

**Utilising Artificial Intelligence to Portray Gender-Balanced Father-Daughter
Relationships in Film**

Daria Shevchenko

Viljandi Culture Academy, University of Tartu

Master Project

Supervisor Taavet Jansen

25 April 2024

Utilising Artificial Intelligence to Portray Gender-Balanced Father-Daughter Relationships in Film

Abstract:

This study explores the feasibility and implications of employing Artificial Intelligence (AI) within the realm of film production, specifically focusing on its capability to represent gender-equitable father-daughter dynamics.

Keywords:

Film production, gender-equal father-daughter relationships, gender stereotypes, Artificial Intelligence, AI

Contents

Introduction.....	4
Background	4
Problem Statement	5
Research Question.....	5
Literature Review.....	7
Gender Representation Through Father-Daughter Relationships	7
Cinematic Techniques in Portraying Father-Daughter Relationships	9
Impact of Father-Daughter Relationships in Film	11
Artificial Intelligence in Films	12
Theoretical Framework.....	13
Schon's Reflective Model	13
Feminist Film Theory	14
Theories of Representation (Stuart Hall)	15
Tests for Gender Representations in Movies	16
Methodology.....	17
Overview of AI Technology Used in Film	17
The Development of the AI-generated Film	18
Challenges in Production.....	22
Questionnaire Structure	25
Results of Viewer Perceptions and Responses.....	27
Respondent Description.....	27
Film Feedback.....	28
Discussion.....	30
Self Reflection according to Schön's Reflective Model.....	30
Stage 1: Knowledge in Action.....	30
Stage 2: Reflection-in-Action.....	32
Stage 3: Reflection-on-Action.....	34
Through Feminist Film Theory Lens.....	37
Through Theories of Representation (Stuart Hall) Lenses.....	39
Testing for Gender Representations in Movies.....	40
Limitations and Future Research	41
Conclusion.....	41
References.....	44
Appendix	50
I. Film Script	50
II. License.....	53
III. Questionnaire	54

Introduction

Background

As a female, the director was stereotyped about what she could or could not do. However, women had the same rights since 1921 in the Soviet Union. Still, according to Olha Kobulianska in *Black Apostle*, “ she [a communist woman] became like a man: her clothes, her voice, her gait, her look, everything was a man's... she lost her femininity, her individuality, her woman`s beauty... a machine working for the revolution”. Women's roles had expanded to include total workloads in addition to their traditional housewife duties. Simply copying everything from male to female is not a viable solution. It starts with the statement of “better” masculine characteristics (leadership, strength, etc.) and “worse” feminine characteristics (empathy, shyness, etc.), which women have taken in the last decades (Kobulianska, 1926). As a result, the quality of the gender development process has slowed down (England, 2020).

The term “gender” is currently understood as a malleable cultural construct and started being used in 1955 when John Money brought it up (Goldie, 2014). The 1950s and 1960s saw the development of the idea of gender as a flexible cultural construct, which signalled a change in perspective from the old binary (system or idea) of masculine and feminine. In this work, the term “gender” is used as a gender identity bar with the males and females on different sides.

The problem in films remained with the rise of Artificial Technology usage as even the AI engineers were males, following brilliance bias (Cave et al., 2023).

Problem Statement

The film industry reflects a persistent gender gap, with women underrepresented in leadership roles and often portrayed through limiting stereotypes (Flicker & Vogelmann, 2020; United Nations [UN], n.d; Cobb al., 2020). This lack of diverse perspectives perpetuates gender bias and hinders progress towards equality.

Research suggests that film father-daughter relationships can significantly impact audience perceptions of gender roles (Clark, 2008). However, the potential of this relationship is to challenge traditional gender norms or reinforce them and it still remains under-explored (Hallama, 2020; Croft et al., 2020).

The new AI tools underline the existing problem since they use biased data.

Though the gender gap in the film is well-documented, it is not fully understood how the portrayal of father-daughter relationships encourages or hinders progress in the area of gender equality.

Research Question

In light of these considerations, this research project seeks to address the following question in the creation the film with AI technology experiment:

How does film production with AI contribute to portray father-daughter relationships in a gender-equal way?

This research explores AI tools' potential and limitations in creating nuances and gender-egalitarian portrayals of father-daughter relationships on the screen according to the proposed idea of the characters' appearance change. By analysing AI-generated film content and its impact

on viewers, this study will contribute to a more precise understanding of the evolving view of gender representation in film.

Literature Review

Gender Representation Through Father-Daughter Relationships

Films play a significant role in shaping societal perceptions of gender roles and relationships. Father-daughter relationships within films offer a unique lens through which we can examine gender representation. Traditional portrayals often depict fathers and daughters through stereotypical gender expectations, such as the aloof and unemotional father and the nurturing and submissive daughter (Montasseri, 2020). These portrayals can reinforce existing gender biases and limit understanding of the complexities of father-daughter dynamics.

However, an increasing number of films are challenging these traditional portrayals. Studies by Croft et al. (2020) suggest that films showcasing males (fathers) in nurturing roles and females (daughters) with traditionally masculine characteristics can contribute to dismantling gender stereotypes. Clark (2008) further emphasises the influence of parental attitudes on children's gender-role development, highlighting the potential of films to promote more progressive and detailed portrayals of father-daughter relationships.

The subtle distinction lies in its focus on a caring father figure and his daughter's efforts to alter his perceptions of her. Though typically depicted as a distant but encouraging presence, fathers are often portrayed as evolving from traditional roles due to their unwavering love for their daughters.

In "The Mitchells vs. the Machines" (2021), Rick Mitchell loves his daughter Katie but doesn't accept her tech-savvy interests, defying the stereotype of the unemotional father (Rianda, 2021). Similarly, in "Moana" (2016), Moana's father overcomes his fears to support her journey beyond the confines of their island (Clements & Musker, 2016).

Other films show daughters who defy social expectations, but this is not the case with the father's portrayal. For example, in *Mulan* (1998), the woman saves the country but still finishes with the marriage as “the happily ever after” (Bancroft & Cook, 1998). *Brave* (2012) follows Merida, who rejects traditional princess behaviour to embrace her individuality and skills as an archer (Andrews & Chapman, 2012). *Luca* (2021) subtly challenges gender stereotypes through Giulia's fearlessness and willingness to break societal rules (Casanova, 2021).

Some movies explore father-daughter relationships but still depict them as distant and lack of depth. In *Interstellar* (2014), Cooper's decision to leave his daughter Murph on a dying Earth highlights the sacrifices fathers make for their children. The father in the film had a valid reason for such actions yet remained emotionally unconnected to his child. (Nolan, 2014) Similarly, *Logan* (2017) delves into the bond between Logan and Laura, blurring the lines between protector and father figure.

The new films *Turning Red* (2022) and *Wolfwalkers* (2020) contribute to a shifting narrative surrounding father-daughter relationships in cinema. Nevertheless, in *Wolfwalkers*, the father is still the “protector” of his daughter who understands that the daughter is right and supports it in the end; in *Turning Red*, the father is not the dominant figure, and it is not showcased, but he seemed as supportive one. (Shi, 2022; Moore & Stewart, 2020)

The diverse films across the years illustrated a shift from traditional, stereotypical representations to more complex and nuanced depictions of father-daughter relationships in cinema.

In conclusion, father-daughter relationships in films have historically been portrayed through stereotypical gender expectations, limiting a nuanced understanding of these dynamics.

However, recent films have challenged traditional portrayals, showcasing fathers in nurturing roles and daughters defying societal expectations. The movie mostly starts with a depiction of distant father-daughter relationships. Still, the increasing number of films promoting progressive and nuanced portrayals of these relationships are encouraging. As the film industry continues to shift towards more diverse and inclusive representation, it is crucial to continue examining the role of film in shaping societal perceptions of gender roles and relationships.

Cinematic Techniques in Portraying Father-Daughter Relationships

Filmmakers utilise various cinematic techniques to depict the emotional complexities and unique dynamics between fathers and daughters. Camera angles, shot selection, and lighting can significantly influence portraying the emotional bond between characters (Pinto et al., 2023). For instance, close-up shots of father and daughter interacting can create a sense of intimacy and connection, while wider shots showcasing them in separate spaces can emphasise emotional distance.

Dialogue and character development are crucial elements in portraying father-daughter relationships. How fathers and daughters communicate, both verbally and nonverbally, reveals the nature of their relationship (Turchi & Bernabo, 2020). Analysing character motivations and backstories can provide deeper insight into the dynamics.

