

Inequality in 800 Popular Films: Examining Portrayals of Gender, Race/Ethnicity, LGBT, and Disability from 2007-2015

Dr. Stacy L. Smith, Marc Choueiti, & Dr. Katherine Pieper

with assistance from

Ariana Case & Justin Marsden

**Media, Diversity, &
Social Change Initiative**

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USC Annenberg
School for Communication
and Journalism

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Yearly, the Media, Diversity, & Social Change (MDSC) Initiative examines inequality on screen and behind the camera across the 100 top-grossing domestic films. To date, we have evaluated 35,205 characters across 800 of the most popular movies from 2007-2015. Every independent speaking or named character on screen was assessed for gender, race/ethnicity, and LGBT status as well as a variety of demographic, domesticity, and sexualization measures. In 2015, we began assessing the portrayal of character disability as well. Clearly, this is the most comprehensive and rigorous intersectional analysis of independent speaking and named characters in popular motion picture content to date.

Key Findings

Gender. Out of 4,370 speaking or named characters evaluated, 68.6% were male and 31.4% were female across the 100 top-grossing films of 2015. This calculates into a gender ratio of 2.2 male characters to every one female character. There has been no meaningful change in the percentage of girls and women on screen between 2007 and 2015.

Of the 100 top films of 2015, 32% depicted a female as the lead or co lead of the unfolding narrative. This is an 11% increase from last year. Five of these films portrayed female leads/co leads 45 years of age or older at the time of theatrical release in 2015. In stark contrast, 26 movies in 2015 featured leads or co leads with males 45 years of age or older.

Females were over three times as likely as their male counterparts to be shown in sexually revealing clothing (30.2% vs. 7.7%) and with some nudity (29% vs. 9.5%). Girls/women (12%) were also more likely than boys/men (3.6%) to be referred to as physically attractive.

Female teens (42.9%) and young adults (38.7%) were more likely than middle-aged females (24.7%) to be shown in sexualized attire. A similar pattern emerged for nudity (41.2%, 36.9%, and 24.4%, respectively). As age increased, females were less likely to be referenced as attractive.

Of the 1,365 directors, writers, and producers of the 100 top-grossing films of 2015, 81% were men and 19% were women. Of 107 directors, 92.5% were male and 7.5% were female. This translates into a gender ratio of 12.4 male directors to every one female director. Women fare slightly better as writers (11.8%) and producers (22%) but far worse as composers. Only 1 female composer but 113 male composers worked across the sample of 100 movies of 2015!

Across 800 films and 886 directors, only 4.1% were women. This translates into a gender ratio of 24 males to every 1 female. Only 3 Black and 1 Asian female directors worked on the 800 films examined. Even more problematic, only 1.4% of all composers were women from 2007 to 2015 (excluding 2011). This translates into a gender ratio of 72 male composers to every 1 female composer.

Race/Ethnicity. In 2015, 73.7% of characters were White, 12.2% Black, 5.3% Latino, 3.9% Asian, <1% Middle Eastern, <1% American Indian/Alaskan Native, <1% Native Hawaiian/Pacific Islander, and 3.6% Other or “mixed race.” Together, a total of 26.3% of all speaking characters were from an underrepresented racial/ethnic group. There was no change in the percentage of White, Black, Hispanic/Latino, Asian or Other races/ethnicities from 2007 to 2015.

Only 14 of the movies depicted an underrepresented lead or co lead. Nine of the leads/co leads were Black, one Latino, and four were mixed race. Not one lead or co lead was played by an Asian actor.

Only three female leads/co leads were played by female actors from an underrepresented racial/ethnic group, the exact same number in 2014. Just one of these actors was an underrepresented female 45 years of age or older.

A full 17% of films did not feature one Black or African American speaking or named character on screen. This number is identical to what we found in 2013 and 2014. Even more problematic, Asian characters were missing across 49 films.

In 2015, only 4 of the 107 directors were Black or African American (3.7%) and 6 were Asian or Asian American (5.6%). Across 886 directors from 2007 to 2015 (excluding 2011), only 5.5% were Black and 2.8% were Asian.

LGBT. Only 32 speaking or named characters were lesbian, gay, bisexual or transgender across the sample of 100 top films of 2015. This is an increase of 13 portrayals from our 2014 report. Just one transgender character appeared sample-wide, as well as 19 gay men, 7 lesbians, and 5 bisexuals (3 males, 2 females).

Not one lead or co lead was LGBT identified across the entire sample of 100 top films of 2015. 82 of the 100 top movies of 2015 did not depict one LGBT speaking or named character.

More racial/ethnic diversity was found across LGBT characters than sample wide. Just over 40% of LGBT characters were from an underrepresented racial/ethnic group. One teenaged character was depicted as gay across the entire sample and only two lesbian parents were portrayed.

Characters with Disabilities. Only 2.4% of all speaking or named characters were shown with a disability. A full 45 of the movies failed to depict one speaking character with a disability. Most of the portrayals appeared in action adventure films (33.3%). Only 2% of all characters with disabilities were shown in animated movies.

61% of the characters were featured with a physical disability, 37.1% with a mental or cognitive disability, and 18.1% with a communicative disability. These designations were based on U.S. Census language and domains.

Only 19% of characters with a disability were female and 81% were male. This is a new low for gender inequality in film. Not one LGBT character with a disability was portrayed across the 100 top films of 2015.

The report also highlights many other results on gender, race/ethnicity, LGBT, and disability in film as well as simple and straightforward solutions to Hollywood’s inclusion crisis.

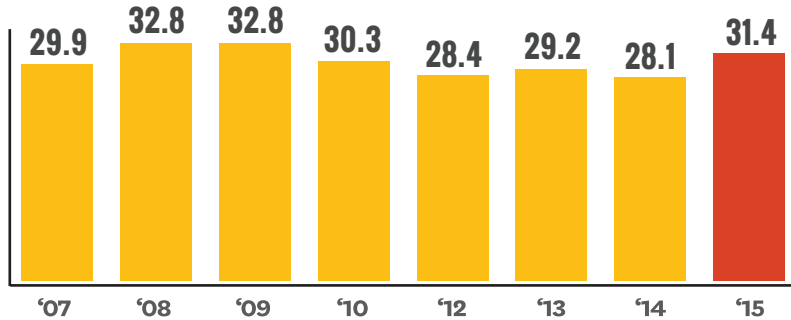
INEQUALITY IN 800 POPULAR FILMS

MEDIA, DIVERSITY, & SOCIAL CHANGE INITIATIVE
USC ANNENBERG

 @MDSCInitiative

FEMALES ARE GROSSLY UNDERREPRESENTED IN FILM

Prevalance of female speaking characters across 800 films, in percentages



Percentage of 800 films with Balanced Casts



Ratio of males to females

2.3:1

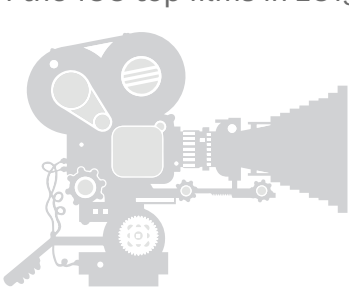


Total number of speaking characters

35,205

FEMALES ARE SELDOM AT THE CENTER OF THE STORY IN FILM

Of the 100 top films in 2015...



DEPICTED A FEMALE LEAD OR CO LEAD

And of those Leads and Co Leads*...

3

FEMALE ACTORS WERE FROM **UNDERREPRESENTED RACIAL / ETHNIC GROUPS**

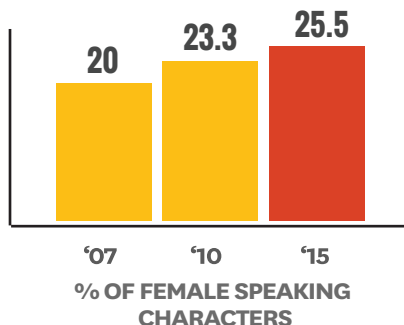
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FEMALE ACTORS WERE AT LEAST **45 YEARS OF AGE OR OLDER**

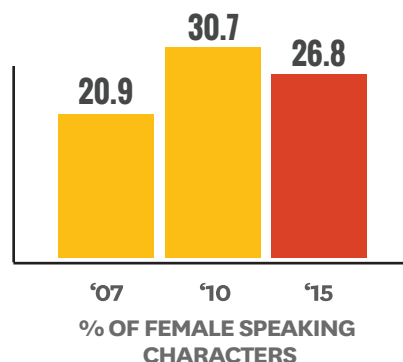
*Excludes films w/ensemble casts

FEMALES FACE ROADBLOCKS IN ACTION, ANIMATION, & COMEDY

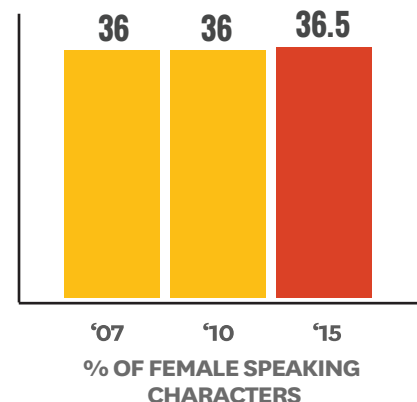
ACTION AND/OR ADVENTURE



ANIMATION

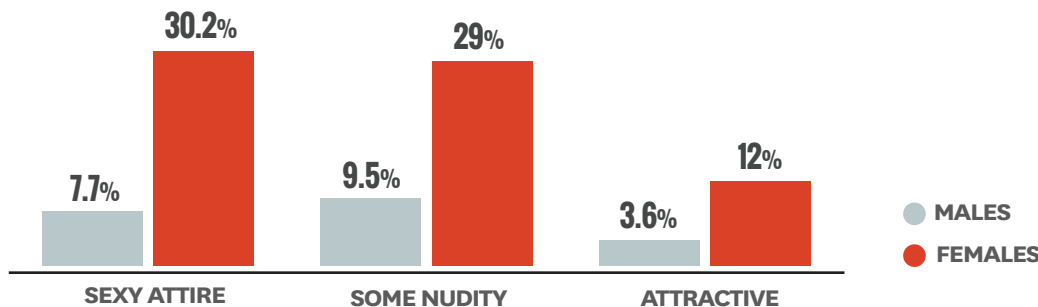


COMEDY



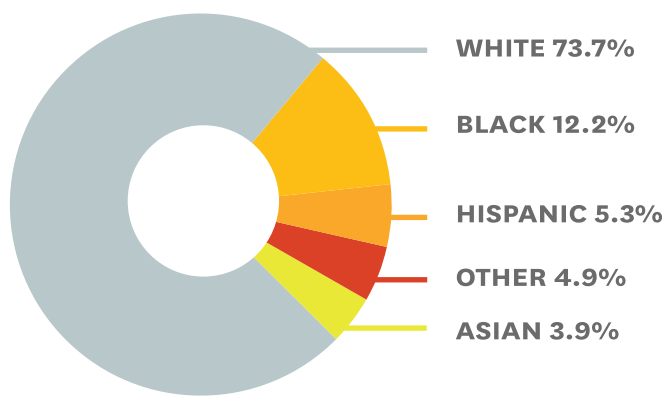
SEXY CONTINUES TO BE THE STATUS QUO FOR FEMALES IN FILM

Top Films of 2015



13-20 yr old females are just as likely as 21-39 yr old females to be shown in sexy attire & with some nudity.

#OscarsSoWhite or #HollywoodSoWhite?



*These percentages have not changed since 2007

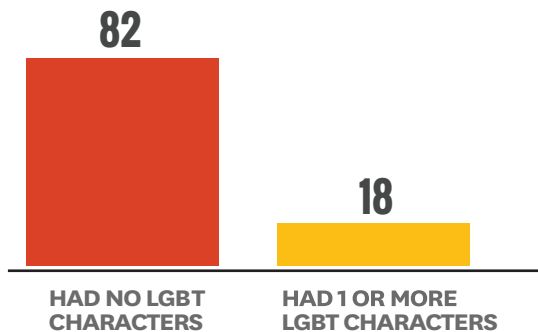
PERCENTAGE OF UNDER-REPRESENTED CHARACTERS: **26.3%**

- 17** FILMS HAVE **NO BLACK OR AFRICAN AMERICAN** SPEAKING CHARACTERS
- 40** FILMS HAVE **NO LATINO** SPEAKING CHARACTERS
- 49** FILMS HAVE **NO ASIAN** SPEAKING CHARACTERS

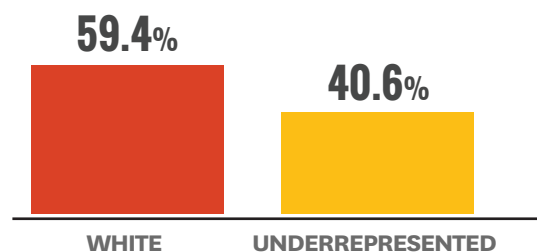
THE LGBT COMMUNITY: MOBILIZED IN THE U.S. BUT MISSING IN FILM



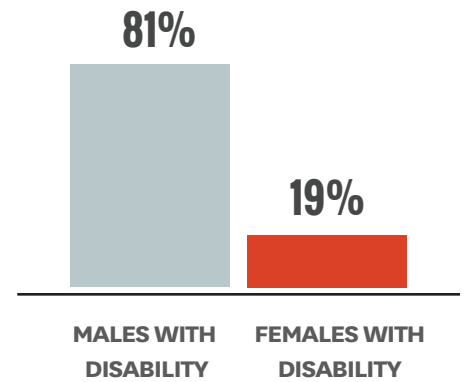
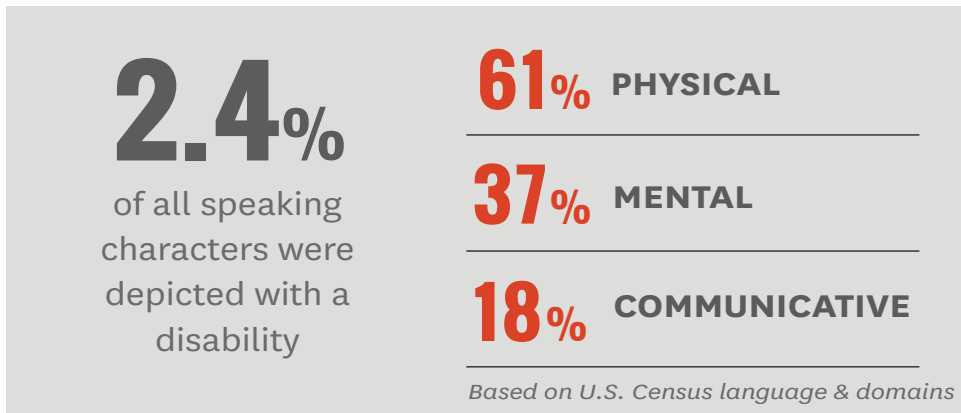
of the 100 top films of 2015...



of the 32 LGBT characters...



