SILENCING THE CONGREGATION: THE IMPACT OF MUSICAL AND CULTURAL CHANGES ON CONGREGATIONAL SINGING IN AMERICAN EVANGELICAL CHURCHES

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In recent years there have been numerous blogs written about the decline of participation in church congregational singing. Several recurring reasons have been cited in the discussion of this congregational "silence." One reason cited is that songs are often unfamiliar to congregants, especially with the rise of projecting song lyrics: "In short order we went from 250 songs everyone knows to 250,000+ songs nobody knows. Songs get switched out so frequently that it's impossible to learn them. People can't sing songs they've never heard. And with no musical notes to follow, how is a person supposed to pick up the tune?"[1] Tel Martin, director of music at Princeton Theological Seminary, states:

> Where I have observed a diligence in church music leaders to explore an expanding repertoire, I also detect that many of these songs are not settling very deeply into the souls of our congregations. Whereas I was taught to disdain the congregation that only knew their "forty favorites," I find myself more and more wishing that congregations might thoroughly know and sing forty songs.[2]

Another reason given is that songs are often sung too high or too low by

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[1] David Murrow, "Why Men Have Stopped Singing in Church," *Patheos* (blog), May 8, 2013, accessed September 17, 2018, https://www.patheos.com/blogs/churchformen/2013/05/why-men-have-stopped-singing-in-church/#ixzz333UCdhRZ.

[2] Tel Martin, "They Just Don't Sing Like They Used To: Why Congregational Singing Has Fallen on Hard Times," *Reformed Worship* (blog), June 2007, accessed September 17, 2018, https://www.reformedworship.org/article/june-2007/they-just-dont-sing-they-used.

the worship team for the "average" congregant: "Some [songs] are simply not suited for everyone to sing. People may like a particular hymn. But, if the rhythm, the arrangement, the melody and the register are not suited to the average person, they will not sing it."[3] A third reason given is that the volume from the stage is so loud that congregants are unable to hear each other, which leads to nonparticipation: "The musicians' volume is cranked up so high that congregants can't hear their own voices, or the voices of those around them, even if they would sing."[4] A fourth reason frequently cited is that congregants feel like they are not expected to sing due to the professional nature of the worship band: "We are a culture that is *sung to*. Most of this music is produced professionally through a series of edits that in essence artificially removes all 'imperfection.' The net result of being immersed in all this 'perfect' music is that we feel ashamed of our imperfection. And this shame leads many to silence."[5]

So how did we get to this point of congregational "silence" instead of active participation in singing in the church? While blogs about the decline of congregational participation provide anecdotal observations, most do not explore beyond current symptoms in the church. As this article will address, the reasons cited above are actually outcomes of several broader factors in American culture and music that have occurred over the past five decades. These factors include (1) a cultural decline in communal singing in general, (2) a self-awareness of the non-singer in a culture of musical professionalism, and (3) musical changes to contemporary worship songs that hinder communal singing. While church music leaders cannot avoid the ramifications of the first two factors, a better understanding of recent musical changes in contemporary worship songs regarding harmony, rhythm, and melodic range can help music leaders present songs that will foster communal singing.

I. THE BIBLICAL MANDATE TO SING

Keith and Kristyn Getty's book *Sing! How Worship Transforms Your Life, Family, and Church* explains both the importance of and practical

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[3]Arthur Serratelli, "Why Some People Don't Sing in Church," personal blog, June 14, 2012, accessed March 5, 2018, https://bishopserratelli.rcdop.org/news/why-some-people-dont-sing. Serratelli's discussion is aimed at singing in the Catholic church, but these same issues are equally seen in evangelical churches in America.

[4]Thom Schultz, "Why They Don't Sing on Sunday Anymore," *Holy Soup* (blog), May 21, 2014, accessed September 17, 2018, https://holysoup.com/why-they-dont-sing-on-sunday-anymore.

[5]Martin, "They Just Don't Sing," 2007.

application of congregational singing in church worship. The opening chapters of the book present reasons why Christians should sing. First, human beings are *created to sing*. As they state,

> Your ability to sing is fearfully and wonderfully made. Around the twelve-week mark, the vocal cords of a baby growing in the womb are in place and have been shown to work long before the baby is born. We may sound different, but each of us has the same vocal apparatus—breath flowing up from our lungs, vibrating through vocal cords in our throat, and pushing sound out through the articulators of our mouths, tongues, and lips. Singing is not merely a happy by-product of God's real intent of making us creatures who can speak. It is something we're designed to be able to do.[6]

Second, Christians are *commanded to sing*. There are more than 400 references in Scripture to singing, as well as direct commands to sing. Psalm 149:1 provides one such command: "Sing to the Lord a new song, his praise in the assembly of the saints." However, God's command to sing gives no indication that worshipers are required to sing *skillfully*. For instance, Psalm 71:23 mentions simply to sing for joy: "My lips will shout for joy when I sing praise to you." In other words, the command to sing is given to all people regardless of skill level.

Third, Christians should feel *compelled to sing*. As the Gettys note,

> It goes against the grain of how God created our humanity for us to keep from praising all that is praiseworthy, to keep quiet about what we are pleased with. Since God is most worthy of our praise, above all other people—we will respond not only by knowing we should praise Him, but by feeling we cannot help but praise Him, for it is our joy to do so, as well as our duty.[7]

Singing allows people to express that joy with their singing voice, but it also aids in their thoughts toward God. Ruth King Goddard explains,

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[6]Keith and Kristyn Getty, *Sing! How Worship Transforms Your Life, Family, and Church* (Nashville, TN: B&H Publishing Group, 2017), 2.

