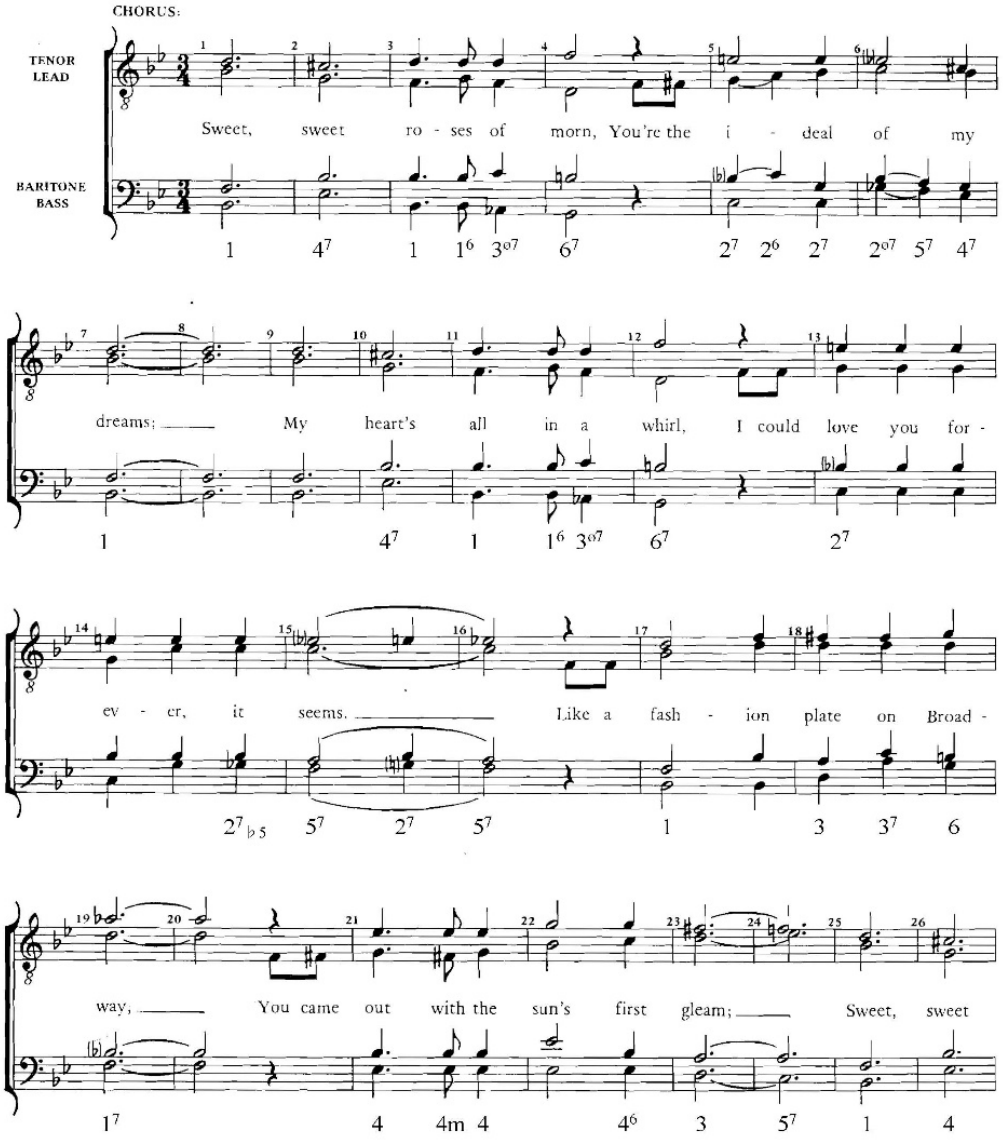
[45] This is another example of Rameau's *double emploi.*

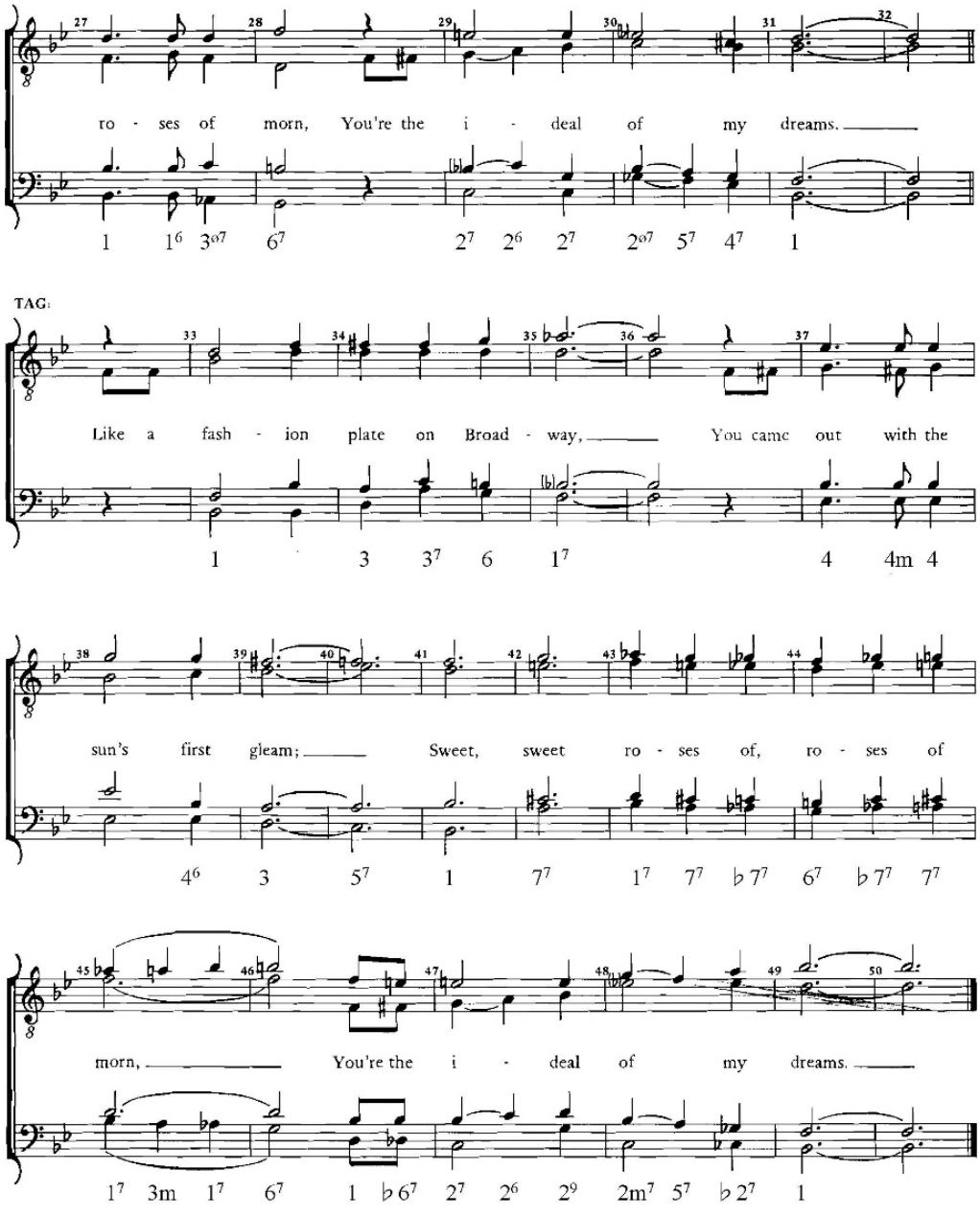
CASE STUDY 3. Oscar F. Jones and Martin S. Peake. “Sweet, Sweet Roses of Morn,” Arranged by Floyd Connett. *Barberpole Cat Songbook*, Kenosha WI: SPEBSQSA, 1971.

SWEET, SWEET ROSES OF MORN

1930s

Words and Music by OSCAR F. JONES (1892-19 ?)
and MARTIN S. PEAKE (1894-19 ?)
Arr. FLOYD CONNETT




ro - ses of morn, You're the i - deal of my dreams.
1 1⁶ 3ø⁷ 6⁷ 2⁷ 2⁶ 2⁷ 2ø⁷ 5⁷ 4⁷ 1
TAG:
Like a fash - ion plate on Broad - way, You came out with the
1 3 3⁷ 6 1⁷ 4 4m 4
sun's first gleam; Sweet, sweet ro - ses of, ro - ses of
4⁶ 3 5⁷ 1 7⁷ 1⁷ 7⁷ ♭7⁷ 6⁷ ♭7⁷ 7⁷
morn, You're the i - deal of my dreams.
1⁷ 3m 1⁷ 6⁷ 1 ♭6⁷ 2⁷ 2⁶ 2⁹ 2m⁷ 5⁷ ♭2⁷ 1

Chapter 3 Conclusions

Barbershop harmony is rooted in tonality yet has a unique idiom of rich chromatic harmonies, progressions, and voice leading paradigms that are not found commonly in Western classical music. I have argued that these are an outgrowth of the improvisational genesis of this style. That improvisation has occurred within the constraints of the style. These constraints include a consistent harmonic vocabulary with four-part chords, especially tritone-containing seventh chords. These constraints have been calcified over time through the introduction of contest rules by Society officials, theoretical texts, and arranging manuals. Despite the shift from freely improvised harmonies to written arrangements and contest rules, barbershop theorists have emphasized the role of ear singing in good arranging, such as the "old woodshedder's rule" of retaining common tones and moving other voices to the closest possible note. This parsimonious voice leading, when considered in conjunction with the harmonic consistency of the style, makes barbershop harmony a uniquely fruitful repertoire for neo-Riemannian theories of seventh chords.

This chapter has borrowed from neo-Riemannian theory to show many of the possible barbershop progressions that use parsimonious voice leading. It has demonstrated that barbershop's "harmonic highway," traveling around the circle of fifths by secondary dominant, can be embellished with linking half-diminished seventh chords, which create the potential for parsimonious voice leading of two semitones per chord change. These parsimonious moves are either Childs's S transforms, or my contribution, the O transform, which moves a rootless dominant ninth to a dominant seventh by moving the ninth down a whole step to the root while retaining the other three pitches. Half-diminished sevenths can also be used to link dominant sevenths within a descending semitone progression of barbershop sevenths, using the

"wormhole" of the diminished seventh to quickly cut across the space to tritone substitutes. I argued that these linking half-diminished sevenths originated in improvisation as quartet singers explored the space between pillar seventh chords. This was similar to Tymoczko's argument about parsimonious improvisation between pillar chords in Chopin's music. My conclusion from this surprising similarity was that improvisation within the seventh chord space between dominant seventh pillars is bound to share many commonalities due to the nature of the pitch space, particularly the funneling (or "wormhole") property of the fully diminished seventh. Finally, parsimonious relationships between triads and seventh chords were explored with an expanded conception of Split and Fuse functions. Split functions serve as on-ramps onto the "harmonic highway" by splitting a doubled note in a triad into two separate notes to produce a seventh chord. For example, the tonic often splits into a $3^{\circ 7}$, which proceeds around the circle of fifths. Fuse functions serve opposite purposes, acting as off-ramps that halt motion on the highway and bring the music to a stable, static triad.

Regardless of the technical labels and methodologies used in this chapter, one must not lose sight of the heart of barbershop harmonic practice, which is ringing, consonant harmonies, often sung in close voicings. Singers and arrangers have leveraged the properties of the barbershop sevenths and half-diminished sevenths to create a harmonic system that features these chords in a variety of chromatic contexts, using parsimonious voice leading to create a sense of cohesion. The common tone retention element of parsimonious voice leading will be a prominent feature of the final chapter, which discusses the unique harmonic syntax and voice leading found in barbershop tags.

Chapter 4: Musical and Social Harmony in Barbershop Tags

Nothing quite captures the essence of barbershop music or the imaginations of its practitioners quite like a tag. The tag of an arrangement is its ending, and it is often a dramatic and exciting ending to the song, usually repeating the lyrics of the last line of the chorus. Tags play a central role in the culture of barbershop singers and are the single most recognizable and important section of an arrangement. They allow arrangers and singers to display their virtuosic skill, serve as the arena for musical innovation in the style, and serve as musical *hors d'oeuvres* for singers to try out in informal settings. Despite the centrality of tags and tag-singing to the barbershop style and its practitioners, no barbershop scholar has written much about their musical characteristics. Tags preserve the history of barbershop while driving innovation in the style. This chapter explores the harmony and voice leading used in tags and compares it to the musical features of the "song proper." I find that tags often feature harmonic vocabulary and syntax that differs from the rest of the song and contain an idiomatic type of parsimonious voice leading that involves retaining a single common tone by a device unique to barbershop music, called a post.

Tags often feature a post (sometimes called a hanger), which is a sustained note, often in a high register, that determines the harmonic options available for the rest of the tag. Whereas barbershop harmony usually lives on the sharp side of the chromatic space, with its raised leading tones in secondary dominants and its raised chromatic neighbor notes and neighbor chords, tags often live on the flat side of chromatic space. Tags gradually add flat notes, borrowing from the parallel minor, before exploding back out into a brilliant major tonic triad to finish. This chapter will explore this dichotomy between the sharp and flat sides of barbershop

harmony, which are equally indicative of the harmonic style. I argue that shifts towards flat notes are used to delineate the tag from the body of the song. The chapter will also examine how posts limit the harmonies that may be used in a tag. This chapter will investigate the ways that harmonies are organized in barbershop tags and will discuss some of the germane issues related to the unique phenomenon of tag-singing as an activity.

There are two distinct, yet highly interconnected arenas of tag singing: formal and informal settings. In a formal contest setting, tags are attached to contest arrangements and are often used as a vehicle for showing the skill of the arranger and the virtuosity of the performers. However, tags are often sung as standalone units at informal gatherings of barbershop singers. These tags are often the endings of existing songs, but in many cases, only the tag remains, and the song to which it was attached has been forgotten. In other cases, tags have been written as imagined endings to songs or arrangements that do not exist. These tags are written for the express purpose of tag singing as a social activity. The *Barbershop Arranging Manual* says that "Barbershoppers love to sing tags, even if they never sing the songs associated with the tags. Indeed, some tags have been composed for nonexistent songs."[1] However, many of the most popular tags to sing have been severed from arrangements performed and popularized by Society gold medalist quartets. These beloved arrangements live on in their shortened tag form in the informal and non-competitive tag singing at social events.

[1] *Barbershop Arranging Manual*, 358.

Informal Tagging and Social Harmony

Whereas the contest stage is often seen as the pinnacle of barbershop music and the judges and rules are the keepers of the style, one could argue that tag singing as an activity is closer to the heart and history of barbershop singing. After every rehearsal, show, and contest, you can find barbershop singers joining their voices together to sing tags. These tags are sometimes "contestable" barbershop (follows the rules), but at times these tags are borrowed from other vocal and choral genres and would be considered non-contestable. This time of informal singing can be a chance to experiment with other chord types and sounds outside the boundaries of barbershop contests. Tag singing is a social activity that all can enjoy together. Old and young, men and women, gold-medalists and beginners, can be found singing tags together at afterglows.

Scholars have often noted the metaphor of harmony as both a musical and social ideal in the barbershop community.[2] Garnett writes that "Harmony's double meaning as musical attribute and social ideal... has a particular resonance (to use another musical metaphor) for barbershoppers."[3] Tag singing is one of the clearest manifestations of the confluence of musical and social harmony in the barbershop community. It is a participatory, rather than performative, activity, that is simply for the enjoyment of the singers. The chief aim is to bask in the harmonies, so the singers will "chord worship," pausing to perfectly tune and relish each chord. A social harmony arises from this activity, which promotes fellowship, collaboration, and connection. The singers stand close together, looking at each other and communicating through facial expressions and gestures. They are unified in purpose and gain mutual enjoyment and

[2] See Averill, "Four Parts, No Waiting," Chapter 5, Garnett, "The British Barbershopper," Chapter 2, and Kaplan, Max, ed. *Barbershopping: Musical and Social Harmony,* Vancouver: Fairleigh Dickinson University Press, 1993.
[3] Garnett, *The British Barbershopper*, 19.

satisfaction. The social harmony that arises from four people singing a tag together is quickly compounded, since tags are much shorter than full songs. This allows someone to sing with dozens of people in just a couple hours after an event. Barbershop singers can swiftly form new social connections through this shared practice.

Case Studies: Harmony and Voice Leading in Tags

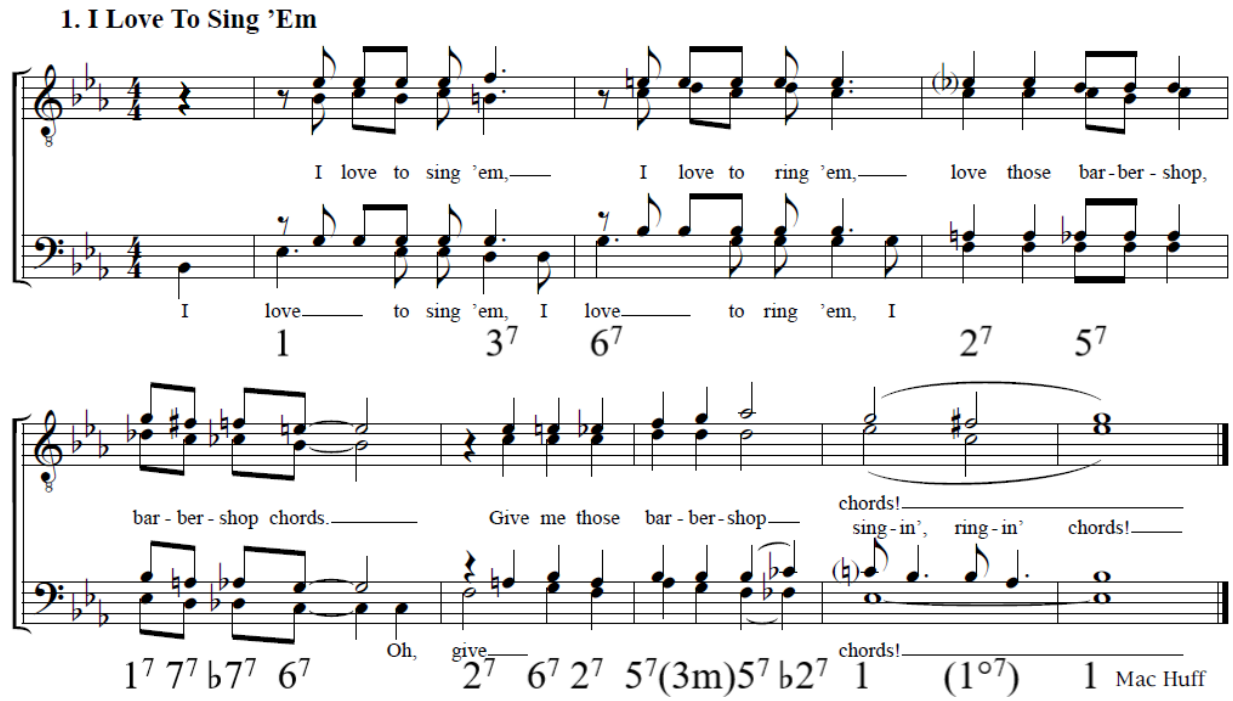
This chapter represents the most comprehensive analysis and theorization of barbershop tags to date. I analyze all 125 tags in "Classic Tags for Men's Voices" compiled and published in 2003 as one of the first centralized sources for barbershop tags. Before this publication, tag singing as an activity was almost entirely an oral and aural tradition. Even today, there is sometimes conflict about what the "right way" to teach and learn a tag is. Some insist that learning by ear is the right way to participate in the hobby, while others prefer reading the music, often on a mobile device via one of the apps created specifically for tag singing. I chose to use "Classic Tags" as a case study because when it was published, it was considered the definitive collection of all the most popular tags. These tags are easy to teach and learn and many of them are still sung at gatherings. However, some of these tags have problematic subject matter, particularly related to the glorification of the Dixie South, and are no longer sung. I supplement "Classic Tags" with several other popular tags to demonstrate interesting musical features not found in this compilation.

Harmonic Progression

I have found that tags are organized by one of three principles: harmonic progression, linear processes, or posts. The Arranging Manual, which was written for 1980s-era barbershop

contest music, notes that tags should follow the same harmonic progressions that the rest of the song uses: secondary dominants resolving by fifth. “The same kind of harmonic motion that is favored in barbershop songs-progressions utilizing Circle of Fifth movement-is preferred in tags.”[4] Many tags, particularly more traditional ones, use this as a guiding harmonic principle. The first tag in “Classic Tags” is an excellent example of this. “I Love to Sing ‘Em,” written by Mac Huff, is an example of a tag written as a standalone unit apart from a full song. It is self-referential in its lyric content. The tag's lyrics proclaim that the singers love to sing and ring barbershop chords. The tag is full of those barbershop seventh chords, resolving according to standard fifth and semitonal resolutions. The first three measures are a large portion of the circle of fifths progression, moving from 3^7 to 1^7 by fifth motion.

EXAMPLE 4.1. Mac Huff, “I Love to Sing ‘em.”

