

Inclusion in the Recording Studio?

Gender and Race/Ethnicity of
Artists, Songwriters & Producers
across 700 Popular Songs
from 2012-2018

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USC Annenberg
Inclusion Initiative



the HARNISCH
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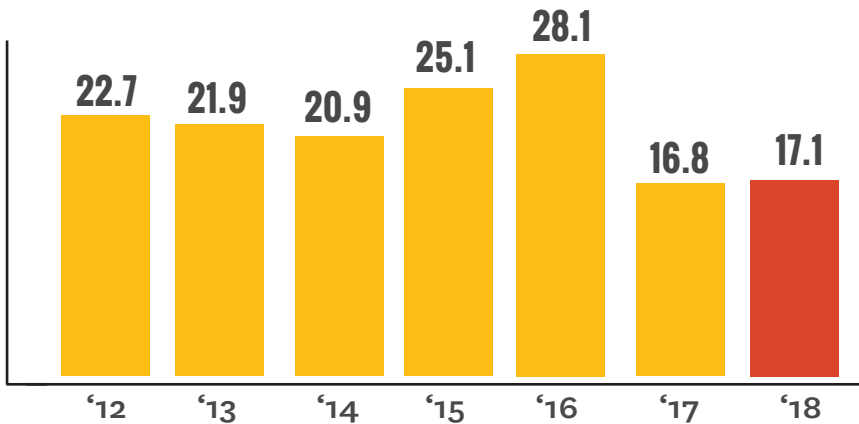
INCLUSION IN THE RECORDING STUDIO? EXAMINING 700 POPULAR SONGS

USC ANNENBERG INCLUSION INITIATIVE

 @Inclusionists

FEMALES ARE MISSING IN POPULAR MUSIC

Prevalence of Female Artists across 700 Songs, in percentages



TOTAL NUMBER OF ARTISTS **1,455**

RATIO OF MALES TO FEMALES

3.6:1



FOR FEMALES, MUSIC IS A SOLO ACTIVITY

Across 700 songs, percentage of females out of...



ALL ARTISTS



INDIVIDUAL ARTISTS



DUOS



BANDS

FEMALES ARE PUSHED ASIDE AS PRODUCERS

THE RATIO OF MALE TO FEMALE PRODUCERS
ACROSS 400 POPULAR SONGS IS

47 to 1

WRITTEN OFF: FEW FEMALES WORK AS SONGWRITERS

Songwriter gender by year...

	2012	2013	2014	2015	2016	2017	2018	TOTAL
FEMALES	11%	11.7%	12.7%	13.7%	13.3%	11.5%	12.2%	12.3%
MALES	89%	88.3%	87.3%	86.3%	86.7%	88.5%	87.8%	87.7%

WOMEN ARE MISSING IN THE MUSIC INDUSTRY

Percentage of women across three creative roles



21.7%
ARE
ARTISTS



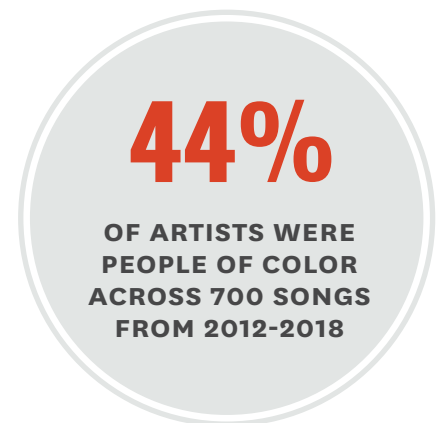
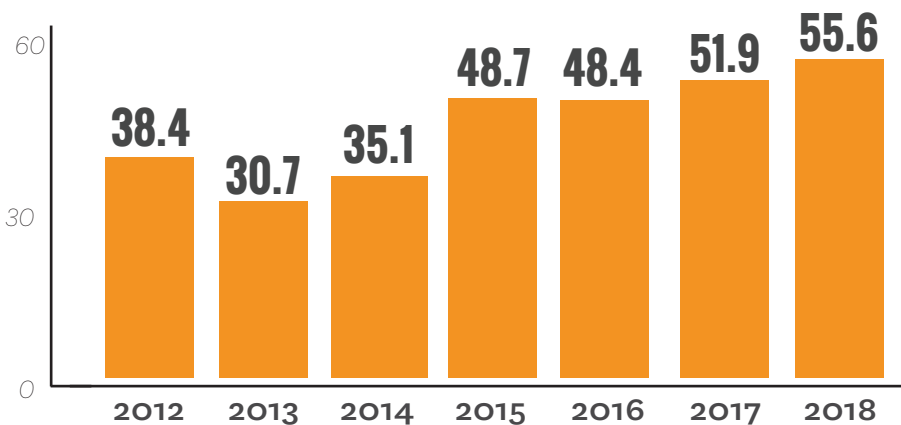
12.3%
ARE
SONGWRITERS













2.1%
ARE
PRODUCERS

VOICES HEARD: ARTISTS OF COLOR ACROSS 700 SONGS

Percentage of artists of color by year...

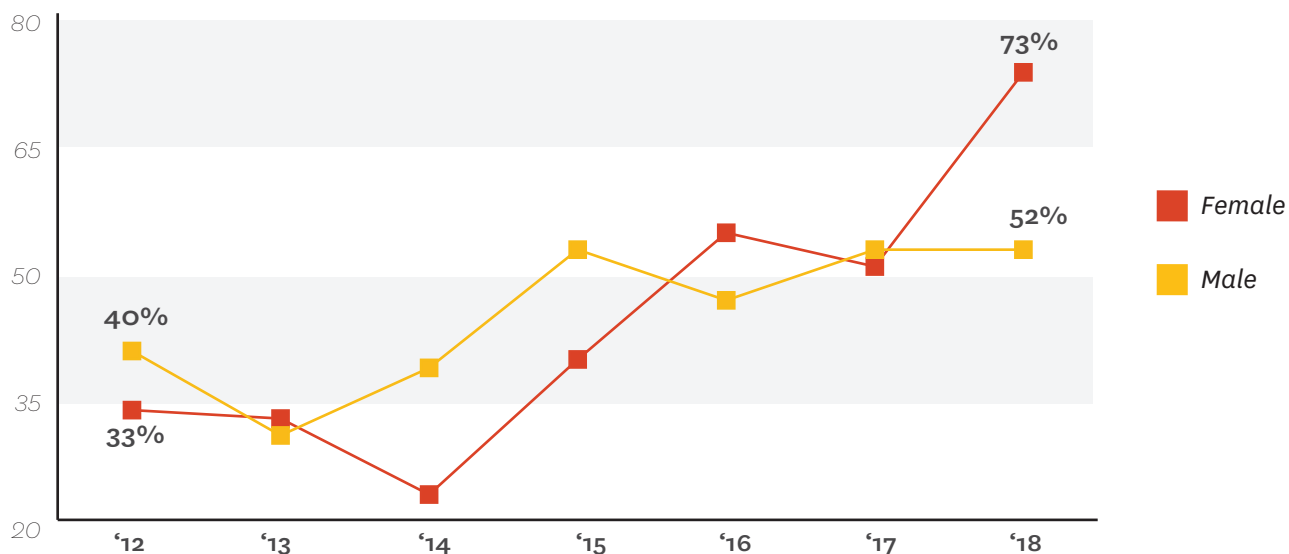


CREATIVE CONSTRAINTS: FEW FEMALE PRODUCERS WORK IN MUSIC

2012	2015	2017	2018	TOTAL
 97.6%	 98.2%	 98.2%	 97.7%	 97.9%
 2.4%	 1.8%	 1.8%	 2.3%	 2.1%

MEN AND WOMEN OF COLOR CLIMB THE CHARTS

Percentage of underrepresented male and female artists by year...



WOMEN OF COLOR ARE INVISIBLE AS PRODUCERS

4 OUT OF **871** PRODUCERS WERE WOMEN OF COLOR

CREDITS & DEFICITS: MALES OUTPACE FEMALES IN SONGWRITING

Leading male and female songwriters by number of credits...

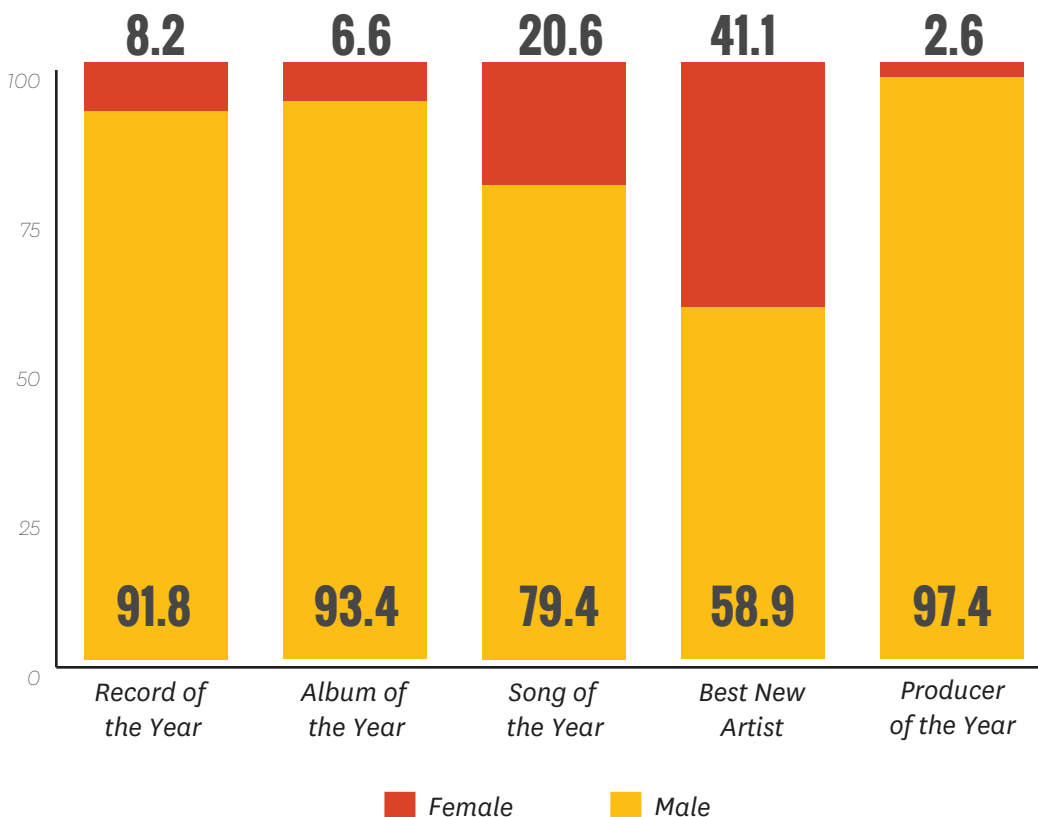
THE TOP MALE WRITER HAS
39
CREDITS
THE TOP FEMALE WRITER HAS
18
CREDITS
ACROSS 700 POPULAR SONGS FROM 2012-2018

Top Male Songwriters	# of credits	Top Female Songwriters	# of credits
Martin Sandberg (Max Martin)	39	Onika Maraj (Nicki Minaj)	18
Aubrey Graham (Drake)	33	Robyn Fenty (Rihanna)	14
Benjamin Levin (Benny Blanco)	24	Taylor Swift	12
Henry Walter (Cirkut)	22	Katheryn Hudson (Katy Perry)	9
Lukasz Gottwald (Dr. Luke)	21	Adele Adkins	8
Savan Kotecha	19	Sia Furler	8
Johan Schuster (Shellback)	18	Belcalis Almanzar (Cardi B)	8
Dijon McFarlane (DJ Mustard)	15	Brittany Hazzard (Starrarah)	8
Michael Williams (Mike WILL Made-it)	14	Selena Gomez	7
Adam Levine	14		

The top 10 male songwriters are responsible for 23% of the 700 most popular songs from 2012 to 2018.

