

# **Women vs The Film Industry: The development of a methodology to determine gender disparity amongst film crews**



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## Abstract

Women have contributed throughout history to the constant progression and innovation of the film industry. Despite this, in the 21st century, women still represent a small percentage of film crews in all areas. In ostracising women from the industry at any level, the medium is itself put in jeopardy as their contribution not only diversifies the stories told but also connects with audiences on a global level. This study developed a methodology that implements modern technology to discern the gender disparity within film crews, both above and below the line and determines whether the percentage of women in these crews has grown over a period of seven years, 2019 to 2025. Not only did the method prove successful, it also found that there was only an increase of 10% in the total amount of women in film crews between 2019 and 2025. Across all four films analysed, no more than 18% of the departments involved in each film had a department with a higher number of women than men. It is clear that while there has been a slight increase in women in film crews, the gender gap is still very prevalent within the film industry. It is hoped that by proving this methodology effective, more studies can be carried out in order to better understand why gender disparity is widespread and why can be done to end it.

## **Acknowledgements**

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## Introduction

Do women have a place in the film industry? It is a question that has been asked since the industry was invented over 100 years ago and it is astounding that it is still being asked to this day, especially considering the struggles that feminist movements have had to get women to where they are today.

The contributions of women in film have been seen throughout the industry's history, from Alice Guy-Blanche, who between 1896 and 1906 was one of the only female directors in the world (Refort. 2026), to Autumn Durald Arkapaw, the first woman to win the best cinematography award in the 2026 Oscars (Ryzik. 2026). For as long as women have been innovative, they have also had to struggle with sexism, gender bias and gender inequality throughout the industry, from the student on their first day of their film course to the most seasoned film veterans.

### *The Facts*

Women from all areas of the industry report the difficulties they have in their respective roles at multiple levels, these range from broad, industry wide struggles including lack of opportunities, lack of support and under-remuneration to individual experiences such as harassment and bullying. This gender disparity seen in the film industry is to the detriment of its overall health and vitality. In ostracising women from the industry at any level, the medium is itself put in jeopardy as their contribution not only diversifies the stories told but also connects with audiences on a global level.

Every industry has its fair share of the same issues. What is interesting, however, is the lack of change in the number of women in the film industry between the early stages of the industry to now. Even in newer facets of the industry that brag about how current and up-to-date they are, such as Animation and Visual Effects (VFX), women have been side-lined from the beginning.

Since the early days of the medium, women have been integral to the success and innovations that shaped the industry to the standard it is today. As I mention in my essay *Can the Mould be Broken?* (Keenan. 2024); Lotte Reiniger was responsible for creating one of the most distinctive animated films in history, *The Adventures of Prince Achmed* (Reiniger and Koch.1926), as well as the leaps and bounds that were made by the ladies hired by Walt Disney himself in the 1930s and 40s including Bianca Majolie, the first female story artist hired into the company (McHugh), Sylvia Holland, Disney's first female story lead, ('Sylvia Moberly-Holland – Great Women Animators') Retta Scott, their first credited female animator (Alexander. 2023) and Mary Blair, the art director responsible for the iconic style of *Alice in Wonderland* (Geronimi, Jackson, and Luske. 1951)(Holt. 2019). Even outside the walls of Disney, women were expressing their love for their craft such as Evelyn (Eve) Lambart, a stopmotion animator who directed *Fine Feathers* (Lambert. 1968), Alison de Vere, a background designer known for her films *The Black Dog* (De Vere. 1987) and *Psyche and Eros* (De Vere. 1994) and Reiko Okuyama, one of the first female Japanese animators ('Great Women Animators'. n.d.), as well as many others.



Fig. 1 - Autumn Durald Arkpaw won her Oscar for her work on *Sinners* (Coogler. 2025)

Even with all of these contributions, why is it that women struggle for a foothold in an industry that they helped to create? Is it due to societal trends, lack of policy or education or is it much culturally inculcated than that? Many have tried to answer these questions through their own hard work and perseverance. When the overall societal trends and values in the treatment of women have shifted so tumultuously in recent years, it is not a surprise that the number of women entering ‘boys clubs’ industries has stalled and flat-lined, in spite of a large portion of film and animation courses worldwide graduating a majority of women (Smith et al. 2019).

### ***The Figures***

In 2019, Women in Animation, in conjunction with USC Annenberg, conducted extensive research into where women were in the industry in comparison to men. This study not only looked at the proportion of men versus women in certain roles within the film and television industry but also why there may be more obstacles for women than men, how women were represented both on and off screen and how women of colour were particularly affected. Smith et al.’s study was comprehensive, looking both above and below the line, industry terms that describe the type of roles that are conducted throughout a production. ‘Above the line’ workers would often include directors, producers, cast members and writers, i.e. people who can arrange with the studio for residuals and percentages of the project that they are working on. ‘Below the line’ workers, on the other hand, are the artists and crafts-people who create the material of the project. They have very specific and in depth knowledge of the field (Banks, 2009). The study particularly considered the animation pipeline and the roles encompassed in it. They found that only 3% of directors were women out of the 120 top animated films between 2007 and 2018, even though the amount of women submitting short films into prominent film festivals, including Sundance and Tribeca, rose by 27% between 2016 and 2018. It was also found in their research that even though women made up a large portion of executive positions in some of the top film and tv companies, that “across 52 of the top animated films from 2014 - 2018, the gender ratio of males to females across 9 key roles or unit head positions was 8.5 to 1”.

