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Gender and Perception of Music Genre in College Students

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Abstract

This research examined the relationship between music genre and gender, and specifically, the relationship between a participant's perceived music genre and the gender of the vocalist. Sixty-nine college students listed five songs that they enjoy, then classified each song into one of 15 music genre options. Each of the listed songs were assessed and coded for vocalist gender, which was compared to the genre classifications and the gender of the participant. Male vocalists were dominant in every music genre tested, with an overall ratio of 3.7 male vocalists to every one female vocalist. Pop was the notably more equitable exception, as it had a ratio of 1.15:1. However, female vocalists were constricted to the pop genre, as nearly half the listed songs with female vocalists were considered to be pop. Female vocalists also had a disproportionately female (73%) listenership, while male vocalists had a roughly evenly split audience. Both male and female listeners predominantly listened to male vocalists, but male listeners' selections were even more disproportionately male (88%). Pop listeners were mostly female students (77%), while rock listeners were mostly male students (69%). Additionally, the study found significant gender differences in the listeners' music genre perception.

Keywords: music genre, gender differences, implicit bias, media representation, gender bias, auditory perception

Gender and Perception of Music Genre in College Students

Gender has an influence on the evaluation of the creative arts, according to prior studies. Creativity, as a characteristic, has taken on a gendered perception as a more male attribute. Specifically, a man is attributed with more creativity than a woman, even when their output is identical (Proudfoot et al., 2015). Not only is there an unwarranted exaggeration of male creativity, but there is also an undervaluation of women's creativity. For instance, when being evaluated by supervisors, female executives are rated as less innovative than their male counterparts (Proudfoot et al., 2015). Although, this bias is not necessarily related to any behavioral factors. While stereotypical masculine behaviors significantly enhance a man's perceived creativity, these exact same behaviors do not have the same effect on a woman's perceived creativity (Proudfoot et al., 2015).

This underlying bias against women's creativity may be impacting the evaluation of the creative arts. While a 1983 Australian study found no overall bias against women in the evaluation of paintings, they did find that women's art was consistently rated lower if it was described as an award winner (Ellerman & Smith, 1983). This suggests that there is some sort of devaluation specifically of successful women's art. This devaluation of women's paintings has significant financial implications, as the average price of a painting by a woman is worth 25% less than a painting by a man (Savolainen, 2006). Artistic style was the only variable that could partially explain this disparity, but the study did not rule out the influence of gender bias in painting prices (Savolainen, 2006).

This anti-female bias in visual arts could also be permeating the exhibit selection process of art galleries and museums. Despite some curators claiming to make a concerted effort to be more inclusive, of the work obtained by the nation's top museums from 2008 to 2018, merely

11% was created by women (Jacobs, 2019). From an intersectional lens, only 3% of the female work selected were created by African American women. In other words, African American women made up only 1/3 of a percent of the work acquired by the top art museums from 2008 to 2018 (Jacobs, 2019).

This lack of representation of women's work is not limited to just paintings and visual arts. A 2014 study showed that male editors, the heavy majority, have a tendency to select more writing from men than women, especially in nonfiction and essay genres, for their anthologies (Oggins, 2014). This is consistent across other genres with evidence that male scientists cite more literature written by men than women (Oggins, 2014).

In other academic realms, this devaluation of women's contributions persists, even in the manner that they are both introduced and referred to. A 2018 Cornell conglomerate of eight studies found that men were more likely than women to be called by only their surname in academic, professional, and political contexts, even when discussed in both formal and casual circumstances. On average, people are more than twice as likely to refer to male professionals by their surname than female professionals (Atir & Ferguson, 2018). The study also found that researchers referred only by surname were perceived to be more well-known and eminent than those referred by their full name. Researchers who were referred by only their surname were also rated as more deserving of a hypothetical career award by 14%. Taken together, it is possible that female professionals are unwarrantedly perceived as less eminent and well-known than male professionals, and therefore are judged as less deserving of their benefits and awards (Atir & Ferguson, 2018). This referential gender bias also persists when professionals are being introduced, as the frequency of the use of professional titles indicate. A 2017 observational study of two medical conferences found that female speakers used professional titles for 96% of

the professionals that they introduced, while male speakers only used them 66% of the time. Particularly, male introducers used professional titles for other men 72% of the time, but only used professional titles for 49% of the female professionals (Files et al., 2017). These different referential and formality practices could be contributing to the dismissal of female authority and the devaluation of women's work.

In addition to visual arts and written work, the gender bias extends to the perception of music as well. A 2003 study from the United Kingdom presented music from fictitious male and female composers and found evidence for an anti-female bias when only given the composer's name, but the evidence was limited to the new age genre (Colley et al., 2003). The evidence for gender bias in music was further broadened by an Australian study that established that male participants listed a more unequal ratio of males and females in their artist preferences than female participants (Millar, 2008).

This gender bias in music may be more concentrated in certain musical genres than others. For instance, another 2003 study from the United Kingdom evaluated adolescents' perception of classical, jazz, and new age composers while accounting for gender of both the composer and the listener. They found that gender was a salient factor in only the jazz genre, where there was a pro-female bias from female participants and an anti-female bias among male participants (North et al., 2003).

Research shows that gender bias exists in other music genres as well. An analysis of 800 popular songs from 2012-2019 compared the gender ratios for six music genres: pop, hip-hop/rap, alternative, country, R&B/soul, and dance/electronica using iTunes genre classifications. The gender ratio of the totality of these 1624 artists, regardless of genre, was 3.6 males to one female artist. Pop, the genre with by far the largest sample size, was the most

equitable music genre with a 2.1:1 ratio of males to females; in other words, pop was 67.4% male to 32.6% female. Alternative had the most uneven distribution with 89% male and 11% female, an 8.1:1 ratio. Hip-hop/rap and R&B/soul both had ratios around 6.7:1, country had a 4.4:1 ratio, and dance/electronica had a 3.7:1 ratio (Smith et al., 2020). This data suggests that there is a gender bias in many music genres, and that there is a spectrum for how wide these disparities are (see **Appendix** to compare these ratios to the results of this study). However, there are still some notable omissions, like rock, in its options for genre classification. Research that includes more genres could be more precise in determining how gender influences music genre. Since this study used iTunes genre classification data, it also did not account for the subjectivity of music genre classifications. Perhaps, there is even gender bias in how these music genres are classified by the listener.