The genre also plays a significant role. Coming-of-age films often explore the challenges of father-daughter relationships during adolescence, while comedies might use humour to highlight the complexities of communication and conflict.

Here is how films from various genres showcase father-daughter relationships from popular movies in each genre:

1. Family films portray fathers as loving and supportive figures who play crucial roles in their daughters' lives, promoting positive fatherhood roles and breaking stereotypes. They beautifully showcase the unbreakable bond between fathers and daughters, capturing poignant moments and delving into the nuances of this special relationship.

2. In drama films, father-daughter relationships are portrayed with nuance and emotional intensity, exploring themes such as grief, forgiveness, personal growth, and the impact of past experiences on their present-day relationship. These films offer powerful character development and storytelling.

3. Comedy films delightfully and amusingly explore father-daughter relationships, using humour to showcase their bond and provide entertainment while preserving the true essence of this unique relationship. It might use more stereotypical portrayals.

4. Sci-fi and fantasy films often explore father-daughter relationships against extraordinary backdrops and otherworldly settings, highlighting love, sacrifice, and resilience themes. These movies provide a unique twist to the portrayal of this bond. (Sort by Popularity - Most Popular Feature Films Tagged With Keyword "Father-daughter-relationship" - IMDb, n.d.)

It's important to clarify that while this section provides a general idea for how genres portray these relationships, the core of the research delves into analysing how to portray father-daughter relationships in a gender-equal way.

Overall, films from various genres provide unique perspectives on father-daughter relationships, showcasing the vast range of emotions, experiences, and dynamics that define this special bond. Each genre offers its storytelling style and thematic focus, portraying the

complexities and profoundness of father-daughter connections in distinctive and captivating ways.

Impact of Father-Daughter Relationships in Film

The portrayal of father-daughter relationships in films can significantly impact viewers, mainly young audiences. These portrayals can influence perceptions of gender roles, family dynamics, and emotional connection (Khadilkar, 2022). Films that reinforce traditional gender stereotypes can limit young viewers' understanding of the possibilities for healthy and supportive father-daughter relationships.

However, films that challenge stereotypes and showcase more nuanced dynamics can have a positive impact. Studies suggest that films portraying positive father-daughter relationships can promote emotional well-being and encourage open communication between fathers and daughters (Croft et al., 2020).

The changing expectations of fathers in caregiving roles have been reflected in the portrayal of single fathers on U.S. television, with some representations being more authentic and others perpetuating stereotypes. The fathers are still portrayed as struggling and irresponsible, but it has had positive shifts as these characters are presented in the media (Turchi & Bernabo, 2020).

Disney fails to depict a good parent style in most cases, which might have a negative impact on children. It is important to portray parents as mature and competent adults with positive qualities associated with authoritative parenting styles, such as warmth, openness, and clear expectations. Fathers (Mermaid, Frozen) are authoritarian parents regarded as high in demandingness yet low in responsiveness. (Zurcher et al., 2019)

In contrast to Disney's portrayal of fathers, Studio Ghibli films tend to present a more balanced and positive image. Whereas Disney fathers are often authoritarian figures, Ghibli characters like Haku (*Spirited Away*) and Asbel (*Nausicaä of the Valley of the Wind*) act as supportive companions and guides for the female protagonists. This is further supported by research by Cho and Macomber (2022) which found that Ghibli protagonists, both male and female, exhibit a relatively equal balance of traditionally masculine and feminine characteristics. This challenges the stereotypical portrayals often seen in children's animated features.

In conclusion, the portrayal of father-daughter relationships in films can significantly impact viewers, particularly young audiences. While films that reinforce traditional gender stereotypes can limit viewers' understanding of healthy father-daughter relationships, those that challenge stereotypes and showcase more nuanced dynamics can have a positive impact. Positive portrayals of father-daughter relationships can promote emotional well-being and encourage open communication between fathers and daughters. It is important to portray parents as mature and competent adults with positive qualities associated with authoritative parenting styles. By doing so, we can promote healthy and supportive family dynamics in society.

Artificial Intelligence in Films

The film industry has increasingly incorporated AI in various stages of the filmmaking process, from pre-production to post-production, to enhance film efficiency, creativity, and overall quality. However, while AI is transforming the film industry, there are concerns about job displacement, the lack of human touch in creative tasks and ethical dilemmas surrounding AI-generated content.

These changes are not unexpected. As Andrew Ng, Co-founder of Coursera, DeepLearning.AI, said, "AI is the new electricity", which caused job replacement, strikes and protestors against industrialisation a century ago. Back then, workers were not replaced by electricity; they were replaced by workers who used electrical power or new engines. The same is likely to happen with AI. (Stanford Graduate School of Business, 2017)

The 2023 scriptwriters strike in the US highlights that even if AI is used to speed up the writing process, an editor is still needed to control the output (Anguiano, 2023). AI's primary advantage is data analysis, which humans cannot match regarding speed and efficiency. And should we?

AI films, such as *The Safe Zone*, *PLSTC*, *The Frost* etc., have already been made, and some were presented at the AI film festival in New York in 2023 hosted by Runway, which makes AI tools for video production (Runway, 2023). Such films still have a director who decided if a story like this is needed and made the creative choices.

Ultimately, responsibility is lent to the creator, not AI. If women are underrepresented, even though we have fantastic new technology, there might be no stories from them. Still, the contribution of AI technology might provide an opportunity because, with these technologies, it is possible to be a "director" no matter did you achieve a leadership position.

Theoretical Framework

Schon's Reflective Model

Schön's reflective model (1983) provides a framework for practitioners to learn from their experiences. It emphasises the cyclical nature of reflection, involving three stages:

Stage 1: Knowing-in-action refers to the tacit knowledge and skills applied automatically during a situation. It encompasses the practitioner's experience and intuition guiding their actions.

Stage 2: Reflection-in-action involves reflecting on ongoing experiences while engaged in the activity. The practitioner monitors their actions, considers their effectiveness, and adapts their approach.

Stage 3: Reflection-on-action occurs after the experience is complete. The practitioner critically analyses their actions, decisions, and the overall process. They identify successes, challenges, and areas for improvement to inform future endeavours.

By engaging in all three stages, practitioners can gain deeper insights from their experiences and continuously improve their practice (Schön, 1983). The director's reflection is in the discussion part.

Feminist Film Theory

Feminist Film Theory was developed in the 1960s-1970s to provide a critical lens to examine and challenge patriarchal power structures reflected within cinematic narratives and techniques (Mulvey, 1975). Starting from the concept of the "male gaze," which represents not only the gaze of a heterosexual male viewer but also the gaze of the male character and the male filmmaker at the objective woman, summarised in an essay by Mulvey (1975), it continued in the matrix gaze by Ettinger, B. (1995). Ettinger's theory of the matrixial gaze offers a fresh perspective on how women can be viewed as subjects rather than objects of the gaze. This outlook deconstructs the conventional structure of the subject and provides border time, border space, and the possibility for compassion and witness. Feminist Film Theory also analyses how

women's roles, desires, and experiences are portrayed, often in stereotyped or marginalised ways. In the context of the leading research question, Feminist Film Theory allows for the exploration of:

1. **Gaze from the viewer:** Are women active protagonists or passive objects of male action in the movie?
2. **Gaze from the characters:** Does the film portray a story from someone's character's view? Is this view stereotypical?
3. **Gaze from the filmmaker:** From what character did the filmmaker write the story? Does the film challenge traditional gender roles?
4. **Matrixial Gaze:** Might the AI techniques make less similar to the statement of one character? How might the use of AI disrupt or reinforce patriarchal representation?

The answers are provided in the discussion chapter.

Theories of Representation (Stuart Hall)

According to Stuart Hall's representation theories, the media can form our perceptions and influence our understanding of the world. His reception theory outlines three distinct types of interpretation: dominant, oppositional, and negotiated.

The dominant message is the intended meaning that producers aim to convey. The oppositional message arises when we reject this message and form our interpretation. In contrast, the negotiated reading represents a middle ground between the two perspectives. (Hall, 1997)

Individuals may take any of these positions based on their unique backgrounds and personal beliefs. According to the relevant concepts from Hall's work, the following questions appear:

1. **Preferred message:** What is wanted to be portrayed in the father-daughter relationship?
2. **Oppositional message:** What do viewers see in the father-daughter relationship in the movie? To what extent are characters reduced to gendered stereotypes?
3. **Negotiated reading:** How might different viewers interpret the film's representations based on their knowledge about AI technology and gender equality? How does the AI technique potentially complicate these stereotypes?

