

Critic's Choice 2: Gender and Race/Ethnicity of Film Reviewers Across 300 Top Films from 2015-2017

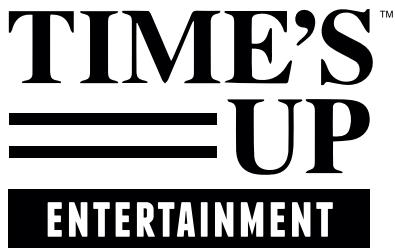
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with assistance from

Ariana Case

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Annenberg Inclusion Initiative



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CRITIC'S CHOICE 2: GENDER AND RACE/ETHNICITY OF FILM CRITICS ACROSS 300 TOP FILMS FROM 2015-2017

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MOVIE REVIEWS ARE MAINLY AUTHORED BY WHITE MALES

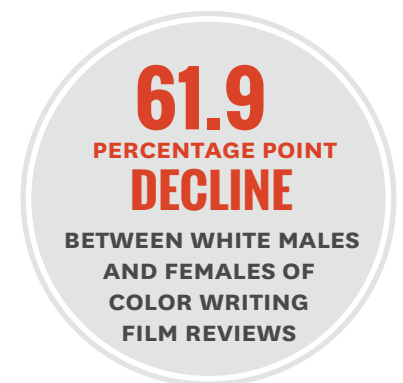
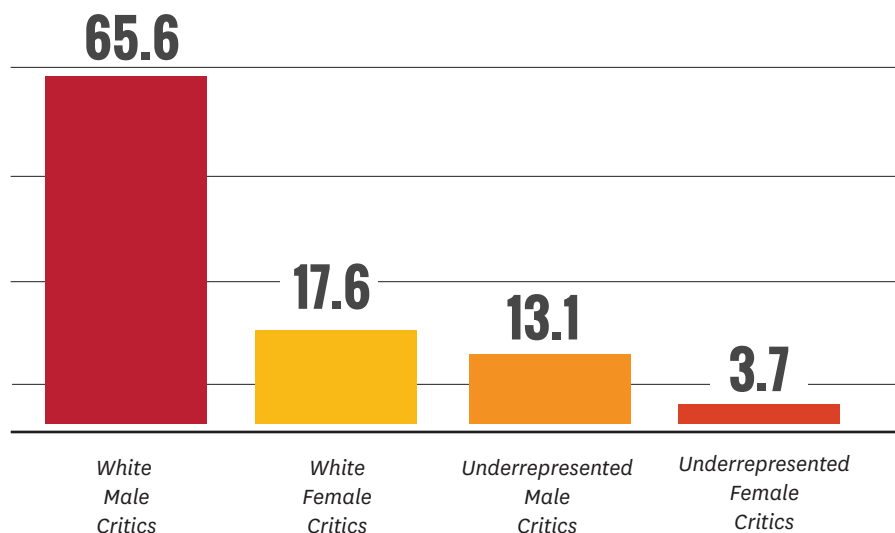
Of the reviews of the 300 top films from 2015-2017...

	MALES	FEMALES	WHITE	UNDER-REPRESENTED
ALL CRITICS	78.7%	21.3%	83.2%	16.8%
TOP CRITICS	77.3%	22.7%	88.2%	11.8%

WOMEN OF COLOR ARE WRITTEN OFF AS CRITICS

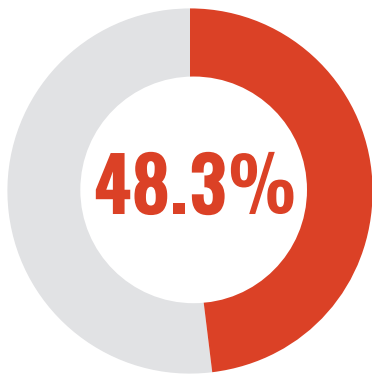
GENDER AND RACE OF FILM REVIEWERS ACROSS THE 300 TOP FILMS FROM 2015-2017

in percentages

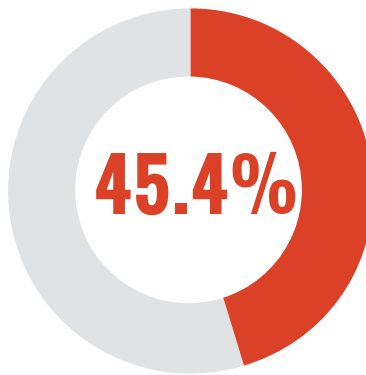


INVISIBILITY OF UNDERREPRESENTED WOMEN AS TOP CRITICS

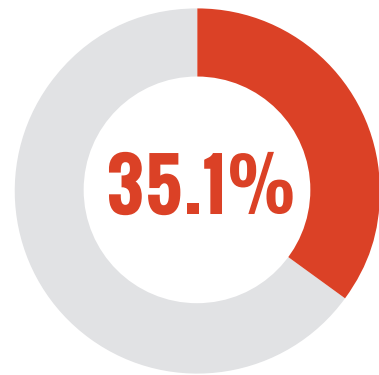
Percentage of films *missing* underrepresented female top critics out of...



300 TOP-GROSSING
FILMS



108 FEMALE-DRIVEN
FILMS



57 FILMS WITH
UNDERREPRESENTED LEADS

UNDERREPRESENTED FEMALES ARE OUTNUMBERED AS TOP CRITICS

THE RATIO OF WHITE MALE TOP CRITIC'S REVIEWS TO
UNDERREPRESENTED FEMALE TOP CRITIC'S REVIEWS ACROSS
300 TOP FILMS IS NEARLY

31 TO 1

DEMOGRAPHIC DISPARITIES EXIST AMONG CRITICS

Percentage of individual critics across 300 top-grossing films by demographic background



52.6%
ARE
WHITE
MALES



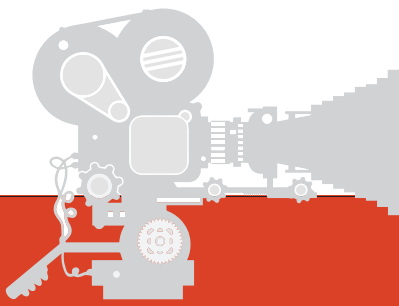
24.2%
ARE
WHITE
FEMALES



14.2%
ARE
UNDERREPRESENTED
MALES



8.9%
ARE
UNDERREPRESENTED
FEMALES

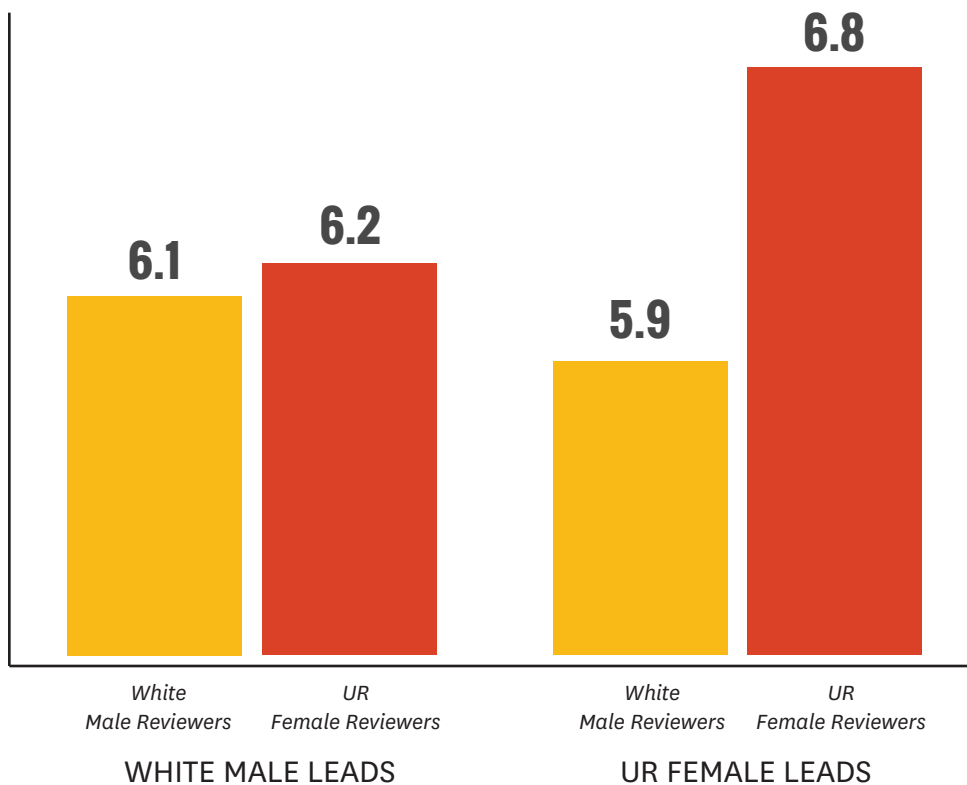


DISPARITIES IN CRITICS' REPRESENTATION BY FILM DISTRIBUTOR

	WHITE MALE TOP CRITICS	WHITE FEMALE TOP CRITICS	UR MALE TOP CRITICS	UR FEMALE TOP CRITICS
20TH CENTURY FOX	67%	20.6%	9.9%	2.5%
PARAMOUNT PICTURES	71%	18.4%	9.2%	1.4%
SONY PICTURES	68.5%	20.2%	9.5%	1.7%
UNIVERSAL PICTURES	64.1%	24.5%	9.1%	2.3%
WALT DISNEY STUDIOS	69.7%	18.3%	9.6%	2.5%
WARNER BROS. PICTURES	68.8%	19%	10.4%	1.8%
LIONSGATE	67.2%	20.4%	10.1%	2.3%
OTHER	67.1%	21.2%	8.6%	3.1%
OVERALL	67.7%	20.5%	9.6%	2.2%

DOES A CRITIC'S IDENTITY IMPACT FILM REVIEWS?