This research sought to examine the relationship between music genre and gender, and specifically, the relationship between a participant's perceived music genre and the gender of the vocalist. This research also sought to discover if this potential relationship is associated with the gender of the participant. Various other subject variables could mediate this relationship, such as race, general music preferences, age, etc. This study provides insight into the perceived gender differences across music genre by testing the following hypotheses:

H1: Songs with female vocalists will be confined to mostly the pop genre, while songs with male vocalists will be represented in a variety of music genres.

H2: Male listeners will have more limited genre classifications of female vocalists compared to female listeners. In other words, the aforementioned hypothesis (H1) is expected to be more pronounced in male listeners.

H3: Both male and female listeners will listen to more male vocalists, but this bias will be more pronounced in male listeners.

Method

Participants

The participants were college students from Coastal Carolina University. Students in psychology 101 classes completed the virtual survey for class credit. Demographically, the group of sixty-nine participants were composed of 38 women, 30 men, and 1 non-binary student, with an average age of 19 ($SD = 1.06$). Additionally, the group was 68% white, 24.6% African-American, and 7.2% Hispanic.

Procedure

The participants were first asked open-endedly to list at least 5 songs that they like, based on Millar's 2008 study. Since this study analyzed characteristics of artists, participants were encouraged to avoid repeating songs by the same artist. Once they finished listing their songs, they were asked to classify each song into a music genre using a forced choice list of music genres. The participants were informed that it could be helpful to treat these genres as umbrella terms that would encapsulate more specific subgenres.

The participants were then instructed to complete the Short Test of Music Preferences (STOMP) questionnaire), with an additional "indie" genre, that will be used to determine the participants' baseline music preferences (Rentfrow & Gosling, 2003). Lastly, the participants were asked to complete a demographic information form. This included questions about the participants' gender, race/ethnicity, age, and home state/country.

Measures

Encoding Procedure

The responses from the participants were encoded for further data analysis. The name of each song and artist, the genre classification of each song, the results of the STOMP questionnaire, and the demographic information were all encoded to be analyzed. From the artist name, the vocalist gender were found using the song credits feature on Spotify in order to be included in the data analysis. Since only one of the study authors coded this data, this procedure was not subject to interrater reliability.

The analyzed variables were identified before data analysis using prior literature (Colley et al., 2003; Millar, 2008; North et al., 2003; Smith et al., 2020). This deductive process would be more in line with a directed content analysis approach (Hsieh & Shannon, 2005).

Vocalist Gender

Vocalist gender is defined as the gender of the artist singing in the participants' selected songs. Once the participants have listed their songs and categorized the genre of each, the vocalist gender were found using the song credits feature on Spotify and encoded for further data analysis. The number of songs with each particular vocalist gender were noted. There were several cases where there were multiple vocalists in the song, and these were categorized by which vocalist gender was more prevalent in the song. If this was even relatively close, the song was categorized as even mix ($n = 14$).

Music Genre

Music genre is defined as the umbrella term that helps to classify and categorize the songs listed by the participants. There were 15 genres included in this study for participants to choose from: alternative, blues, classical, country, dance/electronica, folk, heavy metal, jazz, pop, rap/hip-hop, indie, religious, rock, soul/funk, soundtracks/theme songs (Rentfrow &

Gosling, 2003). These genres were also utilized in the assessment of the participants' baseline music preferences.

Song Genre Perception

Song genre perception is defined as the subjective way that participants classify music into different genre categories. One of the main focuses of the study is determining how vocalist gender and listener gender impact this variable. This variable will also be mentioned as music genre classification.

Listener Gender

Listener gender is defined as the gender of the participant who is picking the music they listen to. The participant identified this as part of the demographics survey after the study.

Baseline Music Preferences

Baseline music preferences of the participants were also considered in the study. STOMP was used to measure the participants' baseline music preferences for each of the aforementioned 15 music genres on a 7-point Likert scale, with scores ranging from 1 (*strongly dislike*) to 7 (*strongly like*), to determine how much each participant likes each genre (Rentfrow & Gosling, 2003).

Analysis

Vocalist gender frequencies were compared to the frequencies of its music genre classification. Listener gender was also analyzed as a factor in this comparison. Vocalist gender frequencies were also analyzed by listener gender. Music genre classification frequencies were also assessed by listener gender. Other subject variables asked in the demographic survey were also analyzed as a factor in this comparison. Chi-square tests were used for all these comparisons.

Results

Sixty-nine participants completed the survey in which they each listed five songs. Since each of the variables were dealing with the characteristics of these songs, the following results are based on a total aggregate of these songs ($N = 345$).

After listing each song, the participants also listed what genre they considered each song, which was designated “song genre perception” in these results. Song genre perception was examined by the gender of the vocalist, in an attempt to determine the ratios of female vocalists ($n = 70$) and male vocalists ($n = 260$) of each music genre (see **Appendix** for these ratios). Vocalist gender was significantly related to the song genre perception, $X^2(28, N = 344) = 92.85$, $p < .001$. Male vocalists were dominant in every single music genre tested, although some genres had a more even distribution (see Figures 1 and 2).

This measurement also analyzed how the vocalist gender was related to how often the song was attributed to a certain genre. For instance, if a song had a female vocalist, there was a nearly 49% chance it was considered a pop song. The genres with the next highest share of female vocalists were rap/hip-hop and soul/funk with 11% each. Alternative and indie clocked in nearly 6% each, and the other genres had $>5\%$ each, as heavy metal, religious, and blues had 0% (see Figure 3). These numbers were markedly different from the genre odds for songs with male vocalists. If a song had a male vocalist, there was a 38% chance it was a rap/hip-hop song. There was a merely 15% chance that a selected song with a male vocalist would be a pop song. There was an 11% chance a song with a male vocalist was a country song, 9% chance it was rock song, 6% it was considered a heavy metal song, and no other genre had $>5\%$ (see Figure 4).

Some of these genres had few responses, so when the results were limited to only music genres over $N = 20$, country, rap/hip-hop, pop, and rock, vocalist gender was still significantly

related to the song genre perception, $X^2(6, N = 242) = 50.59, p < .001$. Male vocalists were the strong majority in all of these genres, with over 85% in each, except for pop, where they had just a 51% majority (see Figure 5).