[7]Getty, *Sing*!, 25.

"Singing practices in evangelical Christianity should be rooted in a biblical foundation because the whole-being nature of the singing voice enables enhanced internalization and expression of the Word of God in our lives …. As we internalize truth through song, we allow those words to settle in our memory, and shape the way we think and live."[8]

II. CULTURAL CHANGES AND THE DECLINE OF COMMUNAL SINGING

Since Scripture commands Christians to sing, and as Christians we should feel compelled to sing, then what better place to sing about God than in church? Unfortunately, in recent decades there have been shifts in culture and in music that have created barriers to active participation of congregational singing in the church. One barrier to congregational participation in singing is the fact that communal singing is rarely seen in culture anymore. Karen Loew, in her 2012 article in *The Atlantic* titled "How Communal Singing Disappeared from American Life," observes:

> Adults in America don't sing communally. Children routinely sing together in their schools and activities, and even infants have sing-alongs galore to attend. But past the age of maturity, at grown-up commemorations, celebrations, and gatherings, this most essential human yawp of feeling … usually goes missing.[9]

She mentions several reasons why this activity has become almost non-existent in contemporary culture (note, this is not a discussion of church singing, but communal singing in general):

1. We are insecure about our voices.
2. We don't know the words.
3. We resent being forced into an activity together.
4. We feel uncool.
5. The person who dares to begin a song risks having no one join

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[8] Ruth King Goddard, "Who Gets to Sing in the Kingdom?" in *Congregational Music-Making and Community in a Mediated Age*, edited by Anna E. Nekola and Tom Wagner (New York: Routledge, 2016), 78.

[9] Karen Loew, "How Communal Singing Disappeared from American Life," *The Atlantic*, March 28, 2012, accessed September 15, 2018, https://www.theatlantic.com/entertainment/archive/2012/03/how-communal-singing-disappeared-from-american-life/255094.

him/her.

6. The elevation of the *American Idol* model and the demotion of the casual crooner.[10]

While all of these reasons have a correlation to congregational singing in church, the insecurity of an individual regarding his/her voice coupled with the elevation of the American Idol model have significant ramifications for church singing. Kimberley MacNeil's 2013 blog about why people are not singing in church discusses these two issues:

> See, not all that long ago, people grew up singing out loud, in public; it was part of life. But when school budgets started getting cut, the Arts Department was the first to go. The music foundation went away. In addition, as Christian music expanded in influence, it took on a more "professional" edge and became more performance oriented. Bottom line: singing was now for the musically gifted. If I ask someone in today's world, "Do you sing?" they almost instantly say, "only in the shower." …. So now, here we are. Though we have a culture that loves music and has easy access to it, today's music is mostly about *listening* to other people sing. So, the idea that when people come to church once a week and are expected to sing out loud in front of both family and strangers—well—they are looking for ways to get out of that! After all, they have never done that in their life![11]

While there is a cultural decline in communal singing in general, a second barrier to congregational participation in singing is the rise of vocal professionalism in the church like that in secular culture. Ruth King Goddard argues that the reason there is a decline in congregational singing has less to do with new styles and settings that mimic the rock concert environment, or the belief that people are stubborn and refuse to sing. Rather, it has more to do with the demise of what she calls the "personal participatory singing voice"[12] in congregational worship, caused

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[10]Loew, "Communal Singing."

[11]Kimberley MacNeil, "Why Aren't People Singing?" *Ministry Matters* (blog), April 22, 2013, accessed September 18, 2018. https://www.ministrymatters.com/all/entry/3843/why-arent-people-singing.

[12]Goddard, "Sing in the Kingdom?" 71.

by commercial aural media. She asserts that the root cause of non-singing is a "media-driven technological aural fantasy sound-ideal."[13]

With the rise of singing professionalism through shows like *American Idol* and *The Voice*, the role of the personal singing voice has been devalued. Goddard's research data from interviews over the past 25 years indicates a common perception of a "deeply ingrained, often unconscious intolerance of imperfection in singing."[14] Because society is so attuned to profession-al-sounding music, whether from the radio or on television, intolerance for mediocre singing turns into critique. This negative critique creates an innate sense of self-consciousness and shyness to singing in public, especially when compared to the perfected singing sounds in culture often crafted through autotune and other voice-enhancing effects.[15] As Goddard acutely observes,

> Much singing shutdown is triggered by the pervasive audio immersion of what I call a "fantasy sound ideal." Increasingly, fewer people have had the opportunity to audi-ate because there is little recreational and relational singing in the home. Instead, we are immersed in studio-recorded singing performances that do not produce the same effect. The flood of technologically produced professional music media has supplanted the live human voice in our surround-ings of home, work, and car. We are no longer surrounded with sounds of real people singing in real time and place. Instead, we are immersed in sounds produced and crafted to eliminate any imperfection, and executed by elite performers who hone their craft. This technologically driven sound immersion is a major cause of the gradually increasingly insecure ear and the acute awareness that one's personal voice is not even close to measuring up to the sounds in

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[13]Goddard, "Sing in the Kingdom?" 71.

[14]Goddard, "Sing in the Kingdom?" 73.