The answers are provided in the discussion chapter.

Tests for Gender Representations in Movies

Various tests have emerged to analyse gender equality and representation in film. The Bechdel and Mako Mori Test have been used to validate *The Trap*.

The Bechdel Test (Raalte, 2015) poses three criteria:

1. The film must feature at least two named female characters.
2. These women must have a conversation with each other.
3. The conversation must be about something other than a man.

Despite its simplicity, the Bechdel test does not take into account intersectionality and does not guarantee that the films that pass it are truly feminist or fair in representation. Nevertheless, it showcases the significant difference in the underrepresentation of women, and it was created to tackle this problem.

Inspired by the character Mako Mori in *Pacific Rim*, this test asks if a film includes (Romano, 2021):

1. At least one female character.

2. This character must have her narrative arc.
3. This arc must not exist solely to support a male character's development.

The Mako Mori Test deals with the lack of independent agency for women in many films, but it also cannot assess a film's overall feminist or diverse qualities.

The results of the tests are in the discussion section.

Methodology

Overview of AI Technology Used in Film

This project applied various AI tools throughout the filmmaking process to create an AI-generated film. Here's a breakdown of the specific technologies and their applications:

Image Generation

Leonardo.AI (<https://www.leonardo.ai/>) generates AI images based on text prompts. It allowed for control over character positioning and background details.

DALL-E (<https://openai.com/index/dall-e-2/>) was not ultimately used in the project, DALL-E was regarded for its image-generation capabilities based on textual descriptions.

Video Creation

Pika Labs (<https://www.pikalabs.com/>) transformed the AI-generated images into video clips, adding basic motion to the characters and backgrounds.

Special Effects

Runway (<https://runwayml.com/>): To create the effect of aged hands, real-life footage captured on a Canon 5D Mark II was processed using RunwayML. This platform provided special effects capabilities that enhanced the realism of the scene.

Haiper (<https://app.haiper.ai/creations>) was initially considered another option for ageing the hands but Haiper ultimately proved ineffective in achieving the desired results.

Audiovisual Tools

Eleven Labs (<https://elevenlabs.io/>) provided AI-powered voice generation, allowing for the creation of voiceovers for the film's characters.

wav2Lip (<https://arxiv.org/abs/2008.10010>) as a deep learning technique facilitated lip-syncing the characters' mouths to the generated voiceovers, creating a more natural on-screen interaction.

Video Enhancement

Stable Diffusion (<https://github.com/CompVis/stable-diffusion>) was employed to improve the overall video quality. This open-source AI model enhanced the generated video clips by refining details and reducing artefacts.

Script Development:

Gemini (Google AI), as a large language model from Google AI, assisted in refining the film's script, providing suggestions and improvements for dialogue and story structure.

Additional Explored Technologies

The project also considered incorporating other AI tools during development, such as additional image generation platforms (beyond Leonardo.AI and DALL-E) for broader creative options. However, their functionalities were not ultimately utilized in the final film.

The Development of the AI-generated Film

Croft et al. (2020) argue that employing commonplace and stereotypical instances of support which are available to individuals across all gender identities can turn out beneficial. Nonetheless, it is crucial to recognise that these conventional examples frequently perpetuate

existing societal norms. Consequently, to foster a more inclusive narrative, it is proposed that films adopt a novel methodology by integrating these routine examples into their storytelling.

The selected topic for this project revolves around a father aiding his daughter in situations where gender inequality is prevalent. This topic was chosen due to the common association of psychological assistance with women. The inspiration for this idea was derived from personal experiences during childhood, where the notion that women are incapable of comprehending a basic wasp trap was perpetuated by misogynistic attitudes and prejudice against women. The refined script, included in Appendix 1, was developed with the valuable assistance of Gemini.

The concept of changing characters' appearances arose with the transition to AI technology in film production, as the filming process was hindered by the unavailability of required actors for certain characters. AI technology now allows for a consistent character appearance throughout the entire film, but this could result in repetitive visuals. This led to the idea of changing characters' looks. Additionally, this concept is related to video length limitations, with a maximum of 4 seconds in Pika Labs, as well as the challenge of stereotypical looks and how constantly changing appearances would be perceived by the audience.

To guarantee the acquisition of the requisite frames, a Storyboarder was engaged to construct a storyboard that outlined the essential frames. While Text-to-Video capabilities are still in progress and may not always yield the desired outcome, image-to-video technology was utilised to elicit emotions or movements. Despite Leonardo.AI's position-to-image function being ineffective in maintaining character positions, image-to-image guidelines were utilised to position the characters in their desired locations accurately. Subsequently, the background was

altered to a monochromatic green screen, ensuring uniformity in the background across all generated characters.

Following the generation of character images using Leonardo.AI, these static visuals were then dynamically transformed into video clips through the application of Pika Labs. This software facilitated the addition of basic motion to the characters and their surrounding environments. Subsequently, the director exercised their creative vision by arranging these newly animated sequences within Adobe Premiere Pro to achieve the desired narrative flow. Notably, Pika Labs was not solely used for character animation. The software's capabilities were also leveraged to introduce subtle background movements, further enhancing the overall realism of the originally static images.

The static images generated by Leonardo.AI and changed in Adobe Photoshop underwent further processing to enhance their visual fidelity and narrative functionality. The deep learning technique wav2Lip was employed to facilitate lip-syncing for the characters, ensuring a more natural on-screen interaction with the generated voiceovers. Additionally, Stable Diffusion was utilized to refine the video quality by reducing artefacts and improving overall detail.

For the explanation of the wasp trap, Adobe After Effects software was the primary tool. This software offered a comprehensive suite of animation and motion graphics capabilities. The implementation of the flying wasp effects was accomplished through the utilization of Pika Labs, based on the final screenshot image extracted from the animation sequence.

The opening scene of the film utilized image morphing techniques within Leonardo.AI to achieve a seamless transition between sequential images. This technique involved the application of three distinct text prompts to the platform's AI algorithms. The impact strength parameter,

initially set at 0.5, was iteratively adjusted to a value of 0.2. This iterative process ensured the generation of the desired image that effectively conveyed the intended visual narrative for the opening scene.

Initial attempts at generating fast-paced movements and old-looking hands within the AI environment proved problematic. Consequently, real-life footage of hands was captured using a Canon 5D Mark II camera. Subsequently, these live-action hand recordings were subjected to AI-powered ageing effects. However, the effectiveness of Haiper (<https://haiper.ai/>) in achieving the desired hand aging was deemed insufficient (see Figure 1). Therefore, RunAwayML (<https://runwayml.com/>) was employed as an alternative solution, yielding satisfactory results (see Figures 2 & 3). This iterative process of generating multiple versions (as evidenced by Figures 1-3) ultimately created visually convincing aged hands.

Figure 1. 1st frame from Original Video Hands



Figure 2. 1st frame Haiper result

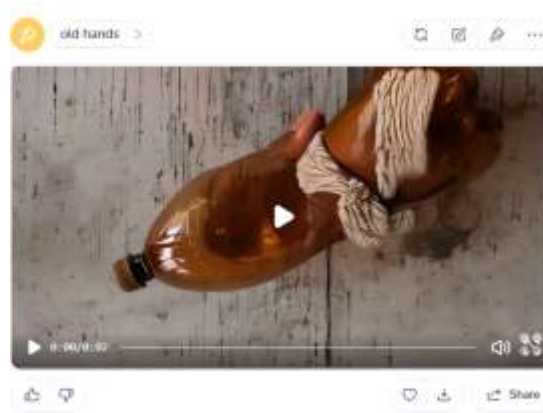


Figure 3. 1st frame Runaway result



The film's director incorporated royalty-free music sourced from Pixabay Free Stock Library (Pixabay, 2024) to complement the visual narrative. The director then exercised creative control by thoroughly arranging the film's graphics to synchronise with the chosen musical piece, ensuring a cohesive audiovisual experience for the audience in Premiere Pro.

Challenges in Production

Throughout the course of the film production, the director encountered numerous challenges, which were either effectively resolved or necessitated alterations in the conceptual framework.

When crafting the character's (grandfather) speech, the director noticed that the rapid frame changes were causing nausea. To remedy this, the director used the same background, position, and cloth colours for the characters in the prompts. For instance, blue cloth is for the grandmother, white for the grandfather, ochre for the aunt, yellow for the daughter, and red for the father.

