

Inequality in 1,100 Popular Films: Examining Portrayals of Gender, Race/Ethnicity, LGBT & Disability from 2007 to 2017

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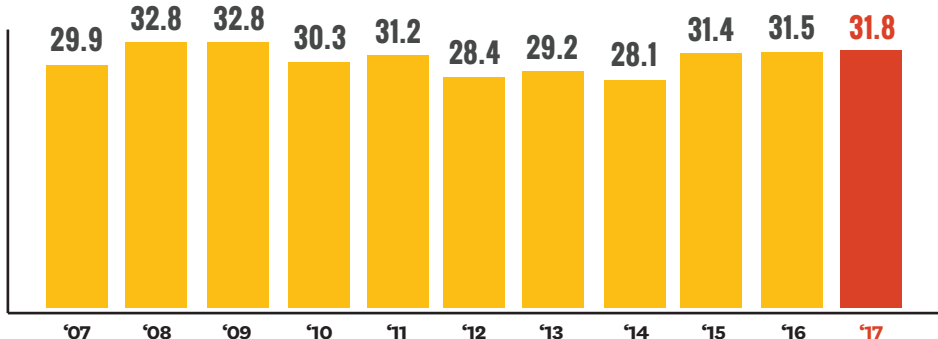
INEQUALITY IN 1,100 POPULAR FILMS

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NO PROGRESS FOR FEMALES ON SCREEN IN FILM FOR OVER A DECADE

Prevalence of female speaking characters across 1,100 films, in percentages



Percentage of 1,100 films with Balanced Casts



Ratio of males to females

2.3:1

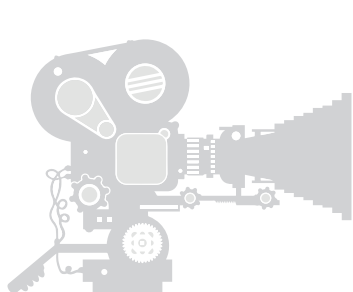


Total number of speaking characters

48,757

LEADING LADIES RARELY DRIVE THE ACTION IN FILM

Of the 100 top films in 2017...



Depicted a **Female Lead** or **Co Lead**

32 films in 2015 and 34 in 2016 depicted a female lead or co lead.

And of those Leads and Co Leads*...

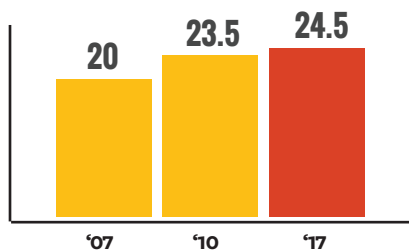
4 Female actors were from **underrepresented racial / ethnic groups**

5 Female actors were at least **45 years of age or older**

*Excludes films w/ensemble casts

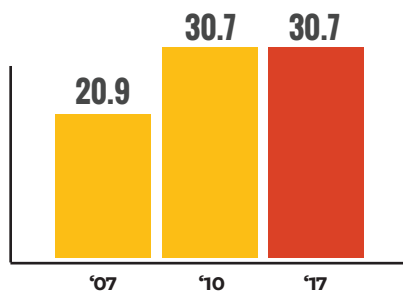
GENDER & FILM GENRE: FUN AND FAST ARE NOT FEMALE

ACTION AND/OR ADVENTURE



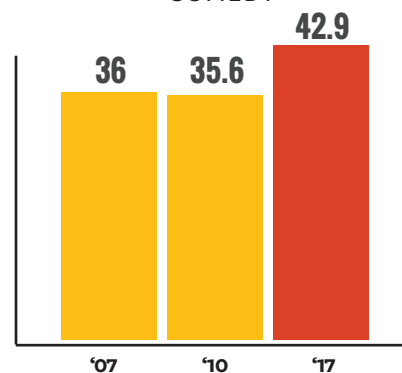
% OF FEMALE SPEAKING CHARACTERS

ANIMATION



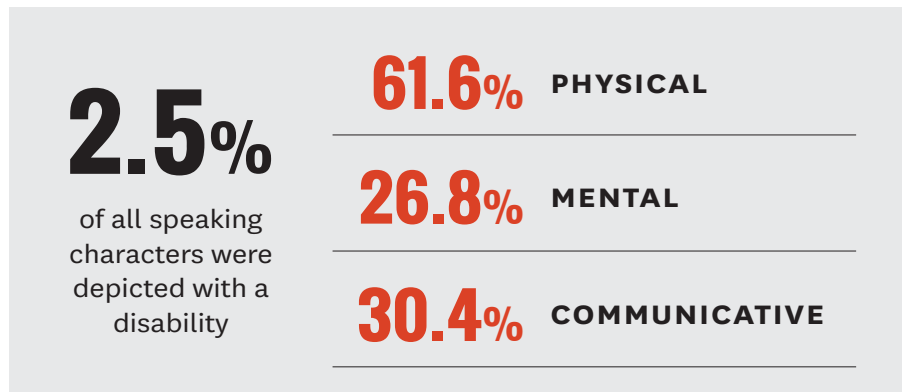
% OF FEMALE SPEAKING CHARACTERS

COMEDY

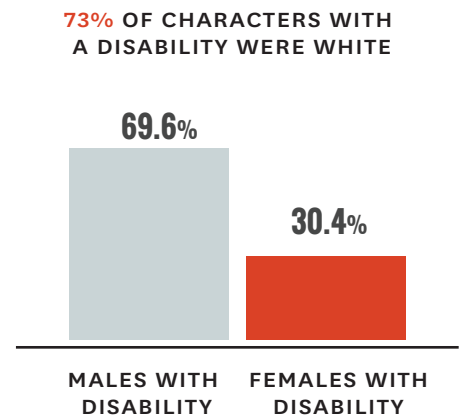


% OF FEMALE SPEAKING CHARACTERS

CHARACTERS WITH DISABILITY FACE A DEFICIT ON SCREEN IN FILM



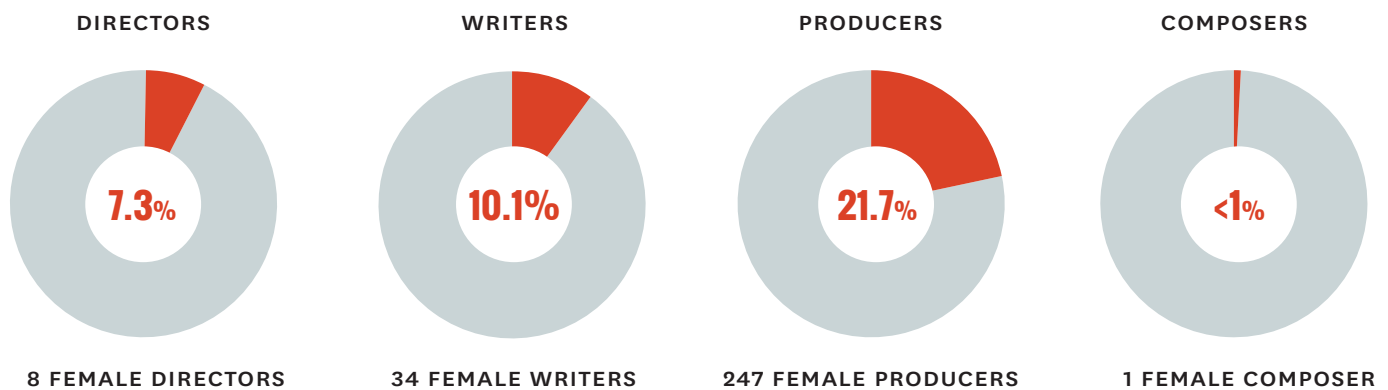
*Based on U.S. Census domains



FILM PRODUCTION IS NOT FEMALE FRIENDLY

Across 1,584 content creators....

● MALES ● FEMALES



OUT OF 1,100 FILMS, ONLY 43 WOMEN WORKED AS DIRECTORS



THERE ARE

43

UNIQUE FEMALE DIRECTORS BETWEEN 2007 AND 2017

Angelina Jolie	Jennifer Yuh Nelson*	Nora Ephron
Anna Foerster	Jessie Nelson	Patricia Riggen*
Anne Fletcher	Jodie Foster	Patty Jenkins
Ava DuVernay*	Julie Anne Robinson	Phyllida Lloyd
Betty Thomas	Julie Taymor	Sam Taylor-Johnson
Brenda Chapman	Kathryn Bigelow	Sanaa Hamri*
Catherine Hardwicke	Kimberly Peirce	Sarah Smith
Diane English	Kirsten Sheridan	Shari Springer Berman
Elizabeth Allen Rosenbaum	Lana Wachowski	Sharon Maguire
Elizabeth Banks	Lilly Wachowski	Stacy Title
Gina Prince-Bythewood*	Loveleen Tandan*	Stella Meghie*
Greta Gerwig	Lucia Aniello	Susanna White
Hallie Meyers-Shyer	Nancy Meyers	Thea Sharrock
Jennifer Flackett	Niki Caro	Trish Sie
Jennifer Lee		

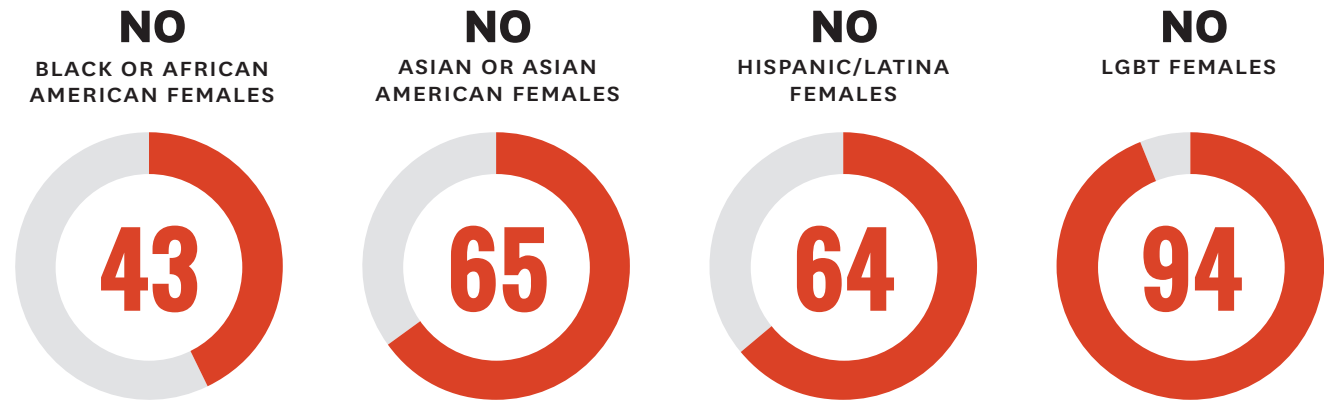
*An asterisk denotes underrepresented female directors.

DIRECTORS AND COMPOSERS: FEMALES NEED NOT APPLY



THE EPIDEMIC OF INVISIBILITY IN FILM

Of the 100 top films of 2017, the number of films with...



WHEN HOLLYWOOD THINKS DIRECTOR, THEY THINK WHITE MALE

ACROSS 1,100 FILMS AND 1,223 DIRECTORS...

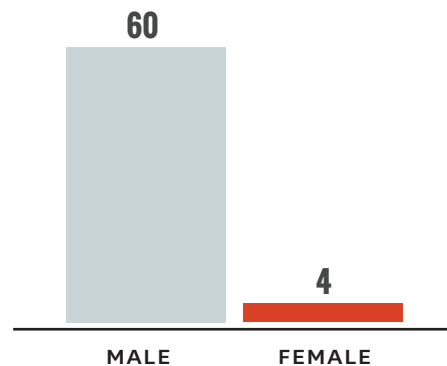
5.2%

OR 64 WERE BLACK OR AFRICAN AMERICAN

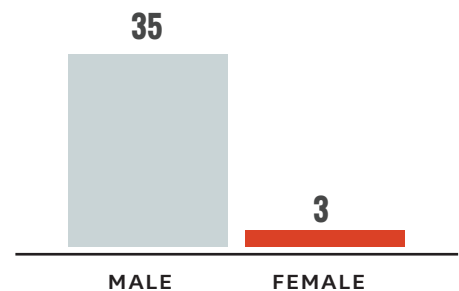
3.1%

OR 38 WERE ASIAN OR ASIAN AMERICAN

OF THE 64 BLACK OR AFRICAN AMERICAN DIRECTORS...

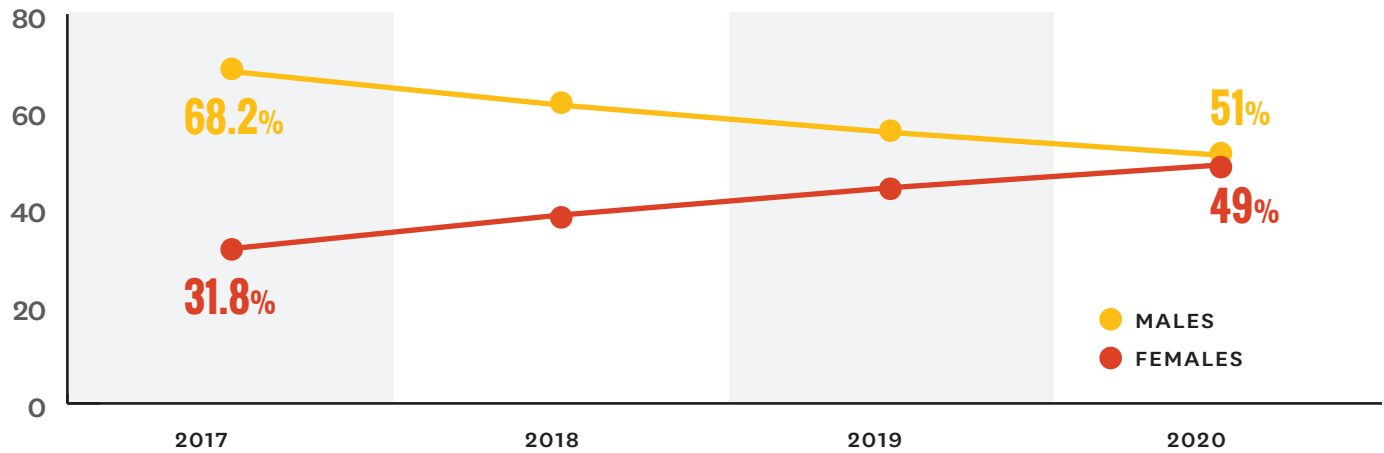


OF THE 38 ASIAN OR ASIAN AMERICAN DIRECTORS...