THE GENDER GAP AT THE GRAMMYS® IS REAL

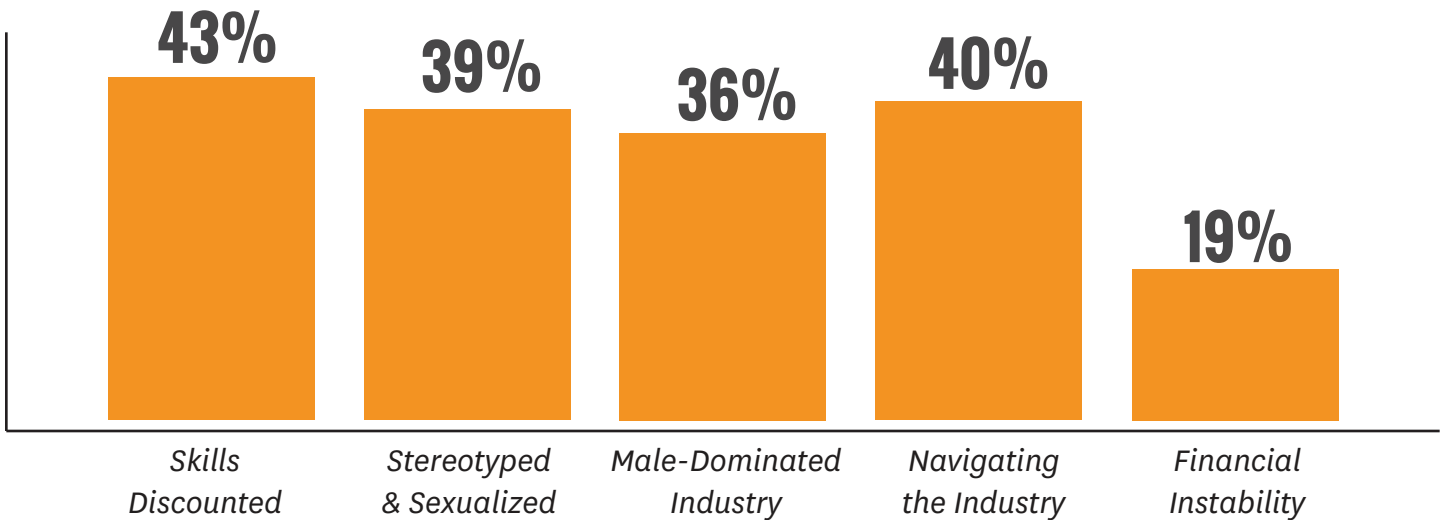
Percentage of Female Nominees by Category, 2013-2019



10.4%
OF GRAMMY® NOMINEES FROM 2013-2019 WERE FEMALE.
89.6% WERE MALE.

BARRIERS FACING FEMALES IN MUSIC

Experiences of 75 songwriters and producers



WHAT HAPPENS TO WOMEN IN THE RECORDING STUDIO?

Experiences of 75 songwriters and producers



STRATEGIC SOLUTIONS TO FOSTER SYSTEMIC CHANGE

COLLECTIVE ACTION	SET TARGET INCLUSION GOALS	INCLUSION RIDER	MENTORSHIP PROGRAMS
SHE IS THE MUSIC	SPOTIFY EQL RESIDENCY PROGRAM	FOR THE RECORD COLLECTIVE	P&E INCLUSION INITIATIVE

**Inclusion in the Recording Studio?
Gender & Race/Ethnicity of Artists, Songwriters, & Producers
across 700 Popular Songs from 2012-2018**

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with assistance from Angel Choi, Kevin Yao and Adaeze Ene

The aim of this study was to examine the quantitative and qualitative realities of working in the recording studio. Quantitatively, we assessed gender and race/ethnicity of artists, songwriters, and producers on the Hot 100 year-end Billboard Charts from 2012-2018. Grammy® nominees over the same time frame were also reviewed, focusing on demographics within the following categories: record of the year, album of the year, song of the year, best new artist, and producer of the year. Qualitatively, the investigation takes a deeper dive into barriers and opportunities women experience in the recording studio. We conducted 75 in-depth interviews with female songwriters and producers to gather information on the impediments they face in music as well as potential solutions to create change.

Artists, Songwriters & Producers on Billboard Charts

Artists. A full 1,455 artists were credited across the sample of 700 songs. In 2018, 82.9% of artists on the year end charts were male and 17.1% were female. This computes into a gender ratio of 4.8 male artists to every one female artist. 2018 (17.1%) was not different from 2017 (16.8%) in terms of female participation. These two years featured the lowest percentages of females on the Hot 100 list across the seven years evaluated.

In 2018, females only represented 26.2% of credited solo artists which was not different than 2017 but was 9.6 percentage points lower than 2012. Not one woman in a duo or band appeared on the Hot 100 chart of 2018. 2018 was substantially lower than 2012 for female participation in duos and bands.

For males, the range of credits was from 1-33. Drake held the top spot with 33 solo credits across the sample time frame, followed by Justin Bieber (13 songs) and Chris Brown (13 songs). The range of credits for females was a bit narrower (1-21), with Rihanna the top performer followed by Nicki Minaj (20 songs) and Taylor Swift (12 songs).

Across 1,455 artists, 56% were white and 44% were from underrepresented racial/ethnic groups. A majority of artists (55.6%) on the 2018 charts were people of color which is well above U.S. Census (39.3%). The percentage of artists of color in 2018 was not different from 2017, but the proportion was meaningfully higher (>5 percentage points) than 2012 (+17.2) and every other year in the sample.

In 2018, the percentage of women of color on the charts was at a seven year high. A full 73% of female artists were from underrepresented racial/ethnic groups in 2018 which is 23 percentage points higher than 2017 and 40 percentage points higher than 2012. For underrepresented males, 2017 (52%) and 2018 (52%) did not differ. However, the percentage of male artists of color on the charts in 2018 was significantly higher (12 percentage points) than 2012 (40%).

Songwriters. A total of 3,330 songwriters were credited on the seven-year sample. A full 87.7% were males and 12.3% were females. This calculates into a gender ratio of 7.1 male songwriters to every one female. No changes in the percentage of female songwriters were observed between 2017 (11.5%) and 2018 (12.2%), nor did either of these years vary meaningfully from 2012 (11%).

Of the 411 female songwriters assessed, 43.3% were from underrepresented racial/ethnic groups and 56.7% were white. However, marked variation was observed over time. 59.4% of female songwriters were underrepresented in 2018 which was higher than 2017 (53.5%). Only 29.8% of female songwriters were women of color in 2012, a percentage substantially lower than 2018.

Differences emerged by gender among the top performing songwriters. The top male songwriter had over two times as many credits (*Max Martin*, 39 credits) as the top female songwriter on the year-end charts (*Nicki Minaj*, 18 credits). The top 10 male songwriters wrote or co-wrote just under a quarter (23%) of all songs in the sample.

Out of 633 songs, 48 songs (7.6%) were written by at least one female songwriter who did not work with a female artist on the song. A total of 90 songs (14.2%) featured at least one female artist and at least one female songwriter. This is a 6.6 percentage point gain. Female artists may be the key to increasing women's access and opportunity to write in the music industry. This is imperative, as females face an epidemic of invisibility penning songs. Of the 633 songs, 360 or 57% lacked the presence of a female writer. In stark contrast, only 3 or <1% lacked any male songwriters.

Producers. Across 400 songs, 871 producers, co producers and vocal producers were credited. 97.9% of producers were male and only 2.1% were female. There has been no change over the four years evaluated, with a gender ratio of 47.4 male producers to every one female producer.

We removed the 14 songs that repeated across the charts in the time frame examined (4 years), bringing the sample to 386. After this, the total number of female producers reduced to 15 individual women and 17 credits. Eleven of these producers were white and 4 were from underrepresented racial/ethnic groups. Only two women worked twice as producers across the songs evaluated.

Grammys. 1,064 individuals received a Grammy Award® nomination in 5 select categories from 2013 to 2019. A full 89.6% were male and 10.4% were female, a gender ratio of 8.6 males to every one female. The percentage of female nominees in 2019 was significantly higher than 2018 and 2013. Despite this, 2018 was not different than 2015 or 2016 in the percentage of women nominated.

While males were the majority of nominees in each category, females were most likely to be nominated for Best New Artist, followed by Song of the Year. In the Record and Album of the Year categories, fewer than 10% of nominees were women. For the first time in the seven years analyzed, a woman (Linda Perry) was nominated for Producer of the Year.

For female nominees, race/ethnicity was analyzed. Overall, 36.9% of female nominees were women of color. The largest number of underrepresented females received nominations for Album of the Year, followed by Record of the Year and Best New Artist—the latter category grew by 16.1 percentage points from last year's total.

Qualitative Trends

Interviews with 75 female songwriters and producers were conducted to examine the impediments facing women in the music industry. Spontaneous and prompted answers were analyzed for recurring themes that pointed to the existence of a career barrier. Below, major findings as well as solutions are presented.

General Career Barriers. 40% percent of interviewees stated that they face difficulty *navigating the industry*, including breaking into the business, making connections, and getting into different rooms. Second, the *financial instability* associated with a music career was mentioned by 19% of women. They described the lack of royalties available to songwriters and producers, the changing nature of the industry due to streaming services, and the difficulties associated with supporting oneself on the income generated from songwriting or producing.

Women's Skills and Abilities are Discounted. A full 43% of interviewees stated that two main issues confronted them as songwriters and producers. First, they were dismissed or not taken seriously—their abilities, competence, and knowledge in the role of songwriter or producer were doubted or were undercut by their colleagues. A second and related issue was that they had to prove their competence to individuals who might work with them.

In a separate follow-up question, 92% of women said their leadership or vision had been resisted by a colleague. Women reported that they were ignored or discounted (43%) such that their contributions were either not seen as important or not recognized. Nearly one-third (29%) stated that they were demeaned, or that others argued, embarrassed them or undermined their input. A further 19% said that women taking on leadership threatened men, while 16% stated that stereotyping about their gender was used to dismiss their work or their abilities.

Sexualized & Stereotyped. 39% of participants provided spontaneous answers that illuminated that women's careers are inextricably tied to expectations about their gender and sexual availability. Women reported being *sexualized* (21%), which included being the subject of innuendo, undesired attention, propositioned, valued for their appearance, and even an awareness or fear of being personally unsafe in work situations.