The director observed a need for more control regarding AI picture generation. The results could still be dramatically altered and biased even with attempts to influence the output through prompt changes or negative prompts. For instance, if the prompt did not specify the gender of a teenager, the output would default to a boy, ultimately relying on gender to describe the character.

Leonardo.AI can't understand the solid green screen requirements as it was needed for the image-to-video generation.

To address the issue of adding to an existing image, the director resorted to Photoshop due to frustration with unwanted results for the Aunt's Talk background, where the grandfather is depicted at the left side of the frame —presented in Figure 8.

Another issue arose when attempting to generate four characters for a wide shot. Leonardo.AI repeatedly produced similar characteristics for the grandfather and grandmother, aunt and daughter. Though the director's Image to Image was used in an attempt to resolve this, the output remained as depicted in the Figures.

Figure 4. Example of problematic generation Image-to-Image



Figure 5. The starting point of the generated picture



Figure 6. Prepared picture with background (left) and aunt (right)

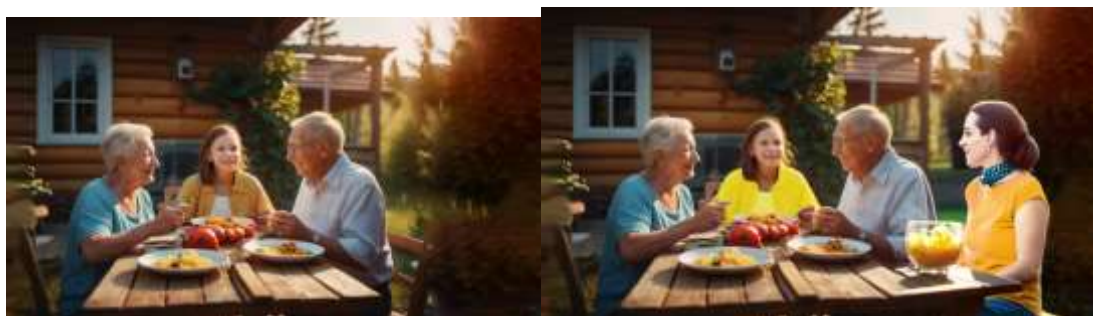


Figure 7. The chosen picture that went through image-to-image generation



Figure 8. Aunt Background without (left) and with grandfather (right) edited in Adobe Photoshop



Another issue encountered pertained to the aesthetic appearance, which was addressed by employing a comparable generative model coupled with a detailed style description, specifically aiming for a “realistic, cinematic style”.

Questionnaire Structure

In order to analyse the film through feminist film theory and representation theory, not only by the director but also by the audience, a survey was developed. The questions and

answers are presented in Appendix III. The primary objective was to dissect and critically evaluate the representational practices within the film *The Trap* employed with AI technology.

The respondent viewed an artificial intelligence-themed film via an online medium, specifically through a link shared on Google Drive. After this viewing, they participated in a series of inquiries presented through Google Forms. The questionnaire gathers responses that could shed light on the audience's perception of gender representation in films, mainly focusing on aspects such as AI face changes.

Feminist film theory, which scrutinises the patriarchal underpinnings of cinematic narratives and visual pleasure, serves as a foundational framework for assessing the roles and portrayals of women in the film. Through questions that categorise women and men as active protagonists or passive objects, the questionnaire endeavours to determine the dynamics of gaze, agency, and power in the narrative structure, thereby interacting with Laura Mulvey's and Ettinger's contribution to the "gaze".

Additionally, the theory of representation, as articulated by Stuart Hall and others, posits that media and cultural texts do not merely reflect reality but actively construct sense. This theoretical lens is applied to querying the narrative perspective of the film and the potential stereotypical rendering of characters, thereby examining how the film contributes to or contests existing societal narratives about gender, identity, and power. The inclusion of questions regarding AI technology's role in altering characters' appearances and possibly their narrative agency extends this analysis to the digital realm, probing into how technological interventions might reinforce or destabilise traditional representations and ideologies.

The questionnaire focuses on the viewer's interaction with AI technology, including their perceptions of its impact on character development and thematic exploration, and introduces a critical inquiry into the mediating role of technology in representation. This approach reflects a post-structuralist understanding, suggesting that meaning is not fixed but is subject to the interplay of various discursive and technological forces. By examining the audience's responses to AI-induced changes within the film, the research studies the contemporary conditions of spectatorship and the blurred boundaries of identity and representation in digital cinema.

In essence, this questionnaire serves as a tool to engage with critically and reflect upon the intersections of feminist film theory, the theory of representation, and digital technology in the context of a specific film. It aims to contribute to academic discourse by providing insights into how AI technology might be shaping contemporary cinematic practices and gender representation within this evolving cinematic landscape.

Results of Viewer Perceptions and Responses

Respondent Description

The demographic was gathered as it can cause limitations to the study, with the dominant presence of one group than the other.

Most respondents identified their gender as female, with a smaller proportion identifying as male and some selecting "Other."

Most respondents are between the 18-34 age range, with a smaller number in the 35-44 and 55+ categories. While most respondents do not have children, a few do, indicating that most of the answers come from the perspective of children's view rather than parents'.

Respondents reported varying frequency of movie watching; the most common responses were weekly and monthly, followed by occasional and rarely. The typical genres of movies indicated a diverse range, including drama, action, comedy, fantasy, family films, thrillers, horror, documentaries, romance, and detective films, reflecting varied viewing preferences. The data revealed Drama as the most popular genre, endorsed by 23 respondents (69.7%). Action and Comedy followed, with equal preference from 15 respondents each (45.5%).

Most respondents have used AI technology before, but some indicated that they have not. More than half of respondents express no fear of AI technology, while others have concerns about its potential impact on human perception and its application in creative and educational fields.

Participants showed low prior familiarity with feminist film theory (n = 9) and Stuart Hall's reception theory (n = 6). It suggests their interpretations of the film were likely not significantly influenced by these specific theoretical frameworks.

Film Feedback

In the movie, women are predominantly perceived as active characters. At the same time, men are also primarily seen as active characters, with some mixed perceptions and difficulty in characterisation.

The film portrays the story from various characters' perspectives, predominantly from the Daughter's viewpoint, with stereotypical portrayals noted from all characters. The most stereotypical view was seen from the Grandmother's character.

The changing looks of the characters are perceived as not effectively tackling the film's portrayal against stereotypes by the majority of respondents, with only 30,3% indicating otherwise. It is generally agreed that the rapid changes in appearance make it difficult to follow

and focus on the storyline. Many of the respondents have expressed discomfort with the frequent changes, finding it unpleasant or even dizzying. However, some of them have acknowledged that the changing looks emphasise the common experience of facing gender-based discrimination. A few responders have even found the changing characters intriguing or have seen it as an interesting play with characters. Some of them suggest that the portrayal of stereotypes in the film is more about characteristics and dialogue than appearance. There is a divergence in opinion on whether the changing looks effectively convey the message about gender-based discrimination or if it is distracting. It was even a suggestion that the concept might work better if executed more cinematically.

More than half of respondents think more about broader ideas or themes in the film because of the changing looks of the characters. In contrast, others have indicated that it had not affected their focus on individual characters. Many respondents have felt that the changing of looks draws attention initially but, as a result, becomes less important because the focus shifts to the plot and dialogue. Additionally, some respondents have answered that the changing looks prevent them from connecting with individual characters or fully engaging with the plot. However, others believe that the changing looks enhance the sense that gender-based discrimination is a widespread issue rather than limited to specific individuals. Overall, there is a division in opinion regarding whether the changing looks effectively de-emphasise individual characters or become a source of distraction. It has been suggested that the changing looks may work better upon repeated viewing or if the viewer focuses specifically on the film's themes. Despite the mixed reactions, some respondents believe that the changing looks de-emphasise individual characters and encourage focus on the broader story or themes.

The father-daughter relationship in the movie is perceived as supportive and understanding by many respondents due to factors such as active listening, dialogue, and empowering language. In contrast, others perceive it as evolving, strained, or patronising, with differences attributed to validation, scene contrast, and camera angles.

The movie prompts reflections on family relationships and the importance of support and dialogue with parents in overcoming stereotypes and internal obstacles. Some viewers considered the concept of fast-changing character appearances as thought-provoking, reminiscent of Federico Fellini's concept movies, while others felt the execution was distracting and the dialogue was unrealistic and exaggerated. However, some of the respondents really appreciated the creativity and found the film captivating despite its flaws in execution.

