COLLABORATION OF HUMAN AND NON-HUMAN ELEMENTS IN FILMMAKING IN THE AGE OF AI

ÖVGÜ BOZGEYİK

ÖZYEĞİN UNIVERSITY

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by
Övgü Bozgeyik

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Advisor: Assoc. Prof. Ayşe Hazar Köksal
Co-Advisor: Prof. Şebnem Timur

Graduate School of Social Sciences
Özyeğin University
İstanbul

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Approved by:

Assoc. Prof. Ayşe Hazar Köksal,
Advisor
Department of Industrial Design
Özyeğin University

Asst. Prof. Burcu Mutlu
Department of Anthropology
Özyeğin University

Asst. Prof. Atanur Andıç
Department of Communication and Design
Özyeğin University

Prof. Itır Erhart
Department of Media
İstanbul Bilgi University

Asst. Prof. Ebru Çiğdem Thwaites Diken
Department of Radio, Television and Cinema
İstanbul Bilgi University

Approval Date: November 21, 2025

To mom, thank you...

DECLARATION OF ORIGINALITY

I hereby declare that I am the sole author of this thesis and that this is the true copy of my thesis, including the final revisions, approved by my thesis committee. All data and information have been obtained, produced, and presented in accordance with the rules of research ethics and principles of academic honesty. As required by these rules, to the best of my knowledge I have acknowledged ideas, thoughts, and any copyrighted material in accordance with the standard referencing rules. I certify that any part of this thesis has not been submitted for a degree or diploma in another educational institution.

Övgü Bozgeyik

ABSTRACT

This dissertation investigates the evolving interplay between human and non-human elements in filmmaking, with a particular focus on the role of artificial intelligence. By examining the evolution of filmmaking technology and the emergence of AI, the study explores how these non-human elements have influenced the creative process and redefined the concept of authorship. A central theme is the concept of machine gaze, which examines how AI, as a non-human agent, contributes to the shaping of cinematic vision and narrative. Using Actor-Network Theory (ANT) and Foucault's author-function as theoretical frameworks, the study analyzes five case studies, including an industry-driven virtual production, a commercial project created with generative AI, independent, experimental and exploratory works by creators, artists and creative technologists. Semi-structured interviews with directors, producers, virtual production supervisor, and artists reveal how AI is integrated at varying levels across pre-production, production, and post-production stages. This research aims to contribute to a deeper understanding of the collaborative dynamics between humans and technology in shaping the future of cinema. Understanding how machines and humans interact within the creative space can contribute to the broader discourse on how AI intersects with creativity, not only in filmmaking but also in other media forms where emerging technologies are being embraced.

Keywords: Collaborative filmmaking, human AI collaboration, AI filmmaking, AI authorship, AI creativity

ÖZET

Bu tez, film yapımında insan ve insan olmayan ögeler arasında gelişen etkileşimi, yapay zeka rolüne odaklanarak araştırmaktadır. Film yapımı teknolojisinin evrimini ve yapay zekanın ortaya çıkışını inceleyen bu çalışma, bu insan olmayan unsurların yaratıcı süreci nasıl etkilediğini ve yazarlık kavramını nasıl yeniden tanımladığını keşfetmektedir. Ana tema, insan olmayan bir unsur olan yapay zekanın, sinematik görüşün ve anlatının şekillenmesine nasıl katkıda bulunduğunu inceleyen makine bakışı (machine gaze) kavramıdır. Aktör-Ağ Teorisi (ANT) ve Foucault'un yazar-işlevini teorik çerçeveler olarak kullanan bu çalışma, sektör odaklı bir sanal prodüksiyon, üretken yapay zekâ ile oluşturulmuş bir reklam projesi, yaratıcılar, sanatçılar ve yaratıcı teknologlar tarafından yapılan bağımsız, deneysel ve keşifsel çalışmalar dahil olmak üzere beş vaka çalışmasını analiz etmektedir. Yönetmenler, yapımcılar, sanal prodüksiyon süpervizörü ve sanatçılarla yapılan yarı yapılandırılmış görüşmeler, yapay zekanın yapım öncesi, yapım ve yapım sonrası aşamalarında değişen düzeylerde sürece nasıl dahil edildiğini ortaya koymaktadır. Bu araştırma, sinemanın geleceğini şekillendirmede insanlar ve teknoloji arasındaki işbirlikçi dinamiklerin daha derin bir şekilde anlaşılmasına katkıda bulunmayı amaçlamaktadır. Makinelerin ve insanların yaratıcı alanda nasıl etkileşim kurduğunu anlamak, yalnızca film yapımında değil, aynı zamanda gelişmekte olan teknolojilerin benimsendiği diğer medya biçimlerinde de yapay zekanın yaratıcılıkla nasıl kesiştiğine dair daha geniş söyleme katkıda bulunabilir.