**PIPELINE PROBLEMS: CAREER PROGRESS STALLS FOR FEMALES**  
*Percentage of Females in the pipeline to directing animated feature films*

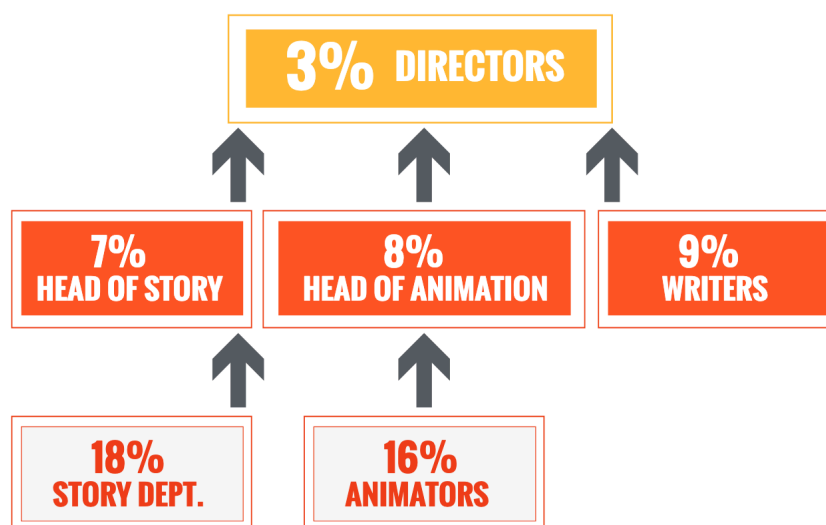


Fig. 2 - Graphic from Smith et al’s 2019 study *Increasing Inclusion in Animation: Investigating Opportunities, Challenges and the Classroom to the C-Suite Pipeline.*

It is not only the animation side of the industry that is seeing this issue. Smith et al published in *Inclusion in the Director's Chair* that across 1200 of the top-grossing films between 2007 and 2018, there were only 46 individual female directors, 8 of which were women of colour. In a later study WIA found that within the crews of 400 films between 2016 and 2019, only 2.9% of the VFX Supervisors were women. In the gaming industry only 5% of those within a programming role were women, under half of the percentage of those in executive roles (12%) (Prescott. 2014). The Writers Guild of America, West found that between 1982 and 2005 only 18% of their employed screenwriters were female, with a 10% increase in their gender pay gap within that same time.

### ***What Needs to Change***



Fig. 3 - Concept art from the proposed project of Sugar and Broly. Both writers are known for their pro-LGBTQ storylines.

These figures are startling, especially when you consider the contributions of women in the modern animation industry. However, as I detailed in my essay *Can the Mould be Broken?*, the profit margins of these large animation companies have guided the decisions and marginalisation of female directors and show runners that are pushing the boundaries of story, style and subject matter, creating projects that are not only open to the exploration of LGBTQ representation, war, racism, conformity, taboo subjects and toxic relationships (Keenan, 2024). Yet in spite of this they are often ridiculed, overlooked or cancelled not just by studios but by governments and social media. Even most recently, it was announced by legends Rebecca Sugar (creator of *Steven Universe* (Sugar. 2013) and her co-writer Matt Braly (creator of *Amphibia* (Braly. 2019)) were unsuccessful in achieving approval from Sony for their project already two years into development (Ruben. 2026)., even after the success of *K-Pop Demon Hunters* (Applehans and Kang. 2025).

In order to change and create a film industry that's not only more inclusive but also more open to collaboration, the reasons behind the gender disparity need to be sourced. This is incredibly difficult in the modern industry's landscape due to the hiring practices and short-term employment that many workers seem to experience. According to the study carried out by Bielby on the writers for film and television, the change from studio leasing to shift work has compounded the gender disparity between men and women, with few differences seen between 1952 and 2005. She attributes this "revolving door" employment practice in the television industry, the reliance on small informal and interpersonal networks for contributions, the dependence that writers must have on their current reputation to get them work, the hope that the same reputation is currently in style and the fact that the overwhelming majority of people in decision making roles for projects are men for this difference, (Bielby. 2009). Networking is not only essential for gaining the job in the first instance but with the reliance on contractual work, it was found the privileged workers had the opportunity to earn up to 45% more than their co-workers by negotiating more favourable hours through their networking activity (Dawson and Holmes. 2012). A workers network and reputation could make or break their career in the film industry, and as the short film *Purl* (Lester. 2019), eloquently put it

women in these situations that are outnumbered by men often have to assimilate or risk their livelihoods.

Unfortunately, there are not a large number of quantitative studies done to rely upon, especially when the global industry must be taken into consideration. Without proper evidence, funding, policy changes and industry reforms cannot take place, as it will lead to substandard arrangements that would only cause short-term relief to a deep rooted issue.

In this study, I developed a methodology that implements modern technology to discern the gender disparity within film crews, both above and below the line and determines whether the percentage of women in these crews has grown over a period of seven years, 2019 to 2025, which encompasses the time between Smith et al.'s study and this one. If this methodology proves effective, it can be implemented on a much larger scale in order to gain the information needed for future development of the treatment of crew members. It could potentially identify the support needed by women to keep them within the industry. As I will argue below, the credits of the film are, in the majority of instances, the best and most accurate way to understand the roles, departments and individual people's work that goes into the making of a film. It is also the most accessible way to derive the data behind the making of a film. Therefore, it is through the credits that this study will be deriving the quantitative data necessary to test the methodology.

