

# The Exclusion of Women In Hollywood

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## ABSTRACT

We like to think of society as ever progressing. It is convenient and comfortable to think that time fixes all mistakes - and under this mindset, it is easy to believe that Hollywood has become better in its representation of a diverse array of people since its inception. In order to explore these assumptions, we utilize the Bechdel Test as a metric for assessing the representation of women within a movie. Through a series of interactive data visualizations that take the audience from any one movie in particular to the whole overarching trend of movies in a 40 year time span, we begin to understand the truth of our optimistic sentiments regarding Hollywood. Although it is true that women have become better represented in Hollywood over time, the magnitude of this upward change is disappointingly small. Thus, we conclude Hollywood still has a long way to go before it can provide an accurate reflection of modern-day feminist ideals in society.

**Keywords:** Women, representation, Bechdel Test.

## 1 INTRODUCTION

In an effort to produce a visualization that tackles an ongoing issue in our society today, we have decided to create a visualization based on the representation of women in Hollywood and the film industry. In our early explorations, we realized that despite the progress of feminist movement and the increasing inclusion of feminist ideals in modern-day society, the film industry has yet to reflect the same kind of progress, leading to a disappointing lack of representation of women and minority groups in movies today. As a result, we raised the question - how has the representation of women in Hollywood changed over time? Has it improved, or is it still the same as ten, twenty, thirty years ago?

In order to evaluate Hollywood's representation of women over the years, we decided to use the Bechdel Test. The Bechdel Test is named after American cartoonist Alison Bechdel, in whose 1985 comic strip *Dykes to Watch Out For* the test first appeared. Originally intended to be a simple tongue-in-cheek jab at the lack of female characters in films, the test is deceptively simple to pass: all the film in question must do is contain two named women who have a conversation about something other than a man. However, despite how simple the test is, many movies fail to pass this test.

In order to convey the astounding lack of movies that pass the Bechdel Test, we have constructed a narrative visualization that utilizes belief-elicitation techniques and a martini-glass structure that explores a wide range of movies over a near forty-year timespan.

## 2 RELATED WORKS

One of the earliest deep-dives into Hollywood's exclusion of women in their movies comes from an article by data-driven website FiveThirtyEight, called [The Dollar and Cents Case Against Hollywood's Exclusion of Women](#). Using the Bechdel test as a metric for determining how well-represented women are in a film, analysts at FiveThirtyEight analyzed a total 1,615 films released from 1990 to 2013 to examine the relationship between the prominence of women in a film and that film's budget and gross profits. Their conclusions were extremely disappointing. They found that the median budget of movies that passed the test entirely was substantially lower than the median budget of all films in the sample, which suggests that movies that made an attempt to be more inclusive ended up either suffering in terms of production or were less popular, less mainstream films. What's more, this article pointed out that many extremely successful Hollywood blockbusters, such as Marvel's *Avengers*, despite featuring supposedly strong female characters, still failed the test. This article provided us the dataset with which we used for our initial iteration of this project, as well as what inspired us to include budget and gross metrics within our visualization as opposed to solely including whether or not a movie passed the Bechdel Test.

According to a 2018 report by BBC titled [100 Women: How Hollywood fails women on screen](#), only about half of all Oscar Best Picture winners pass the Bechdel Test. What's notable about their conclusions, however, is that despite half the number of winners passing the test, many movies passed due to a single instance of conversation - a paltry one or two lines in comparison to the rest of the film. As one particularly contentious example, the report brings up *Spotlight*, a film about a newspaper investigation into the cover-up of child sexual abuse by Roman Catholic priests. In the single scene that makes it pass the Bechdel Test, journalist Sacha Pfeiffer (played by Rachel McAdams) is asked for a glass of water by her grandmother. No other scene in the movie features two women who speak to each other about something not related to men. As a result, one has to consider the shortcomings of the Bechdel Test - despite its simplicity, it is certainly not a complete, or even accurate way to evaluate how well-represented women are in film.

Therefore, with our visualization, we hope to use the Bechdel Test not to make claims about if a certain film represented women well, but rather to convey how many Hollywood films still fail to meet the barest minimum requirements of this test.

## 3 METHODS

Our visualization focuses on telling the narrative of the representation of women in Hollywood. To set the stage, we first ask the audience whether they believe that the

representation of women has improved over time. This primes their mind to start thinking critically about their beliefs regarding Hollywood films.

From there, we employ a martini-style structure to our system where we start small and gradually grow larger. We cover all the bases from one single movie in particular, to the whole overarching trend of movies in a 40 year time span.

Color is an important aspect of our project. We utilize the common color symbolism for green and red to represent good and bad respectively. In our case, green represents how a movie has passed the Bechdel test whereas red represents how a movie has failed the Bechdel test. Taking this further, we also used varying shades of red to represent the severity of failing the Bechdel test. Dark red signifies that the movie did not even have a prominent speaking female character, medium red represents how the female characters did not talk to each other, and light red represents how the female characters only talked to each other about men.