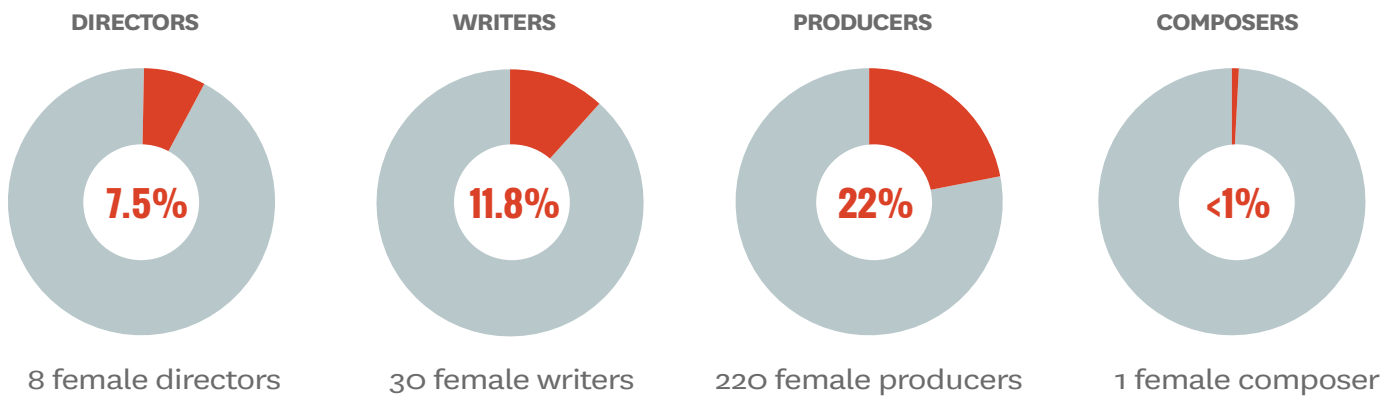
PORTRAYALS OF DISABILITY ARE DISCONCERTING IN FILM



BEHIND THE CAMERA IS BEHIND THE TIMES

Across 1,365 content creators....

● MALES ● FEMALES



THE DIRECTOR'S CHAIR IS WHITE AND MALE

Across 800 films and 886 directors...

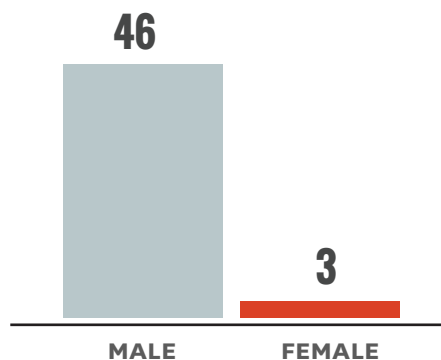
5.5%

OR 49 WERE BLACK OR AFRICAN AMERICAN

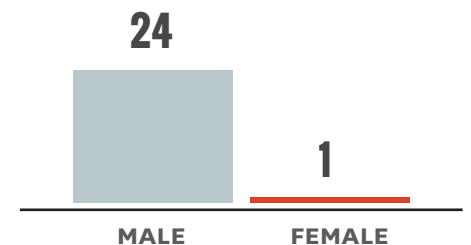
2.8%

OR 25 WERE ASIAN OR ASIAN AMERICAN

Of the 49 Black or African American directors...



Of the 25 Asian or Asian American directors...



FEMALE DIRECTORS AND COMPOSERS ARE CROPPED OUT OF FILM



OUT OF 800 FILMS, ONLY 29 WOMEN WORKED AS DIRECTORS



THERE ARE

29

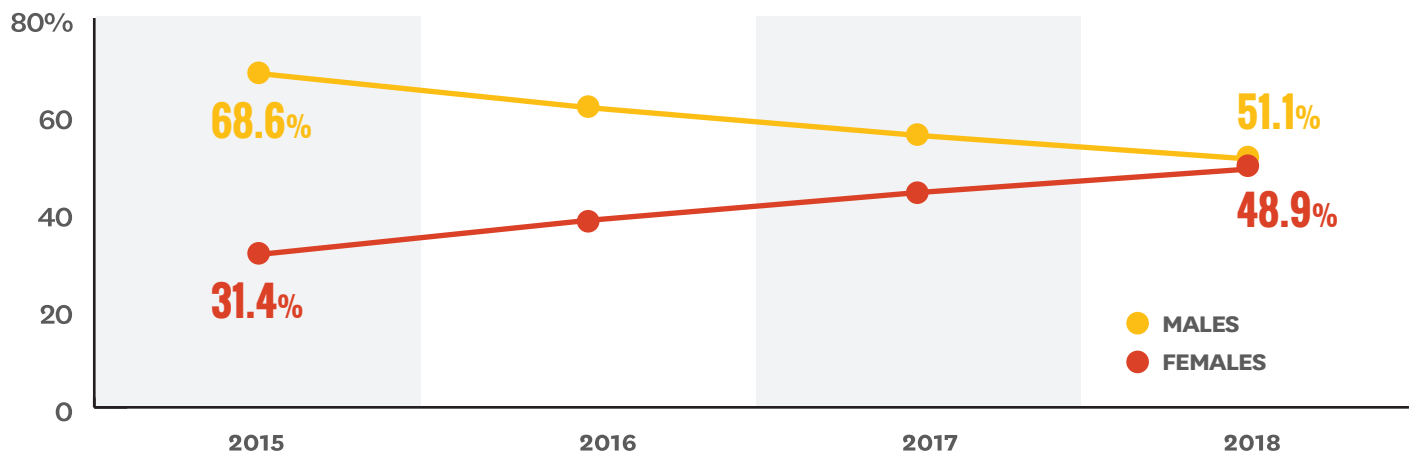
UNIQUE FEMALE DIRECTORS BETWEEN 2007 AND 2015

(Excluding 2011)

Angelina Jolie	Jennifer Flackett	Loveleen Tandan
Anne Fletcher	Jennifer Lee	Nancy Meyers
Ava DuVernay	Jessie Nelson	Niki Caro
Betty Thomas	Julie Anne Robinson	Nora Ephron
Brenda Chapman	Julie Taymor	Phyllida Lloyd
Catherine Hardwicke	Kathryn Bigelow	Sam Taylor-Johnson
Diane English	Kimberly Peirce	Sanaa Hamri
Elizabeth Allen Rosenbaum	Kirsten Sheridan	Shari Springer Berman
Elizabeth Banks	Lana Wachowski	Susanna White
Gina Prince-Bythewood	Lily Wachowski	

A SIMPLE SOLUTION TO GENDER INEQUALITY IN FILM

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



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Yearly, the Media, Diversity, & Social Change (MDSC) Initiative examines inequality on screen and behind the camera across the 100 top-grossing domestic films.¹ To date, we have evaluated 800 of the most popular movies from 2007-2015 (excluding 2011).² Every independent speaking or named character³ on screen is assessed for gender and race/ethnicity as well as a variety of demographic, domesticity, and sexualization measures.⁴ In total, 35,205 characters have been analyzed across eight years of cinematic content.

For the 2014 sample, the analysis was extended to include a qualitative assessment of Lesbian, Gay, Bisexual, and Transgender (LGBT) characters. In 2015, LGBT status was measured again as well as portrayals of characters with disabilities. Focusing on gender, race/ethnicity, LGBT and disability, this is the most comprehensive and rigorous intersectional analysis of independent speaking and named characters in popular motion picture content to date.

Behind the camera inclusion is also assessed. We have demarcated the gender of every director, writer, and producer. For directors only, the percentage of female, Black, and Asian helmers is calculated across the 800 films. We focus on race to complement the research being conducted by other institutions on underrepresented and Latino content creators.⁵ This year, we also included the percentage of male and female composers across the eight years evaluated.

The methodology of the study is detailed in the footnote section of the report. The results of the research are reviewed within four areas of representational concern: 1) gender, 2) race/ethnicity, 3) LGBT status, and 4) disability. Within each section, the 2015 findings are highlighted first followed by a discussion of some overtime trends. Only statistically significant ($p < .05$) and meaningful deviations (5%) are reported below. Some trends were not subjected to statistical tests. In these instances, we applied the 5% rule to demarcate notable differences. The use of the letter “n” indicates the sample size per analysis or cell in question. The list of 2015 films can be found in Appendix A.

Gender On Screen & Behind the Camera in Film

On Screen Prevalence

Out of 4,370 speaking or named characters evaluated, 68.6% ($n=3,000$) were male and 31.4% ($n=1,370$) were female across the 100 top-grossing films of 2015. This calculates into a gender

ratio of 2.2 male characters to every one female character. The prevalence of female characters overtime is highlighted in Table 1. As demonstrated, the percentage of female speaking characters on screen has only increased 1.5% from 2007 to 2015.

Table 1
Prevalence of Female Characters On Screen by Year: 2007-2015

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
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
Total	30.3%	12%	2.30 to 1	35,205	800

Note: Box Office Mojo determined U.S. financial performance of fictional films.

The percentage of female leads was evaluated. The leading character often drives the plot attempting to resolve the central conflict of the story. Sometimes, movies have co leads or another character who also travels on the same journey. ***Of the 100 top films, 32% depicted a female as the lead or co lead of the unfolding narrative. This is an 11% increase from last year, as only 21% of the 2014 movies depicted a female lead or co lead.***

Five of these films portrayed female leads/co leads 45 years of age or older at the time of theatrical release in 2015. This is an increase from 2014, as there were zero last year. In stark contrast, 26 movies in 2015 featured leads or co leads with males 45 years of age or older. It should be noted that the gender of characters in films with ensemble casts was not included in these calculations. Eleven movies were ensembles, with 71.7% of the leading characters male and 28.3% of leading characters female.

We also examined the percentage of the 100 top films with a gender-balanced cast. A gender balanced cast was present when the film had girls/women in roughly half (45.5-54.9%) of all speaking parts. Only 18% of the movies evaluated met this criteria, which is 6% higher than 2007 and 9% higher than 2014. It must be noted that all of the 2015 films featured at least one female character that spoke on screen or was named. However, one movie portrayed only two female characters and both were inconsequential to the storyline.

Character gender varied by MPAA rating (G, PG, PG-13, R).⁶ Only one movie in the 2015 sample was categorized as “general audience” and thus removed prior to analysis. Characters in PG-13

rated films were more likely to be female (34%) than characters in R-rated (28.4%) films. The percentage of girls and women in PG-rated movies (29.7%) did not differ from those films receiving the other two ratings.

Looking at genre, gender also was assessed within three storytelling platforms.⁷ As shown in Table 2, roughly one-fourth (25.5%) of all speaking characters were female in 2015 Action and/or Adventure movies. This represents a 5.5% increase from 2007. Girls and women occupied 26.8% of all roles in Animated films, which is higher (+5.9%) than 2007. Of the genres reported, Comedy has the highest percentage of speaking roles with females (36.5%) which does not differ across the years shown in Table 2.

Table 2
Prevalence of Female Characters On Screen by Film Genre: 2007, 2010, 2015

	Action or Adventure			Animation			Comedy		
	2007	2010	2015	2007	2010	2015	2007	2010	2015
% of females on screen	20%	23.3%	25.5%	20.9%	30.7%	26.8%	36%	36%	36.5%

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

In sum, two trends were apparent across the gender prevalence findings. First, the percentage of female leads/co leads has increased from last year. This underscores the fact that female-driven content has domestic box office appeal. Yet, just over a quarter of the leading roles in ensembles were filled with females. Second, and more problematic, the percentage of female speaking characters on screen has not meaningfully changed. Despite all of the activism and advocacy to increase the number of girls/women on screen, the needle has not moved in eight years. Clearly, a more targeted and theory-driven effort is needed to reduce implicit and explicit biases in the screenwriting and casting processes.