As the primary focus of this study is whether or not the methodology detailed here is successful in identifying the gender disparity, a large portion of this thesis will be discussing the specifics of the limitations, approach and results of said methodology. This will then be followed by a discussion into the results of the data collected and what it could imply in terms of the conditions and treatment of women within the film industry. I will emphasise that due to the quantitative nature of this study, these implications can only be speculative, as no qualitative study has been done to support the data.

# Methodology

## *Initial Limitations and Scope*

The goal of this study ultimately is to research the gender equality in the crews of films. However, in order to narrow the scope, limitations must be put in place. As this thesis is at an undergraduate level, there is a limited amount of time and resources available.

This study will narrow its focus from an initial broad pool of 125 films across a seven year period, between 2019 and 2025. This is to avoid a limited view on the industry and gain a more in-depth perspective on the possible gender imbalances within it. These films must be classified as a feature length film, as the study aims to gain an insight into the industry as a whole. Short films are often done with very small teams that do not typically reflect gender imbalances. In fact, Smith et al found that the majority of directors of short films submitted to festivals in the year 2018 were women (Smith et al. 2019).

Unfortunately, this study will have a certain amount of bias due to language barriers and a lack of knowledge on naming conventions around the globe. The original study only looked at an American based source for their data sample and were able to negate this issue using online tools and deduction. To make this study as fair as possible, it must also be tailored. Therefore, any films that use a lettering system other than the latin alphabet will be disqualified from this study due to the author's lack of linguistic expertise.

As the use of visual effects has become more increasingly common within the filmmaking process, it has also become harder to differentiate whether a film has a heavy reliance on them. Filmmakers often depend on VFX to achieve certain aesthetics for their films, save time and create savings in the overall budget. Films with 'hidden' VFX, or visual effects that are used to subtly change the environment of a film or make a shot easier to film, are becoming increasingly used in a wide variety of genres of film (Failes. 2020) Studios can tell how many shots contain VFX as the film goes through the pipeline. However, this information is often kept internally and not released to the wider public unless the film's VFX artistry is being marketed. Therefore, for the purposes of this study, films that do not outwardly show signs of VFX cannot be discounted from the scope.

## *Data Pool/ Box Office*

One of the few faults in Smith et al's study is the lack of variety when it comes to the data sources. While their study was very broad in its research, the data range it drew from appears limited and selected specifically for the type of information that was required to support their argument. For example, the use of only one source for gross box office numbers as well as using only domestic numbers greatly increases the risk of bias, especially considering the source itself is an American internet film database. To address the effectiveness of using a single source, comparison of the same criteria with another box office source, [TheNumbers.com](https://www.the-numbers.com/), highlighted the vast differences between the two, especially concerning the origin of the film. Since both sources are ruled by gross worldwide box office numbers, the fact that those numbers differ between the two sources undermines the legitimacy of both.

To avoid the same faults within this study, as mentioned previously, the scope of the data pool will be much larger. The initial strategy is that the top 25 films for each year between 2019 and 2025 inclusively will be gathered. To negate the biases of one source, this study will gather the box office totals from two primary sources: [BoxOfficeMojo.com](https://www.boxofficemojo.com) and [TheNumbers.com](https://www.the-numbers.com). The average box office total will be taken for each film and a new top 25 will be determined based on these averages.

Not only will this potentially negate any biases that may occur, it will also give an insight into how the value of a film is determined, and the differences between the two main sources of box office data that the general public can access. The box office numbers also only take feature - length films into account in their calculations.

Once the new top 25 for each year is determined, films from areas that do not use the latin alphabet will be removed from the list. Only after these steps have been appropriately completed and the final pool of films has been gathered will the next stage of the study begin.

### ***Name Collection and Gender Determination***

As the time to collect the data for this study is limited and the resources are scarce, a large language model (LLM) will be used to help collect and categorise the data from the pool created from the above steps. This study will be using Perplexity, as not only will the LLM state the sources it has drawn from for each answer, it will also analyse the information that is fed into it, stick to the criteria that is set for extracting the data without deviating, and will export a file type appropriate for further research later in the process. This was determined through testing Perplexity as well as other LLMs. The data tested using this method was gathered, as mentioned earlier, from film credits that were publicly available and were accessible to check against.

However, the data must undergo a significant preparation process to support its importing into Perplexity. The credits within each film must be individually processed into a singular file that can then be analysed. This file will then be run through an Optical Character Recognition (OCR) software to improve the effectiveness of the LLM. From there the name, gender, role, department and company of each person listed in the credits will be individually measured and a .CSV file exported once completely analysed. Any names that are classed by the LLM as unsure of gender or possibly non-binary, will be flagged also. This data will then be manually cross checked with the original credits for any inconsistencies.

Once this process has been completed for each film, the following data can be extrapolated and analysed:

- Number of women within the crew in comparison to men.
- What roles these women are credited for.
- The proportion of women in different departments in comparison to men.
- The amount of women in leading, supervising, managerial and executive roles in contrast to the number of men in those roles.
- The gender ratio for each film.

The determination of the gender of each person in the crews will be achieved using the software known as Gender API. This software runs an application programming interface that determines

gender based off of any first names given. The database that it draws from is globally based, which is advantageous in circumstances that the name may be unfamiliar. It is also very accessible and easy to use.

## Results

The results found in this study encompass both the astonishing and unfortunately, the expected. However, the method used to gather these results was successful and provided a lot of insight into how this particular area of research could be improved and refined. While the method was successful, it was inefficient and therefore the limitations and scope had to be redefined in order to accommodate the limited resources available.

