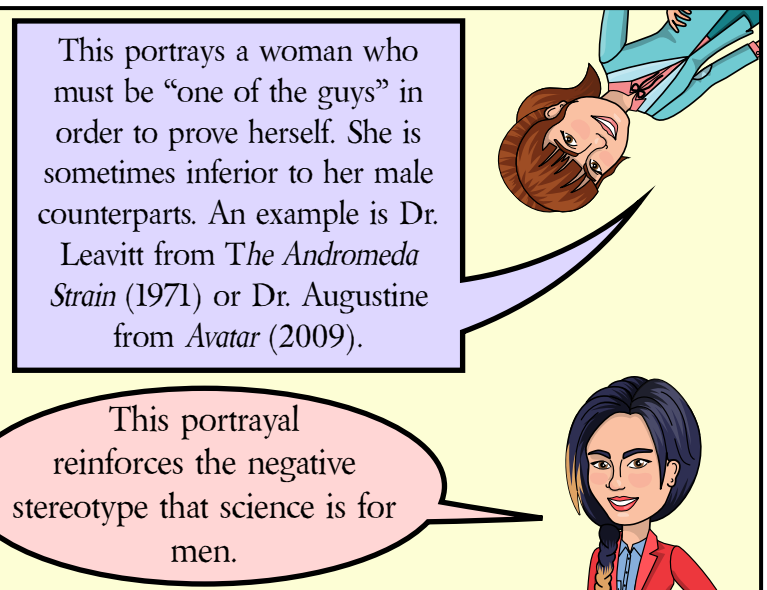
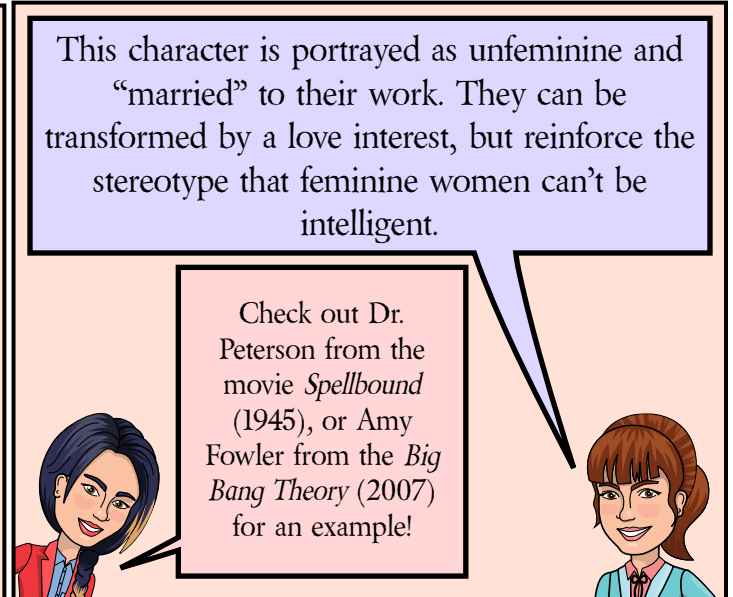
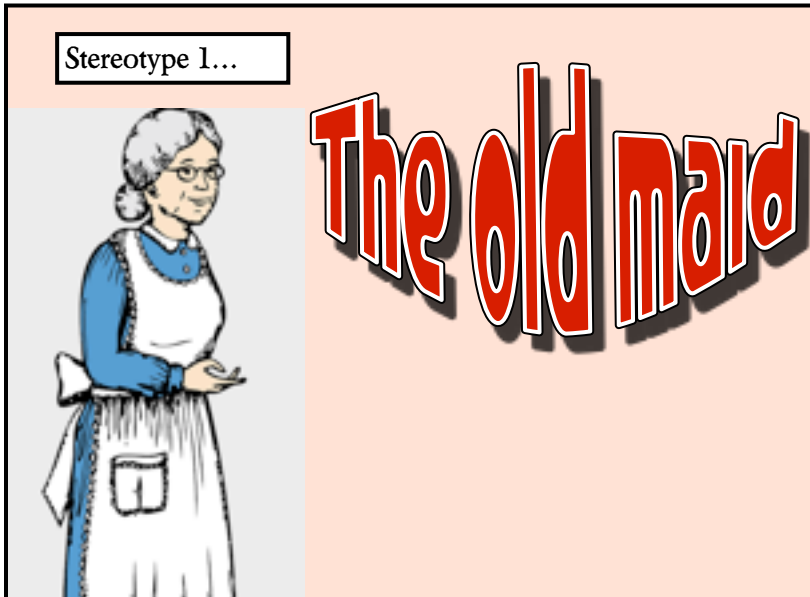
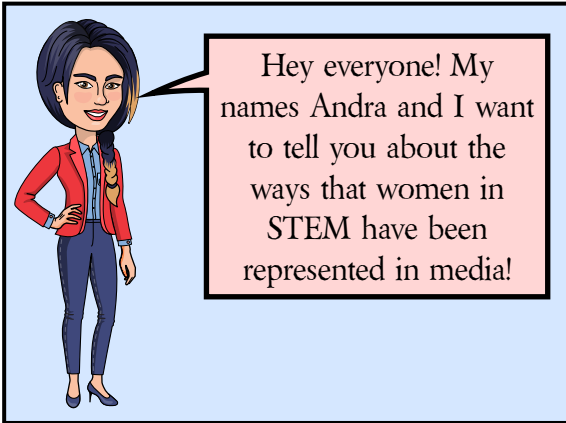


