Inequality in 700 Popular Films: Examining Portrayals of Gender, Race, & LGBT Status from 2007 to 2014

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the HARNISCH
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USC Annenberg
School for Communication
and Journalism

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Each year, USC Annenberg's Media, Diversity, & Social Change Initiative produces a report examining gender and race/ethnicity on screen and behind the camera across the 100 top-grossing fictional films. A total of 700 films and 30,835 characters have been analyzed across the 100 top-grossing films of 2007, 2008, 2009, 2010, 2012, 2013, and 2014 (excluding 2011). All speaking or named characters were assessed for demographics, domestic traits, and hypersexualization. For the 100 top movies of 2014, we also examined qualitatively whether characters were portrayed as Lesbian, Gay, Bisexual, and/or Transgender (LGBT).

Turning to behind the camera, the gender of directors, writers, and producers of the 100 top films of 2014 was assessed. We also examined female and Black directors working across the 700 top films. This year, the prevalence of Asian directors was noted across the most popular movies as well. To date, this is clearly the most comprehensive longitudinal research report on gender and race/ethnicity across 700 top-grossing films. Only differences of 5% or greater are noted to avoid making noise about trivial deviations (1-2%).

Key Findings

Gender. Only 30.2% of the 30,835 speaking characters evaluated were female across the 700 top-grossing films from 2007 to 2014. This calculates to a gender ratio of 2.3 to 1. Only 11% of 700 films had gender-balanced casts or featured girls/women in roughly half (45-54.9%) of the speaking roles.

A total of 21 of the 100 top films of 2014 featured a female lead or roughly equal co lead. This is similar to the percentage in 2007 (20%), but a 7% decrease from the 2013 sample (28%).

In 2014, no female actors over 45 years of age performed a lead or co lead role. Only three of the female actors in lead or co lead roles were from underrepresented racial/ethnic backgrounds. No female leads or co leads were Lesbian or Bisexual characters.

Less than a quarter of all speaking characters were female in the top animated films of 2014, which is a 7.4% decrease from 2010 but no change from 2007. Only 21.8% of speaking characters in action/adventure films were female, which did not differ from 2010 or 2007. 34% of characters in 2014 comedies were female.

Across 700 films, a total of 9,522 characters were coded 40- to 64-years of age. Less than a quarter (21.8%) of these characters were women. Only 19.9% of the middle-aged characters were female across the 100 top films of 2014. This is not different from the percentage in 2007.

In 2014, females of all ages were more likely than males to be shown in sexy attire (27.9% of females vs. 8% of males), with some nudity (26.4% of females vs. 9.1% of males) and referenced as physically attractive (12.6% of females vs. 3.1% of males).

Examining patterns of sexualization by age in 2014 revealed that female teens (13-20 year olds) were just as likely to be sexualized as young adult females (21-39 year olds). Middle-aged females (40-64 year olds) were less likely than these two groups to be sexualized.

Across the 100 top films of 2014, only 15.8% of content creators working as directors, writers, and producers were women. Women only accounted for 1.9% of directors, 11.2% of writers, and 18.9% of producers. Put differently, only 2 women directed across the 100 top films of 2014. This is not different from 2013 (2 female directors across 100 top films) or 2007 (3 female directors across 100 top films). Twenty-eight women have worked as directors across the 700 top films from 2007 to 2014. Only three were African American.

In the aggregate, films with at least one female screenwriter attached have more female characters and more women 40- to 64- years of age on screen than films without a female screenwriter attached. Also, films with a female lead or co lead were associated with more girls/women on screen than those without a female lead or co lead attached.

Race/Ethnicity. Of those characters coded for race/ethnicity across 100 top films of 2014, 73.1% were White, 4.9% were Hispanic/Latino, 12.5% were Black, 5.3% were Asian, 2.9% were Middle Eastern, <1% were American Indian/Alaskan Native or Native Hawaiian/Pacific Islander, and 1.2% were from "other" racial and/or ethnic groupings. This represents no change in the portrayal of apparent race/ethnicity from 2007-2014.

Only 17 of the 100 top films of 2014 featured a lead or co lead actor from an underrepresented racial and/or ethnic group. An additional 3 films depicted an ensemble cast with 50% or more of the group comprised of actors from underrepresented racial/ethnic backgrounds.

Just over a quarter of characters in action and/or adventure (26.1%) and comedy films (26.5%) are from underrepresented racial/ethnic groups across the 100 top films of 2014. This represents no change from 2007 or 2010.

In comparison to top animated films of 2007, a 25.4% increase in the percentage of underrepresented characters was observed in the top animated films of 2014. However, over half of these 2014 characters appeared in one animated film, *The Book of Life*. Even without this movie, there is still a significant increase in the percentage of underrepresented speaking characters in animated films from 2007 to 2014.

In 2014, 17 films did not feature one Black or African American speaking character. This is the same number of movies without Black characters across the 100 top films of 2013. Over 40 movies across the 2014 sample did not depict an Asian speaking character.

Across the 100 top films of 2014, only 5 of the 107 directors (4.7%) were Black. One Black director helmed two pictures and only one was female. Only 45 Black directors have been attached to the 700 top-grossing films. This represents 5.8% of all helmers in the years analyzed.

Only 19 Asian directors worked across the 700 top-grossing films. This is an overall percentage of 2.4%. Only 1 Asian director was female across the films analyzed and was listed as a co-director.

LGBT. Across 4,610 speaking characters in the 100 top films of 2014, only 19 were Lesbian, Gay or Bisexual. Not one Transgender character was portrayed. Ten characters were coded as Gay, 4 were Lesbian, and 5 were Bisexual. Only 14 movies sample wide featured an LGB depiction and none of those films were animated.

Of the LGB characters coded, nearly two-thirds were male (63.2%) and only 36.8% were female. LGB characters were also predominantly White (84.2%). Only 15.8% were from underrepresented racial/ethnic backgrounds.

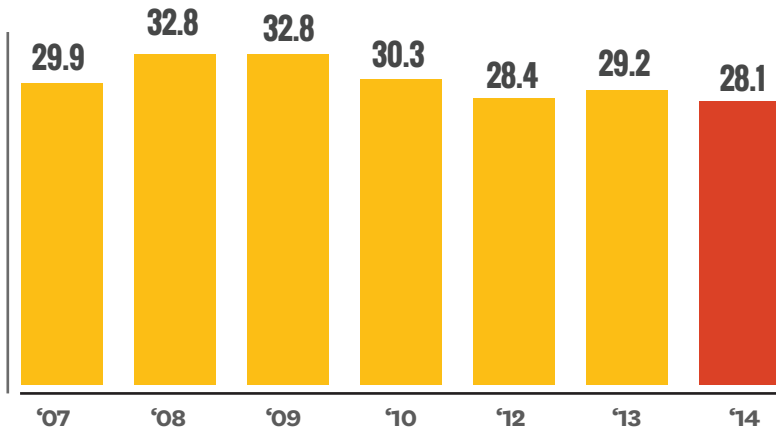# INEQUALITY IN 700 POPULAR FILMS

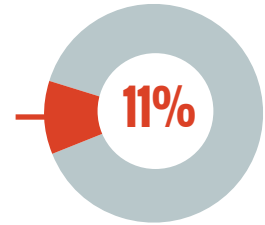## MEDIA, DIVERSITY, & SOCIAL CHANGE INITIATIVE
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FEMALES ARE NOTICEABLY ABSENT IN FILM
Prevalance of female speaking characters across 700 films

'07	'08	'09	'10	'12	'13	'14
29.9	32.8	32.8	30.3	28.4	29.2	28.1

Percentage of 700 films with Balanced Casts **11%**

Ratio of males to females **2.3 : 1**
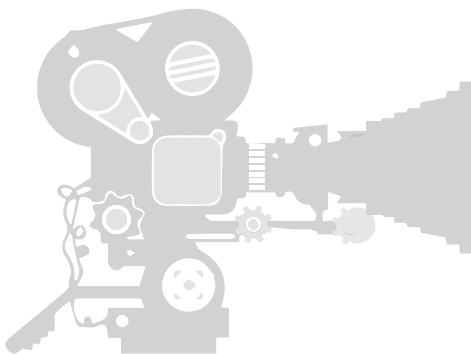
Total number of speaking characters **30,835**

FEMALES RARELY DRIVE THE ACTION IN FILM
Of the 100 top films in 2014...

21 FEATURED A **FEMALE LEAD** OR **CO LEAD**

***AND OF THOSE LEADS AND CO LEADS*...**

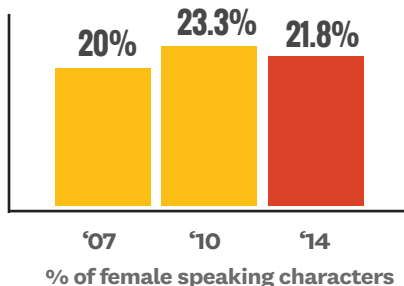**3** FEMALE ACTORS WERE FROM UNDERREPRESENTED RACIAL / ETHNIC GROUPS

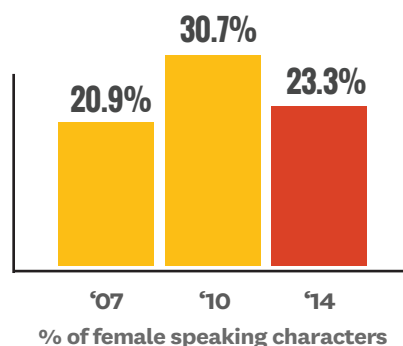**0** FEMALE ACTORS WERE AT LEAST 45 YEARS OF AGE OR OLDER

*Excludes films w/ensemble casts

FEMALES ARE AN ENDANGERED SPECIES IN ACTION, ANIMATION, & MIDDLE AGE

ACTION AND/OR ADVENTURE

'07	'10	'14
20%	23.3%	21.8%

% of female speaking characters

ANIMATION

'07	'10	'14
20.9%	30.7%	23.3%

% of female speaking characters

MIDDLE AGE 40-64 YEAR OLDS

'07	'10	'14
21.1%	21.1%	19.9%

% of female speaking characters

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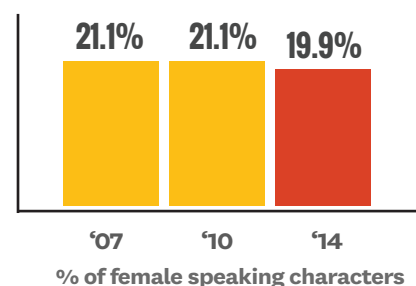
THE MALE GAZE: FEMALES FUNCTION AS EYE CANDY IN 100 TOP FILMS OF 2014

SEXY ATTIRE
- Males: 8%
- Females: 27.9%

SOME NUDITY
- Males: 9.1%
- Females: 26.4%

ATTRACTIVE
- Males: 3.1%
- Females: 12.6%

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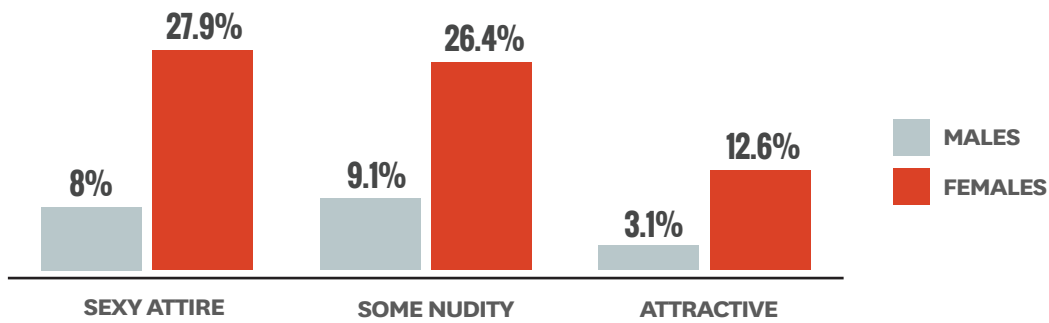
13-20 yr old females are just as likely as 21-39 yr olds females to be shown in sexy attire & with some nudity.