Discussion

With the use of AI technology in film production, this study delves into the portrayal of father-daughter relationships in a gender-equal manner. The aim is to examine how AI tools can contribute to creating nuanced and egalitarian representations on screen using character change technology. The findings offer a mixed picture. While the film avoids certain stereotypes by portraying women as active characters, the AI technique used for changing appearances seems to have hindered the overall effectiveness in achieving a nuanced and gender-equal portrayal of the father-daughter relationship.

Further analysis of *The Trap*, an AI-generated film through the lens of Schön's Reflective Model, Feminist Film Theory and Stuart Hall's work on representation, described earlier, could provide deeper insights into the film's gaze, preferred messages and audience interpretations. This analysis would further contribute to the research objective of understanding the evolving view of gender representation in film.

Self Reflection according to Schön's Reflective Model

Stage 1: Knowledge in Action

Before commencing this project, the director was apprehensive about AI-based filmmaking due to the swift progressions in image and video generation technology. This apprehension stemmed chiefly from the loss of control observed in the domains of image and video. However, this initial anxiety was reduced through participation in a Winter School AI & Semiotics course held in Olomouc, Czech Republic, in January 2023. This course equipped the director with a crucial understanding of AI as a multifaceted tool that could be leveraged for individual creative efforts. It cultivated an openness towards engaging in experimental endeavours with this technology.

The Runway Film Festival, showcasing movies created with AI technology, served as a valuable source of inspiration (Runway, 2023). Here, the director observed how AI tools could enhance existing films, further emphasising the importance of a strong core concept (Runway, 2023). Regardless of AI techniques, a captivating idea remained paramount in engaging viewers.

The director also acknowledged ongoing fears regarding authorial rights stemming from experiences with past scriptwriter strikes in the USA (Anguiano, 2023). The prospect of AI surpassing human creativity was critically analysed. The director firmly believes that human involvement remains essential in creating content for human consumption. Furthermore, the director anticipates a situation in the future similar to the situation with deep fakes, where the ability to distinguish between genuine and AI-generated content becomes specific to the situation.

Previous experience with AI voiceovers during a 2023 media creation internship at the Active Youth Organisation significantly enhanced the director's ability to identify such technology. It allowed the director to make informed decisions regarding AI sounds within the film, using it only for voice. The abundance of readily available music and sound effects rendered the utilisation of AI generation unnecessary for these aspects of the film. Finally, the readily available sound sources eliminated the need for AI generation in those areas.

Stage 2: Reflection-in-Action

The director was actively engaged in the process of creating an AI-generated film. This involved script development, storyboard creation, selection and utilisation of various AI tools, and post-production editing using traditional software.

The director experienced a range of emotions throughout the process. There was a sense of frustration arising from limitations and unintended results encountered with some AI tools, particularly Leonardo.AI. This frustration stemmed from a desire for more granular control over the creative process, similar to what is offered by traditional software like Photoshop and After Effects. Ironically, providing less information through prompts sometimes yields better results, leading to a feeling of being restricted by certain AI platforms. The frustration stemmed from the expectation of "fast and easy" AI tools failing to deliver on those promises. Conversely, the successful application of AI techniques, such as the morphing effect in the opening scene, elicited a sense of satisfaction due to the pre-planning involved.

Several unforeseen factors emerged throughout production, shaping the director's experience and influencing the final product.

One such factor was the iterative nature of AI content generation. Unlike traditional filmmaking, where a single take might capture the desired outcome, AI often requires numerous attempts and adjustments. This back-and-forth process demanded patience and adaptability from the director, who had to embrace the trial-and-error nature of the workflow.

Another unexpected element was the emergence of a diverse software ecosystem. While AI platforms like Leonardo.AI and Pika Labs offered novel creative possibilities, the project ultimately thrived on a synergy between these tools and traditional applications like Adobe Photoshop and After Effects. This hybrid approach allowed the director to leverage the strengths of both established software and cutting-edge AI technology, fostering a more robust and flexible workflow.

Furthermore, the director discovered that AI tools might default to generating male characters if the prompt doesn't explicitly specify gender. This is an example of gender bias, where the algorithm reflects a societal tendency to assume the default is man. Acknowledging these biases, the director ensured the film's narrative remained fair and inclusive.

The project also highlighted the importance of resourcefulness and a willingness to experiment. Limitations within certain AI tools, such as Leonardo.AI's struggles with green screens and unpredictable outputs, often required workarounds and alternative strategies. The director's ability to adapt, resorting to traditional software like Photoshop for specific edits or green screen keying, appeared crucial in overcoming these limitations.

However, the creative freedom promised by AI tools came with a caveat: the juxtaposition of control versus freedom. While AI offered exciting possibilities, the director discovered the need to relinquish some degree of control for optimal results. Features like the

"Canvas tool" in Leonardo.AI felt restrictive, demanding a different approach to creative direction than traditional software.

The project also underscored the importance of effective time management. The repetitive nature of AI-generated visuals could introduce significant delays.

Finally, the intense focus required by the project inadvertently led to social isolation. This potential pitfall highlighted the need for directors to be mindful of maintaining social connections during production, ensuring a healthy work-life balance.

Stage 3: Reflection-on-Action

Having completed the AI-generated film, the director embarked on a period of reflection, meticulously dissecting the filmmaking process to glean valuable insights for future endeavours. This section dissects the production through Schon's reflective model, addressing 'what happened,' 'why it happened,' and 'how to deal with it in the future.'

The director actively participated in every production stage, from crafting the script and storyboarding to meticulously selecting and utilising various AI tools. Traditional software was also employed extensively during post-production editing. The emotional experience throughout the production was a rollercoaster. Frustration arose from limitations and unexpected results encountered with some AI tools, particularly Leonardo.AI. This stemmed from a desire for more granular control, akin to traditional software like Photoshop. Ironically, providing less information through prompts sometimes yielded better outcomes, creating a sense of being restricted by certain AI platforms. Conversely, successful applications, like the opening scene's morphing effect, elicited satisfaction due to the meticulous pre-planning involved.

Several unforeseen elements emerged throughout production, shaping the final product and the director's experience. One such factor was the iterative nature of AI content generation. Unlike traditional filmmaking, where a single preplanned take might capture the desired outcome, AI often necessitates numerous attempts and adjustments. This back-and-forth process demanded patience and adaptability from the director, who had to embrace the trial-and-error nature of the workflow.

Another unexpected element was the emergence of a diverse software ecosystem. While AI platforms like Leonardo.AI and Pika Labs offered novel creative possibilities, the project thrived on a synergy between these tools and traditional applications like Adobe Photoshop and After Effects. This hybrid approach allowed the director to leverage the strengths of established software and cutting-edge AI technology, fostering a more robust and flexible workflow.

Furthermore, the director discovered inherent gender bias in some AI tools. For instance, characters might default to male if the prompt doesn't explicitly specify gender. Acknowledging these biases, the director ensured the film's narrative remained fair and inclusive.

The project also highlighted the importance of resourcefulness and a willingness to experiment. Limitations within certain AI tools, like Leonardo.AI's struggles with green screens and unpredictable outputs, often necessitated workarounds and alternative strategies. The director's ability to adapt, resorting to traditional software like Photoshop for specific edits or green screen keying, proved crucial in overcoming these limitations.

However, the creative freedom promised by AI tools came with a caveat – the juxtaposition of control versus freedom. While AI offered exciting possibilities, the director discovered the need to relinquish some degree of control for optimal results. Features like the

"Canvas tool" in Leonardo.AI felt restrictive, demanding a different approach to creative direction than traditional software.

The project also underscored the importance of effective time management. The repetitive nature of AI-generated visuals could introduce significant delays. Finally, the intense focus required by the project inadvertently led to social isolation. This potential pitfall highlighted the need for directors to be mindful of maintaining social connections during production, ensuring a healthy work-life balance.

The morphing technique employed in the opening scene yielded a visually impactful start, fostering a sense of slowness and interactivity not present in other segments of the film. Maintaining a consistent background for the characters improved visual cohesion and created a stronger sense of continuity within scenes. However, the quality of lip-syncing for the daughter's character fell short compared to other characters due to her smaller head size and less refined appearance.