These findings were consistent with the first hypothesis that female vocalists are confined to the pop genre, as nearly half of all songs with a female vocalist were categorized as pop (see Figure 3). Meanwhile, male vocalists were categorized into a wider variety of music genres, which was also consistent with the first hypothesis (see Figure 4).

Furthermore, in an attempt to determine whether these associations were related to the gender of the participant, the results of the most frequent song genre perceptions ($N > 20$) were split into separate groups based on listener gender. This found a significant relationship between vocalist gender and song genre perception, for female students, $X^2(6, N = 132) = 13.96, p = .003$, as well as male students, $X^2(6, N = 105) = 47.28, p < .001$. For female listeners, the analysis found that male vocalists were dominant across all these genres, but there were no genres that had exclusively male vocalists. For male listeners, the rock and country genres had exclusively male vocalists, rap/hip-hop was nearly all male vocalists, but female vocalists had a slight majority in the pop genre. These results suggest a relation between the gender of the participant and the association of song genre perception and vocalist gender, which is consistent with the second hypothesis of the study.

In order to determine if there was a gender difference in the song genre perceptions listed, these variables were compared and analyzed. Song genre perception was examined by the gender of the participant, female ($n = 190$), male ($n = 150$). For the listener gender analyses, the data from the non-binary participant was excluded, as its sample ($n = 5$) was too small to draw any meaningful conclusions. When all 15 of the genres tested were included, song genre

perception was significantly related to listener gender, $X^2(14, N = 340) = 61.14, p < .001$. Male participants listed songs from all music genres, and were the only ones to list classical or heavy metal songs. Male listeners were also the majority in rock, rap/hip-hop, and folk. There was an even split of male and female listeners in blues. There was a strong majority of female listeners in soundtracks/theme songs, religious, pop, and dance/electronica. There was a majority of female listeners in soul/funk, jazz, alternative, indie, and country, as well (see Figure 6).

More specifically, when the data is limited to just the aforementioned four most frequent music genres, listener gender was still significantly related to song genre perception, $X^2(3, N = 237) = 32.67, p < .001$. Some of the more popular ($n > 20$) genres tested in the study had disparate listener gender demographics (see Figure 7). For instance, 77% of the participants who listed pop songs were female students, while only 17% were male students. Participants who selected rock songs were disproportionately male students (69%). The other popular genres were more evenly split amongst listener gender. The rap/hip-hop genre had a slightly more male listenership of 56% male students and 44% female students. For the country genre, there was a slight majority of female students (57%) over male students (43%). These statistical differences found in the more specific results also suggest an association between the gender of the participant and their song genre perception.

These variable comparisons also uncovered statistical differences among the listed frequencies of each music genre between the gender of the participants. As in, there were some major differences in the genre classifications when they were split between male and female listeners. For instance, male participants had a particular affinity for rap/hip-hop, as it comprised 41% of their listening, which dominated the rest of the genres. Rock was the next most popular genre, as it made up 12% of male listening, with pop and country not far behind at 8.7% each,

and heavy metal took up another 8%. No other genre classification made up more than 5% of the songs listed by male participants, but all the genres were mentioned by at least one male participant. The genres that made up the largest share of the female participants' listening were pop (31%) and rap/hip-hop (25%). The country genre comprised about 9% of female listening, while the alternative and soul/funk genres added about another 7% a piece. No other genre classification made up more than 5% of the songs listed by female participants, as the heavy metal and classical genres had no female listeners. These results suggest an association between the gender of the participant and their song genre perception, both between the participant groups and between the genres.

In order to determine if there were gender differences among the participants in the vocalist gender of the songs they selected, the vocalist gender of the selected songs were examined by the gender of the listener. Accounting for all cases from the study, vocalist gender was significantly related to listener gender, $X^2(2, N = 339) = 19.57, p < .001$. Male vocalists were the commanding majority of both female (67%) and male listeners (87%), and female listeners were three times more likely to list a female vocalist than male listeners (see Figures 8 and 9). While male vocalists had a near even split of male and female listeners, the participants who listed songs with female vocalists were 73% female listeners and 21% male listeners (see Figures 10 and 11). These results suggest an association between the gender of the participant and the gender of the vocalists in the songs they selected. This was consistent with the third hypothesis that both male and female listening is dominated by male vocalists, but male listening is significantly more male dominated.

Overall, the results suggested that song genre perception has associations with vocalist gender and the gender of the participant. It also indicated an association between vocalist gender and the gender of the participant.

Discussion

This study evaluated the relation between gender and music genre perception, especially as it relates to the gender of both the vocalist and the listener, in an attempt to establish a gender bias in the classification of music genre. It found that male vocalists were the majority in each of the 15 music genres tested, with a combined ratio of 3.7 songs with a male vocalist for every 1 song with a female vocalist. This was a nearly identical ratio to the composite analysis of 800 popular songs from 2012-2019 *Billboard* charts, which had a vocalist gender ratio of 3.6 males to every 1 female vocalist (Smith et al., 2020).

Upon closer inspection of these music genres, this gender disparity was prominent in the genres with the most frequent classifications; in other words, this disparity was present in the most popular music genres among the sample. The vocalist gender ratios of some of these genres were even more unbalanced than the ratios recorded in the *Billboard* analysis. For instance, the *Billboard* analysis found a gender ratio of 6.6 male vocalists to every 1 female vocalist among the hip-hop/rap genre; meanwhile, my study found a gender ratio of 12.38 male vocalists to every 1 female vocalist in the rap/hip-hop genre (Smith et al., 2020). Some genres were even more disparate, as the *Billboard* analysis recorded that 4.4 male vocalists in the country genre to every 1 female, while my study found a ratio of 14 to 1 in the country genre (Smith et al., 2020). Conversely, some of the genres were more evenly distributed among vocalist gender in my study than they were in the *Billboard* analysis. While the *Billboard* analysis found a 2.1 to 1 ratio of male vocalists to female vocalists in the pop genre, the sample

in my study recorded a nearly even ratio of 1.15 male vocalists to every 1 female vocalist in the pop genre (Smith et al., 2020). Notably, the *Billboard* analysis did not include the exact same genres as the ones tested in this study, so not all of the genre results can be adequately compared. Rock, the other genre that was considered one of the most popular in my study ($N > 20$), was one of the genres not included in the *Billboard* analysis. Rock had one of the most imbalanced vocalist gender ratios of any of the genres tested in this study, as there were 7.67 male vocalists in the genre to every female (see **Appendix** for the ratios of every genre tested).