Interviewees also answered a question that specifically asked whether any aspect of the environment of the recording studio had ever made them feel uncomfortable or uneasy. More than three-quarters (83%) of participants said that they or other women experienced discomfort in the studio. 39% stated that they had been objectified, and 25% pointed to being the lone female or one of few women in environments populated by males. Third, 28% were uncomfortable due to having their contributions, knowledge, or expertise dismissed, or due to facing hostile language from others. Fourth, 20% of interviewees noted that drugs, alcohol, and sexualized women were part of studio culture. Finally, 11% of respondents provided other reasons for their uneasiness.

One-quarter (25%) of interviewees spontaneously stated that gender *stereotypes* guided others' expectations about their behavior, treatment, or opportunities they were given. The responses in this category illuminate that simply *being a woman* in music can serve as a barrier to career success. Across interview responses, 12% of participants also gave unprompted responses indicating that the qualities associated with producing were associated with males—and that the job itself was not viewed as something women could do. In other words, when individuals *think producer, they think male*.

Male-Dominated Industry. 36% of participants gave unprompted answers regarding a barrier that occurred as the result of being a statistical minority in the music business. A full 29.3% ($n=22$) of interviewees in this category stated that the music industry was male-dominated or functioned as the proverbial 'boy's club.' This category also included responses (12%, $n=9$) who stated that there were few females in songwriting and production, including few female role models, and the handful of responses (4%, $n=3$) indicating that women were competitive with each other.

Solutions for Change

The report also highlights several opportunities for creating industry change. These include creating environments where women are welcome and generating opportunities for women to use their skills and talents. Other solutions suggested are to ensure that role models and mentorships are available to women, and for the industry to commit to considering and hiring more women. The report also illuminates the work of different organizations or initiatives that seek to address the barriers identified in the study. The goals and activities of She Is The Music, Spotify's EQL Residency Program, For The Record Collective, and others are discussed.

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The aim of this study was to examine the quantitative and qualitative realities of working in the recording studio. Quantitatively, we assessed gender and race/ethnicity of artists, songwriters, and producers on the Hot 100 year-end Billboard Charts from 2012-2018. Longitudinally, a total of 5,656 credits were scrutinized for their demographic information. The Grammy® nominees over the same time frame were also reviewed, focusing on demographics within the following categories: record of the year, album of the year, song of the year, best new artist, and producer of the year.

Qualitatively, the investigation takes a deeper dive into barriers and opportunities women experience in the recording studio. We conducted 75 in-depth interviews with female songwriters and producers to gather information on the impediments they face in music as well as potential solutions to create change. The interviews were conducted during the summer and fall of 2018 and serve to illuminate the lived experiences of female artisans in this employment space.

Below, the report features four major sections. First, we overview the current state of the recording studio by gender and underrepresented racial/ethnic status of artists. Second, we focus on the Grammys® and representation among nominees. Third, we offer thematic results of our qualitative interviews with female songwriters and producers regarding their work in the recording studio. The report concludes with a summary of the major findings and specific solutions for change.

Quantitative Assessment of Artists

Credited artists and songwriters were examined for gender and race/ethnicity across the 700 top songs from 2012-2018. A subset of this sample (400 songs) was evaluated for producer demographic attributes: 2012, 2015, 2017, and 2018. In this section, we first present the results for 2018 and then provide comparisons to 2017 and 2012 (on select measures). Only ± 5 percentage point differences were discussed to avoid making noise about meaningless deviations (1-2 percentage points). For information on our methodology and decision making, please see the footnotes of last year's report.

Gender. A full 1,455 artists were credited across the sample of 700 songs.¹ In 2018 (see Table 1), 82.9% of artists on the year end charts were male ($n=179$) and 17.1% were female ($n=37$). This computes into a gender ratio of 4.8 male artists to every one female artist. 2018 (17.1%) was not different from 2017 (16.8%) in terms of female participation. These two years featured the lowest percentages of females on the Hot 100 list across the seven years evaluated. Such figures are surprising, given that females comprise 50% of the U.S. population *as well as* roughly half of music buyers and streamers in the audience.²

Table 1
Artist Gender by Year

Artist Gender	2012	2013	2014	2015	2016	2017	2018	Total
Males	77.3% (n=153)	78.1% (n=168)	79.1% (n=178)	74.9% (n=146)	71.9% (n=138)	83.2% (n=178)	82.9% (n=179)	78.3% (n=1,140)
Females	22.7% (n=45)	21.9% (n=47)	20.9% (n=47)	25.1% (n=49)	28.1% (n=54)	16.8% (n=36)	17.1% (n=37)	21.7% (n=315)
Gender Ratio	3.4 to 1	3.6 to 1	3.8 to 1	3 to 1	2.5 to 1	4.9 to 1	4.8 to 1	3.6 to 1

Besides gender, we also evaluated *genre* and *performer type*. Focusing first on genre, every song in the sample was labeled using the iTunes distinction. Then, the genre label was applied across all the performers and artists on each song.³ As such, the results are presented at the performer level and not the song level. Table 2 illuminates that males worked primarily in Pop (35.4%), Hip-Hop/Rap (28.7%) and Alternative (15.8%). The majority of females worked in Pop (61.6%) and a much lower percentage in Hip-Hop/Rap (15.2%).

Table 2
Song Genre by Artist Gender

Genre	Males	Females	Gender Ratio
Pop	35.4% (n=404)	61.6% (n=194)	2.1 to 1
Hip-Hop/Rap	28.7% (n=327)	15.2% (n=48)	6.8 to 1
Alternative	15.8% (n=180)	5.7% (n=18)	10 to 1
Country	6.4% (n=73)	6.7% (n=21)	3.5 to 1
R&B/Soul	5.4% (n=62)	2.9% (n=9)	6.9 to 1
Dance/Electronic	8.3% (n=94)	7.9% (n=25)	3.8 to 1

While these findings reflect within gender breakdowns, it is important to look at the chart *share* within each genre. We did this by looking at the proportion of performing credits held by males and females per song category. By examining the gender ratio column, it is obvious that male artists dominated every employment opportunity with ratios ranging from 2 to 1 in Pop (low) to 10 to 1 in Alternative (high).

The *type of credit* was evaluated next. Artists were grouped into individual performers, duos, and bands. Over half of all artists were individual performers (59.7%, n=869), followed by members of bands (32.9%, n=478) and duos (7.4%, n=108). Featuring artists on songs were included in this breakdown, within specific type.⁴ In 2018, females only represented 26.2% of credited solo artists which was not different than 2017 but was 9.6 percentage points lower than 2012 (see Table 3). Not one woman in a duo or band appeared on the Hot 100 chart of 2018. 2018 does not differ meaningfully from 2017 for females working in groups. However, 2018 was substantially lower than 2012 for female participation in duos and

bands. Because so few females were featured in duos or bands across the seven-year time line, these findings should be interpreted with caution.

Table 3
Percentage of Female Artists by Type of Credit

Type of Artist	2012	2013	2014	2015	2016	2017	2018	Total
Individual	35.8% (n=39)	33.3% (n=37)	35.8% (n=43)	30.8% (n=41)	35.2% (n=43)	25.6% (n=34)	26.2% (n=37)	31.5% (n=274)
Duo	16.7% (n=1)	10% (n=2)	0	10% (n=1)	0	4.5% (n=1)	0	4.6% (n=5)
Band	6% (n=5)	9.5% (n=8)	4.6% (n=4)	13.5% (n=7)	22.9% (n=11)	1.7% (n=1)	0	7.5% (n=36)

Note: Bands refer to any group featuring three or more performers under one moniker. For the percentage of male artists by year and credit type, subtract the cell percentage from 100. Featuring credits were included within specific credit type. Columns do not add to 100%.

While the previous analyses focused on all artists, we now turn our attention to how often the *same performers* appeared across the seven-year sample. To this end, we first had to remove any duplicate songs that appeared more than once in the sample time frame (n=67). Then, we reduced each performer to a single line of data and tallied up how many times s/he appeared with a solo or featuring credit. The total sample of 1,455 artists was reduced by 64% (n=782 repeat appearances). The total number of individual or unique artists across seven years of Hot 100 charts was 529. Now, we look to see who is routinely working by gender within credit type (i.e., individual, duo, band).

The results for solo artists can be found in Table 4. Despite being fewer in number, female artists seem to be punching at the same weight as male artists with one, three, four, and six or more credits across the sample. The only meaningful differences emerged with males more likely to have two credits than their female counterparts whereas the opposite trend (females>males) emerged for five credits.

Table 4
Number of Songs by Artists with Solo Credits by Gender

# of Songs	Male Artists		Female Artists		Total	
	# of Artists	%	# of Artists	%	# of Artists	%
1	132	57.6%	47	55.9%	179	57.2%
2	36	15.7%	8	9.5%	44	14.1%
3	19	8.3%	9	10.7%	28	8.9%
4	14	6.1%	4	4.8%	18	5.7%
5	4	1.7%	7	8.3%	11	3.5%
≥6	24	10.5%	9	10.7%	33	10.5%
Total	229	100%	84	100%	313	100%

Note: For presentational purposes, the range of 6 or more songs was grouped into one level. Individual artists' credits were ascertained using their name and/or pseudonym on solo or featuring credits.

However, the range of credits differed by gender. For males, the range of credits was from 1-33 (see Table 5). Drake held the top spot with 33 solo credits, followed by Justin Bieber (13 songs) and Chris Brown (13 songs). The range of credits for females was a bit narrower (1-21), with Rihanna the top performer followed by Nicki Minaj (20 songs) and Taylor Swift (12 songs).

Table 5
Top Individual Artists of Songs by Gender

Top Males	# of Songs	Top Females	# of Songs
Drake	33	Rihanna	21
Justin Bieber	13	Nicki Minaj	20
Chris Brown	13	Taylor Swift	12
Calvin Harris	11	Ariana Grande	11
Kendrick Lamar	11	Selena Gomez	9
The Weeknd	10	Katy Perry	8
Bruno Mars	9	Cardi B	8
Future	9	Adele	8

Turning to duos, a total of 25 performing pairs were credited across the sample. Twenty one duos were male only (84%), 12% ($n=3$) featured a male and female pair and only 1 (4%, i.e., *Icona Pop*) contained two female performers. The top performing duo had 7 song credits across seven years (*Florida Georgia Line*), followed by *The Chainsmokers* (5 songs) and *Macklemore and Ryan Lewis* (5 songs). There were 45 bands in sample, 71.1% ($n=32$) featured all males, 24.4% involved males and females ($n=11$), and only two (4.4%, *Fifth Harmony*, *Pistol Annies*) were all females. The top performing bands were *Maroon 5* (13 songs), *Imagine Dragons* and *Migos* (8 songs each), and *One Direction* (6 songs).

Taken together, the results of this section reveal pronounced gender differences on the Hot 100 year-end charts from 2012-2018. While females comprised under a third of individual performers, their presence in duos and bands was in the single digits. Further, no female within a duo or band appeared across the 100 top songs of 2018. We now turn our attention to examine another demographic characteristic on the Billboard year end charts, race/ethnicity.