Average review scores out of 10 by reviewer gender & race/ethnicity across all critics



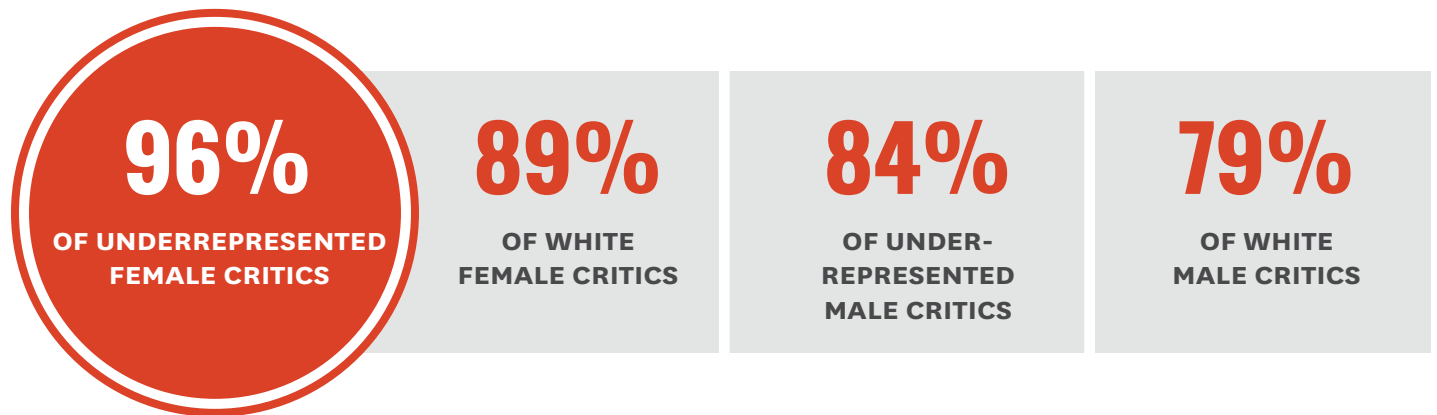
DOES CRITICS' REPRESENTATION VARY BY PUBLICATION TYPE?

Percentage of reviews by top critics by publication outlet across 300 films

	WHITE MALE TOP CRITICS	WHITE FEMALE TOP CRITICS	UR MALE TOP CRITICS	UR FEMALE TOP CRITICS
NOTABLE DAILY PAPERS	65%	19.5%	13.2%	2.3%
DAILY & WEEKLY PAPERS	70%	17.6%	10.1%	2.3%
ENTERTAINMENT TRADES	67.8%	6.1%	22.7%	3.3%
GENERAL NEWS OUTLETS	64.6%	33%	<1%	1.6%
ENTERTAINMENT OUTLETS	68.3%	23.8%	5.8%	2.1%
OVERALL	67.7%	20.5%	9.6%	2.2%

UNDERREPRESENTED FEMALES WRITE FEWER FILM REVIEWS

Percentage of critics writing 50 or fewer film reviews across 300 top-grossing movies...



TAKE ACTION TO IMPROVE INCLUSION AMONG CRITICS



Critic's Choice 2: Gender & Race/Ethnicity of Film Reviewers Across 300 Top Films from 2015-2017

Marc Choueiti, Dr. Stacy L. Smith & Dr. Katherine Pieper
with assistance from
Ariana Case
USC Annenberg Inclusion Initiative

In June of 2018, we released our inaugural report on diversity in the film criticism space using reviews featured on Rotten Tomatoes across the 100 top films of 2017. Now, we are partnering with TIME'S UP Entertainment and extending that investigation in three important ways. First, the diversity of critics associated with the 100 top films each year from 2015 to 2017 was assessed. Second, we were interested in how studios and publication outlets were performing relative to the overall trends. Third, we examined whether critics' identity and character identity by gender and underrepresented status were associated with review scores on Rotten Tomatoes. Overall, a total of 59,751 movie reviews across 300 top-grossing films were evaluated for critic gender and race/ethnicity.

Key Findings

Reviews by All Critics. A total of 59,751 reviews were penned across the 300 top movies from 2015, 2016, and 2017. A full 78.7% of the reviews were written by men ($n=47,002$) and 21.3% were written by women ($n=12,749$). No meaningful difference was observed by year. Overall, this reflects a gender ratio of 3.7 male reviews to every 1 female review.

Of those reviews written by critics with an ascertainable racial/ethnic identity, a full 83.2% ($n=49,473$) were white and only 16.8% ($n=9,974$) were underrepresented. These percentages did not deviate over time. The percentage of critics from diverse backgrounds is well below both U.S. Census (38.7%) and the movie-going audience in North America (45%). The ratio of white critics to underrepresented critics is 4.96 to 1.

The percentage of reviews written by female critics only deviated 2.5 percentage points between studios (high=Universal, 22.7%, low=Warner Bros., 20.2%). An even smaller window (1.6 percentage point difference) exists for underrepresented critics, with the high Fox (17.6%) and the low Universal (16%).

When intersecting gender and underrepresented status, the vast majority of all reviews were written by white male critics (65.6%). White female critics (17.6%) reviewed at a slightly higher percentage than their underrepresented male peers (13.1%). Underrepresented females (3.7%) were the least likely of the four identity groups to author reviews aggregated on Rotten Tomatoes. The ratio of reviews written by white male critics to underrepresented female critics is 17.7 to 1.

Individual Critics. The total sample of 59,751 reviews was penned by 2,413 individual critics. A full 67.1% of these individuals were male ($n=1,620$) and 32.9% were female ($n=793$). Of those critics with an ascertainable race/ethnicity, 23.2% were underrepresented ($n=550$) and 76.8% were white ($n=1,822$).

Crossing these two measures, over half of all critics were white males (52.6%, $n=1,248$), 24.2% were white females ($n=574$), 14.2% were underrepresented males ($n=338$), and 8.9% were underrepresented females ($n=212$). Whether the analyses focus on unique critics or reviews, the findings reveal that white

males are the one group that has far more access and opportunity than their female and underrepresented peers.

On average, white male critics wrote substantially more reviews (31.3) across the sample of 300 films than did underrepresented male critics (23) or white female critics (18.3). Underrepresented female critics wrote only a third of the reviews (10.4) of their white male counterparts. The midpoint, or 50th percentile, for white males was 8 reviews and 3 for underrepresented females. White male critics wrote almost three times as many reviews as did their underrepresented female peers.

Leading Characters & All Critics. Of the 108 female-driven films, not one featured a gender-balanced critics' pool. Seven movies had female critics clock in at 35.6%-39.8% of the total press corps. Further, female critics comprised less than a third of the total pool across 88% of the female-driven films ($n=95$). Turning to women of color, the percentage of critics plummets. Only two films featured female critics of color in double digits. Five percent or less of the total critics' pool was filled with women of color across 77 (71.3%) female-led movies.

A total of 57 (19%) of the 300 films were led by underrepresented leads/co leads or featured an ensemble cast with 40% or more of the principal cast from diverse backgrounds. Not one film featured a critic's pool at proportional representation with U.S. Census (38.7%). The three films with the highest percentage of critics of color were *How to Be A Latin Lover* (34.6%), *Girls Trip* (23.5%), and *Moonlight* (23.2%). Less than a third of the films with an underrepresented lead (28.1%) had critics' pools with 20% or more underrepresented reviewers.

Critic identity and leading character identity intersected to affect standardized review scores, particularly for white male and underrepresented female critics. These two groups of reviewers on average evaluated films with white male leads similarly (white male critics=6.1, underrepresented female critics=6.2). Their average assessment of movies with underrepresented female leads differed, however (white male critics=5.9, underrepresented female critics=6.8).

Underrepresented female critics and white male critics did not differ in their evaluation of films with white male leads—both were nearly equally likely to denote these films as “fresh” (63.9% and 59.9%, respectively). However, when these two groups evaluated films with underrepresented female leads, women of color were more likely to rate these movies as “fresh” (81.1%) than white male critics (59.2%) were. Both average ratings and the percentage of films rated “fresh” should be interpreted cautiously due to the small sample size of movies with underrepresented female leads.

Reviews by Top Critics. Of the 10,807 reviews penned by Top critics over these three years, 77.3% ($n=8,349$) were composed by males and 22.7% ($n=2,458$) by females. This is a gender ratio of 3.4 male Top critics to every 1 female Top critic. No meaningful differences emerged by year.

Top critics' racial/ethnic background was also assessed. No meaningful over time differences were observed. White Top critics (88.2%, $n=9,535$) wrote substantially more reviews than underrepresented Top critics (11.8%, $n=1,272$), at a ratio of 7.5 to 1.

Among distributors, Universal (26.8%) was more likely than Paramount (19.8%), Disney (20.8%), and Warner Bros. (20.9%) to have female Top critics review their movies. For underrepresented Top critics, the difference between the highest and lowest company was only 1.8 percentage points.

Differences were examined by publication outlet. General News Outlets (34.6%) were significantly more likely to feature female Top critics than all other publications. Entertainment Trades contained the lowest percentage of reviews by female Top critics, with less than 10% of reviews across the three years authored by women. In terms of underrepresented Top critics, General News Outlets (2.3%) were significantly less likely to run reviews by these individuals compared to all other publications. Entertainment Trades were most likely (26%) to feature reviews by underrepresented Top critics.

Gender and underrepresented status were crossed for Top critics to understand how representation varied by both demographic characteristics simultaneously. Women of color were the least likely to work as Top critics each year, with 2.2% of reviews written by these individuals. Underrepresented males composed 9.6% of reviews by Top critics and women wrote 20.5% of the pieces by Top critics. Fully two-thirds (67.7%) of reviews by Top critics had white male authors.