# WOMEN IN STEM IN MEDIA: PAST, PRESENT, AND FUTURE

Andra Campbell



Stereotype 3...

# The Naive Expert



This character has little significance towards the scientific theme of the movie, is feminine, and often a love interest. Her naïveté often gets her in trouble, with a man rescuing her.



Dr. Sarah Harding from *The Lost World: Jurassic Park* (1997) is an example of The Naive Expert you may recognize!



"The Lost World: Jurassic Park (Universal, 1997)." *Heritage Auctions*, 2 Sept. 2018, [movieposters.ha.com/itm/movie-posters/science-fiction/the-lost-world-jurassic-park-universal-1997-lenticular-one-sheet-27-x-41-science-fiction/a/161835-51233.s](http://movieposters.ha.com/itm/movie-posters/science-fiction/the-lost-world-jurassic-park-universal-1997-lenticular-one-sheet-27-x-41-science-fiction/a/161835-51233.s).

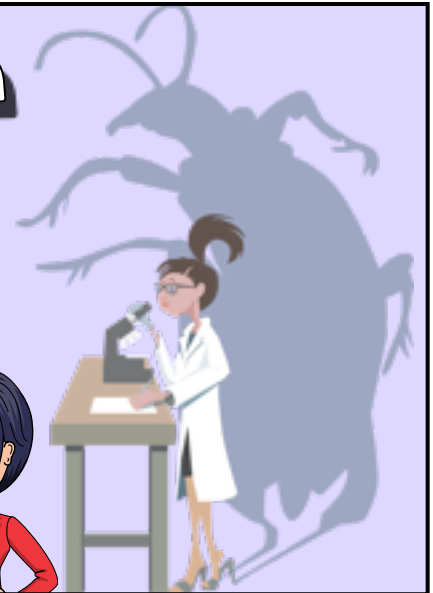
Stereotype 4...

# The EVIL plotter

This character is very attractive and young, and can seduce and trick males. She is corrupt and uses her science for evil. She strongly relies on her looks.



An example is Dr. Schneider from *Indiana Jones-The Last Crusade* (1989).



Stereotype 5...

# The Daughter OR The Assistant



This character has a small, weaker part with stereotypical characteristics. Their success is dependent on the male character, emphasizing the stereotype that women scientists are inferior to men.



Check out Dr. Sattler from the original *Jurassic Park* (1993) or the movie *Them!* (1954) to see an example of this kind of character.