On Screen Portrayal

Three attributes of gender stereotyping were evaluated: domesticity, age, and sexualization. In terms of domestic roles, parental status (no, yes) did not vary by gender.⁸ Of those characters with enough information presented to assess this measure, a full 42% were depicted as parents or caregivers (44.4% of females, 40.2% males). Relational standing was associated with gender, however.⁹ Females (54.8%) were more likely to be depicted in romantic relationships than were males (46.5%). This latter trend is troubling as portraying domestic roles along gender lines may contribute to or reinforce stereotypical attitudes and beliefs about what it means to be male or female in society.¹⁰

Age is another politicized area of film. Because of this, each character was assessed for their apparent age. To this end, characters were grouped into one of four mutually exclusive age

brackets (i.e., 0-12 yrs, 13-20 yrs, 21-39 yrs, 40 or more yrs). Then, the distribution of gender within each age grouping was evaluated.¹¹ As highlighted in Table 3, the increase in age level brings a sharp decrease in female characters on screen. This trend has consequences, as older characters are more likely than younger characters to be shown with powerful careers and as accomplished role models. Based on sheer frequency, viewers have far fewer chances to see talented women in influential occupations on screen.

Table 3
Character Gender by Age in Top-Grossing Films: 2015

	Children 0-12 yrs	Teens 13-20 yrs	Young Adult 21-39 yrs	Adults 40 yrs or Older
Males	54.1%	59.7%	63.8%	75.4%
Females	45.9%	40.3%	36.2%	24.6%
Gender Ratio	1.18 to 1	1.48 to 1	1.76 to 1	3.06 to 1

Note: Each column totals to 100%. Gender ratios were computed per column by dividing the number of male characters within an age bracket by the number of female characters.

Has the percentage of female characters 40 years of age or older changed over time? Table 4 shows that it has not. Only 22.8% of all 12,645 characters 40 years of age or higher were female, with 2007 differing little (2.5%) from 2015. It must be noted that our approach to coding characters 40 years of age or higher changed slightly for the 2015 sample (see Footnote 12 for explanation). As a result, any over time comparisons involving this year should be interpreted cautiously.

Table 4
Female Characters 40 Years of Age or Older: 2007-2015

	2007	2008	2009	2010	2012	2013	2014	2015	Total
% of males	77.9%	72.8%	75.6%	78.2%	79.2%	78.4%	79.3%	75.4%	77.2%
% of females	22.1%	27.2%	24.4%	21.8%	20.8%	21.6%	20.7%	24.6%	22.8%

Note: Only characters 40 years of age or older were included in Table 4.

Another contested area pertains to the sexualization of girls/women on screen. As a result, we measured the percentage of females depicted in an objectifying light. Figure 1 reveals that females were far more likely than their male counterparts to be shown in sexually revealing clothing (e.g., tight, alluring apparel) and with some nudity.¹³ Girls/women were also more likely than boys/men to be referred to as physically attractive.¹⁴ These trends are disconcerting, as theory suggests and studies show that exposure to objectifying content can have negative effects such as body shame, appearance anxiety, or self objectification on some female consumers.¹⁵

The overtime patterns across these three sexualization measures (i.e., sexy attire, nudity, attractiveness) were examined for females (Table 5) and males (Table 6) separately. Scrutinizing the two tables, it is clear that the percentages have been fairly stable from year to year. Females were routinely more likely to be depicted in sexually revealing attire than males, with no meaningful change over time. Among females only, the percentage of girls/women portrayed with some nudity has increased 7.2% between 2007 and 2015. The reverse pattern was observed for attractiveness among females, however. For males, no differences have been observed on nudity or attractiveness over time.

Figure 1
Character Gender by Sexualization Indicators: 2015

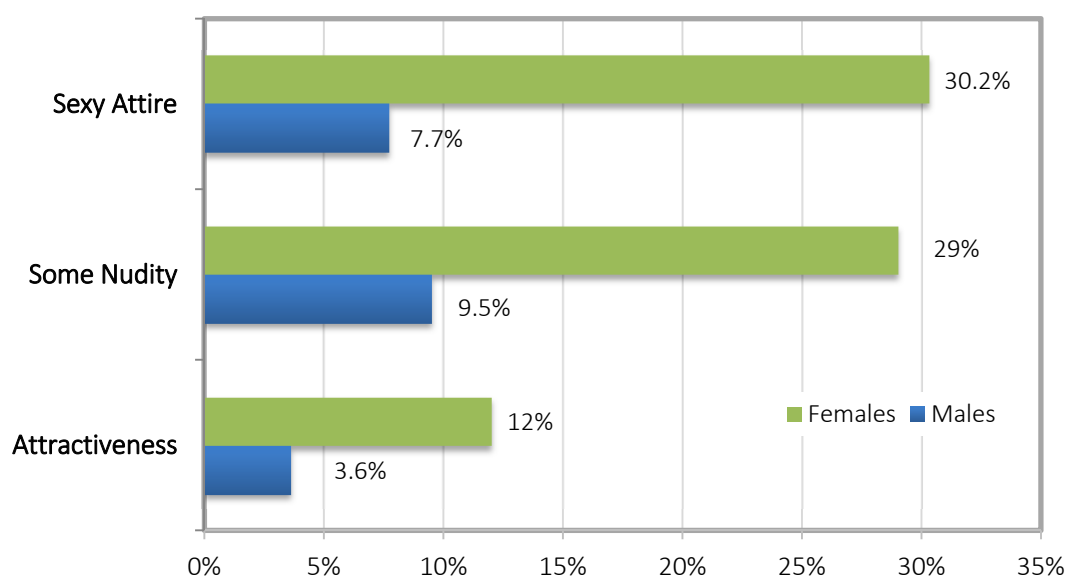


Table 5
Sexualization of Female Characters On Screen: 2007-2015

Measure	2007	2008	2009	2010	2012	2013	2014	2015
% in sexy attire	27%	25.7%	25.8%	33.8%	31.6%	30.2%	27.9%	30.2%
% w/some nudity	21.8%	23.7%	23.6%	30.8%	31%	29.5%	26.4%	29%
% referenced attractive	18.5%	15.1%	10.9%	14.7%	Not Measured	13.2%	12.6%	12%

Note: Each cell represents the percent of females shown across 100 films for a specific measure. Subtracting each cell from 100% illuminates the proportion of females without the attribute in question. For example, 27% of females in 2007 were shown in sexy attire. As such, 73% of females were not shown wearing this type of clothing.

Table 6
Sexualization of Male Characters On Screen: 2007-2015

Measure	2007	2008	2009	2010	2012	2013	2014	2015
% in sexy attire	4.6%	5.1%	4.7%	7.2%	7%	9.7%	8%	7.7%
% w/some nudity	6.6%	8.2%	7.4%	9.4%	9.4%	11.7%	9.1%	9.5%
% referenced attractive	5.4%	4.1%	2.5%	3.8%	Not Measured	2.4%	3.1%	3.6%

Note: Each cell represents the percent of males shown across 100 films for a specific measure. Subtracting each cell from 100% illuminates the proportion of males without the attribute in question.

Moving beyond these overall trends, we wanted to evaluate how age was related to the sexualization measures. Given the pronounced gender differences found in Tables 5 and 6, we only assessed female sexualization for this analysis. Characters were sorted into three groups: teens (13- to 20-yr olds), young adults (21- to 39-yr olds), and middle aged (40- to 64-yr olds). Then, the percentage of females shown in sexy attire, with some nudity, and referenced as physically attractive within each age level was computed. This set of analyses is important, as public concern has been mounting about the hyper sexualization of younger females on screen in the media.¹⁶

Table 7
Female Character Sexualization by Age: 2015

Measures	13-20 year olds	21-39 year olds	40-64 year olds
% in sexy attire	42.9%	38.7%	24.7%
% w/some nudity	41.2%	36.9%	24.4%
% referenced attractive	22.8%	13%	9%

Note: Each cell represents the percentage of females shown with a particular attribute. Subtracting each cell from 100% shows the proportion of females without the characteristic in question.

As shown in Table 7, age was related to sexualization.¹⁷ Female teens and young adults were more likely than middle-aged females to be shown in sexualized attire and with some nudity. For attractiveness a different trend was observed. As age increased, females were less likely to be referenced as attractive. The overtime percentages on sexy attire and some nudity are plotted in Figures 2 and 3. Collectively, the graphs reveal a notable uptick in female sexualization among 13- to 20-yr olds and 40- to 64-yr olds.

Figure 2
Percentages of Females in Sexy Attire by Age: 2007-2015

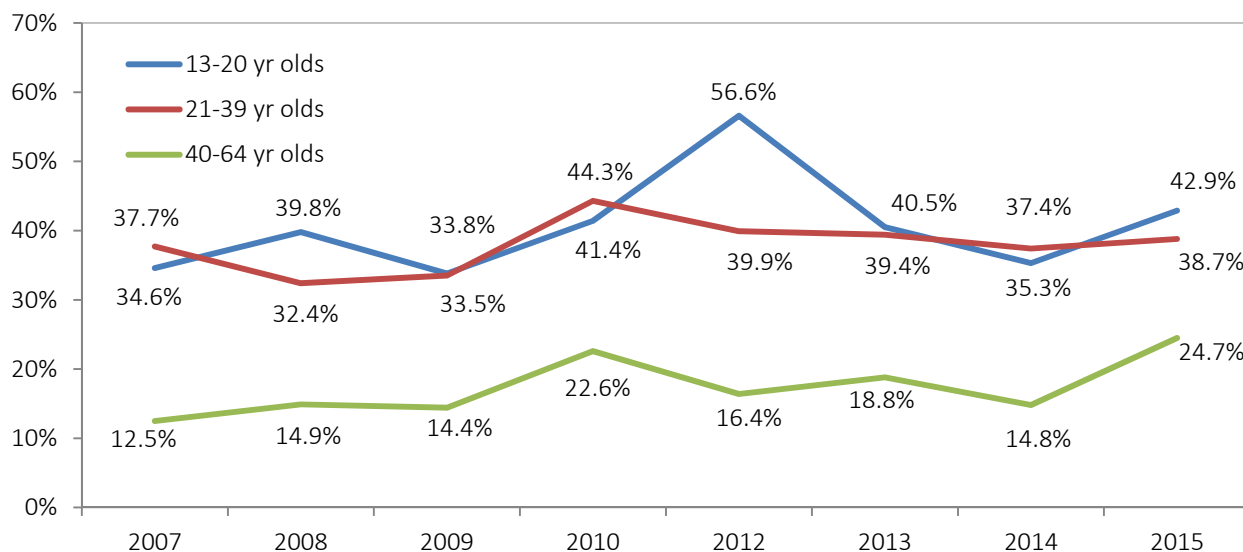
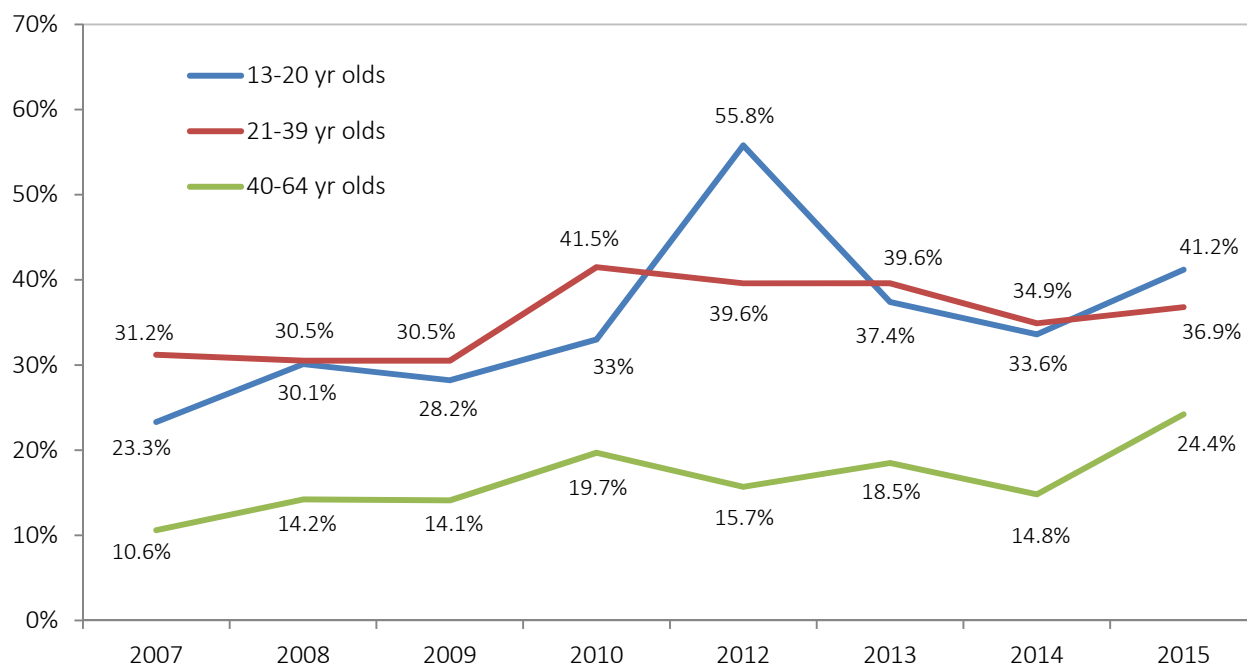


Figure 3
Percentages of Females with Some Nudity by Age: 2007-2015



Taken together, the results of this section reveal that females were not only under represented on screen but they were shown in a stereotypical light. Females in film were young, in relationships, and sexy, familiar tropes that deviate little from year to year. Given these trends, it becomes important to look at who might be responsible for painting a picture of girls and

women in this light. In the next section, we examine this very idea by looking at the gender of content creators working behind the camera in top Hollywood films.

