

GENDER BIAS WITHOUT BORDERS

AN INVESTIGATION OF FEMALE CHARACTERS IN POPULAR FILMS ACROSS 11 COUNTRIES

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Women the world over face stark disparities in health, finance, education, politics, and other arenas. Persistent gender inequality may threaten economic growth and/or social progress.¹ At the most micro level, discrimination impedes girls and women from achieving their individual hopes and dreams. Through its Millennium Development Goals, the United Nations has championed an increase in equality for women and girls across different sectors by 2015.² Despite a push to promote females worldwide, one example of where progress remains stagnant is the U.S. film industry.

Research reveals that the percentage of female speaking characters in top-grossing movies has not meaningfully changed in roughly a half of a century.³ Further, women are often stereotyped and sexualized when they are depicted in popular content. Occupationally, our previous research shows that few women hold positions of power and importance on screen. While Hollywood is quick to capitalize on new audiences and opportunities abroad, the industry is slow to progress in creating compelling and complex roles for females. Is this tendency to under- and misrepresent women an American phenomenon, or does gender imbalance occur on a worldwide scale?

The purpose of this study is to explore the visibility and nature of female depictions in films worldwide. To address this goal, we content analyzed gender roles in popular films across the 10 most profitable territories internationally (Australia, Brazil, China, France, Germany, India, Japan, Russia, South Korea, and the United Kingdom) as reported by the Motion Picture Association of America (MPAA) in 2012.⁴ Films had to be theatrically-released between January 1st 2010 and May 1st 2013 and “roughly equivalent” to a MPAA rating of G, PG, or PG-13.⁵ Given our desire to see how other territories compare to current U.S. films, we also selected 10 domestically popular movies during the same time frame. Because many successful films were collaborations between the U.S. and U.K., we created an additional sample of the 10 top hybrid films from these countries. Only one film was allowed per franchise worldwide. In total, 120 global films were examined.

Every speaking (i.e., utters one or more words discernibly on screen) or named character⁶ was evaluated in this investigation for demographics, sexualization, occupation and STEM careers.⁷ Our major findings from the investigation follow. Only significant and practical differences (5% or greater) are reported.

#1 Global Alert: Girls are Nowhere to be Scene

A total of 5,799 speaking or named characters on screen were evaluated, with **30.9% female** and **69.1% male**. This calculates into a gender ratio of 2.24 males to every one female. Turning to protagonists, only 23.3% of the films had a girl or woman as a lead or co lead driving the plot.



Further, 12 movies or 10% of the sample had a “balanced cast” or featured girls/women in 45%-54.9% of all speaking roles. Given that females represent 49.6% of the population worldwide,⁸ we might expect to see more girls and women on screen. If visibility is currency, then females have little to spend. This limited representation varies significantly by country, story genre, and content creator gender.

Table 1 — Character Gender Prevalence by Country

	% of Female Characters	% of Female Leads/Co Leads	% with Balanced Casts	Total # of Characters
Australia	29.8%	40%	0	386
Brazil	37.1%	20%	20%	423
China	35%	40%	30%	514
France	28.7%	0	0	526
Germany	35.2%	20%	20%	443
India	24.9%	0	0	493
Japan	26.6%	40%	0	575
Korea	35.9%	50%	20%	409
Russia	30.3%	10%	10%	522
U.K.	37.9%	30%	20%	454
U.S./U.K.	23.6%	0	0	552
U.S.	29.3%	30%	0	502

Note: All the U.S./U.K. films presented in this table were co-productions or collaborations between the two countries as defined by the British Film Institute (BFI). U.K. films in this sample are national productions that are not financed by major U.S. studios.

COUNTRY.

Not all countries are equally gender imbalanced (see Table 1). In this sample, the frontrunners for females on screen are the U.K., Brazil, and Korea. Put differently, these three countries are over indexing relative to the global norm (30.9%).

Those at the back of the pack are U.S./U.K. and India.⁹ Turning to leads/co leads, fully half of the Korean films featured a female in one of these prized positions as did 40% of the movies from China, Japan, and Australia.¹⁰

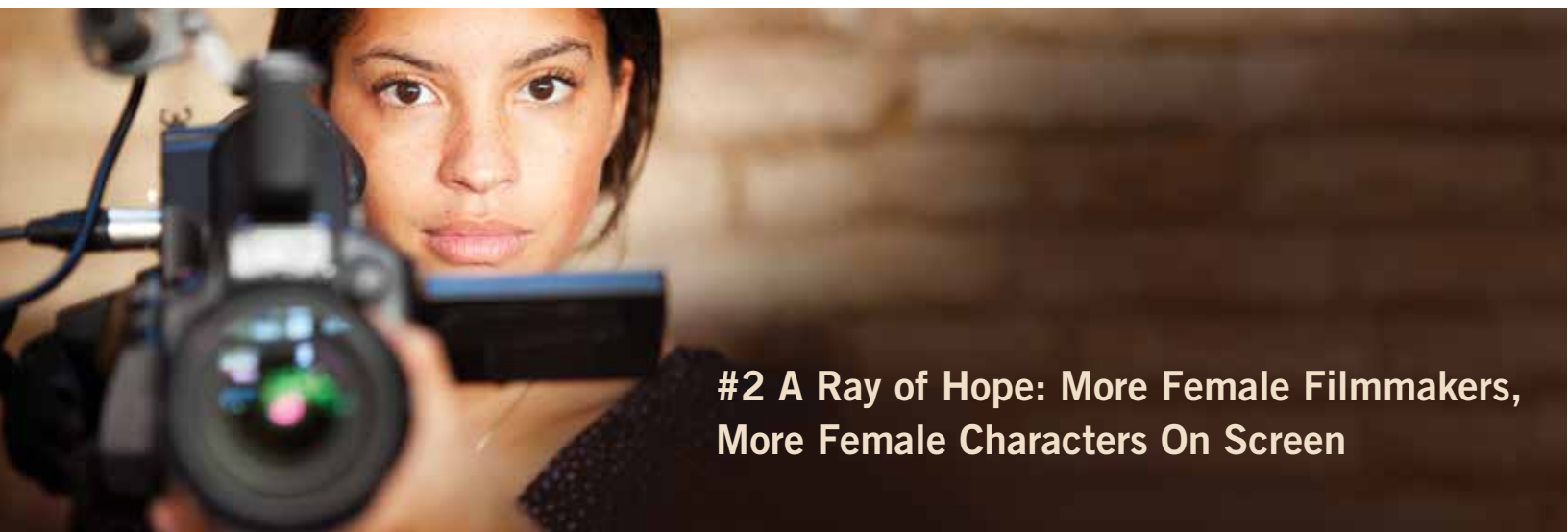
Three countries did not have one female protagonist in their sample of films. China featured the highest number of gender-balanced movies, followed by Korea, U.K., Brazil, and Germany. Six countries did not have any films with gender parity. Summing across the indicators, Korea seems to be outperforming its peers in their sample of 10 films.