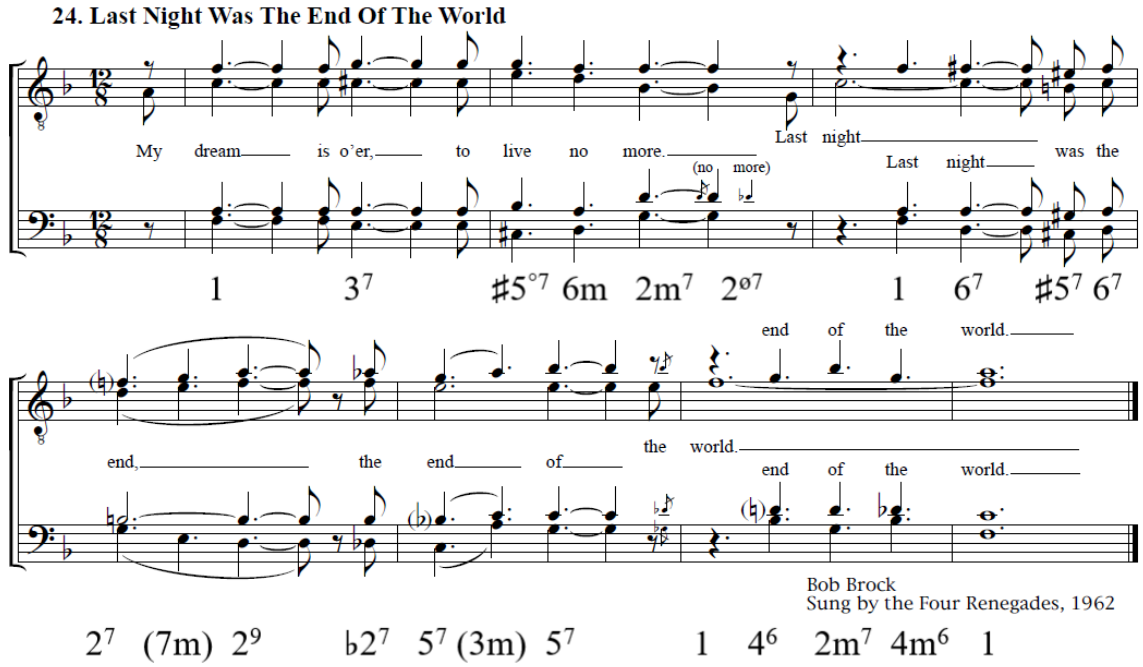


[4] Ibid p. 365

The progression in m. 4 is often used to indicate that the song is approaching the end. It moves from 1^7 to 6^7 by using parallel descending semitones in all voices. That 6^7 continues through the expected circle of fifths in the following measures, with a brief retrogression in measure 5 to 6^7 and a common voice exchange within the 5^7 chord in measure 6. Finally, the last 5^7 is transformed by a tritone exchange to $\flat 2^7$ before arriving on the tonic, which is further embellished by a common tone diminished seventh chord. This tag is perhaps cliché in its writing. Everything about the lyrics and harmonic choices are stereotypical of barbershop music to the point of caricature. In my experience, this tag is not one that is popular today.

One of the most popular tags today according to the goodtags mobile app is another great example of circle of fifths harmonic progression in tags. “Last Night Was the End of the World” was arranged by Bob Brock for the 1965 SPEBSQSA quartet champions, Four Renegades. This tag embellishes the circle of fifths progression a bit more than “I Love to Sing ‘Em.” In m. 2, the 6m is preceded by a tonicizing fully diminished seventh. The 6m proceeds to a 2m, which is further chromaticized by the baritone moving down to d-flat (this optional note is typically sung). The resulting $2^{\text{ø}7}$ allows for movement back to 1, which starts the circle progression over. The 6^7 in m. 3 is decorated by a lower neighbor chord, and both the 2^7 and 5^7 in mm. 4-5 are embellished by splitting and fusing of notes to create passing minor triads. Finally, the tonic post in the lead is harmonized with a typical plagal motion with added modal mixture to create a $4m^6$ penultimate chord.

EXAMPLE 4.2. Bob Brock, "Last Night Was the End of the World."

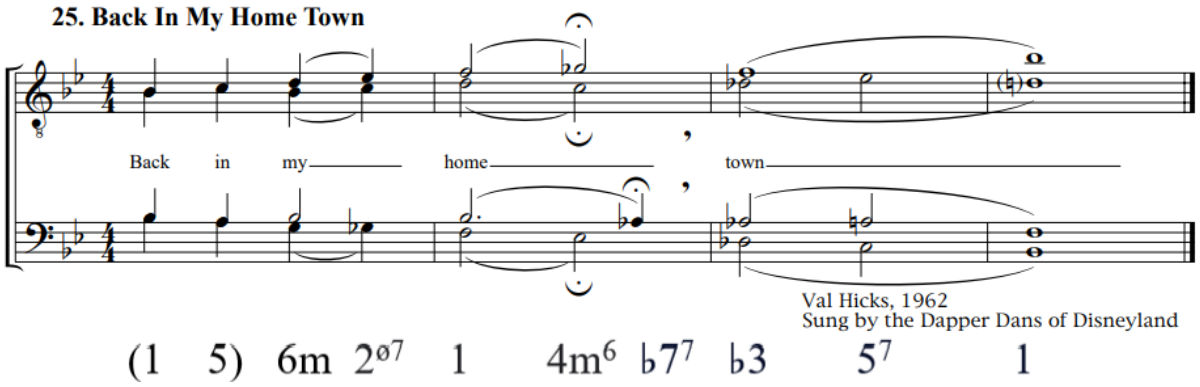


Linear Processes

Some tags are organized by linear processes that supersede the typical harmonic progressions found in barbershop music. These tags may still use fifth-related chords, when possible, but it is clear that an arranging device is the underlying organizer. “Back in My Home Town” uses a blossoming effect as its organizing principle. All four voices start on a B♭ and move outwards. The bass moves down by stepwise motion to the lower octave tonic and the tenor moves in contrary motion to the bass, climbing by stepwise motion through the first two measures. This contrary motion in the outer voices is the most salient feature of this tag, and harmonies are filled in by the inner voices within this outer voice framework. Interestingly, this entire tag is stepwise in all voices except for the leaps in the baritone and tenor from the 5^7 to 1 cadence at the end. There are some very interesting harmonic choices made to accommodate the stepwise bass descent. After reaching a $4m^6$ chord in measure 2, the arranger takes advantage of

the common-tone relationship between $4m^6$ and $\flat 7^7$ and moves the fifth of the apparent $4m^6$ down by step. Retroactively, it sounds like a $\flat 7^9$ resolving down to $\flat 7^7$. That $\flat 7^7$ allows a descending fifth motion to $\flat 3$, which fits the flat third scale degree that was desired in the bass line. Finally, in a move back towards diatonicism, a $\flat 3$ chord moves to a 5^7 to set up the resolution to the final tonic. The arranger uses smooth voice leading to move from $\flat 3$ to 5^7 by retaining the common tone between the chords and moving the three remaining voices by step, splitting the octave D$\flat$s into C and E$\flat$.

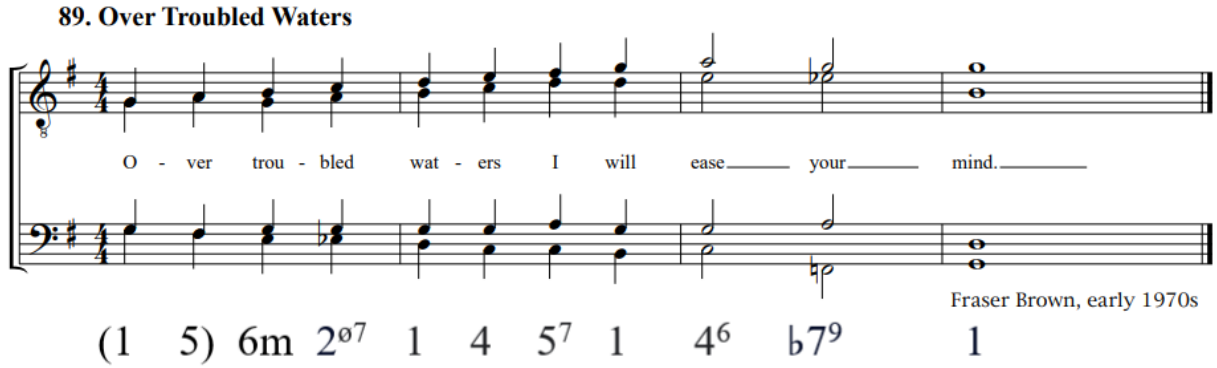
EXAMPLE 4.3. Val Hicks, “Back in My Home Town.”



“Over Troubled Waters” uses a similar process of contrary motion in the outer voices but has some interesting differences. The tenor line ascends a ninth by diatonic stepwise motion, while the bass moves in contrary motion. The bass repeats scale degree 4 in measure 2 to harmonize scale degree 7 in the tenor with a third inversion dominant seventh chord. This sets up a first inversion tonic triad on beat 4. At this point, the contrary motion pattern is broken as the

tag moves to a 4^6 chord. Up to this point, all four parts have moved by stepwise motion or retained common tones, but the final two chords have leaps, presumably to accommodate the desired spacing of voices. For example, all voices could have moved from $\flat 7^9$ to 1 by stepwise motion, but the lead leaps down from ♭6 to 3, a dissonant These downward leaps avoid a divorced bass on the final chord.

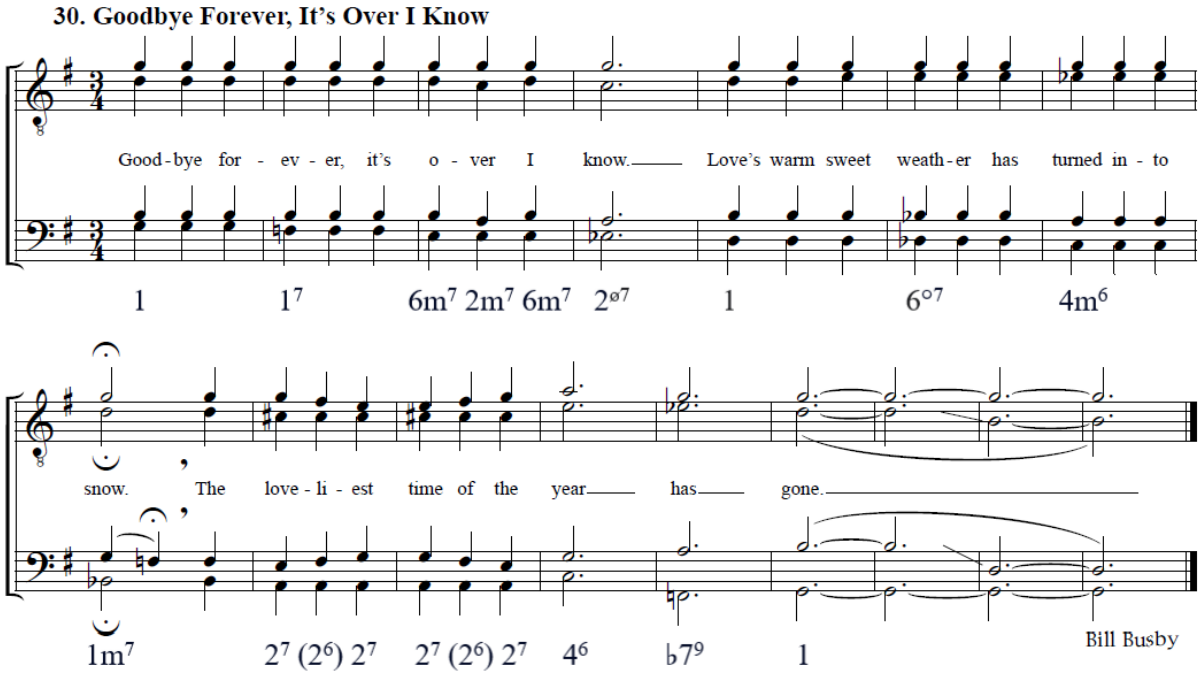
EXAMPLE 4.4. Fraser Brown, "Over Troubled Waters."



These stepwise linear processes are not used solely as contrary motion effects. In "Goodbye Forever, It's Over I Know," A stepwise bass line is used to harmonize a constant tonic *g* in the tenor. The result is some unusual inversion choices. In measure 2, a G7 chord is used in third inversion. In common practice harmony, one would expect a $V^4{}_2$/IV to resolve to a IV^6. Instead, this third inversion 1^7 resolves to a $6m^7$. Just like the previous two examples, scale degrees flat-six and five are used in the bass and are harmonized with $2^{ø7}$ resolving to 1 with the fifth in the bass. Interestingly, we see scale degree flat-five in the bass next, harmonized with a $6^{\circ 7}$. This chord precedes the typical $4m^6$ that harmonizes scale degree four in the bass and

connects to that $4m^6$ by smooth voice leading of descending semitones in the three lower voices. The bass descent to scale degree flat-three is harmonized with a minor tonic triad in first inversion with a baritone move to the minor seventh. The presence of scale degree one retained in the tenor disallows the use of a ♭3 or $♭3^7$ chord, so we see the unusual first inversion seventh chord instead. Finally, the tag breaks away from the existing patterns, moving the tenor away from *g* and the bass by upward leap in the following measures. After two measures of 2^7 with some voice exchanges, the common 4^6 to $4m^6$ to 1 prototype ending is used, but the bass arpeggiates down to F to create a $♭7^9$ instead of $4m^6$.

EXAMPLE 4.5. Bill Busby, "Goodbye Forever, It's Over I Know."



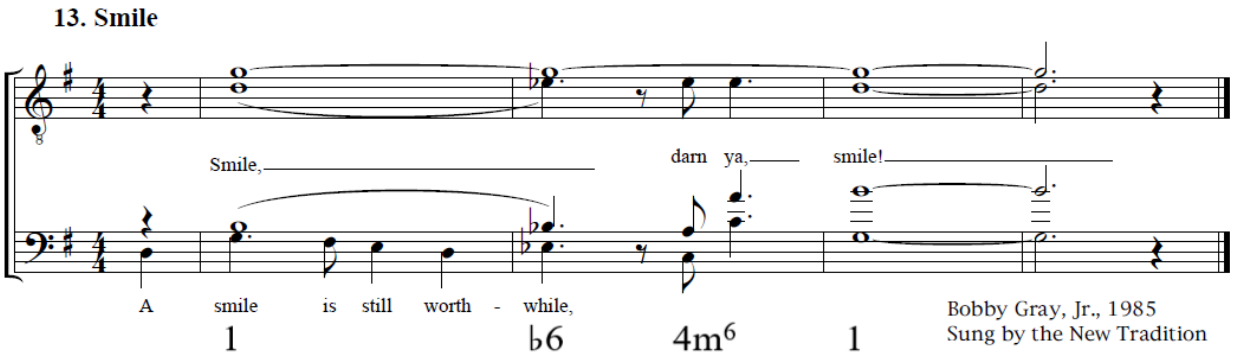
Posts

A post is a long-sustained note in the tag of a song. Most tags have a post, and this prominent feature is an organizational force for allowable harmonies in that tag. Because of the emphasis on consonant harmonies without non-chord tones, the note that serves as a post must be a chord tone in every chord that is used. Given the flexibility of barbershop theorists' conception of consonance and chord tones, this is not an overly limiting constraint. The post note may be the root, third, fifth, sixth, seventh, or ninth of a chord of various qualities. Theoretically, this leaves a lot of harmonic variety on the table, though some are more practical than others. My case studies will divide these posts into three categories: tonic posts, dominant posts, and other posts.

Tonic Posts

Most posts are on the tonic. This creates a space within the music where all chords have the tonic as a common tone. Whereas the "sharp side" of barbershop harmony often uses the secondary dominant sequences by fifth, the constraint of a common tone results in many third relationships in tags. In a tertian harmonic system, third-related harmonies have the ability to share between one and three common tones in a four-voice texture. "Smile" is an example of a tonic post with a simple harmonic progression using descending thirds. The opening tonic moves to a ♭6 triad, which in turn progresses to the ubiquitous $4m^6$ chord before returning to 1.

EXAMPLE 4.6. Bobby Gray, Jr., “Smile.”



The third relationships created by common tones in posts can be seen in Table 4.1 below. It lists the possible chords used to harmonize a post on the tonic. The left column lists the chord quality and the numbers in each row list the root of a chord of that quality that contains scale degree 1. This list covers the most common triads and four-part chords used in barbershop music in order of their potential for consonance.

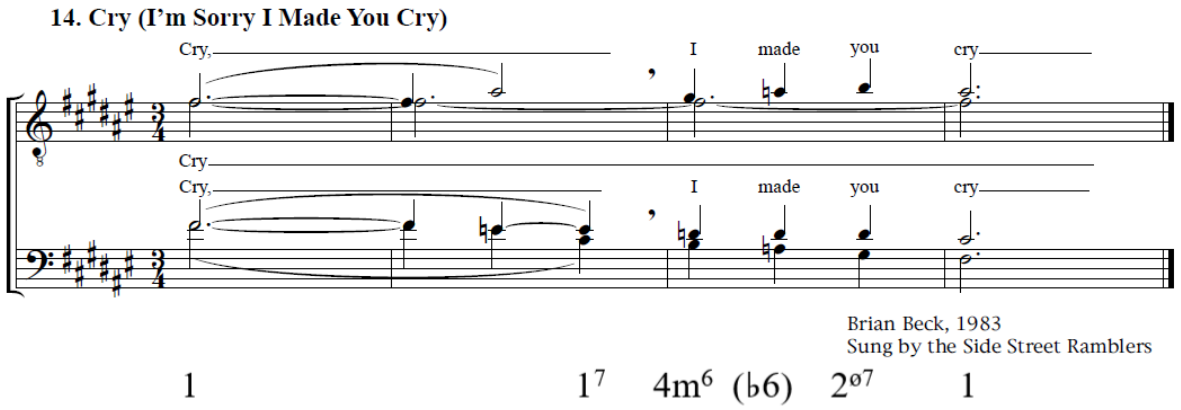
TABLE 4.1. Tonic Post Harmonies.

Tonic Post Harmonies					
Major Triads	1	♭6	4		
Major Minor Sevenths	1	♭6	4	2	
Half-Diminished Sevenths	1	6	♯4	2 ($4m^6$)	
Minor Triads	1	6	4		
Ninth/Added Ninth Chords	1	♭6	4	2	♭7
Minor Sevenths	1 ($♭3^6$)	6 (1^6)	4	2 (4^6)	
Major Sevenths	1	♭6	4	♭2	
Fully Diminished Sevenths	1	6	♯4	♯2	

In the barbershop style, consonance is considered a gradient quality. Harmonies may be more or less consonant depending on their coincident partials. Harmonies with "coincidental partials low in the harmonic stack"[5] are considered consonant and pleasing to the ear. Because of this, the major triad is the most consonant harmony. The dominant seventh and rootless dominant ninth (often interpreted as the half-diminished seventh or minor sixth chord), which are considered dissonant in many other musical styles, are considered highly consonant because of their locations in the overtone series.

Third-related chords are sometimes filled in by stepwise motion in the bass, often accompanied by a contrary motion voice exchange in an upper voice. In "Cry," a unison in all four voices expands to a 1^7 in the second measure. The 1^7 is a secondary dominant leading to the $4m^6$ chord in measure 3, which moves to the $2^{ø7}$,[6] using passing motions in the bass and tenor to fill in the thirds in both voices, resulting in a passing ♭6 triad.

EXAMPLE 4.7. Brian Beck, "Cry."

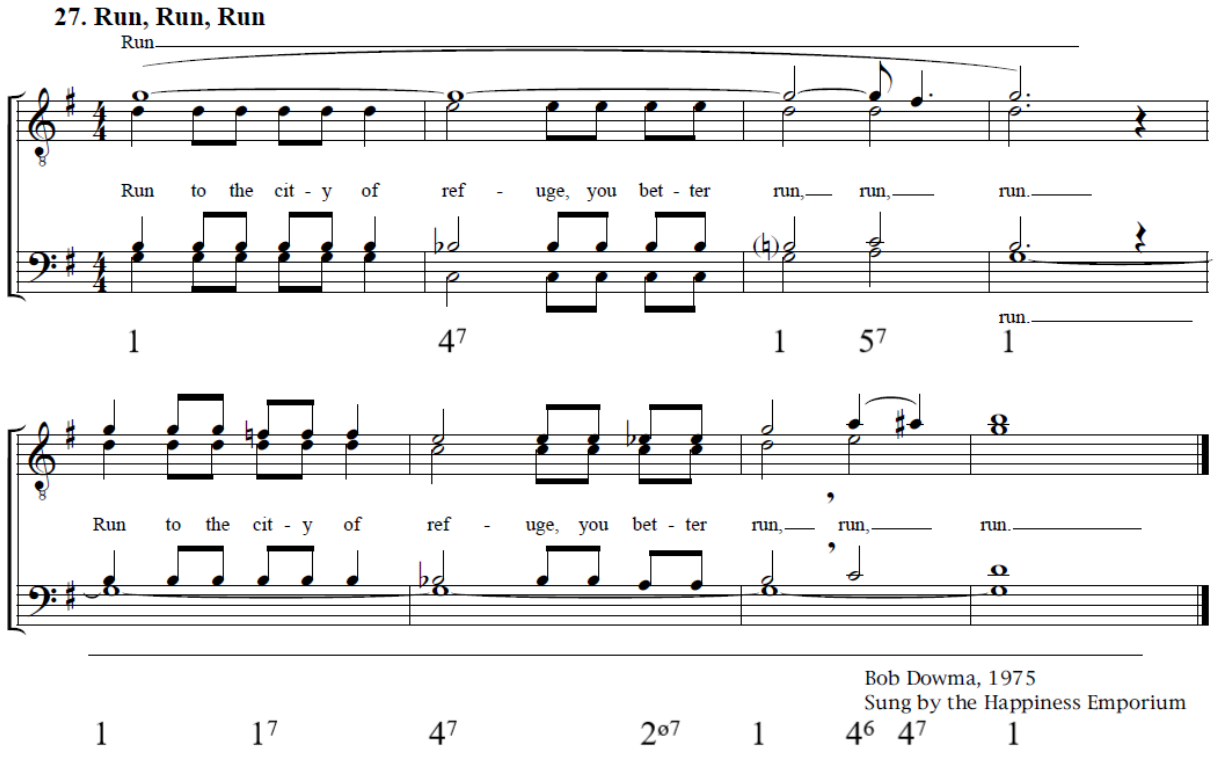


[5] Musicality Category Description 2023 p. 4

[6] As discussed later in the chapter, I prioritize the bass note when deciding between a $4m^6$ or $2^{ø7}$ interpretation.