Behind the Camera

A total of 1,365 directors, writers, and producers worked behind the scenes on the 100 top-grossing films of 2015 (see Table 8).¹⁸ A full 81% were men ($n=1,107$) and 19% were women ($n=258$). Turning to specific positions, 107 directors and co directors were credited across the 2015 sample with 92.5% of helmers male and 7.5% of helmers female. This translates into a gender ratio of 12.4 male directors to every one female director. Women fare slightly better as writers (11.8%) and producers (22%). While not shown on Table 8, only 1 female composer but 113 male composers worked across the sample of 100 movies!

Given the Equal Employment Opportunity Commission's (EEOC) investigation into hiring practices surrounding Hollywood directors, we thought it might be informative to illuminate the number and percentage of women helmers attached to the 100 top films each year (see Table 9). Across 800 films and 886 directors, only 4.1% of helmers were women. While the percentage of women directors has increased in 2015 from 2013 and 2014 levels, it is no different than 2008.

Table 8
Content Creators by Gender: 2015

Position	Males	Females	Total
Directors	92.5% ($n=99$)	7.5% ($n=8$)	107
Writers	88.2% ($n=225$)	11.8% ($n=30$)	255
Producers	78% ($n=783$)	22% ($n=220$)	1,003
Total	81.1% ($n=1,107$)	18.9% ($n=258$)	1,365

These statistics are well below what we might expect to see in the space, based on our other MDSC Initiative research reports. Perhaps the most potent barometer of interest in directing comes from examining the gender composition of short film directors. A full 28% of short film helmers ($n=3,933$) across the 10 top film festivals worldwide were women.¹⁹ Looking at the independent arena, 18% of all narrative directors were females at the Sundance Film Festival from 2002 to 2014.²⁰ And, women fill a similar percentage of directing positions across scripted broadcast television shows (17.1%), cable programs (15.1%) and digital stories (11.8%).²¹ So, why are there so few female directors in feature films? Our qualitative interviews with 59 buyers and sellers in the film industry revealed that explicit and implicit decision-making biases prevent women from securing employment behind the camera.²² The playing field is simply not level for female directors, particularly as the gender ratio is 23.6 males to every 1 female in Table 9.

Table 9
Director Gender: 2007-2015

Measures	2007	2008	2009	2010	2012	2013	2014	2015	Total
# of female directors	3	9	4	3	5	2	2	8	36
% of female directors	2.7%	8%	3.6%	2.75%	4.1%	1.9%	1.9%	7.5%	4.1%
Total	112	112	111	109	121	107	107	107	886

The director's chair is *not* the only behind the camera position exclusionary to women. Composing is almost a complete boy's club.²³ For the first time, we compiled the gender of composers across the 800 movies in the sample. Out of 877 composers, only 1.4% or 12 were women. A full 865 or 98.6% were men. This translates into a ratio of 72 males to every 1 female. The twelve spaces were filled by only 7 women, as two of the female composers worked on multiple movies across the sample (Rachel Portman, Deborah Lurie).

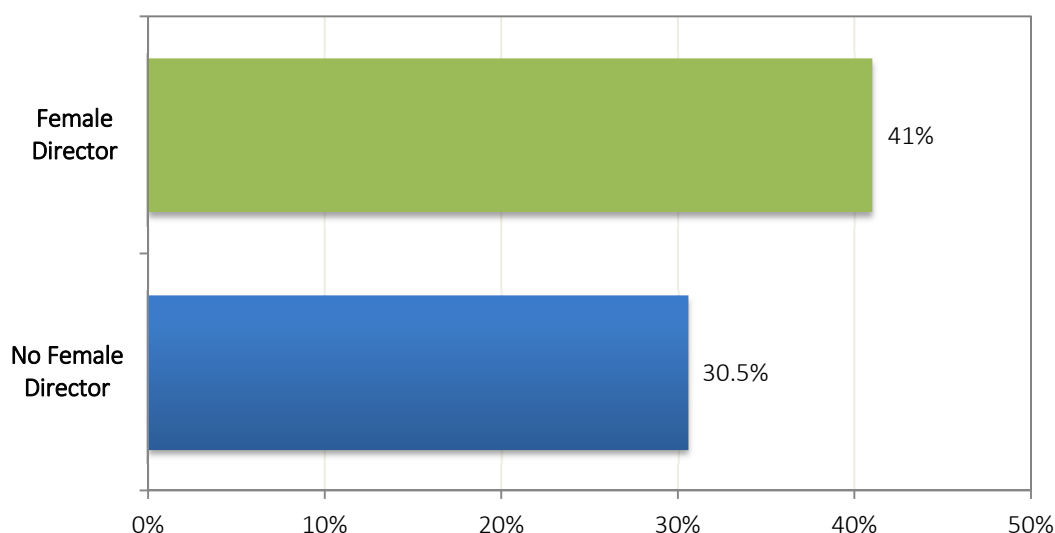
Every year, the relationship between content creator (directors, writers, producers) gender and the gender of speaking characters on screen is evaluated. To this end, the 2015 films were categorized into two silos on the basis of director gender: those with a female director attached vs. those without a female director attached (male only). Then, the percentage of female characters on screen was compared across female-helmed and male-helmed movies. The same process was repeated for writers and producers.

Table 10
Composer Gender: 2007-2015

Measures	2007	2008	2009	2010	2012	2013	2014	2015	Total
# of female composers	0	2	2	2	2	2	1	1	12
% of female composers	0	1.8%	1.8%	1.7%	1.9%	1.8%	<1%	<1%	1.4%
Total	107	108	109	115	105	114	105	114	877

As shown in Figure 4, the gender of the director was associated with on screen gender prevalence. Films with at least one female at the helm portrayed a higher percentage of female characters on screen (41%) than those with only males at the helm (30.5%).²⁴ A similar but less pronounced increase was observed by screenwriter gender. Movies with a female screenwriter attached featured more girls/women on screen (36.9%) than did those movies with only male screenwriters attached (29.2%).²⁵ The gender of the producer was not associated with the portrayal of gender on screen, however.²⁶

Figure 4
Percentage of Female Characters On Screen by Director Gender: 2015



These findings can be interpreted in at least a few ways. Screenwriters and directors may tell stories that reflect their own personal experiences. This reflects the adage, “write what you know.” In this case, female content creators may be interested in and advocate for stories by, for, and about women. Another and more problematic interpretation of the results also exists. It may be the case that decision makers (e.g., agents, studio executives) are more likely to feel comfortable pitching women directors female- rather than male-centric stories. This explanation is oppressive, with women’s employment opportunities to direct being defined by their gender rather than their storytelling prowess. As we will see later, the same pattern emerges with Black directors and movies with Black casts.

Summing up, this section revealed that few women work behind the camera on financially lucrative Hollywood films. Only a handful of female directors -- and even fewer female composers -- were attached to the 800 most popular movies between 2007 and 2015 (excluding 2011). Women are not the only ones shut out of the upper echelons of power in the film industry, however. People of color and the LGBT community also face an epidemic of invisibility as we will see in the next sections of the report.

Race/Ethnicity On Screen & Behind the Camera in Film

Each speaking or named character was coded for race/ethnicity. Of those characters with enough cues to judge this measure ($n=3,975$), 73.7% were White, 12.2% Black, 5.3% Latino, 3.9% Asian, <1% Middle Eastern, <1% American Indian/Alaskan Native, <1% Native Hawaiian/Pacific Islander, and 3.6% Other or “mixed race.” Together, a total of 26.3% of all speaking characters were diverse. Given that 45% of movie ticket buyers and 38.4% of the U.S. population is comprised of individuals from underrepresented racial/ethnic groups, films do not reflect the

demography of this country or the film audience.²⁷ In this section, we explore four factors related to diversity: leads/co leads, genre, distribution of speaking roles, and gender.

Table 11
Prevalence of Character Race/Ethnicity On Screen by Year: 2007-2015

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%
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%

Note: The Other column represents characters coded Middle Eastern, American Indian/Alaskan Native, Native Hawaiian/Pacific Islander, and mixed race. Within each year, the rows total to 100%.

In terms of leads/co leads, we were interested in how many diverse actors appeared across the 100 top films. Here, the measure focused on the actor's race/ethnicity rather than the character. Only 14 of the movies depicted an underrepresented lead or co lead. Nine of the leads/co leads were Black, one Latino, and four were mixed race. Not one lead or co lead was played by an Asian actor.

The intersection of gender and race/ethnicity among leads/co leads was also explored. Only three of the underrepresented leads/co leads were played by female actors, the exact same number in 2014. Just one of these actors was an underrepresented female 45 years of age or older. Focusing on the 11 ensemble films, 9 of the 46 characters (19.6%) were played by diverse actors. Clearly, the percentage of main characters driving the narrative in films -- whether leads or ensembles -- is substantially lower than the U.S. population statistic (38.4%).

Turning to genre, the prevalence of underrepresented speaking characters in three distinct platforms was assessed. As depicted in Table 12, only 29.3% of characters were diverse in Action/Adventure films, 27.3% in Comedy, and 13.2% in Animation. Both Action/Adventure and Animation have demonstrated 5% or greater increases since 2007. No meaningful changes have appeared in Comedy. It is important to note that in 2014, a full 33.5% of speaking characters in animated contexts were from underrepresented racial/ethnic groups. This high percentage last year was due to an overall increase in diversity, particularly in one film (*The Book of Life*). Given that many animated movies' target audience is children and their families, these films may be subtly teaching and/or reinforcing that narratives about people of color and females are not valued in the same way that stories about white males are.

Table 12
Prevalence of Underrepresented Characters On Screen by Film Genre: 2007, 2010, 2015

	Action or Adventure			Animation			Comedy		
	2007	2010	2015	2007	2010	2015	2007	2010	2015
% of under-represented chars	21.5%	29.7%	29.3%	8.1%	1.5%	13.2%	23.1%	23.8%	27.3%

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

Presenting overall statistics may miss important nuances pertaining to race/ethnicity across the 100 top films. As a result, two additional analyses were conducted to dig deeper into the prevalence of underrepresented characters on screen. The first is an invisibility analysis. Here, we assess how many films fail to portray at least one character from each of the following racial/ethnic groups: Black, Latino, and Asian. The second is a distribution analysis. This test shows how many films portray a particular race/ethnicity close ($\pm 2\%$) to the U.S. Census point statistic.²⁸

Table 13
Films Focusing on Black, Latino, & Asian Characters: 2015

Measure	Black Characters	Latino Characters	Asian Characters
# of films missing characters from specific race/ethnicity	17	40	49
# of films w/proportional representation ($\pm 2\%$ Census)	10	2	18
U.S. Census	13.3%	17.6%	5.6%
Total Films Evaluated	100	100	100

Note: The columns do not add to 100%.

Focusing on invisibility, a full 17% of films did not feature one Black or African American speaking or named character on screen (see Table 13). This number is identical to what we found in 2013 and 2014. Even more problematic, Latinos were missing across 40 movies and Asians across 49 films. The norm in Hollywood is clearly exclusion, as storytelling simply fails to include a variety of racial/ethnic groups on screen.

Now, we turn our attention to fictional authenticity or the percentage of movies ± 2 percentage points of the U.S. Census point statistic. As shown in Table 13, few films depict racial/ethnic groups at or near proportional representation. Only 2 movies featured Latino characters in roughly 17% of speaking roles on screen and 10 films depicted Black characters in roughly 13% of speaking roles. Asians fared slightly better, as 18 movies approximated fictional authenticity.

The last measure assessed in this section is gender. The distribution of males and females within the five major racial/ethnic groups is shown in Table 14.²⁹ Females from Other races/ethnicities were more likely to be depicted on screen than White, Black, Latino, or Asian females. Black girls/women (27.8%) were the least likely of all groups to be depicted across the 100 top films.

Table 14
Character Race/Ethnicity by Gender in Top-Grossing Films: 2015

Gender	White	Black	Latino	Asian	Other
% of males	67.5%	72.2%	67.3%	70.7%	59.3%
% of females	32.5%	27.8%	32.7%	29.3%	40.7%
Ratio	2.08 to 1	2.59 to 1	2.06 to 1	2.41 to 1	1.46 to 1

In total, the findings reveal that Hollywood films continue to whitewash storytelling. Many movies still fail to depict Black, Latino, or Asian speaking characters on screen. And, few films featured these three groups at proportional representation with U.S. Census statistics. Asian leads were missing in action in 2015 films as well as underrepresented females and diverse women 45 years of age or older. Surely, Hollywood is the cultural epicenter of exclusionary hiring practices when it comes to people of color and women.