### *Revised Limitations and Scope*

Through carrying out the process described in the methodology, many issues became apparent. Unexpectedly, these issues arose from the use of the LLM Perplexity and the OCR.

While the OCR used within this study was able to parse out individual names from images of text, it did so with a lot of garbled characters, making it almost impossible for the LLM to read effectively. This led to the manual input of information, which wasted valuable time for the researcher. Additionally, the LLM often reconfigured the parameters of the output, which led to readjustments and reiterations of said parameters. As well as that, Perplexity could only facilitate the processing of a small amount of names, approximately 40 to 60 in total, at a time. As these film crews could have over 4000 people within them, it is not hard to comprehend the time impediment on the analysis of the data that occurred. Consequently, the scope had to be readjusted accordingly.

While the same parameters on the overall study would still apply, only a select number of films were chosen from the data pool. These were *Avenger's Endgame* (Russo and Russo. 2019), *Zootopia 2* (Bush and Byron. 2025), *Lilo and Stitch* (Camp. 2025) and *A Minecraft Movie* (Hess. 2025). It was hoped that the comparison of films between 2019 and 2025 would still give an insight into the changes the industry may have undergone, as well as see whether or not the changes seen worldwide over the past seven years had any effect on the film industry.

That being said, the skewed nature of this new data pool must be addressed; three out of the four films were made by the larger Disney Company, therefore causing an unintentional bias within the data pool itself. If more research was to be carried out, this bias must be addressed before proceeding.

### *Data Pool results*

As the majority of the issues arose after the data pool was established, the analysis of the data pool was completed in its entirety. The original pool also included non-latin alphabet based films to insure that the correct films were being excluded from the study.

Only three films across a seven year period successfully exceeded an average of over \$2 billion at the world wide box office, with *Avenger's Endgame* (2019) being the most successful at \$2,758,471,511. Animated films did very well overall, with six of the top ten highest worldwide box office averaging films being animations of different kinds. It was also noted that 2020 was the worst year for the box office, with no films released in that year making over \$500 million,. However this anomaly can be explained by the worldwide pandemic lockdowns.

As these figures were gained from averaging the numbers derived from two different sources, it was also quite interesting to see the differences between these two sources. In fact there were multiple instances where the two differed not only in the figures they were showing, but in the films that made the top fifty films in the worldwide box office. Thirty-seven films over the seven years were listed on either BoxOfficeMojo.Com or TheNumbers.com, but not both. The worldwide box office figures stated by the two sources greatly differed in comparison with one another, with some films having figures that differentiated from each other by over 30%.

### ***Gender Disparity between the film crews***

According to the data, the amount of women in film crews between 2019 and 2025 has risen by approximately 10%. Within the credited Avenger’s Endgame cast, 23.9% (where n = 1058 out of 4422) were women. This grew to approximately 34% by 2025, where 1,579 out of a staggering 4,661 people were women credited across three different films.

On average, approximately 1.55% of names analysed by Gender API were listed as undetermined or left blank. This could indicate a gap in the database’s knowledge, a flaw in the analysing capabilities or the unique nature of the person’s name. Manual determinations were undertaken, where possible, through internet searches of alternate databases, portfolio explorations and social media investigations, however not all of the names could be identified. The average accuracy rate of the gender determination application programming interface across all of the films analysed was 94.36%. As the accuracy rate is substantially high, the effectiveness of the methodology is heavily implied. However, more testing through additional studies would determine whether this is accurate.

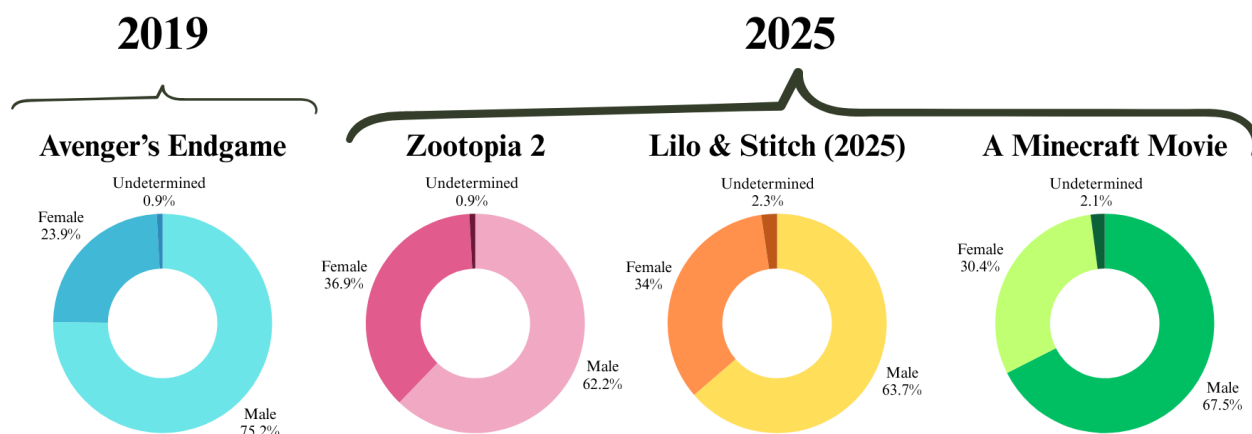


Fig 4 - Percentage of people in credited in each film reviewed

### ***Department and Role Level results***

Within this study, the number of women in certain departments in comparison to men was wildly varied. As mentioned before, there were fewer women in the film crews in all four of the films analysed. For example, the amount of people within the production department that are women has risen between 2019 and 2025 by approximately 4%, and have remained at a mostly even 50:50 ratio

compared to the men. Production was also shown to have more women than men in three films out of four.