TO ACHIEVE 5050by2020: JUST ADD FIVE

Add Five Females to Scripts Per Year to Achieve Gender Equality Quickly

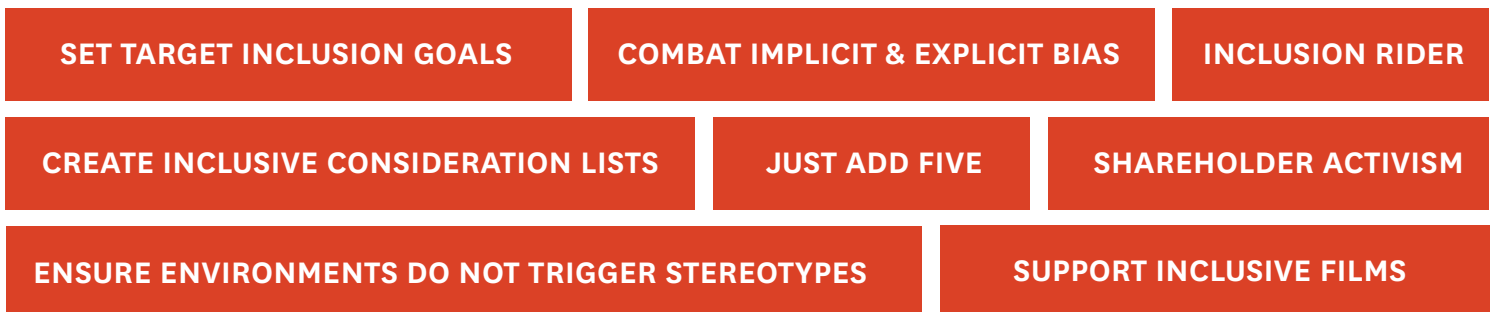


THE INCLUSION CRISIS IN FILM

UNDERSERVED GROUPS IN FILM	FILMS WITHOUT ANY CHARACTERS	PERCENTAGE OF SPEAKING CHARACTERS	U.S. POPULATION	DIFFERENCE (Population-Characters)
FEMALE CHARACTERS	0	31.8%	50.8%	-19%
CHARACTERS W/DISABILITIES	41	2.5%	18.7%	-16.2%
LATINO CHARACTERS	43	6.2%	17.8%	-11.6%
LGBT CHARACTERS	81	<1%	3.5%	-3.4%
BLACK CHARACTERS	20	12.1%	13.3%	-1.2
ASIAN CHARACTERS	37	4.8%	5.7%	-0.9%

Note: U.S. Census was used for all groups except LGB. That point statistic was from Williams Institute (2011).

STRATEGIC SOLUTIONS TO FOSTER SYSTEMIC CHANGE IN ENTERTAINMENT



Inequality in 1,100 Popular Films: Examining Portrayals of Gender, Race/Ethnicity, LGBT, & Disability from 2007 to 2017

Dr. Stacy L. Smith, Marc Choueiti, Dr. Katherine Pieper, Ariana Case, & Angel Choi
USC Annenberg Inclusion Initiative

Annually, the Annenberg Inclusion Initiative conducts the most comprehensive and intersectional investigation into inequality in popular films. We catalogue every independent speaking or named character shown on screen for gender, race/ethnicity, LGBT, and disability as well as a series of contextual variables across an 11-year sample spanning 2007 to 2017. We also assess inclusion behind the camera, examining gender of directors, writers, producers, and composers and the race of directors. In total, 48,757 characters and 1,100 movies have been evaluated for this report.

Key Findings

Gender. A total of 4,454 speaking characters appeared across the 100 top films of 2017, with 68.2% male and 31.8% female. This translates into an on screen gender ratio of 2.15 males to every one female. The percentage of females on screen in 2017 was only 1.9 percentage points higher than the percentage in 2007.

Only 19 stories were gender balanced across the 100 top movies of 2017. A gender-balanced cast refers to a story that fills 45% to 54.9% of the speaking roles with girls/women. The percentage of gender-balanced movies was higher in 2017 than in 2016 and 2007.

Thirty-three films in 2017 depicted a female lead/co lead. The percentage of female leads in 2017 was nearly identical to 2016 (34%) and 2015 (32%) but represents a notable increase from 2007 (20%).

Only 4 movies were driven by a woman of color. All four of these women were from mixed racial/ethnic backgrounds. This number deviates little from 2016 (3) or 2015 (3). Thirty movies featured a male 45 years of age or older at the time of theatrical release whereas only 5 films depicted a female in the same age bracket. Only one movie was led by a woman of color 45 years of age or older across the 100 top films of 2017.

Female characters (28.4%) were far more likely than male characters (7.5%) to be shown in tight or alluring apparel, and with some nudity (M=9.6%, F=25.4%). Females 13-20 years old were just as likely as females 21-39 years old to appear in sexy attire or with some nudity.

A total of 1,584 individuals worked above the line as directors, writers, and producers. 81.7% were male and 18.2% were female. Of 109 directors, only 7.3% were female. Only 10.1% of writers were female and 18.2% of producers.

Only 4.3% of all directors across 1,100 movies were women, with 2008 the 11-year high mark during the sample time frame. Assessing the total number of unique female directors, a full 43 women have helmed one or more top-grossing films in 11 years.

Out of 111 composers across the 100 top movies of 2017, only 1 female worked. No more than two female composers have ever been employed per year during the 11 years studied. Only 1.3% of all composers across 1,100 movies were women.

A full 43% of all speaking characters on screen were girls/women in female-directed content (8 movies). In comparison, only 30.9% of all on screen roles were filled with girls/women under male direction.

Race/Ethnicity. Of characters with an ascertainable race/ethnicity, 70.7% were white, 12.1% Black, 4.8% Asian, 6.2% Hispanic/Latino, 1.7% Middle Eastern, <1% American Indian/Alaskan Native, <1% Native Hawaiian, and 3.9% Mixed Race or Other. Overall, 29.3% of all speaking characters were from an underrepresented racial/ethnic group. In comparison to the U.S. population (38.7% underrepresented) and underrepresented movie ticket buyers (45%), film still lags behind.

Forty-three films were missing Black female characters, 64 did not include any Latinas, and 65 did not include one Asian female speaking character. In contrast, only 7 films were missing white females.

Underrepresented characters in movies from 2017 were least likely to be shown in action/adventure films (28.1%) compared to animated (34%) and comedy (35.6%) films.

Of the 109 directors in 2017, 5.5% were Black or African American. Only one of the Black or African American directors working last year was female. Of the 1,100 movies studied, only 5.2% have been helmed by a Black/African American director. Only 4 Black or African American women have worked in the top 100 movies in the years examined, representing less than 1% of all directors.

The percentage of Black characters in 2017 films increased by 41.8 percentage points when a Black director was behind the camera then when the film did not have a Black director. Of the speaking characters in movies from 2017 with a Black director, 18.5% were Black females, compared to just 2.5% of the speaking characters in movies without a Black director.

In 2017, 4 Asian directors helmed one of the 100 most popular movies—all of these individuals were male. This translates to 3.7% of the 109 directors working in 2017. A mere 3.1% of all directors were Asian or Asian American across 1,100 films and 11 years. Asian female directors are nearly invisible in the sample—of the three slots held by Asian women, two represent the work of Jennifer Yuh Nelson on the *Kung Fu Panda* films.

LGBT. A total of 4,403 characters were evaluated for apparent sexuality. Of those, 0.7% ($n=31$) were Lesbian, Gay, or Bisexual. Over half of the LGB characters were Gay (51.6%), while 29% were Lesbian and 19.4% were Bisexual. In addition, there was not one transgender character who appeared across the 100 top movies of 2017.

There has been no change over time in the depiction of LGBT characters on screen since 2014. Out of 400 popular films from 2014 to 2017, only one transgender character has appeared.

A total of 81 films did not include one LGBT speaking character. Examining films missing LGBT females reveals that 94 movies were devoid of these characters.

Over half (58.1%) of LGB characters were male and 41.9% were female. LGB characters were predominantly white (67.7%), while 32.3% were underrepresented. Only 8 characters of the 4,403 examined were LGB teens.

Of the 19 LGB characters who were shown with enough cues to evaluate this measure, only 1 was depicted as a parent or caregiver (5.3%).

Characters with Disabilities. Only 2.5% of all characters were depicted with a disability across the 100 most popular movies of 2017.

Forty-one films in 2017 did not feature one speaking character with a disability. A total of 78 movies did not include one female character with a disability. Two films featured characters with disabilities in proportion to the U.S. population (18.7%).

14 movies featured a lead or co lead character with a disability at any point in the film. The majority of films with lead or co lead characters with a disability featured males and few females. Only 1 film revolved around an underrepresented leading character with a disability and 1 a leading character from the LGBT community.

Physical disabilities were depicted most often, with 61.6% of characters with a disability included in this category. Communicative disabilities occurred for 30.4% of characters. Finally, 26.8% of characters with disabilities were classified in the mental domain.

More than two-thirds (69.6%) of characters with disabilities were male while 30.4% were female. Nearly three-quarters of characters with disabilities were white, while 27% were underrepresented. Only 1 character shown with a disability was LGBT. Only the percentage of female characters with a disability has increased meaningfully since 2015.

Solutions to inequality in entertainment are outlined in the conclusion of the report. The researchers discuss inclusion riders, setting target inclusion goals, adding female characters to get to #5050by2020, and exploring policy changes.

Inequality in 1,100 Popular Films: Examining Portrayals of Gender, Race/Ethnicity, LGBT, & Disability from 2007 to 2017

The purpose of the present study was to examine diversity and inclusion across the 100 top films from 2007 to 2017.¹ Yearly, we examine every independent speaking or named character shown on screen for gender, race/ethnicity, LGBT, and disability as well as a series of contextual variables.² Across the 11-year sample, a total of 48,757 characters and 1,100 movies have been assessed.³ Clearly, this is *the* most intersectional and comprehensive analysis of popular motion picture content to date.

Besides on screen, we also assessed inclusion behind the camera. Our aim here was to examine the gender of directors, writers, producers, and composers across the sample of 1,100 films.⁴ For directors only, race also was appraised. The focus here was on Black and Asian helmers, as other researchers have examined the Latinx community working above the line in Hollywood on popular films and television shows.⁵ Our goal is to not duplicate their efforts.

The report is comprised of four main sections by topic area: gender, race/ethnicity, LGBT, and disability. Within each section, the findings for 2017 are delineated first. Then, we address over time trends on select measures. We stipulate that both statistical ($p < .05$) and practical significance (± 5 percentage point difference) must be present before we make noise about any of the quantitative findings. For all qualitative and over time trends, the 5% rule was invoked to determine notable deviations. All aspects of the methodology are presented in the footnotes of the report.

Gender

Gender on screen and behind the camera is addressed in the report's first section. On screen, the frequency of female speaking characters, leads/co leads, and ensemble casts was assessed. We then examine the portrayal of common gender stereotypes, looking at age, domestic roles (i.e., parental status, relational partner) and hypersexualization for male and female characters. Finally, we report the prevalence of women working behind the camera (i.e., directors, writers, producers, composers).

On Screen Prevalence

A total of 4,454 speaking characters appeared across the 100 top films of 2017, with 68.2% male ($n=3,039$) and 31.8% female ($n=1,415$). This translates into an on screen gender ratio of 2.15 males to every one female. Over time, gender deviated very little across the sample (see Table 1). The percentage of females on screen in 2017 was only 1.9 percentage points higher than the percentage in 2007! ***Thus, there has been no change in the prevalence of female characters on screen across 11 years of activism, press attention, and public outcry about this issue.***

We were also interested in the number of films that featured a gender-balanced cast (see Table 1). A gender-balanced cast refers to a story that fills 45% to 54.9% of the speaking roles with girls/women. Only 19 stories were gender balanced across the 100 top movies of 2017. The percentage of gender-balanced movies was higher in 2017 than in 2016 (+8 percentage points) and 2007 (+7 percentage points). It should be noted, however, that 2017 was similar to other years (2015, 2013, 2009) on this measure.

Table 1
Prevalence of Female Characters On Screen by Year: 2007 to 2017

Year	% of Female Characters	% of Balanced Casts	Ratio of Males to Females	Total # of Characters	Total # of Films
2007	29.9%	12%	2.35 to 1	4,379	100
2008	32.8%	15%	2.05 to 1	4,370	100
2009	32.8%	17%	2.05 to 1	4,342	100
2010	30.3%	4%	2.30 to 1	4,153	100
2011	31.2%	12%	2.21 to 1	4,508	100
2012	28.4%	6%	2.51 to 1	4,475	100
2013	29.2%	16%	2.43 to 1	4,506	100
2014	28.1%	9%	2.55 to 1	4,610	100
2015	31.4%	18%	2.19 to 1	4,370	100
2016	31.5%	11%	2.18 to 1	4,590	100
2017	31.8%	19%	2.15 to 1	4,454	100
Total	30.6%	12.6%	2.26 to 1	48,757	1,100

Note: Each year a total of 100 movies were evaluated. In 2007 and 2009, two movies were released as double features bringing the total sample size to 101 for those years.

Besides balance, we were curious whether character gender was associated with specific ratings and genres. Each film was categorized as G, PG, PG-13 or R, using the Motion Picture Association of America (MPAA) designations. Only one G-rated film appeared in the 2017 sample and thus it was excluded prior to this analysis. No association between movie rating and character gender emerged.⁶ A full 33.2% of all characters were female in PG-rated films, 30% in PG-13 rated films, and 33.2% in R-rated films.

Genre was also assessed across the sample. Every movie was categorized into one of four mutually exclusive categories (i.e., action/adventure, animation, comedy, all else) using information from Box Office Mojo and IMDbPro.com.⁷ Only the percentage of girls/women in action/adventure, animation, and comedy are reported below, as these types of stories have historically excluded females from on screen roles.

For action/adventure, less than a quarter (24.5%) of all speaking roles were filled with girls and women. This percentage was not meaningfully different ($\pm 5\%$) from the percentage observed in 2016 (23.3%) or 2007 (20%). Speaking roles for females in animation were also problematic. Only 30.7% of all characters in animated movies were girls/women. While this percentage did not vary from 2016 (30.8%), it did differ from 2007 (20.9%). However, an examination of Table 2 also reveals that 2017 was no different from 2009.