On Screen Portrayal

Domestic roles (parents, relational partners) as well as the sexualization measures were examined across the five major racial/ethnic groups. Because of the pronounced differences by gender noted earlier, all analyses were conducted on males and females separately. No differences on the domesticity measures emerged by race/ethnicity within gender, save one.³⁰ Black females (71.9%) were far more likely to be depicted as caregivers or parents than females from all other races/ethnicities. When compared to White women (43.4%), Latinas were (55%) more likely to be portrayed as mothers than were Asian women (38.5%) or women from Other races/ethnicities (36.8%).

Table 15
Sexualization of Female Characters by Race/Ethnicity On Screen: 2015

Measures	White	Black	Latina	Asian	Other
% in sexy attire	30.9%	26.9%	31.9%	32.6%	35.4%
% w/some nudity	29.7%	25.2%	29%	34.8%	35.4%
% referenced attractive	13.7%	7.4%	10.1%	4.3%	17.7%

Note: The Other column represents characters coded Middle Eastern, American Indian/Alaskan Native, Native Hawaiian/Pacific Islander, and mixed race. For each cell, the total subtracted from 100% reveals the proportion within a race/ethnicity without the attribute in question.

Focusing on female sexualization, none of the three measures varied by race/ethnicity (see Table 15).³¹ For male sexualization, race/ethnicity was associated with sexually revealing attire and nudity but not attractiveness.³² Latinos and males from Other races/ethnicities were more likely to be depicted in sexy attire than White or Asian males. A somewhat similar pattern was documented for nudity. Latinos and boys/men from Other racial/ethnic groups were more likely to be shown with some nudity than Black, White, or Asian boys/men. It should be noted that the least likely group to be sexualized is Asian males, which is consistent with stereotyping literature and commentary about how this particular group has been shown in media.

Table 16
Sexualization of Male Characters by Race/Ethnicity On Screen: 2015

Measures	White	Black	Latino	Asian	Other
% in sexy attire	6.6%	9.1%	12.7%	5.4%	13%
% w/some nudity	9.1%	8%	15.5%	5.4%	17.4%
% referenced attractive	3.8%	3.1%	4.2%	2.7%	6.1%

Note: The Other column represents characters coded Middle Eastern, American Indian/Alaskan Native, Native Hawaiian/Pacific Islander, and mixed race. For each cell, the total subtracted from 100% reveals the proportion within a race/ethnicity without the attribute in question.

Wrapping up on screen portrayals, the results reveal that people of color are stereotyped along gender lines. Female sexualization was prevalent across all diverse groups examined. Similar to earlier in the report, we now look behind the camera to examine who gets access to the director's chair across two specific races.

Behind the Camera

Every year, we have examined the number and percentage of Black directors working across the 100 top films. As indicated above, a total of 107 directors were attached to the most popular films. Only four of those directors were Black (F. Gary Gray, Ryan Coogler, Antoine Fuqua, George Tillman, Jr.). None of these Black directors were women. Matter of fact, all 8 women directing motion pictures in the 2015 sample were White.

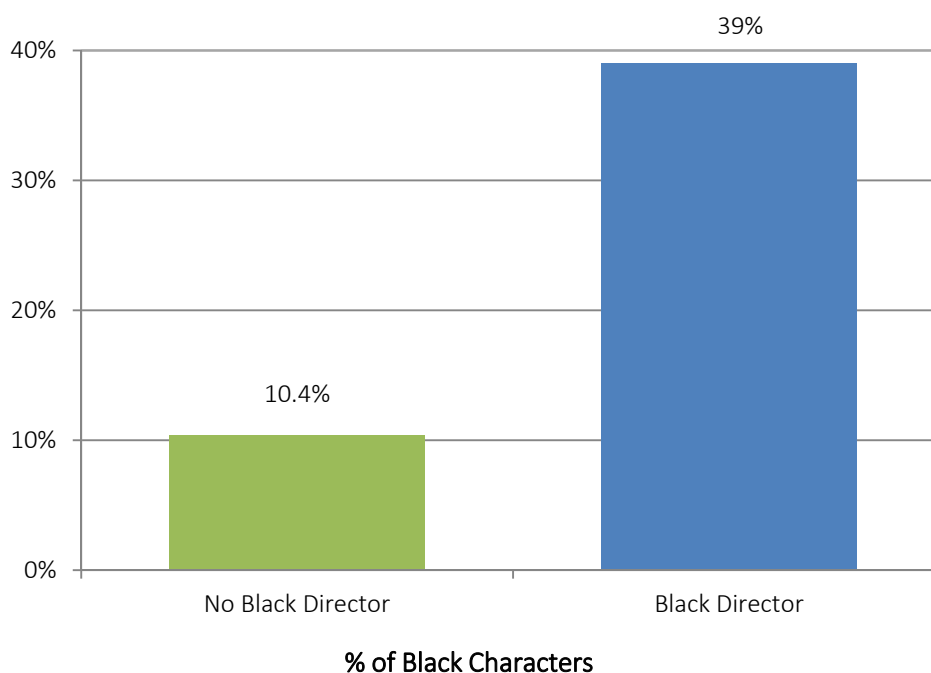
Examining over time trends reveals the severity of exclusionary hiring practices. Across 886 directors, only 5.5% ($n=49$) were Black. The vast majority were male. Only 3 Black women have directed one of the 800 top films from 2007 to 2015. Though not captured in this report, including 2011 does not change the status quo. No Black women directed across the 100 top films that year either.

Table 17
Black Directors by Year: 2007-2015

Black Directors	2007	2008	2009	2010	2012	2013	2014	2015	Total
% of male directors	7.1% (n=8)	4.5% (n=5)	6.3% (n=7)	4.6% (n=5)	4.9% (n=6)	6.5% (n=7)	3.7% (n=4)	3.7% (n=4)	5.2% (n=46)
% of female directors	0	1.8% (n=2)	0	0	0	0	<1% (n=1)	0	<1% (n=3)
Total # of directors	112	112	111	109	121	107	107	107	886

Now, we examine whether having a Black director associated with a film (no, yes) is related to the prevalence of Black characters on screen. To this end, we looked at the percentage of speaking or named characters that were Black in films with and without a Black director attached. The analysis was significant.³³ Films with Black directors depicted substantially more Black characters on screen (39%) than did those films without a Black director attached (10.4%). These analyses should be interpreted with caution, due to the small number of movies with a Black director ($n=4$).

Figure 5
Percentage of Black Characters by Director Race: 2015



These findings, as well as the ones noted above on director gender, can be interpreted in at least a few ways. Individuals may tell stories that reflect their own experiences or they may be given opportunities based on their salient social identities (e.g., gender, race/ethnicity, LGBT). Or, it

may be a combination of both of these factors. Despite this theorizing, one thing is clear. Hollywood is reticent to hire directors that deviate from the status quo or white male prototype.

To round out the discussion on race, we conducted one additional analysis. The number and percentage of Asian directors was assessed. Only 5.6% ($n=6$) directors were Asian across the 100 top films of 2015 (see Table 18). While this represents an increase from 2014, the number and percentage is identical to 2013. No female directors were Asian across 800 movies theatrically released from 2007 to 2015, save one. If the top films of 2011 were included in our sample of films, the number would increase to 2.

Table 18
Asian Directors by Year: 2007-2015

Asian Directors	2007	2008	2009	2010	2012	2013	2014	2015	Total
% of male directors	2.7% ($n=3$)	1.8% ($n=2$)	<1% ($n=1$)	3.7% ($n=4$)	1.6% ($n=2$)	5.6% ($n=6$)	0	5.6% ($n=6$)	2.7% ($n=24$)
% of female directors	0	<1% ($n=1$)	0	0	0	0	0	0	<1% ($n=1$)
Total # of directors	112	112	111	109	121	107	107	107	886

The lack of inclusion behind the camera is alarming. Few racial/ethnic minorities shout action from the director's chair. And, the ones hired in these prestigious posts were almost always male. To reiterate, only 3 Black and 1 Asian female directors were attached to the 800 most popular films from 2007 to 2015. As we move from race/ethnicity to LGBT, we will continue to see the exclusion of diverse voices on screen.

Lesbian, Gay, Bisexual, & Transgender Characters in Film

Only 32 characters (<1%) were characterized as lesbian, gay, bisexual or transgender across the sample of 100 top films of 2015. This is an increase of 13 portrayals from our 2014 report (see Table 19). Just one transgender character (3.1%) appeared sample-wide, which is a slight increase from last year. The majority of LGB portrayals featured gay men (59.4%, $n=19$), followed by lesbians (21.9%, $n=7$), and bisexuals (15.6%, $n=5$, 3 males, 2 females). Given that 3.5% of the U.S. population identifies as LGB, the film industry is clearly under indexing on inclusion of this community.³⁴

Table 19
LGBT Portrayals: 2014-2015

Year	Lesbian	Gay	Bisexual	Transgender	Total
2014	4	10	5	0	19
2015	7	19	5	1	32

The role of LGBT characters also was evaluated. Most of the LGBT characters coded were inconsequential to the plot (71.9%), with only 9 or 28.1% in supporting roles. Not one lead or co lead was LGBT identified across the entire sample of 100 top films of 2015. 82% of the movies in the sample did not depict one LGBT speaking or named character.

Turning to demographics, the gender, race/ethnicity and age of every LGBT character was assessed. Nearly three-quarters were male (68.8%) and 31.2% were female. More racial/ethnic diversity was found across LGBT characters than sample wide. Just over 40% (40.6%) of LGBT characters were from an underrepresented racial/ethnic group. This matches the proportion of underrepresented individuals in the U.S. population.

In terms of age, the vast majority of LGBT characters (93.3%) were shown in their young adult (21- to 39-yrs of age) or middle age years (40- to 64-yrs of age). Only one teenaged character was depicted as gay across the entire sample and this role was completely inconsequential to the plot. Showing stories involving LGBT adolescents is important for the young men and women coming of age in this country. Integrating LGBT youth into our cultural narratives may provide important mediated peers and role models for younger film consumers.

The domestic and romantic lives of LGBT characters also revealed a conflicted story. In terms of their romantic lives, just over two-thirds (68.2%) of those characters that had enough information to be evaluated were married or shown in committed relationships. This is in line with advances made on marriage equality in the U.S. When it comes to parental relationships, however, the picture is more problematic. Only two LGBT parents were depicted across the 100 top films of 2015. Both characters were lesbians and appear in one movie. This exclusive focus on care giving leaves the many LGBT families raising children in communities across the U.S. out of the scene.

Once again, these findings reveal that when it comes to the demographic profile of the U.S., Hollywood is cropping groups out of the picture. Less than 1% of the characters last year were depicted as LGBT, and most were completely inconsequential to the plot. Despite political and legal gains made by the LGBT community, a gap still remains between the presence of LGBT individuals in the population and who is seen on screen.

Characters with Disabilities in Film

For the first time this year, the MDSC Initiative has incorporated a *qualitative* analysis of characters with disabilities into the report. The measure was crafted after existing definitions of disability were scoured from legal, academic, and medical arenas as well as reports by advocacy groups.³⁵ Ultimately, an *adjusted and slightly more conservative* version of the definition provided by the Americans with Disabilities Act (ADA) was utilized to assess whether characters were shown with a disability.³⁶ This approach is consistent with GLAAD's report as well as the recent analysis by Ruderman Family Foundation.³⁷

Our adapted ADA definition had three major components. The first was the presence of a condition that affected the form, function, or structure of a character's body. Second, the condition led to a *current* restriction of *major life activities* or *major bodily functions*.³⁸ The third was that the condition and/or restriction faced by the character was permanent or expected to endure for at least six months.³⁹ Additionally, addiction was excluded from the present analysis given the difficulty in measurement. By stipulation, celestial beings, the undead, and robots were not allowed to possess a disability.⁴⁰

With this definition, how many characters with disability were shown across the 100 top films? After removing supernatural disabilities ($n=11$), only 2.4% of all speaking or named characters ($n=105$) were shown with a disability. This point statistic is surprising, given that 18.7% of the U.S. population reports having a disability.⁴¹

Ten of the films featured a leading/co leading character with a disability across the 100 top films. Four of these characters had PTSD, with the focus varying from one minor scene to an interwoven storyline across the entire narrative. Only three of the leads/co leads featured women and not one was 45 years of age or older, underrepresented, or part of the LGBT community. Only 2 of the 11 ensemble films depicted a primary character with a disability. Both of these characters were male and one was underrepresented. Overall, the vast majority of characters with disability were featured in supporting (54.3%) or inconsequential roles (32.4%).

In terms of visibility, a full 45 of the movies failed to depict one character with a disability and only two were at proportional representation (see Table 20). Most of the portrayals appeared in Action/Adventure films (33.3%) followed by Comedies (24.8%), and Dramas (19%). Only 2% of all characters with disabilities appeared in Animated movies. The latter finding is problematic, suggesting that content targeting the youngest viewers all but erases this community.

Table 20
Films Focusing on Characters with Disabilities

Measure	Characters w/Disabilities
# of films missing characters w/disabilities	45
# of films w/proportional representation ($\pm 2\%$ Census)	2
U.S. Census	18.7%
Total Films Evaluated	100

Each character with a disability was categorized into the U.S. Census domains.⁴² The most common portrayal of character disability fell into the physical domain or conditions/restrictions related to movement or functions of the body and its organs. A full 61% of the characters were featured with a physical disability. Examples include, but are not limited to, mobility impairments, severe facial disfigurement, non Hodgkin's lymphoma, and Chronic Traumatic Encephalopathy.