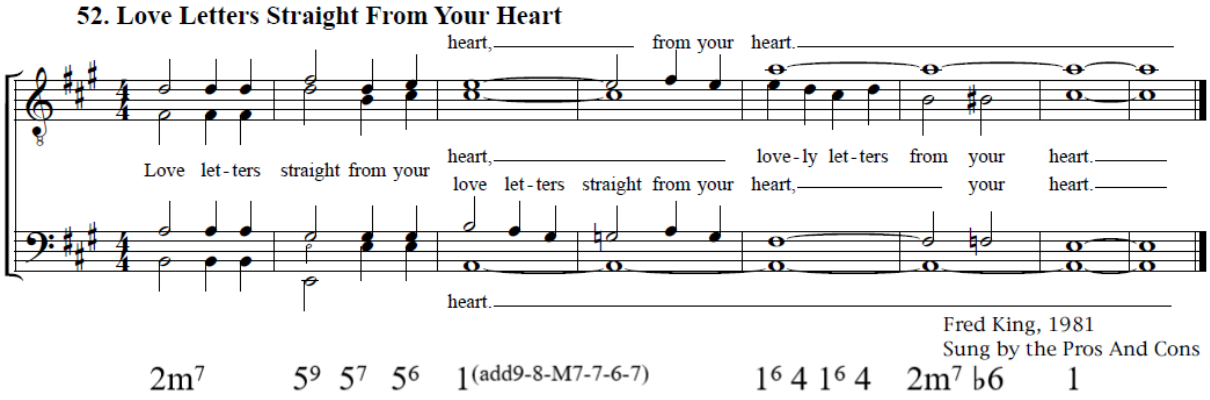
Posts may be placed in any voice, and tags may use more than one post, either by trading off the post from one voice to another, or by using two posts simultaneously. In "Run, Run, Run," a tonic post is sustained for nearly the entirety of the tag. A tenor post is harmonized with a simple $1 - 4^7 - 1$ progression, and the tenor briefly moves down to the leading tone to allow for a 5^7 to 1 cadence to end the first phrase. In measure 4, the bass and tenor trade off, with the bass taking over the post on the tonic. The second half of the tag uses the same overall $1 - 4^7 - 1$ frame but the upper voices add additional modal mixture color with the addition of the 1^7 and $2^{ø7}$.

EXAMPLE 4.8. Bob Dowma. "Run, Run, Run.



In “Love Letters Straight from Your Heart,” simultaneous posts pose some unique challenges for part writing. After a straightforward $2m^7 – 5^7 – 1$ progression, three voices sustain a tonic triad in measure 3. The baritone moves through several notes that are all consonant with that triad. In m. 5, the tenor leaps up to a tonic two octaves higher than the bass. In a style that prioritizes complete chords, this is unusual, because the doubled note prevents complete four-part chords. For example, the $2m^7$ in m. 6 is missing its third. As one might expect, this section that has a double tonic post favors the three major triads that contain scale degree one, 1, 4, and ♭6, since those allow for the possibility of complete chords. The ♭6 triad in this instance is used for its ability to approach the two remaining tonic triad notes, the third and the fifth, by semitone. That semitonal resolution is highlighted by the spelling of the B♯ rather than C♮ in the lead voice in m. 6.

EXAMPLE 4.9. Fred King, “Love Letters Straight from Your Heart.”



Dominant Posts

Posts on the tonic are by far the most widespread across all eras of barbershop singing. In recent years, however, posts in an upper voice on the dominant have become increasingly common. The examples found of posts on scale degree five are from the tags of songs from the most virtuosic quartet singers and very complex and challenging arrangements. These posts offer the singer a chance to exhibit an incredibly long-sustained note belted in their upper range. The use of the dominant instead of the tonic opens up space for a very different chord vocabulary for these tags than the typical harmonizations of tonic posts. Below is the table for common consonant harmonies for harmonizing scale degree five. It is identical to the table for tonic post harmonies, except everything is transposed up a fifth. Though the allowable consonant harmonies are the same as tonic posts, the harmonic progressions and chord qualities that are favored in dominant post tags are very different.

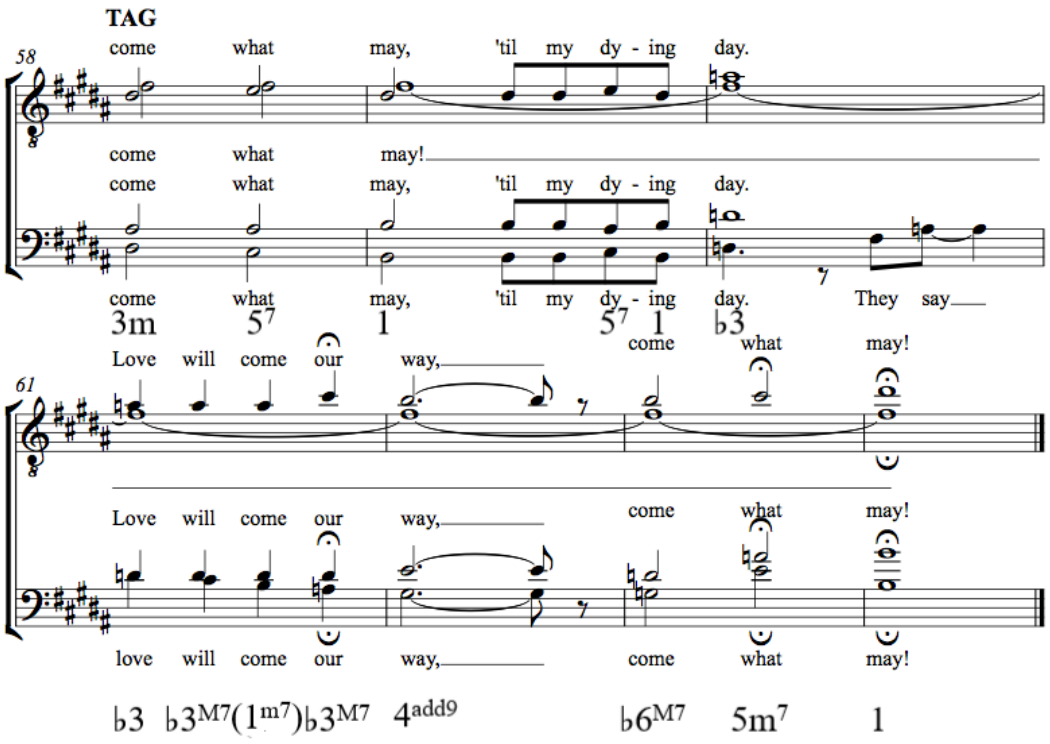
TABLE 4.2. Dominant Post Harmonies.

Dominant Post Harmonies					
Major Triads	5	♭3	1		
Major Minor Sevenths	5	♭3	1	6	
Half-Diminished Sevenths	5	3	♯1	6 ($1m^6$)	
Minor Triads	5	3	1		
Ninth/Added Ninth Chords	5	♭3	1	6	4
Minor Sevenths	5 ($♭7^6$)	3 (5^6)	1	6 (1^6)	
Major Sevenths	5	♭3	1	♭6	
Fully Diminished Sevenths	5	3	♯1	♯6	

Both tonic and dominant post harmonizations tend to feature modal borrowing of the lowered third, sixth, and seventh scale degrees. Interestingly, many dominant post tags tend to use harmonies that are less consonant than the ones preferred in tonic posts, especially added

ninth, minor seventh, and major seventh chords. Weaker inversions such as first and third inversion chords tend to be more prevalent as well. Surprisingly, barbershop sevenths are not nearly as common in dominant post tags, not even the 5^7. In "Come What May," (Example 4.10) sung by the 2018 BHS champion quartet, After Hours, 5^7 is used in mm. 58-59 before being abandoned for the remainder of the tag. Mm. 60-61 have a pillar harmony built on ♭3, with a major seventh added in m. 61. The $1m^7$ seems an embellishing chord on the way to the striking major seventh chord with a fermata on "our." It is peculiar that a major seventh chord is used instead of a $♭3^7$. In the following measure, a 4^{add9} in first inversion is used. It is curious that a $6^{ø7}$ is not used here instead, which could have been accomplished by keeping the baritone on the D. In m. 63, $♭6^{M7}$ moves to a chord that might be labelled as $5m^7$. The arranger chooses to use a minor seventh chord in third inversion rather than a 5^7 to 1 cadence. This choice is made consistently by modern barbershop arrangers who choose to include a dominant post in the tag of their arrangements. As discussed further later in this chapter, the 5^7 is often avoided in tags because of their post-cadential location in the form, and modal mixture is prioritized instead.

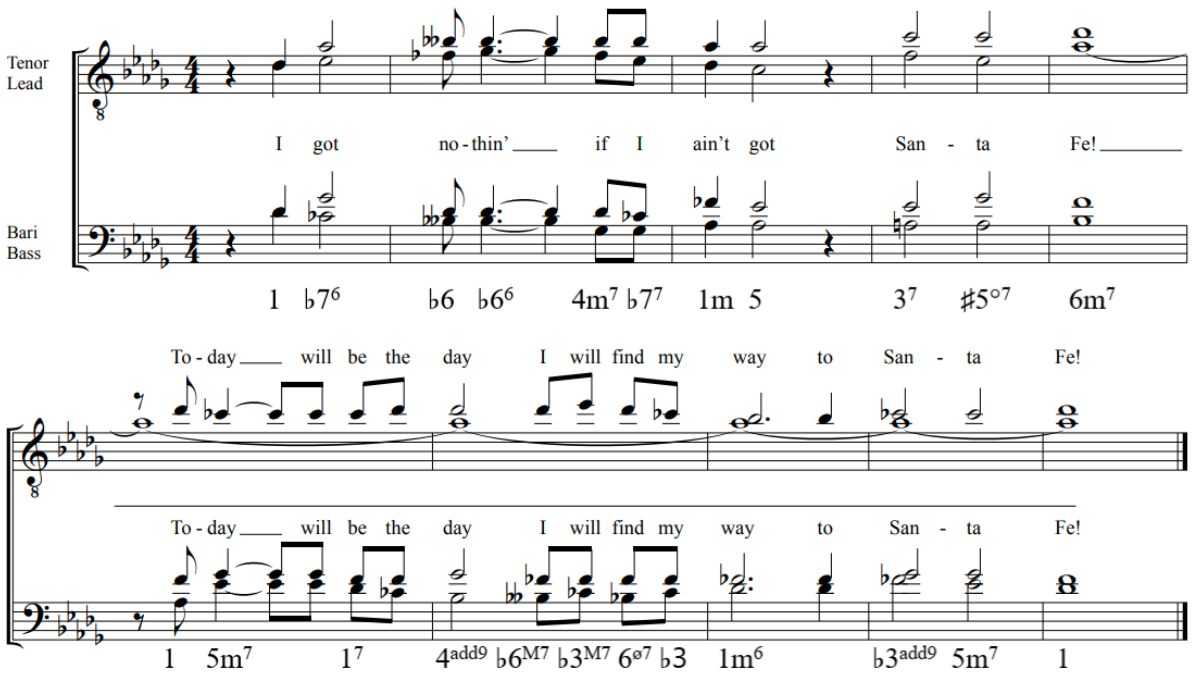
EXAMPLE 4.10. Kevin Keller, “Come What May.”



Many similar harmonic decisions are made by arranger Theo Hicks in his arrangement of “Santa Fe.” In the fifth measure, the lead begins a long post on the dominant. The post is initially harmonized with a $6m^7$ that was tonicized by the previous measure. In m. 6, the first $5m^7$, this time in second inversion, is used, and it moves two voices by stepwise motion to a 1^7. The 1^7 moves to a subdominant flavored harmony as one might expect, moving to a 4^{add9} in first inversion, just as we saw in the previous example. In m. 7, major seventh chords built on both the lowered third and sixth degrees are used, as in “Come What May,” and in the eighth measure, a minor added sixth chord is used. This chord quality is incredibly popular in tags, particularly the $4m^6$, so it is interesting that a dominant post would be harmonized by a minor sixth chord transposed up a fifth from the $4m^6$. The ninth measure uses a $♭3^{add9}$ chord in a tight voicing

within a perfect fifth to set up the $5m^7$ in second inversion. The distance between the $\flat 3^{add9}$ and $5m^7$ is a single semitone descent in the bass. That $5m^7$ proceeds to the final tonic, moving three voices by step.

EXAMPLE 4.11. Theo Hicks, "Santa Fe."



The first two examples of dominant posts both used a $5m^7$ as the penultimate chord of the tag. In "Come What May," the seventh (scale degree four) is used in the bass, and in "Santa Fe," the fifth (scale degree two) is given to the bass. This chord also appears with the third in the bass, which is the lowered seventh scale degree. In these cases, it may make more sense to consider the chord a $\flat 7^6$ instead. Why might this chord in various inversions be used so prevalently to close tags that use dominant posts? Perhaps there is such a strong expectation for the $4m^6$, $2^{ø7}$, or

♭7^9 to close a tag that arrangers look for chords that emulate those chords as much as possible while containing scale degree five. The table below shows the similarities between various inversions of the $5m^7$/♭7^6 and their relation to the $4m^6$, $2^{ø7}$, and ♭7^9 that are the most common group of penultimate chords.

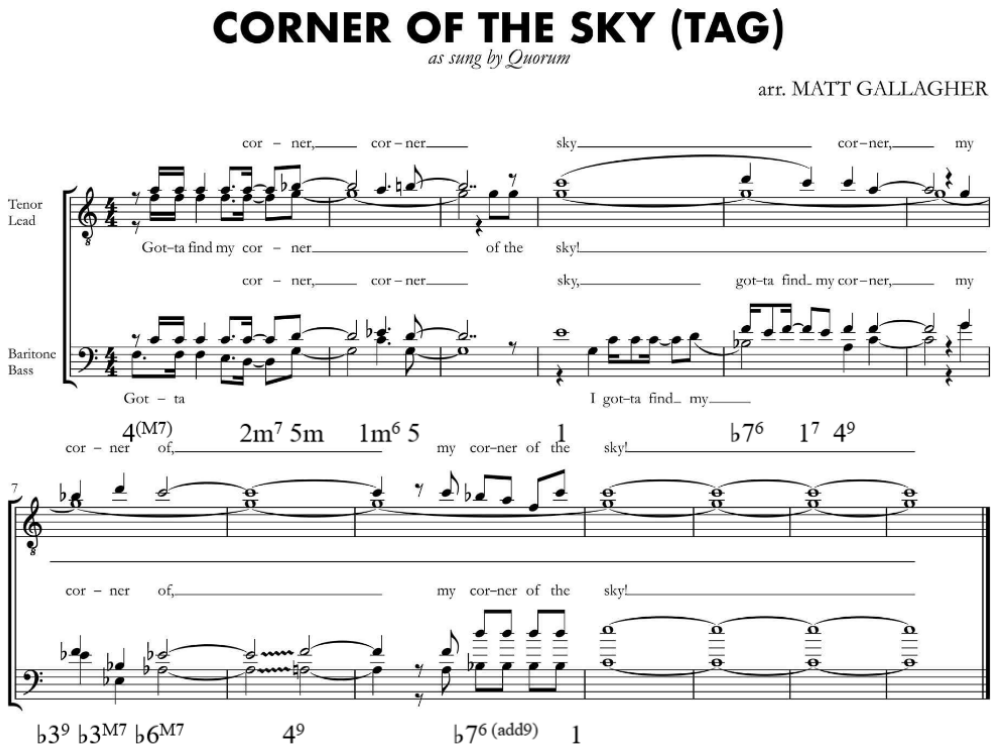
TABLE 4.3. Comparison of Penultimate Chords in Tags with Tonic and Dominant Posts.

Chord	Bass notes	Common voice	Post note	Fourth voice
$4m^6$	4-1	2-3	1	♭6-5
$5m^7$ (3^{rd} inv.)	4-1	2-3	5	♭7-1
$2^{ø7}$	2-1	4-3	1	♭6-5
$5m^7$ (2^{nd} inv.)	2-1	4-3	5	♭7-1
♭7^9	♭7-1	2-3	1	♭6-5
♭7^6	♭7-1	2-3	5	4-1

The $5m^7$ in 3^{rd} inversion used as a penultimate, as in "Come What May," is closely related to the $4m^6$. Both have a plagal four-to-one motion in the bass. Both move scale degree two up to three. Both use a post note, a common tone between the penultimate and the final tonic. And the fourth note of each moves by step to complete the tonic triad. Similarly, the $5m^7$ in second inversion used as a penultimate, as in "Santa Fe," acts similarly to the $2^{ø7}$. Both chords move scale degrees two and four down to one and three, retain a post note common tone, and move the final voice by step. The first inversion of $5m^7$ is better labelled as ♭7^6. This chord used as a penultimate shares many similarities to the ♭7^9. Both are built on the same root and move the

subtonic up to the tonic in the bass. The voice with the third (scale degree two), moves up to the third of the tonic triad. Of course, both chords have a post above the root, a ninth in the case of the tonic and the sixth in the case of the dominant. Finally, the remaining voice of the $\flat 7^{9}$, the lowered sixth, pulls strongly towards five. In a $\flat 7^{9}$ the fifth of the chord, scale degree four, is typically omitted, but that note is included in the $\flat 7^{6}$ to create a complete chord. Because scale degree two moves up to three, though, arrangers must decide how to move the voice with scale degree four to double the tonic in the final chord, which might necessitate a large leap in that voice. In the case of "The Corner of the Sky," performed by the 2022 BHS champions, Quorum, the arranger chooses to anticipate the tonic with a leap in the tenor from F to C in m. 9. The resulting chord on the final eighth note of m. 9 is a "non-vocabulary" chord in barbershop due to its non-tertian nature. However, it is remarkably like a $\flat 7^{9}$, with the only different in notes being the G in the lead rather than an A♭.

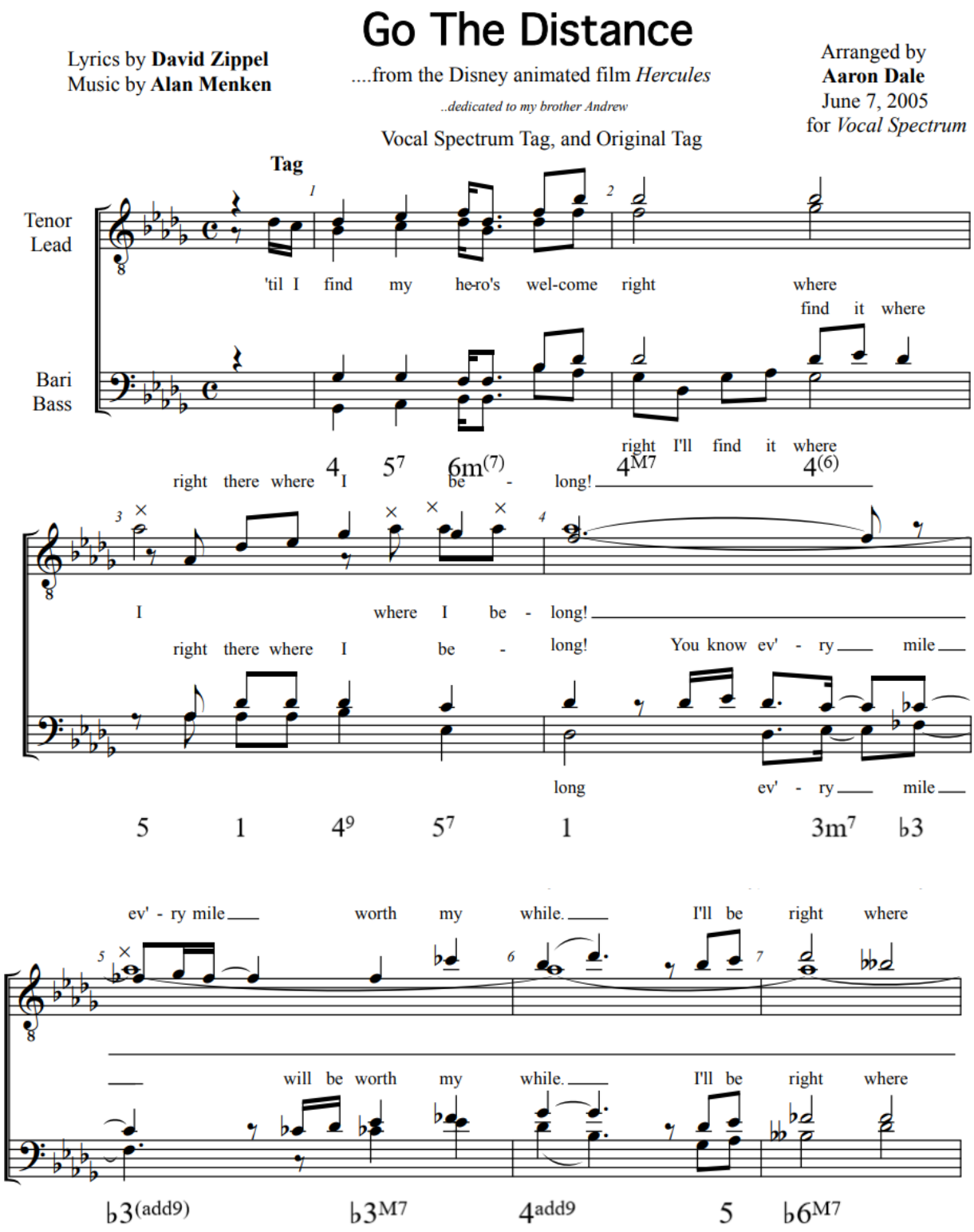
EXAMPLE 4.12. Matt Gallagher, “Corner of the Sky.”