[15]Goddard probes deeper into the reason behind an individual's sense of self-consciousness of his/her voice: "Why is there such a deep emotional sense of fear and shame related to singing for so many? The singing voice is deeply and intimately connected to our sense of self. It is the only aspect of our being where our physical, emotional, mental, and spiritual selves are united in one exceptionally personal action. When we sing, we project sustained sound beyond our selves, exposing our deeply personal essence. Rejection of one's voice feels like rejection of one's very being." Goddard, "Sing in the Kingdom?" 75–76.

which we have become submerged.[16]

The problem is exacerbated by assuming we need to emulate this sound-ideal, which is a fantasy and creates a false and unattainable standard for anyone attempting to sing. Unfortunately, this musical shutdown when comparing one's untrained voice with the ever-present fantasy sound-ideal happens even at church:

> If a church is seeing transformed lives of those who did not grow up in a singing environment, there are two expectations in tension with each other. First, that people should join in congregational song, and second, that all singing should live up to that fantasy sound-ideal. That tension excludes the insecure singer from joining in song they are encouraged to enter. Professional standards for singing, along with the fantasy sound-ideal and the weak cultural tonal ear have produced congregations of worship spectators, rather than participants.[17]

While musical excellence is something to strive for in church music ministry, there is a tendency to create such a professional sound on stage that offers little opportunity for congregants to add their own voice to the mix: "Increased professionalism and prominence given to the music ministry may work against congregational participation …. So professional, at times, is the music that people are more inclined to take it as a performance to be heard and applauded when finished."[18]

III. MUSICAL CHANGES TO CONGREGATIONAL SONGS

The aforementioned cultural shifts in recent decades provide insight into the declining participation of individuals in communal singing. However, these cultural barriers alone are not creating congregational silence instead of active participation in singing. A third barrier, and arguably the one

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[16]Goddard, "Sing in the Kingdom?" 76.

[17]Goddard, "Sing in the Kingdom?" 77–78.

[18]Serratelli, "Why Some People Don't Sing." Thom Schultz echoes this same sentiment: "It seems it's paramount for church music to be more professional than participatory. The people in the pews know they pale in comparison to the loud voices at the microphones. Quality is worshipped. So the worshippers balk at defiling the quality with their crude crooning. It's better to just fake it with a little lip syncing." Schultz, "Why They Don't Sing."

that has the most direct impact on church singing in recent decades, is the use of songs that musically *hinder* participation in singing.

Congregational songs in many American evangelical churches today are quite different from congregational songs sung fifty years ago. While this is a fairly obvious observation, something less obvious is precisely *what* is different musically between traditional hymnody of previous generations and contemporary worship songs. While a few notable studies have focused on musical aspects in contemporary congregational songs,[19] to date there is not a published study that analyzes and tracks precise musical changes in a large corpus of congregational songs over time, from traditional hymnody to current worship songs.

The following research study, representing a corpus analysis of 474 songs currently sung in American evangelical churches, helps to pinpoint musical changes that have occurred in congregational songs over time in order to assess how these changes have impacted communal singing in the church. The content of the song corpus is based on ranked lists from Christian Copyright Licensing International (CCLI), PraiseCharts, and Hal Leonard.[20] The musical analysis focuses on aspects of harmony, including the number of chords and chord inversions used, harmonic progressions used, and the final cadence for each song; rhythm, including the number of melodic beat displacements for each song; and melody, including the original printed key (from Song Select) and the vocal range of the melodic line for each song, as well as the tessitura for select songs.[21]

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[19]See Robert Woods and Brian Walrath, eds., *The Message in the Music: Studying Contemporary Praise & Worship* (Nashville, TN: Abingdon Press, 2007); Daniel Thornton, "Exploring the Contemporary Congregational Song Genre: Texts, Practices, Industry" (PhD diss., Macquarie University, 2015); Swee Hong Lim and Lester Ruth, *Lovin' on Jesus: A Concise History of Contemporary Worship* (Nashville, TN: Abingdon Press, 2017); and Samuel Ng, "Musical Eschatology in Contemporary Christian Worship Songs," in *Music Theory Online*, vol. 28.4.5, 2022.

[20]The main corpus, made up of 374 songs, is a combination of CCLI's semi-annual Top 25 song lists from 1989–2020, CCLI's 100 Most Popular Public Domain Songs (from June 2016–2019), PraiseCharts Top 100 Worship Songs of All Time (from 2018), Hal Leonard's "The Best Praise & Worship Songs Ever" (2004), and Hal Leonard's "More of the Best Praise & Worship Songs Ever" (2018). Two additional corpuses were created from CCLI's Top 50 "Gettys" Songs and CCLI's Top 50 "Sovereign Grace" songs, since both groups are scarcely represented in the other ranked lists, but are sung in many churches in America.

[21]The musical elements of harmony, rhythm, and melody are considered primary musical parameters in tonal music. In his discussion of the degree of closure at the end of a work, theorist Leonard Meyer states, "Clearly some parameters are more important shaping forces than others. In tonal music, for instance, melody, rhythm, and harmony are on the whole more important than timbre, dynamics, and register." Leonard B. Meyer, *Explaining Music: Essays and Explorations* (Berkeley, CA: University of California Press, 1973), 88. While there are other musical aspects that have changed over time, they would be considered musical performance aspects as opposed to primary

While the following discussion will be more technical in nature, the findings help shed light on very real changes that have significant impact on congregational participation in singing.