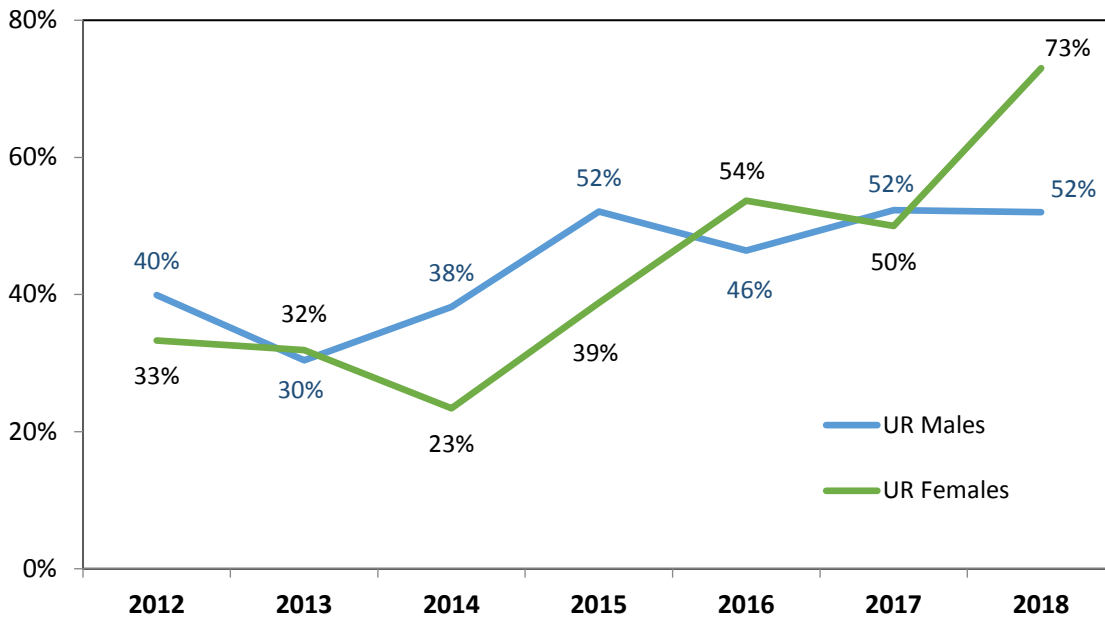
Race/Ethnicity. Every artist also was coded as underrepresented or not (white).⁵ Across 1,455 artists, 56% ($n=815$) were white and 44% ($n=640$) were from underrepresented racial/ethnic groups. As shown in Table 6, a majority of artists (55.6%) on the 2018 charts were underrepresented which is well above U.S. Census (39.3%).⁶ The percentage in 2018 was not different from 2017, but the proportion was meaningfully higher (>5 percentage points) than 2012 (+17.2) and every other year in the sample.

Table 6
Underrepresented Artists by Year

Performers	2012	2013	2014	2015	2016	2017	2018	Total
Not Underrepresented	61.6% ($n=122$)	69.3% ($n=149$)	64.9% ($n=146$)	51.3% ($n=100$)	51.6% ($n=99$)	48.1% ($n=103$)	44.4% ($n=96$)	56% ($n=815$)
Underrepresented	38.4% ($n=76$)	30.7% ($n=66$)	35.1% ($n=79$)	48.7% ($n=95$)	48.4% ($n=93$)	51.9% ($n=111$)	55.6% ($n=120$)	44% ($n=640$)
Total	198	215	225	195	192	214	216	1,455

Similar to gender, we examined how underrepresented status (no, yes) varied with *gender*, *genre*, and *credit type* (individual, duos, bands). The intersection of *gender* and underrepresented status is shown in Figure 1. In 2018, the percentage of underrepresented females was at a seven year high. A full 73% of female artists were from underrepresented racial/ethnic groups in 2018 which is 23 percentage points higher than 2017 and 40 percentage points higher than 2012. For underrepresented males, 2017 (52%) and 2018 (52%) did not differ. However, the percentage of underrepresented male artists on the charts in 2018 was significantly higher (12 percentage points) than 2012 (40%).

Figure 1
Underrepresented Male & Female Artists Over Time



Pivoting to *genre*, Table 7 reveals that song type is related to artist underrepresented status. Underrepresented artists were more likely to be credited with Hip-Hop/Rap or R&B/Soul songs than their Caucasian peers. White artists were more likely to have songs from Pop, Alternative, Country, and Dance/Electronic than underrepresented artists.

In addition to gender and genre, we were interested in whether *performer type* was associated with underrepresented status. As shown in Table 8, the vast majority of solo artists were from underrepresented racial/ethnic groups in 2018 (70.2%). This percentage does not differ from 2017 but is substantially higher than 2012 (54.1%). A very different story emerged with duos, with only 20% of performers underrepresented in 2018 which was significantly lower than 2017 (27.3%) and 2012 (66.7%). Given small cell sizes, these results should be interpreted cautiously. The percentage of UR band members was 29.2% in 2018, which was not different than 2017 (30.5%) but higher than 2012 (15.7%).

Table 7
Song Genre by Underrepresented Artists

Genre	Underrepresented Artists	Not Underrepresented Artists
Pop	32.7% (n=209)	47.7% (n=389)
Hip-Hop/Rap	50.2% (n=321)	6.6% (n=54)
Alternative	1.4% (n=9)	23.2% (n=189)
Country	<1% (n=3)	11.2% (n=91)
R&B/Soul	10% (n=64)	<1% (n=7)
Dance/Electronic	5.3% (n=34)	10.4% (n=85)

Table 8
Percentage of Underrepresented Artists by Credit Type

Credit Type	2012	2013	2014	2015	2016	2017	2018	Total
UR Solo Artists	54.1% (n=59)	51.3% (n=57)	52.5% (n=63)	56.4% (n=75)	60.7% (n=74)	65.4% (n=87)	70.2% (n=99)	59.1% (n=514)
UR Artists in Duos	66.7% (n=4)	15% (n=3)	38.9% (n=7)	70% (n=7)	18.2% (n=4)	27.3% (n=6)	20% (n=2)	30.6% (n=33)
UR Artists in Bands	15.7% (n=13)	7.1% (n=6)	10.3% (n=9)	25% (n=13)	31.3% (n=15)	30.5% (n=18)	29.2% (n=19)	19.5% (n=93)

Note: For the percentage of white artists by year and credit type, subtract the cell percentage from 100. Featuring credits were included within specific credit type.

Table 9
Number of Songs by Underrepresented Artists with Solo Credits

# of Songs	UR Artists		Not UR Artists		Total	
	# of Artists	%	# of Artists	%	# of Artists	%
1	96	54.5%	83	60.5%	179	57.2%
2	26	14.8%	18	13.1%	44	14.1%
3	17	9.7%	11	8%	28	8.9%
4	12	6.8%	6	4.4%	18	5.7%
5	7	4%	4	2.9%	11	3.5%
≥6	18	10.2%	15	10.9%	33	10.5%
Total	176	100%	137	100%	313	100%

Note: For presentational purposes, the range of 6 or more songs was grouped into one level. Individual artists' credits were ascertained using their name and/or pseudonym on solo or featuring credits.

To look at unique or solo performers, we applied the same sift to the data as noted above with gender. A total of 313 unique artists worked across 700 songs (see Table 9). One difference emerged in Table 9, with white artists (60.5%) more likely to have a single credit across the sample than underrepresented artists (54.5%). Just under a sixth (14.1%) of performers had two credits in the sample, 18.2% had three to five credits. One-tenth of the artists had six or more credits across seven years.

Table 10
Top Individual Artists by Underrepresented Status

Top UR Artists	# of Songs	Top Not UR Artists	# of Songs
Drake	33	Justin Bieber	13
Rihanna	21	Taylor Swift	12
Nicki Minaj	20	Ariana Grande	11
Chris Brown	13	Calvin Harris	11
Kendrick Lamar	11	Adele	8
The Weeknd	10	Katy Perry	8
		Ed Sheeran	8

The top performing solo artists by underrepresented status can be found in Table 10. The top underrepresented artist was Drake, with 33 songs in the sample time frame. Drake had two and a half times more solo credits than the top white artist (Justin Bieber, 13 songs). Further, two of the top three underrepresented artists were women (Rihanna, 21 songs, Nicki Minaj, 20 songs) who also had more hits than any white artist on the list.

Besides solo credits, we also explored underrepresented artists' participation in duos and bands. Of the 25 performing pairs, 9 or 36% were underrepresented and 3 (12%) featured underrepresented and white artists. Just over half of all duos were white (52%). The top performing underrepresented duos were *Rae Sremmurd* (4 songs) and *LMFAO* (2 songs) whereas the top performing white duos were *Florida Georgia Line* (7 songs), *The Chainsmokers* (5 songs), and *Macklemore and Ryan Lewis* (5 songs). Of the 45 bands, only 8.9% ($n=4$) featured all underrepresented members, 14 featured (31.1%) a mix of underrepresented and white performers and 27 (60%) were white only. The top performers were *Maroon 5* (13 songs), *Migos* (8 songs), and *Imagine Dragons* (8 songs).

In total, the findings reveal that underrepresented artists dominated a great deal of the Billboard charts. In 2018 alone, underrepresented performers accounted for over half of the artists on the Hot 100 year-end chart. Women of color comprised over 70% of female artists in 2018. The top three performers across the entire study were each from underrepresented racial/ethnic groups. Unlike other forms of entertainment (e.g., TV, film), underrepresented performers are thriving in the music business.

Songwriters & Producers

Songwriters and Producers were also evaluated demographically. Here, we assessed gender for all content creators and underrepresented status for females only. For songwriters, the full seven-year sample was evaluated whereas only four years were assessed for producers. Given that so few females have access and opportunity to produce, a smaller sample was sufficient to establish trends.

Songwriters. A total of 3,330 songwriters were credited on the seven-year sample.⁷ A full 87.7% ($n=2,919$) were males and 12.3% ($n=411$) were females (see Table 11). This calculates into a gender ratio of 7.1 male songwriters to every one female. No changes in the percentage of females were observed between 2017 (11.5%) and 2018 (12.2%), nor do either of these years vary meaningfully from 2012 (11%).

Table 11
Songwriter Gender by Year

Writer Gender	2012	2013	2014	2015	2016	2017	2018	Total
Males	89% ($n=380$)	88.3% ($n=355$)	87.3% ($n=404$)	86.3% ($n=415$)	86.7% ($n=424$)	88.5% ($n=445$)	87.8% ($n=416$)	87.7% ($n=2,919$)
Females	11% ($n=47$)	11.7% ($n=47$)	12.7% ($n=59$)	13.7% ($n=66$)	13.3% ($n=65$)	11.5% ($n=58$)	12.2% ($n=69$)	12.3% ($n=411$)
Gender Ratio	8.1 to 1	7.5 to 1	6.8 to 1	6.3 to 1	6.5 to 1	7.7 to 1	7.2 to 1	7.1 to 1

Note: The gender of three writers was not ascertainable. Another 8 writers on songs were listed as "unknown." These eleven were not included in the above analysis.

Three additional measures were evaluated for female songwriters. The first was *race/ethnicity*. Each female songwriter was evaluated for underrepresented status (no, yes). Of the 411 females assessed, 43.3% were from underrepresented racial/ethnic groups and 56.7% were white. However, marked variation was observed over time. As shown in Table 12, 59.4% of female songwriters were underrepresented in 2018 which was higher than 2017 (53.5%). Only 29.8% of female songwriters were women of color in 2012, a percentage substantially lower than 2018.

