

# Negative Screenwriter Bias

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## Introduction

In the August 9th episode of the podcast “Scriptnotes,” screenwriter John August posited the following hypothesis:

*“I have a theory that the screenwriter’s name is mentioned... more often in a negative review [of a film] than in a positive review.”*

August, together with co-host Craig Mazin, asserted that the hypothesis “feels anecdotally true,” and proposed a comprehensive study of all film reviews over the last five years to determine if it was supported by the data. As a precursor to such a study, I have here selected a small sample of reviews from 2011, in an attempt to determine if any such bias can be found, and whether the hypothesis merits further investigation. After assembling the data, I was able to test the hypothesis over the entire data set, test the hypothesis among individual critics, and to look for other variables which might determine the likelihood of a screenwriter’s name being mentioned in a film review.

## The Data

In order to constrain the data set to a reasonable size, I chose to examine the 50 highest-grossing films of 2011, according to The Internet Movie Database ([www.imdb.com](http://www.imdb.com)). From this list, I excluded two films (The Help, and Super 8), whose only credited screenwriter was also credited as the director, resulting in a total of 48 films. For critics, I chose at random 100 reviewers listed as “Top Critics” on the Rotten Tomatoes website ([www.rottentomatoes.com](http://www.rottentomatoes.com)).<sup>1</sup> Since not every reviewer reviews every film, the number of films reviewed by each critic, and the number of reviews each film received both varied. The number of films reviewed by each critic varied from 1 to 37, with an average of just over 14, and the number of reviews for each film varied from 13 to 41, with an average of just over 29. Additionally, reviews that could not be retrieved from the internet (due either to broken links or insurmountable paywalls) were excluded. This resulted in a total data set of 1,401 reviews.<sup>2</sup>

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<sup>1</sup> An alphabetical list of the critics appears in Appendix A.

<sup>2</sup> A link to the complete data set appears in Appendix B.

For each review, the complete text of the review was retrieved, and searched for each of the screenwriters' names. Only those writers' names with "Screenplay by" credit were included. In order to qualify as a "mention," the name of the writer(s) must have appeared in the body of the review's text, not merely in a list of credits. Whether the review was "positive" or "negative" was determined by the rating assigned it by Rotten Tomatoes.<sup>3</sup> In the data set, each review was assigned a two-letter code. The first letter denotes whether the review is positive or negative, with "X" representing a positive review, and "O" representing a negative review. The second letter denotes whether or not the screenwriters were mentioned by name, with "X" representing a mention, and "O" representing a non-mention. Thus "XX" denotes a positive review in which the screenwriter's name is mentioned, "XO" denotes a positive review in which the screenwriter's name is not mentioned, and so on.

## Analysis

In order to test our hypothesis, we simply need to compare the frequency with which a screenwriter's name was mentioned in negative reviews against the frequency with which the screenwriter's name was mentioned in positive reviews. Because the total number of negative and positive reviews is unequal (565 negative vs. 836 positive), we must normalize over the totals of negative and positive reviews. Mathematically then, we can state our hypothesis as:

$$\frac{\sum OX}{\sum OO + \sum OX} \geq \frac{\sum XX}{\sum XX + \sum XO}$$

The term on the left represents the percentage of negative reviews that mention the screenwriter, while the term on the right represents the percentage of positive reviews that mention the screenwriter.

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<sup>3</sup> It is worth noting that I preserved Rotten Tomatoes' decision about what constituted a "fresh" or "rotten" review, despite sometimes disagreeing with the assessment. Some critics provide a numerical scale (1 to 5 stars) or a letter grade (e.g. B-), while other simply state opinions, (e.g. "Big, dumb, and fun."). This renders the question of what constitutes a positive or negative review fairly subjective.

## Results

Using our entire data set, the equation above yields:

$$31.36\% \geq 50.00\%$$

Obviously, the above equation is false. Not only is there no apparent negative bias toward mentioning the screenwriter, the opposite seems to be true, critics are 18% MORE likely to mention the writer(s) in a POSITIVE review of a film.