DISTORTED DEMOGRAPHY? RACE/ETHNICITY IN 100 TOP FILMS OF 2014

- WHITE **73.1%**
- HISPANIC **4.9%**
- BLACK **12.5%**
- ASIAN **5.3%**
- OTHER **4.2%**
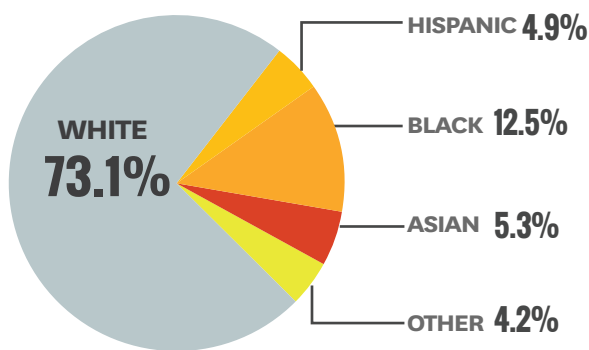
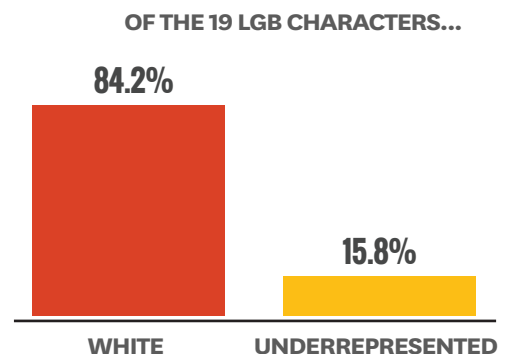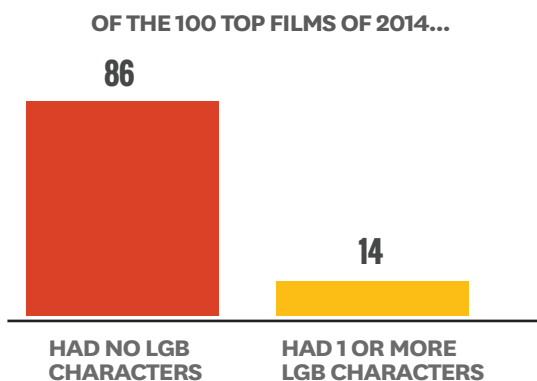*These percentages have not changed since 2007*

% of underrepresented characters: **26.9%**

17 FILMS HAVE NO BLACK OR AFRICAN AMERICAN SPEAKING CHARACTERS

40+ FILMS HAVE NO ASIAN SPEAKING CHARACTERS

17 FILMS HAD A LEAD/CO LEAD PLAYED BY AN ACTOR FROM AN UNDER-REPRESENTED RACE / ETHNICITY

A CONCEALED COMMUNITY: LGBT CHARACTERS IN 100 TOP FILMS OF 2014

OF **4,610** SPEAKING CHARACTERS ONLY...

- **10** GAY
- **5** BISEXUAL
- **4** LESBIAN
- **0** TRANSGENDER

OF THE 100 TOP FILMS OF 2014...
- 86 — HAD NO LGB CHARACTERS
- 14 — HAD 1 OR MORE LGB CHARACTERS

OF THE 19 LGB CHARACTERS...
- 84.2% — WHITE
- 15.8% — UNDERREPRESENTED

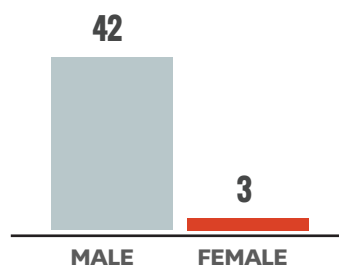*the* HARNISCH FOUNDATION

USC Annenberg

WHO DIRECTED THE 700 TOP FILMS BETWEEN 2007 AND 2014? *(excluding 2011)*

Of 779 directors...

5.8% OR 45 WERE BLACK OR AFRICAN AMERICAN

2.4% OR 19 WERE ASIAN OR ASIAN AMERICAN

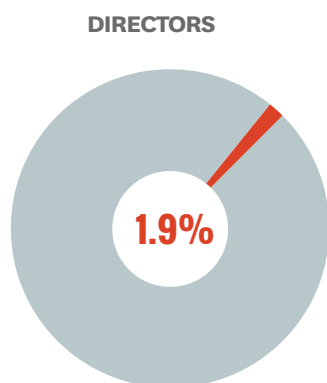*Of the 45 Black or African American directors...*

42 — MALE
3 — FEMALE

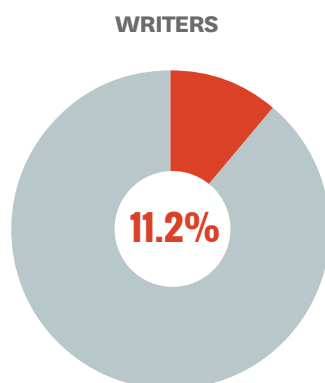*Of the 19 Asian or Asian American directors...*

18 MALES

1 FEMALE

FEW FEMALES WORK BEHIND THE CAMERA IN 100 TOP FILMS OF 2014

Across 1,326 content creators....

■ MALES   ■ FEMALES

DIRECTORS
1.9%
2 female directors

WRITERS
11.2%
33 female writers
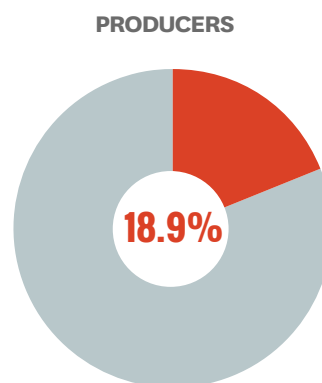
PRODUCERS
18.9%
175 female producers

OF 700 FILMS & 779 DIRECTORS, ONLY 28 WOMEN WORKED AS DIRECTORS

THERE ARE
24
UNIQUE FEMALE DIRECTORS BETWEEN 2007 AND 2014.
*excluding 2011

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

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Each year, USC Annenberg's Media, Diversity, & Social Change Initiative produces a report examining gender and race/ethnicity on screen and behind the camera across the 100 top-grossing fictional films. The most popular narrative movies are derived from domestic earnings as reported by Box Office Mojo.[1] A total of 700 films have been analyzed, the 100 top-grossing films of 2007, 2008, 2009, 2010, 2012, 2013, and 2014 (excluding 2011).

All speaking or named characters[2] are assessed for demographics (age, gender, race/ethnicity), domestic traits (parental status, relational standing), and appearance indicators (sexy attire, nudity, physical attractiveness).[3] For the 100 top-grossing films of 2014, we also examined qualitatively whether characters are portrayed as Lesbian, Gay, Bisexual, and/or Transgender (LGBT) as well as a series of contextual variables surrounding these depictions. This supplements GLAAD's findings on film from the past few years.

Turning to behind the camera, the gender of directors, writers, and producers of the 100 top films of 2014 were culled from industry databases and online sources. We also take a close look at female and Black directors working across the 700 top films, which should complement other research (e.g., Columbia University, UCLA's Bunche Center) examining Hispanics and underrepresented racial/ethnic groups working behind the camera in film and television. This year, we also examine the number of Asian directors across the 700 top films.

To date, this is the most comprehensive longitudinal research report on gender and race/ethnicity across 100 top-grossing films. The study methodology can be found in the footnotes section. Below, we divide the report into three major sections corresponding to public concern on issues of representation: 1) gender, 2) race/ethnicity, and 3) LGBT status. Within each section, the findings for 2014 will be presented first followed by an analysis of change over time on selected variables. Only significant ($p < .05$) differences of 5% or more will be noted to avoid reporting on meaningless deviations (1-2%). Though, not all analyses were subjected to statistical tests and typically, but not always, 5% differences focus on 2007 vs. 2014 or the two

most recent years examined (2013 vs. 2014). The use of "*n*" refers to the sample size of characters, films, or content creators per analysis.

Gender On Screen & Behind the Camera in Film

On Screen Prevalence

Across the 100 top films of 2014, a total of 4,610 speaking or named characters were evaluated.[4] Of these characters, 28.1% (*n*=1,297) were female and 71.9% (*n*=3,313) were male. The gender ratio is 2.6 on screen male characters to every 1 on screen female character. As illuminated in Table 1, the percentage of female characters from 2007 to 2014 has not meaningfully changed. Matter of fact, the 2014 percentage is 1.8% lower than that observed in 2007 and .6% lower than the percentage (28.7%) we observed in a set of popular films from 1990 to 1995.[5] In a small sample of movies released from 1946 to 1955, other research has demonstrated that only 25% of on screen characters were women.[6] *Despite the activism and attention devoted to raising awareness on this topic in the popular press, the prevalence of girls and women on screen has not changed in over 50 years.*

Table 1
Prevalence of Female Characters On Screen: 2007 to 2014

Measures	2007	2008	2009	2010	2012	2013	2014	Total
% of Female Chars	29.9%	32.8%	32.8%	30.3%	28.4%	29.2%	28.1%	30.2%
% of Balanced Casts	12%	15%	17%	4%	6%	16%	9%	11%
Ratio of Ms to Fs	2.35 to 1	2.05 to 1	2.05 to 1	2.3 to 1	2.51 to 1	2.43 to 1	2.6 to 1	2.3 to 1
Total # of Chars	4,379	4,370	4,342	4,153	4,475	4,506	4,610	30,835
Total # of Films	100	100	100	100	100	100	100	700

Note: Only fictional films based on domestic U.S. gross as reported by Box Office Mojo were coded and analyzed. Documentaries were not evaluated as a part of the top 100. 2011 is not included in the sample.