Anahtar Kelimeler: İşbirlikçi film yapımı, insan yapay zeka işbirliği, yapay zeka ile film yapımı, yapay zeka yazarlığı, yapay zeka yaratıcılığı

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1. INTRODUCTION

The idea of having intelligent computers has been around since the 1930s, back when British logician Alan Turing worked on an "abstract computer machine" and a "stored program concept" allowing machines to store symbols and guess further symbols (Copeland, 2025). In the 1950s, artificial intelligence (AI) became a bigger term, especially after the famous 1956 Dartmouth conference, where John McCarthy used it for the first time. McCarthy et al. explained that "every aspect of learning or any other feature of intelligence" could be simulated or imitated by machines, allowing machines to solve problems and perform like humans (McCarthy et al., 2006).

The exponential advancement in the abilities of AI resulted in proliferation of AI generated works. A decade ago, a film scripted by algorithms was considered groundbreaking, while now we see different kinds of AI generated works in our daily lives. AI generated avatars become social media influencers; Mango (clothing brand) works with an AI model; well known musicians like Sezen Aksu and Kenan Doğulu choose to have AI generated music videos; advertising companies and agencies work with AI to create commercials; artists experiment with AI in their artistic explorations; social media accounts generate content with AI tools, making cats cook or dogs dance; ChatGPT is used as an assistant or even as a therapist by some; AI powered dubbing techniques are used; and DeepFake is not an anomaly anymore. The AI hype also brings discussions about AI ethics, concerns about losing jobs, or a possible environmental crisis that could be caused by being too polite in conversing with ChatGPT (More, 2025).

This fast growth of AI and integration of AI in daily lives created a challenge for this dissertation too, because rapid development of the abilities of AI altered some of my analysis. When I started writing about the writing abilities of AI, a coherent body of text

could not be produced effectively by AI tools. This was before OpenAI granted public access for ChatGPT, and with this public access, AI is trained by millions of users around the world on millions of topics. Now, AI can write more efficiently and effectively.

When I started my PhD, AI in creative areas was debated but not much study could be found in the literature. Just in a couple of years, the AI hype took over not only technology enthusiasts or artists, it also excited the scholars. There are a growing number of studies in the area of AI, ranging from the engineering side of AI, to justice and ethics, to AI art. Yet, AI filmmaking is still an area to be explored, and this dissertation aims to fill the gap in literature about AI practices in filmmaking, analyzing different areas of filmmaking, from mainstream filmmaking to more artistic explorations.

More specifically this dissertation examines the collaboration between humans and non-humans in the creative and production processes in filmmaking. Filmmaking is inherently collaborative and technological, and it has become even more so with the integration of advanced technological tools and applications. With technological advancements, the variety and the number of non-humans in the creation process has increased from cameras, light and sound systems to algorithmic and analytical tools. These technological tools are often powered by virtual production techniques or AI and they enter the creative process even before the filming begins. Along with the technological changes in the filmmaking practices, authorship, creativity and agencies are challenged and redefined.

The changes in the dynamic interplay between the agencies of human and non-human elements in filmmaking is the focus of this research. The digitalization of the non-human elements in the age of AI have influenced the creative process of filmmaking. In the recent past, humans were using non-human tools to create, whereas now humans need

to collaborate with the non-human tools, because these tools can now give ideas, comment, facilitate the process and provide efficient solutions. The evolving nature of the relationship between humans and the machines resulted in a highly collaborative environment in the filmmaking industry. Although this change sounds all positive, the issues about authorship, creativity and ethics have entered the picture. The benefits of having the help of technology as non-human elements have also raised questions about autonomy of machines, their increasing agencies and related ethical conflicts. The reliance on past works and cyclical nature of AI creativity challenges authenticity. Overall, concerns about authorship are born when algorithms create content; issues about copyrights, ownership and biased creations can cause legal problems.

Machines are not only included in the production process, but they also affect the outcome significantly. The way machines see, write and generate creates the concept of 'machine gaze', underlining the influence of algorithms in collaborative works. More about machine gaze is explained in the following sections.