Comedy was the most female-friendly genre, with 42.9% of all roles filled with females in 2017. 2017 did not differ from 2016, but is significantly higher than 2007 (36%) but not 2008 (40.2%). *It is clear across all three genres that no meaningful and consistent change has occurred over the 11-year time frame.*

Table 2
Prevalence of Female Characters On Screen by Genre and Year: 2007-2017

Year	% of Female Characters in Action/Adventure	% of Female Characters in Animation	% of Female Characters in Comedy
2007	20%	20.9%	36%
2008	21.6%	26.9%	40.2%
2009	21.6%	30.8%	39%
2010	23.5%	30.7%	35.6%
2011	25%	23.7%	37.2%
2012	22.7%	27.5%	36%
2013	23.9%	24.6%	36.5%
2014	21.7%	23.3%	32%
2015	25.6%	26.8%	36.5%
2016	23.3%	30.8%	40.8%
2017	24.5%	30.7%	42.9%
Total	23.2%	27.2%	37.5%

Note: The percentage of males can be found by subtracting the percentage of females from 100%.

While the above section focused on all speaking characters, we now turn our attention to leads and protagonists that drive the storylines. Out of the 100 top films of 2017, 90 depicted a lead or co lead and 10 featured an ensemble cast. Because of the vast difference in sample size, the findings for leads/co leads and ensembles are reported separately below.

Table 3 illuminates the breakdown of leads/co leads by gender, underrepresented status, and age. Focusing on 2017, a full 57 of the movies featured a male lead/co lead and 33 depicted a female lead/co lead. *The percentage of female leads in 2017 was nearly identical to 2016 (34%) and 2015 (32%) but represents a notable increase from 2007 (20%).* These results are surprising, given that females comprise just over half (51%) of the U.S. population and buy 49% of the movie tickets at the U.S./Canada box office.⁸

Table 3
Leads/Co Leads in Films by Gender, Underrepresented Status, & Age: 2017

Attribute of Leading Character	Males	Females
# of films w/lead or co lead	57	33
# of films w/UR lead or co lead	17	4
# of films w/lead or co lead 45 yrs of age or older	31	5
# of films w/UR lead or co lead 45 yrs of age or older	9	1

Note: Films with a female lead, co lead, or both appear in the "Females" column. For determination of race/ethnicity and age, information pertaining to the *actor* not the character was utilized. Cells in the table refer to the number of movies that have the characteristic present.

Examining race/ethnicity, the background of leading *actors* was ascertained rather than the character portrayed. The aim here was to assess the number of leading roles available to the talent pool of girls/women of color. Table 3 delineates that 17 films featured an underrepresented male lead/co lead, which was an increase (+6 percentage points) from 2016 (11%). Turning our attention to females, only 4 movies were driven by a woman of color. All four of these women were from mixed racial/ethnic backgrounds. This number deviates little from 2016 (3) or 2015 (3). ***Clearly, there were very few—if any—leading roles available to female actors from underrepresented racial/ethnic groups across the most financially lucrative movies in Hollywood.***

We also assessed the leads/co leads' age at the time of the theatrical release. Again, the focus was on an *actor's* age rather than the character played. ***Thirty movies featured a male 45 years of age or older at the time of theatrical release whereas only 5 films depicted a female in the same age bracket.*** This calculates into a gender ratio of 6.2 males to every 1 female. The females include four white women (i.e., Meryl Streep, Frances McDormand, Amy Poehler, Judi Dench) and one woman who is multi-racial (i.e., Halle Berry). The number of films depicting females 45 years of age or older in leading roles was slightly lower in 2017 (5 movies) than in 2016 (8 movies).

Being fully intersectional, a total of 10 movies in the sample depicted an underrepresented actor 45 years of age or older playing a leading role across the 100 top films of 2017. Nine of these roles were filled with underrepresented men and only 1 was filled with an underrepresented woman. ***Therefore, only one movie was led by a woman of color 45 years of age or older across the 100 top films of 2017.***

Table 4
Ensemble Casts by Gender, Underrepresented Status, & Age: 2017

Attribute of Leading Character	Males	Females	Total
% of characters in an ensemble cast	57.1% (n=24)	42.9% (n=18)	100% (n=42)
% of characters that are UR in an ensemble cast	37.5% (n=9)	22.2% (n=4)	30.9% (n=13)
% of characters 45 yrs of age or older in an ensemble cast	45.8% (n=11)	16.7% (n=3)	33.3% (n=14)
% of characters UR and age 45 or older in an ensemble cast	20.8% (n=5)	16.7% (n=3)	19% (n=8)

Note: The analyses in Table 4 refer to the number and percentage of male and female characters in ensemble films. Columns do not total to 100%, as there was overlap across some rows. The findings should be interpreted within cell and column. For instance, 37.5% of all underrepresented characters in an ensemble cast were male.

The demographic characteristics of ensemble casts are shown in Table 4. While the above analysis focused on leads/co leads of *films*, here we turn our attention to *characters*. Across the 10 ensemble films, a total of 42 characters drove the storylines. ***Of the ensemble leads, 57.1% were male (n=24) and 42.9% were female (n=18).*** This was a gender ratio of 1.33 males to every 1 female.

Looking at race/ethnicity, 13 (30.9%) of the 42 ensemble actors were from diverse backgrounds. This point statistic is 7.8 percentage points below U.S. Census (38.7%).⁹ Underrepresented males (37.5%) in ensembles were more likely to work across the 100 top films of 2017 than were underrepresented females (22.2%). Factoring in age, a third of all ensemble casts feature characters 45 years of age or older

with males (45.8%, $n=11$) far more likely to be shown on screen than their female counterparts (16.7%, $n=3$). Few characters ($n=8$, 5 males, 3 females) 45 years of age or older were from underrepresented racial/ethnic groups. Due to small cell sizes, these age-based findings should be interpreted cautiously.

Summing up, the findings in this section reveal that females were substantially underrepresented on screen as speaking characters, leads/co leads, and as members of ensemble casts. The next section tackles the nature of these portrayals, by examining depictions of common stereotypes associated with gender.

On Screen Portrayal

The relationship between character gender and stereotypical portrayals was examined in three ways. The first pertains to domestic roles (i.e., parental status, relational status), as studies show that exposure to traditional depictions in the media may teach and/or reinforce stereotypical attitudes, beliefs and behaviors among some viewers.¹⁰ Examining parental status (no, yes), a significant association with character gender emerged. Females (40.3%) were more likely than males (33%) to be shown as parents or caregivers across the 100 top films of 2017.¹¹ No significant difference emerged for relational involvement (no, yes), however.¹² Females (46.4%) were just as likely as their male (41.5%) peers to be shown in a romantic relationship.

Age is another common stereotype associated with gender.¹³ As shown in Table 5, female characters were less likely than male characters to appear on screen as they aged across the life span. To illustrate, 47.3% of all 0-12 year olds were female in the 2017 sample. Among female characters 40 years of age or older, this percentage drops to 24.6%!

Table 5
Character Gender by Age in Top Grossing Films: 2017

Gender	Children 0-12 yrs	Teens 13-20 yrs	Young Adult 21-39 yrs	Adults 40 yrs or Older
Males	52.7%	55.3%	63.6%	75.4%
Females	47.3%	44.7%	36.4%	24.6%
Ratio	1.11 to 1	1.23 to 1	1.75 to 1	3.07 to 1

Note: Column percentages sum to 100%.

This last point statistic is not atypical. As shown in Table 6, female actors 40 years of age and older were far less likely to work on screen than their male peers. Further, the percentage found in 2017 does not deviate meaningfully from what was observed in 2016 (25.7%) or 2007 (22.1%).

Finally, the sexualization of male and female characters was examined. Studies and theory show that exposure to objectifying content can contribute to and/or reinforce body shame, appearance anxiety, and self objectification among some females.¹⁴ Given this, we measured three attributes of sexualization: sexy attire (no, yes), nudity (none, some) and physical attractiveness (no, yes). The results across these three measures are shown in Figure 1.

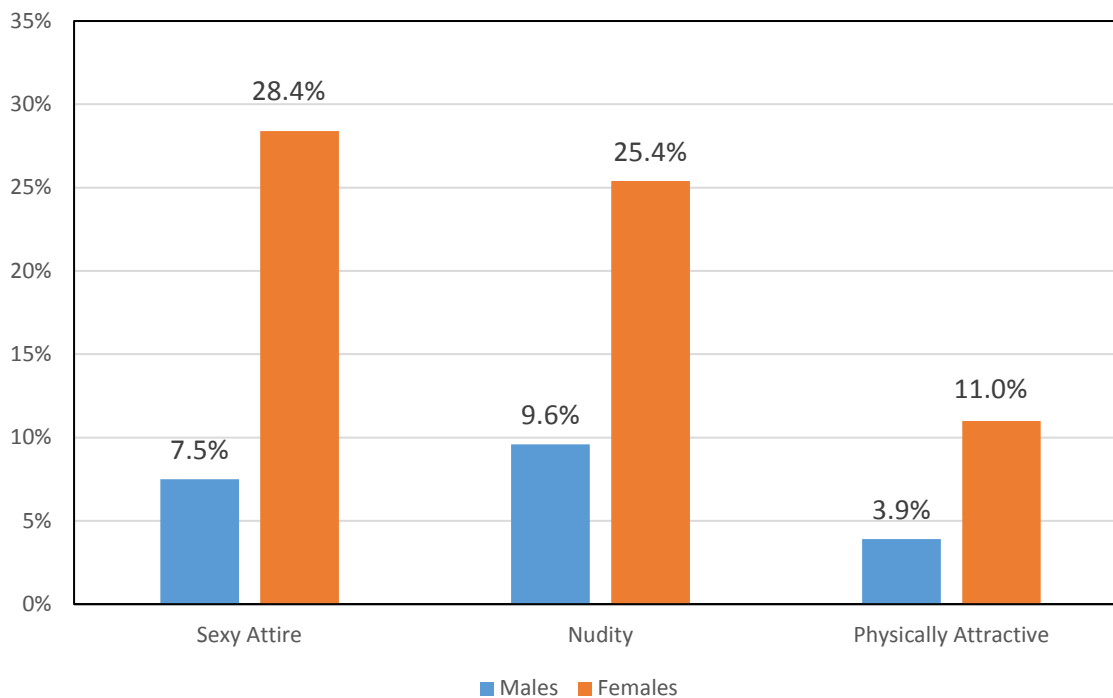
Table 6
Gender of Characters 40 years of Age and Older: 2007 to 2017

Gender	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Total
% of males	77.9%	72.8%	75.6%	78.2%	78.2%	79.2%	78.4%	79.3%	75.4%	74.3%	75.4%	76.8%
% of females	22.1%	27.2%	24.4%	21.8%	21.8%	20.8%	21.6%	20.7%	24.6%	25.7%	24.6%	23.2%

Note: The analysis in Table 6 includes only characters 40 years of age and older.

Sexually revealing clothing varied by character gender.¹⁵ Female characters (28.4%) were far more likely than male characters (7.5%) to be shown in tight or alluring apparel. Put differently, females accounted for 64.9% of all instances of sexy attire across the 100 top films of 2017. Nudity (see Figure 1) also varied with character gender ($M=9.6\%$, $F=25.4\%$), but most instances involved only showing cleavage, a bare midriff or skin in the high upper thigh region.¹⁶ Beauty also was gendered, with females (11%) receiving more appearance comments from other characters than their male (3.9%) peers.¹⁷

Figure 1
Character Gender by Sexualization Indicators: 2017



Has the level of sexualization changed over time? Given the pronounced differences in Figure 1, we report on males and females separately in Tables 7 and 8. For males, the percentages did not differ meaningfully ($\pm 5\%$) from 2007 to 2017. For females, there has been no change in sexy attire and nudity across the 11-year sample. Attractiveness in 2017 did not differ from any other year except 2007 (18.5%). Overall, the trends for hypersexualization variables were remarkably stable from year to year.

Table 7
Sexualization of Male Characters On Screen: 2007 to 2016

Measure	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
% in sexy attire	4.6%	5.1%	4.7%	7.2%	6.8%	7%	9.7%	8%	7.7%	5.7%	7.5%
% w/some nudity	6.6%	8.2%	7.4%	9.4%	8.5%	9.4%	11.7%	9.1%	9.5%	9.2%	9.6%
% deemed attractive	5.4%	4.1%	2.5%	3.8%	2.9%	N/A	2.4%	3.1%	3.6%	3.1%	3.9%

Note: Cells for each measure showcase the proportion of males across 100 films. The percentage of male characters for whom the attribute was absent can be found by subtracting from 100%. In 2012, the attractiveness of characters was not measured (N/A=not applicable).

Table 8
Sexualization of Female Characters On Screen: 2007 to 2017

Measure	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
% in sexy attire	27%	25.7%	25.8%	33.8%	35.8%	31.5%	30.2%	27.9%	30.2%	25.8%	28.4%
% w/some nudity	21.8%	23.7%	23.6%	30.8%	34.1%	30.9%	29.5%	26.4%	29%	25.6%	25.4%
% deemed attractive	18.5%	15.1%	10.9%	14.7%	14.7%	N/A	13.2%	12.6%	12%	10.7%	11%

Note: Cells for each measure showcase the proportion of females across 100 films. The percentage of female characters for whom the attribute was absent can be found by subtracting from 100%. In 2012, the attractiveness of characters was not measured (N/A=not applicable).

The above patterns focus on sexualization by gender across all speaking characters. Because of the concern regarding the sexualization of younger women and teens in the media,¹⁸ we were curious how the sexualization measures behaved when females' age was factored into the equation. Males were not incorporated into the following analyses, as the percentages on the sexualization measures are low.

To examine female characters' sexualization and age, we first split the sample into three distinct age groups: 13-20 year olds (teen), 21-39 year olds (young adult), or 40-64 year olds (middle aged). Then, we looked at the percentage of female characters within each age grouping across the three sexualization indicators.

Female character sexualization by age grouping across the 100 top films of 2017 is presented in Table 9.¹⁹ As shown, females 13-20 years old were more likely than females 40-64 years old to appear in sexy attire, with some nudity and be referenced as attractive. Across all three measures, 21-39 year olds held a middle position and did not deviate meaningfully from 13-20 year olds on two of the three variables. For attractiveness, teenaged females were more likely to be referenced as attractive than were 21-39 year olds or 40-64 year olds. The latter two age groups did not differ meaningfully (>5%) from one another on this measure.