Focusing on leads, a total of 21 films featured a female lead or roughly equal co lead across the sample of 100 films in 2014. This is similar to the percentage in 2007 (20%), but a 7% decrease from the 2013 sample (28%). Three female actors that play leads/co leads are from underrepresented racial/ethnic backgrounds. No leads or co leads are played by female actors over 45 years of age.

Across the 2014 movies, stories with a female lead/co lead featured significantly more female characters on screen (41.2%) than those stories without a female lead (25.5%).[7] A full 47 narrators were identified across the 100 most popular movies of 2014. Only 21.3% were female and 78.7% were male. This is a ratio of 3.7 male narrators to every one female narrator.

The percentage of films with a gender-balanced cast was also evaluated. A gender-balanced cast is one that features girls and women in roughly half (45-54.9%) of the speaking parts on screen. Only 9% of the 2014 films were gender balanced, which is a 7% decrease from last year but no change from 2007. Only 5 of the 100 top films of 2014 had *more* females (>55%) than males on screen while 15 movies cast girls and women in 15% or fewer speaking roles.

The percentage of female characters on screen differed trivially (<5%) across three ratings (PG=28%, PG-13=26.4%, R=30.5%). Only one movie was rated G across the sample of 100 top films in 2014. As such, the percentage of females is not reported for general audience films.[8] Turning to genre, we were interested in three specific story categories: animation, action and/or adventure, and comedy. As depicted in Table 2, less than a quarter of all speaking characters were female in animation in 2014 which is a 7.4% decrease from 2010 but no change from 2007. Action and/or adventure as well as comedy did not differ meaningfully from previous years. *These findings suggest that action and animation probably lower the overall percentage of females on screen. Consequently, these are the genres that activists need to target for change.*

Table 2
Prevalence of Female Characters On Screen by Film Genre: 2007, 2010, 2014

	Action or Adventure			Animation			Comedy		
	2007	2010	2014	2007	2010	2014	2007	2010	2014
% of females on screen	20%	23.3%	21.8%	20.9%	30.7%	23.3%	36%	36%	34%

Note: Only the percentage of female characters is reported in Table 2. For the percentage of male speaking characters, subtract the percentage of females from 100%.

Overall, the findings for prevalence reveal that female characters were vastly underrepresented on screen in the 100 most popular movies of 2014. Despite comprising roughly 50% of the U.S. population, girls/women make up less than a third of all speaking characters on screen and less than a quarter of the leads/co leads driving the storylines. Less than one out of four characters in animated or action adventure movies were female. *Clearly, the norm in Hollywood is to exclude girls and women from the screen.* It is also to misrepresent them, as we will see in the next section.

On Screen Portrayal

Three specific aspects of character portrayals were evaluated: domestic roles, apparent age, and sexualization. Focusing on domestic roles, speaking characters were assessed for whether they were shown as parents (no, yes) and/or in a romantic relationship (no, yes).

Female characters (53.5%) were more likely than male characters (41.9%) to be shown as caregivers.[9] A similar trend emerged for relational standing, with females (59.6%) more likely than males (46.1%) to be depicted in a committed romantic relationship. These patterns reveal that domesticated roles are still gendered in film, which is consistent with previous research.[10]

In addition to domestic roles, the apparent age of each character was of interest. Each character was categorized into one of five mutually exclusive silos: 0-12 years (child); 13-20 years (teen); 21-39 years (young adult); 40-64 years (middle aged); or 65 years or older (elderly). Table 3 reveals that character gender and age were associated across the 100 top films of 2014.[11]

As children, teens, and the elderly, male and female characters do not differ by 5%. However, females (57%) were more likely than their male counterparts (45.9%) to be depicted as young adults (i.e., 21 to 39 years of age) whereas the reverse was true for those in middle age (Males=35.6%, Females=21.7%).

Table 3
Character Age by Gender in Top-Grossing Films: 2014

Apparent Age	Males	Females
0-12 years	5.4% (*n*=164)	7.6% (*n*=95)
13-20 years	8.5% (*n*=260)	9.6% (*n*=120)
21-39 years	45.9% (*n*=1,402)	57% (*n*=709)
40-64 years	35.6% (*n*=1,089)	21.7% (*n*=270)
65+ years	4.6% (*n*=140)	4% (*n*=50)
Total	100%	100%

Note: The analysis reveals the within gender distribution of character age. Thus, the columns total to 100%. Row percentages are not shown but can be derived from cell totals.

The previous analysis focused on the distribution of character age within each gender. Now, we turn to assess how gender distributes within one particular age grouping: 40 to 64 year olds. Focusing on the row frequencies in Table 3, the marginalization of 40 to 64 year old females becomes more apparent. Only 19.9% of 40 to 64 year olds were women in 2014. Given that females in this age group were the most underrepresented in 2014, we looked at the gender breakdown of characters 40 to 64 years of age across the full seven-year sample.

Across 700 films, a total of 9,522 characters were coded between 40 to 64 years of age. *Less than a quarter (21.8%) of these characters were women.* This is a gender ratio of 3.6 middle-aged males to every 1 middle-aged female. As shown in Table 4, there has been no increase in the percentage of female speaking characters 40 to 64 years of age from 2007 to 2014. The high was observed in 2008, however. Not only do female actors face a steep fiscal cliff when they reach 40 years of age on screen, but they are not valued in the same way as their younger female counterparts. This becomes apparent in the section below, which examines physical attributes.

Table 4
Gender of Characters 40-64 Years of Age: 2007-2014

Gender of 40-64 yr olds	2007	2008	2009	2010	2012	2013	2014	Total
% of males	78.9%	74.5%	76%	78.9%	79.3%	78.9%	80.1%	78.2%
% of females	21.1%	25.5%	24%	21.1%	20.7%	21.1%	19.9%	21.8%
Total # of Characters	1,461	1,178	1,287	1,354	1,383	1,500	1,359	9,522

Note: The percentages within each column total 100%.

Three appearance-based indicators were measured.[12] Each speaking or named character was evaluated for wearing sexually revealing clothing (no, yes), exposing skin in chest, midriff, upper thigh regions (no nudity, some nudity), and being referenced as physically attractive (no, yes) by other characters. All three of these variables were significantly related to gender. Females of all ages were more likely than males to be shown in sexy attire (27.9% of females vs. 8% of males), with partial or full nudity (26.4% of females vs. 9.1% of males) and referenced as physically attractive (12.6% of females vs. 3.1% of males). These trends are problematic, as theory suggests and research supports that exposure to objectifying content can contribute to negative effects (e.g., self objectification, body shame) among some females.[13]

Table 5
Hypersexualization of Female Characters On Screen: 2007-2014

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

Note: The percentages within each column do *not* total 100%. Rather, each cell reflects the percentage of females depicted with the measure referenced. For instance, 27% of females were shown in sexualized attire in 2007. This means that 73% were not.

Has the level of female sexualization changed over time? Table 5 reveals that very little deviation has occurred across the seven-year sample. No differences emerged on sexy attire or nudity when comparing 2007 to 2014. The seven-year high on sexy attire and nudity was observed in 2010 and 2012, respectively. Between 2007 and 2014, a 5.9% decline in the proportion of females referenced as physically attractive was observed. As a point of contrast, the over time percentages of male sexualization across the same three indicators are provided in Table 6. This table shows that male sexualization is dramatically lower than female sexualization and that the trends have not changed between 2007 and 2014. Male characters depicted in sexy attire or with exposed skin were at a high (9.7%, 11.7%, respectively) in 2013, but these percentages do not differ from 2014 percentages.

Table 6
Hypersexualization of Male Characters On Screen: 2007-2014

Measures	2007	2008	2009	2010	2012	2013	2014
% in sexualized attire	4.6%	5.1%	4.7%	7.2%	7%	9.7%	8%
% w/some nudity	6.6%	8.2%	7.4%	9.4%	9.4%	11.7%	9.1%
% referenced attractive	5.4%	4.1%	2.5%	3.8%	Not measured	2.4%	3.1%

Note: The percentages within each column do *not* total 100%. Rather, each cell reflects the percentage of males depicted with the measure referenced. For instance, 4.6% of males were shown in sexualized attire in 2007. This means that 95.4% were not.

Now, we turn to examine the relationship between character age and sexualization. Given the pronounced gender differences found above, only the findings for female characters are reported below.[14] Only teens, young adults, and middle-aged characters were included in the analysis. The sexualization by age results for male characters can be found in Footnote 15. As illuminated in Table 7, *female teens (13-20 yr olds) were just as likely to be shown in sexy attire, with exposed skin and referenced as attractive in the 100 top films of 2014 as young adult females (21-39 yr olds).* Middle-aged females were less likely than the other two groups to be sexualized.

Table 7
Female Sexualization by Age in Top-Grossing Films: 2014

Measures	13-20 yr olds	21-39 yr olds	40-64 yr olds
% in sexualized attire	35.3%	37.4%	14.8%
% w/some nudity	33.6%	34.9%	14.8%
% referenced attractive	20%	16.1%	5.2%

Note: The percentages within each column do *not* total 100%. Rather, each cell reflects the percentage of females depicted with the measure referenced. For instance, 35.3% of 13-20 yr old females were shown in sexualized attire. This means that 64.7% were not.

We took a deeper dive and looked at the percentage of females in sexy attire and with some nudity by age in Figures 1 and 2. The trends are remarkably similar for both measures. What is particularly notable is the continued decrease in the proportion of 13 to 20 year old females in sexy attire and with some nudity from 2012 to 2014. However, this trend is tempered by the fact that the percentage of female teens in sexy attire in 2014 is not different from 2007. Also, female teens in 2014 were more likely to be shown with exposed skin than in 2007.

In total, gender stereotypes are alive and well in 2014 top-grossing films. Females were more likely than males to be young adults, sexualized, and shown in domesticated roles such as parents and relational partners. Some of these patterns interact with age, with 13 to 20 year old females and 21 to 39 year old females equally likely to be sexualized. The class of women most likely to be marginalized in movies was women 40 to 64 years of age. This is no surprise, yet it may contribute to and reinforce ageism and sexism in screenwriting as well as industry casting and hiring. Further, these patterns may perpetuate implicit biases in viewers.