Further examination indicated that these genre classification ratios may differ by the gender of the listener. In order to determine this, the data was split by the gender of the participant, and each of the most popular genres were measured for their vocalist gender ratio among each of the gendered groups of participants. While female listeners had a vocalist gender ratio within rap/hip-hop (6.67 males to every female) nearly identical to that of the *Billboard* analysis (6.6 to 1), male listeners' perception of rap/hip-hop was much more disproportionately male, as there were 29.5 male vocalists to every female vocalist in this genre (Smith et al., 2020). There were other popular genres in which both of the gendered groups of participants had more disparate ratios than the one from the *Billboard* analysis. As aforementioned, the *Billboard* analysis listed country's vocalist gender ratio at 4.4 to 1, but the female participants in this study accumulated a ratio of 7.5 male vocalists in the country genre to every 1 female vocalist, while the male participants considered country to be a genre of exclusively male vocalists (Smith et al., 2020). Although the *Billboard* analysis did not measure this genre, rock was another genre that male participants in my study considered to be made up of exclusively male vocalists; the gender ratio for rock among female participants, meanwhile, listed 1.67 males for every female vocalist in the rock genre. Pop was a notable exception to the genres dominated by male vocalists. As

aforementioned, pop was the most equitable vocalist gender ratio (2.1 males to 1 female) of any of the genres in the *Billboard* analysis. The gender ratio of pop songs listed by the female participants in the current study was even more balanced, as there were 1.43 male vocalists to every female vocalist. The only exception to these gender ratios dominated by male vocalists is the ratio for pop songs among the male listeners. Male participants in this study listed 1.4 female vocalists for every male vocalist in the pop genre. These results indicate that the male and female listeners in this study had different perceptions of these musical genres. The male listeners had a more masculine perception of rap/hip-hop, as well as an exclusively male perception of country and rock, but a uniquely feminine perception of pop. Meanwhile, the gender ratios of this study's female listeners were more aligned with the gender ratio averages from the *Billboard* analysis of these music genres.

This study also found significant differences of vocalist gender between the male and female listening groups. While both listening groups listened to a larger share of male vocalists than female vocalists, male students listened to a notably more disproportionate share of male vocalists (87%) than female students did (67%). This finding was consistent with previous literature, in which Australian college males listened to disproportionately more male vocalists than their female colleagues do (Millar, 2008). Male listeners in Millar's study had a 6.66:1 ratio of male artists to female artists that they listed, while the ratio for female listeners was 2.66:1. These ratios were almost identical to the ratios in the present study, which were 6.69:1 and 2.03:1 respectively. This increased pro-male bias in the male participants could stem from the fact that males typically have a stronger sense of same-sex identification than females do (Bussey & Bandura, 1999).

There are other factors that could interact with the relationships described in this study. For instance, according to a U.K. study, a higher proportion of female musicians in a pop song diversifies its lyrical content compared to more male pop songs (Krause & North, 2017). In addition to impacting lyrical content, previous literature has demonstrated that economic and social conditions also influence the musical and demographic characteristics of songs that obtain *Billboard* chart success (Pettijohn & Sacco, 2009; Eastman & Pettijohn, 2019). Specifically, social and economic conditions have influenced both the music genre and the vocalist gender of the songs that are successful on *Billboard* charts. During difficult economic times, male pop vocalists have greater *Billboard* success (Eastman & Pettijohn, 2015). Meanwhile, for R&B/Hip-Hop, female vocalists have greater success during difficult socioeconomic times. During good economic times, female pop vocalists have more *Billboard* success (Dowd, Liddle, & Blyler, 2005; Eastman & Pettijohn, 2015; Eastman & Pettijohn 2019). While it is possible that these social, economic, or other factors could interact with the relationships demonstrated from the current study, more research into these underlying determinants is necessary to further investigate these phenomena.

Like all research, this current study is not without its limitations. Since it relied on frequency data and chi-square tests, the results do not prove causation, but rather acknowledge several statistically significant patterns. With 69 participants, sample size was another limitation of this study, and ideally, future research would test a larger sample. In order to ensure that the participants were dealing with songs and musical stimuli that they were familiar with, the song selections were drawn from the open-ended responses of the participants, which followed the previous literature (Millar, 2008). However, this lack of variable manipulation does not produce causal data, so perhaps future research could use an experimental method to see if song genre

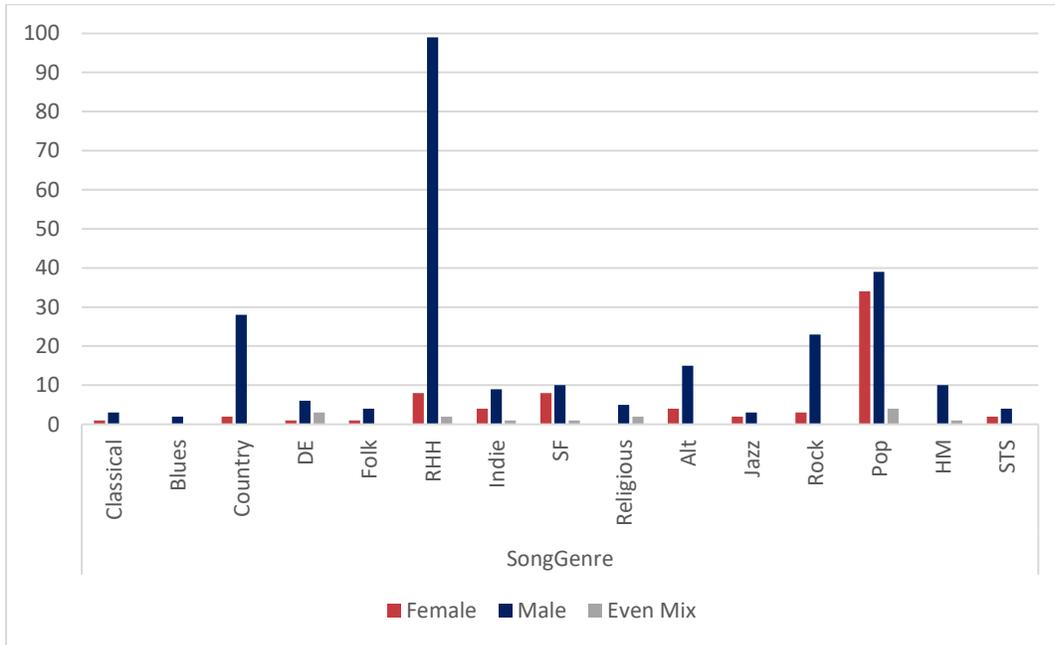
perception and/or vocalist gender is impacted specifically by listener gender. This experimental approach could come in the form of controlling the musical stimuli and maintaining the focus on genre perception, by asking participants to classify each song, which can be analyzed by vocalist and listener gender, or other factors that may influence genre perception. Future research could also focus on the perceptual differences between the rock and pop genres in male and female listeners.