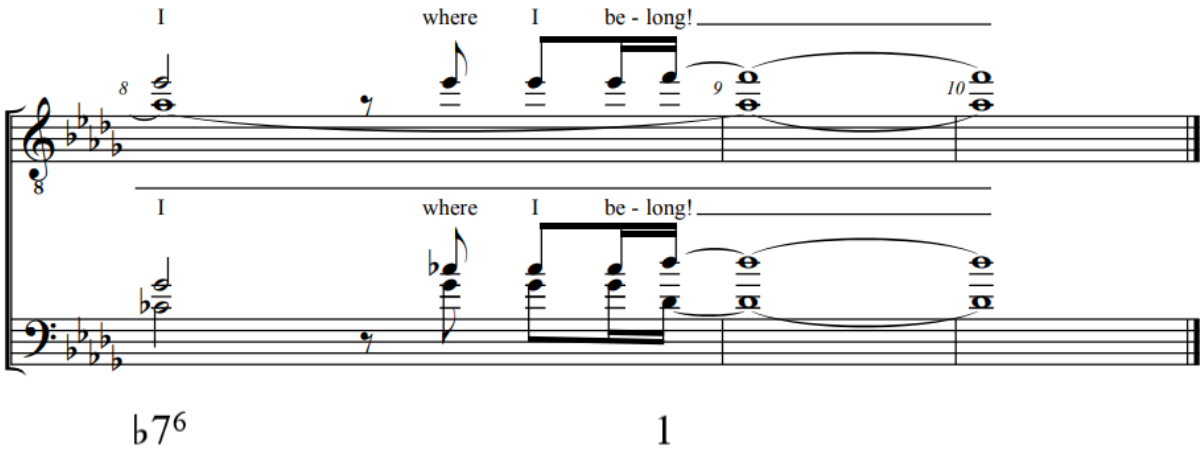


Next, let us look at another tag that addresses the same challenge in a different way. “Go the Distance,” shown in Example 4.13, is one of the most famous tags due to its incredibly long and high post, originally performed by the highly influential 2006 BHS quartet champions, Vocal Spectrum. Vocal Spectrum was a great modernizing force in the BHS, singing more modern arrangements that connected with younger audiences, including several Disney songs, and performing highly challenging and virtuosic music, often in an extremely high range for an all-male quartet. “Go the Distance” certainly contains all those elements. Note that a 5^7 is used to lead into the post in m. 4. It is as if the music is closing from a typical harmonic progression standpoint and moving into a space with a completely different harmonic syntax and language.

Starting with the ♭3 at the end of m. 4, the roots gradually climb by step up a natural minor scale. The ♭3 triad is further embellished with an added ninth and then a major seventh, as we have seen in previous examples and moves to a 4^{add9}. The 4^{add9} passes quickly through a 5 triad (as 5^{7} seems to be taboo in dominant post areas) to a $♭6^{M7}$. In m. 8, a $♭7^{6}$ is struck in root position, which leaves the baritone on the fourth scale degree, far from the tonic that he needs to finish on. So, before moving to the final tonic, the bass and baritone arpeggiate up, suggesting a second inversion $♭7^{6}$, rather than the $5m^{7}$ in third inversion label we assigned this chord at the end of "Come What May." A second inversion 1^{6} is not unusual in jazz parlance, so I do not think it is outrageous to consider this a second inversion major sixth chord.

EXAMPLE 4.13. Aaron Dale, “Go the Distance.”





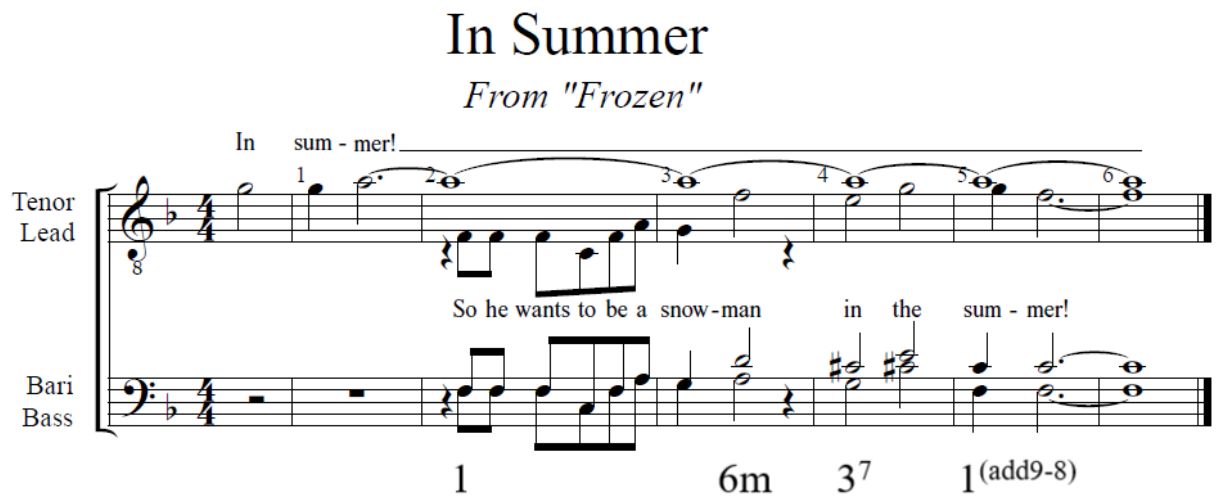
Note that this tag has many similarities with the other dominant post tags we have discussed. All four examples feature 4^{add9} (often in first inversion), $♭3^{M7}$, $♭6^{M7}$, and $♭7^{6}$ prominently. Within the constraints of "vocabulary chords" and a post note that must be a chord tone in all harmonies, modern arrangers have found a harmonic language and syntax for harmonizing dominant posts that is separate from that of tonic post harmonizations yet is still consonant and pleasing to barbershop audiences. They have accomplished this by leveraging some of the same impulses of more traditional tags, namely, common tone retention (through posts), modal mixture, and similar voice leading patterns in some voices (e.g., the $5m^{7}$ family's close relation to the $4m^{6}$ family as penultimate chords). Posts on both the tonic and dominant open up space for unique harmonic progressions apart from the dominant sevenths resolving by descending fifth. The typical dominants and secondary dominants are not seen nearly as often when a post is introduced. 2^{7} is seen infrequently as a harmonization of a tonic post, 5^{7} is mostly avoided when a dominant post is happening, and 6^{7}, despite its inclusion of scale degree five, is completely absent from our examples of dominant posts.

Other Posts

Though incredibly rare, theoretically, posts could occur on notes other than the first and fifth scale degrees. The most obvious candidate is the third scale degree: the remaining chord of the tonic triad. However, examples of scale degree three posts are largely unsuccessful at giving a feeling of satisfying closure. Scale degree three is the vital note for determining the major quality of the tonic triad, and its distinct major quality is contrasted with the modal mixture that so often occurs in tags. Scale degree three is completely avoided in all penultimate chords in the entirety of the "Classic Tags" collection. It seems, then, that due to its important role in defining the final tonic harmony, scale degree three is a poor choice for inclusion in a cadential chord preceding the final tonic of a tag.

The following example has a post on the third scale degree. "In Summer," from the movie "Frozen," was performed by the 2017 BHS quartet champions, Main Street. The arranger chose to use post on scale degree three, which is a salient feature of the original song. It is harmonized very simply, perhaps because of the unusual scale degree three post. An opening tonic moves to a submediant triad. In measure 4, we see a 3^7 chord, first in third inversion and then in first inversion. These weak inversions of this barbershop seventh were perhaps chosen to avoid the strong preference in barbershop music to resolve 3^7 to 6^7 or 6m. I find it curious that the arranger did not use a second inversion 3^7, which would have allowed the bass to move from scale degree seven to one and an upper voice to move from an enharmonic flat six (the raised fifth) down to scale degree five. Especially in cases of unusual progressions, retaining common tones and moving the remaining voices by step, especially semitone, can make the progression sound much more palatable, e.g., $\flat 6^7$ to 1. To my ear, this tag lacks the characteristic tension and release that barbershop music uses to create satisfying conclusions.

Example 4.14. Aaron Dale, "In Summer."



The submediant is infrequently used as a post in a tag. Scale degree six is of course not part of the tonic triad like the other three notes we have seen as posts (though 1^6 is considered an acceptable final harmony), but in many ways this scale degree is more successful than scale degree three in allowing a harmonic language that is satisfying for a tag. “Pity Party” was performed by the groundbreaking quartet GQ. Starting at the 2022 International Convention in Charlotte, NC, the BHS’s international chorus and quartet competitions were open to everyone, regardless of gender. GQ, an all-female quartet, took 4th place in that quartet contest, becoming the first women ever to medal in a BHS International quartet competition. The tag of “Pity Party,” which was their highest scoring song of the competition, features a lead post on the sixth scale degree. Before investigating the harmonies used during the post, I want to call attention to an interesting moment in m. 142. A dominant seventh chord with a lowered fifth is used, and the

lead rises briefly from an a to a b♭. The *b♭* changes the chord from a $5^{7\flat5}$ to a $\flat2^{7}$ by changing only a single semitone.

Example 4.15. Patrick McAlexander, "Pity Party."

As discussed in chapter 3, tritone substitutes, like 5^{7} and $\flat2^{7}$ are two semitones apart, moving two voices in contrary motion. In Douthett and Steinbach's "Power Towers," we can see

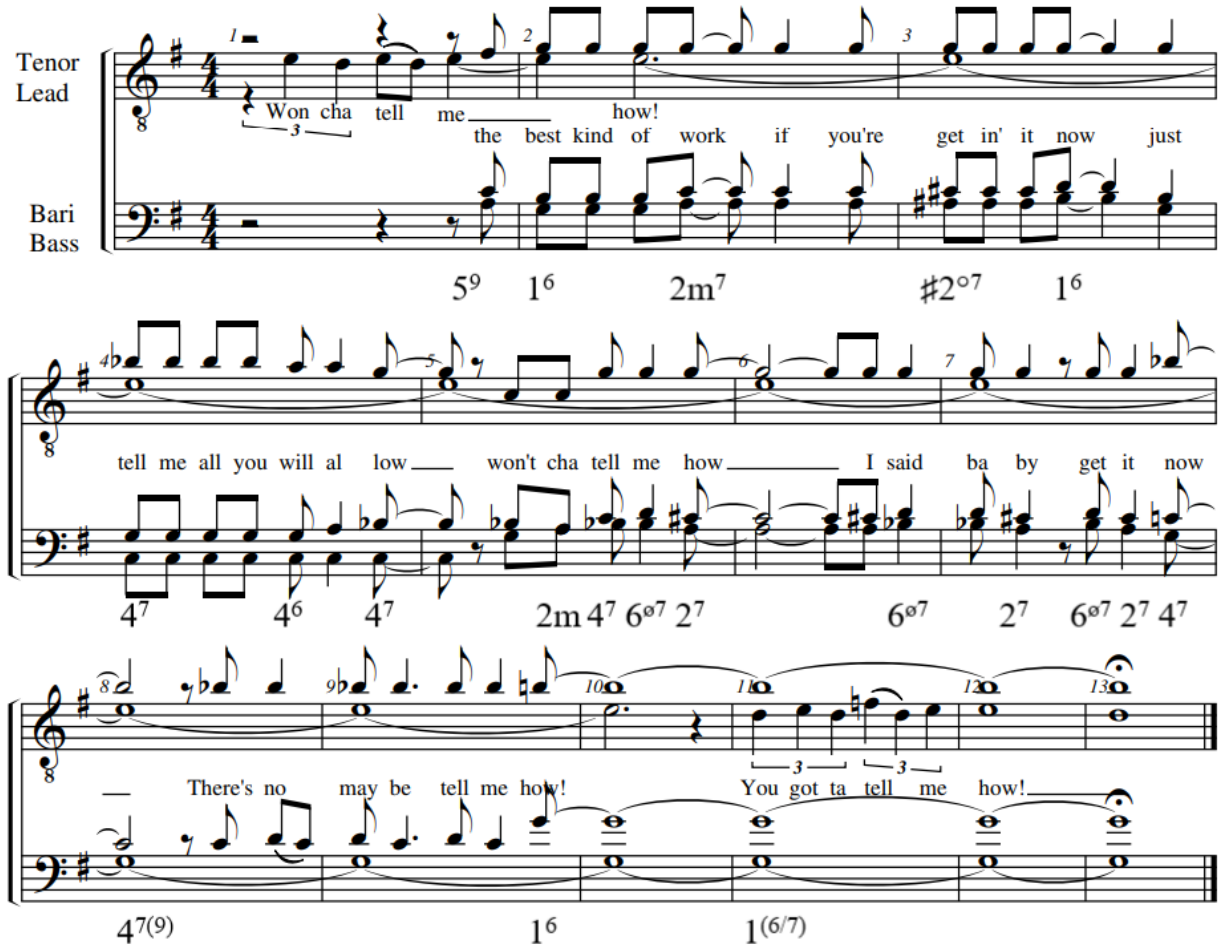
that the intermediary chord between tritone related dominant seventh chords is the fully diminished seventh chord. As demonstrated in the example above from "Pity Party," we note that the other option for an intermediary chord between tritone related dominant sevenths is a dominant seventh with a lowered fifth. Due to the symmetrical nature of this chord (enharmonically a French augmented sixth), one may lower the fifth of either of the tritone related seventh chords and arrive on an enharmonically equivalent dominant seventh with lowered fifth. For example, $B^{7\flat5}$ and $F^{7\flat5}$ are enharmonically equivalent.

The post on scale degree six begins on the last eighth note of m. 142. As we can see in this example, scale degree six works for a post because it is consonant when added to the tonic triad as an added sixth. For example, in m. 143, due to the bass note A and the arpeggiation in the second half of the measure up to D*,* it makes sense to label this full measure as 1^6 in the stable second inversion and root position. M. 144 opens with a $2m^7$ and uses smooth, minimal voice leading of three semitones to move to 7^7, one of the four barbershop sevenths that contain scale degree six as a chord tone, and one that often resolves to the tonic. An anticipation of the tonic in the tenor changes the chord briefly to a fully diminished seventh chord before returning to 1^6. In the following measure the outer voices spread in contrary motion to move from first inversion to root position 1^6, moving through a brief non-vocabulary chord (E, A, B, E*)* and an enharmonically spelled $6^{7\flat5}$. The $6^{7\flat5}$ is not functioning as a dominant seventh here but is a result on contrary linear motion as discussed early in the chapter. Instead, it was picked because it has two common tones with the 1^6, the A and B sustained in the two inner voices, and because the remaining two voices can move by semitone to the missing scale degrees in the 1^6: the lowered second degree moving down to the tonic and the lowered third moving up to the natural third.

The remaining measures of the tag flirt with 1^6 before finally resolving the sixth degree down to scale degree five for a plain, root position tonic triad ending.

Another fascinating case of a scale degree six post comes from 25 years earlier. “Nice Work If You Can Get It” has a longer extended post on the sixth degree. The arranger uses a rootless dominant ninth to lead into the first 1^6 in m. 2, and the lower voices move upward by step through the $2m^7$ and $\sharp 2^{\circ 7}$ on its way to first inversion 1^6. M. 4 uses one of the barbershop sevenths that contain scale degree six, the idiomatic 4^7, with a brief 4^6 interruption. In m. 5, a third inversion 4^7 transforms into a $6^{\varnothing 7}$ by moving the baritone up a whole step, the Oblique transformation discussed in Chapter 3. In this case, it makes sense to use the $6^{\varnothing 7}$ label rather than a rootless 4^9 because it resolves by descending fifth motion to the 2^7 in a highly characteristic barbershop progression. The same $6^{\varnothing 7}$ to 2^7 motion is repeated twice more, but the 2^7 has a strong expectation to resolve to 5^7 or $\flat 2^7$ in the barbershop style, neither of which contain the sixth scale degree. Instead, the arranger leverages the close voice leading relationship between minor third-related barbershop sevenths, moving from 2^7 back to the 4^7 in m. 7. The C transformation is realized in pitch class space, not in pitch space, to move the bass down to the *g* for a second inversion chord rather than a third inversion one. The following two measures play with a 4^7 with added ninths occurring in the baritone. Finally, the 4^7 resolves to the tonic, the post on scale degree six disappears, and the lead plays in the 5/6/♭7 space, creating 1, 1^6, and 1^7 chords before landing on the fifth degree to complete the final tonic with no added notes.

EXAMPLE 4.16. Greg Volk, “Nice Work If You Can Get It.”

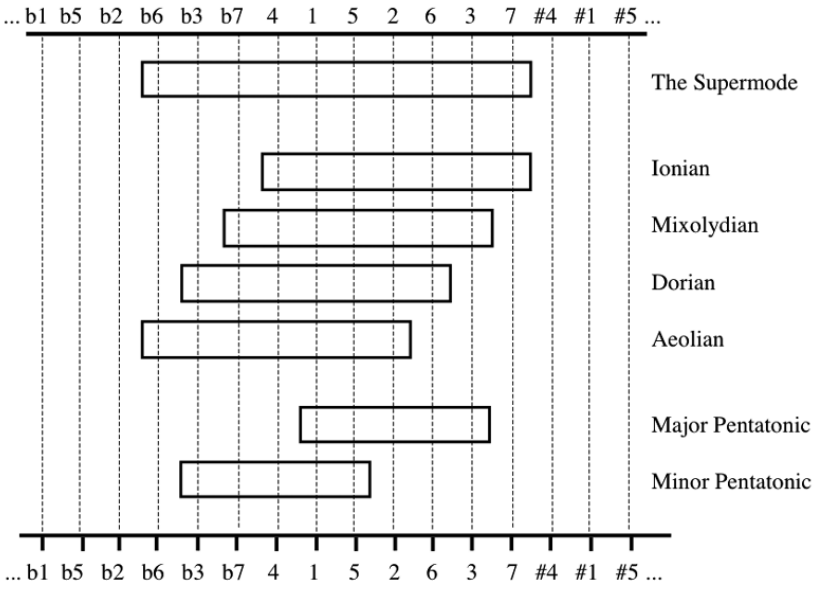


Modal Mixture and Common Voice Leading Schemata

Whereas the typical harmonic progression of barbershop songs uses raised notes, such as secondary leading tones, to create barbershop seventh chords, many tags gradually introduce flats borrowed from the parallel minor: ♭7, ♭3, and ♭6. Since 5^7 does not contain scale degree one, these modal mixture chords tend to be used to close a tag. In “Scalar Shift in Popular Music,” David Temperley theorizes that “sharpward” and “flatward” motion along the line of

fifths may be used "to delineate and reinforce sectional boundaries; to convey a change in mood or situation…; to create a momentary effect of surprise or disorientation; or to construct more complex trajectories of tension and resolution."[7] His methodology is elegantly simple. By plotting the total pitch content of a song or section of a song on the line of fifths, one may notice shifts further towards the sharp side or flat side. His Example 2, which plots common scalar collections in rock music, is reproduced below as Figure 4.1.

FIGURE 4.1. Scale Collections Represented on the Line of Fifths. From David Temperley.[8]



He applies this methodology to rock composition, but it has fruitful application for barbershop analysis, which shifts significantly further towards the sharp side than Temperley's

[7] David Temperley, "Scalar Shift in Popular Music," *Music Theory Online* 17, no. 4 (2011): 6.1.
[8] Temperley, "Scalar Shifts," 2.2.

musical examples. For example, the secondary dominant progressions that are foundational to the barbershop idiom create "complex trajectories of tension and resolution" through the introduction of sharp notes. A 3^7 uses ♯5, and the music shifts flatward through ♯1 (the leading tone in 6^7), ♯4 (in 2^7), and 7 (in 5^7) before returning to the tonic.

Temperley's "scalar shifts" provide a productive tool for discussing the difference between tags and the barbershop song proper. He suggests that scalar shifts may be used to "delineate and reinforce sectional boundaries." Barbershop music commonly uses an authentic cadence to close the song before moving into the tag. As seen in many of the previous examples, (secondary) dominant resolutions, and even the 5^7 are often carefully avoided in the tag. In its place is a new collection of notes that has gradually drifted flatward through the introduction of flats in modal mixture harmonies. This gradual flatward shift is reminiscent of what Roland Hayes said to his biographer: "Our harmonies were personal discoveries, although a good deal of our musical improvisation perhaps was illegitimate. Sometimes we imitated the minstrel singers with whose harmonizations my ear had become familiar before I 'came out from amongst them:' going from the tonic chord into the minor mode, thence into a deep minor and back into the major."[9] Though Abbott cites this account, he does not provide comment on what Hayes may have meant by "deep minor." Averill speculates about this fascinating account: "he alludes to the conventional chords employed by extemporizing singers, which he calls minors and deep minors and by which I believe he means seventh chords and diminished seventh chords."[10] Averill's reading of this account is overly focused on the particular harmonies that Hayes may have considered "minor and deep minor." Hayes specifically notes that the move is from the major

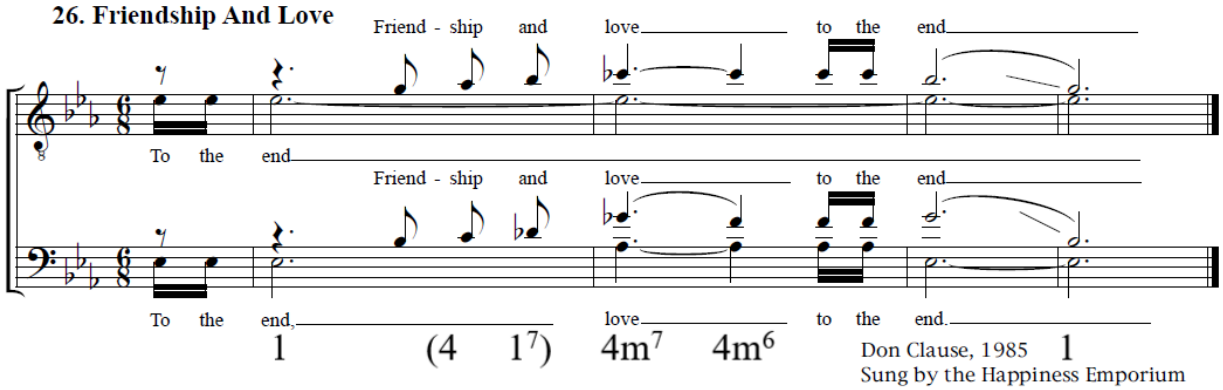
[9] Abbott, "Play that Barbershop Chord," 149.
[10] Averill, "Four Parts, No Waiting," 45.

triad into the minor *mode.* I propose that scalar shift is a more accurate understanding of the concept outlined by Hayes here, particularly in tags.