Stereotype 6...

# The Lonely Heroine



Elleonore Arroway from the movie *Contact* (1997) and Dr. Stone from *Gravity* (2013) are good examples of the lonely heroine.



This character is young, feminine, and highly competent. However, they are not recognized by their male counterparts and are often alone and in a restrictive situation. They often must rely on a male mentor.



Before we talk about why representation is important, I want to mention a few films that media did right. These films have strong STEM women characters without the negative stereotypes.



The movie *Hidden Figures* (2016) is a film about black female mathematicians working for NASA. This movie shows strong, intelligent, STEM women persevering in the face of both racism and sexism.



This movie is even more inspirational as it's based on a true story!



Shuri from the very popular film *Black Panther* (2018) is also a great example! Another strong and diverse female character, Shuri's inventions are critical for her older brother T'Challa's success as the Black Panther.



The animated film *Big Hero 6* (2014) features two women who debunk STEM stereotypes! Honey Lemon and Go Go Tomago from the film rely on their intelligence and scientific competence to help save the day.



# Portray Her

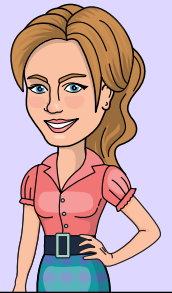


Thank you Dr. Flicker! It's important that we recognize these stereotypes. I want to next introduce Geena Davis, the founder of the Geena Davis Institute on Gender in Media. We will use her report, "Portray Her: Representations of Women STEM Characters in Media".

Thanks for helping us out Geena!



Happy to help! My institute analyzed films with STEM women, and worked with a survey research organization to administer a STEM survey to girls in middle and high school, as well as young women ages 18-24 who are full-time college students.



Amazing! So what did your studies show?

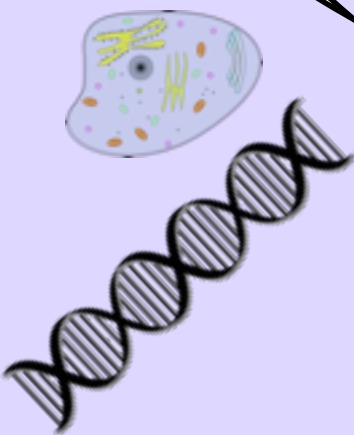


While media has made improvements in women in STEM representation, there is still a lot that can be done.

For example, men STEM characters still significantly outnumber women STEM characters 63% to 37%.



71% STEM characters are white, and 65.8% of women scientists in film and television are in life sciences.



This shows that currently media can improve in its gender and racial diversity, as well as its variety of sciences that are portrayed.



Very true! But why is all this representation of STEM women so important?



Well, less than 50% of women interviewed said they have a STEM role model, and even fewer reported someone encouraging them to pursue stem.

Ah! So it sounds like people's decision to go into STEM often is influenced by media!

This actually hits quite close to home for me! I don't personally know any female scientists, so the reason I got interested in STEM was from watching forensic scientist Abby Scuito



"13 Things Abby Gets Away With That No One Else Could." CBS, CBS, [www.cbs.com/shows/ncis/photos/1004999/13-things-abby-gets-away-](http://www.cbs.com/shows/ncis/photos/1004999/13-things-abby-gets-away-)

I started watching NCIS in middle school, and have had an interest in science ever since.

Now I study biochemistry at the University of Michigan and I'm proof of the difference good STEM representation can make in women's career paths!



# The Scully Effect

Another report I did is called "The Scully Effect: I want to believe in STEM". It focuses on how the character Dana Scully from the X-files made an impact on the career paths of women. My report surveyed over 2,000 women aged 25 and older about their viewing of the X-files and their career paths.