Table 12
Percentage of Underrepresented Female Songwriters

	2012	2013	2014	2015	2016	2017	2018	Total
% UR Females	29.8%	36.2%	32.2%	39.4%	46.1%	53.5%	59.4%	43.3%
Total #	47	47	59	66	65	58	69	411

Note: The percentage of white female songwriters can be obtained by subtracting a particular cell from 100%.

Besides underrepresented status, we also assessed the *genre* of female songwriters. The majority of female songwriters were in Pop (58.6%) followed by Hip-Hop/Rap (17.8%) and Dance/Electric (9.5%). Few were writing lyrics and melodies in the R&B/Soul (5.8%), Alternative (4.4%), and Country (3.9%) space. Similar to performers, we also scrutinized writing credits by gender (see Table 13). There were no meaningful differences (± 5 percentage points) in the number of credits for males and female songwriters in the sample evaluated. Thus, female songwriters were punching at the same weight as their male peers but were afforded fewer opportunities.

Table 13
Number of Songs by Songwriter Gender

# of Songs	Male Songwriters		Female Songwriters		Total	
	# of Writers	%	# of Writers	%	# of Writers	%
1	894	68%	131	70.8%	1,025	68.3%
2	190	14.5%	19	10.3%	209	13.9%
3	75	5.7%	7	3.8%	82	5.5%
4	32	2.4%	8	4.3%	40	2.7%
5	32	2.4%	8	4.3%	40	2.7%
≥6	92	7%	12	6.5%	104	6.9%
Total	1,315	100%	185	100%	1,500	100%

Note: Percentages were calculated within gender. The range of 6 or more was collapsed for presentational purposes.

Where differences emerged by gender was among top performing songwriters (see Table 14). As shown, the top male songwriter had over two times as many credits (*Max Martin*) as the top female songwriter on the year-end charts (*Nicki Minaj*). The top 10 male songwriters wrote or co-wrote just under a quarter (23%) of all songs in the sample.

Table 14
Top Individual Songwriters by Gender

Top Male Songwriters	# of Songs	Top Female Songwriters	# of Songs
Martin Sandberg (Max Martin)	39	Onika Maraj (Nicki Minaj)	18
Aubrey Graham (Drake)	33	Robyn Fenty (Rihanna)	14
Benjamin Levin (Benny Blanco)	24	Taylor Swift	12
Henry Walter (Cirkut)	22	Katheryn Hudson (Katy Perry)	9
Lukasz Gottwald (Dr. Luke)	21	Adele Adkins	8
Savan Kotecha	19	Sia Furler	8
Johan Schuster (Shellback)	18	Belcalis Almanzar (Cardi B)	8
Dijon McFarlane (DJ Mustard)	15	Brittany Hazzard (Starrh)	8
Michael Williams II (Mike WILL Made-it)	14	Selena Gomez	7
Adam Levine	14		

The final question addressed in this section is this: do female artists support and work with women songwriters? To answer this query, we only looked at non-duplicating songs in the sample to avoid double counting. Thus, our sample size reduced to 633. Then, we examined each song for the gender of the artist and the songwriter. 21.3% ($n=135$) of the songs in the sample were by female singer-songwriters with no additional non-performing female writers. These women do not provide employment opportunities for other women and predominantly worked with male writers and other male artists.

Out of 633 songs, 48 songs (7.6%) were written by at least one female songwriter who did not work with a female artist on the song. A total of 90 songs (14.2%) featured at least one female artist and at least one female songwriter. This is a 6.6 percentage point gain. Female artists may be the key to increasing

women’s access and opportunity to write in the music industry. This is imperative, as females face an epidemic of invisibility penning songs. Of the 633 songs, 360 or 57% lacked the presence of a female writer. In stark contrast, only 3 or <1% lacked any male songwriters.

Producers. For producers, our investigation only focused on a subset of songs. Here, we examined the top 400 songs of 2012, 2015, 2017, and 2018. Across 400 songs, 871 producers, co producers and vocal producers were credited.⁸ An individual receiving multiple producing credits on a song was only counted once. A total of 853 or 97.9% of producers were male and only 2.1% were female ($n=18$). The yearly breakdown is revealed in Table 15. There has been no change over the four years evaluated, with a gender ratio of 47.4 males to every one female.

Table 15
Producer Gender by Year

Gender	2012	2015	2017	2018	Total
Males	97.6% ($n=200$)	98.2% ($n=217$)	98.2% ($n=221$)	97.7% ($n=215$)	97.9% ($n=853$)
Females	2.4% ($n=5$)	1.8% ($n=4$)	1.8% ($n=4$)	2.3% ($n=5$)	2.1% ($n=18$)
Ratio	40 to 1	54.3 to 1	55.3 to 1	43 to 1	47.4 to 1

We removed the 14 songs that repeated across the charts in the time frame examined, bringing the sample to 386. After this, the total number of female producers reduced to 15 individual women and 17 credits. Eleven of these producers were white and 4 were from underrepresented racial/ethnic groups. Only two women worked twice as producers across the songs evaluated.

The results for songwriters and producers point to the continued exclusion of women from these positions. The percentages in 2018 reflect that there has been no change in hiring practices related to women behind the scenes in these roles. As songwriters, women of color were 59.4% of the females writing popular music in 2018, and 43.3% of female songwriters overall. Female producers of color, however, do not fare as well. Only 4 women of color have producing credits across the 400 songs analyzed. In the next section, we move to exploring differences by gender and race/ethnicity in critical acclaim.

Grammy Awards®: 2013-2019

The goal of this section is to understand how critical and industry honors vary by gender and to update our previous analysis on the Grammy® nominations. Seven years (2013-2019) of selected categories of Grammy® nominations were analyzed.⁹ These were: Record of the Year, Album of the Year, Song of the Year, Best New Artist, and Producer of the Year. We identified every individual who received a nomination in these categories from the 55th to the 61st Grammy Awards®, including the individual members of groups. The results below are discussed by year and by category. The final analysis overviews gender differences in the frequency of nominations.

1,064 individuals received a Grammy Award® nomination in the select categories from 2013 to 2019. A full 89.6% were male and 10.4% were female, a gender ratio of 8.6 males to every one female. Table 15 reveals that the percentage of female nominees in 2019 was significantly higher than 2018 and 2013. Despite this, 2018 was not different than 2015 or 2016 in the percentage of women nominated. One explanation for this increase is the expansion of nominees in several categories, allowing for a numerical increase in both women and men over prior years.

Table 15
Grammy® Nominations by Gender and Year

	2013	2014	2015	2016	2017	2018	2019	Total
Males	92.1% (n=105)	91.8% (n=156)	85.9% (n=134)	88.5% (n=138)	93.6% (n=190)	92% (n=92)	83.6% (n=138)	89.6% (n=953)
Females	7.9% (n=9)	8.2% (n=14)	14.1% (n=22)	11.5% (n=18)	6.4% (n=13)	8% (n=8)	16.4% (n=27)	10.4% (n=111)

Note: The gender of one producing group could not be identified and was not included in this analysis.

Gender differences across categories are depicted in Table 16. While males were the majority of nominees in each category, females were most likely to be nominated for Best New Artist, followed by Song of the Year. In the Record and Album of the Year categories, fewer than 10% of nominees were women. For the first time in the seven years analyzed, a woman (Linda Perry) was nominated for Producer of the Year.

Table 16
Grammy® Nominations by Gender and Category

	Record of the Year	Album of the Year	Song of the Year	Best New Artist	Producer of the Year	Total
Males	91.8% (n=259)	93.4% (n=520)	79.4% (n=104)	58.9% (n=33)	97.4% (n=37)	89.6% (n=953)
Females	8.2% (n=23)	6.6% (n=37)	20.6% (n=27)	41.1% (n=23)	2.6% (n=1)	10.4% (n=111)

Note: The gender of one producing group could not be identified and was not included in this analysis.

For female nominees, race/ethnicity was analyzed. Overall, 36.9% (n=41) of female nominees were women of color. Differences in nominations for women of color by category are shown in Table 17. The largest number of underrepresented females received nominations for Album of the Year, followed by Record of the Year and Best New Artist—the latter category grew by 16.1 percentage points from last year’s total.

Table 17
Female Grammy® Nominations by Underrepresented Status and Category

	Record of the Year	Album of the Year	Song of the Year	Best New Artist	Producer of the Year	Total
UR	34.8% (n=8)	51.3% (n=19)	18.5% (n=5)	34.8% (n=8)	100% (n=1)	36.9% (n=41)
Not UR	65.2% (n=15)	48.7% (n=18)	81.5% (n=22)	65.2% (n=15)	0	63.1% (n=70)

The final analysis examines the frequency with which men and women were nominated. The list of overall nominees was reduced to 608 individuals who were nominated for one or more Grammys in select categories over the past seven years. Of these, 87.5% were male and 12.5% were female. This translates to a ratio of 7 males to every 1 female.

For both men and women, the distribution of nominations was similar, save one category. Most individuals received just one nomination between 2013 and 2019, though men were more likely to receive five or more nominations than women were. For men, the range of nominations was 1 to 17 (*Tom Coyne*) while for females it was 1 to 7 (*Taylor Swift*).

Table 18
Number of Grammy® Nominations by Gender

No. of Nominations	Males	Females
1	69.2% (n=368)	71.1% (n=54)
2	15.8% (n=84)	18.4% (n=14)
3	5.3% (n=28)	7.9% (n=6)
4	3.2% (n=17)	1.3% (n=1)
≥5	6.6% (n=35)	1.3% (n=1)
Total	532	76

Note: Columns total to 100%.

For women, we also examined nomination frequency by race/ethnicity. Of the 76 individual women, 61.8% (n=47) were white and 38.2% (n=29) were women of color. Again, there were no differences in the frequency of nominations for white women and women of color. Most (72.4%=white vs. 70.2%=UR) received only one nomination. Only two women over the last seven years have received more than three nominations: Taylor Swift (7) and Beyoncé (4).

This section reveals that there is more progress to be made at the Grammys for women. Overall, 10% of nominees in major categories over the last few years were female, with a slight improvement from 2018 to 2019. Notably, for the first time in the seven years we evaluated, a woman was nominated for Producer of the Year. These promising changes reveal that the industry can take steps toward change, but that progress must be accelerated.