It is interesting to note that the U.K. independent sample is very different than the U.S./U.K. collaboration sample across all three prevalence indicators. This may be due to the fact that as U.S. studio money comes in, females are pushed out. Or, it may be the case that genre is driving these findings. Seven of the 10 most popular hybrid U.S./U.K. films are action/adventure stories. As our research shows, genre is related to the portrayal of females on screen.¹¹

Genre. Focusing on story genre,¹² action/adventure films depicted fewer females (23%) in comparison to the industry average (30.9%). Comedy (32.8%), drama (34.2%), and animated (29.3%) movies were within 5% of the global norm.

“Other,” the remaining genre, only featured one film (41.4% female) and thus does not represent a valid “type” of movie content.

We also assessed whether films were for younger audiences, by the “family” designation on IMDbPro, an animated style of presentation, or a protagonist of a high school age or younger driving the story. These films could not depict mature subject matter (i.e., profanity, sexual content, drugs). Twenty-seven films (22.5%) met this restricted definition. No meaningful difference emerged in the prevalence of girls and women in films for younger audiences (29.2%) than those not meeting this definition (31.3%).



#2 A Ray of Hope: More Female Filmmakers, More Female Characters On Screen

CONTENT CREATOR GENDER. Out of a total of 1,452 filmmakers with an identifiable gender, 20.5% were female and 79.5% were male. This translates into a gender ratio behind the camera of 3.9 males to every 1 female. Females comprised 7% of directors, 19.7% of writers, and 22.7% of producers across the sample. A country-by-country break down of directors, writers, and producers can be found in Table 2.

Table 2 Gender Prevalence Behind the Camera by Country

Country	Directors	Writers	Producers	Gender Ratio
Australia	8.3%	33.3%	29.4%	2.5 to 1
Brazil	9.1%	30.8%	47.2%	1.7 to 1
China	16.7%	21.4%	25.3%	3.1 to 1
France	0	6.7%	13.6%	9.6 to 1
Germany	7.1%	22.2%	23.8%	3.7 to 1
India	9.1%	12.1%	15.2%	6.2 to 1
Japan	0	22.7%	7.5%	9.5 to 1
Korea	0	15.4%	20%	5.2 to 1
Russia	0	13.6%	17.7%	6.3 to 1
U.K.	27.3%	58.8%	21.8%	2.7 to 1
U.S./U.K.	9.1%	9.1%	21.6%	4.7 to 1
U.S.	0	11.8%	30.2%	3.4 to 1
Total	7%	19.7%	22.7%	3.9 to 1

Director and writer gender was related to on screen portrayals of girls and women.¹³

Films with a female director attached had 6.8% more females on screen than did those without a female director attached (see Figure 1).

A similar increase (7.5%) was observed for movies with female screenwriters versus those without a female screenwriter credited. Producer gender was not related to gender prevalence on screen, however.

These findings can be explained in a few ways. First, females may be more likely to tell stories featuring female characters and experiences. This explanation reflects the adage, “write what you know.” On the other hand, women may be given those projects to write and direct that include more female characters. This second and latter explanation is more problematic, as it restricts the range of open directing and writing opportunities given to women.

From the results presented above, one conclusion is clear. Gender inequality is rampant in global films. Not one country is anywhere near representing reality; girls and women comprise fully half of humanity. Not a third. Not a quarter. Half.

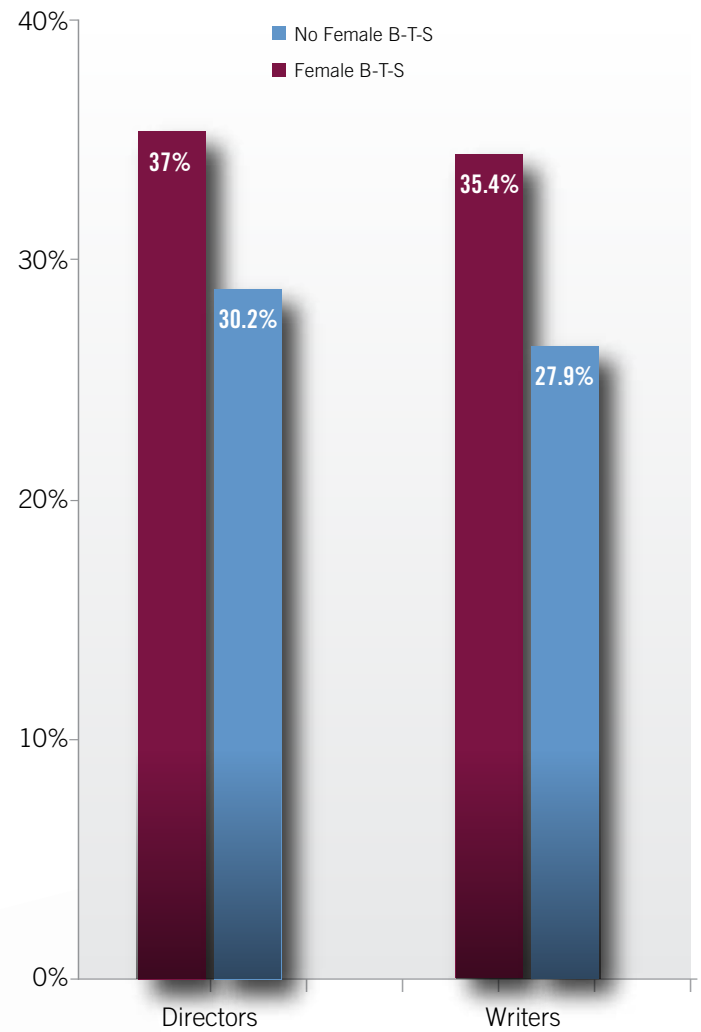


Figure 1
Filmmaker Gender and Character Gender On Screen



#3 No Matter the Territory, Female Characters Cannot Escape An Emphasis on Appearance