Despite our hypothesis proving untrue across the whole data set, I also looked at whether or not it was true for individual reviewers. That is to say, while it appears not to be the case that screenwriters' names are mentioned more frequently in negative reviews than in positive ones, I was curious to see if that was the case for reviews written by specific individuals. In order to reasonably constrain the data set, I looked only at critics who reviewed 20 or more of the films on our list. The table below displays those results.

CRITIC	TOTAL MENTION	MENTION NEGATIVE	MENTION POSITIVE	HYPOTHESIS
AB	69.6%	66.7%	70.6%	FALSE
AG	53.3%	30.8%	70.6%	FALSE
AH	16.2%	10.0%	18.5%	FALSE
AI	64.7%	50.0%	77.8%	FALSE
AK	40.7%	33.3%	46.7%	FALSE
AL	67.9%	72.7%	64.7%	TRUE
AO	25.7%	21.4%	28.6%	FALSE
AU	50.0%	43.8%	60.0%	FALSE
AV	61.3%	58.3%	63.2%	FALSE
AW	20.5%	18.8%	21.7%	FALSE
AY	63.9%	42.9%	77.3%	FALSE
AZ	37.5%	23.5%	47.8%	FALSE
BB	16.7%	11.1%	20.0%	FALSE
BC	9.1%	5.3%	12.0%	FALSE

CRITIC	TOTAL MENTION	MENTION NEGATIVE	MENTION POSITIVE	HYPOTHESIS
BE	11.1%	5.6%	14.8%	FALSE
BG	68.0%	71.4%	66.7%	TRUE
BH	48.0%	42.9%	54.6%	FALSE
BI	17.1%	0.0%	20.7%	FALSE
BJ	70.4%	63.6%	75.0%	FALSE
BK	58.3%	45.5%	64.0%	FALSE
BP	95.8%	85.7%	100.0%	FALSE
BU	100.0%	100.0%	100.0%	FALSE
CC	70.0%	58.3%	87.5%	FALSE
CQ	11.1%	0.0%	16.7%	FALSE
CW	22.7%	7.1%	50.0%	FALSE
CY	40.0%	12.5%	58.3%	FALSE
TOTALS	46.5%	37.7%	53.4%	FALSE

Clearly, our hypothesis is not only disproved across the entire data set, but disproved for almost ALL of the critics on our list, save two.<sup>4</sup> What's more, the critics who are the LEAST likely to mention screenwriters at all are FAR more likely to do so when writing a positive review. (See Critics CQ, BI, BE, BC, etc.)

These two analyses seem to strongly suggest that the hypothesis proposed by Mr. August and Mr. Mazin is patently FALSE, and that in fact the converse is true: *A screenwriter's name is mentioned far more often in a positive review than in a negative review.*