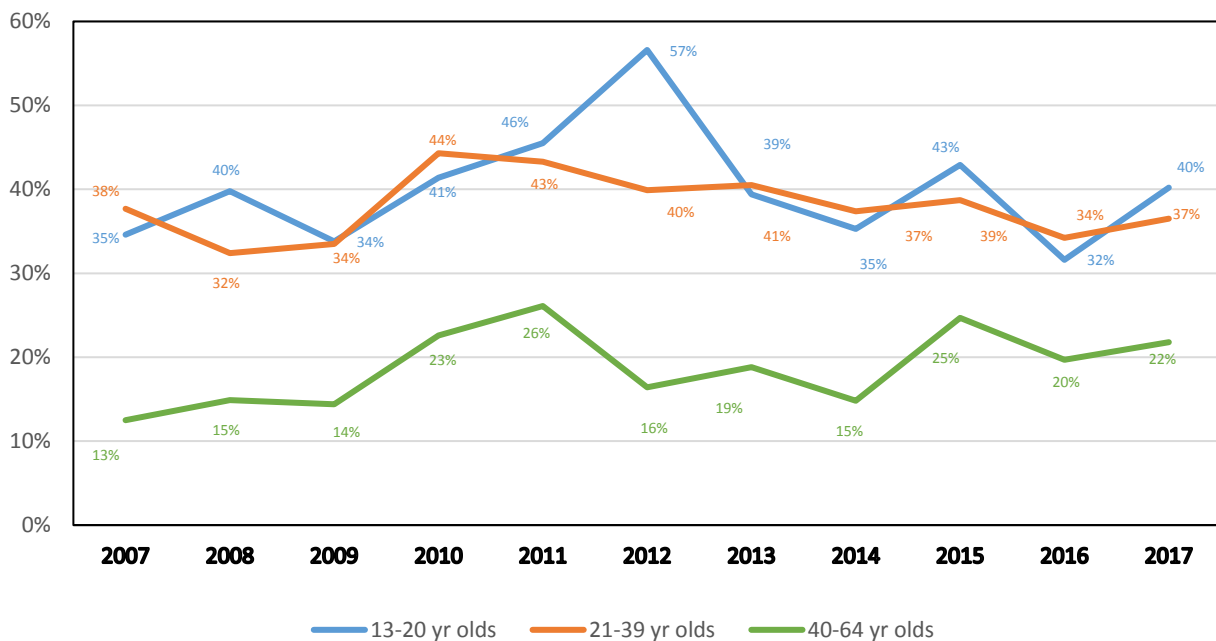
Table 9
Female Character Sexualization by Age: 2017

Measure	13-20 year olds	21-39 year olds	40-64 year olds
% in sexy attire	40.2%	36.5%	21.8%
% w/some nudity	35.9%	33.2%	20.1%
% referenced attractive	21.2%	12.6%	8.6%

Note: Cells for each measure showcase the proportion of females within each age group across 100 films. The percentage of female characters for whom the attribute was absent can be found by subtracting from 100%.

Figures 2 and 3 map out sexy attire and nudity by year across the three age groups. The prevalence of teens shown in sexy attire in 2017 is higher than 2016 (+8 percentage points) and 2007 (+5 percentage points). However, 2012 represents the high point in teens wearing sexy attire across the sample time frame. No differences were observed in the portrayal of sexually revealing clothing among 21-39 year olds. Among middle-aged women, 2017 was no different than 2016 but higher than 2007 (+9 percentage points).

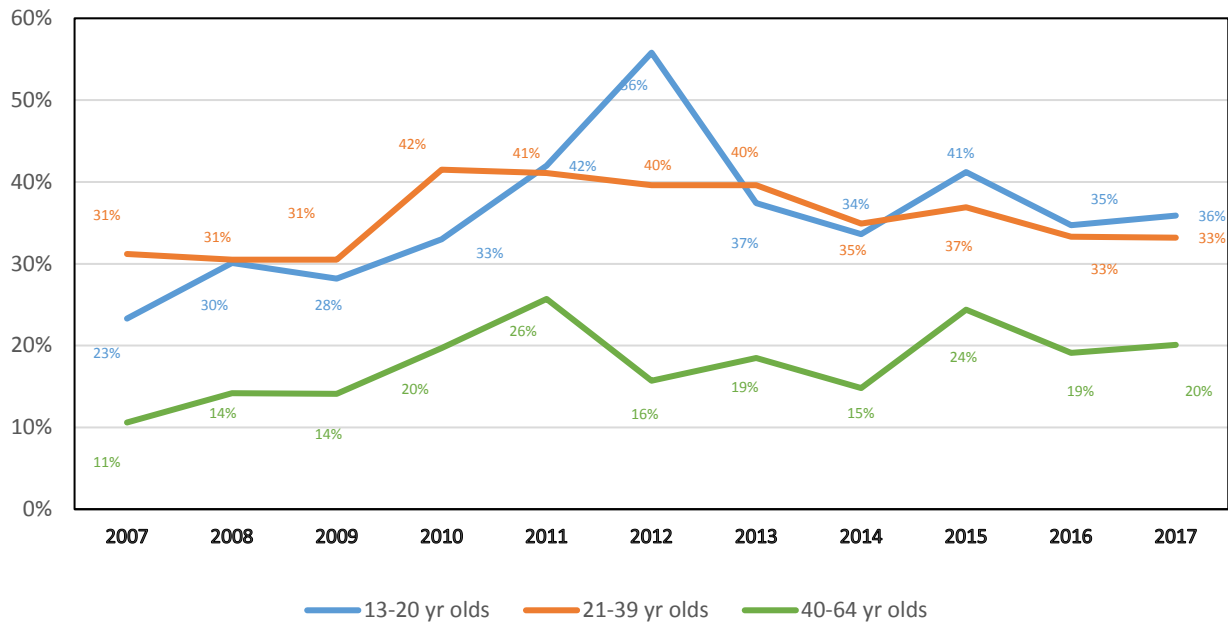
Figure 2
Percentages of Females in Sexy Attire by Age: 2007-2017



For nudity, the percentage of teens shown partially clad in 2017 was no different from 2016 but significantly higher than 2007 (+13 percentage points). A similar increase (+9 percentage points) was observed between 2007 and 2017 for middle-aged females. For young adults, little deviation appeared when comparing 2017 to 2016 or 2007.

Together, the results in this section point to the fact that gender roles are still wedded to tired stereotypical tropes. Females are more likely to be sexualized, young, or shown as parents or caregivers. These findings suggest a problematic binary for female actors, frequently being cast as either the object of interest or a motherly figure. Some of these traditional roles may be explained by the gender of content creators across popular films, a subject for the next section of the report.

Figure 3
Percentages of Females with Some Nudity by Age: 2007-2017



Behind the Camera

Content creators working on the 100 top films of 2017 are presented in Table 10. Across directors, writers, and producers, a total of 1,584 individuals worked above the line with 81.7% male ($n=1,295$) and 18.2% female ($n=289$). The top leadership job, directing, is highly skewed. Of 109 helmers, only 7.3% ($n=8$) were female. Put differently, a full 92.7% of the directing positions were filled with men ($n=101$).

Table 10
Content Creators by Gender: 2017

Position	Males	Females	Gender Ratio
Directors	92.7% ($n=101$)	7.3% ($n=8$)	12.6 to 1
Writers	89.9% ($n=303$)	10.1% ($n=34$)	8.9 to 1
Producers	78.3% ($n=891$)	21.7% ($n=247$)	3.6 to 1
Total	81.7% ($n=1,295$)	18.2% ($n=289$)	4.5 to 1

In order of box office performance, the eight female directors are Patty Jenkins (*Wonder Woman*), Trish Sie (*Pitch Perfect 3*), Greta Gerwig (*Lady Bird*), Stella Meghie (*Everything, Everything*), Anna Foerster (*Underworld: Blood Wars*), Hallie Meyers-Shyer (*Home Again*), Stacy Title (*The Bye Bye Man*), and Lucia

Aniello (*Rough Night*). None of these women have helmed a top 100 film in the last 11 years. In addition to directors, only 10.1% of writers were female and 18.2% of producers (see Table 10).

Table 11
Female Directors: 2007 to 2017

Measure	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Total
# of female dirs	3	9	4	3	4	5	2	2	8	5	8	53
% of female dirs	2.7%	8%	3.6%	2.75%	3.7%	4.1%	1.9%	1.9%	7.5%	4.2%	7.3%	4.3%
Total	112	112	111	109	108	121	107	107	107	120	109	1,223

The total number and percentage of female directors working across the 100 top fictional films in Hollywood each year since 2007 is presented in Table 11. Only 4.3% of all directors were women, with 2008 the 11-year high mark across the sample time frame. The percentage of females working in 2017 is not meaningfully ($\pm 5\%$) different from 2016 or 2007. Assessing the total number of unique female directors, a full 43 women have helmed one or more top-grossing films across 11 years. Thirty-six of the women have directed one film, 5 two films (i.e., Catherine Hardwicke, Jennifer Yuh Nelson, Julie Anne Robinson, Nancy Meyers, Phyllida Lloyd), and 1 woman helmed three films (i.e., Lana Wachowski). Anne Fletcher has worked the most across the sample time frame, directing 4 fictional feature films.

Composers were added to our behind the scenes analysis in 2015. Out of 111 composers across the 100 top movies of 2017, only 1 female worked (Rachel Portman, *A Dog's Purpose*). No more than two female composers have ever been employed per year across the 11 years studied. Only 1.3% of all composers across 1,100 movies were women.

Table 12
Female Composers: 2007 to 2017

Measures	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Total
# of female comps	0	2	2	2	1	2	2	1	1	2	1	16
% of female comps	0	1.8%	1.8%	1.7%	<1%	1.9%	1.8%	<1%	<1%	1.7%	<1%	1.3%
Total	107	108	109	115	109	105	114	105	114	121	111	1,218

Now, we turn our attention to address the following question: Is the gender of the content creator associated with gender prevalence in storytelling? This query is addressed by looking at writer and director gender behind the camera and character gender on screen. First, the sample of 2017 movies were dichotomized: those with a female director attached and those without a female director attached. The proportion of female characters on screen was compared across these two categories. The same process was repeated with writers as well.

Figure 4
Percentage of Female Characters On Screen by Director Gender: 2017

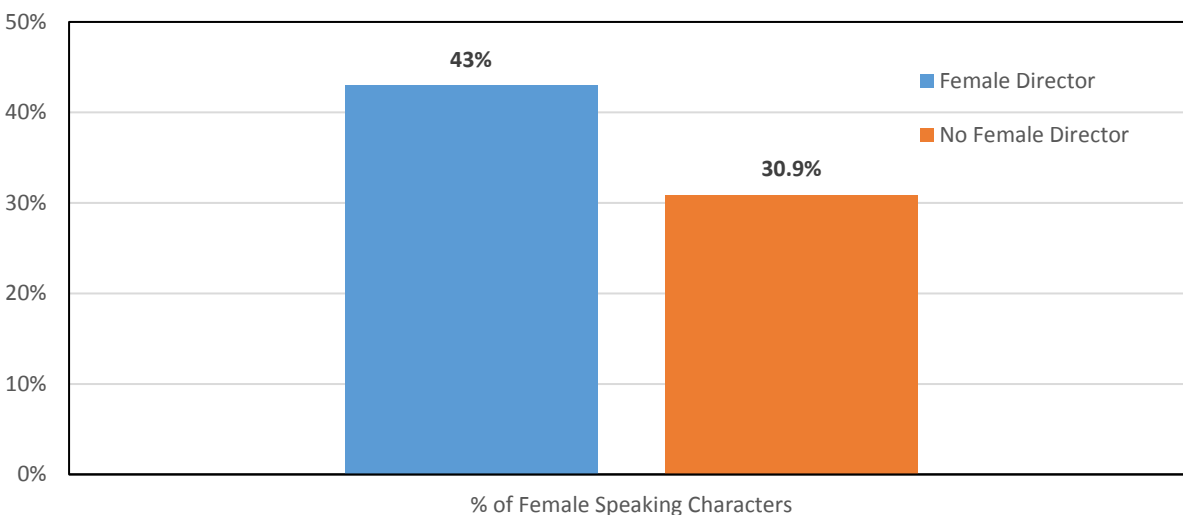


Figure 4 illuminates the significant relationship between director gender and character gender on screen.²⁰ A full 43% of all speaking characters on screen were girls/women in female-directed content (8 movies). In comparison, only 30.9% of all on screen roles were filled with girls/women under male direction. A similar pattern was observed for writers.²¹ Films with female writers attached have more girls/women in their stories (37.3% female) than films written by male writers (29.5%).

There are two possible explanations for these findings. First, screenwriters and directors may simply write and direct “what they know.” Female creatives may be more likely to create and populate fictional worlds with girls/women at the center. Second, female directors and writers may only be getting pitched or attached to stories with female leads and casts. This latter explanation is problematic, as it seriously limits the employment opportunities given to women directors and screenwriters.

Overall, the behind the camera findings show absolutely no signs of improvement for female content creators. The numbers and percentages deviate so little from year to year it suggests that an invisible quota system is at work. Whether a female is writing, directing, or composing, these findings suggest that they will face repeated discrimination and extreme impediments to career sustainability in the movie business.

Race/Ethnicity On Screen & Behind the Camera in Film

In this section, we turn from gender to examine the racial/ethnic diversity of films. Here, we examine the prevalence of speaking characters from different racial/ethnic backgrounds, leading/co leading and ensemble characters, and indicators related to proportional representation and invisibility. The section concludes with an examination of race in the director’s chair.

On Screen Prevalence

Of those characters with an ascertainable race/ethnicity, ($n=3,691$), 70.7% were white, 12.1% Black, 4.8% Asian, 6.2% Hispanic/Latino, 1.7% Middle Eastern, <1% American Indian/Alaskan Native, <1% Native

Hawaiian/Pacific Islander, and 3.9% Mixed Race or Other. Overall, 29.3% of all speaking characters were from an underrepresented racial/ethnic group. In comparison to the U.S. population (38.7% underrepresented)²² and underrepresented movie ticket buyers (45%),²³ film still lags behind.