Moving from prevalence to portrayal, we examined the nature or way in which characters were depicted. Research reveals that exposure to sexualized and thin content can contribute to or reinforce body shame, appearance anxiety, or internalization of the thin ideal among some females.¹⁴ Somewhat related media and body image findings have been documented in the U.S., U.K., Australia, China, Germany, and Japan.¹⁵

In light of this, we measured four key attributes: sexually revealing clothing (i.e., tight, alluring apparel), nudity (i.e., part or full exposure from mid chest to high upper thigh region), thinness (i.e., minimal amount of body fat and/or muscle), and attractiveness (i.e., verbal/nonverbal utterances that communicate the physical desirousness of another character). Each of these sexualization indicators varied by gender (see Figure 2).¹⁶

Appearance comments were directed at females (13.1%) five times as frequently as males (2.6%). Given such pronounced differences, we examined female sexualization more closely across the four indicators by country.

Females were over two times as likely as males to be shown in sexually revealing attire (24.8% vs. 9.4%), thin (38.5% vs. 15.7%), and partially or fully naked (24.2% vs. 11.5%).

Figure 2
Sexualization Indicators by Character Gender Worldwide

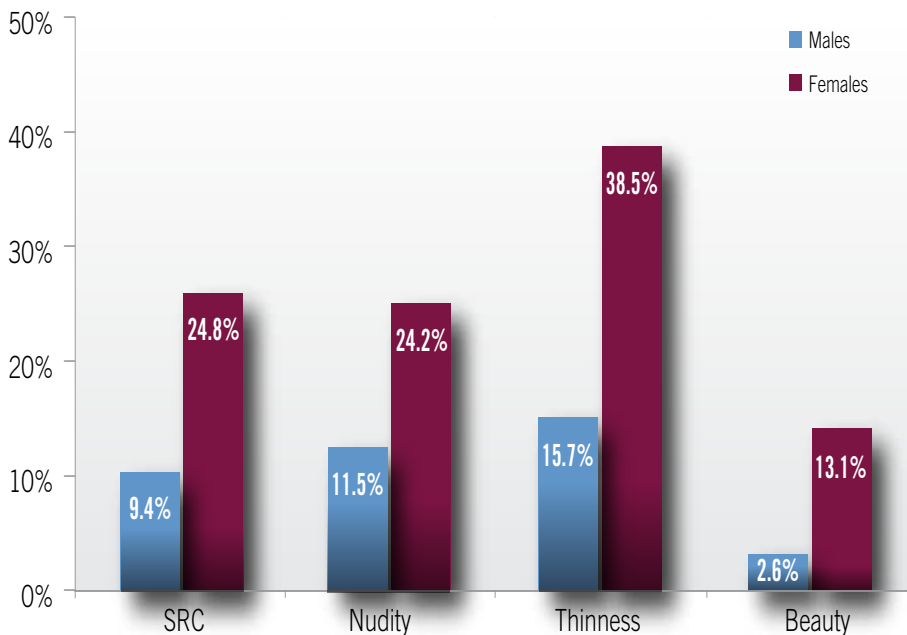


Table 3
Sexualization of Female Characters by Country

Country	% of females in sexy attire	% of females w/some nudity	% of attractive females	% of thin females
Australia	37.1%	37.1%	17.4%	23.2%
Brazil	28.7%	28.7%	10.8%	42%
China	15.6%	13.9%	11.7%	42.7%
France	30.6%	31.3%	16.6%	31.5%
Germany	39.9%	39.2%	15.4%	44.7%
India	34.1%	35%	25.2%	18.6%
Japan	21.1%	19.7%	7.2%	52.5%
Korea	11.6%	10.2%	13.6%	34.9%
Russia	17.4%	19.4%	9.5%	30.4%
U.K.	19.5%	19.5%	8.7%	38%
U.S./U.K.	22.5%	23.3%	10%	49%
U.S.	29%	22.1%	15%	48.7%
Total	24.8%	24.2%	13.1%	38.5%

Note: Cells illuminate the percentage of female characters within a particular country possessing the sexualization characteristic. For instance, the percentage of female characters in sexy attire in Australian films is 37.1%. This means that 62.9% of female characters in Australian films are not shown in sexy attire.

The sample wide sexually revealing attire norm for females is 24.8%, with Germany, Australia, India, and France higher and the U.K., Russia, China, and Korea lower (see Table 3).

The other countries were within 5% of the global norm. In terms of nudity, the same pattern held save two. Russia and the U.K. do not differ by 5% from the industry norm.

Attractiveness varied less, with India depicting a higher percentage of attractive females and Japan portraying a lower percentage. Thinness varied quite a bit, with four countries indexing above (Japan, U.S., U.S./U.K., Germany) the industry norm and four below (Russia, France, Australia, India). No one country consistently performed above or below the global norm across all four indicators. Thus, no matter the territory, female characters cannot escape the emphasis on physical appearance.

In addition to country, we looked at female sexualization in films for slightly younger audiences (see definition above).¹⁷ As noted in Table 4, films for slightly younger audiences were less likely to depict females in sexually revealing attire or with some nudity than were films for all other audiences. These general audience films were more likely to show thin females than were their age-restrictive counterparts. These findings may represent a step in the right direction, but should be interpreted cautiously as only 27 films were demarcated for younger audiences.

Table 4
Sexualization of Female Characters by Type of Films

Sexualization Indicators	Films for Younger Audiences	All Other Films
% in sexy attire	16.9%	26.5%
% w/exposed skin	15.6%	26%
% beautiful	9.7%	13.9%
% depicted thin	45.1%	37%

#4 The Leering Lens: Fictional Females Aged 13-39 Equally Sexualized

International apprehension over the sexualization of young women is increasing. As such, we looked at how age was related to our four appearance measures. The analyses focus specifically on three age levels: teens (13-20 years), young adults (21-39 years), and middle-aged (40-64 years) characters. These analyses are not broken out by country, as too few teens are represented across the sample.