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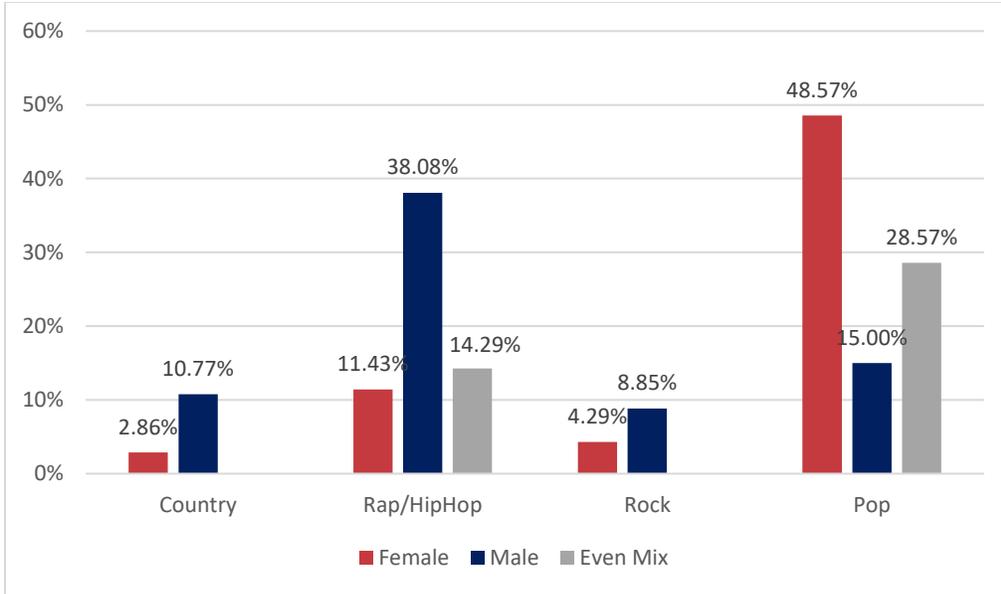
Figure 1*Music Genre Classifications by Vocalist Gender Frequencies*

Note: All 15 of the tested music genres are analyzed by their vocalist gender (in frequency).

DE=Dance/Electronica, RHH=Rap/Hip-Hop, SF=Soul/Funk, Alt=Alternative,

HM=Heavy Metal, STS=Soundtracks/Themes

Figure 2*Condensed Music Genre Classifications by Vocalist Gender %*



Note: The percentages of the vocalist gender breakdowns in each popular (N>20) music genre