Figure 1
Percentages of Females in Sexy Attire by Age: 2007-2014
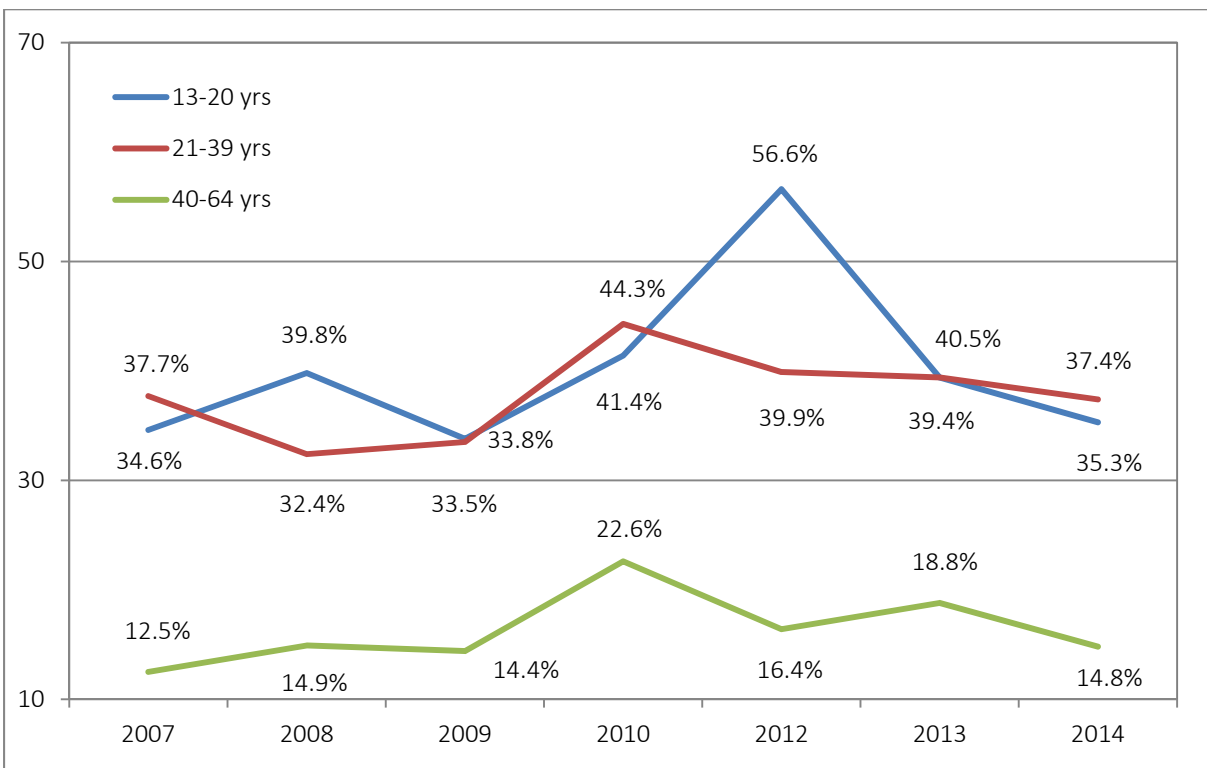
Figure 2
Percentages of Females w/Exposed Skin by Age: 2007-2014

© Dr. Stacy L. Smith
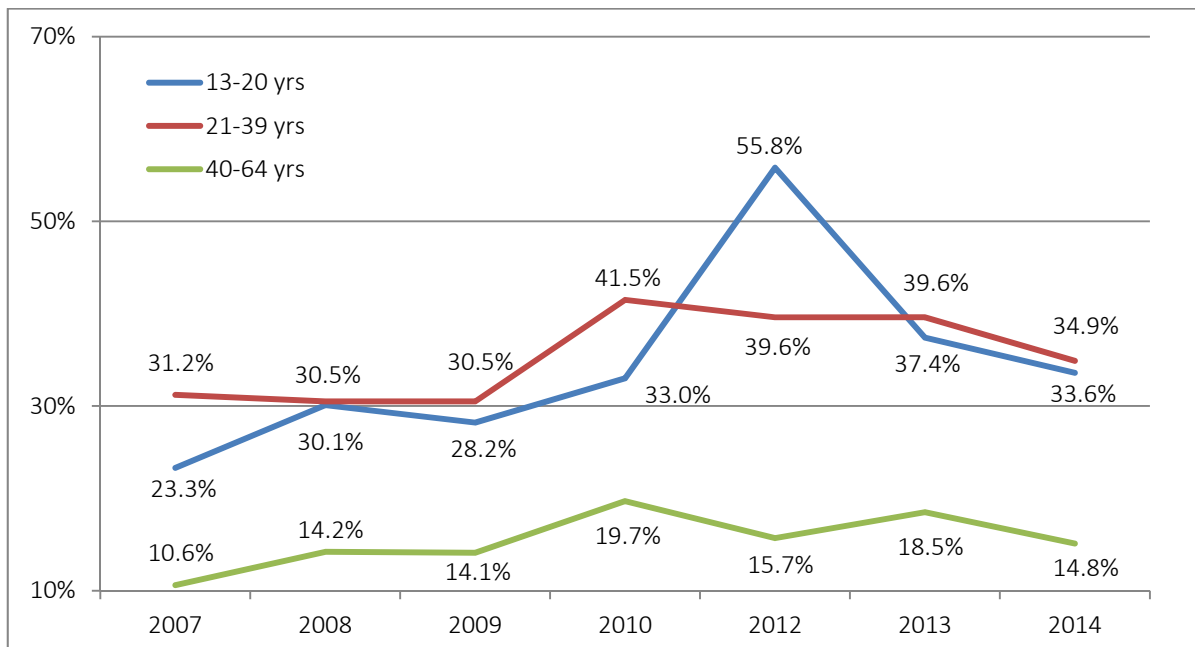
Table 8
Content Creators by Gender: 2014

Behind the Camera	Males	Females	Total
Director	98.1% (n=105)	1.9% (n=2)	107
Writer	88.8% (n=262)	11.2% (n=33)	295
Producer	81.1% (n=749)	18.9% (n=175)	924
Totals	84.2% (n=1,116)	15.8% (n=210)	1,326

Behind the Camera

The gender of all directors, writers, and producers was also evaluated across the 100 top films of 2014.[16] A full 1,326 individuals worked behind the camera in 2014. Only 15.8% were female and 84.2% were male. This calculates into a gender ratio of 5.3 to 1, which is consistent with our other reports on top-grossing films.[17] *Looking at specific behind the camera posts, only 2 women (1.9%) worked as directors across the 100 top films.* Higher percentages were observed for female writers (11.2%) and female producers (18.9%) in 2014. Table 9 illuminates the percentage and number of female directors working across the 100 top films from 2007 to 2014. Across 700 films and 779 directors, only 28 women (3.6%) worked as directors.

Table 9
Number of Female Directors by Year: 2007-2014

Directors	2007	2008	2009	2010	2012	2013	2014	Total
# of female directors	3	9	4	3	5	2	2	28
% of female directors	2.7%	8%	3.6%	2.75%	4.1%	1.9%	1.9%	3.6%
Total # of Directors	112	112	111	109	121	107	107	779

We then examined whether having at least one female content creator behind the camera was associated with a select number of variables. The total number of directors across the 100 top-grossing 2014 films was too low (n=2) to permit statistical analyses. As a result, we only focused on writers and producers. Each film was bifurcated into two categories: those with at least one female writer attached vs. those with no female writers. For producers, this procedure was repeated. Then, the relationship between female writer (no, yes) and female producer (no, yes) and specific variables was assessed.

The first variable was the on screen gender distribution of speaking roles.[18] Films with at least one female writer had a significantly higher percentage of girls and women (34.8%) on screen than did films with only male writers (25.9%, see Figure 3). These findings suggest that female screenwriters may be more likely to include girls and women in their storylines than male screenwriters, reflecting the adage "write what you know." It may also be the case that female writers are more likely to be hired to pen female-driven stories. The latter explanation is clearly problematic and reflects a possible double standard for content creators by gender. No differences emerged in the percentage of girls/women on screen by producer gender.

Figure 3
Writer Gender & Percentage of Female Characters On Screen
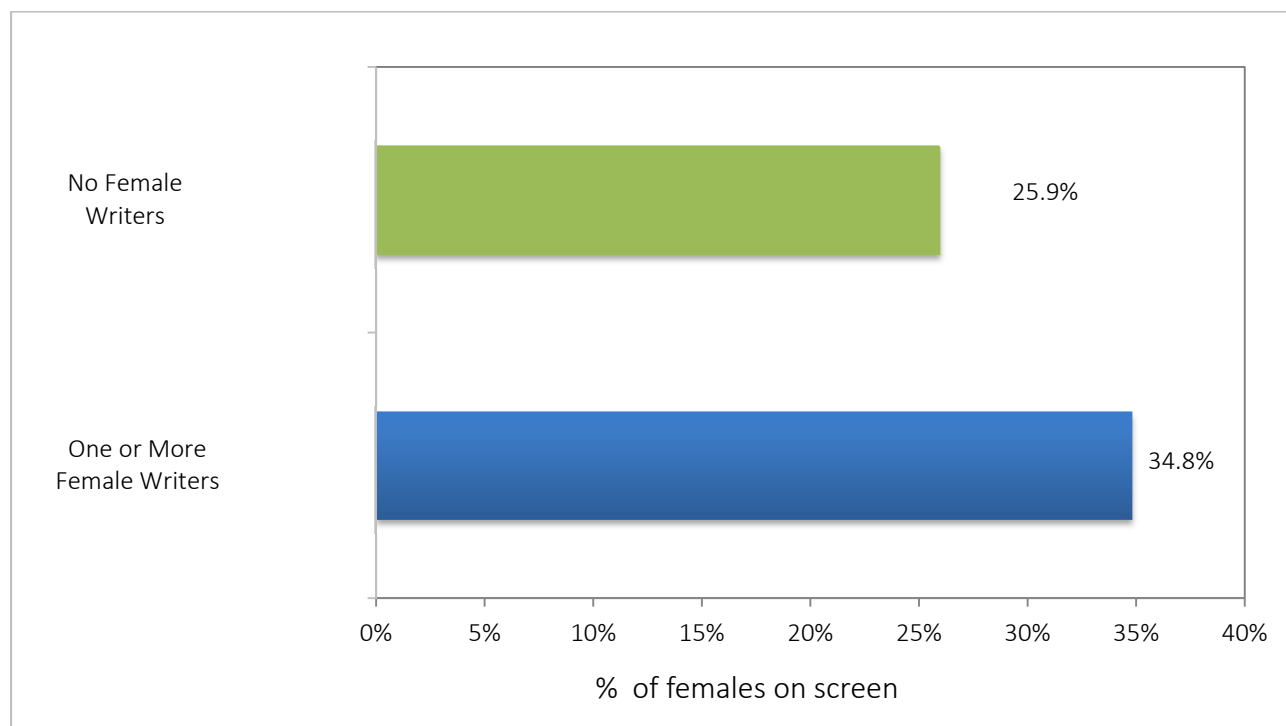
Next, we were interested in whether the presence of a female writer or producer changes the gender distribution of middle-aged characters (40-64 yr olds).[19] No association emerged by producer gender. However, *a 7.8% increase was observed in the percentage of women 40-64 years of age when a female writer was attached (25.9% females on screen with at least one female writer vs. 18.1% females on screen with no female writers).*

Finally, the relationship between female sexualization and the presence of a female writer and producer was assessed.[20] While no differences emerged for writer gender, the presence of a female producer was associated with the percentage of females depicted in sexy attire and with some exposed skin. In comparison to female characters in films without a female producer, female characters in films with a female producer were less likely to be depicted in sexually revealing clothing (35.9% vs. 26.4%) and with some nudity (33.3% vs. 25.1%).