The next most frequent portrayal included a mental or cognitive disability, accounting for 37.1% of portrayals. Instances of these disabilities include, but are not limited to, Post Traumatic Stress Disorder (PTSD), Attention Deficit Hyperactivity Disorder (ADHD), cognitive impairment, and dyslexia. Communicative disabilities accounted for 18.1% of character portrayals (i.e., blind, deaf, speech impediment). It must be noted that the percentages across domains do not add to 100% as some characters had disabilities that spanned different categories.

Turning to the demographics of characters with disability, the picture is quite skewed. In terms of gender, only 19% of characters with a disability were female and 81% were male. This is a new low for gender inequality in film. A full 71.7% of characters with disability were White and 28.3% were from underrepresented racial/ethnic groups. Only two characters with a disability were children (0- to 12- yrs of age) and almost half (49%) of all portrayals depicted characters 40 years of age or older. Not one LGBT character with a disability was portrayed across the 100 top films of 2015.

Summing up, the portrayal of characters with disability is out of line with population norms in the U.S. Based on the definition, only 2.4% of characters were depicted with one or more non supernatural disabilities.

Conclusion

Examining the 100 top-grossing movies from 2015 reveals that inequality is an industry norm in film. Across gender, race/ethnicity, LGBT status, and characters with disabilities, it is clear that despite advocacy and good intentions, change remains difficult to achieve. The results of this annual investigation are both startling and consistent with previous years. Below, major findings, solutions, and limitations are presented.

#1 Proportional Representation is Far From a Reality in Film

The first major finding is that Hollywood's depictions of females, people of color, the LGBT community, and characters with disabilities remain out of step with population norms (see Table 21). Females were still less than one-third of all speaking characters in film, despite being roughly half the population and half of movie ticket buyers.⁴³ Characters from underrepresented racial/ethnic communities were also marginalized. Just 26.3% of all characters were from an underrepresented racial and/or ethnic group, which is 12.1% less than in the U.S. population. With half of children under age 5 in the U.S. from an underrepresented racial/ethnic group,⁴⁴ Hollywood must recognize and address the gap between who appears on screen and the population of current and future moviegoers in this country.

For individuals who are LGBT and/or living with a disability, film is also a representational wilderness. The uptick observed in the number of LGBT portrayals in 2015 is a small positive step in the right direction. But, it also illuminates that the fictional LGBT community is nowhere near proportional to the U.S. population. The percentage of film characters with a disability also falls

well below the point statistic of Americans living with a disability in the U.S.⁴⁵ Both of these vibrant and varied communities find themselves erased when it comes to film portrayals.

#2 An Epidemic of Invisibility is Alive and Well in Film

While examining characters across films allows for population comparisons, understanding how often different groups are absent altogether from the screen is crucial. Forty-nine films did not feature even one Asian or Asian-American speaking or named character. Similarly, 40 cast no speaking or named Hispanic/Latino characters, and 17 depicted not one Black or African American speaking or named character. In terms of LGBT, 82 films did not have one character from this community. Characters with a disability were absent from 45 of the top movies in 2015. These figures reveal that Hollywood still isolates portrayals of different groups into certain movies rather than integrating a range of portrayals and experiences across slates of content.

Table 21 provides an overview of the disparity between on screen and proportional representation. The chart reveals the depth and breadth of exclusion faced by different groups when it comes to film. While it may be tempting to focus on a single category, it is clear that anyone who is not a straight, white, able-bodied male is marginalized in cinema.

Table 21
The Epidemic of Invisibility Across 6 Groups

Underserved Groups	Films w/Out Any Characters	% of Speaking Characters	U.S. Population	Difference (Population-Characters)
Females	0	31.4%	50.8%	-19.4%
People w/Disabilities	45	2.4%	18.7%	-16.3%
Hispanic/Latinos	40	5.3%	17.6%	-12.3%
LGBs	82	<1%	3.5%	-3.49%
Asians	49	3.9%	5.6%	-1.7%
Black/African Americans	17	12.2%	13.3%	-1.1%

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

#3 Leads and Less Prominent Characters Must Both be Tackled

In 2015, there was an increase in the number of films with a female lead or co lead character, both overall and for women age 45 and older. However, this positive trend is not a panacea. Though there are more females at the center of the action, there are still few women from underrepresented racial/ethnic groups, and just one underrepresented female lead 45 years of age or older. There were also no lead or co lead characters identified as LGBT. Deciding who should anchor a story is imbued with financial considerations. Advocacy on the casting of women in leading roles must ask for a more inclusive approach.

Additionally, the shift in female leads and co leads does not reflect a larger trend in overall speaking characters. Casting males in lead roles may rest on explicit biases,⁴⁶ while the persistent inequality that excludes women from small roles is likely governed by implicit biases. These preferences may originate when characters are conceived and linked to different occupations in script development. Casting directors in the hiring process may perpetuate them. For instance, when writers think of a particular career (e.g., police officer, physicist) this may bring to mind the image of a male more quickly than that of a female. Casting directors may be reluctant or unable to audition or hire females for these roles once they are written for men. One way to address the representational gaps across groups is to equip industry members with the knowledge of and specific and *empirically verified* tools to combat implicit biases.

#4 Behind the Camera is Behind the Times

The lack of female directors has been a source of much reporting, advocacy, and activism over the last few years. This has yet to result in meaningful change. Females filled just under one-fifth of above-the-line roles as directors, writers, and producers in 2015. Although 7.5% of directors were female, this has not eclipsed the high reached in 2008. Black and Asian directors also made little progress in 2015. Moreover, females from these groups were scarce among the ranks of top 100 film directors. Only three Black women and one Asian woman directed films across the 800 movies included in this study—a number that remains unchanged from last year. It is imperative that efforts to improve the number of female directors are inclusive of *all* females, including women of color.

For the first time, this report includes an examination of female film composers. These findings reveal that women are vastly underrepresented in this role. Just a handful of women have worked as composers across the 800 top films examined. While directors have drawn the majority of attention from advocates, it is clear film composing is an even more problematic space for women in this industry.

#5 Portrayals of Disability are Disconcerting

The addition of disability measures to the report this year allows for an important intersectional analysis. Although nearly 20% of the U.S. population reports living with a disability, film portrayals fell far below that at just 2.4%. However, this is just part of the story. While a small fraction of characters appear with disabilities in film, these individuals were overwhelmingly white males, and not one was LGBT. For females, it is clear that Hollywood's preference skews toward youth, beauty, and ability. Given that just 19% of the characters with a disability were female and film's reliance on stereotyping and sexualization, the message delivered to young female viewers is disconcerting. Depictions of disability are not only marginalized, they also obscure the true diversity of this community.

Characters with disabilities were also primarily depicted in supporting or inconsequential roles. In line with the findings on leading characters from underrepresented racial/ethnic groups and those identified as LGBT, characters with disabilities are not at the center of the action. This

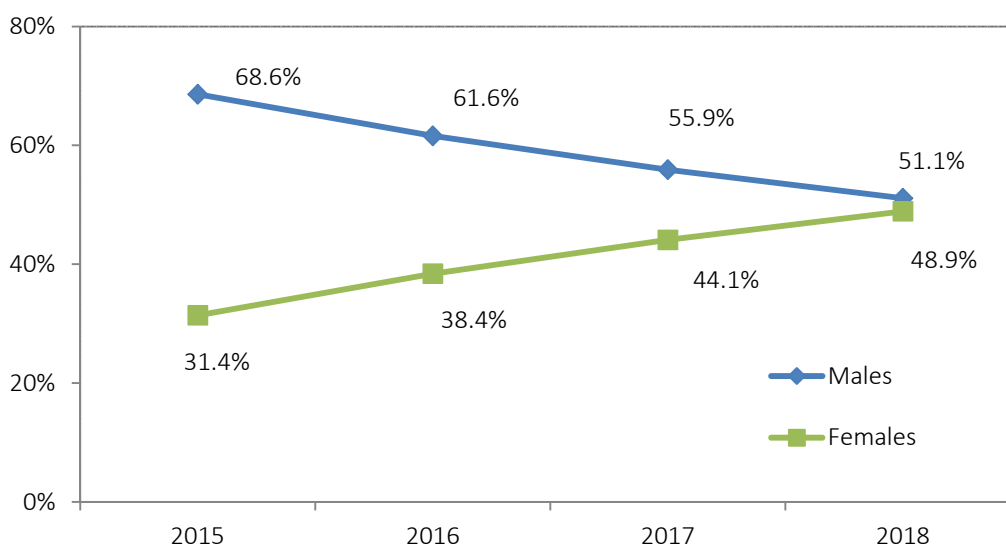
exclusion of different groups homogenizes the stories that are told and who can participate. It also discounts the experiences and perspectives of individuals living with disability who identify with other underrepresented groups. Ultimately, film ensures that a very narrow slice of the community is all that viewers see.

#6 Solutions for Change are Simple but Scarce

The intense scrutiny on Hollywood over the past several years has placed the Academy Awards in the crosshairs of advocates, most notably through the #OscarsSoWhite campaign. However, the data in this report reveal that problems begin much earlier and affect the entire entertainment ecosystem. To address the ongoing inequality faced on screen and behind the camera, simple and strategic solutions are required. These solutions must conquer two of the major barriers to a more inclusive film environment: a lack of imagination and a willingness to change.

To address the lack of female characters overall, one simple solution is to just add five female speaking characters to every film in the top 100. The average feature film has approximately 40 characters. Of those, only a handful are central to the main story (i.e., lead or supporting). Adding small parts for females to films in production will raise the overall percentage of female characters, setting a new overall norm. By adopting this tactic, the film industry can reach overall gender parity in just three years (see Figure 6). Additionally, this strategy bolsters the pipeline for female talent and ensures that film sets are more inclusive when it comes to gender. Importantly, this strategy need not only increase the percentage of White female characters, but females from underrepresented racial/ethnic groups, lesbian characters, or female characters with disabilities. Finally, the strategy does not take employment opportunities away from males, it simply creates additional prospects for females.

Figure 6
Percentage of Speaking Roles by Gender: Just Add Five



A second solution designed to improve representation among all speaking characters is for top talent to add an equity rider to their contracts. This clause would stipulate that fictional authenticity should be achieved in the casting process when it is sensible for the story. Addressing inequality from a legal perspective sets an expectation for accountability and offers an objective standard to be met. Paul Feig is one individual to have publicly expressed support for the idea of altering contracts with an equity rider.⁴⁷ By ensuring that inclusive casting is a recognized goal, progress can be tracked and change can be made.

Both in front of and behind the camera, entertainment companies must make specific and public goals for change. While recognition of the problem and the need to do better are important, goal-setting demonstrates a commitment to progress. For instance, FX CEO John Landgraf recently stated his networks' desire to enact "quantum" change in behind the camera hiring practices.⁴⁸ Announcing inclusion goals also allows the public, advocates, and even industry members to hold organizations accountable for the pledges they make.

It is important to note a few limitations pertaining to the current investigation. The measure of disability in this study was qualitative in nature and was defined broadly. While future research may rely upon a quantitative method, the challenges of assessing fictional content for cues related to disability required a more nuanced approach. A different definition of disability would likely alter the findings. It is also important to consider whether portrayals of disability increase or decrease over time. The films assessed in 2015 may be unique as a result of choices by creative talent (i.e., *Mad Max: Fury Road*), or due to a focus on topics (i.e., *Concussion*) related to disability.

Information related to actors was *not* assessed for the disability analysis. Ensuring that actors with disabilities have access to roles that represent their community is a crucial step toward entertainment equality. Future studies should consider whether actors with disabilities are hired to portray characters with disabilities on screen. Finally, only the 100 top films from 2015 were examined. Given that the top 100 films may involve significant allocation of financial resources and are popular amongst audiences, these films are important to assess. However, films outside the top 100 might depict a more diverse range of characters or be more inclusive behind the camera.

The success of particular movies in 2015 initially left some individuals hopeful about the potential for improved representation in film. The results of this investigation point to a misplaced optimism regarding Hollywood's achievements. Despite the lack of progress observed, it is crucial to continue to advocate for change. By adopting practical solutions that eliminate bias and reward inclusion, Hollywood can become an industry that reflects its consumers.

Footnotes

¹ For last year's report, see: Smith, S.L., Choueiti, M., Pieper, K., Gillig, T., Lee, C., & DeLuca, D. (2015). *Inequality in 700 Popular Films: Examining Portrayals of Gender, Race, & LGBT Status from 2007-2014*. Media, Diversity, & Social Change Initiative, USC Annenberg. See: <http://annenberg.usc.edu/pages/~media/MDSCI/Inequality%20in%20700%20Popular%20Films%208215%20Final%20for%20Posting.ashx>

² The sample of 100 top-grossing films of 2015 was based on domestic box office performance as reported by Box Office Mojo (<http://www.boxofficemojo.com/yearly/chart/?yr=2015&p=.htm>).

³ Our major unit of analysis is the *independent* speaking character. Characters who utter one or more words discernibly on screen, or are referred to by name, constitute the primary unit of analysis. In addition to speaking or named characters, the film is also a unit of analysis.