Figure 3

Female Vocalists' Odds of Being Categorized in each Song Genre

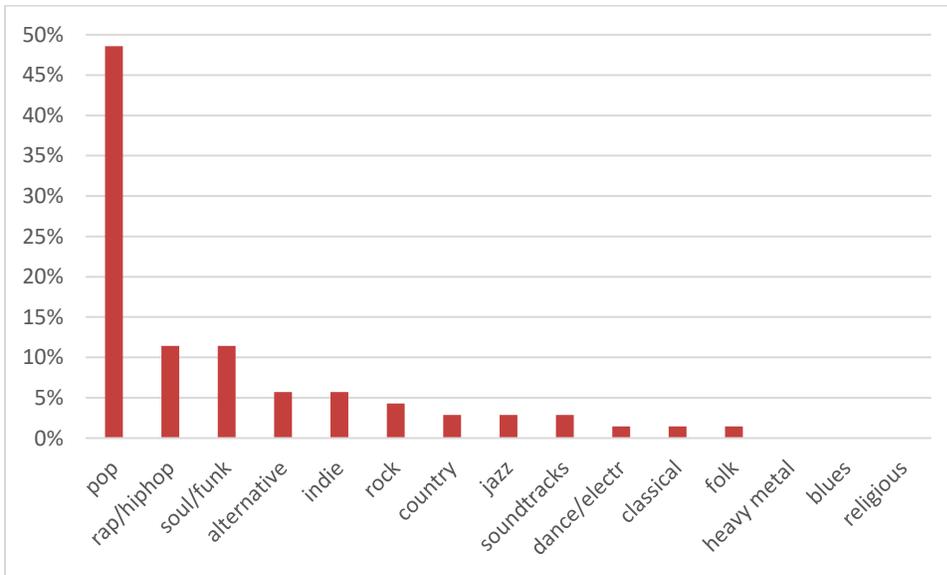


Figure 4

Male Vocalists' Odds of Being Categorized in each Song Genre

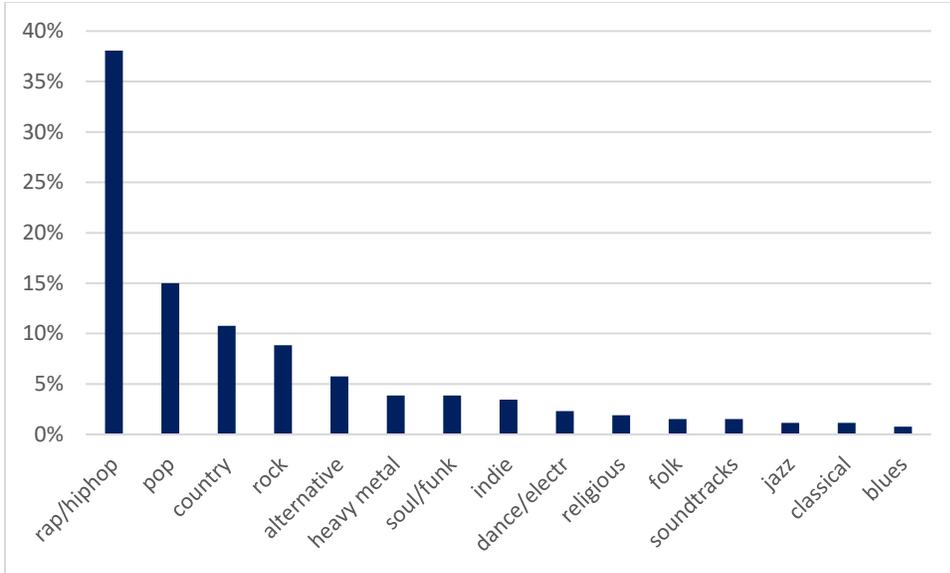
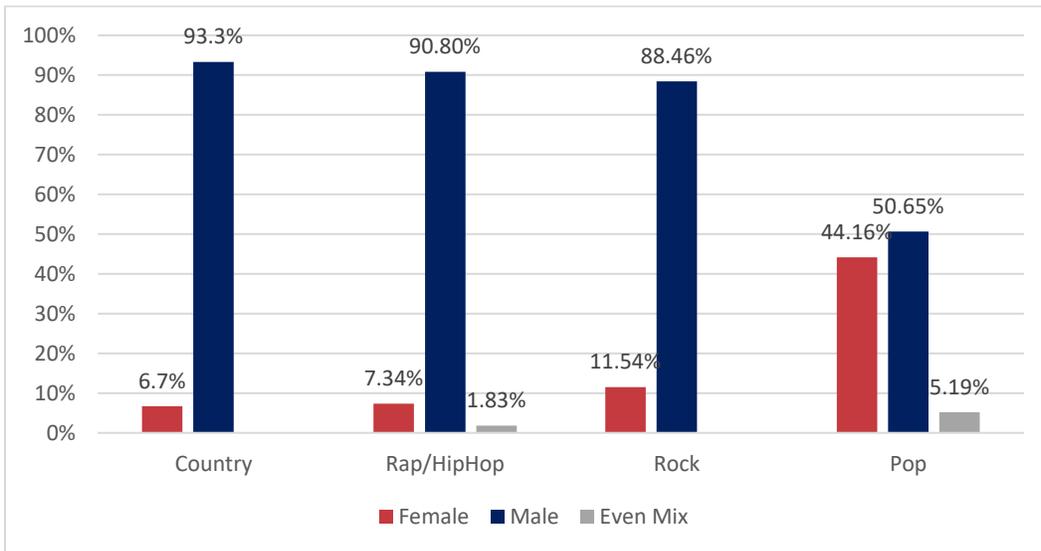


Figure 5

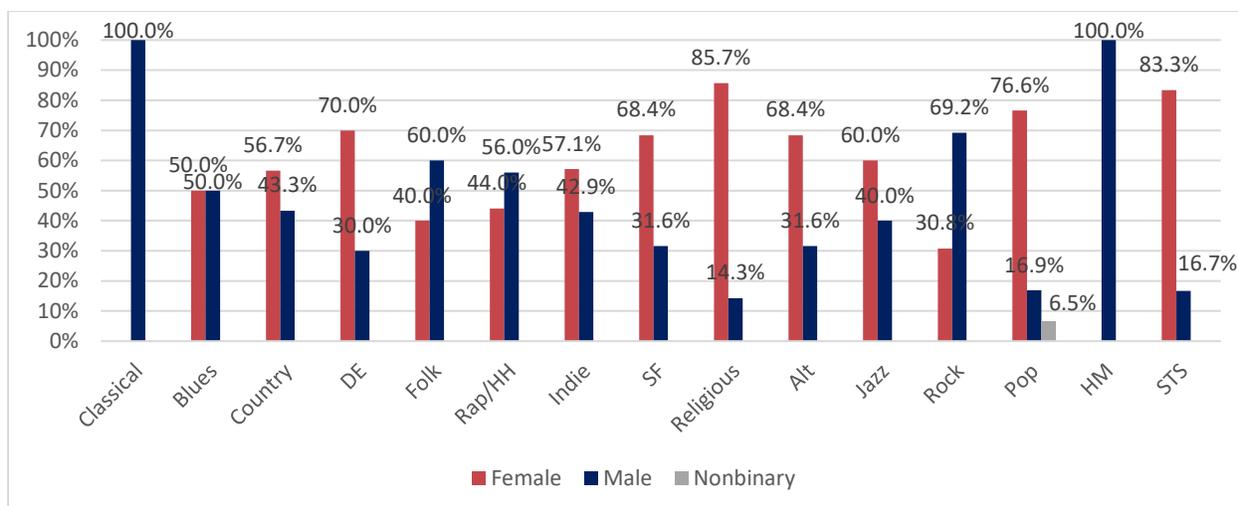
Vocalist Gender % of Perceived Music Genre



Note: Popular (N>20) music genres are broken down by vocalist gender.

Figure 6

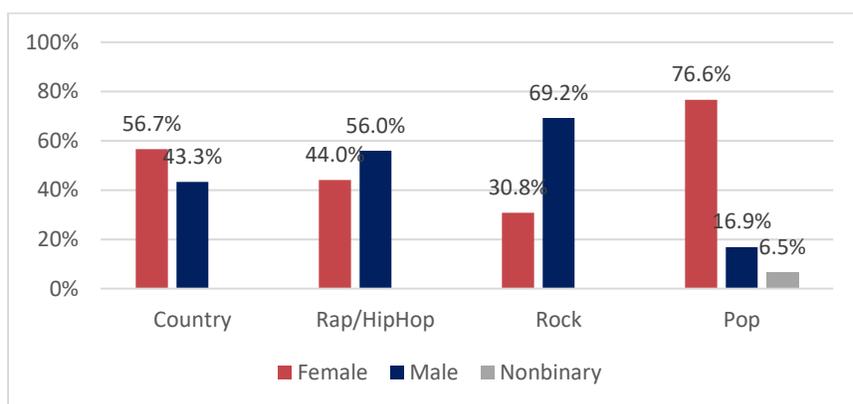
Who Listens to each Music Genre?