Individual Top Critics. Of the 449 individual Top critics reviewing films from 2015 to 2017, a total of 64.1% ($n=288$) were male and 35.9% ($n=161$) were female. This is a ratio of 1.8 male Top critics to every 1 female Top critic. In terms of race/ethnicity, 85.7% ($n=385$) were white and 14.3% ($n=64$) were underrepresented, a ratio of 6 white Top critics to every 1 underrepresented Top critic.

White male Top critics represented more than half (57%) of all Top critics, while white female Top critics were less than one-third (28.7%). Underrepresented male (7.1%) and female (7.1%) Top critics each filled less than 10% of the pool of working Top critics across the three years.

Underrepresented male Top critics wrote the highest average number of reviews (32.3), followed by white male Top critics (28.6), white female Top critics (17.2) and underrepresented female Top critics, who authored only 7.5 reviews on average across the sample.

Leading Character & Top Critics. The proportion of female Top reviewers for female-driven films across the sample of 300 ($n=108$) were examined. Six of these films (5.5%) had a Top critics' pool that is at or above proportional representation (50%). Ten additional films had a Top critics' pool featuring 40% to 48.4% females. No female-driven films in the sample had proportional representation of women of color as Top critics (20%). Five movies featured 10% or more underrepresented female Top critics (range=10% to 12.5%). Of the 57 films with actors from underrepresented racial/ethnic groups at the center, none included a Top critics' pool that reached proportional representation to the U.S. population (roughly 40%).

The number of movies without any female Top critics of color were examined. A full 145 films, or 48.3% of the sample did not have a review by an underrepresented female Top critic. Nearly half (45.4%) of female-driven films across the past three years--a full 49 movies--were not reviewed by an underrepresented female Top critic. More than one-third (35.1%, $n=20$) of films driven by underrepresented leads did not include one underrepresented female Top critic.

Critic's Choice 2: Gender & Race/Ethnicity of Film Reviewers Across 300 Top Films from 2015-2017

Annenberg Inclusion Initiative
USC

In June of 2018, we released our inaugural report on diversity in the film criticism space. For our seminal study and using Rotten Tomatoes, the gender and race/ethnicity of reviewers (all, Top) was assessed across the 100 top-grossing domestic films of 2017. Now, we are partnering with TIME'S UP Entertainment and extending that investigation in three important ways. First, the diversity of critics associated with the 100 top films each year from 2015 to 2017 was assessed.¹ By doing this, we can examine whether there has been any appreciable change over time in access and opportunity for female critics and those from underrepresented racial/ethnic groups.

Second, we were interested in how studios and publication outlets were performing relative to the overall trends. To this end, profiles were created to illuminate the critics' pools across the major studios (Fox, Sony, Universal, Paramount, Disney, Warner Bros.) and Lionsgate as well as by publication type (Top critics only). Third, we assessed whether critics' identity and character identity by gender and underrepresented status was associated with review scores on Rotten Tomatoes. Overall, a total of 59,751 movie reviews across 300 top-grossing films were evaluated for critic gender and race/ethnicity. ***As such, this is the largest and most comprehensive analysis of representation in the film criticism space to date.***

The report is organized in two major sections, focusing first on all critics and then zeroing in on Top critics. Over time trends are presented, followed by distributor and publication outlet (when applicable). For all statistical tests, only findings significant at the $p < .05$ level are reported below. Marginal ($p < .10$) results will be noted as such. For all chi-square tests, it was also stipulated that at least a 5 percentage point or greater difference between comparison groups (year, gender, underrepresented status) was necessary prior to making noise about any particular finding. By employing this approach, we focus not on trivial deviations but rather meaningful differences.

All Critics

A total of 59,751 reviews were penned across the 300 top movies from 2015, 2016, and 2017. Table 1 illuminates the breakdown of review authors by gender. A full 78.7% of the reviews were written by men ($n=47,002$) and 21.3% were written by women ($n=12,749$). No meaningful difference was observed by year (see Table 1).² Overall, this reflects a gender ratio of 3.7 male reviews to every 1 female review. These findings are notable given that females comprise roughly 50% of the U.S. population and buy approximately half of the movie tickets at the box office.³

Of those reviews written by critics with an ascertainable racial/ethnic identity, a full 83.2% ($n=49,473$) were white and only 16.8% ($n=9,974$) were underrepresented. These percentages did not deviate meaningfully over time.⁴ The percentage of critics from diverse backgrounds is well below both U.S. Census (38.7%) and the movie-going audience in North America (45%).⁵ The ratio of white critics to underrepresented critics is 4.96 to 1.

Table 1
Critics' Demographic Characteristics Across All Film Reviews by Year

Measure	Male Critics	Female Critics	White Critics	UR Critics
% of reviews in 2015	80.6%	19.4%	85%	15%
% of reviews in 2016	77.7%	22.3%	82.7%	17.3%
% of reviews in 2017	77.8%	22.2%	82.1%	17.9%
Overall %	78.7%	21.3%	83.2%	16.8%
# of reviews	47,002	12,749	49,473	9,974
Ratio	3.7 to 1		5.0 to 1	

Does the demography of review authors vary by distributor? To answer this question, we looked at the distributor of each motion picture as listed on Box Office Mojo. Each film was categorized into one of 8 mutually exclusive categories (e.g., Fox, Sony, Universal, Paramount, Disney, Warner Bros., Lionsgate, other). Then, the relationship between distributor and the identity group of the review author (i.e., gender, underrepresented status) was assessed. Since no differences emerged in Table 1, we did not evaluate this association within year.

As shown in Table 2, there was very little deviation in review author gender or underrepresented status by distributor.⁶ The percentage of reviews written by female critics only deviated 2.5 percentage points between studios (high=Universal, 22.7%, low=Warner Bros., 20.2%). An even smaller window (1.6 percentage point difference) exists for underrepresented critics, with the high Fox (17.6%) and the low Universal (16%). Given this minimal deviation, an invisible quota system of critics seems to be at work across the top distributors in the film industry.

Table 2
Critics' Demographic Characteristics Across All Film Reviews by Distributor

Distributor	Male Critics	Female Critics	White Critics	UR Critics
Fox	78.3%	21.7%	82.4%	17.6%
Paramount	79.7%	20.3%	83.5%	16.5%
Sony	79.7%	20.3%	83.4%	16.6%
Universal	77.3%	22.7%	84%	16%
Disney	79%	21%	82.9%	17.1%
Warner Bros.	79.8%	20.2%	83.2%	16.8%
Lionsgate	78%	22%	83.2%	16.8%
Other	77.5%	22.5%	83.1%	16.9%

The analyses thus far treated gender and underrepresented status separately. Now, we fully cross or intersect these measures in Table 3.⁷ While the overall patterns were not meaningfully different within identity group by year, a few trends are important to note. First, the vast majority of all critics were white males (65.6%). Second, white female critics (17.6%) were reviewing across the 300 top films at a slightly higher percentage than their underrepresented male peers (13.1%). Third, underrepresented females (3.7%) were the least likely of the four identity groups to author reviews aggregated on Rotten Tomatoes.

In fact, the ratio of white male critics to underrepresented female critics is 17.7 to 1. Fourth, there has been no change over time across the four groups evaluated.

Table 3
Intersection of Demographic Characteristics of Critics Across All Film Reviews

Measure	White Male Critics	White Female Critics	UR Male Critics	UR Female Critics
% of reviews in 2015	68.8%	16.2%	11.8%	3.2%
% of reviews in 2016	64.2%	18.5%	13.5%	3.8%
% of reviews in 2017	64%	18.1%	13.8%	4.1%
Overall %	65.6%	17.6%	13.1%	3.7%
# of reviews	38,996	10,477	7,774	2,200
Ratio	17.7 White Males to 1 UR Female			

Similar to year, very little difference emerged by distributor. As shown in Table 4, there is a relatively stable pool of critics reviewing across each of the major film distributors by gender and underrepresented status.

Table 4
Intersection of Demographic Characteristics of Critics Across All Film Reviews by Distributor

Distributor	White Male Critics	White Female Critics	UR Male Critics	UR Female Critics
Fox	64.7%	17.7%	13.6%	4%
Paramount	66.7%	16.8%	13.1%	3.4%
Sony	66.7%	16.7%	12.9%	3.7%
Universal	65%	19%	12.3%	3.7%
Disney	66.1%	16.8%	13%	4.1%
Warner Bros.	66.4%	16.8%	13.4%	3.4%
Lionsgate	64.5%	18.7%	13.4%	3.4%
Other	64.6%	18.5%	12.9%	4%

The above analyses focus on the representation of *review authors*. Some film critics write multiple movie reviews per year, however. As a result, it becomes important to focus on the total number of *unique film critics* writing one or more reviews across the 300 top movies from 2015-2017. The total sample of 59,751 reviews was penned by 2,413 individual critics. A full 67.1% of these individuals were male ($n=1,620$) and 32.9% were female ($n=793$). Turning to underrepresented status, our sample size drops to 2,372. Of those critics with an ascertainable race/ethnicity, 23.2% were underrepresented ($n=550$) and 76.8% were white ($n=1,822$).

The breakdown of gender and underrepresented status of unique film critics within year is shown in Table 5. Unique film critics may write reviews across any of the years in the sample. As such, we allowed each critic to only be counted once per sample year. Each year then represents the total unique percentage of film critics by gender and underrepresented status. Table 5 reveals little deviation in the percentage of

unique film critics within years. Less than a third of all critics were female (27.3%-31.7%) and under a quarter (19.1%-23.6%) were underrepresented across the 300 top movies from 2015-2017.