The findings reveal that females are grossly underrepresented in top-grossing films. Females were often shown as domesticated, young, and hypersexualized. Few women work behind the camera. When they do, however, they are associated with films that feature more females on screen, a larger percentage of women 40-64 years of age, and less sexualization.

On Screen Prevalence

Each year, we examine the apparent race/ethnicity of speaking or named characters. A total of 4,024 characters could be evaluated for apparent race/ethnicity across the 100 top films of 2014. Of these, 73.1% were White, 4.9% were Hispanic/Latino, 12.5% were Black, 5.3% were Asian, 2.9% were Middle Eastern, <1% were American Indian/Alaskan Native or Native Hawaiian/Pacific Islander, and 1.2% were from "other" racial and/or ethnic groupings. ***As shown in Table 10, this represents no change in the portrayal of apparent race/ethnicity from 2007-2014.***

Table 10
Character Race/Ethnicity in Top-Grossing Films: 2007-2014

Year	White	Hispanic	Black	Asian	Other
2007	77.6%	3.3%	13%	3.4%	2.5%
2008	71.2%	4.9%	13.2%	7.1%	3.5%
2009	76.2%	2.8%	14.7%	4.7%	1.5%
2010	77.6%	3.9%	10.3%	5%	3.3%
2012	76.3%	4.2%	10.8%	5%	3.6%
2013	74.1%	4.9%	14.1%	4.4%	2.5%
2014	73.1%	4.9%	12.5%	5.3%	4.2%

Note: Other comprises Middle Eastern, American Indian/Alaskan Native, Native Hawaiian/Pacific Islander as well as those with mixed racial/ethnic heritages.

Table 10 statistics can be examined against U.S. Census Bureau figures. In terms of U.S. population estimates for 2013, Hispanics comprised 17.1% of the population, Blacks 13.2%, and Asians 5.3%.[21] In light of these real world percentages, Hispanic/Latino characters on screen in film continue to be the most underrepresented ethnic group. This is surprising given that Hispanics purchased 23% of U.S. movie tickets[22] in 2014 and Nielsen (2014, ¶1) estimates that they "have a current spending power of about $1.4 trillion."[23]

In the U.S., individuals from underrepresented racial and/or ethnic groups amount to 37% of the population and, in 2014, bought 46% of movie tickets at the box office.[24] ***Across the 100 top films of 2014, underrepresented characters accounted for 26.9% of all speaking or named characters.*** Further, only 17 of the 100 top films of 2014 featured a lead or co lead actor from an underrepresented racial and/or ethnic group. Of the 17 leads, 47% were Black, 29.4% were from mixed racial/ethnic heritages, 11.8% were Asian, and 11.8% were Hispanic/Latino. An additional 3 films depicted an ensemble cast with 50% or more of the group comprised of actors from underrepresented racial/ethnic backgrounds.

Similar to earlier in the report, we looked at the percentage of all underrepresented characters in action/adventure, animation, and comedy. As shown in Table 11, no 5% or greater differences emerged in the percentage of underrepresented characters on screen in action/adventure or comedy from 2007 or 2010. ***When compared to 2007 a 25.4% increase in the percentage of underrepresented characters was observed in the top animated films (n=10) of 2014. Over half of these characters appeared in one animated film, The Book of Life. Even without this movie, there is***

still a significant increase in the percentage of underrepresented speaking characters in animated films from 2007 to 2014.

Table 11
Percentage of Underrepresented Characters by Film Genre: 2007, 2010, 2014

	Action or Adventure			Animation			Comedy		
	2007	2010	2014	2007	2010	2014	2007	2010	2014
% of underrepresented characters on screen	21.5%	29.7%	26.1%	8.1%	1.5%	33.5%	23.1%	23.8%	26.5%

Note: Only the percentage of underrepresented speaking or named characters is reported in Table 11. For the percentage of White speaking characters, subtract the percentage of underrepresented characters from 100%.

Given that an overall point statistic does not reveal how each film portrays diversity, it becomes important to examine the percentage of underrepresented characters per movie. Since 37% of the U.S. population is not White, we assessed what number of movies fell within +/-5% points of this point estimate (32%-42%). Only 14% of films featured underrepresented characters in 32%-42% of the cast. More problematically, *in 19 movies 10% or less of the cast was from underrepresented racial/ethnic groups.*

Yearly, we also report on the frequency of Black characters on screen (see Figure 4). In 2014, 12.5% of all speaking or named characters were Black. *However, a full 17 films did not feature one Black speaking or named character.* This percentage is identical to last year. Only 11% of films in the 2014 sample featured Black characters in a percentage that fell close to (+/-2%) U.S. Census (13.2%). Nine percent of all films depicted Black characters as 30.1%-62% of the cast.

Figure 4
Percentage of Black Characters per Movie in 100 Top-Grossing Films: 2014
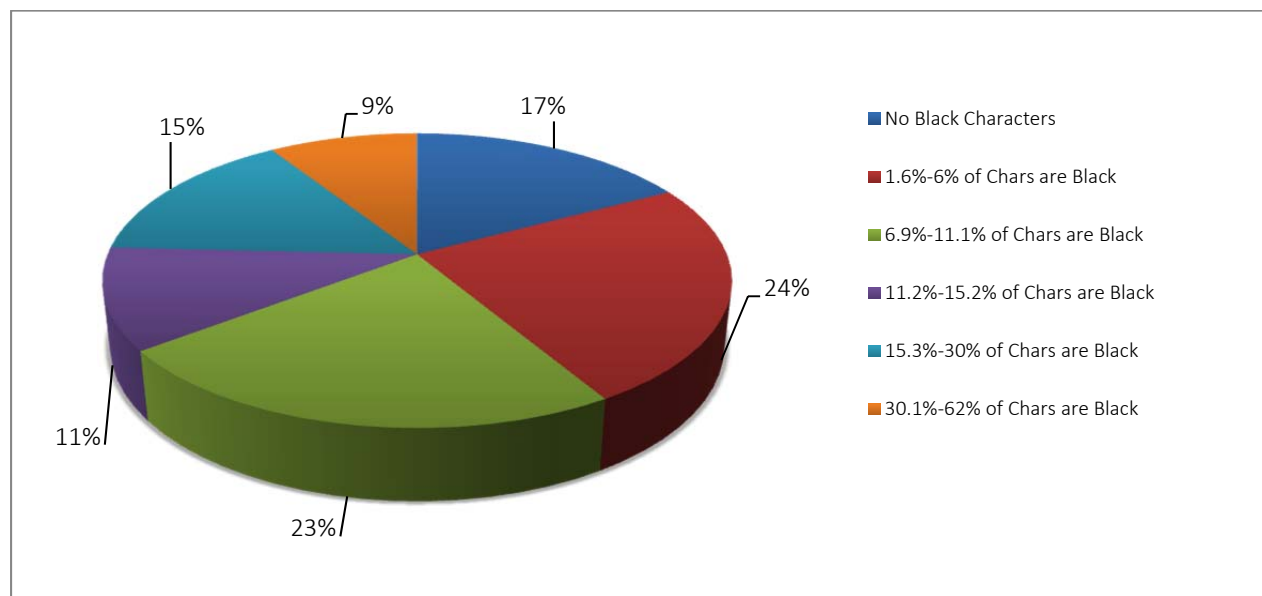
In addition to Black characters, we examined the distribution of Asian characters per film. A total of 5.3% of speaking characters were Asian sample wide across the 2014 top films (see Table 10). Just over a fifth (*n*=21) of the 2014 films are within +/-2% of the U.S. Census figure of 5.3%, which is identical to 2013 films (*n*=21). *However, over 40 of the 100 most popular domestic movies of 2014 featured no Asian speaking characters on screen.* This finding is not different from 2013. Six 2014 films feature Asian characters in 20%-45% of the cast.

Turning to gender, the percentages of males and females within the major racial/ethnic categories across the 100 top-grossing films of 2014 are reported in Table 12. Character race/ethnicity did not vary significantly by gender (see Table 12).

Table 12
Character Race/Ethnicity by Gender in Top-Grossing Films: 2014

	White	Hispanic	Black	Asian	Other
Males	70.5%	68.5%	69.2%	67.4%	75.1%
Females	29.5%	31.5%	30.8%	32.6%	24.9%
Ratio	2.40 to 1	2.18 to 1	2.24 to 1	2.07 to 1	3.02 to 1

Note: Other comprises Middle Eastern, American Indian/Native Alaskan, Native Hawaiian/Pacific Islander as well as those with Mixed racial/ethnic heritages.

Overall, the results show that underrepresented characters lack visibility on screen in popular films. Further, there has been no meaningful change in racial/ethnic composition of casts over the seven years evaluated. A pro male bias persists across every racial/ethnic group examined, particularly among characters from mixed race or "other" ethnic heritages.

On Screen Portrayal

Focusing on portrayals, we looked at the relationship between character race/ethnicity and domestic roles (parental, relational status) as well as our appearance indicators. Given the gender differences noted above, the analyses were run separately for males and females on all measures in this section. Parental status and relational standing did not statistically vary by character race/ethnicity for males or females in 2014.

Turning to appearance measures, only one (attractiveness) of the three measures was statistically related to race/ethnicity for female characters (Table 13).[25] In comparison to Hispanic/Latino females (9.7%), White females were more likely to be referenced as physically attractive whereas Asian females and females from "other" racial/ethnic groups were less likely.

Table 13
Hypersexualization of Female Characters by Race/Ethnicity: 2014

Measure	White	Hispanic	Black	Asian	Other
% in sexy attire	27.5%	30.6%	29%	25.7%	31%
% w/exposed skin	26.3%	27.4%	27.7%	20%	31%
% referenced attractive	14.8%	9.7%	11.6%	4.3%	2.4%

Note: Other comprises Middle Eastern, American Indian/Native Alaskan, Native Hawaiian/Pacific Islander as well as those with Mixed racial/ethnic heritages. Columns do not total to 100%. Rather, each cell reflects the percentage of females depicted with the measure referenced. For instance, 27.5% of White females were shown in sexualized attire. This means that 72.5% of White females were not.