However, the production department was one of few departments that had a majority of women. Across all four films, no more than 18% of the departments involved in each film had this majority, with A Minecraft Movie (2025) having only about 5% of departments with a greater number of women than men.

### Percentage of Women in certain departments between 2019 and 2025

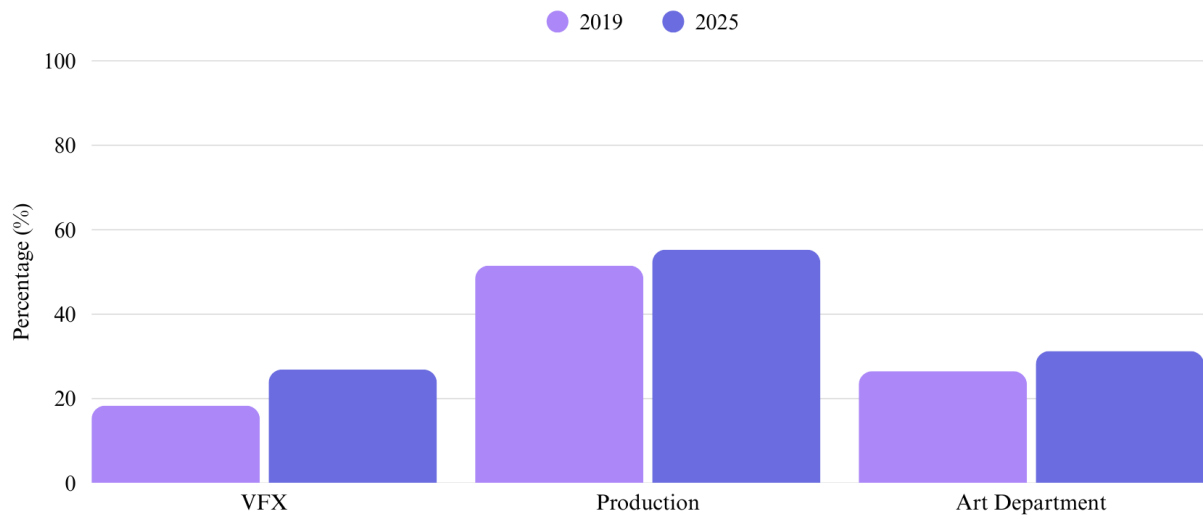


Fig. 5 - In each department shown above, there has been an increase in the amount of women involved. However, the growth is much lower that would be expected when taking the time between into account.

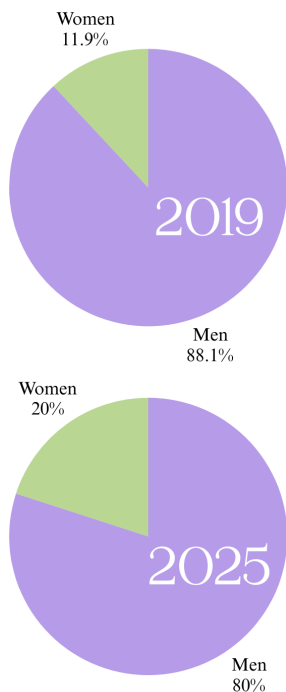


Fig. 6 - Percentage of people in creative leadership roles.

In terms of roles, the amount of women in creative leadership positions, such as art directors, supervisors and writers, has risen by just over 8%. The roles with the most amount of people were, unsurprisingly, the more entry level roles and the stars of the films themselves, including digital artist and VFX artist. As shown in the table below, in all of these roles, men always outnumbered women.

	No. of Men	No. of Women	Total
<b>Digital Artist</b>	923	274	1197
<b>VFX Artist</b>	278	94	372
<b>Animation Artist</b>	107	34	141
<b>Artist</b>	195	87	282
<b>Actor</b>	124	82	206

Fig. 7 - Amount of people in different roles within the film crews analysed.

## Discussion

While the media often credits the director with the making of a film, there are hundreds, if not thousands, of people waiting in the wings to make that film the best it can be. From the historical origin of film-making right up to the modern age, film-making has always been a team effort, and it will hopefully remain so for years to come. However, with the speed at which technology is advancing and the ever-growing emphasis on a film's profits in the box office, the ecosystem of studios across the world has become increasingly precarious with each year. Women have always been a part of the film industry and the industry itself would not be the same without the contributions women have made over the past century. So, given that fact, why is it that the industry is still, to this day, a men's club?

Within the Animation and VFX industries especially, the contributions of women are immeasurable, yet recent studies have shown that their efforts have little to no reward. The gender imbalance seen within the industry is confounding in that while the number of girls participating in courses that feed into the industry has grown, the disparity between the genders is still keenly felt and has been shown to have changed little, even in the 21st Century. This study, therefore, had a number of aims in mind.