Finally, to create a sense of urgency and discomfort, we choose to flip common reading conventions by putting striking white text on a mysterious black background. Aside from the green (passes Bechdel test), reds (fails Bechdel test), and blue (hyperlinks), everything is black and white as if we are stuck in the old ages of monochromatic films. This only adds on to our message that the representation of women in Hollywood is not in a good state.

## 4 RESULTS

As mentioned, we employed a martini-style structure to our system where we start small and gradually grow larger. To first establish foundations, we collect the current beliefs of the audience through a small questionnaire of whether the audience believes that Hollywood has improved its representation. Their beliefs are then compared to that of other visitors to our website. Next, we define the Bechdel test for those who are not familiar with it. This is important because it is so simple yet, as we will come to see, many movies still fail this test.

With the foundation established, we first start with our martini at its tiny point: that of a single movie via the search box. Here, users can easily search for any movie of their choosing and see whether it passes the Bechdel test.

More generalized than this single movie search would then be to look at only a few movies. This is done via the game we have created for the audience. We present a randomly generated list of 10 popular movies and then quiz users on whether they think the movies have passed the Bechdel test. A green outline signifies how their answer is correct whereas a red outline signifies how their answer is incorrect. After inputting their beliefs for all 10 movies,

they are shown a chart that maps out how their answer compares with the average of all other players of our game. This chart provides comparisons of the score, number of false positive guesses (guessed a movie passed the Bechdel test when it had failed), and number of false negative guesses (guessed a movie failed the Bechdel test when it had passed). In most cases, visitors are much more optimistic that movies have passed the Bechdel test, as revealed through how the number of false positive guesses is much higher than the number of false negative guesses. The goal of the single movie search and 10 movie game sections are to get the audience more comfortable with what the Bechdel test is and to reset their previous beliefs about the representation of women in Hollywood.

These two sections rely on the color symbolism of red and green, as described in Methods, to tell their message. The 10 movie game takes color symbolism a step further by using a separate but similar dichotomy between white and black (representing the belief that a movie passed or failed the Bechdel test respectively). These are distinct from the green and red to emphasize choice in belief (clicking the buttons) versus objective fact (showing whether the choice is correct).

After this game of 10 popular movies, we see the breakdown of the top 10 most profitable movies in the last 20 years. We might hold misconceptions that popular movies are more representative of women than niche films because these movies are attractive to a huge amount of people, but this is not the case. Here, we took advantage of a stacked bar chart to easily show the amount of movies that failed the Bechdel test in a given year decomposed by the severity in their failure. These stacked bars are colored in the varying shades of red as described in Methods. Moreover, we decided to only visualize movies that failed the Bechdel test to decrease cognitive load by providing emphasis on failure to meet a test as seemingly simple as the Bechdel test.

After this chart of 200 of the top films, we see a decomposition of movies that passed the Bechdel test by genre. Users can interact with the visualization to compare the percentages of movies of that genre that passed the Bechdel test in a given year. This small multiples chart reveals interesting trends about how some genres are oftentimes more/less representative of women than others. Here, we use a small multiples chart to efficiently display nine multiple genres all at once. These small multiples are area charts, which is perfect for showing trend through time and the amount per given year of movies that passed the Bechdel test. The genres are also colored accordingly to what many Western viewers associate genres to colors (ex: dark red for horror due to gore).

Finally, we arrive at the dual visualizations of the trend of all movies over a 40 year time span from 1973 to 2013. To refer back to the martini formulation, this is the largest part of the martini so we created a large sweeping overview of

our data. Here, users first interact with the line chart to reveal what percentage of all movies from a given year passes the Bechdel test. A line graph was chosen for this purpose because it emphasizes the trend of movies through time. The audience can also click and drag to create a window of years to trigger the accompanying bubble chart. Each bubble in the bubble chart represents a movie and is sized on the gross or budget of that movie. Better grossing movies or movies with higher budgets are larger because such movies are recognizable to most people and hence what most people care about. The stress on these popular movies is further highlighted by how only these bubbles are labeled with their titles. For other bubbles in the chart, users can hover over them to bring up a tooltip that shows all the relevant information for that particular movie, including its title, the domestic gross, international gross, budget, and whether it has passed the Bechdel test. Furthermore, these bubbles are colored with the same green and reds symbolism as described in Methods. This creates a sense of unity and cohesion with what was shown earlier.

We close our project with a conclusion that summarizes the journey we have guided the viewer through. We tie up loose ends and loop it back to our main point of whether Hollywood has actually improved its representation of women, or whether it is just a convenient myth.