Table 5
Demographic Characteristics of Individual Film Critics

Measure	Male Critics	Female Critics	White Critics	UR Critics
% of all critics in 2015	72.7%	27.3%	80.9%	19.1%
% of all critics in 2016	69.6%	30.4%	77.4%	22.6%
% of all critics in 2017	68.3%	31.7%	76.4%	23.6%

When we intersect gender and underrepresented status, a common story emerges. *Over half of all critics were white males (52.6%, n=1,248) whereas 24.2% were white females (n=574), 14.2% were underrepresented males (n=338), and 8.9% were underrepresented females (n=212).* Whether the analyses focus on unique critics or reviews, the findings reveal that white males are the one group that has far more access and opportunity than their female and underrepresented peers.

To assess the frequency of writing, our next set of analyses examine how many opportunities critics get to review across the sample of 300 movies. Here, we divided the sample into four identity groups (i.e., white males, white females, underrepresented males, underrepresented females) and then examine descriptive statistics (i.e., average number of reviews written, the mode or most frequent number of reviews, median number of reviews, range). Given the lack of deviation by year or distributor, these analyses are presented across the entire sample of 300 films.

Table 6
Descriptive Statistics of All Film Reviews by Critics Demographics

Descriptive Statistics	White Male Critics	White Female Critics	UR Male Critics	UR Female Critics
Average # of reviews written	31.3	18.3	23	10.4
Median # of reviews written (50 th Percentile)	8	4	7	3
Modal # of reviews written	1	1	1	1
Range of reviews across 300 movies	1-298	1-264	1-218	1-103
Sample Size	n=1,248	n=574	n=338	n=212

As shown in Table 6, the descriptive statistics of critics' reviews vary substantially by gender and underrepresented status. On average, white male critics wrote substantially more reviews (31.3) than did underrepresented male critics (23) or white female critics (18.3). Underrepresented female critics wrote only a third of the reviews (10.4) of their white male counterparts. The midpoint, or 50th percentile, for white males was 8 reviews and 3 for underrepresented females. The mode, or the most frequent number of reviews written, was 1 and did not differ by gender or underrepresented status. Finally, the range of reviews varied across the sample of 300 movies. White male critics wrote almost three times as many reviews as did their underrepresented female peers.

We now turn our attention to how many reviews critics authored across the sample time frame. The sample was divided into four identity groups by gender and underrepresented status. Next, the total number of reviews per group was classified into increments of 50. A few major trends appear in Table 7. First, the majority of critics only wrote between 1-50 reviews independent of identity group. However, a full 96% of all underrepresented female critics wrote 50 or fewer reviews. Second, white male critics were four to five times as likely as their white female and/or underrepresented peers to craft 51 or more reviews across the 300 top films from 2015-2017. Third, only 8 underrepresented female critics wrote more than 50 movie reviews across the sample time frame.

Table 7
Frequency of Film Critics' Reviews by Gender and Underrepresented Status

Number of Reviews	White Male Critics	White Female Critics	UR Male Critics	UR Female Critics
1-50 Reviews	78.8% (n=984)	88.9% (n=510)	84% (n=284)	96.2% (n=204)
51-100 Reviews	11.3% (n=141)	6.6% (n=38)	11.2% (n=38)	2.8% (n=6)
101-150 Reviews	5.4% (n=67)	2.6% (n=15)	3.3% (n=11)	<1% (n=2)
151-200 Reviews	2.8% (n=35)	1.2% (n=7)	<1% (n=2)	0
201-250 Reviews	1.4% (n=17)	<1% (n=3)	<1% (n=3)	0
251-300 Reviews	<1% (n=4)	<1% (n=1)	0	0

The above analyses focused on review author or individual film critic. We now look at the proportion of reviewers covering films with female leads. A film was categorized as a female lead if the protagonist or a roughly equal co lead drove the storyline. Ensemble casts were determined to be female-led if 50% or more of the principal actors were girls/women. A total of 108 movies across the 300 top films from 2015 to 2017 met these criteria. For these films, we looked at the number and percentage of female critics reviewing the movie.

Of the 108 female-driven films, not one featured a gender-balanced critics pool. Seven movies had female critics clock in at 35.6%-39.8% of the total press corps. Further, female critics comprised less than a third of the total pool across 88% of the female-driven films (n=95). Turning to women of color, the percentage of critics plummets. Only two films featured female critics of color in double digits (*Girls Trip*=11.8%, *My Little Pony*=10.3%). Five percent or less of the total critics' pool was filled with women of color across 77 (71.3%) female led movies.

Using a roughly similar definition, we looked at the percentage of diverse critics reviewing films driven by underrepresented leads. A total of 57 (19%) of the 300 films were led by underrepresented leads/co leads or featured an ensemble cast with 40% or more of the principal cast from diverse backgrounds, in line with the U.S. Census (38.7%). It should be noted that the racial/ethnic identity of the actor was used to make these designations and not the character played. Similar to gender, not one film featured a critic's pool at proportional representation (38.7%). The three films with the highest percentage of critics of color were *How to Be A Latin Lover* (34.6%), *Girls Trip* (23.5%), and *Moonlight* (23.2%). Less than a third of the films with an underrepresented lead (28.1%) had a critics pool with 20% or more underrepresented reviewers.

Given the above findings, it begs the last question of this section: does reviewer identity play a role in how individuals evaluate films with leads from different backgrounds? To answer this query, we had to

first categorize the leads (lead, co lead or ensemble) as white male only, white female only, underrepresented male only or underrepresented female only. This step was taken as some films have mixed gender or racial/ethnic co leads or ensemble casts. By excluding those, we ensure we are capturing the match between reviewer identity and the lead character(s) driving the story line. As with all our analyses of race/ethnicity, the underrepresented status of the actor rather than the character was used to make this determination.⁸ Out of 300 movies, the sample was reduced to 256: 139 white male leads, 74 white female leads, 32 underrepresented male leads, and 11 underrepresented female leads. Due to the small number of films with an underrepresented female lead, the following results should be interpreted with caution.

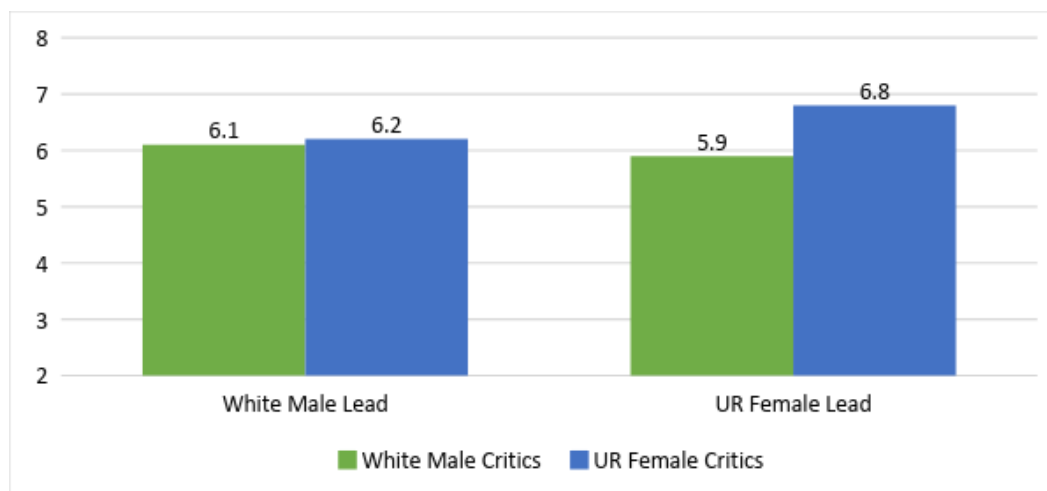
After categorizing the movies, the scores on individual reviews were standardized so all scores were out of 10 points. Then, scores were examined by reviewer and lead identity.⁹ A few trends emerged. First, the intersection of reviewer and actor gender and underrepresented status seems to play a role in evaluating films. Albeit, the differences between the means are small (see Table 8).

Table 8
Average Movie Ratings by Review Author
Demographics and Identity of Leading Characters

Identity of Lead	White Male Critics	White Female Critics	UR Male Critics	UR Female Critics
White Male Character	6.1	6.1	6.3	6.2
White Female Character	6.4	6.6	6.5	6.3
UR Male Character	6.7	6.9	6.9	7.1
UR Female Character	5.9	6.5	6.2	6.8

Second, the deviation between white male and underrepresented female critics is notable (see Figure 1). These two groups of reviewers on average evaluated films with white male leads similarly (white male critics=6.1, underrepresented female critics=6.2). Their average assessment of movies with underrepresented female leads differed, however (white male critics=5.9, underrepresented female critics=6.8). The averages are reported in Figure 1. It is important to note that white male critics' average score may yield a "rotten" score on Rotten Tomatoes whereas the average scores from underrepresented female critics would not.

Figure 1
Average Film Rating by Critic Identity and Leading Character Identity



Another way to explore this relationship was to assess differences between critics in the “rotten” or “fresh” score awarded to a film. For this analysis, we once again separated the films by the gender and underrepresented status of the lead(s) and examined differences related to critics’ identity.¹⁰ The outcome of interest was the percentage of films in each category designated as “rotten” or “fresh.” For simplicity, we report the percentage of critics who rated films as “fresh.”

As shown in Table 9, and in parallel to the results presented above, underrepresented female critics and white male critics did not differ in their evaluation of films with white male leads—both were nearly equally likely to denote these films as “fresh.” However, when these two groups evaluated films with underrepresented female leads, women of color were more likely to rate these movies as “fresh” than white male critics were.

Table 9
Percentage of Films Rated “Fresh” by Character Identity and Critic Identity

Identity of Lead Character(s)	White Male Critics	White Female Critics	UR Male Critics	UR Female Critics
White Male Leads	59.9%	60%	65.1%	63.9%
Underrepresented Female Leads	59.2%	70.4%	69.6%	81.1%

Note: The cells reflect the percentage of films rated “fresh” within critic identity and lead type. For the percentage of movies scored “rotten,” subtract the point statistic from 100% per cell.