Table 13
Prevalence of Character Race/Ethnicity On Screen by Year: 2007-2017

Year	White	Black	Latino	Asian	Other
2007	77.6%	13.0%	3.3%	3.4%	2.5%
2008	71.2%	13.2%	4.9%	7.1%	3.5%
2009	76.2%	14.7%	2.8%	4.7%	1.5%
2010	77.6%	10.3%	3.9%	5.0%	3.3%
2011	77.1%	9.1%	5.9%	4.1%	3.8%
2012	76.3%	10.8%	4.2%	5.0%	3.6%
2013	74.1%	14.1%	4.9%	4.4%	2.5%
2014	73.1%	12.5%	4.9%	5.3%	4.2%
2015	73.7%	12.2%	5.3%	3.9%	4.9%
2016	70.8%	13.5%	3.1%	5.6%	6.9%
2017	70.7%	12.1%	6.2%	4.8%	6.3%

Note: Characters coded as Middle Eastern, American Indian/Alaskan Native, Native Hawaiian/Pacific Islander, and Mixed Race are included in the Other column for presentation purposes. Percentages sum to 100% in each row, with deviation due to rounding.

Given the volume of advocacy and concern over representation in the past few years, it is critical to assess whether the prevalence of underrepresented characters has changed over time. From 2016 to 2017, no differences occurred across racial/ethnic groups. Similar to last year, however, there was a decrease in white characters (-6.9 percentage points) from 2007 to 2017, though it is important to mention that 2017 is not different from 2008. Notably, 2017 had the highest percentage of Hispanic/Latino characters across the sample, though this percentage was not meaningfully different from 2016, 2011, or 2007. See Table 13. ***Overall, the findings reveal that no meaningful change has occurred in the percentage of Black/African American, Hispanic/Latino, Asian, or Mixed Race/Other characters during the years studied.***

The previous analyses demonstrate the nature of racial/ethnic diversity across the sample of 100 films, but do not reveal how representation may be distributed across movies. This is necessary to investigate, as certain movies may include a large number of underrepresented characters, while others may feature very few. The overall percentages may mask imbalances in representation. The next two analyses disaggregate the sample-wide data to evaluate how the industry is performing on a per-film basis.

The first analysis examines the number of films which reach *proportional representation* of different racial/ethnic groups on screen. In line with our previous reports, proportional representation is defined as ± 2 percentage points from the U.S. population (as determined by the U.S. Census). As an example, since Latinos represent 17.8% of the U.S. population, a film would achieve proportional representation if 15.8% to 19.8% of the cast were Latino.

Table 14
Films Focusing on Black, Asian, & Latino Characters: 2015-2017

Measure	Black Characters			Latino Characters			Asian Characters		
	2015	2016	2017	2015	2016	2017	2015	2016	2017
# of films w/out chars. from group	17	25	20	40	54	43	49	44	37
# of films w/prop. representation	10	19	19	2	1	0	18	21	26
U.S. Census	13.3%			17.8%			5.7%		
Total Films Evaluated	100			100			100		

Note: In 2017, 2 films did not include any characters for whom a racial/ethnic background could be ascertained. In 2016, a total of 6 films and in 2015, a total of 0 films met this criterion.

Proportional representation was more likely to occur for Black (19 films) and Asian (26 films) characters than Latino characters. This represents a meaningful increase for films featuring proportional representation of Asian characters from 2016 to 2017. Not one movie in the 2017 sample depicted Latino characters in proportion to the U.S. population. There was no meaningful change from 2016 to 2017 in the number of movies which included Black or Latino characters at rates approximating the U.S. Census.

The second set of analyses focus on how many films are *missing* any speaking or named character from a specific racial/ethnic group. Twenty films did not depict a single Black speaking character, 43 movies were missing Latino characters, and 37 films were devoid of Asian characters. See Table 14. These figures represent a decline from 2016 for Black (-5 films) and Latino (-11 films) characters, and a two-year decrease for Asian characters (-7 movies from 2016; -12 movies from 2015).

Table 15
Epidemic of Invisibility Facing Females by Race/Ethnicity: 2015-2017

	# of Films w/no White Females	# of Films w/no Black Females	# of Films w/no Latino Females	# of Films w/no Asian Females
2015	3	48	65	70
2016	11	47	72	66
2017	7	43	64	65

Note: In 2017, 2 films did not include any characters for whom a racial/ethnic background could be ascertained. In 2016, a total of 6 films and in 2015, a total of 0 films met this criterion.

Building on these findings, for the second year running, we assessed the number of films missing female speaking characters from different racial/ethnic groups. As shown in Table 15, in 2017, 43 films were missing Black female characters, 64 did not include any Latinas, and 65 did not include one Asian female speaking character. In contrast, only 7 films were missing white females. The only meaningful decrease from 2016 was among Latinas. While 8 fewer films were missing Latina characters, the overall finding is still on par with movies from 2015. Compared to 2015, five additional films featured both Black female and Asian female characters. While this may seem to be an improvement, the overall findings reveal that underrepresented women are often invisible in motion picture storytelling.

Table 16
Prevalence of Underrepresented Characters On Screen by Film Genre by Year: 2007-2017

Year	% of UR characters Action/Adventure	% of UR characters Animation	% of UR characters Comedy
2007	21.5%	8.1%	23.1%
2008	32.1%	10.5%	27.8%
2009	23.4%	12.3%	24.7%
2010	30%	1.5%	23.4%
2011	25.2%	27.5%	26.9%
2012	29.4%	5.3%	24.1%
2013	26.9%	12.4%	27.6%
2014	24.9%	33.5%	27.2%
2015	28.9%	13.2%	27.3%
2016	27.3%	48.5%	32.1%
2017	28.1%	34%	35.6%

Note: The percentage of Caucasian speaking characters can be computed by subtracting each cell from 100%.

The next analysis concerns differences in the prevalence of underrepresented characters across film genre. In some genres, few characters from certain racial/ethnic groups were portrayed. Thus, we collapsed all non-White speaking characters into a single group of “underrepresented” characters. Then, we examined the three specific genres indicated earlier, as shown in Table 16. Underrepresented characters in movies from 2017 were least likely to be shown in action/adventure films (28.1%) compared to animated (34%) and comedy (35.6%) films.

Over time information on underrepresented characters in each genre is shown in Table 16. Compared to 2016, the only meaningful difference is a decrease in underrepresented characters (-14.5 percentage points) included in animated movies. However, 2017 is a 25.9 percentage point increase from animated films released in 2007. Similar, though more modest, increases occurred from 2007 to 2017 in action/adventure (+6.6 percentage points) and comedy (+12.5 percentage points). Despite these gains, year-to-year fluctuations suggest that these increases may not indicate stable and enduring changes in representation.

Table 17
Character Race/Ethnicity by Gender in Top-Grossing Films: 2017

Gender	White	Black	Latino	Asian	Other
% of males	68.2%	69.6%	67.8%	61.4%	55.4%
% of females	31.8%	30.4%	32.2%	38.6%	44.6%
Ratio	2.14 to 1	2.29 to 1	2.11 to 1	1.59 to 1	1.24 to 1

We were also interested in whether character gender differed by racial/ethnic group. The relationship between character race/ethnicity and gender was significant.²⁴ As shown in Table 17, female Mixed Race/Other characters were more likely to be depicted than girls or women from other racial/ethnic

groups. Black female characters were least likely to be shown across the sample. Clearly, Hollywood's focus on male characters does not impact each racial/ethnic group equally.

In addition to examining every speaking character, we also focus on leading characters across the sample. As above, we examine leading/co leading characters first, followed by ensemble casts. To reiterate our approach, the *actor's* race/ethnicity is of interest, rather than that of the character on screen.

A total of 21 films featured an underrepresented lead or co lead in 2017. This is an increase of 7 movies over 2016 and 2015, when 14 movies had underrepresented leads or co leads. Eight of the underrepresented leading actors were Mixed Race, including 4 male and 4 female actors. Of the remaining actors, all were male. Seven individuals were Black or African American, 4 were Asian, and 2 were Hispanic/Latino.

Ten films featured ensemble casts, with 42 leading actors filling these roles. Of these individuals, 13 underrepresented actors (30.9%) were the focus of ensemble stories. Of the underrepresented ensemble actors, 69.2% or 9 were male and 30.8% or 4 were female. Most of the ensemble roles went to Black or African American actors (76.9%, $n=10$), with one Asian (7.7%), one Latino (7.7%), and one Mixed Race (7.7%) actor in the remaining ensemble roles.

The results in this section reveal that the prevalence of characters from underrepresented racial/ethnic groups has not changed over time. Despite calls for action and vociferous advocacy, the landscape of motion pictures still reflects a world much whiter than the one we inhabit. One positive change was the increase in underrepresented leading characters in 2017. While it is crucial to increase the number of stories that focus on characters from diverse backgrounds, these characters should be part of an ecosystem in which inclusion is the norm rather than the exception.

On Screen Portrayal

This section focuses on how underrepresented characters are depicted on screen in film, focusing on two distinct areas: domesticity and sexualization. In the following analyses, male and female characters were assessed separately due to gender differences on these measures presented earlier in the report.

No statistically significant differences emerged for males or females across parental or relational status.²⁵ Because the percentages differ so widely by race/ethnicity, we report them here. For males, 36.9% of white, 33.9% of Black, 46.4% of Latino, 20% of Asian, and 28.6% of Mixed Race/Other characters were depicted as parents. Nearly half (46.2%) of white males, 40.4% of Black males, 37% of Latino males, 56.3% of Asian males, and 33.3% of Mixed Race/Other males were shown with a romantic partner.

Among females, 43.2% of white characters, 44.2% of Black characters, 46.4% of Latinas, 33.3% of Asian characters, and 26.3% of Mixed Race/Other characters were parents. The percentage of females in romantic relationships by racial/ethnic group was: 49.7% white, 46.2% Black, 34.5% Latina, 36% Asian, and 43.6% Mixed Race/Other.

Character sexualization was also explored. For females, race/ethnicity was related to sexually revealing clothing and nudity.²⁶ As shown in Table 18, females from Mixed Race/Other racial/ethnic groups were most likely to be shown in sexy attire or with partial nudity and Asian females least likely. Both groups were meaningfully different from white, Black, and Latino females. One other finding emerged related to nudity; Latinas were more likely than Black females to be shown with some exposed skin. The relationship

between race/ethnicity and physical attractiveness was not significant.²⁷ Among male characters, race/ethnicity was not related to any indicators of sexualization.²⁸ Results per variable are presented in Table 19.

Table 18
Sexualization of Female Characters by Race/Ethnicity On Screen: 2017

Measures	White	Black	Latina	Asian	Other
% in sexy attire	29%	26.1%	31%	13.2%	38.2%
% of w/some nudity	26.2%	23.1%	29.6%	8.8%	35.3%
% referenced as attractive	12.4%	8.8%	11%	8.8%	20.4%

Note: Each cell reflects the percentage of females in each racial/ethnic group across 100 films who were depicted with the attribute. To determine the percentage of female characters who were not depicted with the attribute, subtract the cell percentage from 100%.

Table 19
Sexualization of Male Characters by Race/Ethnicity On Screen: 2017

Measures	White	Black	Latino	Asian	Other
% in sexy attire	7.1%	5.6%	7.8%	5.7%	9.5%
% of w/some nudity	8.2%	6.9%	7.2%	5.7%	11.9%
% referenced as attractive	3.8%	5.5%	5.2%	0.9%	7%

Note: Each cell reflects the percentage of males in each racial/ethnic group across 100 films who were depicted with the attribute. To determine the percentage of male characters who were not depicted with the attribute, subtract the cell percentage from 100%.

This section reveals that the portrayal of underrepresented female characters, particularly females from Mixed Race backgrounds, is still typified by sexualization. The findings reflect a lack of imagination on the part of content creators, who continue to portray underrepresented women in line with historical—and historically criticized—notions. These results suggest that it is past time for films to update their depictions of underrepresented female characters to reflect reality.

Behind the Camera

Each year, this report examines the number and percentage of Black and Asian directors across the 100 top-grossing films. In 2017, the year's most popular movies were helmed by a total of 109 individuals. Of those, 5.5% were Black or African American. These individuals were: F. Gary Gray (*The Fate of the Furious*), Jordan Peele (*Get Out*), Malcolm D. Lee (*Girls Trip*), Tyler Perry (*Tyler Perry's Boo 2! A Madea Halloween*), Benny Boom (*All Eyez on Me*), and Stella Meghie (*Everything, Everything*). Only one of the Black or African American directors working last year was female.

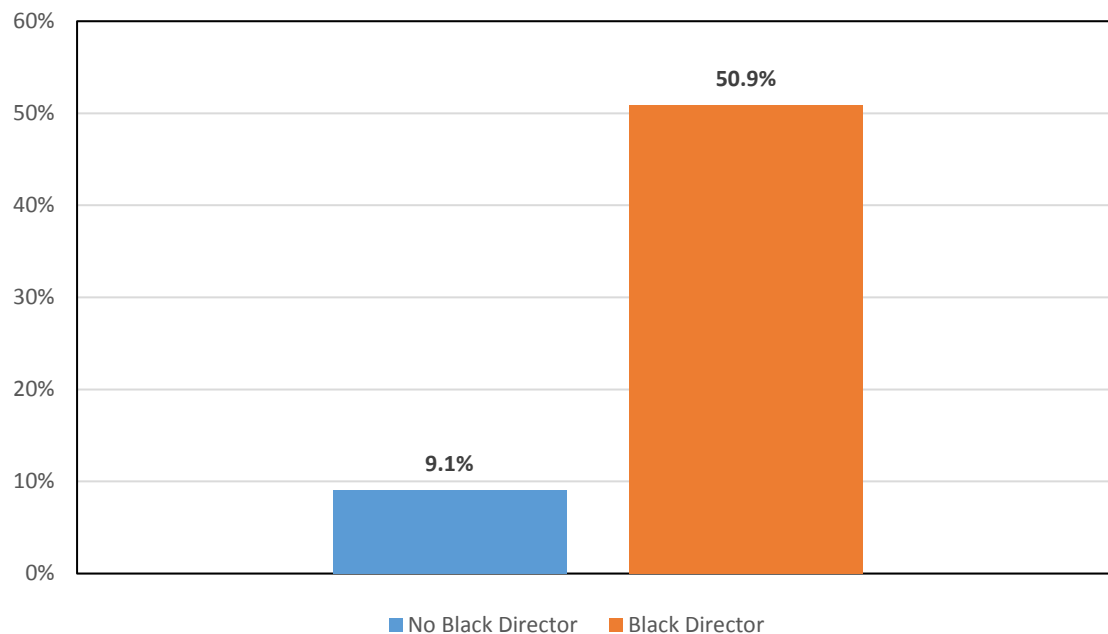
Tracing hiring practices of Black directors across the 11 years examined, it is clear that there has been no change since 2007. See Table 20. Of the 1,100 movies studied, only 5.2% have been helmed by a Black/African American director. Only 4 Black or African American women have worked in the top 100 movies in the years examined, representing less than 1% of all directors. ***It is clear that there has been no change over time in the percentage of Black directors working behind the camera in popular film.***

Table 20
Black Directors by Year: 2007-2017

Black Directors	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Total
% of male directors	7.1% (n=8)	4.5% (n=5)	6.3% (n=7)	4.6% (n=5)	1.8% (n=2)	4.9% (n=6)	6.5% (n=7)	3.7% (n=4)	3.7% (n=4)	5.8% (n=7)	4.6% (n=5)	4.9% (n=60)
% of female directors	0	1.8% (n=2)	0	0	0	0	0	<1% (n=1)	0	0	<1% (n=1)	<1% (n=4)
Total	112	112	111	109	108	121	107	107	107	120	109	1,223

Beyond the presence of Black directors, their relationship to the on screen portrayal of Black characters was assessed. Films were separated into two categories: those with a Black director, and those without. Following this, the percentage of Black speaking characters appearing in the films in each category was evaluated. A significant relationship emerged.²⁹ As shown in Figure 5, the percentage of Black characters in 2017 films increased by 41.8 percentage points when a Black director was behind the camera then when the film did not have a Black director. This relationship can be interpreted in two ways: Black directors are more likely to be hired to direct stories about Black characters *or* they are more likely to create or pursue directing opportunities that feature Black characters.