Female teens and adults were equally likely to be shown in sexy attire, partially or fully naked, and referred to as beautiful.¹⁸ That is, there is virtually little or no difference in the sexualization of female characters between the ages of 13 and 39 years.

However, a higher percentage of female teens were shown thin than their adult female counterparts. Also, middle-aged females were far less likely to be sexualized in cinematic content than were females from the other two age groups evaluated (see Table 5).

Youth and beauty are clearly two important components of female portrayals in global films. The focus on age and the sexualization of female characters becomes particularly problematic as we examine how females fare in the workplace, where perceptions of competence may be linked to aspects of appearance.¹⁹

Table 5
Sexualization of Female Characters by Age

Measures	Teens	Adults	Middle Aged
% in sexy attire	35.6%	32.4%	14.9%
% w/exposed skin	33.3%	31.7%	14.9%
% beautiful	20.1%	16.8%	4.8%
% depicted thin	55%	45.9%	11.3%

Note: Cells represent the percentage of speaking characters within an age bracket that were shown in a particular light. For instance, 35.6% of teenaged females were depicted in sexy attire. This also means that 64.4% were not shown in revealing clothing.

#5 Widespread Gender Disparity: On Screen Inequality Doesn't Mirror Real World Roles

Media content can present youth with a window to the world of work. Indeed, research reveals that exposure to media portrayals can contribute to or reinforce viewers' occupational knowledge, career socialization, and even gender stereotypical attitudes and beliefs about work.²⁰ As such, we measured whether speaking characters were shown working in global films.

Table 6
Female Characters' Workforce Participation vs. Females' Actual Workforce Participation

Country	% of Working Females in Film	% of Working Females in Real World	Difference
Australia	22.8%	45.5%	- 22.7
Brazil	25.4%	43.7%	- 18.3
China	27.8%	43.6%	- 15.8
France	18.8%	47.4%	- 28.6
Germany	24.2%	45.9%	- 21.7
India	15.6%	25.3%	- 9.7
Japan	23.7%	42.2%	- 18.5
Korea	26.3%	41.6%	-15.3
Russia	20.8%	49.2%	- 28.4
U.K.	27.9%	45.9%	- 18
U.S./ U.K.	17.6%	n/a	n/a
U.S.	23.2%	46.3%	- 23.1
Total	22.5%	n/a	n/a

Note: Real-world percentages are based on figures from World Bank (2012). Percentages were rounded to one decimal point.

Employment was gendered across the sample of international movies (see Table 6).²¹ Of those holding

a job ($n=3,306$), 77.5% were males and 22.5% were females. This trend parallels our results across 129 popular films in the U.S.²² To further contextualize the findings, the percentages of women working in the fictional world are compared to real-world percentages across 11 countries. For obvious reasons, the U.S./U.K. sample is not compared to any real-world correlate. Women comprise 39.8% of the actual global workforce which is higher (+17.3) than the percentage observed here in global films (22.5%).²³

Across all the countries examined, females were underrepresented in the film workforce compared to their actual percentages globally. Discrepancy scores were calculated to determine the degree to which on-screen depictions of occupations differ from real-world values (see Table 6). The scores were grouped into three categories based on the size of the discrepancy: small (5-9.9), moderate (10-19.9), and large (20+). India was the only country in which female film jobs revealed a small difference from the real world. Five countries (Japan, Brazil, U.K., China, Korea) showed moderate differences between movie and actual workforce percentages and five countries (France, Russia, U.S., Australia, Germany) showed large differences.

Once again, women are underrepresented on screen. This time they comprise less than a quarter of the workforce in international films, which is well below their share in the real world of work. Given that movies can set an agenda for the next generation entering the workforce, the lack of females in the labor market is a concern. Perhaps even more troubling is the types of occupations women are shown possessing, the topic of the next section.

#6 Female Executives are an Endangered Species in International Films



Each occupation was classified as belonging to a particular industry (e.g., finance, law, medicine, academia, etc.). Then, the degree of clout or influence a character possessed was evaluated. Characters working in management or professional positions were closer to the top of the clout hierarchy, while those in administrative or transportation roles fell near the bottom.

Table 7 contains the percentage of characters in the upper echelons of power working across eight different industries. Put differently, these are the most powerful positions seen across all 120 movies in the sample. As illustrated, male characters disproportionately hold more powerful occupations than their female counterparts. No country differences are reported, due to the small sample of females in positions of influence. Across the global sample, occupational power is at odds with female participation.

Table 7
Clout Based Positions by Character Gender Across Eight Industries

Sector	Males	Females
% in the C-suite	86.1% (n=68)	13.9% (n=11)
% in business/finance (investors, developers)	88.7% (n=47)	11.3% (n=6)
% of high level politicians	90.5% (n=115)	9.5% (n=12)
% of partners in law firms	100% (n=1)	0
% of news directors	0	100% (n=1)
% of academic administrators	70.6% (n=12)	29.4% (n=5)
% of entertainment studio heads, agency partners	83.8% (n=31)	16.2% (n=6)
% of religious leaders	100% (n=3)	0

C-suite. Few females fill executive positions in the C-suite. Of the 79 executives shown across the sample, 13.9% (n=11) were female.

Women in these roles span just four sectors (business/financial; science, technology, and engineering; media, arts, and entertainment; and healthcare) while men in power are visible across eight (business/financial; science, technology, and engineering; media, arts, and entertainment; personal/corporate care; food service; legal; law enforcement; sports). Viewers would be hard pressed to find mediated examples of female executives on par with U.S.'s Indra Nooyi, India's Chanda Kochhar, or Australia's Gail Kelly in our sample of films.

POLITICS.

We looked carefully for some representation of current and/or former female political powerbrokers worldwide. From Brazil's Dilma Rousseff to South Korea's Park Geun-hye, or even India's Pratibha Patil, films featured few female politicians.

Only 12 women were shown at the highest levels of local, state/provincial, or national governmental authority, versus 115 males, a gender ratio of 9.6 to one.

These 12 women represented the actual or fictional equivalent of: legislators, ministers/secretaries/chiefs, ambassadors/international council members, or mayors. However, just 3 female characters governed at the very apex of political leadership.