White female and underrepresented male critics held an intermediate position in their scores of films with underrepresented female leads. Underrepresented male critics were also more likely than white male and female critics to label movies with white male leads as “fresh.” These results, as above, suggest that a critics’ identity may play a role in how they evaluate certain movies. See footnote 10 for additional analyses on underrepresented male leads and white female leads by critic’s identity.

This section outlined the demographic characteristics of all film reviewers across the 100 top movies from 2015 to 2017 as aggregated by the site Rotten Tomatoes. The results demonstrate that there has been little change over the past three years—white male reviewers craft the majority of reviews for these popular films. This leaves the perspectives of women and people of color on the margins when it comes to reviewing movies. The analyses also reveal that there is no difference in the percentage of female or underrepresented reviewers by film distributor. This suggests that the major film companies are not acting to create a more balanced group of reviewers when possible. Overall, these results reinforce that diverse perspectives are not the norm in film criticism—a curious situation, given the subjective and personal nature of the work. In the next section, a smaller but more notable group of reviewers are examined: Top critics.

Top Critics

As in our previous report, we also focused on Top critics (as designated by Rotten Tomatoes) reviewing the 100 top-grossing films each year from 2015 to 2017. Of the 10,807 reviews penned by Top critics over these three years, 77.3% ($n=8,349$) were composed by males and 22.7% ($n=2,458$) by females. This is a gender ratio of 3.4 male Top critics to every 1 female Top critic. As shown in Table 10, no meaningful variation appeared from year to year.¹¹

Table 10
Critics' Demographic Characteristics Across Top Critic Film Reviews by Year

Measure	Male Top Critics	Female Top Critics	White Top Critics	UR Top Critics
% of reviews in 2015	78.7%	21.3%	87.1%	12.9%
% of reviews in 2016	77%	23%	88.8%	11.2%
% of reviews in 2017	76%	24%	88.9%	11.1%
Overall %	77.3%	22.7%	88.2%	11.8%
# of reviews	8,349	2,458	9,535	1,272
Ratio	3.4 to 1		7.5 to 1	

Top critics' racial/ethnic background was also assessed in terms of their underrepresented status (no, yes). As shown in Table 10, no meaningful over time differences were seen among the proportion of underrepresented Top critics' reviews across popular films.¹² White Top critics (88.2%, $n=9,535$) wrote substantially more reviews than underrepresented Top critics (11.8%, $n=1,272$), at a ratio of 7.5 to 1.

The breakdown of Top critics assigned to review films by distributor was analyzed (see Table 11).¹³ Once again, all years were assessed simultaneously. One meaningful difference did emerge. ***Universal (26.8%) was more likely than Paramount (19.8%), Disney (20.8%), and Warner Bros. (20.9%) to have female Top critics review their movies.*** No other differences by distributor were observed. As with gender, we assessed whether the prevalence of underrepresented Top critics varied by film distributor.¹⁴ Table 11 reflects the results. The findings were not significant, and no differences of 5 percentage points or greater occurred across distributors. Between the highest and lowest company, the difference was only 1.8 percentage points.

Table 11
Critics' Demographic Characteristics Across Top Critic Reviews by Distributor

Distributor	Male Top Critics	Female Top Critics	White Top Critics	UR Top Critics
Fox	76.9%	23.1%	87.7%	12.3%
Paramount	80.2%	19.8%	89.4%	10.6%
Sony	78.1%	21.9%	88.7%	11.3%
Universal	73.2%	26.8%	88.7%	11.3%
Disney	79.2%	20.8%	88%	12%
Warner Bros.	79.1%	20.9%	87.8%	12.2%
Lionsgate	77.3%	22.7%	87.6%	12.4%
Other	75.7%	24.3%	88.3%	11.7%

Apart from distributor, the publications for which Top critics write and work were of interest. Here, our question was whether gender and/or underrepresented status varied by the type of publication. The outlets associated with Top critics ($n=71$) were examined and collapsed into 5 distinct categories (Notable Daily Papers, Daily & Weekly Newspapers, Entertainment Trades, General News Outlets, Entertainment Outlets).¹⁵ Because no differences were observed over time in the prevalence of Top critics by gender or underrepresented status, the analysis was conducted on all 300 films and reviews.

As shown in Table 12, General News Outlets were significantly more likely to feature female Top critics than all other publications.¹⁶ Notable Daily Papers and Entertainment Outlets did not differ from each other, though Entertainment Outlets were more likely than Daily & Weekly Newspapers to feature reviews by female Top Critics. Finally, Entertainment Trades contained the lowest percentage of reviews by female Top critics, with less than 10% of reviews across the three years authored by women. The proportions for male Top critics evidenced the same pattern in reverse—General News Outlets included the lowest percentage of male Top critics; even so, roughly 65% of reviews were crafted by men at these publications.

Table 12
Critics' Demographic Characteristics Across Top Critic Reviews by Outlet

Outlet Type	Male Top Critics	Female Top Critics	White Top Critics	UR Top Critics
Notable Daily Papers	78.2%	21.8%	84.5%	15.5%
Daily & Weekly Newspapers	80.1%	19.9%	87.7%	12.3%
Entertainment Trades	90.6%	9.4%	74%	26%
General News Outlets	65.4%	34.6%	97.7%	2.3%
Entertainment Outlets	74.1%	25.9%	92.2%	7.8%

In terms of underrepresented Top critics (see Table 12), General News Outlets (2.3%) were significantly less likely to run reviews by these individuals compared to all other publications.¹⁷ While Notable Daily Papers and Daily and Weekly Papers did not significantly differ from each other, both were significantly less likely than Entertainment Trades to feature reviews by underrepresented Top critics. Once again, for white Top critics the patterns also fluctuated across outlets. Across all publication types, white Top critics composed nearly three-quarters or more of all reviews.

As above, we crossed gender and underrepresented status for Top critics to understand how representation varied by both demographic characteristics simultaneously. The analysis was significant, but no meaningful differences were seen across the three years.¹⁸ Women of color were the least likely to work as Top critics each year, with fewer than 3% of reviews written by these individuals. See Table 13. Underrepresented males composed less than 10% of reviews by Top critics and women wrote roughly one-fifth of the pieces by Top critics. Fully two-thirds of reviews by Top critics had white male authors.

Table 13
Intersection of Demographic Characteristics of Top Critics Across Top Critic Film Reviews

Measure	White Male Top Critics	White Female Top Critics	UR Male Top Critics	UR Female Top Critics
% of reviews in 2015	68.5%	18.6%	10.1%	2.8%
% of reviews in 2016	67.2%	21.5%	9.8%	1.5%
% of reviews in 2017	67.3%	21.5%	8.7%	2.5%
Overall %	67.7%	20.5%	9.6%	2.2%
# of reviews	7,316	2,219	1,033	239
Ratio	30.6 White Males to 1 UR female			

Turning to the intersection of gender and race/ethnicity by distributor (Table 14), *Universal (24.5%) was more likely than the Disney (18.3%), Paramount (18.4%), or Warner Bros. (19%) to have their films reviewed by white female Top critics.*¹⁹ No other meaningful differences emerged across distributors. Underrepresented male Top critics wrote roughly 10% or less of all reviews across distributor, while underrepresented female Top critics authored 3.1% or fewer of the reviews related to top films at each distributor.

Table 14
Intersection of Demographic Characteristics of Top Critics Across Film Reviews by Distributor

Distributor	White Male Top Critics	White Female Top Critics	UR Male Top Critics	UR Female Top Critics
Fox	67%	20.6%	9.9%	2.5%
Paramount	71%	18.4%	9.2%	1.4%
Sony	68.5%	20.2%	9.5%	1.7%
Universal	64.1%	24.5%	9.1%	2.3%
Disney	69.7%	18.3%	9.6%	2.5%
Warner Bros.	68.8%	19%	10.4%	1.8%
Lionsgate	67.2%	20.4%	10.1%	2.3%
Other	67.1%	21.2%	8.6%	3.1%

When the intersection of gender and race/ethnicity was explored by news outlet, disparities came further into focus.²⁰ Table 15 presents these results. White female Top critics crafted the most reviews for General News publications (33%), followed by Entertainment Outlets, Notable Daily Papers, Daily and

Weekly Newspapers, and crafted just 6.1% of reviews for the Entertainment Trade publications. In contrast, the Trades had the highest percentage of reviews by underrepresented male top critics (22.7%). Notable Dailies and Daily and Weekly Papers held a middle position, but were significantly higher than Entertainment Outlets and General News Outlets when it came to underrepresented male Top critics.

White male Top critics were significantly more likely to write reviews included in Daily and Weekly Newspapers than Notable Daily Papers or General News Outlets. The proportion of reviews written by underrepresented female Top critics did not differ across the outlets; 3.3% or less of all reviews by Top critics for each publication type were written by women of color. From this analysis, it is clear that women of color were least likely to publish reviews as Top critics across publications.

Table 15
Intersection of Demographic Characteristics Across Top Critic Reviews by Outlet

Outlet Type	White Male Top Critics	White Female Top Critics	UR Male Top Critics	UR Female Top Critics
Notable Daily Papers	65%	19.5%	13.2%	2.3%
Daily & Weekly Newspapers	70%	17.6%	10.1%	2.3%
Entertainment Trades	67.8%	6.1%	22.7%	3.3%
General News Outlets	64.6%	33%	<1%	1.6%
Entertainment Outlets	68.3%	23.8%	5.8%	2.1%

In addition to examining all reviews by Top critics, the proportion of individual Top critics reviewing across 300 top films from 2015 to 2017 was examined. This overall number reflects the unique number of critics writing across all three years sampled. For instance, a Top critic reviewing in 2016 and 2017 was only counted once.