Upon reflection, a sense of over-reliance on dialogue, particularly AI-generated dialogue, emerged as a concern. The film could benefit from a stronger emphasis on animation and portraying emotions through character actions rather than solely relying on voiceovers. The director can explore character animation beyond its limitations, as the narrative is not bound by a static character representation.

The "pose to image" feature proved ineffective with close-up shots, generating excessive wireframe elements.

While the initial uniformity of character appearances generated by Leonardo.AI was disappointing, refining prompts to achieve a more distinct look did not yield the desired results.

The director acknowledges the need for a more iterative approach involving generating multiple options and selecting those most closely aligned with the creative vision.

Future projects will undoubtedly be influenced by AI effects. These effects, however, need not be hyper-specific, as exemplified by the wasp animation within the explanatory sections. Their implementation could streamline the creation process, particularly for a director with a background in graphic animation rather than visual effects (VFX).

Greater focus should be placed on crafting compelling prompts and exploring the capabilities of various AI tools in future endeavours. The current reliance on "working prompts" without further refinement represents an area for improvement.

The broader implications of AI in filmmaking encompass both exciting possibilities and potential challenges. Recent research suggests the creation of full-length AI-generated movies, which could ultimately reshape audience preferences and viewing habits (Song et al., 2024). On the other hand, the potential for bias within AI algorithms remains a concern. However, AI presents a powerful tool for generating unique ideas and fostering the development of individual creative projects, as evidenced by the director's experience. However, it is important to acknowledge that even within AI filmmaking, a collaborative team effort often remains essential.

In conclusion, creating an AI-generated film proved to be an odyssey of discovery. While the initial challenges with specific tools were anticipated, the emergence of unforeseen factors like iterative development, the need for a diverse software ecosystem, and the challenge of mitigating bias ultimately shaped the creative process. The director's resourcefulness, adaptability, and willingness to experiment allowed them to navigate these challenges and embrace the potential of AI filmmaking. The experience is a valuable case study, highlighting

the additional considerations directors must consider when venturing into this uncharted creative territory.

Through Feminist Film Theory Lens

This section delves into the film's portrayal of gender relations through the lens of feminist film theory, drawing on the director's reflection, audience feedback, and the established literature overview.

The **viewer's gaze** perceived women as primarily active characters, aligning with the director's intent to showcase female agency, as seen from responses. However, the film also featured active male characters, suggesting a potential move away from a strictly female-centric narrative.

The **character's gaze** in the story unfolds from various perspectives, with the daughter's dominant viewpoint. This aligns with the feminist concept of "woman's gaze" (Mulvey, 1975), challenging the traditional male gaze that objectifies women. However, the audience noted stereotypical portrayals across characters, particularly the grandmother, highlighting the film's struggle to dismantle these tropes fully. This aligns with the literature (Montasseri, 2020) that highlights the persistence of traditional gender expectations in films.

The **filmmaker's gaze** aimed to challenge gender roles, which is evident in the use of AI to change the characters' appearances constantly. This technique disrupts the association of femininity with a fixed physical form. However, the audience's mixed reactions indicate that the execution may require refinement.

The rapid character transformations enabled by AI introduce a **matrixial gaze** element (Ettinger, 1995), where the technology disrupts the established order of representation. However,

as some viewers found the constant changes distracting, the film may not achieve the full subversive potential of this approach. The director's experience highlights a crucial aspect not yet fully explored in the literature: the potential for gender bias in AI tools.

This film's exploration of gender through AI-generated visuals offers a valuable case study for feminist film theory. While the results are inconclusive, they highlight the potential and challenges of using this technology to challenge traditional portrayals. The director's experience emphasises the need for further research on AI bias and the development of more sophisticated tools. By combining AI with traditional filmmaking techniques and feminist film theory frameworks, filmmakers can strive to create films that promote a more nuanced and equitable representation of gender.

Through Theories of Representation (Stuart Hall) Lenses

This section analyses the portrayal of the father-daughter relationship in the film using Stuart Hall's reception theory and incorporating the director's reflection, audience feedback, and relevant literature.

Based on the director's intention, the **preferred message** aimed to portray a supportive and understanding father-daughter relationship. This could be conveyed through elements like:

- **Dialogue:** Open communication, active listening, and language that empowers the daughter.
- **Actions:** The father actively supports the daughter's goals and aspirations.

The audience's response reflects a partial confirmation of this preferred message. Many viewers perceived the relationship as supportive due to the mentioned elements.

However, the **oppositional readings** offered by viewers also offered oppositional readings, suggesting the relationship might be:

- **Evolving:** The father's support might develop over time, requiring the daughter's initiative to overcome initial distance or lack of validation.
- **Strained:** Underlying tension or conflict could exist within the relationship.
- **Patronising:** The father's support might come across as condescending or controlling.

These interpretations highlight how viewers can critically analyse the portrayal and identify potential discrepancies between the director's intent and their perceived message.

The audience's diverse backgrounds and knowledge can influence their interpretations, creating **negotiated readings**. Female and younger viewers might resonate more strongly with the daughter's perspective. Viewers familiar with AI's might question the film's authenticity in portraying a truly equal relationship, even if it appears supportive.

The film's portrayal of the father-daughter relationship presents a complex picture. While you aimed for a supportive message, audience interpretations varied. AI technology adds another layer of complexity, introducing potential biases and limitations in control. Future research could explore how AI tools can be developed to represent nuanced relationships better and mitigate gender bias. This analysis demonstrates the value of Stuart Hall's reception theory in understanding how audiences decode and interpret films, particularly those created with emerging technologies like AI.

Testing for Gender Representations in Movies

Applying the Bechdel and Mako Mori Test to the AI movie yields mixed results. The film passes the Bechdel Test, featuring multiple named female characters engaging in conversations beyond male-related topics. This indicates a conscious effort to represent women in varied roles and interactions.

However, the Mako Mori Test reveals limitations in the film's ability to provide all female characters with independent narrative arcs. While some characters demonstrate agency and development, others remain tethered to male character arcs, underscoring the need for more balanced representation.

Limitations and Future Research

While this study provides valuable insights, it also acknowledges limitations, such as the current lack of norms in the generations and potential biases in AI algorithms. Future research could explore developing and implementing bias-free AI technologies in film production and further investigate audience reception of AI-generated content.

The survey faced limitations. The sample (mostly female, 18-34 age range) might not be generalised to a broader population. Additionally, limited familiarity with feminist film and reception theory potentially influenced interpretations.

Conclusion

In conclusion, the experiment of AI in film production, specifically in portraying father-daughter relationships, presents a groundbreaking avenue for challenging and reshaping gender stereotypes within cinematic narratives. This research has illuminated the multifaceted role that

AI can play in fostering gender-equal representations, thereby contributing to a more inclusive and nuanced understanding of gender dynamics in contemporary society.

The investigation has underscored the persistent gender disparities in the film industry, particularly in the representation and perception of father-daughter dynamics. Traditional cinematic portrayals have often been laden with stereotypical gender roles, with fathers depicted as distant or authoritative figures and daughters as submissive or nurturing. Such representations not only reinforce outdated gender norms but also limit the scope of narrative creativity and diversity. However, the advent of AI technologies in film production heralds a new era of possibilities where gender-equal narratives can be more systematically crafted and promoted.

The findings of this research advocate for a paradigm shift in the conceptualisation and portrayal of father-daughter relationships in films. By leveraging AI, filmmakers have the potential to dismantle entrenched gender stereotypes and cultivate a more equitable cinematic landscape. AI can aid in scriptwriting, character development, and storyboarding processes, ensuring that gender biases are identified and addressed from the inception of the creative process. Furthermore, AI-driven analytics can provide valuable insights into audience perceptions and reactions, enabling a more targeted and effective approach to challenging gender norms.

The practical implications of this study offer a roadmap for harnessing AI technologies to pursue gender equality in the film industry. As the film industry continues to evolve, the integration of AI in the creative process stands as a beacon of progress, illuminating the path toward a more inclusive and equitable cinematic world.

In essence, this research contributes to the broader discourse on gender equality, highlighting the transformative potential of AI in redefining gender narratives in film. As we move forward, it becomes imperative for industry stakeholders to recognise and act upon the power of cinema as a medium for cultural and societal change. By prioritising gender-equal representations, particularly in portraying father-daughter relationships, the film industry can play a pivotal role in shaping a more gender-inclusive future.