There are times in feature films when characters in groups speak simultaneously (e.g., a shouting crowd at a sporting event) or sequentially (e.g., a police squad, firefighters) that affect how they are unitized. Simultaneous speech does not meet the definition of independence and thus is not coded. Characters that were identical (making their independent identity impossible to ascertain) but spoke separately were "grouped" into one unit or line for coding purposes. Only 16 groups were found across the sample, which falls within the range of groups from previous years examined (low=3, high=30). Groups were *not* included in any of the analyses, however.

In terms of unitizing, each speaking or named character represented one line of data. As with all our reports, a new line of data was entered when characters changed type, age grouping, sex, or race/ethnicity (e.g., Genie in *Aladdin*, Bruce Banner in *The Hulk*) across the plot. Only 197 demographic changes were observed sample wide. 39.6% of all demographic changes were females and 60.4% were males. Removing demographic changes from the total number of character lines has little impact on the distribution of gender in the sample (69% male, 31% female). As such, all demographic changes were left in the analyses unless reported otherwise below.

⁴ Every speaking character was evaluated across a series of characteristics. We will only *briefly* summarize the measures we have used in previous yearly reports. For more information, please visit our research briefings housed on our MDSC Initiative website: <http://annenberg.usc.edu/pages/DrStacyLSmithMDSCI>

In terms of demographics and domesticity, we assessed a character's *role* (i.e., primary, secondary, tertiary) *type* (i.e., human, animal, supernatural creature, anthropomorphized supernatural creature, anthropomorphized animal), *age* (i.e., 0-5, 6-12, 13-20, 21-39, 40-64, 65 or older), *sex* (i.e., male, female), *race/ethnicity* (i.e., White, Black, Hispanic/Latino, American Indian/Alaskan Native, Native Hawaiian/Pacific Islander, Asian, Middle Eastern, Other/Mixed race), *parental status* (i.e., not a parent, single parent, co parent, parent relational status unknown), and *relational standing* (i.e., single, married, committed relationship/unmarried, committed, marital status unknown, divorced, widowed).

Character sexualization was captured with three measures. First, sexually revealing attire was assessed. Using Downs & Smith's (2010, p.725) definition, sexy attire (no, yes) referred to tight and/or alluring apparel that highlights the shape of the torso. Next, the degree of nudity was measured. Nudity referred to the amount of skin showing on a character's body from the mid chest region to the high upper thigh region. The codes were none (i.e., no exposed skin from mid chest to upper thigh), some (i.e., skin

exposed in cleavage, stomach/midriff, and/or upper thigh area), or full (i.e., complete exposure of the skin--including with transparent clothing--from the middle of the chest to the high region of the thighs as well as the depiction of breasts for female characters). Screen shots of sexually revealing clothing and nudity were taken to legitimate and validate coding decisions on these measures.

Attractiveness was measured by capturing characters' physical desirousness, which was demarcated by other characters' verbal (e.g., he is a babe) and nonverbal (e.g., staring at another character, licking lips) references in the story. Attractiveness had three levels: none, one reference, or two or more references. It must be noted that while every character was assessed for attractiveness, only those with a human or human like body were evaluated for sexually revealing attire and nudity.

Most measures contained two additional codes: "can't tell" and "not applicable." "Can't tell" referred to those characteristics where not enough information was given to make a judgment. For example, a character may only say one word in a coffee shop making parental status and/or relational standing impossible to ascertain. "Not applicable," on the other hand, was used when the attribute evaluated did not apply to the character being coded. For instance, animals that only have fur and exist in communities without clothing norms for covering their bodies would be coded as "not applicable" on sexually revealing attire and nudity.

Sexuality and gender identity were evaluated as well. Apparent sexuality was defined as the enduring romantic and sexual proclivity toward men, women, or both sexes. To be included, these attractions needed to be voluntary, persistent, and authentic for each character. In the absence of direct information in the plot, at least two indirect cues were needed to include a portrayal. Characters were coded as lesbian, gay, bisexual, or not. Stated differently, we did not measure heterosexuality.

Characters were coded as transgender if they identify as the gender opposite their biological sex. This excluded any instances of cross-dressing, performance in drag, and characters that identify as "gender nonconforming." Any known transgender individuals (e.g., Catelyn Jenner) who appear as themselves were coded as transgender.

Each movie was also evaluated for attributes of storytelling. At the end of each film, the coder assessed rating as well as the nature of the story told (i.e., lead, co lead, ensemble cast). Because of the difficulty coders have in determining story structure, the leadership team of the MDSC Initiative were involved in rendering judgments about story leads/co leads or whether the narrative was carried by an ensemble cast. Genre and rating judgments were derived from online sources such as IMDbPro, Box Office Mojo, and Variety Insight.

Prior to coding, all of our research assistants (RAs) were trained for roughly 6 weeks in a class room type setting by one of the study authors (Choueiti). Two different groups, one in the Fall of 2015 and the other in the Spring of 2016, participated in coding the majority of the measures. Data collection and reliability measures are reported uniformly across the two groups. The RAs were also given training diagnostics to test their understanding and application of unitizing and variable coding. After more than 6 diagnostics, the entire group began coding the sample of 100 films. Films were assigned to three evaluators that assessed the content independently. Reliability was run per film and disagreements were resolved via discussion with one of the MDSC Initiative leadership team. After the disagreements were finalized, the film was watched at least one additional time and unitizing and variable coding was "quality checked" across the story. At this point, the quality checker could overturn previous decisions. Also, members of the MDSC Initiative leadership team could upend any invalid coding judgments by the student research

assistants. This process refers to the quantitative assessment of gender, race/ethnicity, and LGBT only. Disability will be discussed below.

For each film, two types of reliability were assessed: unitizing and variable coding. Unitizing agreement captured the number of lines per film that were agreed upon by 2 of the 3 coders (or, in the case of one film, 3 of the 4 coders). The higher percentages indicate greater agreement in identifying speaking characters. Agreement is reported at the film level in quartiles: Q1 100%-90% (films 1-25); Q2 89.2%-85.7% (films 26-50); Q3 85.7%-80.6% (films 51-75); Q4 80.4%-60% (films 76-100). Only three films had unitizing agreement below 70% (69.2%, 65.4%, 60%).

Variable coding was assessed using the Potter & Levine-Donnerstein (1999) formula. For each measure, the sample wide median is reported first followed by the sample wide mean and range in parentheses. *Role* 1.0 ($M=.99$, $range=.63-1.0$), *type* 1.0 ($M=.99$, $range=.64-1.0$), *age* 1.0 ($M=.94$, $range=.65-1.0$), *sex* 1.0 ($M=1.0$, $range=1.0$), *race/ethnicity* 1.0 ($M=.99$, $range=.66-1.0$), *parental status* 1.0 ($M=.99$, $range=.64-1.0$), *relational standing* 1.0 ($M=.99$, $range=.65-1.0$), *sexually revealing clothing* 1.0 ($M=.99$, $range=.61-1.0$), *nudity* 1.0 ($M=.99$, $range=.63-1.0$), *attractiveness* 1.0 ($M=1.0$, $range=1.0$), *apparent sexuality* 1.0 ($M=1.0$, $range=1.0$), and *transgender* 1.0 ($M=1.0$, $range=.61-1.0$).

⁵ Hunt, D., Ramón, A.C., & Tran, M. (2016). *2016 Hollywood Diversity Report: Business as Usual?* Ralph J. Bunche Center for African American Studies. UCLA, California. Negrón-Muntaner, F. & Abbas, C. (2016). *The Latino Disconnect: Latinos in the Age of Media Mergers*. Center for the Study of Ethnicity and Race. Columbia University, NY.

⁶ The chi-square analysis for *gender* (male, female) by MPAA rating (PG, PG-13, R) was significant, $\chi^2(2, 4,347)=13.70$, $p<.05$, $V^*=.06$. A total of 10 characters' biological sex could not be ascertained (i.e., supernatural creatures or animals) and one was not applicable (i.e., blob). These characters were excluded from all gender analyses.

⁷ Genre distinctions were made using information from Box Office Mojo in line with our previous reports. In cases where a general audience or vague label (i.e., family, western) was provided, the film was re-categorized using information from IMDbPro.com. No statistical tests were executed for genre.

⁸ Prior to running the analysis on *parental status*, the variable was collapsed into two levels: not a parent vs. parent (single, co parent, parent, relational status unknown). The analysis revealed a non significant association ($p >.05$) between *gender* (male, female) and *parental status* (no, yes).

⁹ For *relational status*, the variable was also dichotomized: romantic relationship present (married, committed relationship, committed relationship unmarried, committed marital status unknown) vs. absent (single, divorced, widowed). The analysis yielded a significant association with *gender* (male, female), $\chi^2(1, 1,082)=7.33$, $p<.05$, $\phi=.08$.

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), 1615-1628.

¹¹ Though not reported, the analysis for *age* (child, teen, young adult, middle age/elderly) by *gender* (male, female) was significant, $\chi^2(3, 4,066)=89.46$, $p<.05$, $V^*=.15$.

¹² In 2015, the process for age coding was slightly altered. After coding finished, all research assistants' judgments on age for those coded middle age (40- to 64-years old) and elderly (65-years and older) were checked by using actors' birthdays found across multiple online sources including but not limited to IMDbPro.com, Variety Insight, and Studio System. This was done for a secondary analysis to be released separately. This process revealed that coders underestimated the age of older characters regardless of gender. Despite this change in protocol, the proportions of males and females within these age brackets were not different from previous years as depicted in Table 4.

¹³ The chi-square analysis for *sexy attire* (no, yes) by *gender* (male, female) was significant, $\chi^2(1, 4,137)=358.30, p<.05, \phi=.29$. For nudity, the original variable involved three levels. Prior to analysis, some and full nudity were collapsed. It must be noted that there were 39 instances of full nudity across the entire sample. Of those 39 instances, 51.3% involved males and 48.7% involved females. The relationship between *nudity* (none, some) and *gender* (male, female) was significant, $\chi^2(1, 4,139)=258.84, p<.05, \phi=.25$.

¹⁴ Physical attractiveness was collapsed into two levels: none vs. some (one or more references). The analysis for *gender* (male, females) by *physical attractiveness* (none, some) was significant, $\chi^2(1, 4,370)=112.91, p<.05, \phi=.16$.

¹⁵ 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.

¹⁶ 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>

¹⁷ The analysis for *age* (teens, young adults, middle aged) by *sexy attire* (no, yes) for females was significant, $\chi^2(2, 1,078)=22.30, p<.05, V^*=.14$. *Nudity* (none, some) and *attractiveness* (none, some) also varied by age, respectively: $\chi^2(2, 1,079)=18.57, p<.05, V^*=.13$; $\chi^2(2, 1,104)=15.18, p<.05, V^*=.12$. No statistical tests were utilized for over time patterns but rather the 5% rule.

While not presented above, we break down the same analyses for males by age here for interested readers. The chi-square for *sexy attire* (no, yes), *nudity* (none, some), and *attractiveness* (none, some) were all significant: *sexy attire* $\chi^2(2, 2,331)=34.13, p<.05, V^*=.12$; *nudity* $\chi^2(2, 2,332)=49.52, p<.05, V^*=.15$; *attractiveness* $\chi^2(2, 2,408)=22.77, p<.05, V^*=.10$.

Male Character Sexualization by Age: 2015

Measures	13-20 year olds	21-39 year olds	40-64 year olds
% in sexy attire	14.8%	10.4%	4.7%
% w/some nudity	21%	13%	6.1%
% referenced attractive	8.2%	5%	2%

Note: The columns do not add up to 100%. Rather, each cell represents the percentage of males shown with a particular attribute. Subtracting each cell from 100% illuminates the percentage of males without the characteristic in question.

¹⁸ Information on directors, writers, and producers was gleaned from IMDbPro.com. Two research assistants independently collected the names of individuals listed in the director, writer, and producer categories. Each individual was only counted once within category (director, writer, producer) across a film, though individuals could be credited across these distinctions. Certain titles were excluded from the producing category (e.g., Production Executive, Development Executive, Production Supervisor). Then, each research assistant utilized industry databases or other online sources to confirm the gender of each individual. This was done using photos, pronouns (he/she), or gender listings (male/female). These were combined to form a single gender judgment for each person, with differences resolved by determining the correct decision. Only one individual's gender could not be identified.

For directors, information on race/ethnicity was obtained from industry databases (i.e., StudioSystem/InBaseline, Variety Insight). When information could not be found, attempts were made to confirm race/ethnicity judgments with directors and/or their representatives. The Directors Guild of America database was also utilized. Finally, an online search was conducted for information about directors' race/ethnicity. When additional information was not available, a race/ethnicity judgment was made by researchers using a photo. This was done for one individual in 2015. Information on prior years can be found in our previous reports.

¹⁹ Smith, S.L., Pieper, K., Choueiti, M., & Case, A. (2015a). *Gender & Short Films: Emerging Female Filmmakers and the Barriers Surrounding their Careers*. Report prepared for Clif Family Foundation. Media, Diversity, & Social Change Initiative. Los Angeles, CA. USC Annenberg.

²⁰ Smith, S.L., Pieper, K., & Choueiti, M. (2015b). *Exploring the Careers of Female Directors: Phase III*. Report prepared for Women in Film Los Angeles and Sundance Institute. Media, Diversity, & Social Change Initiative. Los Angeles, CA.

²¹ Smith, S.L., Choueiti, M., & Pieper, K. (2016). *Inclusion or Invisibility? Comprehensive Annenberg Report on Diversity in Entertainment*. Media, Diversity, & Social Change Initiative. Los Angeles, CA. USC Annenberg.