Note: The audience of each music genre is broken down by listener gender.

Figure 7

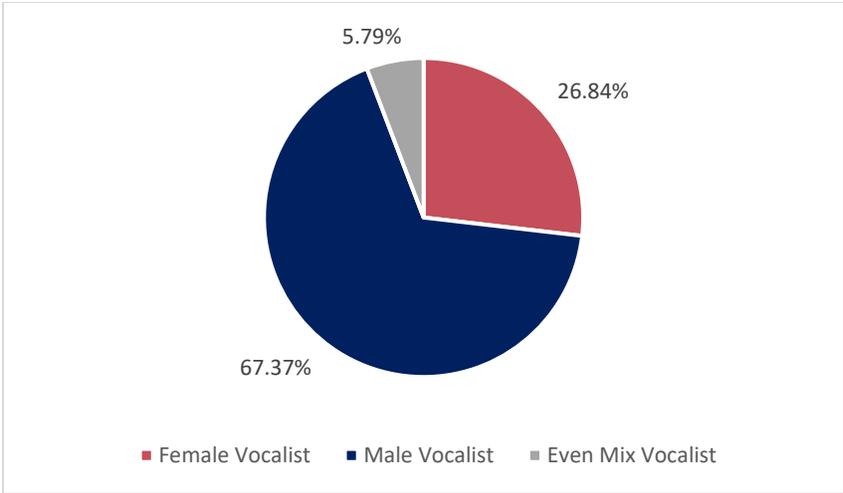
Condensed Who Listens to each Music Genre?



Note: The audience of each popular (N>20) music genre is broken down by listener gender.

Figure 8

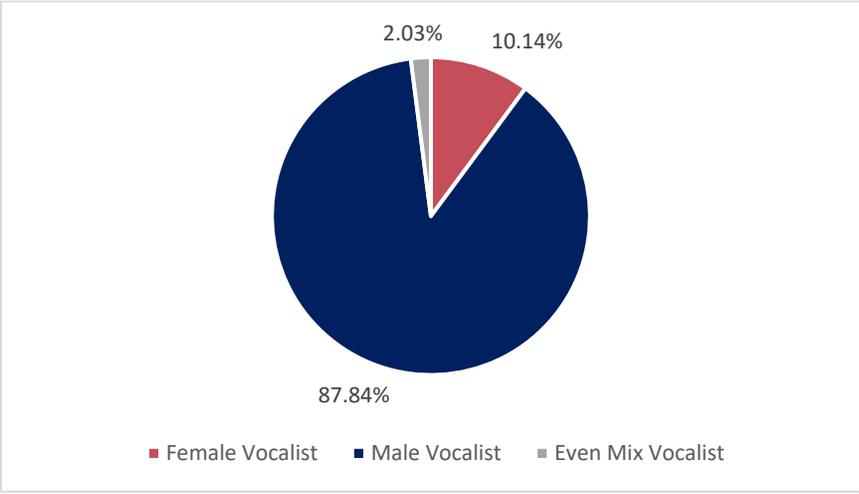
Who do Female Students Listen to?



Note: Female students' listening is broken down by vocalist gender.

Figure 9

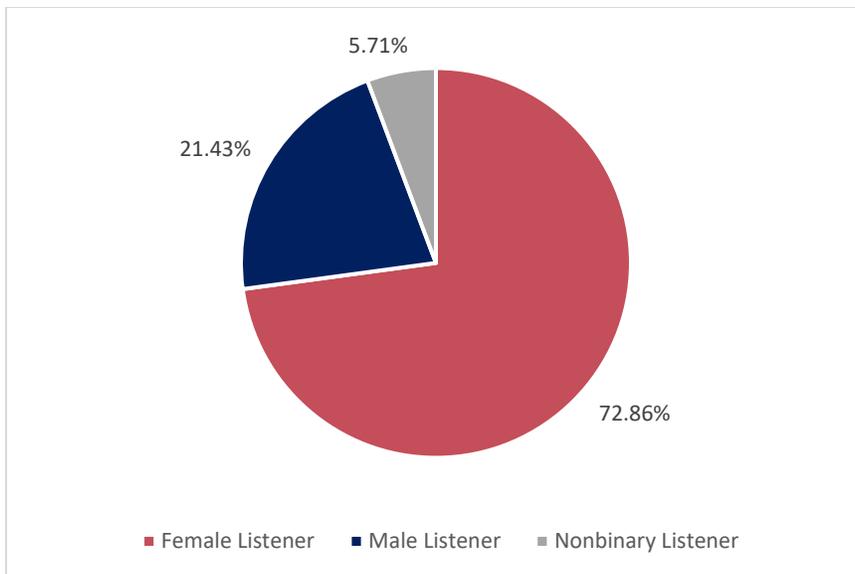
Who do Male Students Listen to?



Note: Male students' listening is broken down by vocalist gender.

Figure 10

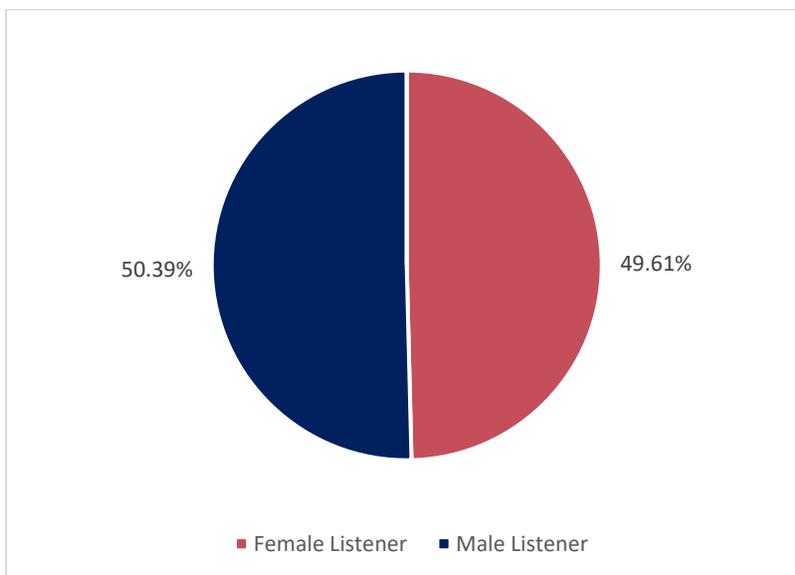
Who Listens to Female Vocalists?