Tags have common patterns of introducing and resolving flat notes. These lowered notes have strong tendencies to pull down by half-step. The scale degree 6-♭6-5 motion in a single voice is particularly effective in creating closure. Another common scale degree fragment often used is 3-♭3-2-3. The ♭7 scale degree is often used either in a ♭3 major triad, 1^7 to lead to some variety of subdominant harmony, or as a $♭7^9$ to lead directly into the final tonic. Just like the sharpward side creates trajectories of tension and resolution through the introduction and resolution of secondary dominants, tags move through flats, sometimes moving as far flatward as ♭2, before returning to the major tonic. In other words, the music moves through a minor mode and a deep minor to create tension before returning to major. The following examples show how barbershop tags use common voice leading schemata to move flatward to create tension before resolving to the final tonic.

In "Friendship and Love," the lead and bass sing "to the end" in octaves, and a D♭ is used in the baritone to imply an incomplete 1^7, setting up a descending fifth motion to a subdominant harmony. The frequently used $4m^6$ is further embellished with a preceding $4m^7$. That flat-third degree, G♭ in the baritone, has a strong pull downwards to the sixth of the chord, and the accompanying flat-sixth degree in the tenor has a strong pull downwards to B♭ of the tonic triad.

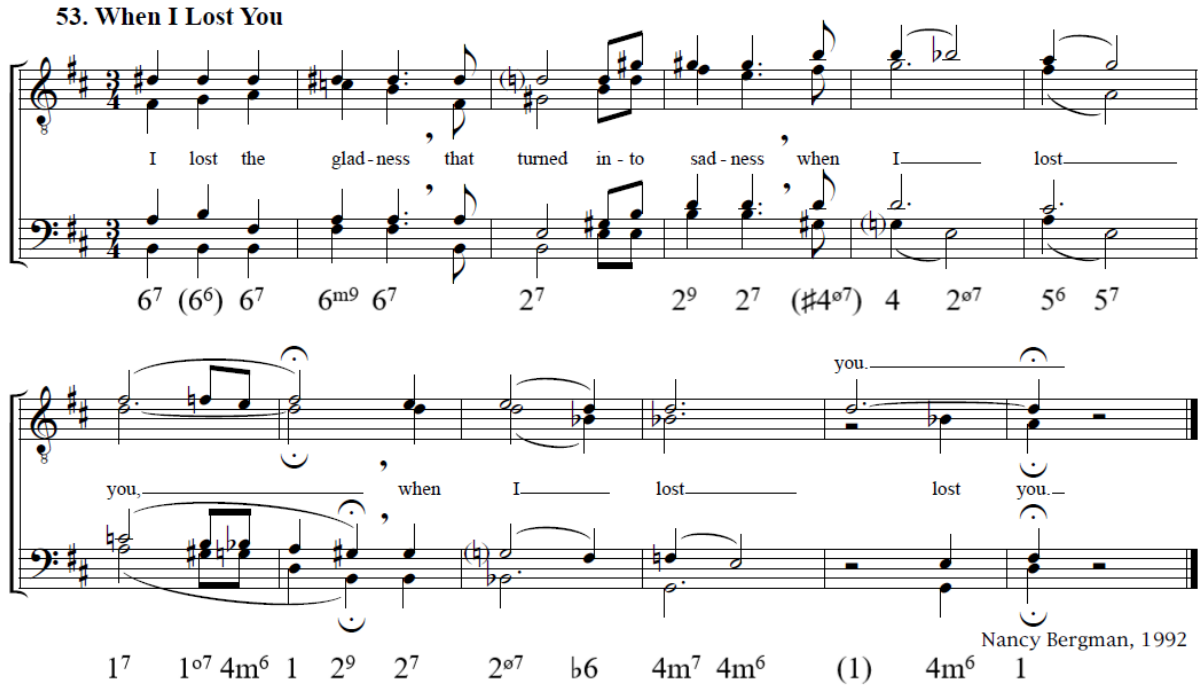
EXAMPLE 4.17. Don Clause, "Friendship and Love."



The ♭6 triad, $4m^7$, and 4^7 are common modal mixture chords used to introduce the flat third scale degree, which in turn has a strong pull downward to scale degree 2 in some form of $2^{ø7}$. $4m^7$ is particularly useful in leading to $4m^6$ because the difference between the two is a semitone. That seventh is often treated as a suspension resolving down to the sixth. In "When I Lost You," the seventh (the flat third degree) of the $4m^7$ in m. 10 is prepared in the previous measure by a ♭6 triad.[11] This preparation gives the F♮ in the baritone the feel of a traditional suspension, though barbershop theorists would consider the seventh to be consonant, and thus not a non-chord tone.

[11] Note: m. 9 is missing the natural sign in front of the F in the baritone part.

EXAMPLE 4.18. Nancy Bergman, "When I Lost You."

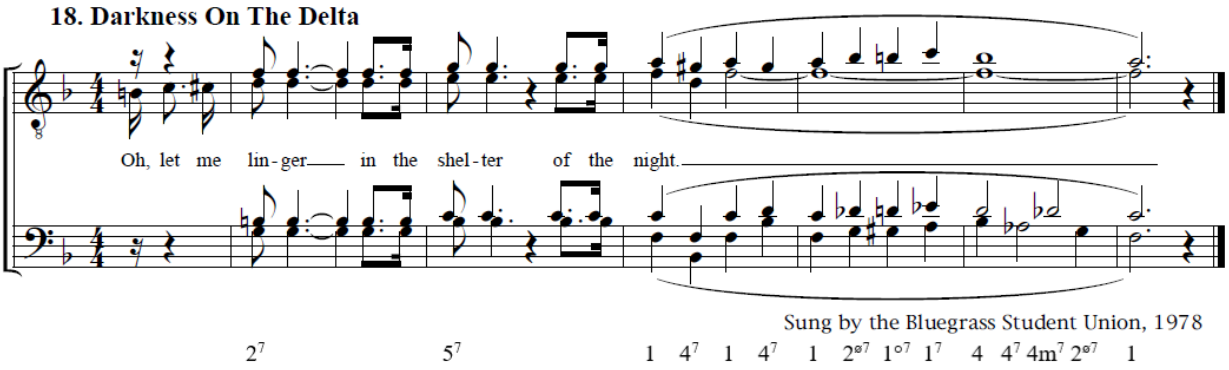


The 4m^7 resolving to 4m^6 schema is flipped on its head in "Darkness on the Delta."[12] After a secondary dominant sequence and some alternating 1 and 4^7 chords, we see a familiar chord progression in measure 4 harmonizing the tonic post. These four chords are the "Sweet Adeline" progression that is prevalent in early barbershop music, but the chords appear in reverse order: 1-2^{ø7}-1$^{°7}$-1^7. This progression moves the three harmony parts up by semitone in every chord change except the whole step in the bass from F to G. The 1^7 tonicizes the 4 triad on the downbeat of m. 5. That 4 chord proceeds to a unique inversion of a common progression. Instead of maintaining the subdominant in the bass and moving the baritone and tenor, the bass

[12] This song is highly controversial in barbershop circles due to its original lyrics, which include some distasteful racial language. It is still included in the Society-published Barber Polecat II songbook with updated lyrics, though recent popular opinion has called for its removal.

participates in the modal mixture with the introduction of the A♭. The resulting 4^7 and $4m^7$ chords are thus in third inversion, and the resolution of the seventh downward to scale degree two in the bass makes us call the penultimate chord a $2^{ø7}$ rather than the expected $4m^6$.

EXAMPLE 4.19. “Darkness on the Delta.”

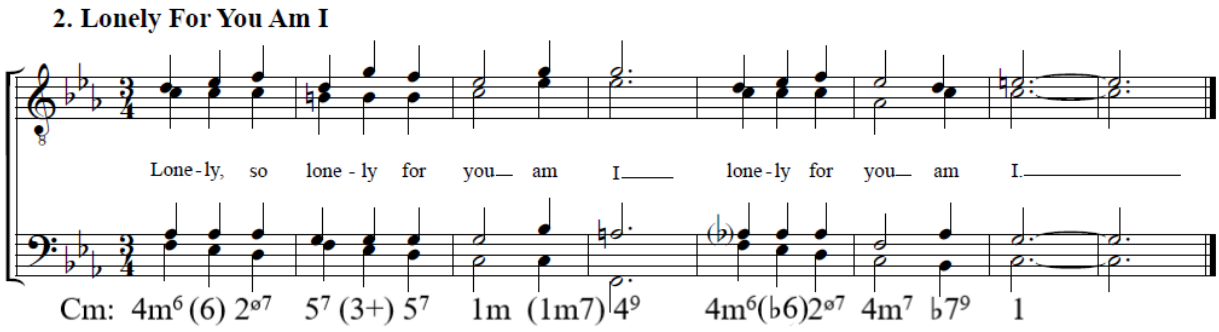


The Plagal Cadence Chord Family

Most tags end with some sort of plagal cadence or closely related motion, similar to the emphasis on the subdominant in codas in common practice music. These related chords all contain scale degree four and often also have scale degrees six (flattened or unflattened), one, and two or flat-three. Tags often use the variants of the $2^{ø7}$ chord as the penultimate chord before the tonic. We see this chord appearing commonly in all inversions, but most often with scale degree 4 in the bass. For this reason, many barbershop theorists call this chord a 4m6 (minor subdominant triad with added sixth). There is certainly a case to be made for a $♭7^9$ label for this chord instead. In fact, we sometimes see the ♭7 appear in the bass, either immediately, or as a downward arpeggiation from scale degree 4. For consistency purposes, I will consider the bass

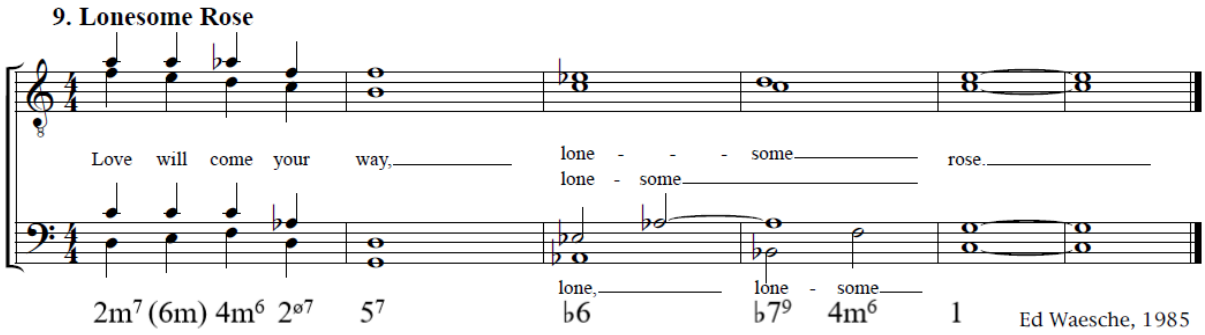
note to be the deciding factor in labelling this common penultimate chord. Of the 125 tags in "Classic Tags," 42 close with a $4m^6$ to 1 plagal cadence, thirteen use the closely related $2^{ø7}$ to 1, and another nine use the $♭7^9$ version of the chord to precede the final tonic. These three chords are used interchangeably, often arpeggiating from one to another before resolving to the final tonic, but $4m^6$ seems to be the preferred version as a penultimate chord. "Lonely For You Am I" uses all three versions of this chord. Its minor key makes these chords diatonic. In mm. 1 and 5 we see that the arpeggiation from $4m^6$ to $2^{ø7}$ has been filled in with passing tones to create a contrary motion voice exchange in the outer voices. The incidental ♭6 chord is purely passing in nature. Whereas $4m^6$ nearly always resolves to 1, the $2^{ø7}$ is often seen resolving to 5^7 by descending fifth root motion. We see that resolution in m. 2, in this case to a third inversion 5^7. This allows for a repetition of the 4-3-2 descent in the bass, and a slightly varied repetition of the voice exchange in the tenor. An E♭ in the tenor would have fit the resulting passing chord, but because it is an augmented triad, the arranger chose to double the third instead. In m. 6 a $4m^7$ chord in second inversion is used on the downbeat. A root position $4m^7$, as in the "Friendship and Love" example above, nearly always resolves the seventh down by half-step to create a $4m^6$ penultimate chord. However, in this case, the $4m^7$ in second inversion allows for the bass to use stepwise motion down to B♭ to form a $♭7^9$ chord, instead of leaping up to F to form the typical $4m^6$.

EXAMPLE 4.20. "Lonely for You Am I."



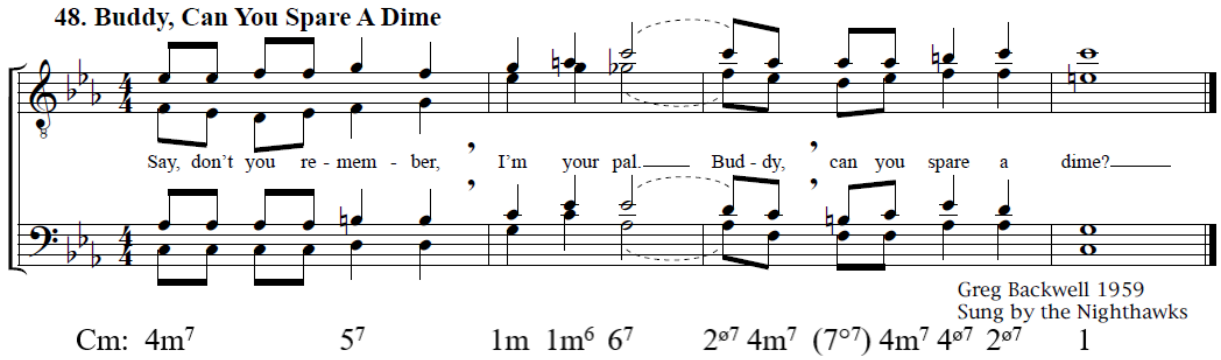
"Lonesome Rose" also has all three versions of the $2^{ø7}$ chord family. An arpeggiation from $4m^6$ to $2^{ø7}$ in the first measure sets up a resolution to 5^7. After a deceptive resolution to ♭6, stepwise contrary motion in the outer voices forms a $♭7^9$ chord. Rather than resolving that immediately to 1, the arranger arpeggiates the bass up to scale degree four to create an apparent $4m^6$ chord. However, one might also see this bass arpeggiation as simply a move from the root to the fifth of a dominant ninth.

EXAMPLE 4.21. Ed Waesche, "Lonesome Rose."

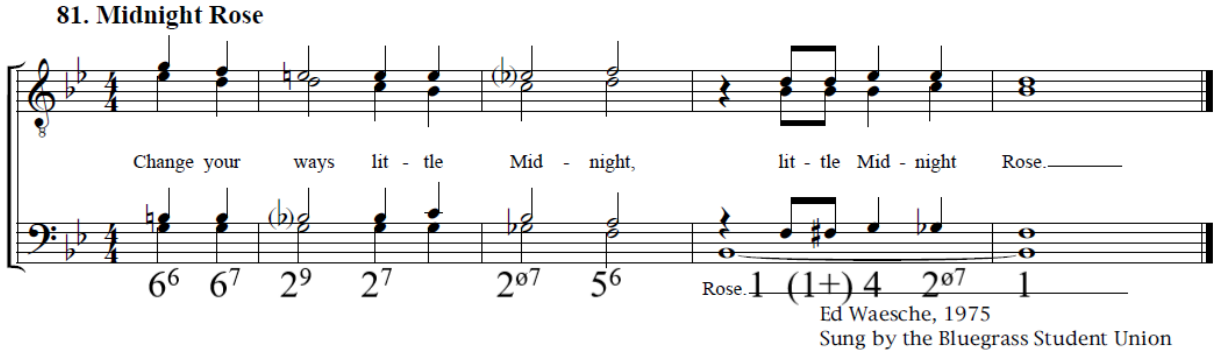


Other inversions of $2^{ø7}$ with the first or flat sixth scale degrees in the bass are unusual but are used occasionally as penultimate chords. In “Buddy, Can You Spare a Dime,” the penultimate chord is a second inversion $2^{ø7}$. It is immediately preceded by an unusual chord: an enharmonically spelled $4^{ø7}$. This chord is related to the $2^{ø7}$ by minor third, allowing for a C-transformation. The lead and bass are retained as common tones while the tenor and baritone move in contrary motion by semitone to reach the unusual inversion of this $2^{ø7}$. The inversion of the $2^{ø7}$ with the seventh (scale degree one) in the bass is a bit more common. In each case of this chord as a penultimate in “Classic Tags,” the bass has a post on the tonic. One such example is “Midnight Rose,” sung by the influential quartet and 1978 gold medalists, Bluegrass Student Union. The initial close to the tonic in measure 4 instituted by the bass tonic post is reopened by the climbing baritone and tenor lines, and the upper three voices move to form a $2^{ø7}$, whose scale degrees four and flat-six give it a strong pull towards the tonic by descending half-step.

EXAMPLE 4.22. Greg Backwell, "Buddy, Can You Spare a Dime?"

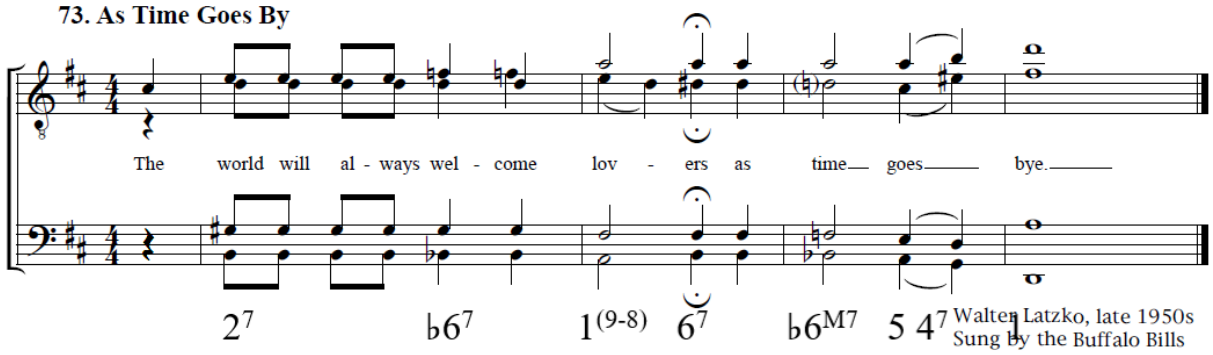


EXAMPLE 4.23. Ed Waesche, "Midnight Rose."



The 4m^{6} and its variants are not the only plagal cadences used to close tags. The second most common penultimate chord after the 4m^{6} in "Classic Tags" is the 4^{7}, with 16 appearances. The 4^{7} is ubiquitous in barbershop music and is often used to embellish a tonic triad. As one of only four barbershop seventh chords that have the tonic as a chord tone, and the only one related by fourth/fifth to the tonic triad, it makes sense that the 4^{7} would have a privileged place in the barbershop harmonic language. In addition, barbershop music developed as an African American music form alongside the blues in the mid to late 19th century, and the 4^{7} is used prolifically in both styles. Just as in the blues, 4^{7} is commonly preceded by a 5^{7} chord. Many of the tags with the 5^{7} – 4^{7} – 1 ending are older tags, perhaps from the days when there was a closer kinship between the barbershop and blues artforms. "As Time Goes By" was sung by the Buffalo Bills, the 1950 International Champion quartet that brought barbershop quartets back into the public eye through their appearances in the 1957 Broadway show and 1962 film version of "The Music Man." The 5 triad in m. 3 does not resolve to 1 as we might a expect a dominant to do but moves to a 4^{7} chord instead.

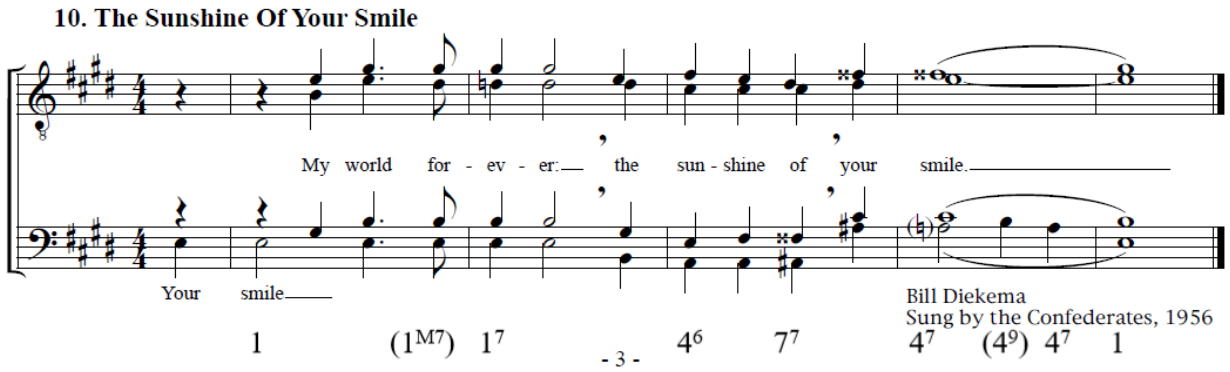
EXAMPLE 4.24. Walter Latzko, "As Time Goes By."