The songs in the main corpus (374 songs) were compiled into five time periods to reflect music changes over time: (1) songs written prior to 1970, (2) songs written from 1970-1989, (3) songs written from 1990-1999, (4) songs written from 2000-2009, and (5) songs written from 2010-2019. The main corpus consists of songs that have gained popularity within evangelical churches and/or industry outlets. Additional mini corpus studies were conducted on the top 50 songs by the Gettys and the top 50 songs by Sovereign Grace, based on popularity in CCLI data, in order to compare their music to the main corpus song data.

1. *Musical Analysis: Harmony*. The first musical consideration in the corpus study was harmony. The analysis included a tabulation of the number of nonrecurring chords used in a song, as well as the number of nonrecurring chordal inversions. There are several interesting results from the harmonic chord analysis, with the results shown in Figures 1 and 2. (These and succeeding figures are collected at the end of this article beginning on page 112.) First, the number of nonrecurring chords in a song, as well as the number of chordal inversions used in a song, significantly decreases overall in songs written after 1990. Songs prior to 1990 have a concentrated number of songs using at least two chordal inversions, and between three to eight nonrecurring chords. Songs written after 1990, however, shift toward more root positions only, and the number of nonrecurring chords in each song are concentrated around four to five chords. In fact, in the songs written since 2010, over 90 percent use two chordal inversions or less, with more than 30 percent of the songs using only root-position chords. This overwhelming use of root position chords in contemporary worship songs in recent decades follows similar trends seen in rock music, based on findings from the corpus analysis of rock harmony in DeClercq/Temperley 2011.[22] The results for both the Gettys and Sovereign Grace songs tend to track in the middle between traditional hymnody and contemporary worship songs, with the Gettys leaning more toward the results of songs prior to 1970 and Sovereign Grace leaning

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elements of the music itself.

[22]Trevor Declerq and David Temperley, "A Corpus Analysis of Rock Harmony," in *Popular Music*, vol. 30/I, 2011, 47–70.

more toward the results of songs after 1990.

Second, the choice of chords used in songs vary significantly over the last fifty years, as shown in Figure 3. The majority of songs written prior to 1990 use at least one secondary dominant chord. The use of secondary dominant chords shows a more complex harmonic structure than simply using diatonic chords (chords within the established key). The use of secondary dominants decreases in songs in the 1990s, and dramatically decreases after 2000, with only 3 percent of songs after 2010 using a secondary dominant chord. Also, the use of the vi7 chord and, to a lesser extent, the IV7 chord (not shown in the chart) increases significantly in songs written after 1970. Prior to 1970, songs utilized the vi and IV almost exclusively as a triad, following common practice tonality. The increased use of vi7 and IV7 (along with ii7 and iii7) in songs after 1970 is perhaps an influence of jazz harmony in recent decades. Another striking change is that the use of the V7 chord abruptly drops in songs written after 1990. The loss of the chordal seventh tendency tone weakens the cadential motion toward the tonic (I) chord, or the tonic substitute (vi) chord. By removing the chordal seventh of the dominant, the resolution to the subdominant (IV) chord becomes a viable option, based on the single tendency tone in the dominant triad. This progression, V-IV, while a rarity in common-practice tonality and hymnody, is used frequently in recent songs, both sacred and secular.[23]

In addition to analyzing individual chords, specific harmonic progressions were also analyzed, with results shown in Figure 4. The most prominent change that has occurred between songs prior to 1970 and songs particularly after 2000 is the decrease of the traditional dominant-tonic progression and the increase of the subdominant-tonic progression. In fact, the use of the vi-IV-I progression is particularly intriguing, as it occurs in less than 4 percent of songs prior to 1970, but is in a majority of songs after 2010. Also, the use of V-IV retrogression, which occurs in only one song prior to 1970, is used in the majority of songs after 2000. Both the Gettys and Sovereign Grace songs tend to use more contemporary harmonic progressions, which makes sense as they are aiming to provide modern-sounding music.

Lastly, the final harmonic cadence was analyzed in order to assess song endings, with results shown in Figure 5. As is evident in the results, the

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[23]For example, DeClercq and Temperley, "A Corpus Analysis of Rock Harmony," discusses the prevalence of the V-IV-I progression in rock harmony, 47–48 and 60–62.

use of a dominant-tonic ending, whether using V or V7, decreases steadily after 1970 with a more dramatic decrease in songs after 2000. In contrast, the use of a final IV-I (plagal motion) increases steadily in songs after 1990. Most notably, however, is the use of a final cadence that ends away from tonic. This motion is not seen in a single song prior to 1990, which follows traditional tonality's overwhelming use of tonic endings. However, after 2000, more than a third of the songs in the corpus end away from tonic. While the majority of these songs end on a IV chord, there are numerous songs that end with a V or Vsus, or even ii or vi chord. While it is beyond the scope of this article to fully unpack the ramifications to these findings, the previous analysis demonstrates significant changes that have occurred to the harmonic language of congregational songs in recent decades, mirroring the harmonic changes that have occurred in American secular music.

2. *Musical Analysis: Rhythm*. The second consideration in the corpus study was rhythm, particularly melodic rhythm. While harmonic changes do not necessarily have a negative impact on congregational participation in singing, the melodic rhythm of a song has a major impact on a group's ability to sing together. The purpose of this analysis was to determine the complexity of a melody's rhythm, based on the use of beat displacements. Displacing the beat can occur in two ways, as shown in Example 1: (1) front-beat displacement, in which the melodic note comes in earlier than anticipated, or (2) back-beat displacement, in which the melodic note comes in later than anticipated. These displacements occur at the eighth-note or sixteenth-note, creating a total of four displacement types. The higher the number of beat displacements used in a melodic line, along with increased use of types of beat displacements, the more complex and unpredictable the melodic rhythm. This creates increased difficulty for communal singing, especially without printed sheet music from which to read.