In contrast, all three appearance measures were associated with male characters' race/ethnicity.[26] When compared to Hispanics/Latinos, Black and "other" male characters were more likely to be shown in sexually revealing attire. Asian males were less likely than White, Black and males from "other" racial/ethnic groups to be shown in sexy clothing. When compared to Black and White males, those from "other" racial/ethnic groups were more likely to be shown with exposed skin and Asian males were less likely. Hispanic/Latino males were less likely than those males from "other" racial/ethnic groups to be shown with some nudity. Finally, Black males were more likely than Asian males to be referred to as physically attractive.

Table 14
Hypersexualization of Male Characters by Race/Ethnicity: 2014

Measure	White	Hispanic	Black	Asian	Other
% in sexy attire	7.2%	6%	11.8%	1.4%	11.1%
% w/exposed skin	9.4%	6%	7.8%	2.1%	18.9%
% referenced attractive	2.7%	3.7%	5.7%	.7%	2.4%

Note: Other comprises Middle Eastern, American Indian/Native Alaskan, Native Hawaiian/Pacific Islander as well as those with Mixed racial/ethnic heritages. Columns do not total to 100%. Rather, each cell reflects the percentage of males depicted with the measure referenced. For instance, 7.2% of White males were shown in sexualized attire. This means that 92.8% of White males were not.

Behind the Camera

As illuminated above, 107 directors helmed the 100 top films of 2014. Only 5 (4.7%) of these directors were Black (see Table 15). The five films they directed include: *Ride Along* (Tim Story), *The Equalizer* (Antoine Fuqua), *Think Like a Man Too* (Tim Story), *Selma* (Ava DuVernay), and *When the Game Stands Tall* (Thomas Carter). As this list illustrates, only four *unique* Black directors worked across the top films of 2014. Only 1 was a Black female director.

Table 15
Number of Black Directors by Year: 2007-2014

Black Directors	2007	2008	2009	2010	2012	2013	2014	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)	5.4% (*n*=42)
% of female directors	0	1.8% (*n*=2)	0	0	0	0	<1% (*n*=1)	<1% (*n*=3)
Total # of Directors	112	112	111	109	121	107	107	779

To contextualize 2014, we have presented the number and percentage of Black directors from 2007 to 2014 (see Table 15, excluding 2011). Only 45 (5.8%) Black directors have been attached to the 700 top-grossing films, which under indexes in comparison to U.S. Census (13.2%). Only 3 Black directors were women across the 700 top-grossing films of 2007-2014.

Figure 5
Percentage of Black Characters by Director Race

% of Black Characters On Screen

Black Director Present — 40.2%

Black Director Absent — 10.6%
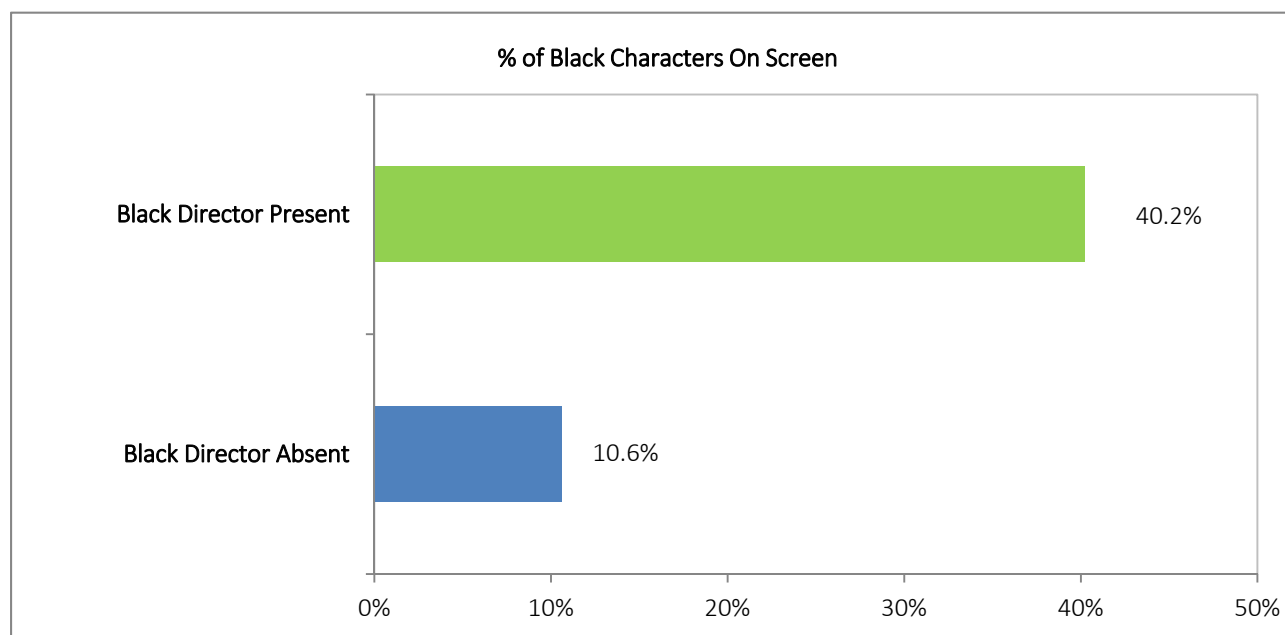
Next, we were interested in how the presence or absence of a Black director was associated with the percentage of on screen characters in film that were Black. As shown in Figure 5, the relationship between director race and character race was pronounced.[27] Of the films with a Black director, 40.2% of all characters were Black. When the director was not Black, only 10.6% of all on screen speaking or named characters were Black.

These findings are similar to earlier results in the report on female writers. Black directors may be telling stories that reflect their social and cultural experiences. Or, it may be the case that Black directors get hired to helm films that have primarily Black casts. As mentioned earlier, this latter explanation is problematic as it limits the work opportunities for directors by the racial/ethnic composition of the lead or supporting cast.

In addition to examining Black directors, this year we assessed Asian directors working across the 700 movies. As shown in Table 16, only 19 Asian directors worked across the 700 top films of 2007, 2008, 2009, 2010, 2012, 2013, and 2014. This translates into only 2.4% of all directors. Only 1 Asian woman was attached as a co-director for a specific region (India) on *Slumdog Millionaire*.

Table 16
Number of Asian Directors Across 700 Films

Asian Directors	2007	2008	2009	2010	2012	2013	2014	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	2.3% (*n*=18)
% of female directors	0	<1% (*n*=1)	0	0	0	0	0	<.2% (*n*=1)
Total # of Directors	112	112	111	109	121	107	107	779

Overall, at least three notable findings emerged from this section. First, film is still a White bastion. Second, a substantial increase (25.4%) was observed in the percentage of underrepresented characters in animated films. Some of that was due to the diversity in the film *The Book of Life*. Third, few Black or Asian directors work in the top-grossing sphere. Only three Black females and one Asian woman directed movies assessed in this analysis. Black directed movies were associated with more Black characters on screen, a finding we have observed in our previous research.

LGBT On Screen Portrayals

For the first time, the MDSC Initiative added qualitative measures to capture the prevalence of Lesbian, Gay, Bisexual, and/or Transgender (LGBT) characters on screen.[28] *Across the 4,610 speaking or named characters on screen, only 19 were coded as LGB across the 100 top films of 2014.*[29] This is less than half of 1% of all portrayals (.4%). Ten characters were coded as Gay, 4 were Lesbian, and 5 were Bisexual. Not one Transgender character was portrayed. Only 14 movies sample wide featured an LGB depiction and none of those films were animated.

The percentage of LGB characters is notably lower than estimates of the LGB population in the U.S., which The Williams Institute at UCLA reports to be 3.5% and 0.3% identifying as Transgender.[30] In a more recent study of 18-35 year olds in the U.S., "seven percent of millennials identify either as lesbian, gay, bisexual, or transgender (LGBT)" (PRRI, 2015, see page 46, ¶1).[31] *Clearly, Hollywood is substantially under indexing on inclusive portrayals of the LGBT community.*

What is the gender and racial/ethnic breakdown of the 19 LGB characters? Nearly two-thirds were male (63.2%) and only 36.8% were female. LGB characters were also predominantly White (84.2% or 16 White characters, 10.5% or 2 Asian characters, 5.3% or 1 Black character). In terms of age, the majority of characters were young adults or older (*n*=17). Two female characters were teens. It must be noted that one character (Alan Turing, *The Imitation Game*) was depicted in a flashback during his teenage years.

Three trends were apparent in portrayals of LGB characters in the top-grossing films of 2014. First, depictions of healthy romantic/sexual relationships were scarce. Of 19 LGB characters, only two were portrayed as being in a public, stable, long-term partnership and two were shown dating. Notably, these characters represented interracial (Asian/White) Lesbian couples. However, no Gay or Bisexual male characters were portrayed in a committed relationship. Second, no LGB characters were depicted as parents raising young children together. Finally, a handful of Gay and Bisexual characters were shown concealing their sexuality.

Conclusion

The landscape of popular cinema in 2014 remains skewed and stereotypical. Across 700 films and over 30,000 speaking characters from 2007 to present, movies continue to distort the demographic reality of their audience. Film characters are overwhelmingly White and male, despite both population statistics and viewing patterns.

Employment trends behind the camera evidence a similar dearth of diversity. Only five Black directors helmed top movies in 2014, and women were underrepresented by a factor of 5.3 to 1 as directors, writers, and producers in 2014. Further, the 100 top films of 2014 featured no Asian directors. Despite activism, attention, and statements about addressing the issue, Hollywood's default setting for characters and content creators remains fixed on "status quo."

The portrayal of characters in popular film is also problematic. Movies depict female characters as younger and more sexualized than their male counterparts. This focus on youth and beauty restricts both the career opportunities of female actors and the range of stories that are told. Marginalizing middle-aged women means missing out on plots about female characters able to achieve occupational or other forms of power. Increasing the prevalence of females of all ages means increasing the variety of stories seen on screen.

In terms of diversity, the percentage of underrepresented characters in animated films increased in 2014. Over half of these characters appeared in just one movie, *The Book of Life*. However, even without this film, a significant increase was observed in the percentage of underrepresented characters from 2007 to 2014. As a genre designed to appeal to young viewers, animated fare has under represented the diversity of U.S. children. Half of children under age 5 are from an underrepresented racial and/or ethnic group.[32] Though its target audience is increasingly diverse and its stories restrained only by the boundaries of imagination, animated content remains an arena where representation and vision lags. It will be important to examine the percentage of underrepresented characters in 2015 movies to assess whether these 2014 findings were an anomaly or part of a new inclusive trend.

After 7 years and 700 films, it is clear that activism and advocacy are still required. Reframing the requests made to writers and decision-makers may be one way forward. The results from this study illuminate that three-quarters (76%) of the characters in popular 2014 films are inconsequential to the plot. Adding and adjusting the background or supporting players is one easy and essential means of increasing the diversity in popular movies. Doing so will ensure that the lead characters in popular films move through a demographic landscape that matches the profile of the audience.