One, a fictional representation of German Chancellor Angela Merkel did not even speak. Another, a female elephant named Angie, brought her constituents together to marshal resources when global warming threatened their existence. Finally, the only female protagonist who wielded power on the world stage was Margaret Thatcher in *The Iron Lady*. Interestingly, due to the framing of Thatcher's political career, she accounts for 3 of the 12 high-powered political depictions. This translates to just 10 unique women in political authority across 120 films and 5,799 speaking characters.

Of course, royals and rulers also exerted leadership. We counted these political figures separately, given the improbability of viewers to inherit this type of governmental power. Women thrive as fictional monarchs worldwide, where they represented 29.5% ($n=13$, vs. 70.5%, $n=31$ males) of those imbued with authority via divine right, despotism, or other means. Even when their kingdoms were comprised of owls, bees, or other talking animals, these queens outnumbered the representations of attainable political power in films.

Although in 2013 global senior management positions were 24% female,²⁴ fictional executives are much harder to find. Similarly, female politicians comprised 21.8% of the seats in legislatures worldwide²⁵ and are powerful international figures yet remain a fraction of the world leaders in film. As a consequence, young viewers are missing the opportunity to see powerful female role models in leadership positions within their own countries. Across the data in this sample, it appears that female executives are an endangered species in international films.



#7 No Justice for Fictional Females in Law, Medicine, and Academia

LAW, ACADEMIA, & MEDICINE.

Stereotypes stifle women in powerful professional positions across law, academia, and medicine (see Table 8). Only two female lawyers (vs. 20 males) were shown across the sample, both of whom appeared in comedic roles. Similarly, just one female judge (vs. 19 males) appeared across these 120 movies.

Powerful males in the cinematic legal world outnumber females by a factor of 13 to 1.

Women in academics face a similar struggle; just one female professor was shown while 16 male professors were depicted. The most balanced of these three distinguished careers across the 120 films was among medical practitioners (e.g., doctors, veterinarians, psychologists), where more than 5 male doctors appeared for every one female (69 males vs. 12 females). One bright spot in the medical field was the depiction of a female cardiac surgeon. However, across these 140 characters in top professional positions, a single counter stereotypical example represents a needle in the haystack of traditional portrayals.

Table 8
Professional/Specialized Careers by Character Gender

Professional or Specialized Careers	Males	Females
Lawyers	90.9% (n=20)	9.1% (n=2)
Judges	95% (n=19)	5% (n=1)
Doctors	85.2% (n=69)	14.8% (n=12)
Professors	94.1% (n=16)	5.9% (n=1)
Journalists	59.8% (n=76)	40.1% (n=51)
Sports Figures	95.9% (n=117)	4.1% (n=5)
Clergy	94.9% (n=37)	5.1% (n=2)

SPORTS & RELIGION.

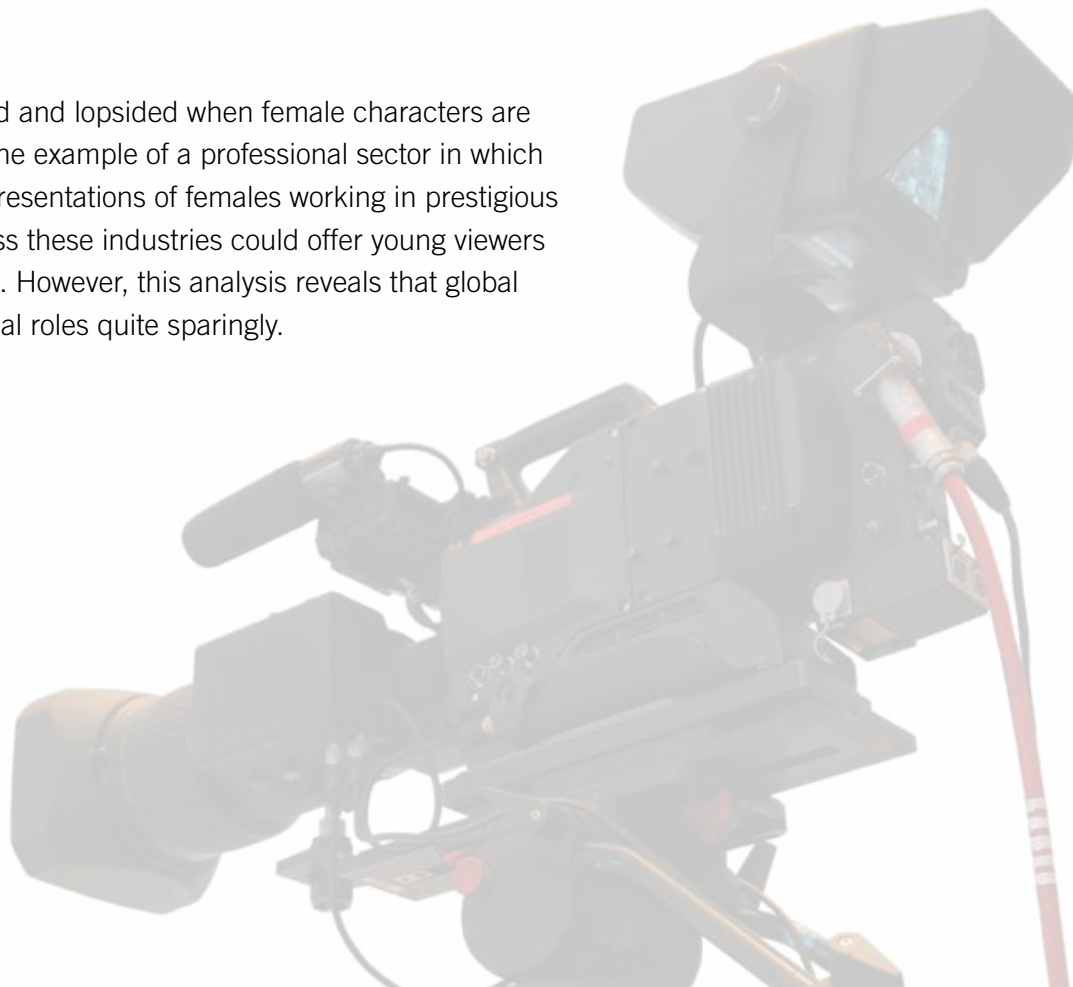
The findings also show that women are nearly shut out of sports and spiritual professions. Although the Olympics prominently feature female athletes and the Church of England recently allowed female bishops, these portrayals are almost absent in feature films. Only 5 women were portrayed as athletes, coaches, or sports announcers in comparison to 117 men. Just two women were shown in any kind of religious career—a pair of Brazilian nuns. Men were depicted across a variety of spiritual posts, including but not limited to Hindu priests, Buddhist monks, pastors, deacons, and even one imam. Clearly, women are rarely allowed to achieve even a small level of athletic or divine success in global films.