Figure 6 presents some of the findings from the melodic rhythm analysis, based on a tabulation of the number of beat displacements in a melody line as well as the number of types of beat displacements used. There are several major shifts in the complexity of melodic rhythm, particularly after 1990, as indicated in these findings. First, the percentage of songs that utilize beat displacement has grown significantly since 1990. This can be seen in the first three rows in the figure. As the numbers show, prior to 1970 less than 7 percent of songs have an instance of any sort of beat

displacement in the melodic rhythm, and not a single song utilizes both types. Since 1990 however, almost 9 out of 10 songs utilize eighth-note displacements, and over half utilize both types of displacements.

Second, there is a dramatic increase not only in songs that use beat displacements but also in the number of instances of beat displacements used in a song. The fourth row in Figure 6 shows the percentage of songs that use more than ten beat displacements throughout the melody. Not a single song in the corpus prior to 1970 utilizes more than ten. In contrast, starting in the 1990s at least 8 out of 10 songs utilized more than ten beat displacements. The Gettys songs follow similar statistics to traditional hymnody while the Sovereign Grace songs align more closely with the contemporary congregational songs.

Third, there is also a dramatic increase in the use of multiple types of beat displacements after 1970, and particularly the use of three or more types of beat displacements after 2000. When only one type of beat displacement is used, it is generally the front-beat eighth-note displacement. This type of beat displacement is generally easier for a group of people to sing together after hearing it. However, when a song utilizes at least three types of beat displacements, at least one of the sixteenth-note displacements types is being used. This type of displacement is generally harder for a group of people to sing together. While songs prior to 1970 rarely utilize the sixteenth-note beat displacement, more than a quarter of songs after 2000, and almost a third of songs after 2010, use three or four types of beat displacements.

Figure 7 shows the number of melodic beat displacements used in each song and trendlines to show changes over time. There is a dramatic increase in the number of beat displacements in songs after 1990. Interestingly, the average use of eighth-note displacements and total displacements decreases around 2010, while the average use of sixteenth-note displacements increases steadily and actually becomes more utilized than the eighth-note displacement around 2015. However, in general, songs after 2000 use an average of at least 25 beat displacements per song, whereas songs prior to 1990 use an average of less than five, showing a striking change toward rhythmic complexity in the majority of melody lines in recent congregational songs. This increased complexity in the melodic rhythm corresponds to the more oral, improvisatory tradition of music making in recent decades as opposed to a written-out music tradition.[24]

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[24]The change from a more written music tradition to an oral, improvisatory tradition is seen in

3. *Musical Analysis: Melody.* The third analytical consideration in the corpus study was melody; specifically, the melodic range of each song in the original printed key and the tessitura in select songs. The melodic range includes the highest and lowest notes sung in the melody. Based on the vocal ranges given in the *New Harvard Dictionary of Music* voice categories, shown in Figure 8, a strict voice range overlap in which all voice types should be able to sing comfortably is C4-C5 (one octave) using octave equivalence. A more flexible voice range overlap would increase each limit by a tone to Bb3-D5.[25] This gives a voice range overlap of an octave plus a third (sixteen semitones). Figure 9 shows the vocal range of each song on a graph in chronological order. Prior to 1990, almost 90 percent of melodies were within the voice range overlap. After 2000, there is a dramatic shift both upward and downward in melodic lines, such that over half of the songs written after 2000 have melodies that include notes higher than the voice range overlap, reaching E5, F#5, and even G5, particularly in the last decade.

The dramatic shifts in range, on both the low and high extremes, has to do with songs being written for solo artists with specific voice types. As those songs make their way into the church for use as congregational songs, the original key may not work well for communal singing. To be fair, songs can be transposed in order to provide a more comfortable vocal range for songs and indeed that is the case with some songs, as represented in Figure 10. However, even using transposition almost a third of the songs written after the year 2000 have melodies that are larger than the voice range overlap, and more than 10 percent of songs that are at least three semitones beyond the overlap.[26] Interestingly, the most common vocal range for songs up to 2010 was an octave (12 semitones), whereas the most common vocal range in songs after 2010 is 17 semitones. Due to the larger range, these songs have less options for key areas in order to maintain the voice range overlap for the majority of the song.

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secular musical culture: "Most pop [music] today is driven less by what the composer writes down than the performance taking raw materials and fashioning it into an individually charismatic performance…. New pop is spoken music, old pop was much more written down." John McWhorter, *Doing Our Own Thing: The Degradation of Language and Music and Why We Should, Like, Care* (New York: Penguin Group Inc., 2003), 209–10.

[25] The flexible voice range overlap (Bb3–D5 octave equivalent) would assume a high limit based on "alto" high note and a low limit based on "tenor" low note, down one semitone (any flat-key area will have Bb instead of B-natural).

[26] If the range of a melody is 16 half-steps or lower, then that song can be transposed to a key that will allow the melody to lie within the voice range overlap.