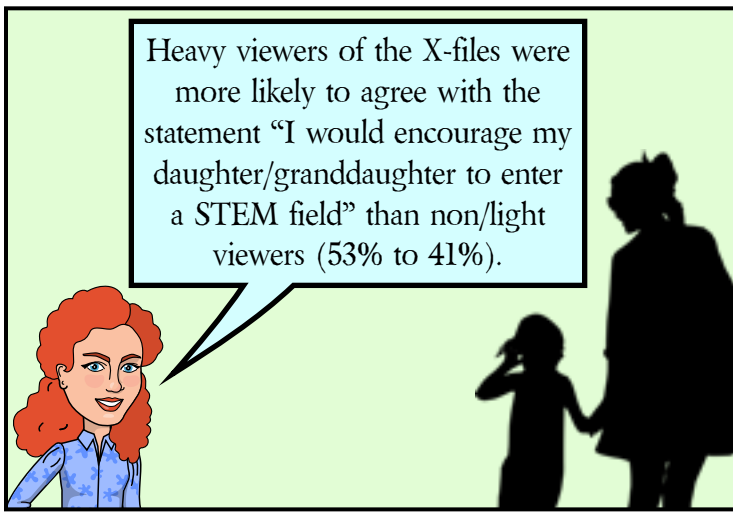
"Queen Scully ." National Post, Postmedia , 28 Apr. 2018, [nationalpost.com/entertainment/television/thanks-to-the-scully-effect-women-who-watch-the-x-files-are-more-likely-to-work-in-stem](http://nationalpost.com/entertainment/television/thanks-to-the-scully-effect-women-who-watch-the-x-files-are-more-likely-to-work-in-stem).

Thanks for joining us Gillian! I'm a big fan of your show!

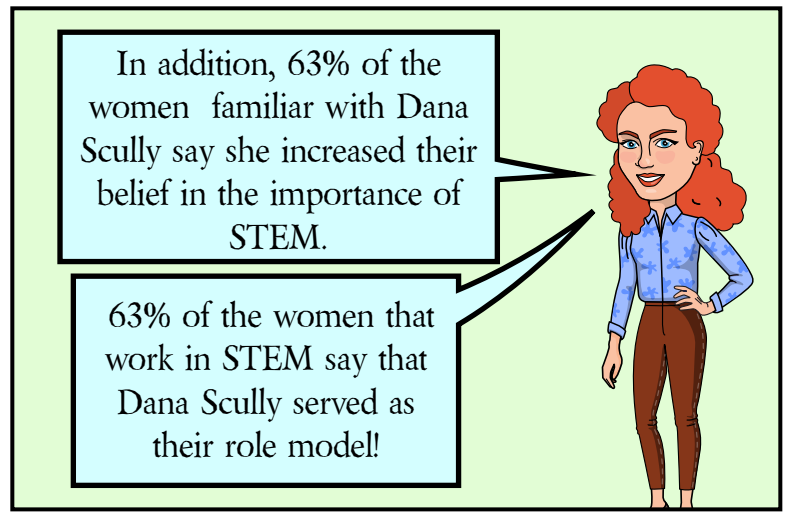
Our report showed that your character, a medical doctor and a FBI Special Agent on X-files, had quite an impact on how women view professions in STEM!

You're right! The report showed that medium to heavy viewers of the X-files are 50% more likely than non/light viewers to have worked in a STEM field.