Of the 449 individual Top critics reviewing films from 2015 to 2017, a total of 64.1% ($n=288$) were male and 35.9% ($n=161$) were female. This is a ratio of 1.8 male Top critics to every 1 female Top critic. In terms of race/ethnicity, 85.7% ($n=385$) were white and 14.3% ($n=64$) were underrepresented, a ratio of 6 white Top critics to every 1 underrepresented Top critic.

Table 16 reveals the percentage of individual Top critics per year. For the over time analysis, critics were counted individually within year and could repeat across years. For example, a Top critic reviewing in 2016 and 2017 would be counted one time within each year. The over time analyses for individual top critics was not significant.²¹ Female Top critics comprised less than one-third of the critics' pool in each year examined. The percentage of underrepresented critics was similar across years and reached a high of 15.5% in 2017. It is evident that from year to year, the Top critics reviewing movies changed little.

Table 16
Demographic Characteristics of Individual Top Critics

Measure	Male Top Critics	Female Top Critics	White Top Critics	UR Top Critics
% of Top Critics in 2015	67.6%	32.4%	88.7%	11.3%
% of Top Critics in 2016	66.8%	33.2%	86.8%	13.2%
% of Top Critics in 2017	67.2%	32.8%	84.5%	15.5%

In addition to examining over time differences by gender and race/ethnicity separately, the intersectional nature of these variables was explored per year. The analysis was not significant.²² White male Top critics represented more than half (57%) of all Top critics, while white female Top critics were less than one-third (28.7%). Underrepresented male (7.1%) and female (7.1%) Top critics each filled less than 10% of the pool of working Top critics across the three years.

Alongside overall prevalence, the frequency with which Top critics work was of interest. As there were no differences over time, these analyses included each individual Top critic working across all three years ($n=449$). Results are displayed in Table 17. Underrepresented male Top critics wrote the highest average number of reviews (32.3), followed by white male Top critics (28.6), white female Top critics (17.2) and underrepresented female Top critics, who authored only 7.5 reviews on average across the sample. Across all groups, most Top critics wrote only 1 review during the three-year sample.

Table 17
Descriptive Statistics of Film Reviews by Top Critics' Demographics

Descriptive Statistics	White Male Top Critics	White Female Top Critics	UR Male Top Critics	UR Female Top Critics
Average # of reviews written	28.6	17.2	32.3	7.5
Median # of reviews written (50 th Percentile)	7.5	3	4	3
Modal # of reviews written	1	1	1	1
Range of reviews across 300 movies	1-237	1-175	1-218	1-43
Sample Size	256	129	32	32

Does the number of reviews written by each Top critic vary by gender and race/ethnicity across the sample? To answer this question, the number of reviews written by each individual Top critic was categorized into one of 5 groups. The results appear in Table 18. Underrepresented female Top critics wrote no more than 50 reviews across the top 300 films analyzed. This reflects how opportunities for these critics are curtailed, especially when compared to the percentage of their white female (88.4%) or underrepresented male (71.9%) counterparts writing 1 to 50 reviews. White male Top critics held a middle position between the latter two groups (80.5%) in this category. Underrepresented male Top critics (15.6%) were also more likely than white female Top critics (8.5%) to write 51-100 reviews over the three years.

Table 18
Frequency of Top Critics' Reviews by Gender and Underrepresented Status

Number of Reviews	White Male Top Critics	White Female Top Critics	UR Male Top Critics	UR Female Top Critics
1-50 reviews	80.5% (n=206)	88.4% (n=114)	71.9% (n=23)	100% (n=32)
51-100 reviews	12.1% (n=31)	8.5% (n=11)	15.6% (n=5)	0
101-150 reviews	2.7% (n=7)	2.3% (n=3)	6.3% (n=2)	0
151-200 reviews	3.1% (n=8)	<1% (n=1)	3.1% (n=1)	0
201-250 reviews	1.6% (n=4)	0	3.1% (n=1)	0

Given the disparities reported above in the percentage of Top critics' reviews by outlet, we examined the distribution of individual critics by publication. The analysis was not significant.²³ Table 19 displays differences by outlet. Entertainment Trades (71.4%) had the highest percentage of white male Top critics. General News Outlets had the largest share of white female Top critics (38.8%). Finally, Daily and Weekly Newspapers had the highest percentage of underrepresented male (9.1%) Top critics, while the highest percentage of underrepresented female Top critics was found at Notable Daily Papers (9.3%).

Table 19
Intersection of Individual Top Critics' Demographic Characteristics by Outlet

Outlet Type	White Male Top Critics	White Female Top Critics	UR Male Top Critics	UR Female Top Critics
Notable Daily Papers	56%	28%	6.7%	9.3%
Daily & Weekly Newspapers	56.5%	26.6%	9.1%	7.8%
Entertainment Trades	71.4%	16.3%	8.2%	4.1%
General News Outlets	50%	38.8%	6.1%	5.1%
Entertainment Outlets	58.9%	28.8%	4.1%	8.2%

In order to understand whether identity plays a role in the assignment of films to Top critics, we examined the proportion of female Top reviewers for female-driven films across the sample of 300 (n=108). Six of these films (5.5%) had a Top critics' pool that is at or above proportional representation (50%). Ten additional films had a Top critics' pool featuring 40% to 48.4% females.

Examining the proportion of underrepresented female Top critics reviewing female-driven fare presents a slightly different picture. No female-driven films in the sample had proportional representation of women of color as Top critics (20%). Five movies featured 10% or more underrepresented female Top critics (range=10% to 12.5%). ***A full 49 movies—or 45.4% of female-driven films across the past three years—were not reviewed by an underrepresented female Top critic.***

Next, films with actors from underrepresented racial/ethnic groups at the center were examined. Of these 57 films, none included a Top critics' pool that reached proportional representation to the U.S. population (roughly 40%). Of the three films with the highest percentage of underrepresented Top critics (28.6% to 30%), two were made by Tyler Perry (*Tyler Perry's Boo! A Madea Halloween* and *Tyler Perry's Boo 2! A Madea Halloween*). The remaining film was *The Wedding Ringer*, with 29.2% of the Top critics from underrepresented racial/ethnic groups. Two films with underrepresented leads were not reviewed

by any Top critics of color. More than one-third (35.1%, $n=20$) of films driven by underrepresented leads did not include one underrepresented female Top critic.

Finally, we examined the percentage of all 300 movies missing at least one underrepresented female Top critic. ***A full 145 films, or 48.3% of the sample did not have a review by an underrepresented female Top critic.*** This means that across three years, the most notable women of color working as film reviewers did not publish a critique of nearly half of the most popular movies released.

The purpose of this section was to understand the profile of Top critics (as designated by Rotten Tomatoes) working across the 100 most popular films of the previous three years. The results point to three major conclusions. First, the demographic disparities noted among all critics continue to be seen amongst notable practitioners in the field. Women and underrepresented individuals represented less than half of the overall pool of Top critics from 2015 to 2017. Second, the percentage of women of color working as Top critics and the opportunities afforded to these women were paltry. A fraction of Top critics were women of color, who wrote the fewest number of reviews on average per year. Moreover, a number of films driven by female or underrepresented individuals were completely missing any underrepresented female Top critics in their review pool. Third, while there were slight fluctuations in representation across distributor and publication outlet, the disproportionate reliance on white male critics appears to be an issue that spans the entertainment and journalism industries.

Conclusion

This report, the second in a series, was intended to extend and update findings from our inaugural study on the representation of women and people of color as film critics. To that end, reviews for 300 top-grossing movies from 2015 to 2017 were analyzed. The major findings are discussed below, along with potential solutions and limitations of the study.

#1 No Change in Reviewer Representation Over Time

In the three years examined, there was no meaningful change in the percentage of female critics or reviewers from underrepresented racial/ethnic groups working across all reviewers or as Top critics. When we crossed gender and race/ethnicity, the results revealed that white males wrote 65.6% of the reviews for the 300 films studied, white females 17.6%, and underrepresented males 13.1%. Underrepresented females composed just 3.7% of the reviews. These findings were mirrored among Top critics, where the ratio of white male to underrepresented female Top critics was nearly 31 to 1.

These findings demonstrate the stability of our initial results over time and reinforce the idea that the playing field for critics is not level. While some may argue that a critics' identity should not or does not play a role in their evaluations of films, the findings in this study suggest a different view. Though provisional, the analysis in this report provides initial indication that underrepresented female critics and white male critics review certain movies differently. Importantly, those are films with underrepresented female leads and *not* movies driven by white males.

The consequences of this are striking. Some evidence suggests that critics' reviews can affect box office performance, particularly negative reviews.²⁴ Given that white male critics rate movies with underrepresented female leads lower than their underrepresented female counterparts, this could influence a film's financial performance. Amplifying the role that women of color play in the conversation surrounding films with underrepresented leads could have the potential to increase revenue surrounding these movies. While only preliminary, the findings here demonstrate that in the ecosystem of filmmaking,

inequity in film criticism is one piece of a chain of decisions that can affect what audiences can access in the theater.

#2 Differences by Distributor Are Minimal

In this report, we included an analysis by distributor to examine whether any of the major studios have achieved a balanced or proportional critic's pool. Whether among all reviewers or Top critics, films released by the major motion picture companies were still reviewed primarily by white male critics. While some differences emerged by distributor amongst Top critics regarding white female reviewers, only one company (Universal) was within 5% of reaching proportional representation of this group. Overall, these findings reveal how far these companies have to go until their critics' pools reflect their audience.