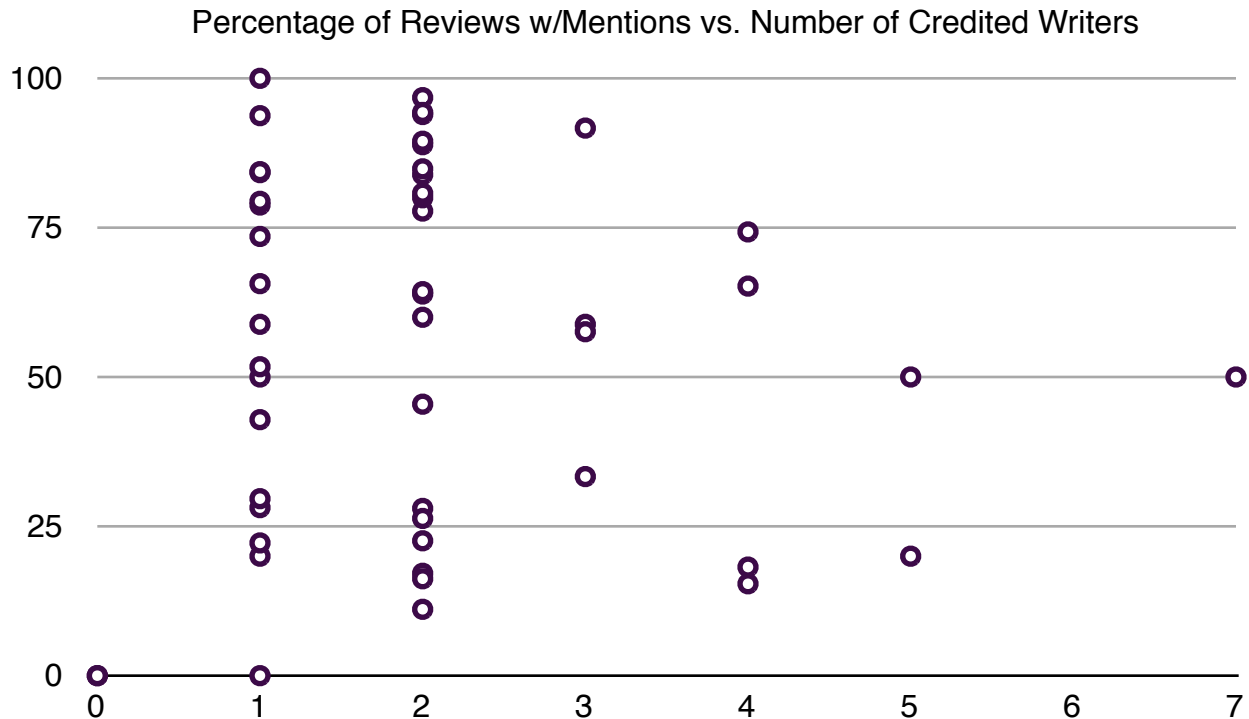
## Other Questions

Having answered our original question to my satisfaction, I next turned to looking at other factors that might determine the likelihood of a screenwriter's name being mentioned in a film review. It occurred to me that one factor which may influence the likelihood of a reviewer mentioning the screenwriters by name might be the number

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<sup>4</sup> One of the two exceptions, Elizabeth Weitzman of the New York Daily News, is, in my opinion, a fair-minded and extremely capable critic, who reviews lots of little indies that most people would ignore. She also mentions the writers most of the time, and is only SLIGHTLY more likely to do so in a negative review. I hope the reader will not demonize her. Peter Howell of the Toronto Star, however, seems to me like a pompous gasbag, so hate on him all you want.

of screenwriters credited on the film. Since critics must stay within very specific constraints on number of words or number of column inches, my theory was that films with many screenwriting credits would be less likely to have their writers mentioned by name. The number of credited screenwriters varied in our data set from 1 to 7, with a median of 2. I compared the percentage of total reviews which mention the screenwriters against the number of credited writers. A graph of that comparison appears below:

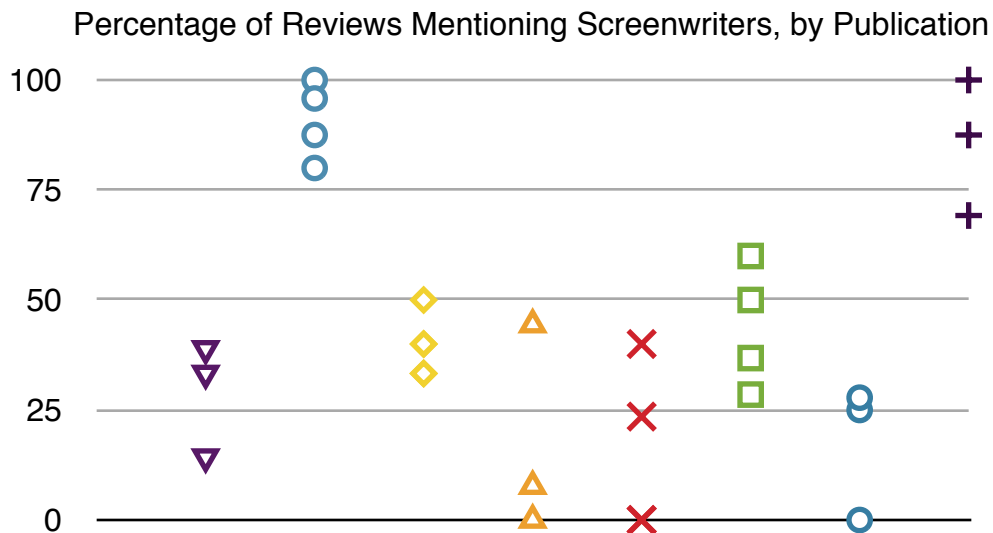


This data seems to suggest a slight falloff of the likelihood of the screenwriters' name being mentioned with an increasing number of writers, but the coefficient of determination is extremely low ( $\sim 0.02$ ). It is possible that the effect would be more significant in a larger data set, or there may be a method of analysis better suited to this data than a simple linear-regression model. That work is beyond the scope of this paper, but I believe it merits further study.