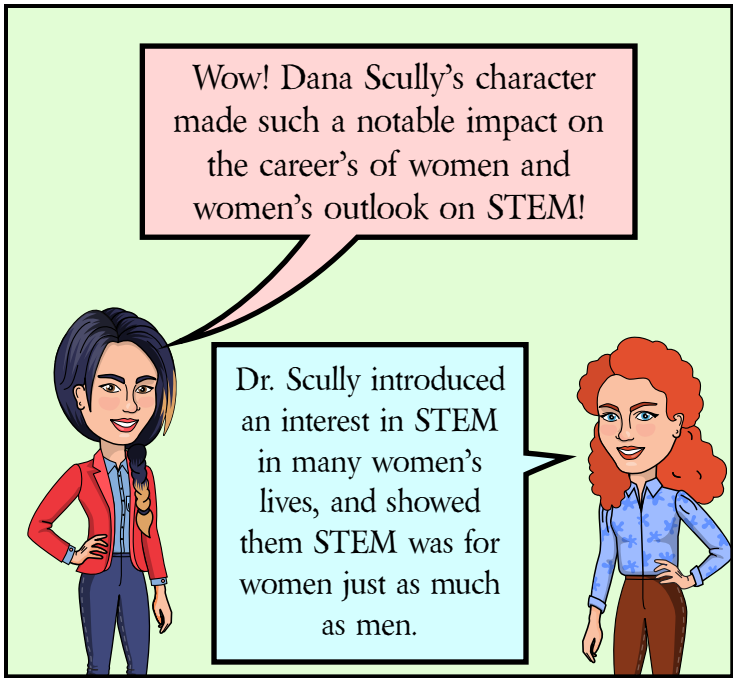


Heavy viewers of the X-files were more likely to agree with the statement "I would encourage my daughter/granddaughter to enter a STEM field" than non/light viewers (53% to 41%).



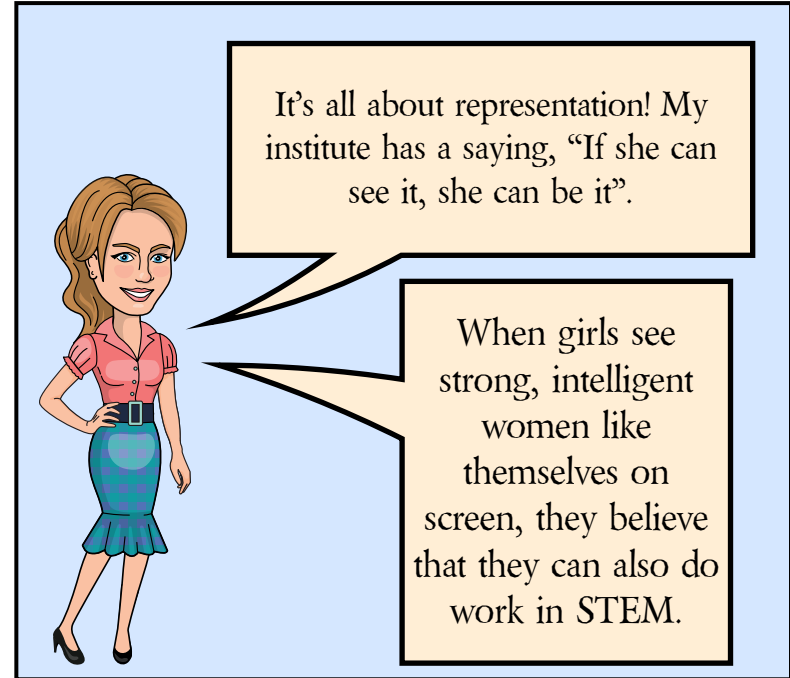
In addition, 63% of the women familiar with Dana Scully say she increased their belief in the importance of STEM.

63% of the women that work in STEM say that Dana Scully served as their role model!



Wow! Dana Scully's character made such a notable impact on the career's of women and women's outlook on STEM!