Barriers Facing Female Songwriters & Producers in Music

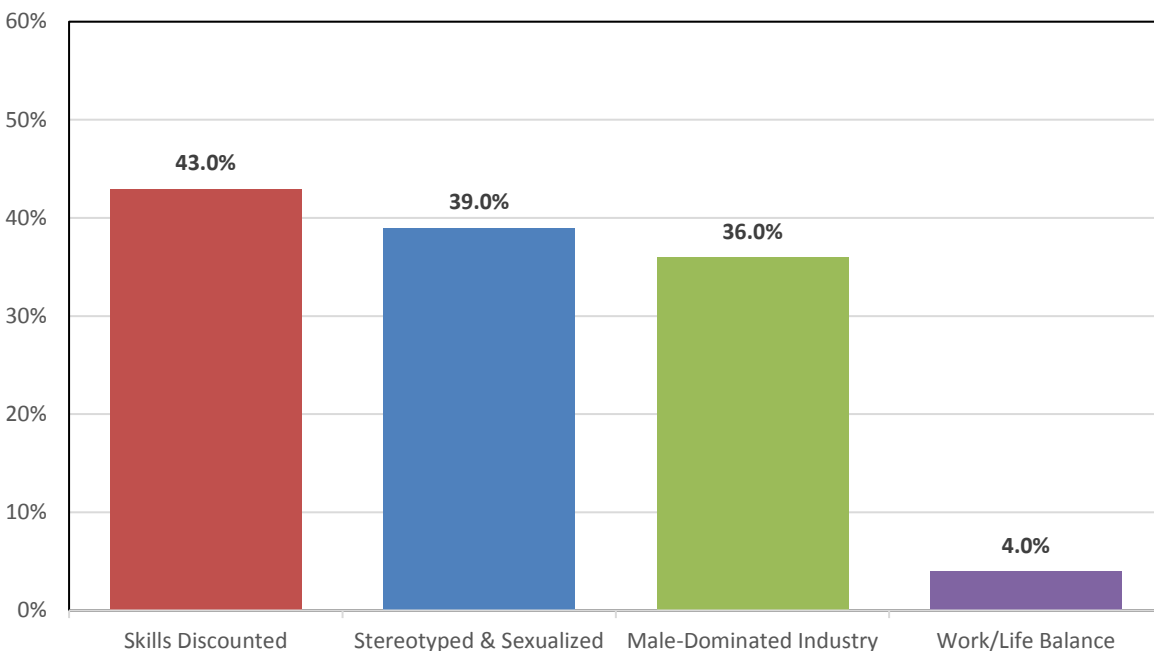
Across seven years and 700 popular songs, 12.3% of songwriters and 2% of producers were female. These figures beg the question: *why?* The purpose of this investigation was to understand the reasons for the low numbers of women participating behind the scenes in the music industry. To that end, we conducted a series of qualitative interviews to learn the impediments facing women in two positions: songwriting and producing.

In the summer and fall of 2018, 75 interviews were conducted with female songwriters and producers.¹⁰ Interviewees spanned genres and experience levels in music; 47% indicated they were songwriters, 9% were producers, and 44% held both roles. The average age of participants was 33 (range=21-59). In terms

of racial/ethnic identification, 71% were white and 29% from an underrepresented racial/ethnic group. Finally, 16% of participants worked outside the U.S.

Each participant was asked *what barriers have you faced as a songwriter or producer in music?* Responses were spontaneous, with some receiving additional prompts. Answers were analyzed for similar themes which pointed to the existence of a career impediment.¹¹ In their answer, individuals could indicate that they had personally faced the barrier in question, could state that other women they knew faced the barrier, or describe general situations they had heard about in the music industry. Each barrier is described in this section alongside research that explains how it relates to career paths.

Figure 2
Barriers Facing Female Songwriters and Producers in Music



General Career Barriers

The first two spontaneous barriers indicated by participants were not gender-specific. More than one-third (40%, $n=30$) of interviewees stated that they face difficulty *navigating the industry*, including breaking into the business, making connections, and getting into different rooms. Given the complexities of launching a creative career in a decentralized industry like the music business, this barrier is not surprising.

A second impediment women stated was the *financial instability* associated with a music career. Nineteen percent ($n=14$) of women described the lack of royalties available to songwriters and producers, the changing nature of the industry due to streaming services, and the difficulties associated with supporting oneself on the income generated from songwriting or producing. While financial uncertainties associated with artistic careers are certainly difficult and noteworthy, they do not provide a full explanation of why women work less than men. The problems associated with financial instability in music can face both males and females, particularly as revenue models change.

Apart from these two categories, 11% ($n=8$) of interviewees stated that their age created a barrier. An additional 11% ($n=8$) provided a series of other reasons why they faced impediments in music, which were not related to their gender.

Women's Skills and Abilities are Discounted

The first major barrier that faced female songwriters and producers was the consistent and persistent dismissal of their work and contributions. A full 43% ($n=32$) of interviewees stated spontaneously that two main issues confronted them as songwriters and producers. First, they were dismissed or not taken seriously—their abilities, competence, and knowledge in the role of songwriter or producer were doubted or were undercut by their colleagues. A second and related issue was that they had to prove their competence to individuals who might work with them.

These two barriers—that women's contributions are dismissed and that they must repeatedly prove themselves to their male colleagues—create challenges in two ways. If women's creative input is not valued or doubted this could have an economic impact on the revenue they derive from their profession. It also affects the experiences women have of bringing a creative product to fruition. When women must prove their abilities to others before they are considered for employment or to ensure their contributions are recognized, this might also impact their professional trajectory.

The dismissal of women's contributions fits into a larger pattern of research on the perception of women's knowledge or ability by others. For example, evidence suggests that men and women use gender as a reference when determining expertise.¹² Women may be perceived to hold less expertise or competence than men, particularly in a stereotypically masculine domain.¹³ The results of challenging others in the workplace might also influence perceptions of women, who may even be punished for violating gender norms.¹⁴

When it comes to proving themselves, women may face a more difficult road than males, as they could be subject to differing standards of competence or excellence.¹⁵ In one study, researchers found that the minimal competence standard for a female job applicant was lower than for a male.¹⁶ However, the female applicants faced higher standards than male applicants when the level of their ability was considered. While women may be able to get their foot in the door, they may be plagued by the idea that they are “good for a girl” rather than being seen as equally proficient at a task as their male colleagues.

At the crux of this barrier is the idea that men may resist women's influence more than women resist men's influence. To more deeply probe this idea, we asked women a follow-up question about whether their leadership or vision had been resisted by a colleague. 92% of women answered yes.

Women once again reported that they were ignored or discounted (43%, $n=32$) such that their contributions were either not recognized or not taken seriously. Nearly one-third (29%, $n=22$) stated that they were demeaned, or that others argued, embarrassed them or undermined their input. A further 19% ($n=14$) said that women taking on leadership threatened men, while 16% ($n=12$) stated that stereotyping about their gender was used to dismiss their work or their abilities. This could include individuals making assumptions about women's ability to lead or their technical proficiency.

While creative work may be shaped through the exchange of ideas and compromise between collaborators, women's experiences in music suggest this is not always the case. Instead, women songwriters and producers work in environments and with individuals who dismiss their ideas, do not acknowledge their abilities, and ignore their contributions. This sets up a system in which women must

continually prove their competence, talent, and skills to be considered and hired for work—particularly when they are the only person of their gender in the room.

Sexualized & Stereotyped

The second impediment, reported by 39% ($n=29$) of participants in unprompted responses, was that women's careers are inextricably tied to expectations about their gender and sexual availability. Women reported being *sexualized* (21% $n=16$), which included being the subject of innuendo, undesired attention, propositioned, valued for their appearance, and even an awareness or fear of being personally unsafe in work situations. One-quarter (25%) of interviewees ($n=19$) stated that gender *stereotypes* guided others' expectations about their behavior, treatment, or opportunities they were given. The responses in this category illuminate that simply *being a woman* in music can serve as a barrier to career success.

How do gender stereotypes influence career outcomes? According to one theorist, the stereotypes we hold about gender can overlap or diverge from qualities associated with leadership.¹⁷ In particular, qualities associated with being female, such as being warm, supportive, or kind, are often *not* the traits that describe successful leaders. In contrast, attributes that are typically viewed as masculine (e.g., ambitious, dominant, assertive) tend to align well with perceptions of leadership. There are at least two potential consequences that emerge. One is that women may not be projected into leadership roles because they are perceived to lack leadership qualities. The second is that women who hold leadership positions may be punished if they behave in ways that are in line with more masculine leadership traits and violate female gender roles. Women must walk a very fine line in order to both make career gains and escape backlash.

In the music industry, this leadership paradox for women may be particularly difficult to negotiate when the role of producer is considered. Across spontaneous interview responses, 12% ($n=9$) of participants stated that the qualities associated with producing were associated with males—and that the job itself was not viewed as something women could do. In other words, when individuals *think producer, they think male*. This bias about who has the skills, background, or fits the cognitive profile of a producer excludes women and may limit their career prospects. This finding aligns with a large body of global research that suggests that when people “think manager, they think male.”¹⁸

Stereotyping is not the only gender-based hurdle women face. The responses in this category also indicated that women experience objectification by their colleagues and the wider industry.¹⁹ According to theorists, objectification occurs when an individual is viewed not as a whole person but instead as a body and valued on the basis of how the body can be used or consumed. There are several consequences of diminishing women to mere objects—both to the work context and to women themselves.

Research demonstrates that when women are objectified, they contribute less to groups and perform less well on tasks, and that harassment can effect speech fluency.²⁰ Additionally, at least one study has shown that focusing on a woman's appearance (but not a man's) can reduce perceptions of her warmth and competence.²¹ As noted earlier, perceptions related to both women's fulfillment of gender roles (e.g., warmth) or competence could lead to backlash or dismissal of her contributions.

When objectified (either by self or others), women's state of “flow,” a focused state of working, can be interrupted.²² One example of this occurs when women must negotiate the objectifying gaze or potential advances of a male colleague while simultaneously trying to accomplish creative work. Objectification

also has potential consequences for women's psychological health. The internalization of objectification, a process called self-objectification, affects some women situationally and others habitually. Self-objectification can lead to other adverse mental health outcomes, such as body shame.²³

Apart from spontaneous answers that pointed to sexualization and stereotyping, interviewees also answered a question that specifically asked whether any aspect of the environment of the recording studio had ever made them feel uncomfortable or uneasy. More than three-quarters (83%) of participants said that they or other women experienced discomfort in the studio, with 68% specifying that they themselves had felt this way. Further comments on the question were coded into categories that represent the reasons participants felt uneasy in the studio.

More than one-third of interviewees (39%, $n=24$) stated that they had been objectified, hit on, or experienced sexual innuendo while working. Women recounted experiences in which their safety was a concern, from attending sessions in remote studios or someone's home, late at night or with strangers. A second category of responses (25%, $n=19$) pointed to being the lone female or one of few women in environments populated by males. The third source of discomfort (28%, $n=21$) was having their contributions, knowledge, or expertise dismissed or even facing hostile language from others. Fourth, 20% ($n=15$) of interviewees noted that drugs, alcohol, and sexualized women were part of studio culture, and that being surrounded by intoxication fostered nervousness. Finally, 11% ($n=8$) of respondents provided other reasons for their uneasiness, such as feeling under pressure to create a good song, particularly while others were watching.

The recording studio and the music industry more broadly are sites where women feel that their appearance and gender mark them for unwanted attention. Additionally, gender stereotypes thwart women's ability to participate across the music business in all roles. It is clear that women in music face a work environment in which their gender makes them primarily valuable for one thing—and it is not their talent.