Ultimately, this thesis proposes ideas in achieving gender equality in cinematic representations but also showcases the promising opportunities that AI presents in overcoming these obstacles. It is a clarion call for continued innovation, collaboration, and advocacy in the quest to ensure that film production serves as a catalyst for gender equality, reflecting the complexity, diversity, and richness of human relationships in all their forms.

References

- Andrews, M. (Director), & Chapman, B. (Director). (2012). *Brave* [Film]. Pixar Animation Studios; Walt Disney Pictures.
- Anguiano, D. (2023, September 27). *Hollywood writers agree to end five-month strike after new studio deal*. The Guardian. <https://www.theguardian.com/culture/2023/sep/26/hollywood-writers-strike-ends-studio-deal>
- Bancroft, T. (Director), & Cook, B. (Director). (1998). *Mulan* [Film]. Walt Disney Pictures; Walt Disney Feature Animation.
- Casanova, E. (Director). (2021). *Luca* [Film]. Pixar Animation Studios; Walt Disney Pictures.
- Cave, S., Dihal, K., Drage, E., & McInerney, K. (2023). *Who makes AI? Gender and portrayals of AI scientists in popular film, 1920–2020*. *Public Understanding of Science*, 32(6), 745–760. <https://doi.org/10.1177/09636625231153985>
- Cho, E., & Macomber, M. (2022, November 30). *A Content Analysis: Gender Roles in Studio Ghibli Films*. *Journal of Student Research*, 11(4). <https://doi.org/10.47611/jsrhs.v11i4.3722>
- Clark, C. C. (2008). *Film Families: The Portrayal of the Family in Teen Films from 1980 to 2007* (Doctoral dissertation). Retrieved from <https://scholarsarchive.byu.edu/etd/1601>
- Clements, R. (Director), & Musker, J. (Director). (2016). *Moana* [Film]. Walt Disney Animation Studios; Walt Disney Pictures.
- Cobb, Shelley, and Linda Ruth Williams. "Gender equality in British film-making: research, targets, change." *Women in the International Film Industry: Policy, Practice and Power* (2020): 97-110. https://link.springer.com/chapter/10.1007/978-3-030-39070-9_6

- Croft, A., Atkinson, C., Sandstrom, G., Orbell, S., & Akin, L. (2020, December 1). *Loosening the GRIP (Gender Roles Inhibiting Prosociality) to Promote Gender Equality*. *Personality and Social Psychology Review*, 25(1), 66–92.
<https://doi.org/10.1177/1088868320964615>
- England, D. E., Descartes, L., & Collier-Meek, M. A. (2011, February 10). *Gender Role Portrayal and the Disney Princesses*. *Sex Roles*, 64(7–8), 555–567.
<https://doi.org/10.1007/s11199-011-9930-7>
- England, P., Privalko, I., & Levine, A. (2020). *Has the Gender Revolution Stalled*. *Economic and Social Review*, 51, 463-488. <https://www.semanticscholar.org/paper/Has-the-Gender-Revolution-Stalled-England-Privalko/da697c1fd87741433f2135966fb2bf483f3c2ccc>
- Ettinger, B. (1995). *The matrixial gaze*.
- Flicker, E., & Vogelmann, L. L. (2020). *Gender in the Austrian Film Industry*. *Women in the International Film Industry: Policy, Practice and Power*, 21-41.
https://link.springer.com/chapter/10.1007/978-3-030-39070-9_2
- Goldie, T. (2014). *The man who invented gender*. In University of British Columbia Press eBooks. <https://doi.org/10.59962/9780774827942>
- Hall, S. (1997). *Representation: Cultural representations and signifying practices*.
<http://ci.nii.ac.jp/ncid/BA29844802>
- Heilman, M. E., Caleo, S., & Manzi, F. (2024, January 22). *Women at Work: Pathways from Gender Stereotypes to Gender Bias and Discrimination*. *Annual Review of Organizational Psychology and Organizational Behavior*, 11(1), 165–192.
<https://doi.org/10.1146/annurev-orgpsych-110721-034105>

- Khadilkar, K., KhudaBukhsh, A. R., & Mitchell, T. M. (2021). *Gender bias, social bias, and representation: 70 years of B H ollywood*. *Patterns* (New York, N.Y.), 3(2), 100409.
<https://doi.org/10.1016/j.patter.2021.100409>
- Kobulianska, O. (1926). *Black Apostle (Апостол Черні)*.
- Macdonald, C. (2021). *Media representation and gender bias in science*. *Journal of Environmental Media*. https://doi.org/10.1386/jem_00036_1
- Montasseri, Z., Khaghaninejad, M. S., & Moloodi, A. (2020). *Gender Representation in American Movies: A Corpus-based Analysis*. *The International Journal of Humanities*, 27(4), 42-53.
- Moore, T. (Director), & Stewart, R. J. (Director). (2020). *Wolfwalkers* [Film]. Cartoon Saloon; Apple TV+; GKIDS.
- Mulvey, L. (1975b). *Visual pleasure and narrative cinema*. *Screen*, 16(3), 6–18.
<https://doi.org/10.1093/screen/16.3.6>
- Nolan, C. (Director). (2014). *Interstellar* [Film]. Paramount Pictures; Warner Bros. Pictures.
- Raalte, C. van. (2015). *No Small-Talk in Paradise: Why Elysium Fails the Bechdel Test, and Why We Should Care*. In H. Savigny, E. Thorsen, D. Jackson, & J. Alexander (Eds.), *Media, Margins and Popular Culture* (pp. 1-?). Springer. ISBN 9781137512819.
- Raveney, F. H., Moldaschl, B., & Koblitiz, A. (2018). *Gender Inequality for Directors in the European Film Industry: Focus on Austria*. *Media Business and Innovation*.
https://doi.org/10.1007/978-3-319-71716-6_28
- Rianda, M. (Director). (2021). *The Mitchells vs. the Machines* [Film]. Columbia Pictures; Sony Pictures Animation.

- Romano, A. (2021, June 1). *The Mako Mori Test: 'Pacific Rim' inspires a Bechdel Test alternative*. The Daily Dot. <https://www.dailydot.com/pop-culture/fandom/mako-mori-test-bechdel-pacific-rim/>
- Runway. (2023). *Runway AI Film Festival*. Retrieved April 3, 2024, from <https://aiff.runwayml.com/2023>
- Schön, D. A. (1983). *The reflective practitioner: How professionals think in action*. Basic Books
- Shevchenko, D. (2024). *The Trap* [Video].
- Shi, D. (Director). (2022). *Turning Red* [Film]. Pixar Animation Studios; Walt Disney Pictures.
- Song, Z., Wang, C., Sheng, J., Zhang, C., Yu, G., Fan, J., & Chen, T. (2024, March 3). *MovieLLM: Enhancing Long Video Understanding with AI-Generated Movies*. arXiv.org. <https://arxiv.org/abs/2403.01422>
- Sort by Popularity - Most Popular Feature Films tagged with keyword "father-daughter-relationship"* - IMDb. (n.d.). IMDb. Retrieved March 6, 2024, from https://www.imdb.com/search/keyword/?keywords=father-daughter-relationship&sort=moviemeter,asc&mode=detail&page=1&title_type=movie&release_date=2004%2C2023&ref_=kw_ref_gnr
- Stanford Graduate School of Business. (2017, January 25). *Andrew NG: Artificial intelligence is the new electricity* [Video]. YouTube. <https://www.youtube.com/watch?v=21EiKfQYZXc>
- The Gender Snapshot 2022 — SDG Indicators*. (n.d.). <https://unstats.un.org/sdgs/gender-snapshot/2022/>
- The Gender Snapshot 2023 — SDG Indicators*. (n.d.). <https://unstats.un.org/sdgs/gender-snapshot/2023/>

- Turchi, J., & Bernabo, L. (2020). *“Mr. Mom” no more: single-father representations on television in primetime drama and comedies*. *Critical Studies in Media Communication*, 37(5), 437–450. <https://doi.org/10.1080/15295036.2020.1812683>
- Zurcher, J. D., Brubaker, P. J., Webb, S., & Robinson, T. (2019). *Parental Roles in “The Circle of Life” Representations of Parents and Parenting in Disney Animated Films from 1937 to 2017*. *Mass Communication and Society*, 23(1), 128–150. <https://doi.org/10.1080/15205436.2019.1616763>

Appendix

I. Film Script

EXT. SUMMER KITCHEN - DAY

A cozy summer kitchen. Dinner is almost finished. GRANDMOTHER sits near her husband GRANDFATHER, their granddaughter HILDA opposite to them. A plate of half-eaten potato sits in front of everyone. Wasps buzz around the table.