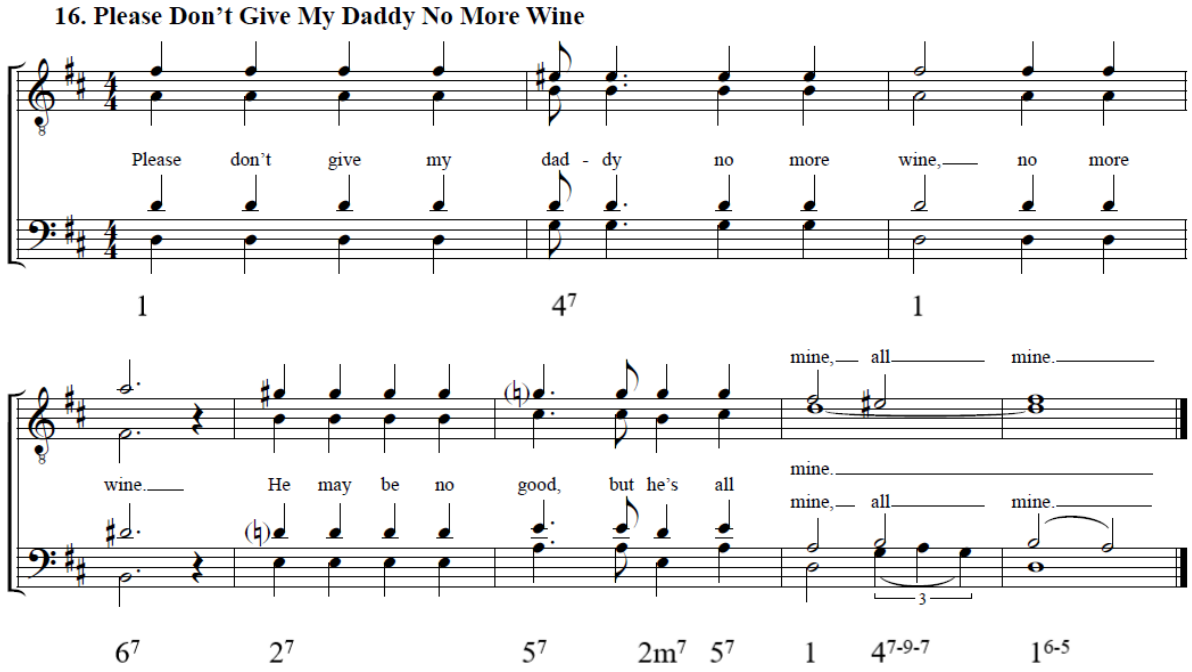
"The Sunshine of Your Smile" was sung by another gold medalist quartet from the 1950s, the 1956 champions, The Confederates.[13] A 4^7 to 1 plagal motion is used to close the tag, and it is preceded by the tritone substitute of 4^7, allowing for two semitones to move in contrary motion in the bass and lead to move smoothly from one chord to the next. The 4^7 is in root position and the bass part has its own swipe up from the root to the ninth and back to the root of the prevailing harmony. This embellishment of the 4^7 in the bass is common in the early barbershop style. Two more examples come from the classic tag "Please Don't Give My Daddy No More Wine," and from the tag of the most oft-sung polecat, "Heart of My Heart." Both tags follow classic barbershop harmonic progressions, using barbershop sevenths as both dominant and non-dominant functioning chords to allow for great consonance. Both tags close with the same 4^7 figure with the bass moving up to the ninth and back to the seventh of the 4^7 chord.

[13] The name of the 1956 champions, The Confederates, is one of many examples of how the Society has been continually plagued by the glorification of the Antebellum South. Renamed to the Southeastern Harmony District in 2024, the formerly named Dixie District still recognizes its highest scoring district representative at Internationals with the Confederates Memorial Award.

EXAMPLE 4.25. Willis Diekema, "The Sunshine of Your Smile."

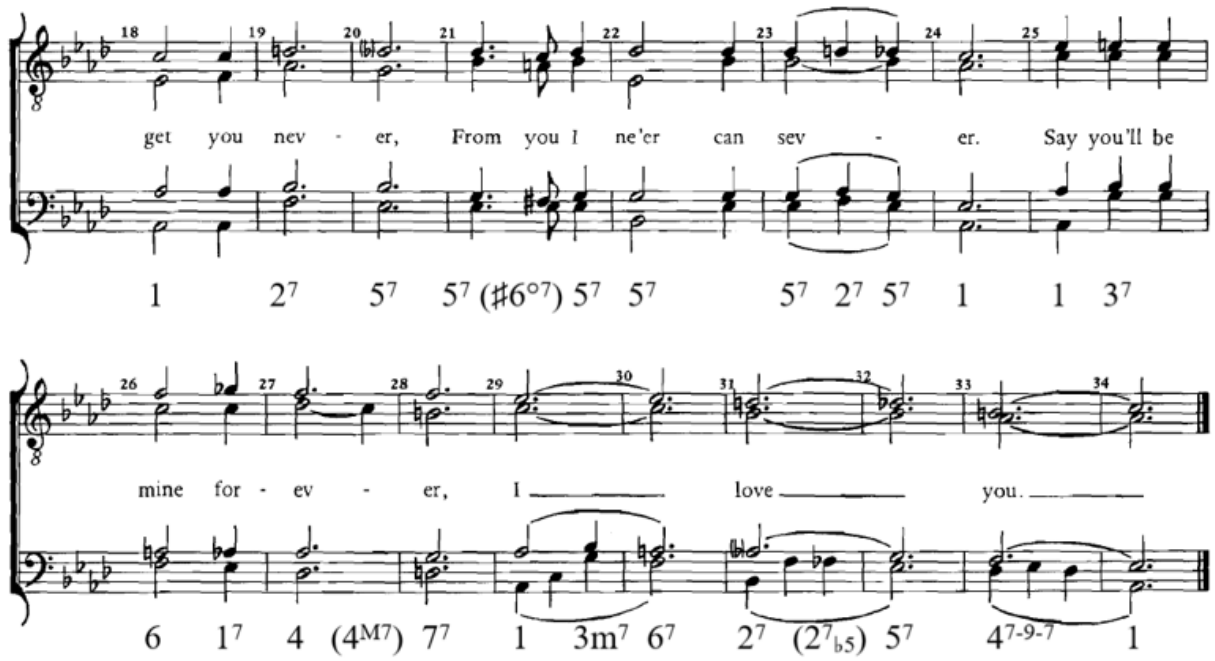


EXAMPLE 4.26. "Please Don't Give My Daddy No More Wine."



EXAMPLE 4.27. “Heart of My Heart.”

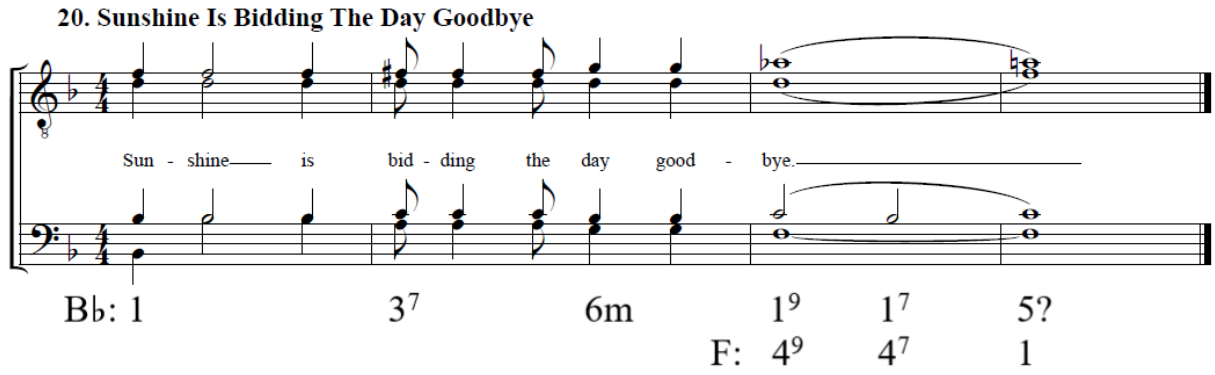
Heart of My Heart



A unique use of a 4^7 to 1 plagal cadence is found in “Sunshine is Bidding the Day Goodbye.” If this tag belonged to a full song, there is no longer any record of that song, so we cannot say what comes before this tag. Though the tag has an F major key signature, the tag unequivocally starts in B♭ major. The harmonic progression is a very typical barbershop progression. When the 3^7 secondary dominant leads into a 6^7, that 6^7 proceeds by descending fifth to a harmony build on the second scale degree. However, it is common for 3^7 to lead to a 6m triad instead. In these cases, the doubled root usually splits outward to form a 1^7 in second inversion, as seen in the example above. This progression of 3^7 to 6m to 1^7 is idiomatic to the barbershop style. Because of this, a barbershop practicitioner singing “Sunshine is Bidding the

Day Goodbye" would be firmly entrenched in B♭ major through the first three bars. Though it is theoretically possible to hear and sing this tag completely in F major, my anecdotal experience is that singers always "blow"[14] a B♭ for this tag. The final chord, then, comes as a surprise, as the 1^7 does not move down a fifth to a subdominant harmony of some kind, which we would in turn expect to initiate a closing plagal cadence. Instead, the 1^7 is reinterpreted as a second inversion 4^7, and the A♭ in the tenor resolves up to *a♮* instead of downward.

EXAMPLE 4.28. "Sunshine is Bidding the Day Goodbye."



Eighty of the 125 "Classic Tags" use the $4m^6$, its variants ($2^{ø7}$ and $♭7^9$), or 4^7, to create plagal cadence closure at the end of the tag. This vastly outnumbers the mere twelve tags that end with 5^7 to 1 authentic cadences. The importance of common tone retention and modal mixture in barbershop endings is apparent by these numbers.

[14] A note is "blown" on a pitch pipe to establish the key before singing. This note is almost always the tonic. Even with electronic pipes, the appropriate jargon is still to "blow a B♭."

Augmented Sixth and Neapolitan Chords

The 4^7 in many of the previous examples is spelled with a raised second scale degree, an enharmonic spelling of the flat third degree that is the seventh of a 4^7 chord. This is a common respelling for this resolution, showing the resolution up to the third of the final tonic. When spelled this way, there is an augmented sixth interval between the root and the raised second degree. This spelling and resolution of the 4^7 is more akin to the German augmented sixth chord, which is of course enharmonic to the major-minor seventh chord. In m. 31 of "Heart of My Heart," shown in Example 4.27, we see another chord which resembles an augmented sixth chord. The F♭ introduced in the bass turns the 2^7 into a dominant seventh with lowered fifth. F♭ to D♮ is another augmented sixth interval, and the flat sixth degree resolving down to five makes this chord look a lot like a French augmented sixth chord, but without the upward resolution in the tenor voice.

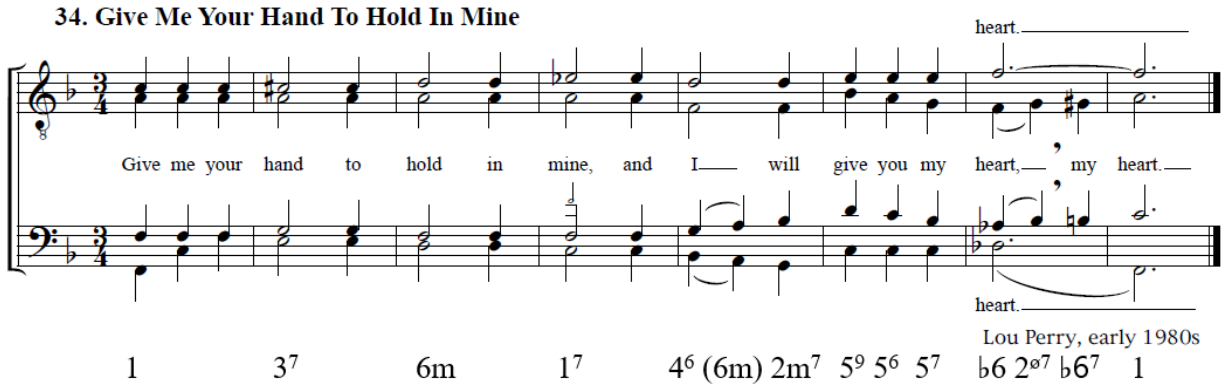
Now is an appropriate time to discuss the difference between the resolution of sixth and seventh chords. Given that the most common four note chord in barbershop music, the major-minor seventh, is enharmonically equivalent to the German augmented sixth, it is fair to question when we might choose one label over the other. A general guiding principle is that sevenths tend to resolve down, whereas sixths tend to resolve up. For example, the ubiquitous $4m^6$ features the sixth above the root (scale degree two) resolving up to the third scale degree. Because of this, it would probably be more appropriate to label the 4^7 when it resolves to 1 as a 4^{+6}, as it is often spelled to call attention to the upward resolution of that sixth. However, because of the importance of the barbershop seventh to the style, and the use of that chord for its sound quality

apart from function, I have chosen to always label a chord as a major-minor seventh if it can be enharmonically respelled as one.

Two other chords are commonly used to close barbershop tags and might be labelled as augmented sixths. The $\flat 6^7$ appears six times as a penultimate chord in "Classic Tags." This chord is one of four possible barbershop sevenths that contain scale degree one, along with 1^7, 2^7, and 4^7. When used as a penultimate chord, it is often respelled to draw attention to the upward resolutions of the fifth and seventh.

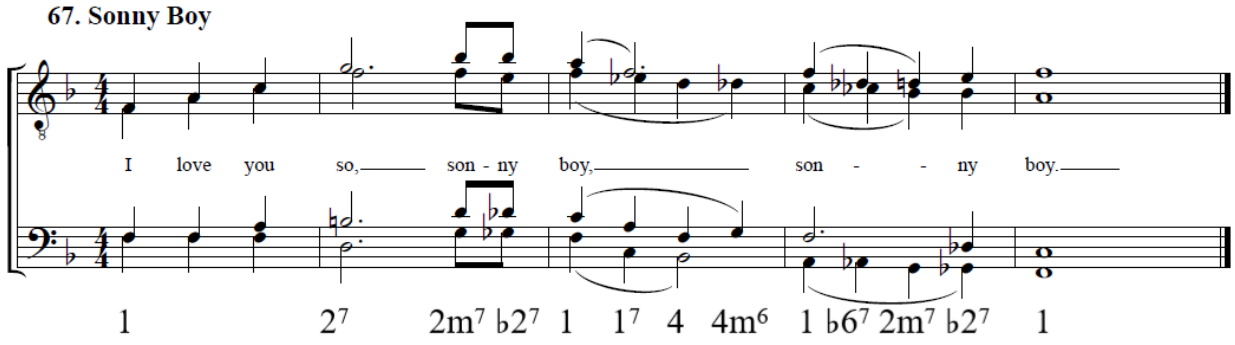
"Give Me Your Hand to Hold in Mine" begins with the common progression discussed in conjunction with "Sunshine is Bidding the Day Goodbye." The 3^7 tonicizes 6m, which often splits the doubled root in contrary motion by step in the outer voices to form a 1^7. That 1^7 tonicizes a 4^6 that goes through a passing chord to a $2m^7$, which contains all the same notes as 4^6 but is related to the following dominant seventh by fifth-root relation. The 5^7 moves by deceptive motion into a $\flat 6$, and the bass and tenor stay as common tones while the lead and baritone climb by step through a $2^{\varnothing 7}$ and a $\flat 6^7$ before resolving to the final tonic. The arranger is clearly not concerned with the spelling of the $\flat 6^7$ but is instead focused on the linear motion of the inner voices. In addition to the augmented sixth spelling of *d♭* to *b♮*, the fifth above the root is respelled as a *g♯* to show the upward resolution to scale degree three, just as it was in the 4^7 examples seen previously. The $\flat 6^7$ is effective as a penultimate harmony because it contains the tonic as a chord tone and two notes which can lead by half-step into the two remaining pitches of the tonic triad: the raised second and fourth scale degrees leading to the third and fifth scale degrees, respectively.

EXAMPLE 4.29. Lou Perry, "Give Me Your Hand to Hold in Mine."



One other barbershop seventh often functions as an augmented sixth and is used to close tags. The $\flat 2^7$ is used as a penultimate seven times in “Classic Tags.” In “Sonny Boy,” $\flat 2^7$ is used twice to connect $2m^7$ to 1. $\flat 2^7$ is the tritone substitute of 5^7, and contains the lowered sixth scale degree, whose downward resolution to scale degree five is a strong marker of closure in barbershop. The chord is spelled as an augmented sixth chord, with the characteristic interval occurring between the lowered second scale degree and the leading tone. The $\flat 2^7$ is used as part of a broader linear motion of descending half steps in the bass from the fourth scale degree down to the tonic. Though $\flat 2^7$ does not include the tonic as a chord tone, it is very effective as a penultimate chord because all four pitches resolve by semitone to the tonic. The major triad built on the lowered second degree resolves in parallel motion down by semitone to the tonic triad, and the leading tone resolves up in contrary motion to double the tonic.

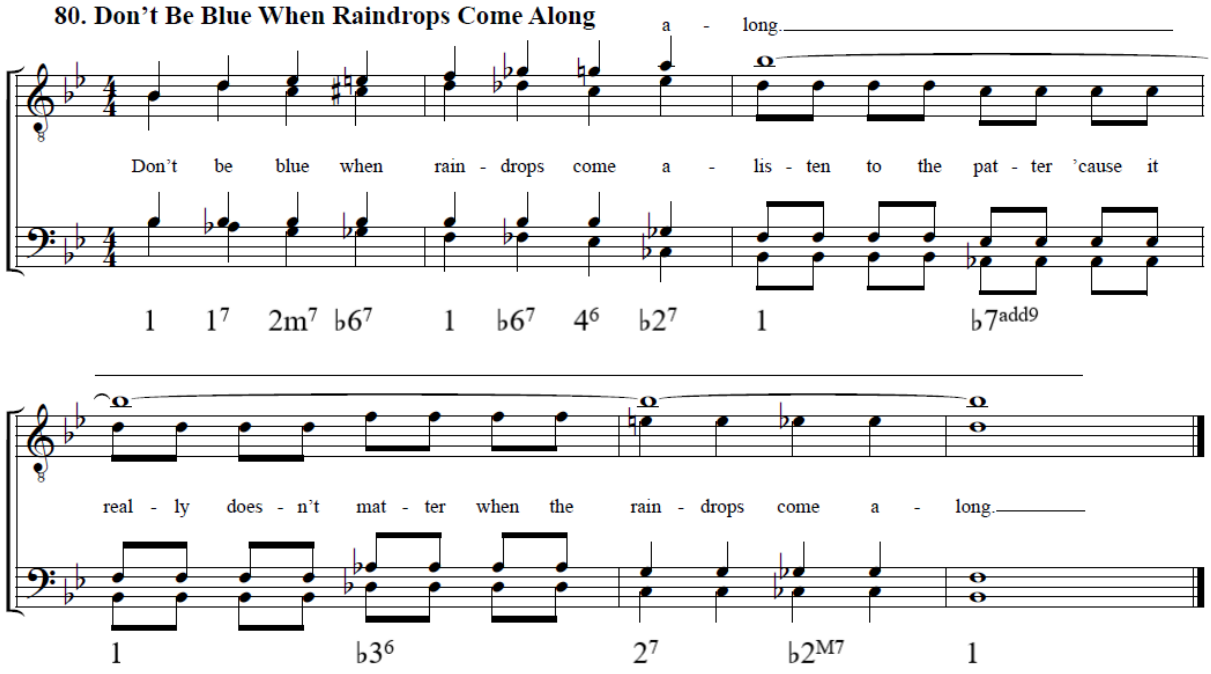
EXAMPLE 4.30. "Sonny Boy."



This descending parallel major triads motion can be seen in a very similar type of ending using another seventh chord built on the lowered second degree: $\flat 2^{M7}$. In all four cases of this chord used as an ending in "Classic Tags," it is used as part of a larger progression to harmonize the tonic in the tenor (usually as a post). "Don't Be Blue When Raindrops Come Along" is a great example of this that also has many other interesting features. The first two measures have a blossoming effect, starting at a unison and expanding out by contrary motion in the outer voices while keeping the tonic as a common tone in the baritone. The outer voices move almost entirely by semitone. On the fourth beat of the first measure, we have a $\flat 6^7$ that functions exactly as a common practice German augmented sixth, with the augmented sixth interval expanding out to an octave on the fifth scale degree. However, unlike the common practice, the second inversion tonic triad does not function as a cadential six-four. In the second measure there is another $\flat 6^7$, this time in an unusual third inversion. At the end of the measure is another example of an augmented sixth chord built on the lowered second degree, resolving to the tonic. The last four measures feature a tonic post in the tenor and parallel motion in the lower three voices. Those

three voices maintain their shape of a major triad, moving to a variety of consonant harmonies that contain a major triad plus the tonic as a fourth note. The tonic post is a root, then an added ninth, then a root again, then a sixth, a minor seventh, a major seventh, and finally, a root again. The $\flat 3^{6}$ - 2^{7} - $\flat 2^{M7}$ progression moves the three lower voices in parallel descending semitones, creating an interesting aural effect against the stationary tenor post. Interestingly, all examples of $\flat 2^{M7}$ as a penultimate in classic tags preceded that chord with a 2^{7}, and all but one also included the $\flat 3^{6}$.

EXAMPLE 4.31. "Don't Be Blue When Raindrops Come Along."



Chapter 4 Case Study – "Bright Was the Night"

Though this chapter discusses only tags, an entire song is analyzed for the final case study. This analysis combines elements of chapters 3 and 4 while referencing ideas discussed in the first two chapters. The case studies in the prior chapters examined arrangements from the Barberpole Cat Songbook, originally published in 1971. In 2015, the Society published a sequel, Barberpole Cat Songbook Volume II, to provide a book of common repertoire that was more challenging than the original book of polecats. This case study will analyze one song from this book, entitled "Bright Was the Night." This arrangement includes an interesting historical background. "This arrangement is fondly dedicated to Glenn Howard, who learned the chorus of this song from barbershop harmonizers in 1919. It is through Glenn that this song comes to us; its previous origin is unknown."[15] This song makes an especially intriguing case study because the song is an old one passed down solely by oral tradition, and the arranger had to balance faithfulness to the original harmonies with a style of harmonizing and arranging songs influenced by over fifty years of Society contests and music theory. The following case study will explore the elements of old and new present in this arrangement, and examine the fascinating use of parsimonious voice leading, particularly in the tag.