Firstly, and most importantly, I wanted to see whether the amount of women working in films, in relation to the amount of men, has grown between 2019 and 2025. 2019 was an important year for the film industry and for the world in general. Some of the biggest franchises in history were releasing their penultimate projects such as Marvel with *Spiderman: No Way Home* (Watts. 2021), *Star Wars with The Rise of Skywalker* (Abrams. 2019), and Dreamworks with *How to Train your Dragon: Hidden World* (DeBlois. 2019). 2019 is also the year before the world was seized by the COVID-19 pandemic, which not only changed the way bigger studios thought about consumers and bolstered the shift from theatrical to streaming releases for films, but also changed the way the industry itself was run from behind the scenes. as Miranda Banks put it in (Mayer et al. 2024):

*“In Spring 2020, when U.S. box office revenue zeroed out and more than 100,000 entertainment industry workers lost their jobs, everyone wanted to feel connected, but the industry had not been in immediate and complete shutdown for over 100 years. COVID swept across the industry and impacted every worker and virtually every structured workflow”*

- Miranda J Banks

The animation industry especially was strengthened, as it was one of the very few entertainment industries that could be completely done remotely and therefore experienced few negative side effects caused by the sudden shift left in the wake of COVID - 19. The results of Smith et al's 2019 study also piqued my curiosity and convinced me to look at 2019 as a good baseline year, as it was the year after the study was published.. It is hoped that the results of this study can be compared and contrasted not only between the films within the study at a broad level, but also to the more specific levels of the roles and departments involved in the making of each film. This study will also compare and contrast with the study carried out by Smith et al from 2018 to understand what may or may not have changed over the past eight years.

Secondly, I wanted to test an approach to the methodology that has rarely been applied in this context before now. As Large Language Models (LLMs) continue to become more and more advanced, the use of them for research purposes has become more abundant. However, the film and animation industry in general has been very averse to integrating any form of artificial intelligence (AI), with good reason. The increasing popularity of AI and the ease of use has led many companies to believe that it is a cheaper and more accessible method of creating assets. No longer does a team of artists, who have taken years to hone their skill and experience, from multiple disciplines, need to spend months creating a piece of footage two minutes long, when a passable alternative can be made, sometimes within a few minutes.

While a number of companies have embraced the use of AI, many more are concerned for the future of the industry because of it, Generative AI in particular has quickly started dominating advertisements (Foley. 2025), art competitions (Metz. 2022) and social media worldwide (Goonetillake. 2025). That being said, while there are many downsides to the use of AI and LLMs, the integration of them in everyday technology cannot be avoided and their role in the industry can be established in a productive way, without the provocation of artists and the belittling/erosion of their invaluable skills and experience. That's why, in this study, I wanted to test whether an LLM would be beneficial in analysing the data taken from screen credits, and whether it could possibly play a role in media research.

Lastly, I hoped this study would shed a bit of light on whether the box office is the best way to judge the quality of a film. As times change, more and more we see the aim of a film's release is to make over a billion dollars in the box office. A lot of people will judge whether or not to see a film based off of this monetary success, which puts a large portion of indie films, films with a limited distribution and films in different languages other than English, at a severe disadvantage when it comes to viewership. It also allows larger film companies to gain more influence and accolades than their much smaller counterparts, as they have the funds to pour into the promotion of their films, leading to less creative and more formulaic film-making and less innovation. As a result of this study, I will be analysing the box office numbers from 2019 - 2025 and I hope that my findings can eventually lead to a more in-depth study.

### ***The Good News***

Many revelations came to light as a result of this study. While not as broad as Smith et al's 2019 study the findings made within this study are significant, especially when the time between the two sets of data are considered. In Smith et al's study, the overall number of people within a film crew was not considered, rather the percentages of each within certain roles and departments, as well as the amount of women in higher positions of influence. This study was able to compare and contrast in the same way but within the context of the whole film crew rather than subsets, however the original research question must be considered: how are women represented in the animation and VFX industries in terms of opportunities, progression and leadership representation in comparison to men?

At the very core of this question is the balance between the genders within the film crews. For decades, Hollywood has been dominated by men, with women only having the opportunity to take on supportive, less creative roles, such as production, human resource positions and accounting (Brewer. 2018). Within animation, women had the opportunity to make films of their own and

become a guiding influence on the industry, as I have previously mentioned. However, once animation gained popularity as a medium, especially through the work of Walt Disney, and became more reliant on Hollywood for its success, the role of women within the animation workforce was diminished, as I mentioned in the intro of this paper. Even the roles in the wider film industry that are more female-dominated, such as costume design and makeup, are often degraded and disrespected for being lesser. Miranda Banks found that through the language and economics, roles like costume design were being treated as ‘women’s work’ (Banks. 2009). As society has changed, so too has the role of women, especially with more laws and initiatives in place globally to address gender disparity in the workplace.

In this study, the number of men vs women in film crews has risen between 2019 and 2025 from approximately 24% to 34%. The reasons behind this rise are many, including the rise of women interested in careers within the animation and VFX industries, (Barnett et al. 2025), the rise in women within creative technology such as VFX, (Failes. 2020), and the expansion of the industry due to the successes seen since COVID-19 (Feng and Yang. 2024).

In 2006, Tarana Burke founded the “Me Too” Movement, an organisation that helped women that became victims of sexual violence with resources, support and healing (Burke. n.d.). However, in 2017 the movement really kicked off after a number of women in Hollywood spoke up against legendary producer, Harvey Weinstein, which ultimately led to not only his own conviction in February 2020 (BBC. 2021), but also the downfall of multiple high profile men in critical roles within the Hollywood circuit (Shelly and Horeck. 2018). It is no surprise then that this study found an increase in the amount of women overall between the film crews of 2019 and those of 2025.