Although many songs can be transposed to fit within the voice range overlap, worship leaders may tend to still sing the song in the original key. As guitars increasingly have become the dominant instrument in worship bands, the key areas have changed to reflect guitar-led instrumentation, particularly the keys of the open strings on the guitar (G, D, A, E, B). As Figure 11 shows, prior to 1970 the majority of songs were written in flat-key areas which work well for orchestral instrumentation. After 1990, however, two-thirds of the songs in the corpus are written in sharp-key areas with more than 30 percent of the songs in keys with at least three sharps (A, E, B, F#). It is these keys specifically which are responsible for driving the melodic vocal range higher. Most melodies go up to the 5th scale degree in a key or to the octave. In the keys of A and E, that high note would be E. In the case of B and F#, that high note would be F#. In other words, the guitar-led instrumentation has caused more songwriters to write in keys well-suited for guitarists, which in turn often causes melody lines to be shifted higher than the voice-range overlap.[27]

While the previous data looks at the overall vocal range in each song, Figure 12 takes a detailed look at the tessitura in select songs. A visual inspection of a song's melodic line (i.e., lead sheet) will provide a quick overview of recurring notes and can give a general idea of a song's tessitura. A more precise identification of a song's tessitura involves tabulating the amount of time each individual pitch is sung and adding those values together. Since this process of tabulating each pitch duration can be painstakingly arduous, this process was not completed for every song in the main corpus. Rather, representative corpi of 45 songs were chosen to show differences between public domain songs (traditional hymnody in the corpus) and contemporary congregational songs.[28] In looking at the percentages for each pitch in the combined lists, the public domain songs have a clear center of pitches around G4-A4. Conversely, the contemporary congregational songs written after 2010 have a more evenly distributed tessitura, with especially higher percentages from pitches D5-F5. This tessitura shift greatly affects certain voice types from being able to sing a melodic line at pitch and hinders participation in singing.

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[27]Those same key areas are quite difficult for orchestra instruments, particularly instruments of transposition. For instance, a song performed in the key of B has 5 sharps, and for Bb clarinets, the key signature has 7 sharps. If you transpose that song down a half step to Bb, there are now 2 flats in the key, and for Bb clarinets, there are no sharps or flats. This is something not often thought about by worship leaders but has a big impact on instrumentalists if using an orchestra.

[28]The contemporary songs were selected from the 25 Top CCLI song list from June 2019, with 20 of those songs written after 2010.

IV. CONCLUSION

Based on the findings in the corpus research, many songs that are considered popular for congregational singing today are not necessarily songs that work well for communal singing. As harmony has been simplified, melodic rhythm has become increasingly more complex. Without printed sheet music, the increasingly complexity to melodic rhythm challenges communal participation in singing. Furthermore, the vocal range and tessitura of many contemporary congregational songs have expanded and shifted higher, moving beyond the voice range overlap and creating increased difficulty in certain voice types to actively participate. Coupled with the fact that our culture in general is not a singing culture, these musical changes create a recipe for congregational silence instead of robust participation.

While some of the findings may be intuitive to music leaders, the purpose of the corpus study is to offer clarity and precision to the discussion of declining congregational singing by providing objective data from several hundred songs currently sung in American evangelical churches. With this research, it is hoped that church music leaders will recognize and understand the musical changes that have affected songs in recent decades, and that they will use this knowledge when selecting songs for congregational singing.

With current technology, there is easy access to an overwhelming number of songs from which to choose. It can be difficult at times to decide what to sing. Of utmost importance, however, is to choose songs that allow our congregation to actively participate in corporate worship through singing while avoiding songs that are a hindrance musically and theologically.[29] This is vital to producing communal singing and will aid in what Thomas Turino refers to as a participatory musical performance: "a special type of artistic practice in which there are no artist-audience distinction, only participants and potential participants … the primary goal is to involve the maximum number of people."[30] If this truly is the goal of congregational singing, then that means certain sacrifices may need to be made by the music leader(s) in order to promote active participation by the congregants. As Goddard states, "Musical leadership must submit to the non-musicians to better help them participate in the life-giving words

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[29]For a lyrical study on the same corpus, see Nathan Burggraff, "'I Wanna Talk About Me': Analyzing the Balance of Focus between God and Man in Congregational Songs of the American Evangelical Church," *Artistic Theologian* 9 (2021): 19–41.

[30]Thomas Turino, *Music as Social Life: The Politics of Participation* (Chicago: University of Chicago Press, 2008), 26.

of worship."[31] The musical and cultural barriers that have increasingly silenced congregational participation in singing are very real; recognizing those barriers and working to overcome them are crucial to fostering an active singing congregation.

	<1970	1970-1989	1990-1999	2000-2009	2010-2019	Gettys	Sov. Grace
2	0.7						
3	15.7	6.7	4.0	1.6	4.8		
4	22.9	10.0	28.0	50.0	48.4	26.0	12.0
5	21.4	15.0	26.0	32.8	40.3	36.0	48.0
6	12.9	25.0	28.0	9.4	6.5	26.0	24.0
7	12.1	23.3	2.0	4.7		6.0	10.0
8	9.3	11.7	4.0	1.6		6.0	2.0
9	1.4	3.3	6.0				4.0
10	2.9	1.7	2.0				
11	0.7	3.3					
% of:	140 songs	60 songs	50 songs	64 songs	62 songs	50 songs	50 songs

Figure 1: Tabulation of Nonrecurring Chords Used

	<1970	1970-1989	1990-1999	2000-2009	2010-2019	Gettys	Sov. Grace
0	2.1	10.0	12.0	21.9	32.2	4.0	20.0
1	2.9	10.0	28.0	39.1	33.9	12.0	30.0
2	12.9	15.0	28.0	18.8	27.4	16.0	22.0
3	25.7	21.7	10.0	7.8	3.2	26.0	18.0
4	13.6	18.3	12.0	9.4	3.2	24.0	4.0
5	15.7	8.3	2.0	3.1		14.0	2.0
6	11.4	8.3	4.0			2.0	4.0
7	6.4	5.0	2.0			2.0	
8	5.7	1.7	2.0				
9	1.4	1.7					
10	1.4						
11	0.7						
% of:	140 songs	60 songs	50 songs	64 songs	62 songs	50 songs	50 songs

Figure 2: Tabulation of Nonrecurring Chordal Inversions Used

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[31]Goddard, "Sing in the Kingdom?" 79–80.