While organizations may be cautious about the idea of setting target inclusion goals, these results speak to what we earlier referred to as an invisible quota system that clearly continues to operate. By engaging in the same or similar practices to recruit critics for every film in their slates and across years, the major entertainment companies are already acting to maintain an unbalanced ratio of white male reviewers to other groups. By setting target inclusion goals, these corporations can choose to act intentionally and seek out opportunities to include critics who might be overlooked if they merely continue on with "business as usual." Given the results mentioned above, this may be vital to ensuring that money is not left on the table and that films with underrepresented female leads can reach their full revenue potential.

#3 Publications Perpetuate a Lack of Representation

Differences in representation of critics by publication were assessed for Top critics. Only a few of the publication groups reached proportional representation of white female Top critics. One category—Entertainment Trades—featured more than 20% of reviews from underrepresented male critics. The overrepresentation of white male critics across all publications reflects not only how these reviewers dominate the conversation on film, but the employment pool as well.

In contrast to the demographic profile of critics, the pipeline appears far more balanced. Over 40% of communication and journalism Bachelor's degrees are awarded to white women, and nearly a quarter to women of color-- which makes women overall the majority of graduates.²⁵ The proportion of females in the talent pool compared to those employed in film criticism is vastly divergent, particularly for women of color. What happens to these women as they seek employment-- particularly in an industry that is still undergoing changes? Even as the journalism industry evolves, we would still expect that the percentage of female talent in the pipeline would be reflected in the employee ranks. Ensuring that the hiring process is equitable and that newsrooms are representative of available talent will be crucial for creating sustainable change in the corps of film critics.

Solutions

As in our previous report, we offer a few solutions to the ongoing lack of representation among film critics. Moving forward, we suggest that studios, film festivals, publications (news outlets, trades, magazines), and other organizations set target inclusion goals to reach proportional representation to the population: 30% white males, 30% white females, 20% underrepresented males, and 20% underrepresented females. One way to achieve this is for film festivals and other groups to commit to including underrepresented critics in their events. This could be similar to what the Sundance Film Festival and the Toronto International Film Festival have done by making a percentage of press passes available to underrepresented critics.²⁶ Or, it could mirror Rotten Tomatoes' recent commitment to expand the profile of critics aggregated on their site.²⁷ Studios, however, can pledge to "just add 9"

critics. This idea invites studios to add 9 critics—3 white females, 3 underrepresented males, and 3 underrepresented females—to the existing pool of invited critics for each film on their slate. After 5 years of doing this for each film they release, studios could ensure that the critics pool reflects reality.

Studios and film festivals may make commitments, but how can they ensure that they have access to a diverse pool of invitees? The CRITICAL database from TIME'S UP Entertainment may be one tool that can assist. By acting as a central repository of information, CRITICAL can help those who are planning screenings or other events by meeting a desire to be inclusive with what is needed to make that happen. Talent can also make requests to studios regarding the proportion of female and underrepresented critics or journalists who review films and cover movie releases. Finally, no progress will be made until publications hire more inclusively and assign women and underrepresented critics to review movies. As the pipeline of potential reviewers continues to include more female and underrepresented individuals, this should occur over time, but outlets must set goals to have their editorial and news staff reflect this incoming talent pool and work to achieve this on a set timeline.

Limitations

A few limitations to the study are important to note. As mentioned earlier, the analysis related to critics' identity and their review scores is suggestive but based on small sample sizes. Thus, to reach more firm conclusions, more data and evidence are needed. Second, while this study provides information on the overall value reviewers place on content, these scores do not provide insight into the nature of the reviews themselves. That is, what language do reviewers use when discussing these films? A sentiment analysis examining review content is needed to fully explore the breadth of reviewers' work and how it may vary by identity or the inclusiveness of a film.

A third limitation relates to the publication analysis. While we know which outlet reviewers work for, we do not have information on the nature of their employment. For example, this study does not examine how many critics are staff reviewers, editors, or film journalists. Most importantly, an indication of how many critics are working as freelance writers is not examined. Future work should assess how gender and race/ethnicity vary by job title to provide an awareness of how employment may differ across groups. This could include a survey of critics and journalists regarding their job titles, experiences, and the barriers they face in the workplace. Lastly, while this study explores critics, it does not offer a lens into the larger picture of publicity surrounding a film. Junkets, red carpets, premieres, and other interviews may be spaces where an imbalance of women or underrepresented journalists exists. We need more information to understand the experiences of female journalists and those from underrepresented racial/ethnic backgrounds in these situations. Further, we need to explore how the environment of a red carpet or other publicity venue may impact talent when the majority of participants are male. By examining the full picture related to marketing a film, we can more adequately take steps to ensure that equitable and safe spaces are created.

Overall, this study adds to our knowledge regarding the inequity that exists in film criticism. As a key part of the filmmaking ecosystem, it is clear that the conversation is dominated by white male voices. What does it mean for audiences to have their impressions of a film filtered through this skewed group of reviewers? How does this influence profits? How might it affect greenlighting or marketing decisions for future movies? These answers may not be available at present, but it is clear that the current state of film criticism does little to reflect the ticket-buying audience. For that reason alone, it is vital to create ways for more balanced representation and a greater share of diverse voices to enter the space.

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Footnotes

1. The 100 top domestic box office films of 2015, 2016, and 2017 were retrieved from Box Office Mojo. <https://www.boxofficemojo.com/yearly/> Our method is outlined meticulously in Choueiti, M., Smith, S. L., & Pieper, K. (2018). *Critic's Choice? Gender and Race/Ethnicity of Film Reviewers Across 100 Top Films of 2017*. Annenberg Inclusion Initiative. Los Angeles, CA: Annenberg School for Communication & Journalism, Los Angeles, CA. As a result, details for this investigation only will be paraphrased below.

A total of 300 films garnered 59,761 reviews on Rotten Tomatoes. For the 100 top films of 2017, the date the reviews were pulled was March 27th, 2018 whereas the 100 top films of 2016 and 2015 were retrieved on June 11th, 2018 and June 12th 2018 respectively. As stated in our initial report, pulling reviews on a different day may yield a slightly different sample as Rotten Tomatoes updates critics' reviews often as well as corrections on the site. For definitions of all and Top reviewers, see Choueiti et al. (2018).

Of the 59,761 reviews, 10 were written by critics whose sex we could not confirm. As a result, these 10 reviews were excluded from analysis (9 critics total). Thus, our total sample size for all reviews is 59,751. Turning to authors, a full 2,422 critics were responsible for the entire sample of reviews (59,761). For 34 critics, we were not able to confirm their sex. Using Babynames.com, 25 were classified as male or female based on the gender typicality of their first name (e.g., Andrew, Brian, Catherine, etc). Nine critics could not be identified by sex, so the total sample size for all critics was 2,413. For race/ethnicity, a total of 314 (<1%) were authored by critics whose underrepresented status could not be confirmed. The total sample size for the underrepresented analyses reduces to 59,447. These reviews were authored by 50 different critics, bringing the sample size on this measure to 2,372.

Some reviews were written by more than one person. This happened a total of 92 times across the sample of 59,761 reviews. When this occurred, the reviews were only counted once in analyses. Both members of each writing team were accounted for in critics' analyses, however. In all but one writing team, the critics shared identities by gender and underrepresented status. In the case where one critic was a white male and the other was a white female, the reviewer information was loaded onto the female's line. This approach is consistent with other studies where we have analyzed male and female co directors or mixed gender co leads (see Smith et al., 2018; *Inequality in Popular Films*).

In terms of the coding process, two members of the research team evaluated all of the critics in the sample each year. Both of those researchers are from underrepresented racial/ethnic groups. To make judgments, information from all available online sources was scoured for biographical information from pictures (e.g., individual, family, friends) and narrative accounts for identity indicators (e.g., pronoun use, heritage, nationality, etc). In the absence of definitive information, the two members of the research team made judgments about the race/ethnicity of the critics. As such, our measure for underrepresented status should be considered "apparent race/ethnicity." It should be noted, however, that the correlation between our teams' judgments on character underrepresented status and actor underrepresented status was .90 ($n=1,883$ of TV series regulars). If 1.0 is a perfect correlation, then we can assume minimal deviation in the researcher's judgments. That said, the results should be interpreted cautiously until self report surveys of actual critics can be completed.

There are slight deviations from the findings in our previous report on films from 2017. We were able to ascertain the racial/ethnic background of two males since the release of the first report. Both are now categorized as white; in our previous report they were unknown and excluded. Additionally, we categorized two individuals (one female, one male) as white who were underrepresented in the previous report. In these four cases, changes were made in the discovery of extra information. These four critics authored 42 reviews in 2017 (<1% of all reviews) and thus any changes between this report and the previous version are minimal.

2. The chi-square test for reviewer *gender* (male, female) by *year* (2015, 2016, 2017) was significant, $X^2(2, 59,751)=62.85, p<.01, V^*=.03$. The difference between percentages was less than 5%, however.