## 5 DISCUSSION

Through our work, the audience should arrive at a pessimistic idea of Hollywood's representation of women. Given the advances of society in regards to diversification, it is easy to assume how through the years, an ever increasing number of movies can pass something as simple as the Bechdel test.

However, as our visualization has shown, this is clearly not the case. Although it is true that the representation of women in American films has gotten better through the years, the magnitude of change is shockingly small. Even in the 2010s, around 50% of all movies passed the Bechdel test. This is extremely unfortunate given how this 50% threshold has stayed more or less consistent since the mid 1990s. In fact, many of the most popular movies to date do not even pass the Bechdel test. For example, 2008's *Iron Man* failed the Bechdel test quite miserably due to not having any prominent speaking female characters at all. Moreover, the representation of women in genres such as action and drama has pretty much plateaued since the 1980s.

Taking these together, although it is objectively true that the representation of women in Hollywood has improved through the years (at least according to the Bechdel test), it is still nowhere near the ideal.

## 6 FUTURE WORKS

We have focused solely on the Bechdel test as a metric to assess whether there is an adequate representation of women in a film. The Bechdel test, however, may be too simplistic of a test to assess. After all, it only has three criteria that must be met in order for a movie to pass. In fact, the test itself has its own share of criticisms for being too simple or too limiting, among other factors. Nowadays, many people are seeking out newer, more up-to-date measures for evaluating the representation of women in movies, which includes considerations for race, sexuality, character arc, and more.

In 2017, FiveThirtyEight launched a campaign to create the next Bechdel Test. In this campaign, they asked more than a dozen women to come up with a new metric for determining the gender and racial imbalance of a movie. Here are a couple of the many responses: Emmy-winning writer Lena Waithe asked that films have a black female character who is in a position of power and in a healthy relationship; actor Rory Uphold asked that the on-set crew be 50 per cent women; and writer Noga Landau asked that the film's female lead not end up dead, pregnant or causing problems for the male lead. It's clear that these new tests, which put greater weight on the actual roles of women in the movies they appear in, will not only provide more accurate evaluations of representation but also reveal the continuous failure of Hollywood to reflect the progression of feminism in modern day society.

As a result, a point of future work for our visualization is to include tests that are more inclusive than the Bechdel Test within our evaluation of the representation of women in films. We expect that visualizations arising out of such metrics will present an even smaller percentage of movies every year that 'pass' in terms of its representation of women. Although this was beyond the scope of our final project, we believe that pushing past the limiting rules of the Bechdel Test is important and hope that more data analysis is performed using these newer, updated metrics in the future.

## REFERENCES

- [1] "100 Women: How Hollywood Fails Women on Screen." BBC News, BBC, 2 Mar. 2018, [www.bbc.com/news/world-43197774](http://www.bbc.com/news/world-43197774).
- [2] "API Overview." The Movie Database (TMDb), [www.themoviedb.org/documentation/api](http://www.themoviedb.org/documentation/api).
- [3] Bechdel Test Movie List, [bechdeltest.com/](http://bechdeltest.com/).
- [4] Hickey, Walt. "Creating The Next Bechdel Test." FiveThirtyEight, 21 Dec. 2017, [projects.fivethirtyeight.com/next-bechdel/](http://projects.fivethirtyeight.com/next-bechdel/).
- [5] Hickey, Walt. "The Dollar-And-Cents Case Against Hollywood's Exclusion of Women." FiveThirtyEight, FiveThirtyEight, 1 Apr. 2014, [fivethirtyeight.com/features/the-dollar-and-cents-case-against-hollywoods-exclusion-of-women/](http://fivethirtyeight.com/features/the-dollar-and-cents-case-against-hollywoods-exclusion-of-women/).
- [6] Seth, Radhika, et al. "Why Are Films Failing The Bechdel Test When TV Has Progressed?" British Vogue, 15 July

2020,

[www.vogue.co.uk/arts-and-lifestyle/article/the-bechdel-test](http://www.vogue.co.uk/arts-and-lifestyle/article/the-bechdel-test).

- [7] Sun, Zhiming. "Week 10, Small Multiples." Popular Blocks, [bl.ocks.org/suneric1/c5432c5ecd181dc8b4fe#index.html](https://bl.ocks.org/suneric1/c5432c5ecd181dc8b4fe#index.html).
- [8] Tharmalingam, Narmelan. "Worldwide Blockbusters 2019-1977." Kaggle, 3 Feb. 2020, [www.kaggle.com/narmelan/top-ten-blockbusters-20191977](https://www.kaggle.com/narmelan/top-ten-blockbusters-20191977).
- [9] Waletzko, Anna. "Why the Bechdel Test Fails Feminism." HuffPost, HuffPost, 7 Dec. 2017, [www.huffpost.com/entry/why-the-bechdel-test-fails-feminism\\_b\\_7139510](https://www.huffpost.com/entry/why-the-bechdel-test-fails-feminism_b_7139510).