	<1970	1970-1989	1990-1999	2000-2009	2010-2019	Gettys	Sov. Grace
ii	52.9	88.3	68.0	43.8	43.5	70.0	82.0
iii	15.7	40.0	24.0	6.3	9.7	22.0	36.0
IV	98.6	95.0	100	100	100	98.0	100
V	100	100	98.0	100	95.2	100	98.0
V7	89.3	76.7	22.0	6.3	3.2	42.0	10.0
vi	45.0	80.0	86.0	93.8	96.8	92.0	94.0
vi7	1.4	40.0	40.0	46.9	54.8	50.0	34.0
Sec. Dom.	57.9	51.7	22.0	7.8	3.2	16.0	20.0
IV/5	2.1	55.0	36.0	3.1		34.0	12.0
% of:	140 songs	60 songs	50 songs	64 songs	62 songs	50 songs	50 songs

Figure 3: Specific Harmonies Used

	<1970	1970-1989	1990-1999	2000-2009	2010-2019	Gettys	Sov. Grace
PD-V-I	76.4	96.7	86.0	46.9	40.3	86.0	76.0
PD-V	77.1	96.7	88.0	60.9	58.1	94.0	86.0
V-I	99.3	98.3	94.0	73.4	67.7	96.0	92.0
V-vi	22.1	28.3	56.0	54.7	62.9	56.0	68.0
V-IV	0.7	25.0	48.0	65.6	67.7	50.0	72.0
IV-I	65.0	43.3	66.0	84.4	91.9	76.0	88.0
vi-IV-I	3.6	1.7	14.0	35.9	54.8	16.0	44.0
% of:	140 songs	60 songs	50 songs	64 songs	62 songs	50 songs	50 songs

Figure 4: Specific Harmonic Progressions Used
(PD = PreDominant Chord ii or IV)

	<1970	1970-1989	1990-1999	2000-2009	2010-2019	Gettys	Sov. Grace
V7-I	82.1	56.7	12.0			24.0	6.0
V-I	15.7	26.7	50.0	26.6	25.8	44.0	58.0
V(7)-I	97.9	83.3	62.0	26.6	25.8	68.0	64.0
IV/5-I		11.7	16.0	1.6		10.0	
IV-I	1.4	1.7	14.0	28.1	32.3	6.0	26.0
Not I			6.0	37.5	40.3	12.0	8.0
% of:	140 songs	60 songs	50 songs	64 songs	62 songs	50 songs	50 songs

Figure 5: Final Harmonic Cadence Used

(Traditional rhythm of Amazing Grace)

(Recomposed rhythm of Amazing Grace with various beat displacements)

1. 8th note front-beat   3. 16th note front-beat

2. 8th note back-beat   4. 16th note back-beat

Example 1: Beat Displacement Types in "Amazing Grace"

	<1970	1970-1989	1990-1999	2000-2009	2010-2019	Gettys	Sov. Grace
8th	5.0	43.4	90.0	92.2	82.3	22.0	70.0
16th	1.4	18.3	54.0	71.9	83.9	6.0	42.0
Both		13.3	50.0	67.2	69.4		32.0
> 10		16.7	80.0	93.8	82.3	2.0	60.0
0 Types	93.6	51.7	6.0	3.1	3.2	72.0	20.0
1+ Types	6.4	48.3	94.0	96.9	96.8	28.0	80.0
2+ Types		15.0	52.0	75.0	74.2		36.0
3+ Types		3.3	8.0	25.0	30.6		4.0
4 Types			2.0	7.8	4.8		
% of:	140 songs	60 songs	50 songs	64 songs	62 songs	50 songs	50 songs

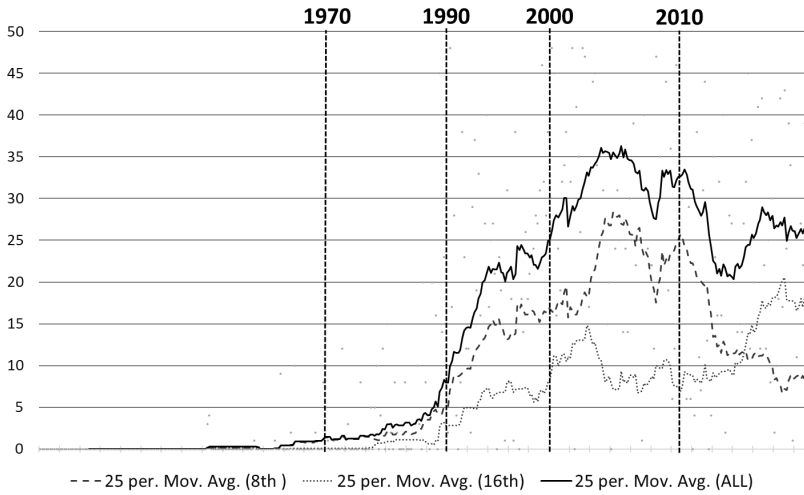Figure 6: The Use of Beat Displacements in Melodic Lines