Industry initiatives such as Women in Animation Mentorship programme (WIA. n.d.), the Women’s Film Initiative (Women’s Film Initiative. n.d.), and CIRCLE, (CIRCLE Women Doc Accelerator. n.d.), could also be a contributing factor to the rise. The amount of women taking Animation, visual effects and filmmaking courses has risen significantly since the start of the 21st century, Smith et al. found that approximately two thirds of student bodies in animation programmes in the US were women back in 2018. This in turn would have a domino effect on the hiring practices of studios.

The percentage of women in Irish studios in 2024 was 55.6%, which is over 20% more than this study has found in the crews of some of the top films of 2025. This could be due to the many initiatives that Ireland has within the film sector, such as the FÍS Initiative (IADT. n.d.) and FÍS Éireann/ Screen Ireland’s Enhanced Production Funding for Female Talent (Screen Ireland. 2018). It could also be due to the amount of women in executive positions within these studios, a quick survey of five of the top studios in Ireland showed that over 45% of these positions were held by women (Lighthouse Studios. n.d., Cartoon Saloon. n.d., Studio Meala. n.d., Brown Bag. n.d., Boulder Media. n.d.). The percentage found by WIA Ireland is very similar to a study done by the UK Screen Alliance, which found that 51% of the animation industry in the UK consisted of women (Hatton. 2019).

The gender disparity between departments is also very interesting. Smith et al. found that, 37% of people credited as producers in animated films were women, while only 15% were female producers in live action films. In this study, the 4% rise in women in production departments between 2019 and 2025 is a significant increase when compared to Smith et al’s findings, however it is worth noting that Smith et al may have been evaluating the amount of women within the

specific role of producer rather than the production department as a whole, which they had the ability to do with their significant data pool of 1200 films to analyse.

Unfortunately, this study has found that this gender equity is limited to a very small number of departments. Production is the only department behind the scenes that experiences this. The largest department in both 2019 and 2025 was Visual Effects (VFX) and there was a rise of nearly 10% in the amount of women within the department between the two years. This could be due to the increased accessibility in this sector, as VFX is used more and more often within the film industry, more colleges offering courses that feed into the sector and the ability to work in the sector remotely. Within the Art Department however, there has only been an increase of approximately 5%, while this is an increase, it is not a significant one. This could be due to the skewed nature of the data pool towards live action films within this study. It could also be due to the very slow change in a department, and industry, that has been seen as a boys club (Cobb and Horeck. 2018)

The 8% rise in women across creative leadership positions is a welcome indication of more women becoming accepted in these leadership roles. However, it is still quite low when the amount of time is considered. Smith et al stated specifically that under 10% of writers in the writing room were women. This study found that only approximately 11% of writers over all three films in 2025 were women, representing only a 1% increase over seven years.

### ***The Bad News***

Even though this study has noted an overall increase in the amount of women in film crews when comparing those of 2019 and 2025, it is not a very significant rise. It was hoped that the amount would be higher due to the increasing interest of women in creative roles. More and more colleges and universities offering courses that would feed into the film industry have become increasingly populated by women (Smith et al. 2019. 3)

Even though these courses are boasting more equity between genders within their student population, there have been reports that these programmes are not fostering creativity and exploration of female and non-binary students into areas of the industry that are male dominated. In the article by Banks. M (Banks. 2019) it was found that some of the most promising female students in first year were going into production roles or working solo by the end of their course and were taking more classes in areas that are outside mainstream Hollywood, such as experimental film and documentary.

However a lot has changed in both the overall film industry and in worldwide society as a whole between 2019 and 2025.

It is no secret that Covid - 19 had a monumental impact on society in comparison to a few years beforehand. The initial impact that the pandemic had on the mental and physical health of people on a global scale is well documented, and the economic repercussions it had on almost every industry worldwide is still being felt to this day (World Bank. 2022). There were some silver linings, however. Due to the nature of the animation industry and the relative ease it had in becoming a remote working environment, it was able to adapt incredibly well to the lockdown protocols and sanctions put in place. It was one of the only entertainment industries that could do so smoothly and with animated content becoming increasingly popular, the industry was one of the few that could expand during the period of lockdowns, (Mayer. 2024)

However, with that said, as I mentioned previously, it was one of the only success stories to come out of Covid - 19. The film industry was essentially put on hold due to social distancing and safety measures that were put in place. Any projects that were filming or in development when the lockdowns hit had to get special permissions from governments to continue their work, and even then they were incredibly limited (Roy and de Jong. 2020)

For women in particular, it became much harder to maintain the work life balance. Childcare and educational institutions were forced to close their doors, meaning that children were restricted to their homes, and older relatives and medically-compromised individuals were likewise forced to stay at home, where, for the most part, women were compelled to look after them. Women within the industry would have struggled to work and create in these spaces where there could be constant distractions as a result, (Banks. 2024). This could place an enormous amount of pressure and possibly have led to resignations, drop outs and change of careers to better suit the needs of personal lives. This loss could have contributed to the less than expected proportion of women in studios.