The present study has several limitations with regard to the scope of these measures. First, the LGBT measures were only applied in 2014. Thus, we have little information on how portrayals have changed over time in the 100 top films from previous years. As a result, we plan to monitor these depictions qualitatively and quantitatively in future studies. Second, both for on screen and behind the camera, the racial and ethnic classifications are very broad. Though derived from U.S. Census categories, many different groups identify within each label. For instance, the Asian category encompasses many unique ethnic groups. A closer examination of representation of individual ethnic backgrounds is needed in the future. Third, our research does not address issues of neurodiversity or physical abilities. In 2016, we plan to begin exploring these other forms of diversity in media.

Looking ahead to 2015, change may already be on the horizon. Films by and about women (e.g., *Pitch Perfect 2, Spy, Fifty Shades of Grey, Cinderella, Insurgent*) have drawn ticket buyers en masse. Five female directors have helmed films that made over $25 million in the first half of 2015, which should put them all in the 100 top films this year. This is greater than the number of female directors of the 100 top films of 2013 <u>and</u> 2014. Diversity has also proven to be a draw at the box office, with films like *Furious 7* earning over $1 billion worldwide. While the economics are encouraging, long-term solutions and further monitoring are required. Only with sustained effort and change can Hollywood move from an industry of inequality to one of inclusion.

Notes

[1.] The list of 100 top-grossing films of 2014 was complied from Box Office Mojo (http://www. boxofficemojo.com/). The revenues were based on domestic box office performance. No documentaries were included in the 100 top films. As such, the study only focuses on fictional features.

[2.] Because this is a longitudinal investigation, the language regarding variables, definitions, training/reliability, and coding procedures is taken from our codebook and thus the footnotes are highly similar from year to year. There were two units of analysis in the present study: the speaking character and the film. A character is defined as a living being that speaks one or more words independently and discernibly on screen. Non-speaking characters that are referred to by name also were included in the investigation. Sometimes characters appear nearly identical and speak independently on screen. In these cases, the unique identity of characters may not be decipherable. When this occurs, the coders "group" homogeneous characters and code them as a single entity. This happens infrequently across the 100 top films. Only 6 groups were found across the sample of movies this year, which is lower than what we found in 2013 (n=30) but consistent with other years we have reported (e.g., n=3 in 2012; n=9 in 2010). All group data was excluded from analysis. Anytime an independent speaking character changed type, age, sex, or ethnicity, a new character line was created. A total of 236 demographic changes were observed across the sample; if these were removed the percentage of female characters would decrease by .1% to 28%. Thus, demographic changes have very little impact on the overall percentage of speaking characters by gender.

[3.] Each character was evaluated on a series of demographic characteristics: *sex* (male, female); *age* (0-5 years, 6-12 years, 13-20 years, 21-39 years, 40-64 years, 65+ years); *apparent race/ethnicity* (White, Hispanic/Latino, Black, American Indian/Alaskan Native, Native Hawaiian/Pacific Islander, Asian, Middle Eastern, Other); and *role* (primary, secondary, tertiary). Characters were also assessed for *parental status* (not a parent, single parent, co parent, parent-relational status unknown) and *relational status* (single, married, committed relationship-not married, committed relationship-martial status unknown, divorced, widowed). These latter two measures were only assessed when there was enough information available to make a judgment. As a result, the sample size of characters for these two analyses is much smaller.

There were three appearance indicators, which were derived from Downs & Smith (2010, p. 725). *Sexually revealing clothing* (SRC) refers to tight or revealing apparel worn in such a way that heightens and/or draws gaze to parts of the body from mid chest to mid thigh. SRC was coded as present or absent. *Nudity* refers to the amount of skin shown due to the lack of clothing or its insufficient coverage of specific body parts. Nudity (Downs & Smith, 2010, p. 725) was coded as none, partial (i.e., skin depicted in breast, midriff, and/or lower buttocks regions), or full (i.e., exposed breast(s) or genitals for females; exposed genitals only for males). A bare buttock is not considered full but rather partial nudity. Also, full nudity is coded if characters are shown without any clothes but use their hands to cover breast and/or genital regions (e.g., *The Proposal*). These variables were only assessed for characters with human or human-like bodies.

Characters were also assessed for attractiveness, which demarcates the frequency of verbal (e.g., "he is hot!") and/or nonverbal references (e.g., making "eyes" at another character) one (or more) character makes about another character's physical beauty. Any self references are ***not*** taken into consideration on this measure. Further, this measure does not rely on our coders' standards of physical attractiveness but rather emerges from character dialogue and behaviors. The variable has three levels: no verbal or nonverbal references, 1 verbal or nonverbal reference, or 2 or more verbal or nonverbal references.

For all of the variables above, two additional levels were available as coding options: not applicable and can't tell. Can't tell was used when a speaking or named character possessed a characteristic but it was impossible to evaluate with the information provided in the plot. For example, a baby may be called a gender-neutral name (i.e., Pat) and depicted on screen wearing only a white one piece. For biological sex, the baby would be coded as "can't tell." Not applicable is used when the character doesn't exhibit the characteristic under assessment. To illustrate, a dog that speaks on screen and has a Doberman body would be not applicable for coding *sexually revealing clothing* or *nudity*. Finally, some variable levels were collapsed prior to analysis. The details on collapsing were noted in the footnote pertaining to the specific variable's analysis. In the report, we only report on variables post collapsing.

At the film level, a few additional variables were captured. *Role* measured qualitatively whether the character was the lead or co lead of the unfolding narrative. The lead character is the major force attempting to accomplish the story's purpose. In some cases, two characters share roughly equivalent screen time, appear within the first five minutes of the film, and/or are equally involved in the journey. The presence or absence of a *narrator* was coded, focusing on a raconteur that articulated via voice over the backstory or filled in details about the unfolding events. Each narrator was coded for biological *sex* (male, female).

Prior to evaluating the sample of 2014 films, the students were trained to unitize and evaluate measures in a classroom type setting for roughly 6 weeks. Diagnostics were provided for feedback and to teach students how to apply the variables to motion picture content. The same instructor (Project Manager, Marc Choueiti) has taught the codebook to all the students that evaluated the 700 movies in the sample (starting with the initial report on 2007 films). Once the training was over, each film was watched independently by three MDSC research assistants and evaluated for unitizing and variable reliability. Disagreements were resolved through discussion with the project manager.

Unitizing agreement was operationalized as the total number of characters seen by at least two of the three coders. We report unitizing agreement across the four quartiles (25%) of the sample: Q1 (100%-88.6%); Q2 (88.5%-83.3%); Q3 (83%-78.6%); and Q4 (78.1%-59.4%). It should be noted that all but 5 films had 70% unitizing agreement or higher across the sample (68.2%, 68%, 67.4%, 67.1%, 59.4%). Thus, the unitizing reliability is very strong despite the complexity of identifying every independent speaking or named character on screen.

In terms of variable coding, the Potter & Levine-Donnerstein (1999) formula for multiple coders was used. Here, we report median reliability coefficients sample wide as well as the range on each variable: *form* 1.0 (*range*=1.0); *apparent age* 1.0 (*range*=.65-1.0); *sex* 1.0 (*range*=1.0); *apparent race/ethnicity* 1.0 (*range*=.66-1.0); *parental status* 1.0 (*range*=.64-1.0); *relational status* 1.0 (*range*=.65-1.0); *sexually revealing clothing* 1.0 (*range*=.61-1.0); *nudity* 1.0 (*range*=.63-1.0); *physical attractiveness* 1.0 (*range*=1.0); *role* 1.0 (*range*=.63-1.0); *first narrator* 1.0 (*range*=.47-1.0); *first narrator sex* 1.0 (*range*=.61-1.0); *second narrator* 1.0 (range=.47-1.0); and *second narrator sex* 1.0 (range=0-1.0). Given how few films have a third or fourth narrator, we did not calculate reliability on the presence of a narrator or narrator sex on these movies.

It must be noted that reliability for *first* and *second narrator* is calculated only once per film as this decision is a film level measure. Therefore, a single disagreement negatively impacts the final coefficient for a film (reflected in the range of values above). Further, when coders disagree about the presence of a narrator, their resulting values for *narrator sex* will differ by default given the dependence of these two measures.

For each film, additional information was collected from online databases. Using labels from Box Office Mojo, each film's genre was classified into one mutually exclusive category: action and/or adventure, animation, comedy, or all else. We used the same approach in earlier years (2007, 2010, 2013). In a few instances, movies were reclassified for consistency and validity across the time frame evaluated. Musicals were typically reclassified based on their stories. Most films with genre descriptors of "action" or "adventure" were kept in those categories, even if other terms were used (i.e., action comedy, action drama, action horror). Ratings were derived from DVD box art and checked on MPAA's website.

[4.] Across the 100 top films of 2014, only 4 speaking or named characters were impossible to categorize for gender. They are excluded from all analyses. For the overtime gender analyses in Table 1, two years featured 101 movies. This was due to the fact that two sets of movies were released as a "double feature." For simplicity, the gender balance percentage (for those years and overall) is rounded to the nearest whole number.

[5.] 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 prepared for the Geena Davis Institute on Gender in Media. Los Angeles, CA.

[6.] Powers, S.P., Rothman, D.J., & Rothman, S. (1996). *Hollywood's America: Social and political themes in motion pictures*. Boulder, CO: Westview Press.

[7.] The chi square analysis for *female lead/co lead* (no, yes) by *character sex* (male, female) was significant, X^2 (1, 4,610)=78.71, *p* <.01, phi=.13.

[8.] A statistically significant chi square was observed for *character sex* (male, female) by *rating* (G, PG, PG-13, R), X^2 (3, 4,610)=8.09, *p* <.05, V*=.04. Only 1 film in the 2014 sample was rated G. Given the small sample size of general audience films, the percentage of female characters was not compared to the percentage of female characters in films rated PG, PG-13, or R. No 5% or greater differences emerged across the three remaining ratings.

[9.] *Parental status* (not a parent, single parent, co parent, parent-relational status unknown) was collapsed into two levels: parent (single, co parent, parent-relational status unknown) vs. not a parent. Chi square analysis for *parental status* (no, yes) by *character sex* (male, female) was significant, X^2 (1, 1,007)=13.11, *p* <.01, phi=.11.

Prior to analysis, *relational status* (single, married, committed relationship-not married, committed relationship-martial status unknown, divorced, widowed) was also collapsed into a dichotomous variable: in a relationship (married, committed relationship-not married, committed relationship-martial status unknown) vs. not in a relationship (single, divorced, widowed). The analysis revealed a significant association between *relationship status* (in a relationship vs. not in a relationship) and *character sex* (male, female): X^2 (1, 1,009)=17.60, *p* <.01, phi=.13.