Figure 7: Number of Melodic Beat Displacements in Songs of the Main Corpus

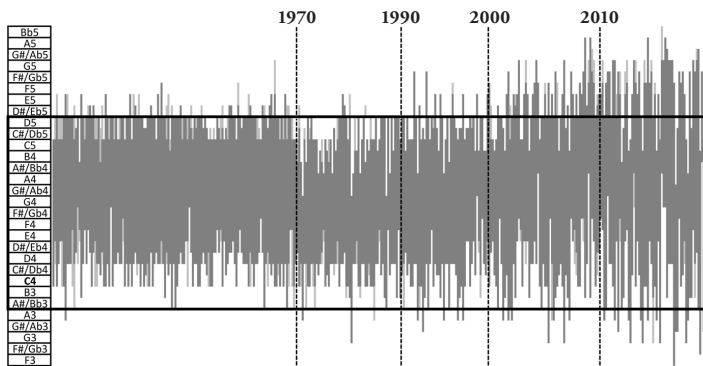Figure 8: Vocal Ranges According to the New Harvard Dictionary of Music

Figure 9: Vocal Range of Melodies (Original Key) in the Main Corpus
(The light gray denotes a pitch used only once in a song.)

Voice Range Overlap	<1970	1970-1989	1990-1999	2000-2009	2010-2019	Gettys	Sov. Grace
24				1.6	3.2		
23							
22				4.7	4.8		
21				1.6	1.6		
20							
19	0.7		2.0	1.6	4.8	2.0	2.0
18							
17	0.7		4.0	7.8	25.8	22.0	14.0
16	3.6		6.0	9.4	11.3	8.0	12.0
15	1.4	5.0	4.0	1.6	3.2	18.0	18.0
14	13.6	8.3	8.0	14.1	12.9	32.0	14.0
13	4.3	5.0	12.0	10.9	1.6		10.0
12	41.4	28.3	32.0	28.1	19.4	14.0	20.0
11	0.7	1.7	2.0			2.0	2.0
10	11.4	15.0	14.0	4.7	6.5		6.0
9	10.7	16.7	8.0	3.1	3.2	2.0	2.0
8	5.0	8.3	6.0	6.3			
7	5.0	10.0	2.0	4.7	1.6		
6	0.7						
5	0.7						
4		1.7					
% of:	140 songs	60 songs	50 songs	64 songs	62 songs	50 songs	50 songs

Figure 10: Vocal Range of Melodic Line in Semitones
(12 semitones = 1 octave)

|	<1970	1970-1989	1990-1999	2000-2009	2010-2019	Gettys	Sov. Grace
Gb				1.6			
Db	4.3				6.5	2.0	4.0
Ab	14.3	3.3		4.7	1.6		
Eb/c	8.6	10.0	2.0	1.6	3.2	6.0	2.0
Bb/g	8.6	10.0	6.0	9.4	11.3	6.0	2.0
F	20.7	16.7	12.0	6.3	1.6	4.0	
C	9.3	18.3	8.0	14.1	16.1	24.0	12.0
G/e	23.6	10.0	24.0	12.5	12.9	2.0	26.0
D	9.3	26.7	18.0	17.2	16.1	40.0	20.0
A	1.4	3.3	10.0	9.4	9.7	12.0	20.0
E		1.7	20.0	9.4	3.2	4.0	12.0
B				14.1	14.5		2.0
F#					3.2		
% of:	140 songs	60 songs	50 songs	64 songs	62 songs	50 songs	50 songs

Figure 11: Original Printed Key (based on Song Select)
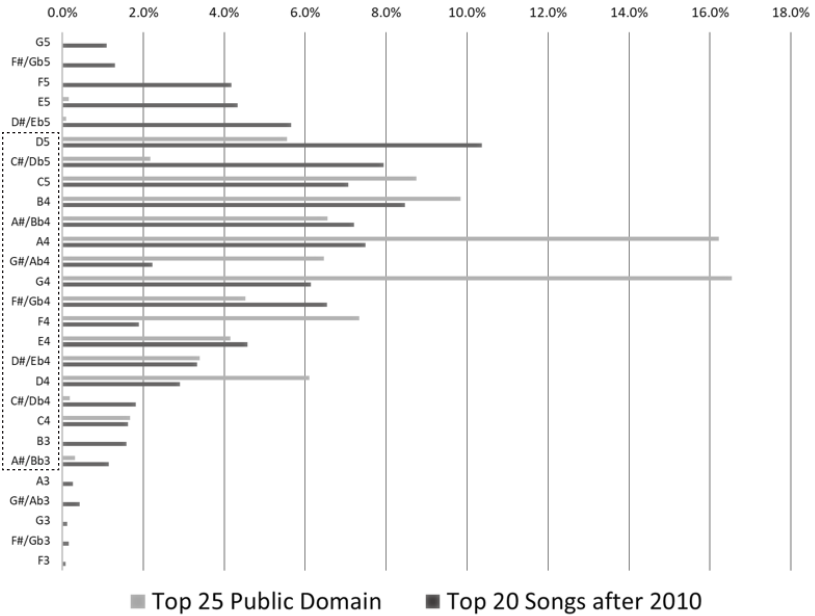
Figure 12: Average Tessitura Pitches in Select Songs from the Main Corpus
(Voice range overlap shown in the dotted box)