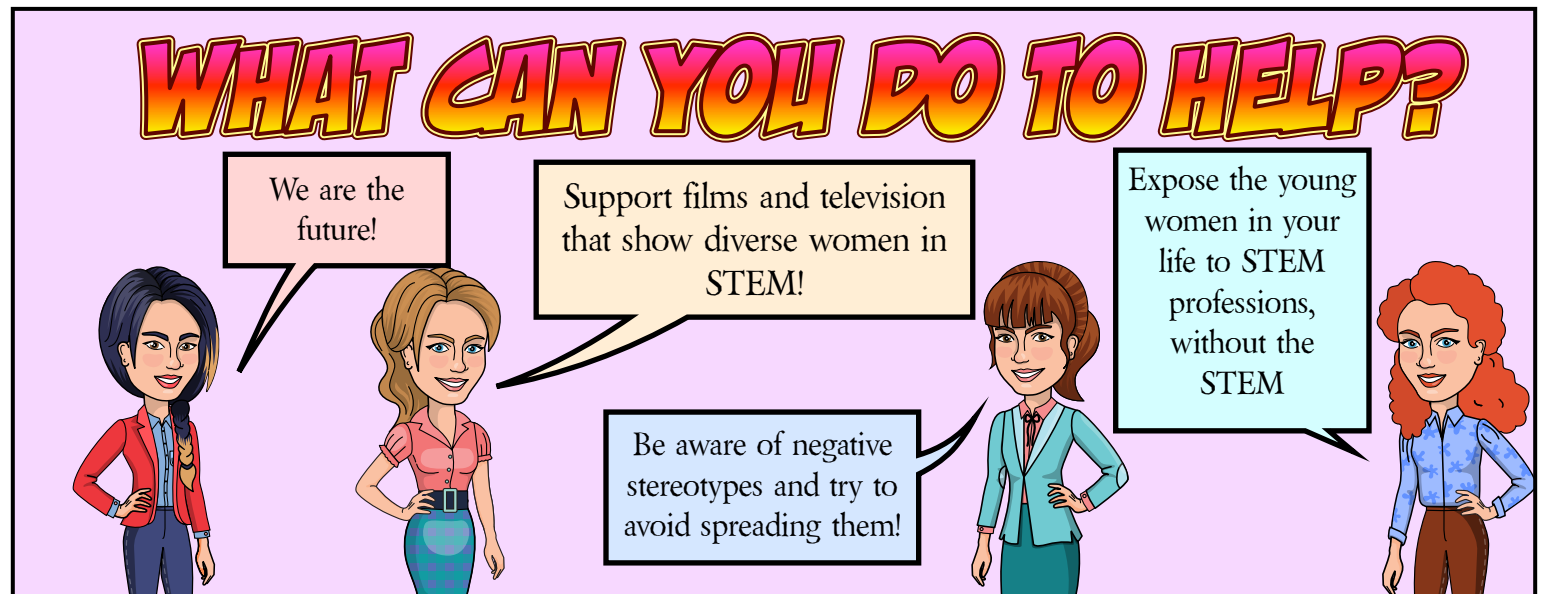
Dr. Scully introduced an interest in STEM in many women's lives, and showed them STEM was for women just as much as men.



It's all about representation! My institute has a saying, "If she can see it, she can be it".

When girls see strong, intelligent women like themselves on screen, they believe that they can also do work in STEM.

# WHAT CAN YOU DO TO HELP?



We are the future!

Support films and television that show diverse women in STEM!

Expose the young women in your life to STEM professions, without the STEM

Be aware of negative stereotypes and try to avoid spreading them!



Thanks for learning about women in STEM's representation with me! For more information you can check out Geena Davis Institute's website and read Eva Flickers academic paper! I'll put the information on the right!



*Eva Flickers Paper:  
Between Brains and Breasts-Women Scientists  
in Fiction Film: On the Marginalization and  
Sexualization of Scientific Competence*

Published: July 1, 2003  
Journal: *Public Understanding of Science*

*Geena's website:*  
<https://seejane.org/>

#### *Citations:*

Flicker, Eva. "Between Brains and Breasts—Women Scientists in Fiction Film: On the Marginalization and Sexualization of Scientific Competence." *Public Understanding of Science*, vol. 12, no. 3, 2003, pp. 307–318., doi: 10.1177/0963662503123009.

The Geena Davis Institute on Gender in Media, and Lyda Hill Foundation. "Portray Her: Representations of Women STEM Characters in Media." *The Geena Davis Institute on Gender in Media*, 2018.

The Geena Davis Institute on Gender in Media, 21st Century Fox, J. Walter Thompson Intelligence. "The Scully Effect: I Want to Believe in STEM." *The Geena Davis Institute on Gender in Media*, 2018.