Though the original tune and harmonies were only preserved in Howard's mind, "Molly" Reagan mentions this song in a 1943 issue of *The Harmonizer.* "In 'Bright Was the Night' the diminished seventh is the steppingstone from a 12 o'clock Major to a one o'clock seventh as the echo repeats '... bright was the night.' The diminished seventh (on I) is the step between the 11 o'clock Major to a 12 o'clock Major in the phrase ''Twas there *I* met ...'"[16] He notes that a fully diminished seventh is used to connect the tonic to the following 5^7, and a $1^{\circ 7}$ is used to move

[15] Barberpole Cat Songbook Vol. II
[16] Reagan, "Mechanics of Barbershop Harmony [V]."

from 4 to 1. In David Wright's arrangement of "Bright Was the Night" in the second polecat book, he consistently uses the ♯6°7 to move from 1 to 5^7, perhaps thanks to Howard's recollection of the harmonies. On the other hand, Wright forgoes the 1°7 on "I" in m. 25, opting instead for a 4^7. These harmonies are separated by a single half-step and moving the bass from F to F♯ would result in the diminished seventh mentioned by Reagan.

This arrangement shows broad scale differences between approaches to arranging and harmonizing in the early and late 20th century. Whereas Howard only recounted the chorus of "Bright Was the Night," which was only 16 measures long, Wright adds a twenty-measure introduction and an eight-measure tag. This reflects the change from improvising short choruses in small groups to performing complete musical units for an audience. The introduction is in G major, with constant allusions to the relative minor. After sixteen measures in G major, a four-measure phrase in C major concludes the intro and sets up the chorus in C. The harmonies are simple and straightforward in the intro, so as not to overshadow the simplicity of the following chorus.

The original chorus of "Bright Was the Night" is an "echo song," as is typical of the oldest surviving barbershop songs. This call-and-response effect points directly to the African American origin of barbershop. The arranger, David Wright, uses a variety of textures to set the lead-ins, rather than keeping the song as a true echo song with a solo and echoes. The four-part harmonization of these lead-ins posed a challenge to the arranger. The E-D♯-E melody appears first as a solo in m. 20, a nod to the echo song style of the original. The next entrance, however, is harmonized in tenths by the tenor in m. 22. In m. 28, it is harmonized with four voices, and the pillar chord in the measure is 5^7. The Es are harmonized with a typical sixth chord, but the chromatic lower neighbor cannot be harmonized with the typical Type III or Type IV neighbor

chords because the chromatic note is a half-step below the sixth, not a root, third, fifth, or seventh. Keeping the tenor the same in m. 28 as in m. 22 was also prioritized. The arranger finds a harmony that retains both the D♯ and F♯ and can lead back to a dominant-functioning chord. By moving the baritone and bass up by half-step, in contrary motion to the lower neighbors in the upper voices, the arranger finds an enharmonic spelling of $\flat 6^7$, which is the tritone substitute for 2^7, the barbershop seventh a fifth above the prevailing 5^7 harmony. In m. 30, the melody moves to the bass and the lead takes the bass part from m. 28 up an octave. This puts the E in the bass, so the 5^6 is now a root position Em triad. The lead and bass swap the root and fifth of the $\flat 6^7$, which shares no tonal relationship with the 3m triad before and after it whatsoever. However, the semitonal movement in and out of the $\flat 6^7$ in all four voices allows one's ears to accept it more readily.

As discussed in this chapter, tags often differ from the rest of the arrangement with contrasting harmonic language and voice leading meant to create excitement and a satisfying conclusion. Whereas the arranger's original intro of "Bright Was the Night" uses a straightforward and simple harmonization that matches the simplicity of the original chorus, the tag differs significantly in tone and harmonic language from everything preceding it. Though the arranger marks the beginning of the tag halfway through m. 36, the chorus cadences on the downbeat of m. 35, and the swipes in the remainder of the measure are working to build momentum and excitement. The tonic in m. 35 swipes up to a 1^7, which is first preceded by a Type III neighbor chord. In barbershop music, progression and resolution are accompanied by descending motion, so upward motion tends to build tension and excitement. The arranger reverses common voice leading paradigms used in progression in this tag, and the resulting upward chromatic motion is highly effective at creating anticipation. For example, the last two

chords in m. 35 and the downbeat of m. 36 are harmonized with $2^{ø7}$ - ♯2°7 - 1^7. The baritone stays on the tonic while the other three voices move by ascending semitone into the 1^7 on the downbeat of m. 36. This progression is a reversal of the "Sweet Adeline" swipe seen in the Chapter 2 case study. It uses the same parsimonious voice leading but moves backwards through the progression, producing the opposite effect: tension rather than resolution.

The 1^7 sets up a subdominant harmony in m. 37, which is identical to m. 33 except that the baritone and tenor have switched parts for the first three notes. The higher baritone and tenor voices continue to contribute to the heightened excitement. After the 6^7 moves to 2^7 on the downbeat of m. 38, the tag breaks significantly with the end of the verse. In m. 34, "bride" was harmonized with 2^7- $2^7{}_{♭5}$- 5^7. Note that because of the metric placement, the dominant seventh with a lowered fifth was used instead of $2^{ø7}$, as seen in the Chapter 3 case study. In the tag, the lead moves with the bass to move 2^7 to its tritone substitute, ♭6^7, on its way to the 5^7 pillar chord, which is expanded over the following two measures. In measure 39 the tenor moves up from the root to the ninth of the 5^7, and that rootless dominant ninth (or half-diminished seventh) may move "through the wormhole" by an S6(5) to ♭2^7, which in turn moves by C-transform back to 5^7. After a move back to ♭2^7 in m. 40, the arranger again reverses a typical parsimonious progression to create more excitement and tension.

As seen in this chapter, when flats are continuously added throughout a tag, the appearance of the lowered second scale degree in ♭2^7 typically signals the end of the tag, as ♭2^7 resolves nicely to the tonic. In "Bright Was the Night," however, that resolution is thwarted by this ascending chromatic progression. The B leading tone resolves to C in the tenor, as expected in the ♭2^7 to 1 resolution, but the bass and lead retain scale degrees ♭6 and 4. The baritone moves

up from D♭ to D, cancelling out the lowered second degree. The overall move is from $\flat 2^7$ to $2^{\varnothing 7}$, using S3(2) to move two voices by semitone and retain two others. The tenor initiates a post on the tonic, and another S-transform, this time S4(3), is used, moving the baritone and lead up by half step. The resulting chord is a $\flat 6^7$, spelled enharmonically to show the lead's and baritone's upward resolutions into the final tonic, identical to the enharmonic spelling used in m. 28 for the $\flat 6^7$ embellishing of the 5^6 chord. A double S-transform connects $\flat 2^7$ to $\flat 6^7$ by moving parsimoniously through the $2^{\varnothing 7}$. This is an ascending fifth movement between dominant sevenths, rather than the typical descending fifth. Note that the S3(2)/S4(3) double S-transform is the reverse of the rarely used bottom path, S4(3)/S3(2), in Figures 6 and 7 in Chapter 3. The least travelled path through an intermediary half-diminished seventh chords between two barbershop sevenths in the descending circle of fifths progression is the path that is used to facilitate parsimonious voice leading between two barbershop sevenths in an ascending fifth move.

We may learn three lessons from this progression. First, ascending chromatic motion builds tension and excitement, as opposed to the sense of progression and resolution initiated by descending chromatic motion. Second and related, common parsimonious voice leading paradigms may be used in either direction to different effect. Third, a preferred parsimonious path in a descending progression may not be the preferred path in an ascending one.

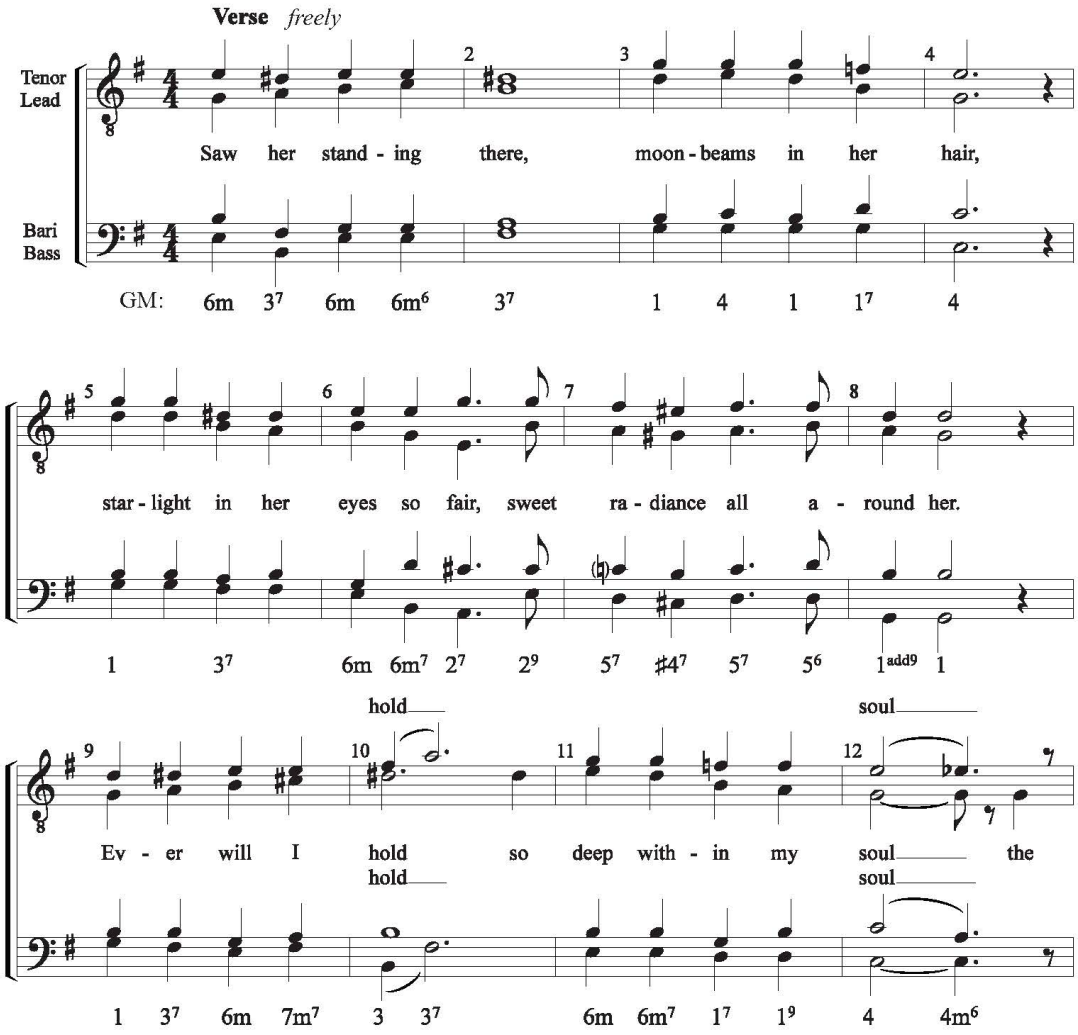
CASE STUDY 4. Anonymous. “Bright Was the Night,” Arranged by David Wright. *Barberpole Cat Songbook II*, Nashville, TN: BHS, 2015.

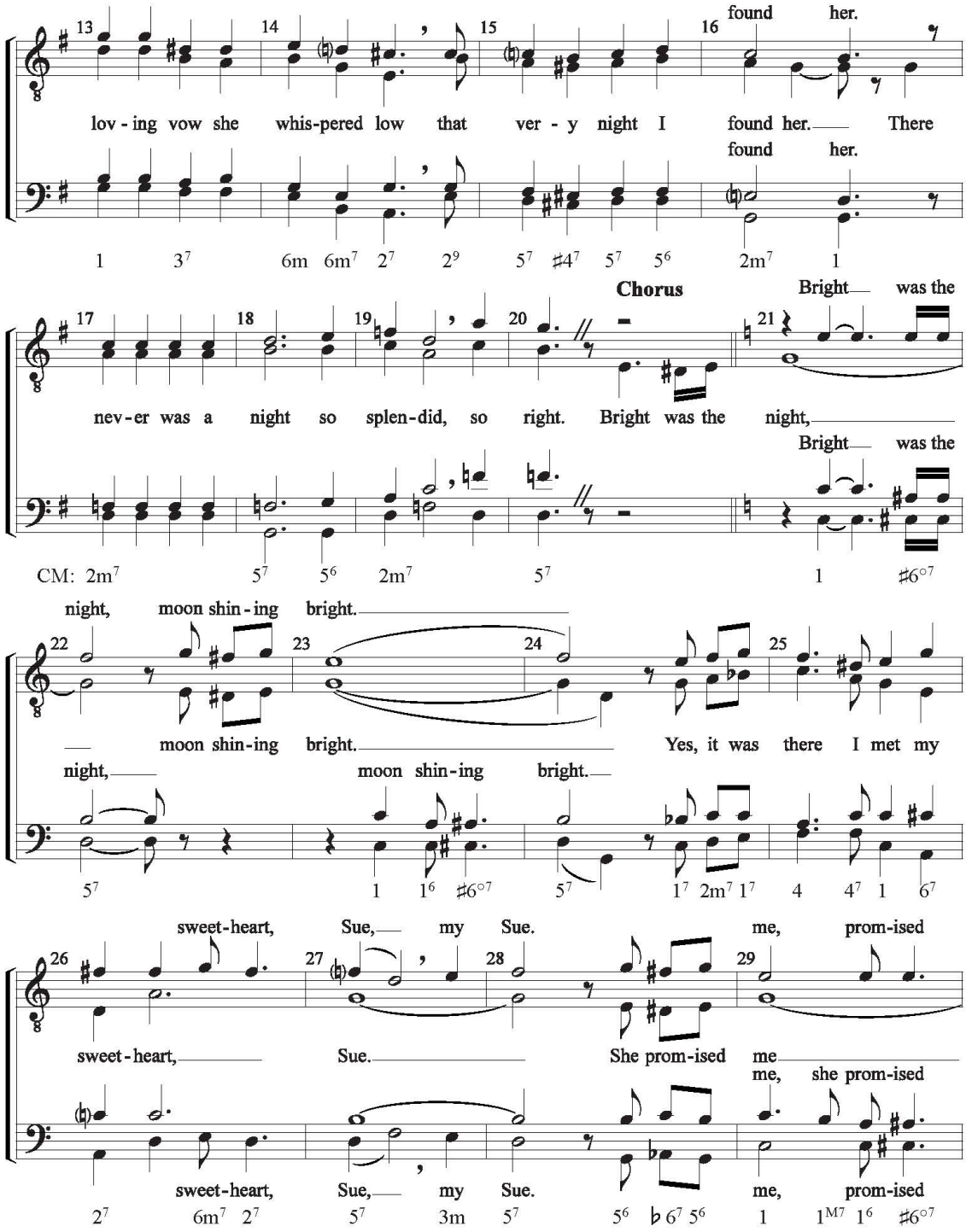
BRIGHT WAS THE NIGHT

as sung by The Gas House Gang

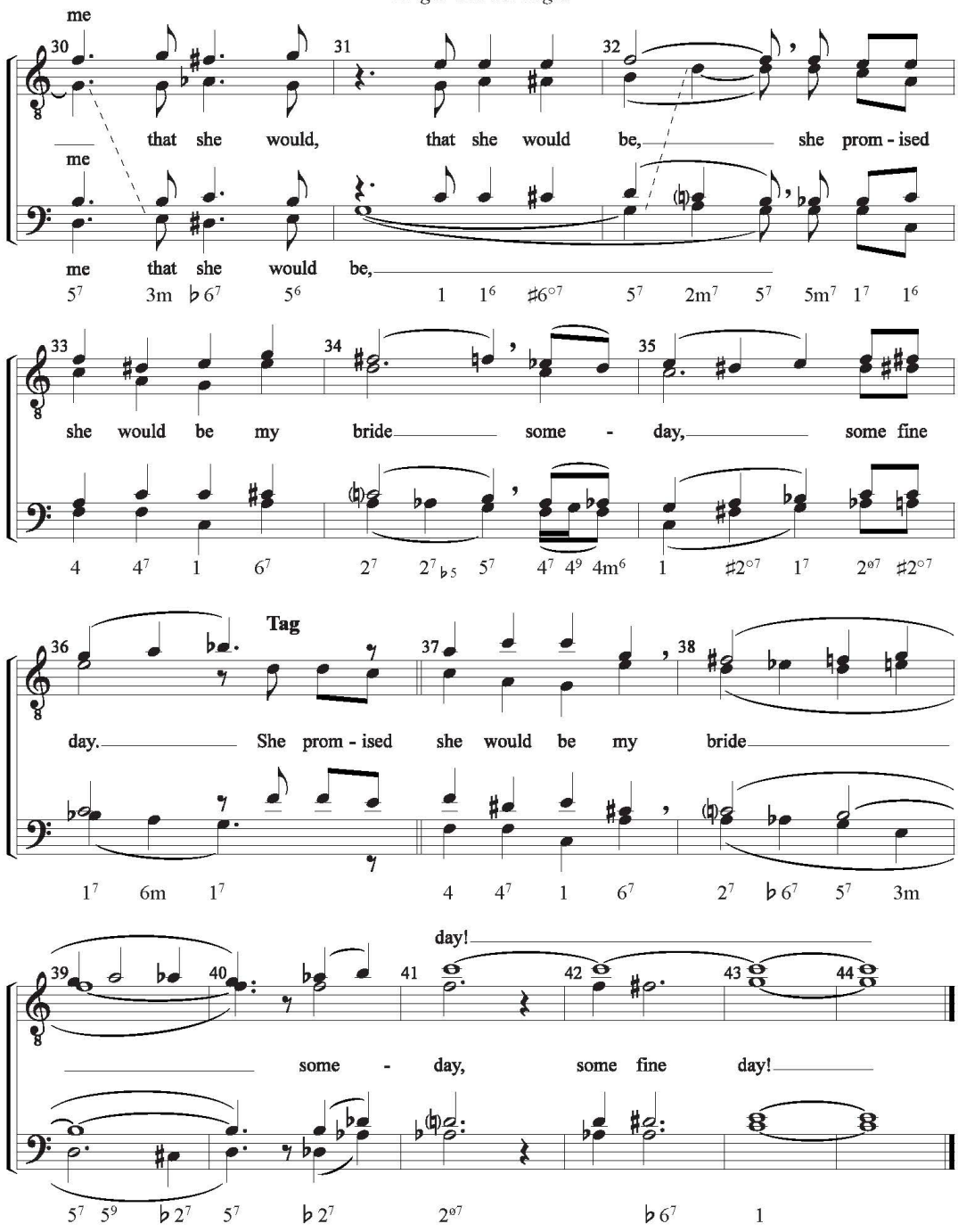
Words and Music Anonymous
Verse by DAVID WRIGHT

Arrangement by DAVID WRIGHT




13 14 15 16
found her.
lov - ing vow she whis-pered low that ver - y night I found her. There
found her.
1 3⁷ 6m 6m⁷ 2⁷ 2⁹ 5⁷ ♯4⁷ 5⁷ 5⁶ 2m⁷ 1
17 18 19 20 21
Chorus
Bright was the
nev-er was a night so splen-did, so right. Bright was the night,
Bright was the
CM: 2m⁷ 5⁷ 5⁶ 2m⁷ 5⁷ 1 ♯6°⁷
night, moon shin-ing bright.
22 23 24 25
moon shin-ing bright. Yes, it was there I met my
night, moon shin-ing bright.
5⁷ 1 1⁶ ♯6°⁷ 5⁷ 1⁷ 2m⁷ 1⁷ 4 4⁷ 1 6⁷
sweet-heart, Sue, my Sue. me, prom-ised
26 27 28 29
sweet-heart, Sue. She prom-ised me
me, she prom-ised
sweet-heart, Sue, my Sue. me, prom-ised
2⁷ 6m⁷ 2⁷ 5⁷ 3m 5⁷ 5⁶ ♭6⁷ 5⁶ 1 1^M7 1⁶ ♯6°⁷

Bright Was the Night



Chapter 4 Conclusion

Tags are the ultimate representation of barbershop harmony, and the activity of tag singing is a significant part of the community and culture of barbershop singing, representing the musical and social harmony that barbershop practitioners strive for. This chapter has been the most complete analysis of tags to date and provides a theoretical framework for the unique harmony and voice leading practices used in these exciting endings. Tags tend to be organized by one or more of three principles: harmonic progression by descending fifth or semitone (as in typical barbershop progressions of secondary dominants and/or tritone substitutes), linear stepwise processes (such as blossoming out from a unison), or posts.

A post constrains the allowable harmonies since the sustained note must be a consonant chord tone. Tonic and dominant posts tend to have distinct harmonic languages and syntaxes, but both often use modal mixture and tend to avoid dominant seventh resolutions by fifth. The modal mixture that is so common in tags contrasts with the abundance of raised notes used in secondary dominant sequences, and these lowered notes have strong pulls downward. The lowered sixth scale degree is especially effective in enacting closure when it resolves down to the fifth of a tonic triad. Subdominant chords and other chords that are closely related often use plagal motions to end a tag. The most important elements for satisfying endings in barbershop seem to be the retention of common tones and the use of minimal voice leading movements, so even unusual cadential chords such as $\flat 6^7$ can resolve to a final tonic triad in a satisfying way by retaining a common tone and moving two voices by semitone, despite its distant relationship to the tonic. This chapter has shown that parsimonious voice leading is a primary organizing principle of barbershop tags, and I posit that this parsimonious voice leading is evidence of the improvisational roots of barbershop harmony.

I argue that improvised harmony by both white and Black quartets before the 1940s exhibited looser approaches to doubling and voice leading. I also find numerous accounts that indicate that the chromatic, "unusual" and non-functional use of harmony in barbershop music around the turn of the 20th century was unique to the Black improvised tradition.

Tag: Conclusions and Final Remarks

Just as a tag is a discrete, post-cadential section of a barbershop song, this section is a separate unit outside of the main body of the dissertation. In it, I will summarize the content and contributions of my work and provide some closing thoughts on the current state of both the barbershop community and music theory academia and how my research contributes to each. I have argued that barbershop is highly syncretic, and this dissertation has reflected that syncretism by weaving disparate threads of thought together to create a holistic understanding of this musical idiom. These threads are the scholarly literature on the history and origin barbershop by musicologists and ethnomusicologists, the vernacular music theory found in Society publications, the methodologies and approaches found in neo-Riemannian theory, and my own analysis.