Note: Female vocalists' audience is broken down by listener gender.

Figure 11

Who Listens to Male Vocalists?



Note: Male vocalists' audience is broken down by listener gender.

Appendix

Music Genre Results Cheat Sheet

The following appendix has a breakdown of the results of each genre. The genres are in order from most listed to least listed. Each genre will have a table with its n (number of times it was listed), its vocalist gender ratio, and its listenership percentage. The vocalist gender ratios will be written as “male vocalists:female vocalists.” Male first because they outnumbered female vocalists in every genre. The table will be followed by a brief explanation. This appendix can be used as a quick cheat-sheet for the results of each genre.

Table A1

Rap/Hip-Hop

n=109	12.375:1 vocalist gender ratio	56% male and 44% female audience
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Rap/Hip-Hop was the most popular genre amongst the student participants, as it was listed 109 times. With 12.4 male vocalists to every female vocalist, this genre was one of the most unbalanced in the study. This imbalance is particularly interesting as a contrast to *Rap/Hip-Hop*'s balanced listenership, which was 56% male and 44% female.

Table A2

Pop

n=77	1.15:1 vocalist gender ratio	82% female and 18% male audience
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Pop was one of the most popular genres in the study, listed 77 times. This genre had the most balanced vocalist gender ratio in the study at 1.15 male vocalists to every female vocalist. While male vocalists were still the majority in this genre (and every single other genre tested), *Pop* had

the most female vocalists of any of the genres (as predicted in the first hypothesis) with 34, nearly half the 70 total female vocalists. No other genre had more than 8. This relatively balanced vocalist gender ratio is in stark contrast to its imbalanced listenership, as 82% of the *pop* songs listed were from female participants and 18% from male participants.

Table A3

Country

$n=30$	14:1 vocalist gender ratio	56% female and 43% male audience
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Country was one of the more popular genres in the study, listed 30 times. This genre had the most unbalanced vocalist gender ratios, with 14 male vocalists to each female. This is also in stark contrast to its balanced listenership, 56% female and 43% male.

Table A4

Rock

$n=26$	7.66:1 vocalist gender ratio	69% male and 31% female audience
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Rock was one of the more popular genres in the study, listed 26 times. This genre had a pretty unbalanced vocalist gender ratio of 7.66 male vocalists to each female. This was aligned with a predominantly male listenership, 69% to 31%.

Table A5

Alternative

$n=19$	3.75:1 vocalist gender ratio	68% female and 32% male audience
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Alternative was not quite as popular as the other genres in this study, listed only 19 times, so only limited conclusions can be drawn from such a small sample. Nevertheless, this genre had a relatively balanced vocalist gender ratio, but still predominantly male, with 3.75 to 1. This can be contrasted to its predominantly female listenership, 68% to 32%.

Table A6

Soul/Funk

$n=19$	1.25:1 vocalist gender ratio	68% female and 32% male audience
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Soul/Funk was also listed only 19 times, so its conclusions are limited. It had a pretty balanced vocalist gender ratio of 1.25 males to every female, but it also had a predominantly female listenership, 68% to 32%.

Table A7

Indie

$n=14$	2.25:1 vocalist gender ratio	57% female and 43% male audience
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Indie was a new addition to the music genres included in STOMP (Rentfrow & Gosling, 2003), but being listed 14 times (4% of responses) justified its inclusion. While the sample is too small to draw meaningful conclusions from, larger samples could still use the findings as a starting point for comparisons. *Indie* had a relatively balanced vocalist gender ratio of 2.25 males to each female, with a slightly female majority listenership of 57% to 43%.

Table A8

Heavy Metal

n=11	10:0 vocalist gender ratio	100% male and 0% female audience
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Heavy Metal was only listed 11 times in the study, but its vocalists were exclusively male. None of the listed songs had only female vocalists, but there was one song with an even mix. This exclusively male vocalist ratio aligns perfectly with its 100% male listenership.

Table A9

Dance/Electronic

n=10	6:1 vocalist gender ratio	70% female and 30% male audience
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Dance/Electronic was only listed 10 times in the study, so conclusions are limited. It had a 6:1 vocalist gender ratio, but 3 songs were considered an even mix. This mostly male vocalist ratio contrasts to *Dance/Electronic's* predominantly female listenership, 70% to 30%. Although, this genre may not be as impacted by any vocalist gender effect, because it this genre is less lyric focused, sometimes without any lyrics at all.

Table A10

Religious

n=7	5:0 vocalist gender ratio	86% female and 14% male audience
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Religious was only listed 7 times in the study, which limits any conclusions. This genre also had exclusively male vocalists, but 2 were considered an even mix. This can be contrasted to its predominantly female listenership, 86% to 14%.

Table A11

Soundtracks/Song Themes

<i>n</i> =6	2:1 vocalist gender ratio	83% female and 17% male audience
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Soundtracks/Song Themes was only listed 6 times in the study, so conclusions based on this small sample are extremely limited. This genre had a vocalist gender ratio of 2 males to each female, with a predominantly female listenership of 83% to 17%.

Table A12*Jazz*

<i>n</i> =5	1.5:1 vocalist gender ratio	60% female and 40% male audience
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Jazz was only listed 5 times. It had a vocalist ratio of 1.5 males to every 1 female, with a listenership of 60% female to 40% male.

Table A13*Folk*

<i>n</i> =5	4:1 vocalist gender ratio	60% male and 40% female audience
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Folk was only listed 5 times. It had a vocalist ratio of 4 males to its 1 female, with a listenership of 60% male and 40% female.

Table A14*Classical*

<i>n</i> =4	3:1 vocalist gender ratio	100% male and 0% female audience
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Classical was only listed 4 times. Its vocalist gender ratio was 3 males to its 1 female, with an exclusively male listenership.

Table A15

Blues

$n=2$	2:0 vocalist gender ratio	50% male and 50% female audience
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Blues was only listed twice. While both songs had a male vocalist, its 2 person audience had an even split of gender.