Figure 5
Percentage of Black Characters by Director Race: 2017



Additionally, the relationship between Black directors and Black female characters was explored, as our previous research indicates that they are more likely than underrepresented males or white females to be excluded from storytelling. The relationship was significant.³⁰ Of the speaking characters in movies from 2017 with a Black director, 18.5% were Black females, compared to just 2.5% of the speaking characters in movies without a Black director. This is striking, as it corresponds to the percentage of

underrepresented women designated as “top critics” by the site Rotten Tomatoes and writing reviews of the 100 top films of 2017.³¹ The lack of women of color on screen as speaking characters, leading characters, and as critics speaks to the widespread erasure of these women from the film ecosystem.

The results regarding Black directors reveal Hollywood’s stubbornness in hiring helmers from this community. There has been no change over time in the percentage of Black directors—including Black female directors—attached to top films. Why does this matter? Aside from offering opportunities equally to talented creatives, Black directors are associated with the presence of more Black characters in films. While this may be driven by the choices Black directors make, it is clear that directors from other racial/ethnic groups fall far behind when it comes to depicting Black characters in the stories they tell.

Each year, this report also examines the frequency of Asian directors working across the 100 top films to understand employment practices related to this racial/ethnic group. In 2017, 4 Asian directors helmed one of the 100 most popular movies—all of these individuals were male. This translates to 3.7% of the 109 directors working in 2017. These individuals were: Pierre Coffin (*Despicable Me 3*), M. Night Shyamalan (*Split*), Yimou Zhang (*The Great Wall*), and Dean Devlin (*Geostorm*).

Table 21 presents over time data related to Asian directors. A mere 3.1% of all directors were Asian or Asian American across 1,100 films and 11 years. Asian female directors are nearly invisible in the sample—of the three slots held by Asian women, two represent the work of Jennifer Yuh Nelson on the *Kung Fu Panda* films. *These findings indicate that there has been no change in the previous 11 years related to the prevalence of Asian directors of top-grossing movies.*

Table 21
Asian Directors by Year: 2007-2016

Asian Directors	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Total
% of male directors	2.7% (n=3)	1.8% (n=2)	<1% (n=1)	3.7% (n=4)	2.8% (n=3)	1.6% (n=2)	5.6% (n=6)	0	5.6% (n=6)	3.3% (n=4)	3.7% (n=4)	2.9% (n=35)
% of female directors	0	<1% (n=1)	0	0	<1% (n=1)	0	0	0	0	<1% (n=1)	0	<1% (n=3)
Total	112	112	111	109	108	121	107	107	107	120	109	1,223

Our findings related to race/ethnicity in film reveal little progress in front of or behind the camera. Though studios and production companies are eager to move away from campaigns like #OscarsSoWhite, the content that is routinely created and released perpetuates an image of the world that is far from reality. The next section explores another facet of inclusion in film: the LGBT community.

Lesbian, Gay, Bisexual, and Transgender Characters

In the 100 top-grossing movies of 2017, a total of 4,403 characters were evaluated for apparent sexuality. Of those, 0.7% (n=31) were Lesbian, Gay, or Bisexual. Over half of the LGB characters were Gay (51.6%, n=16), while 29% (n=9) were Lesbian and 19.4% (n=6) were Bisexual. Compared to the 3.5% of the U.S. population that identifies as LGB in the U.S., Hollywood falls far short of depicting reality.³² In addition, there was not one transgender character who appeared across the 100 top movies of 2017.

Table 22 demonstrates that there has been no change over time in the depiction of LGBT characters on screen since 2014. In fact, 2017 represents a decrease of 20 gay male characters from our 2016 analysis and the number of lesbian and bisexual characters remains unchanged from the previous year. Examining these findings reveals that out of 400 popular films from 2014 to 2017, only one transgender character has appeared.

Table 22
LGBT Portrayals: 2014-2017

Sexuality	2014	2015	2016	2017
Lesbian	4	7	9	9
Gay	12	19	36	16
Bisexual	5	5	6	6
Transgender	0	1	0	0
Total	21	32	51	31
% of LGBT characters sample-wide	<1%	<1%	1.1%	<1%

Two films featured a leading character from the LGB community—both of these characters were white, one was male and one was female. Both individuals were bisexual. Given the lack of LGBT leading characters, the nature of roles for LGBT characters was further scrutinized (see Table 23). Slightly more than half (48.4%) of LGB characters appear in supporting roles, which is not different from 2016 (45.1%). The percentage of LGB characters who are inconsequential to the plot decreased from 2016 (49%) to 2017 (41.9%).

As with our race/ethnicity analysis, the number of films without any LGBT characters was assessed. A total of 81 films did not include one LGBT speaking character, which is an increase from the 76 films in 2016, though a slight decrease from 2014 (86 films). Examining films missing LGBT females reveals that 94 movies were devoid of these characters; this is on par with the prior years examined.

Table 23
Roles & Visibility of LGBT Characters: 2014-2017

Measures	2014	2015	2016	2017
% of supporting characters	38.1%	28.1%	45.1%	48.4%
% of inconsequential characters	47.6%	71.9%	49%	41.9%
# of movies w/no LGBT	86	82	76	81
# of movies w/no LGBT females	96	93	91	94

Note: Columns do not total to 100%.

Demographic attributes of LGB characters were also evaluated. Over half (58.1%, $n=18$) of LGB characters were male and 41.9% were female ($n=13$). LGB characters were predominantly white (67.7%, $n=21$), while 32.3% ($n=10$) were underrepresented. In terms of age, 38.7% ($n=12$) LGB characters were 21-39 years old, 29% ($n=9$) were 40-64 years old, 25.8% ($n=8$) were 13-20 years old, and 6.5% ($n=2$) were 65 years of age or older.

Of the 19 LGB characters who were shown with enough cues to evaluate this measure, only 1 was depicted as a parent or caregiver (5.3%). This individual was a bisexual Mixed Race female character. One-third ($n=7$) of the 21 LGB characters whose relational status could be ascertained had a romantic partner, while 66.7% ($n=14$) did not. Films still fail to depict the full familial and relational lives of the LGBT community.

In sum, this section reveals how disparate fictional storytelling is from the lived reality of the LGBT community. The portrayal of LGBT characters is rare, and in many films, LGBT characters are completely absent. Most LGB characters are shown in supporting roles which do not showcase the romantic or parental connections individuals have to their partners or families. Moreover, these portrayals are focused on young adult, white male characters rather than the diverse members of this group.

Characters with Disabilities in Film

This is the third year in which the Annenberg Inclusion Initiative has evaluated the prevalence of characters with disabilities in top-grossing films. Each speaking or named character was assessed for the presence or absence of a disability, relying upon an adapted definition drawn from the Americans with Disabilities Act (ADA).³³ Consistent with previous years, creatures with supernatural origins (e.g., zombies, ghosts, robots, etc.) were not considered for this measure and addiction was not included as a disability. Only 2.5% of all characters ($n=112$) were depicted with a disability across the 100 most popular movies of 2017. As shown in Table 24, this is similar to our findings in previous years.

Table 24
Films Focusing on Characters with Disabilities: 2015-2017

Measure	2015	2016	2017
% of characters w/disabilities	2.4%	2.7%	2.5%
# of films missing characters w/disabilities	45	38	41
# of films missing female characters w/disabilities	84	70	78
# of films w/proportional representation ($\pm 2\%$ Census)	2	1	2
U.S. Census	18.7%		
Total Films Evaluated	100	100	100

On a per-film level, characters with disabilities are strikingly absent from motion picture storytelling. Forty-one films in 2017 did not feature one speaking character with a disability. Over time, there has been no change in this figure. A total of 78 movies did not include one female character with a disability. This is an increase over 2015 (+8 films) but a decrease from 2015 (-6 films). Finally, consistent with prior reports, two films featured characters with disabilities in proportion to the U.S. population (18.7%).³⁴

Turning to leading characters, 14 movies featured a lead or co lead character with a disability at any point in the film. These characters experienced difficulty with mobility, blindness, mental health issues, craniofacial differences, loss of hearing, or were mute. The majority of films with lead or co lead characters with a disability featured males ($n=10$) and few females ($n=4$). Only 1 film revolved around an underrepresented leading character with a disability and one a leading character from the LGBT community. Over the past three years, there have been no meaningful changes in the depiction of leading characters with disabilities—any gains in 2016 are offset by films from 2017, which approximate the results from the first year of our analysis (see Table 25).

Table 25
Lead/Co Lead Characters with Disabilities: 2015-2017

Measure	2015	2016	2017
# of films w/lead or co lead character with disability	10	15	14
# of films w/male lead or co lead character with disability	7	12	10
# of films w/female lead or co lead character with disability	3	3	4
# of films w/UR lead or co lead character with disability	0	0	1
# of films w/LGBT lead or co lead character with disability	0	0	1

Films with leading ensemble casts were also evaluated for the presence of characters with disabilities. Three films with ensemble leads featured a character with a disability in the ensemble. All of these characters were male, and 2 (66.7%) were from an underrepresented racial/ethnic group.

To further explore the roles characters with disabilities inhabit, we examined both supporting and inconsequential speaking parts. Slightly more than half (51.8%, $n=58$) of characters with disabilities were in supporting roles, while 32.1% ($n=36$) filled inconsequential parts. There has been no change from 2016 (supporting=48.4%, inconsequential=31.5%) or 2015 (supporting=54.3%, inconsequential=32.4%) in the distribution of characters with disabilities across roles in film.

After determining the characters with disabilities, each was evaluated for the presence of three distinct domains, based on the U.S. Census.³⁵ Physical disabilities were depicted most often, with 61.6% of characters with a disability included in this category. These characters used wheelchairs, had difficulty breathing, or were missing limbs. Communicative disabilities occurred for 30.4% of characters, who were blind, deaf, and/or mute. Finally, 26.8% of characters with disabilities were classified in the mental domain. Examples include those with dissociative identity disorder, post-traumatic stress disorder (PTSD) or amnesia. These categories were not mutually exclusive and thus do not sum to 100%.

The demographic profile of characters with disabilities appears in Table 26. More than two-thirds (69.6%, $n=78$) of characters with disabilities were male while 30.4% ($n=34$) were female. Nearly three-quarters ($n=73$) of characters with disabilities were white, while 27% were underrepresented. Only 1 character shown with a disability was LGBT. The findings from 2017 in each of these groups represent no change from our 2016 report. Only the percentage of female characters with a disability has increased meaningfully since 2015.

Table 26
Demographic Profile of Characters with Disabilities: 2015-2017

Measure	2015	2016	2017
% of male characters w/disabilities	81%	67.7%	69.6%
% of female characters w/disabilities	19%	32.3%	30.4%
% of white characters w/disabilities	71.7%	74.5%	73%
% of UR characters w/disabilities	28.3%	25.5%	27%
# of LGB characters w/disabilities	0	1	1

The age of characters with disabilities was also assessed. Characters depicted with a disability were most likely to be age 40 or older (56.4%, $n=62$), while children age 0-12 ($n=5$) represented 4.5% of this group. The image of disability in popular films is a very narrow one.

The results in this section reveal that disparities in the depiction of characters with disabilities continue to exist. Movies consistently portray few characters with disabilities, and rarely are these individuals the focus of storytelling. When characters with disabilities do appear, they are predominantly white, straight, and male. Viewers hoping for an authentic picture of individuals with disabilities will find little to watch in the top films of 2017.

Conclusion

The purpose of this report was to examine the nature of representation on screen and behind the camera in the 100 top-grossing movies of 2017. To determine if there has been any change over time, data from 2017 was compared to previous reports from 2007 to 2016. As a result, this study presents a comprehensive look at inclusion in the film industry over the last decade. The primary findings are described below, along with potential solutions to inequality, as well as limitations and next steps for researchers.

Exclusion is Endemic to Popular Film

Each year, this report provides insight into where there have been gains and losses across gender, race/ethnicity, LGBT status, and disability on screen in film. Following years of advocacy and efforts to create change by groups and individuals throughout the industry, the evidence in this report suggests that 2017 was not meaningfully different from prior years. The percentage of female speaking characters has not increased since 2007, nor has the proportion of characters from underrepresented racial/ethnic groups. Girls and women were still less than one-third of all speaking characters, and underrepresented individuals were less than 30%. While there has been a slight decline in white characters from 2007, this trend was observed last year, and is not different from what was observed in 2008. In terms of women and people of color, Hollywood movies continue to present viewers with a status quo that skews from reality.

The findings related to the LGBT community and characters with disabilities also reflect stability over time. Less than 1% of characters were LGBT, and any gains found in 2016 related to the depiction of gay males have evaporated in 2017. Across the previous four years and 400 popular movies, only 1 transgender character has appeared. Similarly, only 2.5% of speaking characters were shown with a disability—a far cry from the 18.7% of the population living with a disability.³⁶ Despite their visibility in nearly every facet of our daily lives, these groups are rarely found on screen in entertainment.