GRANDFATHER

These darn wasp! Can't even enjoy a meal in peace.

GRANDMOTHER

Just another summer with those wasps. Previous was better.

(signes)

GRANDFATHER

I have seen a trap. You take a bottle, cut it in half like so...

(He gestures with his hands)

Then you invert the top part, see? Like a funnel... and you put some of that sweet syrup stuff inside. The wasps, those sweet lovers bastards, come flying in, attracted by the sugar, and then... well, let's just say they never leave.

GRANDMOTHER

Still can't understand.

AUNT SIRJE

Me neither.

HILDA

Oh, it's quite easy, I want to make one and show you!

GRANDMOTHER

Don't worry, dear. Some things are just better left to the men.

GRANDMOTHER

Besides, some things are just too complicated for the female mind, wouldn't you agree, George?

HILDA

It's not complicated! Anyone understand it if he tries more.

INT. HILDA'S BEDROOM - EVENING

HILDA is sitting on her bed, looking at her phone. HILDA is clearly upset. HILDA dials a number and puts the phone to her ear.

FATHER

Yes, I am listening.

HILDA

Dad, it's Hilda. How are you?

FATHER

Normal, little by little. What happened?

HILDA

I'm here for your support.

HILDA

So, Grandpa revealed his new idea - a wasp trap. I got the construction from the first try. Grandma and Aunt Sirje? Lost at perspectives.

HILDA

He could've explained it again, right? But nooooo. Stereotypes are apparently easier to build than a decent fly swatter. And the worst part? They're perfectly content with it! "Not for our woman brains," they say.

HILDA

Promise me that you never underestimate me. Or at least try.

FATHER

Listen, you know I try not to underestimate you, right? Though sometimes, with your head buried in your idea, the conversation is like trying to catch high-speed... well, you.

But seriously, the only limitations you have are the ones you build yourself. Society likes to make walls too, but let's save that for another day. Remember that German teacher of yours? She also failed all your class as I remember.

Hilda rolls her eyes.

HILDA

"Architecture is such a man's job," she said. "So glad you chose this department."

Like my sister couldn't love blueprints just because she hates math. OR SHE IS WOMAN!

FATHER

Exactly!

HILDA

Thank you. I needed that.

EXT. SUMMER KITCHEN - EVENING

Someone is making wasp trap following instructions, but we see only hands. When the trap is ready, it reveals GRANDMOTHER face.

GRANDMOTHER

That was actually easy.

II. License

Non-exclusive licence to reproduce thesis and make thesis public

I, Daria Shevchenko,

1. herewith grant the University of Tartu a free permit (non-exclusive licence) to:

1.1. reproduce, for the purpose of preservation and making available to the public, including for addition to the DSpace digital archives until expiry of the term of validity of the copyright, and

1.2. make available to the public via the web environment of the University of Tartu, including via the DSpace digital archives until expiry of the term of validity of the copyright,

of my thesis

Title,

(title of thesis)

supervised by Taavet Jansen,

2. I am aware of the fact that the author retains these rights.

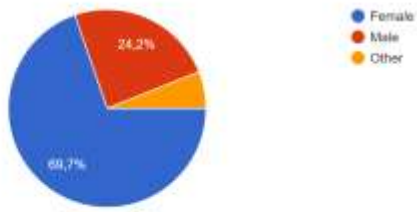
3. I certify that granting the non-exclusive licence does not infringe the intellectual property rights or rights arising from the Personal Data Protection Act.

Tartu, **15.05.2024**

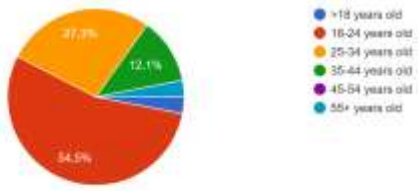
III. Questionnaire

Demographics

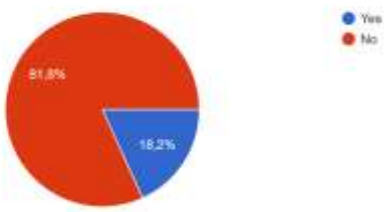
Your Gender Identity
33 responses



Your age
33 responses

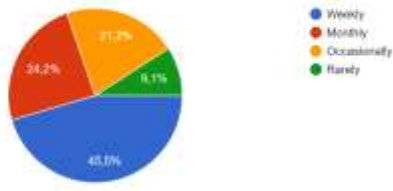


Do you have children?
33 responses

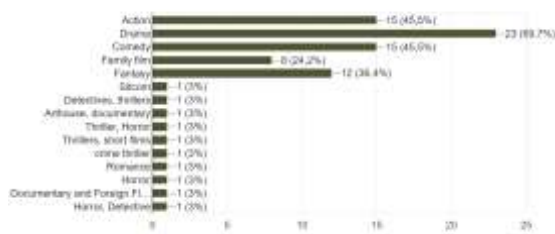


Film Experience

How often do you watch movies?
33 responses



What genres of movies do you typically watch?
35 answers

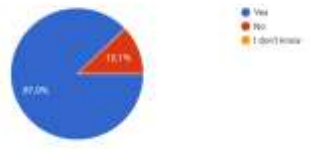


How important do you consider gender equality to be in movies?
33 responses

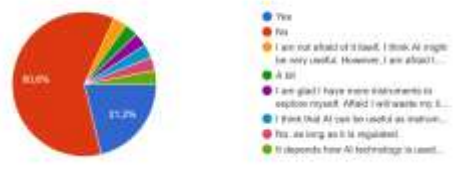


AI technology

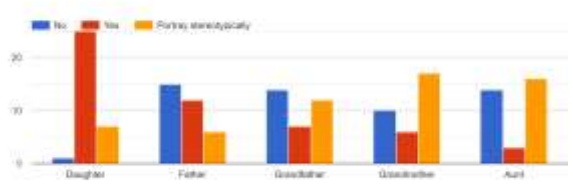
Do you used AI technology before (ChatGPT, Midjourny, etc.)?
33 responses



Are you afraid of AI technology?
33 responses



Please, specify from whose perspective film portrays actions

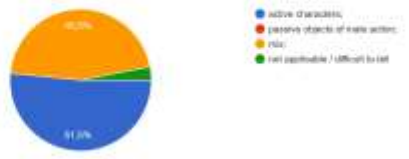


Does the characters' changing looks tackle the film's character portray against stereotype?
35 responses

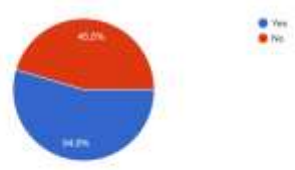


Film Experience

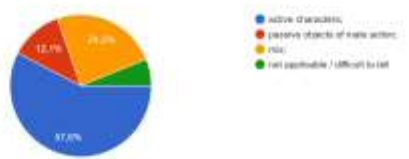
Are women in the movie...
35 responses



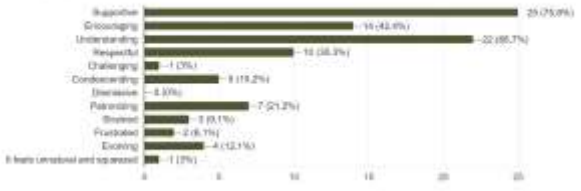
Did the characters' changing looks make you think less about individual characters and more about broader ideas or themes in the film?
35 responses



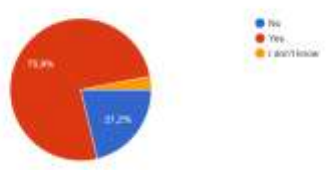
Are men in the movie...
35 responses



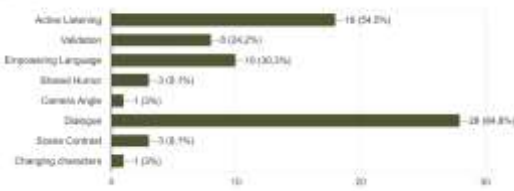
How do you see the father-daughter relationship in the movie?
35 responses



Does the film portray a story from someone's character's view?
35 responses

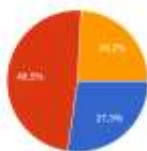


Why do you see in this way the father-daughter relationship in the movie?
35 responses



Theories

Are you familiar with feminist film theory?
35 answered



Yes
No
Maybe

Are you familiar with Stuart Hall's reception theory?
35 answered



Yes
No
Maybe