Male-Dominated Industry

The third major barrier stated in their initial response by 36% of participants ($n=27$) occurred as the result of being a statistical minority in the music business. A full 29.3% ($n=22$) of interviewees in this category stated that the music industry was male-dominated or functioned as the proverbial 'boy's club.' This category also included responses (12%, $n=9$) who stated that there were few females in songwriting and production, including few female role models, and the handful of responses (4%, $n=3$) indicating that women were competitive with each other.

That music is predominantly created by males—particularly popular music—can be objectively verified, and has been by reports such as this one. Yet, it is more than the numerical disparity between men and women that creates a barrier for female songwriters and producers. Being outnumbered by men can affect women in multiple ways.

The experience of being alone in a group is what researchers have termed *solo status*.²⁴ The negative effects of solo status for women may include decreased task performance and among some, changing response style to less detailed language.²⁵ If women are, as we note above, already at risk for being dismissed or discounted then this may be amplified when they are the only woman in the workgroup.

A second risk to women which is borne out by the spontaneous and prompted answers above, is either real or threatened forms of gender-based or sexual harassment. Research has shown that these behaviors are more likely to occur when women have greater contact with males in the workplace.²⁶ Additionally, sexual or gender-based harassment may be more likely to occur to women who embody more masculine traits—or who work in more male-dominated environments.²⁷

To further understand women's solo status or isolation, we explored quantitative data. After removing duplicate songs from the sample outlined earlier, we examined 633 popular songs from 2012 to 2018. Across these songs, 56.9% did not feature even one female writer. When women are present, they are often alone—31.6% of songs had just one female writer involved. A mere 11.5% of songs had 2 or more female writers credited. At most, a song had 6 female writers involved. In contrast, up to 16 men were involved with a song. Only 3 songs in the sample, or less than 1% of 633 songs, did not feature a male songwriter. Males are also solo contributors to just 9.6% of songs. Thus while women are excluded or alone on 88.5% of the most popular songs over the last 7 years, men face solo status or erasure on only 10% of these tracks.

Beyond often working alone, a secondary barrier related to working in a male-dominated industry cited by participants was the lack of role models in songwriting and producing. Women stated that there were not robust examples of women doing these jobs or shown in other aspects of the music industry such as playing instruments or working as engineers. However, not all role models are created equal. Research in computer science reveals that for young women, stereotypical role models of either gender are likely to repel interest and perceived success in the field. The same is true of environments; when young women encounter environmental cues that are evocative of computer stereotypes, they are less likely to pursue the major.

This evidence suggests that expanding women's interest in music production and songwriting entails more than ensuing that role models exist. It is imperative that role models do not evoke negative stereotypes that may decrease interest.²⁸ At least one other investigation examined how women's career aspirations can be influenced by experiencing stereotype threat, or the fear of confirming a negative stereotype about their gender.²⁹ In this context, women who were skilled mathematically opted for fields that were more in line with stereotypically feminine occupations, such as journalism, communication, or writing instead of technical fields such as engineering or accounting.

One way stereotyping may be communicated is through the pervasive sexualization of women in music. As noted earlier, women face a climate of objectification in the recording studio. Song lyrics themselves—especially those with male artists—include references to women's bodies or sexual activities,³⁰ making not only the *workplace* but the *work product* a source of objectification. An awareness of these stereotypes may decrease the likelihood that women will want to pursue a career in the field.

Work and Life Balance

The difficulty of balancing both professional and personal demands was also explored. Few participants overall (4%, $n=3$) spontaneously mentioned that work and life balance created a career impediment. We further probed this topic with a focused question: "To what extent is balancing work and family life an issue in your career?" This revealed that 70.7% ($n=53$) of participants personally find this challenging and an additional 13.3% ($n=10$) indicated while it might not be a problem for them, other women across the business might see this as a barrier.

Over half (54.7%, $n=41$) of participants indicated that their relationships suffered as a result of the demands of work. These relationships included ties to romantic partners, family members, or friendships. Interviewees stated that they did not have the time to invest or nurture these bonds, that working in music put pressure on relationships, or that they chose not to foster these connections. In line with this category, 25.3% ($n=19$) of participants indicated that they prioritized their career over relationships or other aspects of their lives.

A few other issues emerged that created challenges or illuminated how participants strive to create balance. Roughly ten percent (10.7%, $n=8$) of participants said that they faced mental or physical health issues due to the demands of the field. Gender roles and industry biases that make balancing professional and personal demands a greater burden for women to bear were commented on by 20% ($n=15$) of participants. Eight percent said that their family life impacted their career and/or they felt guilt about their choices. Seven respondents (9.3%) indicated that they put off having children in order to focus on their careers. Finally, 25.3% ($n=19$) of those interviewed indicated they did not have children at present.

The challenge of balancing demanding careers with personal relationships and family life is not unique to music. It has emerged in studies related to females behind the camera in film,³¹ and having children or caring for older relatives affects women to a larger extent than men, even interfering with work responsibilities.³² Despite this reality, the need to balance personal and professional concerns may restrict the opportunities women are able to take, but is not sufficient to explain the low percentages of women in the field overall.

Women of Color Face Unique Impediments

While few of the individuals (3%, $n=2$) interviewed stated that being from an underrepresented racial/ethnic group created an impediment to their careers, a follow up question yielded more information. More than 80% (82.3%, $n=14$) of the women from underrepresented racial/ethnic backgrounds prompted on the topic ($n=17$ of 21) indicated either directly or indirectly that their race/ethnicity created a barrier to their work in music.

These women reported that they were not considered (58.8%, $n=10$) for certain projects when their identity was clear before they met someone, that they were rejected for certain opportunities, or not taken seriously, and that they were not seen as marketable. Additionally, 29.4% ($n=5$) said they were stereotyped in terms of the genre in which they could work. Similarly, 29.4% ($n=5$) said they did not receive support in the form of acceptance, praise, or that they were only respected within their in-group. Finally 29.4% ($n=5$) stated that they were hired based on their token status or that they were the only person of color in the room.

Research supports the idea that women of color face greater hurdles than their white female counterparts across industries. Studies show that women from underrepresented racial/ethnic backgrounds are disadvantaged for promotions, may experience a larger wage gap, and feel that they lack access to mentorship, informal relationships with co-workers, role models, and assignments that bring visibility.³³ In other facets of entertainment, women of color are far less likely than their white female colleagues to work as film or TV directors, film producers, executives, in notable below-the-line positions, and as film critics.³⁴ In a previous study on barriers facing underrepresented film directors, women of color indicated that the influence of both their gender and race limited their career opportunities.³⁵ As noted above, only 4 women of color worked as producers across 400 songs from 2012 to 2018—

providing further evidence that in music women of color confront obstacles that their white female peers do not.

Additional Barriers

In addition to what is described above, a small percentage of women described additional barriers that they faced. Each will be described briefly.

Nine percent ($n=7$) of women stated that there were internal barriers that created difficulties for them in their work in the music industry. This included lacking confidence, knowledge, or perceiving that their own abilities were limited. While women may legitimately feel that they need to enhance their skills, knowledge or abilities in their chosen field, other factors may be at work. Research suggests that individuals may self-stereotype, particularly if their gender identity is more salient.³⁶ After working in a business rife with gender stereotypes, women may be more likely to view themselves as their industry sees them.

Eleven percent ($n=8$) of participants indicated that the music industry was more difficult for women generally, without offering additional information on how or why that might be the case. Finally, 4% ($n=3$) of participants stated that to find success they pursued work on their own terms. By choosing to operate outside of closed networks, they were able to create opportunities.

The results of the qualitative analysis provide an explanation for the lack of women in music. Through women's own words and experiences, it is clear that the way they are viewed and treated in the industry prevents more women from exploring careers in music. What follows are closing thoughts on the data presented here and solutions to remedy the ongoing exclusion of women in songwriting and producing.

Conclusion

The purpose of this study was twofold. First, we updated our initial study on the prevalence of women and people of color working as artists, songwriters and producers in popular music. The results revealed that little has changed in the last year. Second, we explored the reasons why so few women work as songwriters and producers in the industry. Through interviews with 75 individuals employed in this capacity, the experiences of women in music illuminated the impediments women face.

In 2018, issues of inclusion in music took center stage, but the percentage of female participants still lags. Only 17.1% of Billboard Hot 100 artists in 2018, and 21.7% of artists overall across the past seven years were female. Women were primarily individual performers, and most likely to be found in pop music. Behind the music, however, females were still just 12.3% of songwriters overall and a mere 2% of producers. These latter two percentage points have not changed in the seven year time period studied.

The inescapable conclusion from this report is that the major impediment confronting women is the very way the industry views their gender. Women described being isolated, objectified, and dismissed. These issues individually create barriers but collectively impose a matrix of issues that women must navigate. As described above, when women are the sole female in a workgroup, their ideas may be less persuasive and their leadership resisted. They may be objectified by group members, creating the potential for a hostile work environment and gender-based harassment. Finally, pervasive gender stereotypes about women's interests and abilities may mean that women are not considered to possess the skills and abilities needed to take on certain roles. The low percentage of women participating as songwriters and

producers is the inevitable result of an industry that does not seem to believe that women are valuable assets in these roles.

In addition to the impediments facing women, it is also clear that women of color face unique challenges as songwriters and producers. As noted earlier, women of color make up a very small percentage of producers. Perceptions and stereotypes related to an individual's racial/ethnic background, and the feeling of working as a token, seem to create additional impediments to success.

Turning to artists, however, in 2018 over half of the performers on a Billboard Hot 100 song were from underrepresented racial/ethnic groups. In fact, of female artists, 73% were women of color. These figures offer a sharp contrast to other forms of entertainment, particularly film, where people from underrepresented racial/ethnic groups are often marginalized on screen.

What can be done to combat the impediments facing women and ensure greater access and opportunity? We propose several solutions to improve the participation of women and counter the biases described above.

Create Environments Where Women are Welcome

As women described, the recording studio and other workspaces in music are sites for objectification and dismissal of their opinions and ideas. Additionally, these predominantly male environments isolate women, at times creating fears for personal safety. One way to change the dynamics in these spaces is to ensure that women are welcome and present.

Adding more women not only changes the ratio, it eliminates their solo status and may clear social identity threats that can undermine their performance. Increasing the percentage of females in the recording studio may not only lead to better individual performance, but to better work product overall. In a question that specifically asked about whether the presence of more women altered the studio environment, 80% ($n=60$) of participants answered yes, 10.7% ($n=8$) said they were unsure, and 8% ($n=6$) said no. One individual did not respond.

What changes when more women are in the studio? Over half of the women (52%, $n=39$) interviewed said that adding more women to this context creates a culture of collaboration. This includes better communication, an emotional connection with others, feeling their skills and abilities would not be dismissed, and that the resulting music would be a product of positive collaboration. Nearly one-third (45.3%, $n=34$) said that they felt or would feel more at ease in the studio with more women present. This translated to feeling less alone, a sense of comfort, and that someone "had their back." More than one-third (30.7%, $n=23$) stated that it was important to change the ratio and have more women present. Some individuals (6.7%, $n=5$) mentioned that having more women present could neutralize bad behavior in the studio, and 8% ($n=6$) said that they were unsure whether the presence of more women would create change as they had always worked alone. A few responses (14.7%, $n=11$) said that having more women in the studio has made things more difficult in the past.