[10.] Smith, S.L., & Cook, C.A. (2008). *Gender stereotypes: An analysis of popular films and TV*. Geena Davis Institute on Gender in Media. Los Angeles, CA.

[11.] Prior to analysis, the *apparent age* variable was collapsed into five categories: child (0-5 & 6-12), teen, young adult, middle aged, elderly. The chi-square analysis revealed a significant relationship between *apparent age* (child, teen, young adult, middle aged, elderly) and *character sex* (male, female): X^2 (4, 4,299)=86.02, *p* <.01, V*=.14.

[12.] The three appearance indicators each varied by character sex: *sexually revealing attire* X^2 (1, 4,248)=289.20, *p* <.01, phi=.26; *nudity* X^2 (1, 4,251)=213.43, *p* <.01, phi=.22; and *physical attractiveness* X^2 (1, 4,610)=153.81, *p* <.01, phi=.18. Before running the chi square for *nudity*, the three level measure was collapsed into two categories: no nudity vs. some or full nudity. A total of 46 instances of full nudity were observed across the sample of films, with 63% (*n*=29) of those depictions involving male characters and 37% (*n*=17) involving female characters. However, the percentage of all females (1.4%) and all males (1%) in full nudity did not differ by 5%. Prior to running the *physical attractiveness* analysis, the three levels were collapsed into two: not attractive vs. attractive (1 reference, 2 or more references).

[13.] Fredrickson, B.L., & Roberts, T.A. (1997). Objectification theory: Toward understanding women's lived experiences and mental health risks. *Psychology of Women Quarterly, 21*,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), 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* (2), 366-386.

[14.] The three appearance indicators were all significantly related to *female characters' age*: *sexy attire*, X^2 (2, 1,057)=45.86, *p* <.01, V*=.21; *nudity* X^2 (2, 1,057)=37.66, *p* <.01, V*=.19; and *physical attraction* X^2 (2, 1,099)=23.77, *p* <.01, V*=.15.

[15.] Male *apparent age* was also statistically related to each of the appearance measures: *sexy attire*, X^2 (2, 2,612)=60.30, *p* <.01, V*=.15; *nudity* X^2 (2, 2,612)=51.47, *p* <.01, V*=.14; and *physical attraction* X^2 (2, 2,751)=31.14, *p* <.01, V*=.11. The breakdown of male characters' *apparent age* by each of the variables can be found in the following table.

Male Sexualization by Age in Top-Grossing Films: 2014

Measures	13-20 yr olds	21-39 yr olds	40-64 yr olds
% in sexualized attire	16.6%	10.5%	3.7%
% w/some nudity	11.1%	13.2%	4.5%
% referenced attractive	6.2%	4.8%	1.1%

[16.] Industry databases (IMDbPro.com, Studio System, Variety Insight) were used to catalog the biological sex of content creators. First, templates of all content creators were taken from IMDbPro.com. From there, the biological sex of every content creator was confirmed via a picture, pronoun reference (he, she), or gender label (e.g., male, female). Within content creator position, names were only counted once. Across categories, however, the same name could appear multiple times. For instance, a director may also have writing and producing credit. Judgments about race were made with multiple indicators: 1) looking at identifying information in Studio System, the Directors Guild of America website, and Variety Insight; 2) phone calls/email correspondence to filmmakers and/or their representatives; and/or 3) an online search for information/stories about directors' race/ethnicity. A total of 13 directors were identified via online information. In only 10 cases additional information was not available and judgments were made solely based on photographs.

[17.] Smith, S.L., Choueiti, M., & Pieper, K. (2013). *Gender inequality in popular films: Examining on screen portrayals and behind-the-scenes employment patterns in motion pictures released between 2007-2013*. Media, Diversity, & Social Change Initiative, USC Annenberg, Los Angeles, CA.

[18.] The chi-square analysis for *female screenwriter* (no, yes) and *character sex* (male, female) was significant, X^2 (1, 4,610)=34.34, p <.01, phi=.09. The analysis for *female producer* and *character sex* was not significant.

[19.] Chi-square analysis of *female screenwriter* (no, yes) and *middle-aged characters' sex* (male, female) was significant, X^2 (1, 1,359)=9.23, p <.01, phi=.08. No significant association was observed for female producer, however.

[20.] The chi-square analyses for *female producer* (no, yes) and female *sexy attire* (no, yes) and *exposed skin* (none, some) were both significant: *sexy attire*, X^2 (1, 1,220)=7.38, p <.01, phi= -.08; and *nudity*, X^2 (1, 1,221)=5.69, p <.05, phi= -.07. No significant associations were found for *female screenwriter* on these measures.

[21.] U.S. Census Bureau (no date). *USA quick facts from the U.S. Census Bureau*. Retrieved online: http://quickfacts.census.gov/qfd/states/00000.html

[22.] Motion Picture Association of America (2015). *Theatrical market statistics 2014*. Retrieved online: http://www.mpaa.org/wp-content/uploads/2015/03/MPAA-Theatrical-Market-Statistics-2014.pdf

[23.] Nielsen (2014, September 25). Engaging the evolving Hispanic consumers: A look at two distinct sub-groups. Retrieved online: http://www.nielsen.com/us/en/insights/news/2014/engaging-the-evolving-hispanic-consumers.html

[24.] MPAA (2015).

[25.] Only one appearance indicator was statistically related to *race/ethnicity* (White, Hispanic/Latino, Black, Asian, Other) for female characters: *physical attractiveness*, X^2 (4, 1,195)=12.14, p <.05, V*=.10.

[26.] The chi square for *race/ethnicity* (White, Hispanic/Latino, Black, Asian, Other) by each of the following appearance indicators for male characters was significant: *sexy attire*, X^2 (4, 2,818)=20.27, p <.01, V*=.08; *nudity*, X^2 (4, 2,819)=25.94, p <.01, V*=.10; and *physical attractiveness*, X^2 (4, 2,829)=12.71, p <.05, V*=.07. The results from the last analysis should be interpreted with caution, as 3 cells had an expected value of <5.

[27.] Chi square analysis of *director race* (Black vs. not Black) and character *apparent race* (Black vs. not Black) was significant, X^2 (1, 4,024)=192.27, p <.01, phi=.22.

[28.] Each character was evaluated for *apparent sexuality*, defined as the character's perceived enduring attraction (i.e., emotional, sexual, romantic) to men, women, or both sexes. Characters were assessed based on all cues presented in the plot. Only anthropomorphized characters were applicable for this measure. In terms of values, female characters with romantic proclivities towards women were coded as Lesbian. Male characters with romantic proclivities towards men were coded as Gay. Characters with an enduring attraction to both men and women were

coded as Bisexual. All other characters were coded as *not* lesbian, gay, or bisexual. Characters were also coded as *Transgender* or not in a separate measure. Transgender characters are those that identify as the gender opposite the sex they were assigned at birth. Multiple sources of information were needed in order to code a character as Transgender.

Research assistants were taught the measures *apparent sexuality* and *transgender status* during March 2015. At that point, the majority of 2014 films already had been evaluated for gender and race/ethnicity. Therefore, two research assistants were assigned to apply the new LGBT measures and simultaneously check the quality of the finalized data per film. Three movies in the sample (i.e., *Selma*, *The Gambler*, *American Sniper*) were coded for all measures in their first round of analysis. Afterward, two additional research assistants checked these three films and their data in order to maintain consistency in our approach. Similar to the process above, all disagreements were discussed with one of the report's authors. As a final check, another author confirmed all characters that were analyzed as LGB. Given the qualitative nature of these measures and process, these findings should be interpreted with caution.

[29.] It must be noted that some characters underwent demographic changes across their storylines. For example, Alan Turing in *The Imitation Game* and Bob Crewe in *Jersey Boys* were each depicted in two different age categories. If demographic changes are included, the total number of LGB characters increases by 2. The age categories portrayed for the longest duration (young adult, 21-39 years old in both cases) were used for this analysis.

[30.] 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/

[31.] Jones, R.P., & Cox, D. (2015). *How race and religion shape millennial attitudes on sexuality and reproductive health*. Public Religion Research Institute. Retrieved online: http://publicreligion.org/research/2015/03/survey-how-race-and-religion-shape-millennial-attitudes-on-sexuality-and-reproductive-health/#.VZIXQqbTGWY Quote taken from page 46, paragraph 1 of the report.

[32.] U.S. Census Bureau (June 25, 2015). *Millennials outnumber baby boomers and are far more diverse, Census Bureau reports.* Press release retrieved online: http://www.prnewswire.com/news-releases/millennials-outnumber-baby-boomers-and-are-far-more-diverse-census-bureau-reports-300104898.html

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List of Films in the 2014 Sample

American Sniper	Noah	The Book of Life
The Hunger Games: Mockingjay - Part 1	Edge of Tomorrow	About Last Night
Guardians of the Galaxy	Non-Stop	Into The Storm
Captain America: The Winter Soldier	Heaven is for Real	The Judge
The LEGO Movie	The Imitation Game	Jersey Boys
The Hobbit: The Battle of the Five Armies	Dumb and Dumber To	Blended
Transformers: Age of Extinction	Annie	The Giver
Maleficent	Fury	St. Vincent
X-Men: Days of Future Past	Tammy	Need for Speed
Big Hero 6	Annabelle	A Million Ways to Die in the West
Dawn of the Planet of the Apes	The Other Woman	John Wick
The Amazing Spider-Man 2	Penguins of Madagascar	Birdman
Godzilla	Let's Be Cops	Dolphin Tale 2
22 Jump Street	The Monuments Men	The Expendables 3
Teenage Mutant Ninja Turtles	Hercules	Earth to Echo
Interstellar	The Purge: Anarchy	Sex Tape
How to Train Your Dragon 2	Alexander and the Terrible, Horrible, No Good, Very Bad Day	Wild
Gone Girl	Think Like a Man Too	Million Dollar Arm
Divergent	Exodus: Gods and Kings	The Theory of Everything
Neighbors	The Nut Job	This is Where I Leave You
Ride Along	God's Not Dead	The Gambler
Rio 2	Son of God	Paranormal Activity: The Marked Ones
Into the Woods	Planes: Fire & Rescue	Nightcrawler
Lucy	The Grand Budapest Hotel	Chef
The Fault in our Stars	RoboCop	Get On Up
Unbroken	Dracula Untold	3 Days to Kill
Night at the Museum: Secret of the Tomb	Horrible Bosses 2	Deliver Us From Evil
Mr. Peabody & Sherman	The Hundred-Foot Journey	When the Game Stands Tall
300: Rise of An Empire	No Good Deed	Draft Day
The Maze Runner	Selma	Oculus
The Equalizer	Muppets Most Wanted	The Best of Me
	Ouija	A Walk Among the Tombstones
	The Boxtrolls	That Awkward Moment
	Jack Ryan: Shadow Recruit	Boyhood
	If I Stay	