3. U.S. Census Bureau (2018). Quick Facts. Retrieved June 5, 2018. Retrieved from: <https://www.census.gov/quickfacts/fact/table/US/PST045217>. Motion Picture Association of America (n.d., p. 19). THEME Report: A comprehensive analysis and survey of the theatrical and home entertainment market environment (THEME) for 2017. Author. Retrieved from: https://www.mpa.org/wp-content/uploads/2018/04/MPAA-THEME-Report-2017_Final.pdf
4. An analysis revealed a significant chi-square test by *underrepresented status* (yes, no) and *year* (2015, 2016, 2017), $X^2(2, 59,447)=64.01, p<.01, V^*=.03$. Yet, a meaningful difference (5% or greater) was not observed between percentages.
5. U.S. Census Bureau (2018). Quick Facts. Retrieved June 5, 2018. Retrieved from: <https://www.census.gov/quickfacts/fact/table/US/PST045217>. Motion Picture Association of America (n.d., p. 19). THEME Report: A comprehensive analysis and survey of the theatrical and home entertainment market environment (THEME) for 2017. Author. Retrieved from: https://www.mpa.org/wp-content/uploads/2018/04/MPAA-THEME-Report-2017_Final.pdf
6. The analysis for *distributor* (21st Century Fox, Sony Pictures, NBC Universal, Paramount Pictures, Walt Disney Company, Warner Brothers, Lionsgate, other) by *review author sex* (male, female) was statistically significant, $X^2(7, 59,751)=33.93, p<.01, V^*=.02$. No 5% difference was observed, however. The analysis for *distributor* by *underrepresented status* (yes, no) was not significant, $p=.26$.
7. The chi-square analysis for *intersectional identity* (white males, white females, underrepresented males, underrepresented females) and *year* (2015, 2016, 2017) was significant, $X^2(6, 59,447)=133.54, p<.01, V^*=.03$. However, the criterion for meaningful significance (5% difference) was not achieved.
8. Smith et al. (2018). *Inequality in 1,100 Popular Films*.
9. Two ANOVAs were conducted and the results appear in Table 8. The dependent measure was the reviewer score which was standardized on a 0 to 10 scale. Scores appear as fractions with five different denominators (i.e., 4, 5, 10, 20, and 100), letter grades with a plus or minus designation, or phrases. The first (which could be points, stars, reels, etc.) were converted to a score out of 10. We used Metacritic's (<http://www.metacritic.com/about-metascores>) conversion chart to transform each letter grade into a value out of 10. Phrases (e.g., "not recommended", "highly recommended") were not transformed into a value. Of the 59,751 reviews, 26.7% ($n=15,927$) did not have a score, or had a value that was not communicated as a fraction or letter grade. These reviews were excluded from the analysis.
- An ANOVA was run on *reviewer identity* (i.e., white male, white female, underrepresented male, underrepresented female) and *male lead character* (i.e., white male, underrepresented male) on the standardized reviewer score from Rotten Tomatoes (i.e., 0-10) across all reviews. The analysis yielded two significant main effects, reviewer identity $F(3, 25,323)=5.69, p<.01$ and lead identity $F(1, 25,323)=161.36, p<.01$ and a significant interaction, $F(3, 25,323)=2.73, p<.05$. In Table 8, the means from the interaction effects are presented without post hoc tests.
- An ANOVA was executed on *reviewer identity* (i.e., white male, white female, underrepresented male, underrepresented female) and *female lead character* (i.e., white female, underrepresented female) on the standardized reviewer score (i.e., 0-10) across all reviews. A main effect for reviewer identity $F(3, 11,641)=6.51, p<.01$ was qualified by a significant interaction between reviewer identity and lead identity, $F(3, 11,641)=4.99, p<.01$. The means in Table 8 are presented without post hoc tests.
10. A series of chi-square analyses were undertaken to further explore the ANOVA results presented in the previous footnotes. For each lead type (underrepresented vs. not) within gender (male vs. female), the percentage of reviewers by identity (white male, white female, underrepresented male, underrepresented female) designating a film as "fresh" or "rotten" was assessed. Below, two analyses (white male leads, underrepresented female leads) are

presented regarding the findings detailed in the report. Subsequently, we present chi-square results regarding reviewer identity by white female leads and underrepresented male leads for interested readers.

The first analysis for *reviewer gender and race* (white male, white female, underrepresented male, underrepresented female) by *reviewer evaluation* (rotten, fresh) of white male leads was significant, $X^2(3, 28,069)=41.10, p<.01, V^*=.04$. Differences between groups are reported in text. Chi-square analysis for *reviewer gender and race* (white male, white female, underrepresented male, underrepresented female) by *reviewer evaluation* (rotten, fresh) of underrepresented female leads was significant, $X^2(3, 1,154)=22.57, p<.01, V^*=.14$.

Chi-square analysis for *reviewer gender and race* (white male, white female, underrepresented male, underrepresented female) by *reviewer evaluation* (rotten, fresh) of underrepresented male leads was significant, $X^2(3, 6,226)=19.87, p<.01, V^*=.06$. A meaningful difference emerged. White male critics are less likely to score films with underrepresented male leads as “fresh” than white or underrepresented female critics.

The analysis for *reviewer gender and race* (white male, white female, underrepresented male, underrepresented female) by *reviewer evaluation* (rotten, fresh) of white female leads was significant, $X^2(3, 14,847)=17.88, p<.01, V^*=.03$. No meaningful differences emerged across cells.

Percentage of Films Rated “Fresh” by Character Identity and Critic Identity

Identity of Lead Character(s)	White Male Critics	White Female Critics	UR Male Critics	UR Female Critics
Underrepresented Male Leads	72.4%	77.6%	76.6%	79.9%
White Female Leads	66.1%	68.6%	70.2%	70.3%

11. The chi-square analysis for *reviewer gender* (male, female) by *year* (2015, 2016, 2017) was significant, $X^2(2, 10,807)=7.24, p<.05, V^*=.03$. No differences of 5% or greater were observed, however.

12. The chi-square analysis for *reviewer underrepresented status* (yes, no) by *year* (2015, 2016, 2017) was significant, $X^2(2, 10,807)=6.78, p<.05, V^*=.03$. No differences of 5% or greater were observed, however.

13. Chi-square analysis for *reviewer gender* (male, female) by *film distributor* (21st Century Fox, Paramount Pictures, Sony Pictures Entertainment, Universal Pictures, Walt Disney Company, Warner Bros., Lionsgate, other) was significant, $X^2(7, 10,807)=31, p<.01, V^*=.05$.

14. Chi-square analysis for *reviewer underrepresented status* (underrepresented, not) by *film distributor* (21st Century Fox, Paramount Pictures, Sony Pictures Entertainment, Universal Pictures, Walt Disney Company, Warner Bros., Lionsgate, other) was not significant, $X^2(7, 10,807)=3.14, p=.87, V^*=.02$.

15. Each outlet in the sample was researched, examining its website, social media accounts, and (if available) its entry on Wikipedia. Following this, every outlet was categorized as either having a printed publication (newspaper, magazine) or only existing via an online site (website). For printed publications, we used three articles to group 10 notable daily newspapers into a single category: <https://www.cision.com/us/2017/09/top-10-u-s-daily-newspapers-2/>; <https://www.statista.com/statistics/184682/us-daily-newspapers-by-circulation/>; <https://muckrack.com/blog/2018/01/10/the-top-10-newspaper-publications-in-the-us>. The final list of publications in this category include: *The Chicago Tribune*, *Los Angeles Times*, *Minneapolis Star Tribune*, *New York Daily News*, *New York Post*, *New York Times*, *Newsday*, *USA Today*, *Wall Street Journal*, and *Washington Post*. Newspapers apart from the 10 listed were sorted into the daily and weekly news category. We specifically designated the entertainment trades (*The Hollywood Reporter*, *Variety*, *TheWrap*) as one category. Printed magazines were sorted into two categories: entertainment based or general interest magazines. For sites that contain reviews, we took those that were focused on movies and sorted them into two categories (one individual’s movie review site vs a movie site with multiple contributors). For all other sites, we sorted them into two groups as well: sites that were

entertainment related, and those that were comprised of general/other content. Entertainment magazines and websites were combined into a single category along with websites focused on reviews; the process was repeated for general interest magazines and sites.

16. The chi-square analysis for *reviewer gender* (male, female) and *outlet type* (Notable Daily Papers, Daily & Weekly Newspaper, Entertainment Trade, General News Outlet, Entertainment Outlet) was significant, $X^2(4, 10,807)=250.45, p<.01, V^*=.15$. Meaningful differences were observed and are reported in text.

17. The chi-square analysis for *reviewer underrepresented status* (no, yes) and *outlet type* (Notable Daily Papers, Daily & Weekly Newspaper, Entertainment Trade, General News Outlet, Entertainment Outlet) was significant, $X^2(4, 10,807)=371.53, p<.01, V^*=.19$. Meaningful differences were observed and are reported in text.

18. The chi-square test for *reviewer gender and race* (white male, white female, underrepresented male, underrepresented female) by *year* (2015, 2016, 2017) was significant, $X^2(6, 10,807)=31.04, p<.01, V^*=.04$. There were no differences of 5% or greater, however.

19. Chi-square analysis for *reviewer gender and race* (white male, white female, underrepresented male, underrepresented female) by *film distributor* (21st Century Fox, Paramount Pictures, Sony Pictures Entertainment, Universal Pictures, Walt Disney Company, Warner Bros., Lionsgate, other) was significant, $X^2(21, 10,807)=42.82, p<.01, V^*=.04$.

20. Chi-square analysis for *reviewer gender and race* (white male, white female, underrepresented male, underrepresented female) by *outlet type* (Notable Daily Papers, Daily & Weekly Newspaper, Entertainment Trade, General News Outlet, Entertainment Outlet) was significant, $X^2(12, 10,807)=610.42, p<.01, V^*=.14$. Differences of 5% or greater are noted in the text.

21. The chi-square analysis for *individual reviewer gender* (male, female) by *year* (2015, 2016, 2017) was not significant, $X^2(2, 863)=.04, p=.98, V^*=0.01$. The chi-square analysis for *individual reviewer underrepresented status* (yes, no) by *year* (2015, 2016, 2017) was not significant, $X^2(2, 863)=2.29, p=.32, V^*=.05$.

22. The chi-square test for *individual reviewer gender and race* (white male, white female, underrepresented male, underrepresented female) by *year* (2015, 2016, 2017) was not significant, $X^2(6, 863)=3.15, p=.79, V^*=.04$.

23. Chi-square analysis for *individual reviewer gender and race* (white male, white female, underrepresented male, underrepresented female) by *outlet type* (Notable Daily Papers, Daily & Weekly Newspaper, Entertainment Trade, General News Outlet, Entertainment Outlet) was not significant, $X^2(12, 449)=12.95, p=.37, V^*=.10$.

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