The rise of misogyny could also have impacted the numbers of women found in the film industry. While this paper suggested earlier that the fall of Weinstein and men like him could have led to a growth in the proportion of women within the industry, the opposite argument could be made regarding the rise of anti-feminist influencers like Andrew Tate. These influencers promote “harmful ideologies, attitudes and behaviours, including restrictive and oppressive forms in masculinity that are predicated on sexual and gender-based abuse, harassment and violence”, (O’Rourke et al. 2025). This is not only seen in adult males but also in younger boys, and the rhetoric has spread like an infection across multiple countries, especially with the accessibility to internet platforms and algorithms that reiterate it repeatedly (Milne et al. 2025). Misogyny in general has negatively affected women worldwide across history, however as of 2025, approximately 840 million women globally have experienced partner or sexual violence in their lifetime (Carmo. 2025). The spotlight that the Weinstein case shone was a cultural pivot point in Hollywood, it also highlighted the fact that this abuse was happening in the worldwide film industry and there is a desperate need for global reform and change that is as systemic as the problem itself (Loist and Verhoeven. 2019). This rise in sexism could have influenced the decisions made at an interview level and enhanced the gender biases against women, regardless of the amount graduating from feeder courses.

The overall “factory model” of Hollywood (Banks. 2024) and the shift to short-term contract work that is popular among studio hiring practices nowadays could be the reason behind the exploitation of creative workers as a whole (Mayer et. al. 2024). The ambiguity of limited, project based employment could be contributing to “employee uncertainty, labour market instability and widening division among workers” (Dawson. 2012).

These short-term contracts are often reliant on the networks and reputations of the worker themselves (Dawson. 2012). As the pandemic resulted in these networks essentially being cut off from one another, people found it more and more difficult to find work, completely dependent on what position they were in before lockdowns occurred. In Inside Stakeholders source, this is remarked upon with great clarity;

*“As far as being unemployed, all the shows [stopped] so I don’t think It is affecting one race over another...But I think that anybody who’s new - who doesn’t have an established career - is suffering whether they’re white, Black or brown.”*

*- Salvador Perez*

Due to this reliance on networks and reputation, the pressure is multiplied exponentially on women, who, as this study and many other studies have identified, are only a small proportion of the film industry. In an industry where harassment, sexism and blatant disrespect is still very prevalent, the balance of power is skewed away from women who are trying to progress through the industry ranks. This is especially true for all of those women who are fresh into the industry over the time period this paper has researched. Feminism and inclusive employment practices are to this day seen as “risky behaviours” to employers and hiring pipelines within the film industry, and while this is the case, any chance of reform to better help workers will be arduous, (Mayer et al. 2024)

Due to the nature of this study, the above theories can only be hypothetical. In order to find more definitive answers on the subject, more qualitative data must be collected, such as surveys and interviews. This type of data would give an in-depth analysis on the experiences of women within the industry and accurately measure whether the scenarios discussed previously have merit.

### ***Methodology Discussion***

The approach this study made to the methodology was successful in that it was able to parse out the information from the credits and successfully determine whether the name analysed was male or female, where further analysis was able to be made. However, in saying this, the efficiency of the methods used in this study could be improved.

That being said, without either the OCR or the LLM, the data collected for this study would be far less than what it is, and would have taken twice the length of time to determine. As there was manual inputting involved, it meant that checks were more frequent which led to less mistakes and undetermined results. If this method were to be used in future, the LLM capacity would need to be improved to facilitate larger amounts of information. The retention of the information it has already been given would also need to increase in its capacity. However, this method clearly not only succeeded in cutting the amount of time required in comparison to a more manual approach, but it also reduced the amount of people required to carry it out. Only one person was available to collect and analyse the data, which is dissimilar to the study that this research was based on. While said study was able to get more varied and numerous data than this one, the fact that one person was successfully able to collect data and give valuable results is notable.

It is also worth noting that while the credits should contain the names of all the people who have worked on the film, that is not always the case. Film extras, or people who perform in films in roles that have a background or a crowd position, are often uncredited due to the sheer amount of people who are often involved and the transient nature of the department. Additionally people are often credited for multiple roles within the credits. There are also cases where people get credited for work that they haven’t done, which are more commonly known as ‘vanity credits’. A recent example of this is the executive producer credit that Amanda Seyfried was given on *Housemaid* (Feig. 2025)(Baker. 2026).

## Conclusion

In spite of all of the challenges that women have in gaining a foothold within the industry, they are slowly but surely gaining traction in every department. The studies that have been done up until now, such as ‘Increasing Inclusion in Animation: Investigating Opportunities, Challenges, and the Classroom to the C-Suite Pipeline’ Smith et al. 2019), , ‘Inclusion in the Director’s Chair: Gender, Race, & Age of Directors Across 1200 Top Films from 2007 to 2018’ (Smith et al. 2019) and Re-Distributing Gender in the Global Film Industry: Beyond #MeToo and #MeThree’ (Verhoeven. 2019), as well as this study proves that there is a vested interest in changing the film industry’s attitude towards women for the better. Even with all of the challenges that women face today, there has always been a female presence within the industry. Therefore, the industry as a whole should be fostering the innate talent and ideas that this large demographic have, but also the prolific amount of under-appreciated cultures that face their own fair share of obstacles, including people of colour, those within the LGBTQ community and those with disabilities. Overall diversification and inclusivity will not only enrich the stories that can be told but also enlighten and teach the audience outside the industry.

This study has proved that the methodology used to investigate the gender disparity in film crews is viable, and with some refinement it can be used on a much wider scale. With this data as numerical evidence of the challenges that women face within the film industry, the reasons behind them can be studied, not only in this industry but in similar media industries such as television and gaming. This methodology can also be applied to films outside the latin-based alphabet by those familiar with the languages of which they are being applied. If the obstacles can be identified and supported with quantifiable evidence, it is my hope that this could lead to policy reform on a global scale. Women have a place in any industry they want to be in, no matter what is said or done to try to prevent it.

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