JOURNALISM.

The journalism sector featured a higher percentage of females in the workforce, with 40.1% of reporting, anchor, and photojournalism jobs allocated to women.

Additionally, the only news director depicted was a female (see Table 7). Every territory in the sample but one showed a female journalist. Given the importance of journalism to an informed and educated constituency, it is heartening to see that fictional females have a role to play in delivering the news to their fellow citizens.

Professional careers in film are limited and lopsided when female characters are considered. Journalism provided a lone example of a professional sector in which fictional females thrive. Mediated representations of females working in prestigious professional or specialized roles across these industries could offer young viewers a glimpse of employment possibilities. However, this analysis reveals that global films put females in these occupational roles quite sparingly.





#8 No Seeds Being Planted for Women and Girls in STEM With Males Outpacing Females by Over 7 to 1

identifiable STEM career. Across countries, the U.S. had the highest number of STEM characters and Germany and the U.K. the lowest.

Of characters with a STEM job, 88.4% were men and 11.6% were women. This calculates into a gender ratio of 7.6 STEM males to every 1 STEM female. Table 9 displays percentages of women in the STEM workforce from each country where information was available. As illustrated, very few women were portrayed in STEM jobs across the sample and thus comparisons were not made to real-world figures or across countries.²⁶

Table 9
STEM Jobs by Gender and Country

Country	# of STEM Jobs	STEM Males	STEM Females	% of Females in STEM Workforce
Australia	6	100%	0	n/a
Brazil	9	88.9%	11.1%	17.7%
China	6	100%	0	n/a
France	5	60%	40%	n/a
Germany	2	50%	50%	n/a
India	12	91.7%	8.3%	12.7%
Japan	21	90.5%	9.5%	n/a
Korea	6	66.7%	33.3%	12.3%
Russia	3	100%	0	n/a
U.K.	2	100%	0	15.5%
U.S./U.K.	17	94.1%	5.9%	n/a
U.S.	32	87.5%	12.5%	24%
Total	121	88.4%	11.6%	n/a

Note: n/a indicates that STEM workforce data by gender was not available. STEM definition vary widely between countries.

Table 10 breaks down the types of STEM jobs into four categories: life/physical sciences, computer science/technology, engineering, math, other.

Females only fill 8.9%-17.2% of jobs in the life or physical sciences, computer science/technology, and engineering.

No females were shown as mathematicians, though only one male was depicted in this occupational arena.

Table 10
Type of STEM Occupation by Character Gender

Type of STEM Occupation	Males	Females
% working in the life or physical sciences	88.4% (n=38)	11.6% (n=5)
% working in computer science/technology	82.8% (n=24)	17.2% (n=5)
% working in engineering	91.1% (n=41)	8.9% (n=4)
% working in mathematics	100% (n=1)	0
% working in other	100% (n=3)	0

Note: "Other" involved occupations that were a hybrid of multiple STEM categories.

CONCLUSION

The purpose of this study was to examine the prevalence and nature of female characters in popular films from 11 countries around the world. One unifying theme was apparent: female characters are not equal and they are not aspirational in this sample of global films. This theme is illustrated by the following facts from this study:

- Only 30.9% of all speaking characters are female.
- A few countries are better than the global norm: U.K. (37.9%), Brazil (37.1%), and Korea (35.9%). However, these percentages fall well below population norms of 50%.
- Two samples fall behind: U.S./U.K. hybrid films (23.6%) and Indian films (24.9%) show female characters in less than one-quarter of all speaking roles.
- Females are missing in action/adventure films. Just 23% of speaking characters in this genre are female.
- Out of a total of 1,452 filmmakers with an identifiable gender, 20.5% were female and 79.5% were male. Females comprised 7% of directors, 19.7% of writers, and 22.7% of producers across the sample.
- Films with a female director or female writer attached had significantly more girls and women on screen than did those without a female director or writer attached.
- Sexualization is the standard for female characters globally: girls and women are twice as likely as boys and men to be shown in sexually revealing clothing, partially or fully naked, thin, and five times as likely to be referenced as attractive. Films for younger audiences are less likely to sexualize females than are those films for older audiences.
- Teen females (13-20 years) are just as likely as young adult females (21-39 years) to be sexualized.
- Female characters only comprise 22.5% of the global film workforce, whereas male characters form 77.5%.
- Leadership positions pull male; only 13.9% of executives and just 9.5% of high-level politicians were women.
- Across prestigious professions, male characters outnumbered their female counterparts as attorneys and judges (13 to 1), professors (16 to 1), medical

Given these grim findings, a call to change is crucial. Girls and women comprise 50% of the world's population, but represent far less of the international film populace. Asking filmmakers to create more roles for girls and women is not asking for the impossible. Instead, adding girls and women to stories means conceptualizing a fictional world that looks startlingly like the one we already inhabit.

Second, a call to be creative is necessary. Female characters can and should easily fill an equivalent share of the workforce and clout positions across industries simply through the imaginations of their creators. Conceiving of female CEOs, politicians, lawyers, judges, and doctors is the work of a creative writing moment but could have important and lasting consequences for the next generation.

Though the findings above are compelling, this study has a few limitations. First, the sample of films from each country was quite small. Analyzing ten movies does not summarize the full array of diversity that exists in each nation. Future research should examine more movies to determine if these initial trends are borne out.

Second, highly popular films for slightly older audiences were not included in order to achieve a "rough equivalency" to a MPAA rating of PG-13 or lower in our sample. This may mean that content with more girls and women or different portrayals of sexualization or occupation was not captured. Future scholars could expand the range of films they study to determine if films with higher ratings contain more or less gender stereotyping, or other problematic instances of gender relations (i.e., domestic violence). A deeper dive into animated or films targeted to children would also be instructive.