²² Smith, S.L., Pieper, K., & Choueiti, M. (2015b).

²³ A list of composers was generated by examining the IMDbPro listings for each film analyzed across 2007-2015 (excluding 2011). Only individuals credited as "composer" or "score composer" were included in the analysis. When IMDbPro did not list a composer, Variety Insight and StudioSystem/InBaseline were

consulted. When there was no information available in these sources, the film's credits were watched to determine if a composer was credited. When a group was identified as the composer of a film's score, the members of the group or the individuals responsible for the composition were ascertained and each entered as a unique line of data. The gender of each individual composer was assessed using online sources (i.e., Variety Insight, StudioSystem/InBaseline) or via web search.

- ²⁴. A significant chi-square was observed for *director gender* (at least one female attached, no female attached) and *character gender* (male, female), $X^2(1, 4,370)=16.81, p<.05, \phi=.06$.
- ²⁵. The relationship for *writer gender* (at least one female screenwriter attached, no female screenwriter attached) and *character gender* (male, female) was significant, $X^2(1, 4,370)=23.82, p<.05, \phi=.07$.
- ²⁶. No statistical relationship between *producer gender* (female producer attached, no female producer attached) and *character gender* (male, female) was observed ($p>.05$).
- ²⁷. Motion Picture Association of America (2016). *Theatrical Market Statistics: 2015*. Retrieved online: http://www.mpa.org/wp-content/uploads/2016/04/MCAA-Theatrical-Market-Statistics-2015_Final.pdf
U.S. Census Bureau (n.d.). *QuickFacts from the U.S. Census Bureau*. Retrieved from: <https://www.census.gov/quickfacts/table/PST045215/00>
- ²⁸. U.S. Census Bureau (n.d.).
- ²⁹. The analysis examining the relationship between *gender* (male, female) and *race/ethnicity* (White, Black, Latino, Asian, Other) was significant, $X^2(4, 3,975)=11.42, p<.05, V^*=.05$.
- ³⁰. Only one of the domestic analyses by gender was significant, *race/ethnicity* (White, Black, Latino, Asian, Other) by *parental status* (no, yes) for female characters: $X^2(4, 411)=11.09, p<.05, V^*=.16$.
- ³¹. For female sexualization, only *attractiveness* (no, yes) was marginally related to *race/ethnicity* (White, Black, Latino, Asian, Other): $X^2(4, 1,280)=9.29, p=.054, V^*=.08$.
- ³². For male sexualization, *sexy attire* (no, yes) and *nudity* (none, some) varied by *race/ethnicity* (White, Black, Latino, Asian, Other), respectively $X^2(4, 2,693)=15.10, p<.05, V^*=.08$; $X^2(4, 2,693)=17.67, p<.05, V^*=.08$.
- ³³. A significant relationship was observed for *director race* (Black, not Black) and *character race* (Black, not Black), $X^2(1, 3,975)=180.20, p<.05, \phi=.21$.
- ³⁴. 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/>
- ³⁵. Brault, M.W. (2012). *Americans with Disabilities: 2010*. U.S. Department of Commerce Economics and Statistics Administration. Available: <http://www.census.gov/prod/2012pubs/p70-131.pdf>. He, W. & Larsen, L.J. (2014). Older Americans With a Disability: 2008-2012. *American Community Survey Reports*. U.S. Department of Health and Human Services National Institutes of Health National Institute on Aging and U.S. Department of Commerce Economics and Statistics Administration U.S. Census Bureau. Available: <http://www.census.gov/content/dam/Census/library/publications/2014/acs/acs-29.pdf>.

Centers for Disease Control and Prevention (2015, July 22) Disability Overview. Available: <http://www.cdc.gov/ncbddd/disabilityandhealth/disability.html>. Centers for Disease Control and Prevention (2015, July 9) Disability Overview. Available: <http://www.cdc.gov/ncbddd/developmentaldisabilities/facts.html>. U.S. Equal Employment Opportunity Commission. (n.d.) Disability Discrimination. Available: <https://www.eeoc.gov/laws/types/disability.cfm>. World Health Organization (2015, December). *Disability and health*. Fact sheet No. 352. Available: <http://www.who.int/mediacentre/factsheets/fs352/en/>. International Classification of Functioning, Disability and Health. (2002). *Towards a Common Language for Functioning, Disability and Health*. Geneva, World Health Organization. Available: <http://www.who.int/classifications/icf/icfbeginnersguide.pdf>. National Center on Birth Defects and Developmental Disabilities Division of Birth Defects and Developmental Disabilities. *Facts About Intellectual Disability*. Centers for Disease Control and Prevention. Available: http://www.cdc.gov/ncbddd/actearly/pdf/parents_pdfs/IntellectualDisability.pdf. American Association on Intellectual and Developmental Disabilities. (n.d.) *Frequently Asked Questions on Intellectual Disability*. Available: http://aaidd.org/intellectual-disability/definition/faqs-on-intellectual-disability#.VtiL6_krKUI. Social Security Administration. (2016). *2016 Red Book*. Available: <https://www.ssa.gov/redbook/eng/definedisability.htm#a0=0>. National Institute of Child Health and Human Development. (n.d.). *Intellectual and Developmental Disabilities (IDDs): Condition Information*. Available: <https://www.nichd.nih.gov/health/topics/idds/conditioninfo/Pages/default.aspx>. Courtney-Long, E.A., Carroll, D.D., Zhang, Q.C., Stevens, A.C., Griffin-Blake, S., Armour, B.S., & Campbell, V.A. (2015, July 31). Prevalence of disability and disability type among adults—United States, 2013. *Morbidity and Mortality Weekly Report*, 64 (29). Centers for Disease Control and Prevention. Available: <http://www.cdc.gov/mmwr/pdf/wk/mm6429.pdf>. Forman-Hoffman, V.L., Ault, K.L., Anderson, W.L., Weiner, J.M., Stevens, A., Campbell, V.A., & Armour, B.S. (2015). Disability status, mortality, and leading causes of death in the United States community population. *Medical Care*, 53 (4). p. 346-354. Stein, R.E.K., Bauman, L.J., Westbrook, L.E., Coupey, S.M., & Ireys, H.T. (1993). Framework for identifying children who have chronic conditions: The case for a new definition. *The Journal of Pediatrics*, 122(3), p. 342-347.

³⁶ The ADA definition is stated verbatim: “Disability means, with respect to an individual, (i) A physical or mental impairment that substantially limits one or more of the major life activities of such individual; (ii) A record of such an impairment; or (iii) being regarded as having such an impairment.” https://www.ada.gov/regs2016/final_rule_adaaa.html See this link for the definition of physical and mental impairments, major life activities, and major bodily functions. Our definition, as noted below, focused primarily on section (i) and (iii) of the ADA's conceptualization.

³⁷ Woodburn, D., & Kopic, K. (2016). *On Employment of Actors with Disabilities in Television*. The Ruderman White Paper. Retrieved online from: http://www.rudermanfoundation.org/wp-content/uploads/2016/07/TV-White-Paper_final.final_.pdf GLAAD (n.d.) *Where We Are on TV 2015-2016*. Report produced by GLAAD. Available: <http://www.glaad.org/files/GLAAD-2015-WWAT.pdf>

³⁸ Some advocates may be reluctant to utilize a “medical model” of disability rather than a definition that takes into account the identity of the character. However, given the fictional context of film and the limitations of storytelling, rich information on identity may not be disclosed. This is especially true for inconsequential characters who appear only briefly or speak just one word on screen. Relying on portions of the ADA definition listed above, three independent evaluators assessed every speaking or named characters for cues pertaining to a condition, restriction, and duration. Then, the three investigators reviewed each film (Smith, Choueiti, Pieper) and made notes and rendered a judgment. Only characters with a condition and current enduring restriction were coded qualitatively as disabled.

³⁹. In addition to the definitional components, all scars on a character's face, hands, or feet were assessed for whether they were a disability. Here, severity of the scar had to be taken into consideration. We operationalized a disfiguring scar using guidelines surrounding U.S. military and veteran compensation. Each scar was examined using a photo of the character from the film and measured against a standard size and width. Disfiguring scars or missing digits were automatically coded as a disability if they were characterized by social censure (i.e., in the form of a joke, direct statement, nonverbal utterance).

⁴⁰. There were several additional stipulations surrounding coding. Celestial beings (i.e., entities that live in spiritual contexts such as demons, ghosts, spirits), the undead (i.e., part or whole corpses and/or skeletons such as vampires, zombies), and robots (i.e., machines or technology) were not allowed to have a disability. This was due to the fact that these types of entities are not affected by restrictions of bodily functions or life activities. For example, a robot that has his/her arm dismembered can simply have it replaced. Or, skeletons lack internal organs and therefore have no restrictions of the mind or body.

Second, the species of each character had to be detectable to render disability judgments related to disfigurement. Some characters are aliens, living on or from other planets or dimensions other than earth. These characters may exist in the future or the past. We scrutinized the physical domain or form of these characters in two ways. Facially, another character had to be presented to assess what is typical for the species. Without another character to judge typicality, facial features could *not* be assessed for the definition of disability. The character was still assessed for whether any major bodily functions or life activities were affected (i.e., missing limb, slow gait, organ failure) as well as disabilities from the communicative or mental domains.

Similar to the ADA, a list of conditions were not included in our definition of disability. Based on the ADA those include "(1) Transvestism, transsexualism, pedophilia, exhibitionism, voyeurism, gender identity disorders not resulting from physical impairment, or sexual behavior disorders; (2) Compulsive gambling, kleptomania, or pyromania; or (3) Psychoactive substance use disorders resulting from current illegal use of drugs." See: https://www.ada.gov/regs2016/final_rule_adaaa.html

⁴¹. Brault, M.W. (2012).

⁴². Brault, M.W. (2012).

⁴³. Motion Picture Association of America. (2015). *Theatrical Market Statistics*. Available: http://www.mpa.org/wp-content/uploads/2016/04/MPAA-Theatrical-Market-Statistics-2015_Final.pdf

⁴⁴. United States Census Bureau. (2015, June 25). *Millennials Outnumber Baby Boomers and Are Far More Diverse, Census Bureau Reports*. <http://www.census.gov/newsroom/press-releases/2015/cb15-113.html>

⁴⁵. Brault, M.W. (2012).

⁴⁶. Smith, S.L., Granados, A., Choueiti, M., Erickson, S., & Noyes, A. (2011). *Changing the Status Quo: Industry Leaders' Perceptions of Gender in Family Films*. Executive summary and report prepared for the Geena Davis Institute on Gender in Media.

⁴⁷ Cohen, S. (2016). *Film director says he supports moves toward gender parity*. Retrieved from, <http://bigstory.ap.org/article/3dd3ac72903a4ec9aeb1d235cc5ccd08/film-director-says-he-supports-moves-toward-gender-parity>

⁴⁸ Ryan, M. (2016, August 9). FX CEO John Landgraf on the 'Racially Biased' System and Taking Major Steps to Change His Network's Director Rosters. *Variety*. Available: <http://variety.com/2016/tv/news/fx-diversity-directors-hiring-ceo-john-landgraf-interview-1201831409/>

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* Our Summer 2016 team that went above and beyond the call for research. You are the best!

Appendix A
List of Films in the 2015 Sample

Star Wars: The Force Awakens	Terminator: Genisys	Krampus
Jurassic World	Taken 3	Max
Avengers: Age of Ultron	Sisters	The Age of Adaline
Inside Out	Alvin and the Chipmunks: The Road Chip	Brooklyn
Furious 7	Maze Runner: The Scorch Trials	The Longest Ride
Minions	Ted 2	The Boy Next Door
The Hunger Games: Mockingjay - Part 2	Goosebumps	Pan
The Martian	Pixels	Hot Pursuit
Cinderella	Paddington	Concussion
Spectre	The Intern	The DUFF
Mission: Impossible – Rogue Nation	Bridge of Spies	Woman in Gold
Pitch Perfect 2	Paul Blart: Mall Cop 2	The Second Best Exotic Marigold Hotel
The Revenant	The Big Short	Unfriended
Ant-Man	War Room	Entourage
Home	Magic Mike XXL	Paper Towns
Hotel Transylvania 2	The Visit	Chappie
Fifty Shades of Grey	The Wedding Ringer	Crimson Peak
The SpongeBob Movie: Sponge Out of Water	Black Mass	A Walk in the Woods
Straight Outta Compton	Vacation	Point Break
San Andreas	The Perfect Guy	Sinister 2
Mad Max: Fury Road	Joy	The Last Witch Hunter
Daddy's Home	Fantastic Four	No Escape
The Divergent Series: Insurgent	The Hateful Eight	Ricki and the Flash
The Peanuts Movie	Focus	The Woman in Black 2: Angel of Death
Kingsman: The Secret Service	Southpaw	Run All Night
The Good Dinosaur	Insidious Chapter 3	Love the Coopers
Spy	Poltergeist	The Lazarus Effect
Trainwreck	Jupiter Ascending	Ex Machina
Creed	Sicario	In the Heart of the Sea
Tomorrowland	The Man From U.N.C.L.E.	The Gallows
Get Hard	Spotlight	Hitman: Agent 47
	McFarland, USA	Project Almanac
	The Gift	Black or White
	Everest	Aloha
	The Night Before	