Chapter 1 reviewed scholarly literature on the history, origin, and early development of the barbershop style in America. This chapter showed that Black recreational singing is the principal origin of this style of four-part close harmony, and that the complex interaction of race and musical cultures around the turn of the 20th century contributed to the development of the style. This history was erased and replaced with the white origins myth by the barbershop revivalists of the 1930s, who created a society dedicated to the "preservation" of a restrictive barbershop style that did not reflect the diversity of race, gender, and musical practice of

barbershop music at the height of its popularity in the early 1900s. I observed that both the true history outlined by Abbott, Henry, Averill, and others, and the revivalists' whitewashed history closely associate early barbershop practice with improvisation.

Chapter 2 investigated the role of vernacular music theory in the development and preservation of the modern genre of barbershop music. I examined Society publications from the first 50 years of its history, including contest rules, music theoretical treatises, and arranging manuals. This study not only provided the reader with a thorough understanding of the musical features of the style, but it also provided insight into the idiosyncratic perspectives of barbershop practitioners on consonance, doubling, and voice leading. These writings were motivated by the principle of preservation that was demanded in the Society named SPEBSQSA.

Chapter 3 advanced the understanding of harmony and voice leading in barbershop music by coupling improvisation and neo-Riemannian theoretical methodologies to explain the idiosyncratic use of chromatic harmonies observed in barbershop music. I argued that these unusual chromatic movements are organized by the principle of parsimonious voice leading, rather than the principles of harmonic progression and retrogression found in vernacular and Western tonal music theory. Building on the analogy of the harmonic highway, I provided graphical visualizations of the parsimonious voice leading found in barbershop music. I showed that half-diminished sevenths may be used to link barbershop seventh pillar chords via parsimonious voice leading, either within descending fifth sequences, the preferred path on the highway around the circle, or within descending semitone sequences, which fully diminished sevenths as shortcuts across the space. I associated this parsimony with improvisation, and, drawing inspiration from a surprising source, the music of Chopin, I argued that the existence of linking half-diminished seventh chords is evidence of an improvisational exploration of

chromatic seventh chord space between pillar barbershop sevenths. I identified and labeled several common parsimonious movements, including the Oblique transform, third-exchanges, and an expanded conception of split and fuse functions between triads and seventh chords. I incorporated triads into the conceptual harmonic highway, conceiving of split functions as on-ramps and fuse functions as off-ramps of the highway created by the secondary dominant sequence. Though this chapter provided many insights into the parsimonious voice leading and chromatic harmonies found in barbershop music, it was not comprehensive in labelling or graphing every possibility within the style. Instead, I argued that parsimony acts as a primary organizing principle for movement within the constraints of the preferred harmonic vocabulary of the idiom.

Chapter 4 elucidated the significance of tags to the musical and social practice of barbershop singing. Despite this significance, very little research has been done on the musical elements of tags until my analysis in this chapter. I analyzed nearly 150 tags and found three primary principles of organization – harmonic progression, linear processes, and posts. The tags in the "harmonic progression" category most closely resemble "contestable" barbershop, featuring secondary dominant sequences and tritone substitutes. Tags organized by linear processes or posts, on the other hand, tend to feature modal mixture. I argued that this flatward shift in many tags creates a sectional boundary, signaling the arrival of a tag and differentiating it from the sharpward movement of the secondary dominant sequence. This flatward shift produces a trajectory throughout the tag of gradually building tension, which is released by the final major triad tonic. The modal mixture harmonies are further organized by linear processes, such as parallel or contrary stepwise motion, or posts, which persist as a common tone with each chord, thereby limiting the allowable harmonic vocabulary. I found that posts on the tonic were the most

prevalent by far and catalogued the allowable and typical harmonies and successions of those harmonies within tonic post tags. I performed the same analysis on tags with dominant posts, the only other post that appears commonly in the literature and found that those tags had very different harmonic vocabulary and procedures than tonic post tags. Despite these differences, both used modal mixture, common tone retention, and plagal motion to create a satisfying sense of closure.

The Barbershop Harmony Society: Trends and Research Applications

Since 2020, I have been an active member of the BHS, competing in district contests in both a chorus and a quartet, competing at Internationals with the Southern Gateway Chorus, arranging, coaching, and teaching within the barbershop community. I have attended the Society's weeklong educational event, Harmony University, multiple times, and have sung tags into the early hours of the morning. In other words, I have experienced the musical and social harmony that barbershop is built upon. Since this dissertation outlines the racist and exclusionary practices of the Society in the first couple decades of its existence, I would be remiss if I did not mention the positive change that has occurred since.

The name change from the "Society for the Preservation and Encouragement of Barber Shop Quartet Singing in America" to the "Barbershop Harmony Society" in 2004 reflects a significant change in the priorities of the organization. The Society has moved away from rigid preservation of repertoire and musical elements. Though the Musicality category of judges still desire to preserve certain core elements, their more flexible perspective is represented in the current CJHB: "Barbershop is not a musical genre; it is a style of arranging and delivery that can

be applied to multiple genres of music."[1] This flexibility has allowed an influx of new arrangements of songs from many different genres. Despite this expanded repertoire, barbershop from mainstream a cappella music by holding to the core elements of the style: four-part consonant harmony, melody in an inner voice, and a preponderance of seventh chords, particular dominant sevenths. The name change also reflects the greater inclusivity of the Society. By removing "Quartet Singing" from the name, choruses are not demoted to a lesser role in the organization's mission. As previously discussed, the Society has promoted the art form around the world and invites ensembles from its affiliate organizations to participate in its International Convention every year.

That inclusivity became an explicit aim of the Society in 2017, with the announcement of the "Everyone in Harmony" initiative.[2] In 2018, the Society opened its membership to women, and in 2022, had open chorus and quartet contests at the International convention in Charlotte, NC that allowed all-male, all-female, and mixed-gender ensembles to compete against one another. The all-female quartet, GQ, made history at that contest, becoming the first female quartet medalists by placing fourth. In 2023, the Northern Stars chorus from Stockholm, Sweden became the first mixed chorus to receive medals, placing fourth at the International contest in Louisville, KY.

The "Everyone in Harmony" initiative also represents a trend of increased diversity and inclusion of racial minorities.[3] The Society has embraced the scholarship of Lynn Abbott and Jim Henry, awarding Abbott honorary membership. Its website acknowledges the African American origin of the barbershop style and the Society's role in erasing that history. In 2017, the Society

[1] *Contest and Judging Handbook*, 5-2.
[2] https://www.barbershop.org/everyone-in-harmony
[3] https://www.barbershop.org/about/dei

posthumously awarded the Grand Central Red Caps honorary membership and created "The Grand Central Red Caps Endowment" to award scholarships for African Americans to attend Harmony University. In 2023, the Society gave a plaque to Lauren Ward Parsons, honoring her father, Red Caps baritone Robert Ward, thanks to Clifton Boyd, who located Mrs. Parsons during his dissertation research. Current Society demographics are unavailable, but the predominantly old, white, male membership base has seen a noticeable increase of youth, women, and people of color in recent years. There is a growing awareness within the Society of the problematic nature of songs and names associated with the nostalgic glorification of the pre-Civil War south. This has led to the retirement of many tags and songs with problematic themes and lyrics, and this year, the BHS's Dixie District voted to change its name to the Southeastern Harmony District.

The Society has also seen increased professionalism and has embraced music pedagogy and scholarship. Though "easily singable" is still in the Society's definition of barbershop, arrangements are becoming more difficult and complex, especially at the highest levels of the quartet and chorus contests. Music literacy is increasing among membership, and vocal pedagogy and music theory are taught more commonly. This has resulted in many aspiring arrangers, who have created demand for arranging instruction. This demand has been met with the announcement of a four-volume series *Arranging Barbershop*, the first Society publications on arranging since the 1980 publication, *Barbershop Arranging Manual*. The first three volumes have been published in the last year, and I have been invited to contribute some of my dissertation research to the forthcoming Volume IV. In that chapter, I will demonstrate the parsimonious voice leading potential of dominant and half-diminished seventh chords. This potential allows for the use of third-exchanges, which are closely related to tritone substitutes and may have application for modulation, and linking half-diminished seventh chords, which

embellish descending fifth and descending semitone progressions. Though these can be found in the music, there is no existing comprehensive theory of this voice leading potential in the barbershop vernacular. My analysis of pitch and harmonic organization in tags is also a significant contribution to arrangers and barbershop theorists.

Implications and Applications for Music Theory Academia

Though the entirety of this dissertation has focused on the idiomatic features of a niche American musical practice, I would like to propose some implications and applications of my research for the broader discipline of music theory. In his dissertation, Clifton Boyd has already written extensively on the lessons that academic music theory can learn from the history of exclusion and preservation in the BHS. He observes many similarities between the BHS and the Society for Music Theory (SMT). He notes that both societies are primarily white, despite concerted efforts by both organizations to increase racial diversity. Boyd argues that music theory has been used to preserve whiteness in both societies. He writes, "The SMT is white because it has been bound by its white racial frame to value and prioritize whiteness."[4] Since Phillip Ewell's 2019 plenary address "Music Theory's White Racial Frame" at SMT's annual meeting, the field of music theory has been filled with controversial debates on how its prioritization of music and methodologies written by white composers and theorists have contributed to its lack of racial diversity. At the center of the discussions is the early 20th century German music theorist, Heinrich Schenker, whose music theoretical writings are taught in most music theory graduate programs in America. Schenker was a German nationalist, and, as argued

[4] Boyd, "Keep it Barbershop," 201.

by Ewell, his racist ideologies heavily influenced both the repertoire he chose to study and his music theoretical writings.

As Boyd has shown, vernacular barbershop music theory has been used in the past to exclude and ignore the African American contributions to the style. In my study of the barbershop theory in Chapter 2, I endeavored to recognize and call attention to the motivations of the authors, who often used "preservation" as an excuse to exclude and sought to connect the barbershop style to the white European classical tradition instead of recognizing the Black improvisational origin of barbershop singing in America. I have continued to dismantle the myth of white origins, recognizing and valuing the African American origin and contributions to the idiom. Moreover, I have observed that many of the most fascinating salient features of barbershop music that common practice tonal theory, which was created to analyze white European music, has difficulty explaining can be understood by recognizing the role of Black improvised singing in the development of the harmonic style.

I have argued that parsimonious voice leading, which has arisen from that improvisational origin, is an organizing principle that provides coherence to unusual motion between seventh chords in barbershop music. I contended that these parsimonious voice leading movements between chromatic seventh chords are rooted in the improvisational origin of the style, making barbershop music a fruitful repertoire for application of neo-Riemannian theory. I now propose that there are likely many unexplored applications of neo-Riemannian theory within improvisational genres. There are isolated associations in the music field between improvisation and neo-Riemannian theory, such as Tymoczko's analysis of two compositions by Chopin

discussed in Chapter 3 and Sean Smither's article on guide-tones in tonal jazz music.[5] However, there are possible further applications for any music that follows these three conditions – 1) a consistent harmonic vocabulary, 2) a harmonic framework of pillar chords, and 3) improvisation within that framework.

Barbershop music has exciting potential for use in the undergraduate music theory classroom. Since it has a simple, four-part homorhythmic texture, students may easily identify chords in analysis. This repertoire provides students opportunities for studying music with many seventh chords, and is particularly useful for practicing the identification of secondary dominants. Additionally, students can learn through the study of barbershop about another system of harmony and voice leading outside of the common practice tradition, one that emphasizes consonant, complete tertian harmonies over independent voice parts. In the aural skills classroom, students can sing barbershop music to learn how to tune consonant harmonies and can hear and see a variety of seventh chord types in a relatively small amount of music. The features of barbershop music make it interesting to sing and analyze, and its texture closely resembles the part-writing exercises of the music theory curriculum, making it an effective pedagogical tool.

[5] https://mtosmt.org/issues/mto.19.25.2/mto.19.25.2.smither.html

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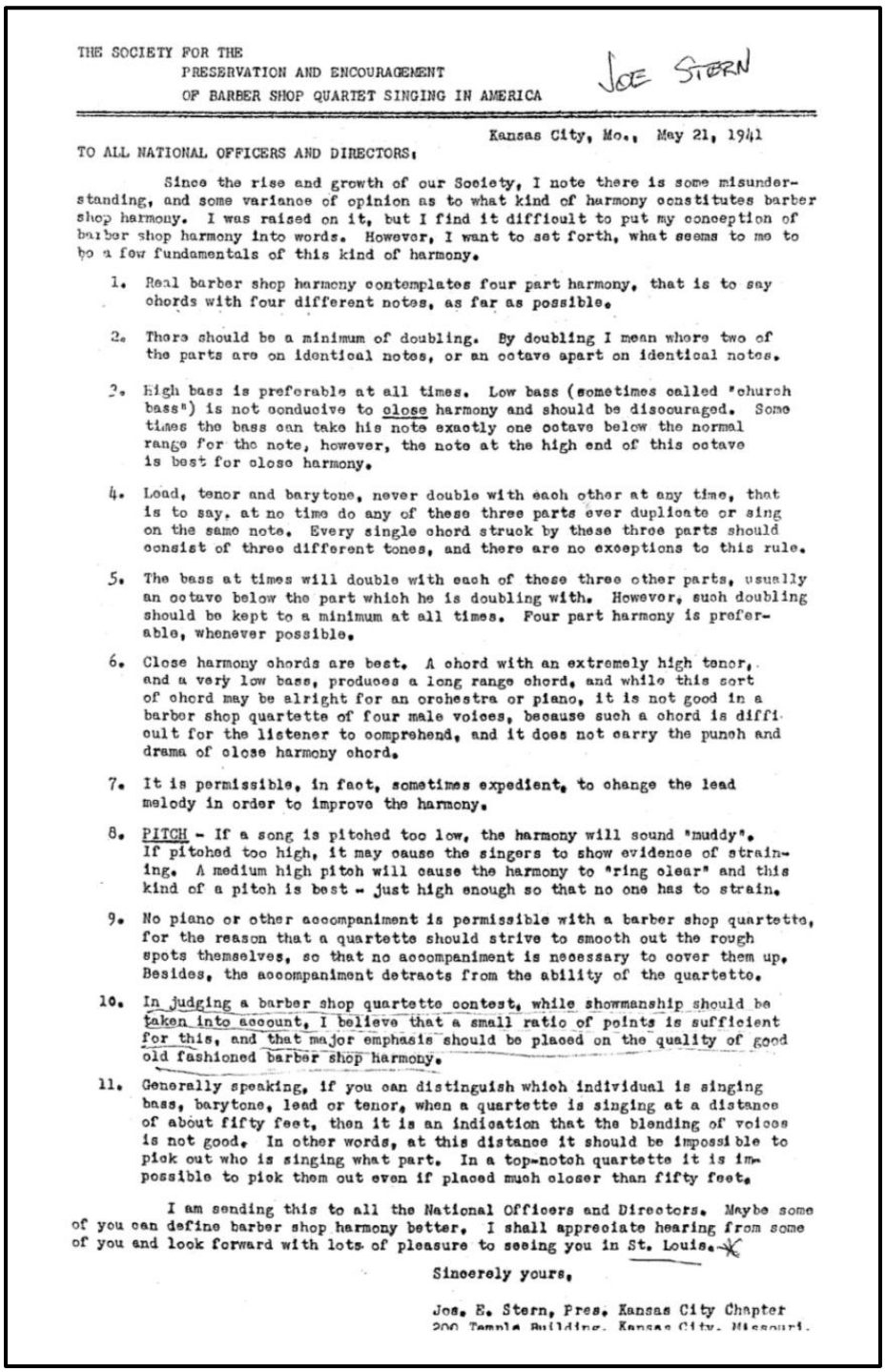
APPENDIX A: Definitions of Barbershop Harmony

Letter from Joseph Stern to SPEBSQSA Officers Providing Guidelines for Judging the 1941 National Contest[6]



THE SOCIETY FOR THE
PRESERVATION AND ENCOURAGEMENT
OF BARBER SHOP QUARTET SINGING IN AMERICA

JOE STERN

Kansas City, Mo., May 21, 1941

TO ALL NATIONAL OFFICERS AND DIRECTORS:

Since the rise and growth of our Society, I note there is some misunderstanding, and some variance of opinion as to what kind of harmony constitutes barber shop harmony. I was raised on it, but I find it difficult to put my conception of barber shop harmony into words. However, I want to set forth, what seems to me to be a few fundamentals of this kind of harmony.

1. Real barber shop harmony contemplates four part harmony, that is to say chords with four different notes, as far as possible.

2. There should be a minimum of doubling. By doubling I mean where two of the parts are on identical notes, or an octave apart on identical notes.

3. High bass is preferable at all times. Low bass (sometimes called "church bass") is not conducive to close harmony and should be discouraged. Some times the bass can take his note exactly one octave below the normal range for the note, however, the note at the high end of this octave is best for close harmony.

4. Lead, tenor and barytone, never double with each other at any time, that is to say, at no time do any of these three parts ever duplicate or sing on the same note. Every single chord struck by these three parts should consist of three different tones, and there are no exceptions to this rule.

5. The bass at times will double with each of these three other parts, usually an octave below the part which he is doubling with. However, such doubling should be kept to a minimum at all times. Four part harmony is preferable, whenever possible.

6. Close harmony chords are best. A chord with an extremely high tenor, and a very low bass, produces a long range chord, and while this sort of chord may be alright for an orchestra or piano, it is not good in a barber shop quartette of four male voices, because such a chord is difficult for the listener to comprehend, and it does not carry the punch and drama of close harmony chord.

7. It is permissible, in fact, sometimes expedient, to change the lead melody in order to improve the harmony.

8. PITCH - If a song is pitched too low, the harmony will sound "muddy". If pitched too high, it may cause the singers to show evidence of straining. A medium high pitch will cause the harmony to "ring clear" and this kind of a pitch is best - just high enough so that no one has to strain.

9. No piano or other accompaniment is permissible with a barber shop quartette, for the reason that a quartette should strive to smooth out the rough spots themselves, so that no accompaniment is necessary to cover them up. Besides, the accompaniment detracts from the ability of the quartette.

10. In judging a barber shop quartette contest, while showmanship should be taken into account, I believe that a small ratio of points is sufficient for this, and that major emphasis should be placed on the quality of good old fashioned barber shop harmony.

11. Generally speaking, if you can distinguish which individual is singing bass, barytone, lead or tenor, when a quartette is singing at a distance of about fifty feet, then it is an indication that the blending of voices is not good. In other words, at this distance it should be impossible to pick out who is singing what part. In a top-notch quartette it is impossible to pick them out even if placed much closer than fifty feet.

I am sending this to all the National Officers and Directors. Maybe some of you can define barber shop harmony better. I shall appreciate hearing from some of you and look forward with lots of pleasure to seeing you in St. Louis.

Sincerely yours,

Jos. E. Stern, Pres. Kansas City Chapter
200 Temple Building, Kansas City, Missouri.

[6] History of the BHS Contest and Judging System (compiled by Kevin Keller), https://drive.google.com/file/d/1yNCkRG9lvL0OF-kDQ7eK5gXJp67lIF8W/view?usp=sharing.

Definition of the Barbershop Style, Published in 1977 in *Contest and Judging Handbook*

Barbershop harmony is a style of unaccompanied vocal music characterized by consonant four-part chords for every melody note. Occasional brief passages may be sung by fewer than four voice-parts.

The voice-parts are called tenor, lead, baritone and bass. The melody is consistently sung by the lead, with the tenor harmonizing above the melody, the bass singing the lowest harmonizing notes below the melody, and the baritone completing the chord either above or below the melody. The melody may be sung occasionally by the bass, but not by the tenor, except for an infrequent note or two to avoid awkward voice leading, and in introductions or tags (codas).

Barbershop music features Major and minor chords and barbershop (dominant-type) seventh chords, resolving primarily on the Circle of Fifths. Sixth, ninth, and Major seventh chords are avoided except where demanded by the melody, while chords containing the minor second interval are not used. The basic harmonization may be embellished with additional chord progressions to provide harmonic interest and rhythmic momentum, to carry over between phrases, or to introduce or close the song effectively.

Barbershop interpretive style permits relatively wide liberties in the treatment of note values – staying within proper musical form – and uses changes in tempo and volume to more effectively create a mood and tell a story artistically.

Relative to an established sense of tonality, the melody line and the harmony parts are enharmonically adjusted in pitch to produce an optimum consonant sound. The resulting pitch relationships are often considerably at variance with those defined by the equal temperament of fixed-pitch instruments. Use of similar word sounds in good quality and optimum volume relationships by each of the voice parts further enhances the sensation of consonance by mutual reinforcement of the harmonics (overtones) to produce the unique full or "expanded" sound characteristic of barbershop harmony.

Most Recent Definition of the Barbershop Style, Published in 2008 in *Contest and Judging Handbook*

Barbershop harmony is a style of unaccompanied vocal music characterized by consonant four-part chords for every melody note in a primarily homorhythmic texture. The melody is consistently sung by the lead, with the tenor harmonizing above the melody, the bass singing the lowest harmonizing notes, and the baritone completing the chord. Occasional brief passages may be sung by fewer than four voice parts.

Barbershop music features songs with understandable lyrics and easily singable melodies, whose tones clearly define a tonal center and imply major and minor chords and barbershop (dominant and secondary dominant) seventh chords that often resolve around the circle of fifths, while also making use of other resolutions. Barbershop music also features a balanced and

symmetrical form. The basic song and its harmonization are embellished by the arranger to provide appropriate support of the song's theme and to close the song effectively.

Barbershop singers adjust pitches to achieve perfectly tuned chords in just intonation while remaining true to the established tonal center. Artistic singing in the barbershop style exhibits a fullness or expansion of sound, precise intonation, a high degree of vocal skill, and a high level of unity and consistency within the ensemble. Ideally, these elements are natural, not manufactured, and free from apparent effort.

The performance of barbershop music uses appropriate musical and visual methods to convey the theme of the song and provide the audience with an emotionally satisfying and entertaining experience. The musical and visual delivery is from the heart, believable, and sensitive to the song and its arrangement throughout. The most stylistic performance artistically melds together the musical and visual aspects to create and sustain the illusions suggested by the music.