Third, the occupation measure we used privileged a U.S. definition of industries. This was chosen specifically to facilitate comparisons to our previous research. However, we may have missed slight cultural variability in how different jobs or sectors are regarded in each country. Relying on research assistants primarily from the countries sampled was one means of ensuring that any variation remained minimal.

Despite these limitations, the present study offers a unique glance at the gendered nature of film content worldwide. The opportunity to usher in a new reality is close at hand, however. Equipping and catalyzing storytellers to counter decades of stereotypical media portrayals is one place to start. After all, filmmakers make more than just movies, they make choices. Those choices could be for balance, for less sexualization, and for more powerful female roles. The choice could be for gender equality.

Footnotes

For space considerations, all academic articles are only cited by authors' last names and year of publication. The full citations can be found in the executive report. Also, aspects of the coding process are truncated here. The executive report details the complete methodology of the study.

1. Elborgh-Woytek, Newiak, Kochhar, Fabrizio, Kpodar, Wingender, Clements, & Schwartz. (September, 2013). United Nations. (2010). *The World's Women 2010: Trends and Statistics*. New York: United Nations.
 2. United Nations Millennium Development Goal 3: Promote Gender Equality and Empower Women. <http://www.un.org/millenniumgoals/gender.shtml>
 3. Smith, Choueiti, & Pieper (2014). Smith & Choueiti (2010). Smith & Cook (2008). Powers, Rothman, & Rothman (1996). Smith, Choueiti, Prescott, & Pieper (2013).
 4. Motion Picture Association of America (2012). *Theatrical Market Statistics: 2012*. Author. See report online: <http://www.mpa.org/wp-content/uploads/2014/03/2012-Theatrical-Market-Statistics-Report.pdf>
 5. Effort was taken to try to match films in ratings to the 10 U.S. movies in our sample. Studies show, however, that ratings are not universal and can vary widely from country to country (see Olsberg, SPI, KEA European Affairs, & KPMG, 2003; Hanewinkel, Morgenstern, Tanski, & Sargent, 2008; Anderson, Millett, Polansky, & Glantz, 2010; Leenders & Eliashberg, 2011; Hanewinkel, Sargent, Karlsdóttir, Jónsson, Mathis, Faggiano, ... & Morgenstern, 2011; Thrasher, Sargent, Vargas, Braun, Barrientos-Gutierrez, Sevigny, ... & Hardin, 2014; Price, Palsson, & Gentile, 2014). As such, we devised a scheme using other country rating systems and selected films they indicated were appropriate for audiences 12-16 years of age or younger. Yet, Price et al. (2014) have argued "that there is no universal consensus about what types [*sic*] of material is appropriate for children" (p. 10). While the films in the sample have rough equivalency in terms of age-based ratings, the content within varies considerably based on the values held by each country. See the executive report for complete details on sampling films across the 12 territories.
 6. The major unit of analysis was the independent speaking character. Characters had to speak one or more words discernibly on screen to be evaluated in this investigation. Named characters that did not speak were also included. Sometimes homogeneous characters spoke sequentially on screen making their independent identity impossible to ascertain. These characters were chunked together as a group. Group characters were not included in any analyses. Only 11 groups were coded across the sample of 120 films.
 7. Several variables were measured at the character and the film level. At the character level, demographics, domesticity, hypersexualization, and occupation were captured. Adapted from Wilson et al., (1997), characters were coded for *sex* (i.e., male, female), and *apparent age* (i.e., 0-5, 6-12, 13-20, 21-39, 40-64, 65 years or older). Four indicators captured appearance and/or sexualization (adapted from Downs & Smith, 2005): *sexualized attire* (i.e., present, absent), *nudity* (i.e., some degree of exposed skin between the mid chest and high upper thigh regions, no nudity), *thinness* (i.e., thin, not thin), and *attractiveness* (i.e., no reference, at least one verbal or nonverbal reference). Across all measures, coders were allowed to use two additional values: not applicable and can't tell. In addition to these variables, the presence/absence of an *occupation*, *major occupational group*, *sector*, *executive position*, and *high clout* were measured at the character level, as well as *role* (main, secondary, tertiary). At the film level, coders noted the *style of presentation* (animated, live action, both).
- Research assistants (RAs) were recruited during 2013 and 2014 to code the sample of films. Training took place in a classroom type environment where students learned how to unitize and measure character attributes. Diagnostics were given to students to facilitate the training process and evaluate unitizing and variable reliability. At the end of a roughly 6 week training process, student RAs began evaluating the sample of films. Each film was evaluated independently in the Media, Diversity, and Social Change Initiative lab at USC's Annenberg School for Communication and Journalism. Three students were assigned to code each movie in two phases. After both phases of content coding were completed, a final research assistant would "quality check" all of the students judgments by watching the film one more time noting whether s/he agreed with all of the previous coders' judgments. Full details on reliability can be found in the executive report as well as any deviations to the coding process outlined above.
8. Women are 49.6% of the population. This is a sex ratio of 1.014 males to every female. See: http://www.census.gov/population/international/data/idb/worldpop/tool_population.php and <https://www.cia.gov/library/publications/the-world-factbook/geos/xx.html>
 9. The chi-square analysis for *gender prevalence by country* was significant, $X^2(11, 5,799)=60.11, p<.01, V^*=.10$.
 10. The analysis of *female lead/co lead character* (no, yes) by *country* was marginally significant, $X^2(11, 120)=19.38, p<.06, V^*=.40$. This analysis should be interpreted with caution due to low expected frequencies (>5) across many cells.
 11. Smith, Choueiti, & Pieper (2014).
 12. To assess genre, IMDbPro was first consulted. Then, the second author of the investigation sorted the movies into one of five mutually exclusive categories. IMDbPro's categorization was overturned when it violated the content of the film. The five categories included: action/adventure, comedy, drama, animation, and other. Only one film was coded in the latter category, *The Woman in Black*. This film is billed as a "drama/horror/thriller" on IMDbPro. The relationship between *character gender* (male, female) and *genre* was significant, $X^2(4, 5,799)=48.38, p<.01, V^*=.09$.
 13. The chi-square analysis for *female director attached* (no/yes) and *character gender* (males, females) was significant, $X^2(1, 5,799)=10.27, p<.05, \phi=.04$. The analysis for *female writer attached* (no/yes) and *character gender* (males, females) also was significant, $X^2(1, 5,799)=35.91, p<.05, \phi=.08$.
 14. See Aubrey (2006). Harper & Tiggemann (2008). Fredrickson & Roberts (1997). Roberts & Gettman (2004). Grabe, Ward, & Hyde (2008).
 15. Swami, Frederick, Aavik, Alcalay, Allik, Anderson, ... & Zivcic-Becirevic (2010). Grabe, Ward, & Hyde (2008). McCabe, Ricciardelli, Mellor, & Ball (2005). Tiggemann (2003). Dittmar, Halliwell, & Ive (2006). Yamamiya, Shroff, & Thompson (2008). Xu, Mellor, Kiehne, Ricciardelli, McCabe, & Xu (2010). Schneider, Weiss, Thiel, Wemer, Mayer, Hoffman, The GOAL Study Group, Dehl, (2013).
 16. All four appearance indicators varied with gender: *sexually revealing clothing*: $X^2(1, 5,484)=229.66, p<.01, \phi=.21$; *nudity*, $X^2(1, 5,487)=145.27, p<.01, \phi=.16$; *thinness*, $X^2(1, 4,281)=275.16, p<.01, \phi=.25$; *physical beauty*, $X^2(1, 5,799)=245.98, p<.01, \phi=.21$. *Nudity* was collapsed prior to analysis: none vs. some (partial or full nudity). Some nudity featured 803 instances of partial and 45 instances of full nudity. *Thinness* also was collapsed into two categories: not thin vs. thin. Finally, *attractiveness* was transformed into a binary: attractive (1 or more references) vs. not attractive (no references).
- We looked at each sexualization variable for males and females separately across countries. For females, all four variables were significant by country: *sexually revealing clothing*: $X^2(11, 1,717)=66.61, p<.01, V^*=.20$; *nudity*, $X^2(11, 1,717)=71.78, p<.01, V^*=.20$; *thinness*, $X^2(11, 1,374)=53.67, p<.01, V^*=.20$; *physical beauty*, $X^2(11, 1,789)=32.04, p<.01, V^*=.13$.