The last, and perhaps most intriguing question that I attempted to tackle with this data set occurred to me in the process of retrieving and coding the data itself. It quickly became apparent that there WAS one variable which seemed to be strongly predictive of whether or not a particular review was likely to mention the screenwriter by name, and that was the publication in which the review appeared. To illustrate this effect, I selected the eight publications that each had three or more critics appearing in

our data set. In the graph below, each point represents a single critic, and the points are plotted by publication to show the percentage of that critic's reviews that mention the screenwriters by name:

- + Variety
  - × Dallas Morning News
  - ▽ The New Yorker
- Chicago Reader
  - △ Globe and Mail
  - Hollywood Reporter
- Washington Post
  - ◇ NPR



The consistently tight grouping of these data points makes obvious what was clear during the coding process: the likelihood of a review mentioning the screenwriter by name is linked to the publication in which that review appears. This seems to strongly suggest that the decision about whether or not to mention the screenwriter's name is not a decision made solely by the individual reviewers on a case-by-case basis, but is to some degree a matter of editorial policy.<sup>5</sup>

## Conclusions

Based on the data set compiled here, we can say with confidence that there is no negative bias toward screenwriters in film reviews. The question of whether having more credited writers on a film decreases the likelihood of their being mentioned merits

<sup>5</sup> This theory seems reinforced by the fact that the entertainment industry trade publications are the MOST likely to mention screenwriters by name; reviews appearing in *Variety* and *The Hollywood Reporter* almost ALWAYS mention the screenwriters.

further study. Some publications are more likely than other to mention screenwriters, which seems to suggest that if we hope to increase the frequency with which writers are mentioned by name in reviews (and I think we should), bodies representing writers' interests<sup>6</sup> should take it upon themselves to lobby publications to make mentioning the writers a matter of editorial policy.

Lastly, I want to say that although we writers like to hate on critics for hating on us, we probably shouldn't. Critics are (as we have seen) far more likely to call us out for something they loved than something they hated, and they do serve an important function in the filmmaking ecosystem. The role of the critic was probably most artfully expressed in the film Ratatouille, flawlessly written by Brad Bird, and voiced by the incomparable Peter O'Toole:

EGO (V.O.)

In many ways the work of a critic is easy. We risk very little, yet enjoy a position over those who offer up their work and their selves to our judgement. We thrive on negative criticism, which is fun to write and to read.

But, the bitter truth we critics must face is that, in the grand scheme of things... the average piece of junk is probably more meaningful than our criticism designating it so. But there are times when a critic truly risks something... and that is in the discovery and defense of the new. The world is often unkind to new talent, new creations. The new needs friends.

It doesn't surprise me that established writers might feel attacked or abused by critics, and I agree wholeheartedly with the notion that one must learn to ignore their jabs. But speaking as a very new and unestablished writer, I am thankful for critics, because they are some of the few people actively looking for gems in the ever-growing ocean of trash.

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<sup>6</sup> I'm talking to you, WGA.