There are current industry programs that are working to create spaces that are friendlier to women. One example is She Is The Music. A non-profit whose goal is to increase the number of women working in music, She Is The Music conducts songwriting camps where women work collectively to create new music. These all-women rooms are designed to create environments where women feel supported, safe,

and are able to let their creativity flourish. By bringing women together, She Is The Music is disrupting the ways that the recording industry treats women to create new models for success.

Create Opportunities for Women to Use their Skills and Talents

Improving the number of women working in popular music is essential, and it begins with creating ways that women's skills and talents can be recognized and used. Women reported being dismissed or not taken seriously in the recording studio, a barrier that can reduce their effectiveness and long-term career sustainability. At least one study suggests that credibility and legitimacy conveyed by others strengthens women's influence in groups.³⁷ Beyond simply hiring more women, one strategy to improve women's experience in the studio is for others to ensure that their expertise and talents are noted.

Spotify has taken steps to ensure that women's skills are nurtured and recognized. Through the EQL Studio Residency Program, Spotify supports three female producers and engineers in studios located in New York, Nashville, and London. The residency program offers women the opportunity to use their skills, be mentored by other industry practitioners and gives them the recognition and support they need to move forward in their careers. By putting women in the studio, Spotify is setting the stage for these individual's careers and expanding the purview of what women can do.

Role Models and Mentorships

Beliefs about what women can and should do are rooted in gender role stereotypes. As noted earlier, these stereotypes can influence perceptions and shape aspirations of young people for careers and activities. Participants in this study reported that the lack of females in songwriting and producing positions means that there are few role models for young women. They also told us that producing, in particular, was viewed as a job for men.

It is imperative that outdated stereotypes about women's capabilities be traded for a new vision of what women can do. One tool that can expand our view of women is the media. Portraying women and showcasing their work as songwriters, producers, and engineers is one way to demonstrate that women can thrive in these roles. By witnessing women succeeding in those positions, the ambitions of young women and the beliefs that men hold can be transformed. One strategy developed to address this pipeline is the For The Record Collective. The For The Record Collective is a call to action for inclusion that will feature a first-of-its-kind collection of EPs, docuseries, and live events with music produced, written, and engineered by women.

Another avenue to support young women as they seek to move into songwriting and producing positions is mentorships and sponsorships. Mentorship plays a large role in She Is The Music's plan to increase the number of women working in music. It is also a key aspect of Spotify's EQL residency in partnership with Berklee College of Music. Moreover, training, mentorship, and support for women are the basis for groups such as Women's Audio Mission, SoundGirls, Gender Amplified, Girls Make Beats, and SheWrites. These organizations have been working to ensure that women's talents are nurtured and that the pipeline for employment in the music industry is robust.

Commit to Considering & Hiring More Females

A final way to include more women in the recording studio is to hire them. Women in this study stated that they routinely felt the need to prove themselves to those they worked alongside or who could hire

them. In an environment where women feel their skills are doubted, companies, labels, managers, and artists can commit to considering and hiring more women to write, produce, and engineer their music.

One option for ensuring that more women are part of production is for groups to set target inclusion goals. These would specify the number of women to be considered in specific producing or engineering roles.³⁸ Goals could also be set for songwriting camps to include a certain number of female writers. Inclusion goals are a legal way for companies to remedy historical imbalances in the number of individuals from a protected group working in industries or organizations. By making the process of hiring producers and engineers more thoughtful and focused, target inclusion goals can ensure that progress is made toward a more balanced pool of songwriters, producers, and engineers. Target inclusion goals will not only get more women onto consideration lists, but should result in more women in the studio who are utilizing their talents and abilities to create new music.

Limitations and Future Directions

A few limitations of the study are worth noting. In terms of the quantitative study, the sample was constructed from the Billboard Hot 100. This is one measure of popularity, but may not reflect the full spectrum of the music business. Examining different genres or using another indicator of popularity or sales could change the resulting picture of the industry. Secondly, while race/ethnicity was measured across artists, we only examined the underrepresented status of female songwriters and producers. It is important for future research to expand this analysis to understand how men of color fare as songwriters and producers. It is also necessary to expand access to information on the topic in order to allow researchers to disaggregate the data to understand how different groups are represented in music. Third, we restricted our analysis to only artists, songwriters, and producers, but other positions must be explored. In a follow up analysis in 2018, we found that only 3% of mixing and mastering engineers were women. Examining other positions, such as session singers, instrumentalists, and executives across the industry is important for developing a wider understanding of inclusion throughout the business.

The qualitative analysis is limited by a few factors as well. The analysis on barriers facing females is based on interviews with volunteer participants. Individuals who were willing to participate might differ in important ways from those who did not volunteer. Including the perspectives of others could alter the nature or consistency of the responses. There may also be additional barriers that face female songwriters and producers that are not included here. In particular, it is important to further understand how interactions with labels might create career impediments. Several aspects of this, from interacting with A&R professionals to dealing with publishers, were explored in interviews but are not analyzed here. Lastly, exploring the process of crediting and “splits” will be important for future research, as this may be one way that females’ participation is restricted in music. Despite these limitations, this study reveals the notable ways that women, their voices, and their talents have been curbed in the creation of music.

In conclusion, when we consider the barriers facing women it is no surprise that the percentage of women working in popular music has changed little over time. Until women are valued for their contributions more than for their bodies, the music business will continue to be a place where women feel at best disrespected and at worst unsafe. In order to see true and long-term change, the industry must feed the pipeline of women who are coming up through the various organizations working to support the next generation of female songwriters and producers. It must also work to address the ways in which women currently experience isolation, objectification, and dismissal throughout its ranks. By embracing collective action and new solutions, music can be an industry that celebrates all people and all voices.

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Footnotes

1. The year-end Hot 100 chart on Billboard can be retrieved here: <https://www.billboard.com/charts/year-end/2018/hot-100-songs>. As noted in our seminal report, some songs repeat across year-end charts. This happened with 67 songs across the seven years evaluated. These overlapping songs were included in analyses within each year-end chart they appeared. However, the 67 repeating songs were excluded when analyzing individuals credited multiple times across the sample.

All unitizing and variable coding decisions can be found in the S. Smith, M. Choueiti, and K. Pieper (2018) *Inclusion in the Recording Studio* report. Artists were included as they appeared on the Billboard chart. Photos, online information, industry databases, pronoun usage, biographies, and other referents were used to determine the gender of all individuals credited across the sample. Information to determine gender was found for all artists.

2. Retrieved from Music Watch: <https://www.riaa.com/wp-content/uploads/2018/05/MusicWatch-Consumer-Profile-2017.pdf>

3. Similar to the previous report, songs appearing on soundtracks or compilation albums were categorized into one of the designations reported. This was done using artist genre and information. The 700 songs across the entire sample without removing repeats were categorized into the following genres: 300 (42.9%) Pop, 181 (25.9%) Hip-Hop/Rap, 63 (9%) Alternative, 63 (9%) Country, 47 (6.7%) R&B/Soul, and 46 (6.6%) Dance/Electronic.

4. Excluding featuring artists from Table 3 does not meaningfully (± 5 percentage points) affect any of the female cell findings for any of the years studied. As such, these credits remained in the analyses and are reported in the results.

5. Adding upon the data collected from the inaugural study, our research team looked up each new individual Artist for information pertaining to their race/ethnicity across online databases (i.e., StudioSystem, Variety Insight) and/or other internet based sources. In this report, race/ethnicity for individuals is categorized as either white/caucasian or person of color (Hispanic/Latino, Black/African American, Asian/South Asian, Native American/Alaskan Native, Native Hawaiian/Pacific Islander, Middle Eastern, or Other/Mixed Race), noted as ‘underrepresented’ in this report. For 29.3% of individual artists in this sample (n=155), racial/ethnic grouping (White vs. Underrepresented) was inferred by the senior research team members using images and/or biographical information. In a prior study, we calculated a 0.90 correlation between our categorization of individuals on this binary measure and their confirmed status. Thus, we are quite confident in the validity of our race/ethnicity judgments. Occasionally, new information that alters the judgments made in this report may be uncovered. Subsequent investigations will reflect any potential changes.

6. U.S. Census (2019). Quick facts. <https://www.census.gov/quickfacts/fact/table/US/PST045218>

7. Songwriting credits were retrieved from a combination of three online databases: ASCAP (<https://www.ascap.com/repertory>), BMI (<http://repertoire.bmi.com>), and SESAC (<https://www.sesac.com/Repertory/RepertorySearch.aspx>).

We were unable to confirm the gender identify of 33 individuals credited as songwriters across the 700 songs using databases or online information. For gender, we classified 23 of these writers based upon their first name (e.g., Peter) – all were categorized as Male. Seven individuals were credited as “Unknown Writer” instead of being named. We excluded these seven unknowns and the remaining three songwriters from all analyses.

All female writers as well as the top 10 male writers were researched and categorized for race/ethnicity in the same manner as artists. The senior team members inferred 71 (38.4%) of the 185 individual female songwriters in the sample as white or underrepresented using the same method applied for artists.

8. Across the 386 songs from 2012, 2015, 2017, and 2018, album liner notes were used to retrieve producing credits for 288 songs. The website Genius.com and one news article were used to determine the producers, co-producers, and vocal producers on the remaining 98 songs (25.4%). We used the Recording Academy's producer definitions to determine eligibility for this analysis:

https://www.grammy.com/sites/com/files/pages/producer_definitions_for_awards.pdf. Obtaining gender and race/ethnicity for producers followed the same approach used for artists and songwriters.

Four credits were excluded from Producer analyses. We could not confirm the exhaustive membership of the individuals in the group, Shampoo Press & Curl. This group appeared three times across the sample (credited as Producer) and was excluded from analyses. Additionally, we excluded one producer credited by their stage name as we could not confirm their identity or gender. We inferred the racial/ethnic grouping for eight (53.3%) of the 15 female producers.

9. Grammy® Award nominees were gleaned from <https://www.grammy.com> and other websites. Each individual attached to a nomination (by mention of name or group, band, or duo affiliation) was included in the analyses. However, we did not include the performing artists associated with Song of the Year nominations – only the nominated songwriters were included. Of the 76 individual females, senior research team members inferred the underrepresented status (white vs. woman of color) for 22 nominees (28.9%).

10. Only individuals who could be perceived as female-presenting were invited to participate in the study. Put differently, no male-identifying individuals were interviewed for this investigation. Each interview was conducted over the phone by one of three of the study authors. Participants were asked a series of twelve questions, some of which included follow up prompts when necessary. The interviews focused on the career path and experiences of female songwriters and producers. All responses were transcribed from audio recordings, checked for accuracy, aggregated by members of the research team, and analyzed by the study authors.

11. Coding of qualitative interviews focused on frequently occurring themes and theoretically relevant information from five of the interview questions, including all relevant follow ups. While major barriers emerged from spontaneous mentions, two individuals were prompted to specifically discuss their gender in relation to the barriers. Those responses are counted as spontaneous. In this section, the unit of analysis is an individual's response to a single question. Thus, answers range in length by question and by respondent, and may fit into multiple categories.

Responses to additional interview questions are included in discussions of each career impediment when relevant. Questions provided in text are provided as they were posed to interviewees.

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