Given the industry attention to inclusion, it is difficult to understand why the numbers remain resistant to change. Many of these roles reflect supporting or inconsequential characters, parts for which gender, race/ethnicity, sexuality, or disability matter little to the plot. Content creators can easily diversify the fabric of their storytelling simply by reimaging the world in which their characters live and interact. Moreover, writers and storytellers should remember the diversity that already exists in their own world—where these characters are created.

Invisibility is Still an Issue in Motion Pictures

Overall figures related to representation tell one story about the lack of inclusivity in film but each year, the Annenberg Inclusion Initiative also catalogues the erasure of 6 groups from individual films. Table 27 depicts this information alongside the deficits in representation overall. While decreases in the number of films missing Black, Asian and Latino characters have been observed, the number of movies missing LGBT characters or characters with disabilities remains consistent over time.

Table 27
The Epidemic of Invisibility Across 6 Groups

Underserved Groups in Film	Films w/Out Any Characters	% of Speaking Characters	U.S. Population	Difference (Population-Characters)
Female Characters	0	31.8%	50.8%	-19%
Characters w/Disabilities	41	2.5%	18.7%	-16.2%
Latino Characters	43	6.2%	17.8%	-11.6%
LGBT Characters	81	<1%	3.5%	-3.4%
Black Characters	20	12.1%	13.3%	-1.2%
Asian Characters	37	4.8%	5.7%	-0.9%

Note: U.S. Census was used for all groups except LGB. That point statistic was from Williams Institute (2011).

This report also examines invisibility from an intersectional perspective. In 2017, 43 films did not depict one Black female character, 64 were missing even one Latina, and 65 did not include an Asian female speaking character. Coupled with the fact that 78 movies did not feature a female character with a disability and 94 were devoid of an LGBT female, this analysis reveals how many of our most popular films keep women from marginalized groups out of the picture.

The complete absence of individuals from these groups—and particularly females—reveals even more about the approach that Hollywood takes to inclusion and representation. Content creators seem to envision story settings in which diversity is primarily achieved through the presence of a single underrepresented group, or in which characters do not have intersectional identities. Stories can expand our notions of what is possible, and clearly storytellers need help expanding their conceptions of how inclusion can be attained in film.

Diversity is Stalled Behind the Scenes

When inclusion is missing from content, audiences may take notice and make their voices heard. A smaller subset of people, however, may be aware that behind the camera, few women or people of color have worked as directors on the most popular films across more than a decade. Of 2017's top-grossing film directors, only 7.3% were female, 5.5% were Black, and 3.7% were Asian. Only 1 woman of color worked on the top movies released last year. These percentages have not changed meaningfully since 2007, despite voluble protests and calls for change in Hollywood's hiring practices.

For females, other behind-the-scenes positions were also scrutinized. A mere 10.1% of writers and 18.2% of producers were women in 2017. Additionally, there was 1 female composer out of the 111 individuals

hired to score the 100 top films. The presence of women in these creative roles has been stable over the past 11 years, which means audiences see and hear the stories and sounds of women in cinematic content only rarely.

Why do results like these matter? As we demonstrated earlier, the presence of a female in the directing or writing role is associated with more female characters on screen. The same is true for Black directors and Black characters—particularly Black female characters. To address persistent on screen diversity deficits, the answer may lie behind the scenes. However, until biases in the consideration and hiring practices for these top movies are eliminated, the status quo will persist.

Increasing Inclusion through Targeted Solutions

This is the ninth report from the Annenberg Inclusion Initiative to examine popular films. At the beginning, the study focused on gender, then incorporated race/ethnicity, and included LGBT and disability in later years. While the report and its scope have changed, the findings have remained consistent. To address the underlying reasons why progress has not occurred, the Annenberg Inclusion Initiative offers several solutions to combat the ongoing inequality in film.

Use Inclusion Riders when Launching New Projects

In 2014, Dr. Stacy L. Smith (author of this report) wrote an op-ed in *The Hollywood Reporter* introducing the concept of an ‘equity rider’ for A-list talent to add to contracts. The idea was straightforward: allowing actors to use their influence and leverage to advocate for equality through a clause their contract. The rider would stipulate “that tertiary speaking characters should match the gender distribution of the setting for the film, as long as it’s sensible for the plot.”³⁷ That idea evolved into the inclusion rider,³⁸ adding provisions for other marginalized groups (e.g., racial/ethnic groups, the LGBT community, individuals with disabilities) as well as a process for ensuring below-the-line hiring is equitable. The inclusion rider provides a flexible set of options that can be strategically deployed to ensure that the process used to consider and hire on screen and behind the camera positions is fair.

Following a declaration from actor Frances McDormand on the Academy Award stage in 2018, inclusion riders became a buzzword in the entertainment industry. The full text of one inclusion rider template is available at the Annenberg Inclusion Initiative website for use by actors, directors, or other interested parties in consultation with their legal representation.³⁹ We are aware of other inclusion riders developed by different entities working in entertainment and salute their efforts. As groups seek to implement inclusion riders on various entertainment projects, the Annenberg Inclusion Initiative welcomes the opportunity to bring different constituencies together to further develop language and ideas that work for studios, agencies, guilds, lawyers, and individuals on both sides of a negotiation to create balanced sets and inclusive storytelling.

Set Target Inclusion Goals

The stability of trends around on screen and behind the camera hiring indicate that even if companies desire greater inclusivity in their content, the results have not followed. One way to move toward measurable change is for companies to set target inclusion goals. These objectives, which should be transparent and public, should specify not only a company’s expectations for inclusion but also the steps it will take to achieve the goals.

Target inclusion goals allow a company to take a slate approach to inclusion, in the same way they might when considering revenue. Setting target goals gives executives and content creators an important benchmark and measuring stick to evaluate performance. This tactic allows for teams to gauge how their film contributes to the overall goals and when adjustments need to be made. Most importantly, setting goals and crafting plans to achieve them makes inclusion an intentional part of decision-making rather than making it an afterthought.

Pay Attention to Background Roles and Address Disparities Simply

Large-scale efforts to create change are needed in film, but simpler solutions are available as well. One reason that progress for female characters on screen is elusive is that background roles or smaller speaking parts continue to be primarily awarded to males. For several years, we have advocated for one method as a way to increase the percentage of female characters on screen—just add five.

The premise is simple: add five female speaking characters to every one of the 100 top movies next year. These can be small, background roles or even supporting parts. Doing so will set a new overall norm for female characters. Repeating this process for 3 years will result in gender parity on screen in 2020, and the first time equality would be reached in almost three-quarters of a century. Adding five female characters allows for intersectional diversity as well—these women can be from underrepresented racial/ethnic groups, can be from the LGBT community, and can be depicted with a disability. Moreover, the plan does not take away background roles from male actors and should be relatively inexpensive. Creating gender parity need not be an onerous endeavor, but it must be a thoughtful one.

Investigate Policy Solutions

One venue for creating change that remains relatively unexplored is state and federal policy. Entertainment companies benefit from state tax incentives that subsidize production costs on their projects. Recently, California extended its film and TV tax incentive program and introduced new measures for productions receiving the credit to report on diversity.⁴⁰ Other states may be interested in going further to tie funding to employing diverse cast or crew members on productions receiving support. Or, they may award funding based on the use of inclusion riders or other criteria. State and federal legislators can reward companies who make inclusion a priority through tax incentives—and can ensure that their constituents have an equal chance to work on the films their tax dollars support.

Limitations

A few limitations to this study must be noted. Each year, we clarify that this investigation focuses on the 100 top-grossing movies according to domestic box office. This is done to illuminate patterns of representation in the most popular films, which are seen by the largest audiences. Sampling movies outside of the top 100 could result in a different pattern of results. Additionally, while our definition of disability is consistent with the ADA, it does not take a broader view of mental health issues that may appear in film. We plan to release an additional report investigating the portrayal of mental health to address this gap.

Annually, this report serves as a tool to evaluate the progress made in the depiction of inclusive content on screen and the presence of diverse voices behind the camera. As the reverberations of the #MeToo and #TimesUp movements continue to resonate in the entertainment industry and beyond, this investigation marks how far we still have to go. Workplace safety goes hand in hand with workplace

equity. As we have demonstrated, there are still few films where equity is a hallmark of the production or the content. Addressing the lack of inclusivity in cinema is an essential part of building a future in which talented individuals can safely create, inspire, and entertain audiences who are finally able to see their own challenges and triumphs on screen.

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Footnotes

1. The sample was the 100 top domestic box office films as reported by Box Office Mojo (<http://www.boxofficemojo.com/yearly/chart/?yr=2017&p=.htm>). Only fictional films were included across the 1,100 movie sample. For all details of our longitudinal methodology, see Smith, S.L., Choueiti, M. & Pieper, K. (2017). *Inequality in 900 Popular Films: Gender, Race/Ethnicity, LGBT, & Disability from 2007-2016*. Media, Diversity, & Social Change Initiative, USC Annenberg. For this investigation, two additional years (2017, 2011) were added to the study. Several years ago, the 100 top movies of 2011 were not included as another researcher conducted the same study. To ensure that every year is accounted for in this investigation, 2011 has now been integrated into the analysis.

Also, the 100 top films of 2016 were analyzed for another investigation since the publication of the last report. In the process of analyzing all 100 films a third time, coders found a total of 7 additional characters. These characters (4 males, 3 females) were added to the existing set of 4,583 characters thus increasing the total to 4,590 characters. The longitudinal analyses were recalculated for this study to reflect the updated information of characters across the top films of 2016. As a result, some statistics reflecting the 2016 data may be different than our previous report. Ultimately the differences yielded no meaningful results (i.e., the percentage of female characters increased by .1 percentage points).

2. There are two units of analysis in this longitudinal study. The first is the individual speaking character. Any time an independent character uttered one or more discernible words on screen (from any language) or was referred to by name he/she/it was entered onto a "line of data". Characters speaking in groups were given special attention, however. Groups comprised of heterogeneous characters engaging in simultaneous speech were determined to lack independence and thus were not coded. There are times when virtually identical characters speak sequentially in a group on screen. Here, the character's speech is unique but the identity is difficult, if not impossible, to ascertain. These types of characters were chunked and loaded onto a single line of data. In 2017, there were a total of 16 homogeneous groups shown across the sample of 100 top movies. This is consistent within the range found in previous years (low=3, high=30). All of these lines of data were removed prior to analyses. The film was the second major unit in this investigation.

One particular unitizing rule at the character level is important to note. Any time a speaking (or named) character changed a level within a demographic measure (i.e., type, age, gender, race/ethnicity), a new line of data was created. To illustrate, consider the movie *Moonlight*. Here, the main character -- Chiron -- had three lines of data that correspond to three distinct age groups (i.e., child, teen, adult) across the plot. A total of 219 (61.6% male, 38.4% female) demographic changes appeared across the 100 top films of 2017. Removing these lines decreased the overall percentage of female speaking characters on screen minimally (.4%, from 31.8% to 31.4%). Given the trivial deviation, all demographic changes remained in the analyses. For leads with demographic changes, the information reported on protagonists (i.e., leads/co leads, ensemble casts) focused on those roles that lasted the longest in the film and drove the narrative's main storyline.

3. A series of measures were captured at both the character and the film level. Many of these definitions appear in our earlier reports (see Smith et al., 2017a). For brevity, only variable names and levels are provided below. In terms of character-level measures, a series of demographic variables tapped *type* (i.e., human, animal, supernatural creature, anthropomorphized supernatural creature, anthropomorphized animal), *biological sex* (i.e., male, female), *apparent race/ethnicity* (i.e., White, Hispanic/Latino, Black,

American Indian/Alaskan Native, Native Hawaiian/Pacific Islander, Asian, Middle Eastern, Other/mixed race), and *age* (i.e., 0-5, 6-12, 13-20, 21-39, 40-64, 65+).

Two variables assessed the domestic attributes of characters: *parental status* (i.e., not a parent; single parent; co parent; parent, relational status unknown) and *relationship status* (i.e., single; married; committed/unmarried; committed marital status unknown; divorced; widowed). Sexualization was also measured with three variables adapted from Downs & Smith, 2010). For human and human-like characters, *sexually revealing clothing* (SRC) was coded as present or absent and *nudity* was coded as none, partial, or full. For these two measures, coders also captured images and stored the photos for later group-based discussions. Prior to analyses, two of the study authors (Choueiti, Case) reviewed all of the pictorial judgments to ensure consistency across the sample time frame. Lastly, the presence of *physical attractiveness* was assessed. Each character was coded as receiving no appearance comments, one appearance comment, or two or more appearance comments.

In 2014, the study incorporated measures to capture characters' *sexual orientation* (lesbian, gay, bisexual or not lesbian, gay, bisexual) and *transgender* identity (no, yes). In 2015, character *disability* was added to the codebook (no, yes) as well as the presence/absence of *communicative, mental, or physical disability*. Across the study, all the character variables – save one (i.e., type) -- had two additional levels: Can't tell and not applicable. For character *type*, only the latter was an option when coding.

At the film level, a few additional measures were assessed. *Rating* (G, PG, PG-13, R) was retrieved from online outlets and FilmRatings.com. *Genre* was assessed using information provided online at IMDbPro.com and Box Office Mojo. Lastly, the *lead character* of the film was categorized as lead/co lead or an ensemble cast. This decision was made after scrutinizing the film's three act structure.

Each semester, a group of students are trained by one of the study authors on unitizing and variable coding. The same instructor (Marc Choueiti) has trained all of the research assistants across the 11-year sample. The undergraduate research assistants spend roughly 6 weeks learning the study code book and practicing on a series of training films and TV shows. Post-training, each individual student is assigned to independently review films in the sample of 100 top movies. Across Fall 2017, Spring 2018 and Summer 2018, at least three coders were assigned to watch each of the films in the sample and reliability was assessed per movie. All disagreements are resolved with one of the study authors. After reliability, three additional student coders watched the film to "quality check" students' original judgments and code for disability measures.