17. All four appearance measures varied for females by *film type* (for younger audiences vs. all other films): *sexually revealing clothing* (no, yes): $\chi^2(1, 1,717)=12.33, p<.01, \phi=-.09$; *nudity*, $\chi^2(1, 1,717)=14.81, p<.01, \phi=-.09$; *thinness*, $\chi^2(1, 1,374)=5.76, p<.05, \phi=-.07$; *physical beauty*, $\chi^2(1, 1,789)=4.56, p<.05, \phi=-.05$.
18. The same appearance variables varied by females' *age* (teen, adult, middle aged): *sexually revealing clothing*, $\chi^2(2, 1,432)=39.94, p<.01, V^*=.17$; *nudity*, $\chi^2(2, 1,432)=36.21, p<.01, V^*=.16$; *thinness*, $\chi^2(2, 1,159)=115.89, p<.01, V^*=.32$; *physical beauty*, $\chi^2(2, 1,468)=33.01, p<.01, V^*=.15$.
19. Glick, Larsen, Johnson, & Branstiter (2005). Heflick, Goldenberg, Cooper, & Puvia (2011).
20. DeFleur & DeFleur (1967). Herrett-Skjellum & Allen (1996). Kimball (1986). O'Bryant & Corder-Bolz (1978). Jeffries-Fox & Signorielli (1979).
21. Chi-square analyses revealed a significant association between *character gender* (males, females) and *occupation* (no, yes); $\chi^2(1, 5,304)=242.00, p<.01, \phi=-.21$. Though not reported above, males (69.1%) were more likely to be depicted with an occupation than were females (46.6%). Within gender, the relationship between *occupation* (no, yes) and *country* was significant for *females*, $\chi^2(11, 1,596)=25.19, p<.01, V^*=.13$; and *males*, $\chi^2(11, 3,708)=37.80, p<.01, V^*=.10$. Looking at the workforce only, the *gender by country* analysis was also significant, $\chi^2(11, 3,306)=28.47, p<.01, V^*=.09$.
22. Smith, Choueiti, et al. (2012).
23. Data in Table 6 are from The World Bank (2012). See <http://data.worldbank.org/indicator/SL.TLF.TOTL.FE.ZS>. Global workforce data are also from The World Bank (2012), available: <http://wdi.worldbank.org/table/2.2>.
24. Catalyst. (2014). Women in management, global comparison. Retrieved from: <http://catalyst.org/knowledge/women-management-global-comparison>
25. World Bank. (2014). Retrieved from: <http://data.worldbank.org/indicator/SG.GEN.PARL.ZS/countries?display=default>.
26. Definitions of the STEM workforce around the world vary widely. Alternate definitions of STEM may result in different real-world figures. We utilized consistent data when available. It is possible that other data sources using other indicators may provide different data for the countries in the sample. Readers should interpret real-world statistics with extreme caution. For the data presented in Table 9, the following links provide relevant data. U.S.: Beede, Julian, Langdon, McKittrick, Khan, & Doms (August, 2011). *Women in STEM: A Gender Gap to Innovation*. ESA Issue Brief #04-11. Economics and Statistics Administration: Author. <http://www.esa.doc.gov/sites/default/files/reports/documents/womeninstemagapinnovation8311.pdf>. Brazil, India, South Korea: Women in Global Science & Technology (2013). *National Assessments on Gender Equality in the Knowledge Society*. Country Results: India. Retrieved from: http://wisat.org/data/documents/National_Scorecard_India.pdf. See p. 7. Note that the definition for STEM jobs in these countries is not clear. UK: Kirkup, G., Zalevski, A., Maruyama, T. and Batool, I. (2010). *Women and Men in Science, Engineering and Technology: the UK Statistics Guide 2010*. Bradford: the UKRC. Data are from 2008. See: <http://www.napier.ac.uk/research/centresandprojects/src/Documents/final-sept-15th-15-42-ukrc-statistics-guide-2010.pdf>