## Appendix A

DN	Agrell, Siri - Globe and Mail
BR	Anderson, John - Wall Street Journal
DS	Baltake, Joe - Passionate Moviegoer
CS	Barker, Andrew - Variety
DP	Barnard, Linda - Toronto Star
DA	Bennett, Ray - Hollywood Reporter
AZ	Berardinelli, James - Reelviews
AS	Biancolli, Amy - Houston Chronicle
CJ	Bowles, Scott - USA Today
CN	Buckwalter, Ian - NPR
BB	Burr, TY - Boston Globe
DT	Catsoulis, Jeannette - NPR
BO	Chang, Justin - Variety
BT	Charity, Tom - CNN.com
AF	Chrunin, Nancy - Dallas Morning News
DB	Cole, Stephanie - Globe and Mail
CP	Cordova, Randy - Arizona Republic
BJ	Corliss, Richard - TIME
AH	Covert, Colin - Minneapolis Star Tribune
AN	Dargis, Manohla - New York Times
DU	DeBruge, Peter - Variety
AD	Denby, David - The New Yorker
BY	Derakshani, Tirdad - Philadelphia Inquirer
CE	Diones, Bruce - The New Yorker
DD	Dowell, Gary - Dallas Morning News
AW	Ebert, Roger - Chicago Sun-Times
DV	Ebiri, Blige - New York Magazine
BN	Edelstein, David - New York Magazine
CB	Germain, David
CQ	Gleiberman, Owen - Entertainment Weekly
BI	Goodykoontz, Bill - Arizona Republic
DH	Goss, William - Film.com
CU	Groen, Rick - Globe and Mail
AR	Gronvall, Andrea - Chicago Reader
AA	Guzman, Rafer - Newsday
DL	Hiltbrand, David - Philadelphia Inquirer
CG	Holmes, Linda - NPR
CD	Honeycutt, Kurt - Hollywood Reporter
AQ	Hornaday, Ann - Washington Post
AL	Howell, Peter - Toronto Star



CR	Hynes, Eric - Village Voice
BZ	Jenkins, Mark - Washington Post
CO	Jones, J.R. - Chicago Reader
AB	Kennedy, Lisa - Denver Post
BK	Kenny, Glenn - MSN Movies
DF	Koehler, Robert - Variety
CA	Kois, Dan
DM	Kuipers, Richard - Variety
AJ	Lacey, Liam - Globe and Mail
BQ	Lane, Anthony, - The New Yorker
CL	LaSalle, Mick - San Francisco Chronicle
AE	Legel, Leremy - Film.com
DG	Lehmann, Megan - Hollywood Reporter
BM	Lemire, Christy - Associated Press
DR	Leydon, Joe - Variety
AK	Long, Tom - Detroit News
DQ	Longworth, Katrina - Village Voice
BH	Lumenick, Lou - New York Post
CK	MacDonald, Gayle
BX	Maurstad, Tom - Dallas Morning News
BP	McCarthy, Todd - Hollywood Reporter
AT	McCollum, Charlie - San Jose Mercury News
CV	Mondello, Bob - NPR
BE	Moore, Roger - Orlando Sentinel
AG	Morgenstern, Joe - Wall Street Journal
BV	Morris, Wesley - Boston Globe
DK	Neumaier, Joe - New York Daily News
DC	O'Connell, Sean - Washington Post
AM	O'Hehir Andrew - Salon.com
DJ	O'Sullivan, Michael - Washington Post
AC	Orr, Christopher - The Atlantic
AV	Phillips, Michael - Chicago Tribune
DI	Pinkerton, Nick - Village Voice
CI	Pols, Mary - Time Magazine
AO	Puig, Claudia - USA Today
AI	Rainer, Peter - Christian Science Monitor
CY	Rea, Steven - Philadelphia Inquirer
CT	Rechtshaffen - Hollywood Reporter
BD	Reed, Rex - New York Observer
BA	Rickey, Carrie - Philadelphia Inquirer
DE	Rocchi, James - MSN Movies
AX	Roeper, Richard - Richard Roeper.com
CZ	Sachs, Ben - Chicago Reader
BF	Schager, Nick - Village Voice

BL	Schwarzbaum, Lisa - Entertainment Weekly
CC	Scott, A.O. - New York Times
BU	Sharkey, Betsy - Los Angeles Times
CW	Smith, Kyle - New York Post
CM	Snider, Eric D. - Film.com
AU	Stevens, Dana - Slate
CF	Stewart, Sarah - New York Post
DO	Taylor, Ella - NPR
CH	Tipping, Joy - Dallas Morning News
BW	Tobias, Scott - NPR
AY	Travers, Peter - Rolling Stone
AP	Turan, Kenneth - Los Angeles Times
CX	Vognar, Chris - Dallas Morning News
BG	Weitzman, Elizabeth - New York Daily News
BC	Whitty, Stephen - Newark Star Ledger
BS	Wilmington, Michael - Chicago Reader

## Appendix B

The original data set used in this paper can be found on the internet at:

<http://tinyurl.com/9hj7o58>