Reliability on our coding process is determined in two ways. Unitizing agreement is calculated as the number of matched characters the majority of coders agree upon (i.e., two out of three). Perfect unitizing agreement is 100%, where the majority of coders come to the same decision on every speaking character in the film. We report unitizing agreement in quartiles: Q1 100%-90.5% (films 1-25); Q2 90.3%-85.4% (films 26-50); Q3 85.3%-79.1% (films 51-75); Q4 78.3%-54.5% (films 76-100). Only 11 films were below 70%, and only 1 was below 60%. This pattern is consistent with previous years' unitizing reliability.

The second type of reliability assesses agreement on variable coding, using the Potter & Levine-Donnerstein formula for multiple coders. Medians are reported for each variable based on sample wide calculations, followed by the mean and range in parentheses: *type* 1.0 (M=.99, range=.64-1.0), *sex* 1.0 (M=1.0, range=1.0), *race/ethnicity* 1.0 (M=.99, range=.66-1.0), *age* 1.0 (M=.91, range=.65-1.0), *parental* 1.0 (M=.99, range=.64-1.0), *relational* 1.0 (M=.99, range=.65-1.0), *sexually revealing clothing* 1.0 (M=1.0, range=1.0), *nudity* 1.0 (M=1.0, range=.63-1.0), *attractiveness* 1.0 (M=1.0, range=1.0), *apparent sexuality*

1.0 (M=1.0, range=.75-1.0), and *transgender* 1.0 (M=1.0, range=.61-1.0), *disability* 1.0 (M=1.0, range=1.0), *communicative disability* 1.0 (M=.90, range=.61-1.0), *mental disability* 1.0 (M=.91, range=.61-1.0), and *physical disability* 1.0 (M=.91, range=.61-1.0).

4. As in our prior research, behind the camera findings were obtained through a process that involved several steps. First, each film's entry on IMDbPro was used to determine the individuals who worked as directors, writers, producers, and composers. From there, each individual's biological sex was obtained through online sources, including photos and text evidence provided in databases such as Variety Insight, Studio System/InBaseline. The biological sex of a total of 4 writers and producers could not be ascertained using this method. Using babynames.com, the gender of 2 of those individuals was obtained. At the end of the process, the biological sex of 2 individuals was unknown. These individuals were not included in the analysis.

The race/ethnicity of directors was ascertained through multiple sources, including online databases, the DGA database, and calls to representatives. The race/ethnicity of most directors in the sample had been determined and included in previous Annenberg Inclusion Initiative reports. See those reports for information on how the race/ethnicity of directors was determined when information was missing from other sources. For the individual who was added for this report, information in Variety Insight and Studio System/InBaseline provided the director's race/ethnicity.

5. Negron-Muntaner, F. & Abbas, C. (2016). *The Latino Disconnect: Latinos in the Age of Media Mergers*. Center for the Study of Ethnicity and Race. New York, NY. Columbia University.

6. The relationship between *character gender* (male, female) and *movie rating* (PG, PG-13, R) was significant, $X^2(2, 4,379)=5.08, p < .10, V^*=.03$. However, no difference of 5% or greater emerged between the ratings.

7. Genre distinctions from Box Office Mojo were used to assign films to one of four genre categories. When these designations were vague (e.g., Family Adventure), labels from IMDbPro were used to provide clarity. Decisions from previous years were revisited and in some cases, revised. Therefore, data presented in this report may differ slightly from prior years.

8. Motion Picture Association of America (2018, pg. 19). *Theme Report 2017*. Retrieved July 18, 2018 from https://www.mpa.org/wp-content/uploads/2018/04/MPAA-THEME-Report-2017_Final.pdf. U.S. Census Bureau (2016). Quick Facts. Retrieved July 17, 2017 from <https://www.census.gov/quickfacts/>

9. U.S. Census Bureau (2016).

10. Herrett-Skjellum, J., & Allen, M. (1996). Television programming and sex stereotyping: A meta-analysis. *Communication Yearbook*, 19, p. 157-185. Davies, P.G., Spencer, S.J., Quinn, D.M., & Gerhardstein, R. (2002). Consuming images: How television commercials that elicit stereotype threat can restrain women academically and professionally. *Personality and Social Psychology Bulletin*, 28(12), p. 1615-1628. Opplinger, P.A. (2007). Effects of Gender Stereotyping on Socialization. In R.W. Press, B.M. Gayle, N. Burrell, M. Allen, & J. Bryant (Eds.) *Mass Media Effects Research: Advances Through Meta-Analysis*. Mahwah, NJ. LEA.

11. Prior to analysis, the parental status variable was collapsed into two levels: not a parent vs parent (i.e., single parent, co parent, parent relational status unknown). A chi-square analysis revealed a

significant relationship between *parental status* (no, yes) and *character gender* (male, female); $X^2(1, 1,063)=6.14, p < .05, \phi=.08$.

12. Similar to parental status, relational standing was reduced to a dichotomous measure: no (single, divorced, widowed) vs. yes (married, committed/unmarried, committed marital status unknown). The chi-square test revealed a non significant relationship ($p > .05$) between *relational status* and *character gender* (male, female). The percentages for males (41.5%) and females (46.5%) were also not meaningfully (5%) different.

13. The chi-square for *character age* (child, teen, adult, elderly) and *character gender* (male, female) was statistically significant, $X^2(3, 4,118)=107.63, p < .01, V^*=.16$. Prior to analysis, the age variable was reduced from five categories to four by collapsing middle age (40-64 years of age) and elderly (65 years of age and older) into one level.

14. Fredrickson, B.L., & Roberts, T.A. (1997). Objectification theory: Toward understanding women's lived experiences and mental health risks. *Psychology of Women Quarterly, 21*, p. 173-206. Roberts, T.A., & Gettman, J.Y. (2004). Mere exposure: Gender differences in the negative effects of priming a state of self-objectification. *Sex Roles, 51*(1/2), p. 17-27. Aubrey, J.S. (2006). Effects of sexually objectifying media on self-objectification and body surveillance in undergraduates: Results of a 2-year panel study. *Journal of Communication, 56*, p. 366-386.

15. The relationship between *sexually revealing clothing* (no, yes) and *character gender* (male, female) was significant, $X^2(1, 3,838)=302.05, p < .01, \phi=.28$.

16. Before analysis, the *nudity* variable was collapsed into two levels: no nudity vs. some nudity (partial, full). The vast majority (93.8% of 568) of portrayals depicted partial nudity ($n=533$) rather than full ($n=35$). Of the 35 instances of full nudity, 20 were involving male characters (57.1%) and 15 were involving female characters (42.9%). A chi-square test revealed a significant association between *character nudity* (none, some) and *character gender* (male, female); $X^2(1, 3,839)=166.46, p < .01, \phi=.21$.

17. The *attractiveness* variable was dichotomized prior to analysis: not attractive (no appearance comments) vs. attractive (1 or more appearance comments). A significant relationship emerged between this variable and *character gender* (male, female), $X^2(1, 4,454)=85.30, p < .01, \phi=.14$.

18. American Psychological Association, Task Force on the Sexualization of Girls (2007). Report of the APA Task Force on the Sexualization of Girls. Retrieved from <http://www.apa.org/pi/women/programs/girls/report-full.pdf>

19. Chi-square tests were run for each sexualization measure by *character age* (teen, young adult, middle age): *sexy attire* $X^2(2, 1,013)=22.98, p < .01, V^*=.15$; *nudity* $X^2(2, 1,013)=18.79, p < .01, V^*=.14$; *physical attractiveness* $X^2(2, 1,123)=13.68, p < .01, V^*=.11$.

20. A significant relationship emerged between *director gender* (female director attached, no female director attached) and *character gender* (males, females), $X^2(1, 4,454)=19.17, p < .01, \phi=.07$.

21. Chi-square analysis revealed a significant relationship for *writer gender* (female screenwriter attached, no female screenwriter attached) and *character gender* (male, female), $X^2(1, 4,454)=25.50, p < .01, \phi=.08$.

22. U.S. Census Bureau (2016).
23. Motion Picture Association of America (2018)
24. An analysis revealed a significant relationship between *character race/ethnicity* (White, Black, Latino, Asian, Other) and *character gender* (male, female), $X^2(4, 3,691)=19.56, p<.01, V^*=.07$.
25. For males, chi-square tests did not reveal a significant relationship by *character race/ethnicity* (White, Black, Latino, Asian, Other): *parental standing* (no, yes) $X^2(4, 496)=3.91, p=.42, \phi=.09$, *relational standing* (no, yes), $X^2(4, 506)=3.69, p=.45, \phi=.09$. Similar non-significant results emerged for females by *character race/ethnicity* (White, Black, Latino, Asian, Other): *parental status* (no, yes), $X^2(4, 428)=5.09, p=.28, \phi=.11$ and *relational standing* (no, yes), $X^2(4, 428)=4.07, p=.40, \phi=.10$.
26. Two measures related to sexualization varied by *character race/ethnicity* (White, Black, Latino, Asian, Other) for female characters: *SRC* $X^2(4, 1,191)=13.14, p<.01, V^*=.11$; *Nudity*, $X^2(4, 1,191)=16.12, p<.01, V^*=.12$.
27. No differences emerged for females in *physical attractiveness* by *race/ethnicity*, $X^2(4, 1,211)=8.6, p=.07, V^*=.08$.
28. Sexualization indicators did not vary by *race/ethnicity* (White, Black, Latino, Asian, Other) for male characters: *SRC* $X^2(4, 2,437)=2.66, p=.62, V^*=.03$; *Nudity* $X^2(4, 2,437)=4.13, p=.39, V^*=.04$; *Attractiveness* $X^2(4, 2,480)=7.75, p=.10, V^*=.06$.
29. A significant chi-square between *black director* (no, yes) and *black character* (no, yes) was found, $X^2(1, 3,691)=404.48, p<.01, \phi=.33$.
30. A chi-square test revealed a significant relationship between *black director* (no, yes) and *black female character* (no, yes), $X^2(1, 3,691)=176.35, p<.01, \phi=.22$.
31. Choueiti, M., Smith, S.L., & Pieper, K. (2018). *Critic's Choice? Gender and Race/Ethnicity of Film Reviewers Across 100 Top Films of 2017*. Annenberg Inclusion Initiative. Los Angeles, CA.
32. Gates, G.J. (2011). *How many people are Lesbian, Gay, Bisexual, and Transgender?* Report by The Williams Institute. Retrieved online: <http://williamsinstitute.law.ucla.edu/research/census-lgbt-demographics-studies/how-many-people-are-lesbian-gay-bisexual-and-transgender/>
33. See prior years' reports for the specific definitional aspects. For more information on the ADA, visit: : https://www.ada.gov/regs2016/final_rule_adaaa.html.
34. Brault, M.W. (2012). Americans with Disabilities: 2010. U.S. Department of Commerce Economics and Statistics Administration. Available: <https://www.census.gov/content/dam/Census/library/publications/2012/demo/p70-131.pdf>.
35. Brault, 2012.
36. Brault, 2012.

37. Smith, S.L. (December 15, 2014). Hey Hollywood, it's time to adopt the NFL's Rooney Rule—for women. *The Hollywood Reporter*. Available: <https://www.hollywoodreporter.com/news/hey-hollywood-time-adopt-nfls-754659>

38. The full inclusion rider template was developed with input and assistance from Kalpana Kotagal, Fanshen Cox DiGiovanni, Leah Fischman, Katherine Pieper, and Marc Choueiti.

39. The full text is available: <http://assets.uscannenber.org.s3.amazonaws.com/docs/inclusion-rider-template.pdf>

40. Handel, J. (June 27, 2018). California extends film tax credits to 2025. *The Hollywood Reporter*. Available: <https://www.hollywoodreporter.com/news/california-extends-film-tax-credits-2025-1123674>

Appendix A

Sample of 100 Top Grossing Films of 2017

1	Star Wars: The Last Jedi	43	Captain Underpants: The First Epic Movie	86	The Nut Job 2: Nutty by Nature
2	Beauty and the Beast	44	A Bad Moms Christmas	87	Rings
3	Wonder Woman	45	A Dog's Purpose	88	Logan Lucky
4	Jumanji: Welcome to the Jungle	46	The Shape of Water	89	Home Again
5	Guardians of the Galaxy Vol. 2	47	The LEGO Ninjago Movie	90	Resident Evil: The Final Chapter
6	Spider-Man: Homecoming	48	Baywatch	91	The House
7	It	49	The Shack	92	All the Money in the World
8	Thor: Ragnarok	50	Darkest Hour	93	Gifted
9	Despicable Me 3	51	Happy Death Day	94	Downsizing
10	Justice League	52	Three Billboards Outside Ebbing, Missouri	95	The Bye Bye Man
11	Logan	53	Atomic Blonde	96	Victoria and Abdul
12	The Fate of the Furious	54	American Made	97	Rough Night
13	Coco	55	The Dark Tower	98	My Little Pony: The Movie
14	Dunkirk	56	Lady Bird	99	Leap!
15	Get Out	57	Tyler Perry's Boo 2! A Madea Halloween	100	The Disaster Artist
16	The LEGO Batman Movie	58	Snatched		
17	The Boss Baby	59	The Great Wall		
18	The Greatest Showman	60	Smurfs: The Lost Village		
19	Pirates of the Caribbean: Dead Men Tell No Tales	61	Going in Style (2017)		
20	Kong: Skull Island	62	All Eyez on Me		
21	Cars 3	63	xXx: The Return of Xander Cage		
22	War for the Planet of the Apes	64	47 Meters Down		
23	Split	65	The Big Sick		
24	Wonder	66	Valerian and the City of a Thousand Planets		
25	Transformers: The Last Knight	67	The Star		
26	Girls Trip	68	Ghost in the Shell (2017)		
27	Fifty Shades Darker	69	King Arthur: Legend of the Sword		
28	Baby Driver	70	Jigsaw		
29	Pitch Perfect 3	71	American Assassin		
30	Daddy's Home 2	72	The Foreigner		
31	Murder on the Orient Express (2017)	73	Everything, Everything		
32	Annabelle: Creation	74	Wind River		
33	Kingsman: The Golden Circle	75	Geostorm		
34	Blade Runner 2049	76	Monster Trucks		
35	John Wick: Chapter Two	77	Fist Fight		
36	The Emoji Movie	78	How to be a Latin Lover		
37	Power Rangers (2017)	79	Kidnap (2017)		
38	Ferdinand	80	Underworld: Blood Wars		
39	The Post	81	The Mountain Between Us		
40	The Mummy (2017)	82	Life (2017)		
41	The Hitman's Bodyguard	83	I, Tonya		
42	Alien: Covenant	84	Hostiles		
		85	Molly's Game		