The term artificial intelligence is often used as a broad term encompassing a wide range of computational techniques. Therefore, it can be overgeneralized at times. AI approaches include machine learning, neural networks, and large-scale predictive models. These approaches do not operate in the same way, and they do not have the same implications for creative practices. In this dissertation, the primary focus is on generative AI, a branch of AI that produces new content based on patterns learned from large datasets. Unlike classification-oriented AI, generative AI actively participates in the creation process by generating outputs that can serve as visual assets, narrative elements, or stylistic interventions. Because of its capacity for creative production, generative AI is uniquely positioned to transform authorship, creativity, and cinematic workflows.

Therefore, this research concentrates specifically on generative AI (GenAI) as it shapes filmmaking practices and human-machine collaboration.

The primary objective of this dissertation is to analyze how human and non-human elements collaborate and coexist in contemporary filmmaking practices shaped by artificial intelligence and related technologies. The notion of agency expands beyond intentional human action to include algorithmic and machinic processes and by focusing on the interplay between human creativity and machine-driven processes, this research aims to interrogate how agency, authorship, and creativity are reshaped in the evolving media landscape. Along with these main objectives, I aim to conceptualize the "machine gaze" as a form of vision and perception that differs from human subjectivity, and to examine how it reshapes cinematic and narrative strategies, and spatial representation. In the context of AI and evolving technologies in filmmaking, the boundaries between human and non-human elements blur or become more pronounced, and this dilemma is worth exploring. A critical examination of how authorship is redefined when creative control is distributed across humans, algorithms, and computational systems is necessary to understand this technological evolution in creative mediums. In line with these objectives, my main research questions are: How does the collaboration between human and non-human elements in filmmaking redefine the concept of authorship and agency in the creative process? In what ways does the concept of machine gaze reshape cinematic vision and narrative structure in filmmaking in the age of AI?

The theoretical framework of this dissertation consists of Foucault's author-function to understand the evolving notion of authorship in the context of AI, and Latour's Actor-Network Theory to understand the relationship between human and non-human actors in a system of filmmaking. In terms of case studies, I conduct semi-structured

interviews with professionals, digital artists, directors, creative technologists, and AI studios in Turkey. This research aims to understand how machines and humans interact within the creative space; thus I will also look at the concept of machine gaze, to understand how machines influence, perceive, and contribute to the storytelling process. Rather than adopting a deterministic perspective that privileges either technology or humans, my study takes a balanced approach, considering both the agency of technology and human creativity.

This dissertation adopts a qualitative, multi-case study design to examine how artificial intelligence and advanced digital technologies shape filmmaking practices across different contexts. This study explores both the industrial and independent uses of AI in film production, and thus captures the diversity of creative, technological, and institutional configurations of this emergent field. The study focuses on case studies including streaming series *Prens* produced by MGX Studios, commercial film *Pioli* produced by Novus Film, experimental digital film *MYth* by İrem Çoban, and creations of AIMania by Deniz Türkeri and creative technologist Ayça Turan. Semi-structured interviews with Bilgehan Yoldaş, the co-founder of Novus Film, Deniz Türkeri, co-founder of AIMania, the director of *Prens* Gökdeniz Uslu, MGX Studio PR Coordinator Negin Piran and Operations Manager and VP Supervisor Okan Mertgil, digital artist İrem Çoban and creative technologist Ayça Turan. These interviews provide first-hand insights into the lived experiences, challenges, and strategies of professionals working with AI and virtual production technologies.

These cases are deliberately selected to represent diverse practices, ranging from large-scale, industry-driven productions to experimental, personal engagements with AI. This comparative design enables the analysis of convergences and divergences across

contexts, as well as the identification of broader patterns in the negotiation of authorship, creativity, and agency. By structuring the research around semi-structured interviews, supported by ANT and author-function analysis, the case studies allow the research questions of this dissertation to be explored both empirically (through real-world perspectives and experiences of production practices) and theoretically (through concepts of authorship, creativity, and sociotechnical networks). This dual strategy ensures that the findings not only document how AI is used in filmmaking but also contribute to broader debates in film studies, media and STS.

AI inherently presents uncertainties as it evolves into a creative entity with its own agency. Although humans design these systems, AI's role in creative domains like filmmaking raises complex questions about authorship, agency, and the future of storytelling. I believe my research can contribute to the broader discourse on how AI intersects with creativity, not only in filmmaking but also in other media forms where emerging technologies are being embraced.

Defining the scope of this dissertation involved making choices about what to include and what to exclude intentionally. Conducting interviews for the case studies and assembling a balanced and informative portfolio was challenging, as not all potential participants were available. Nevertheless, the cases gathered provide a strong foundation for examining the intersections of AI and filmmaking. Another limitation came from the topic itself. AI is fast-improving and keeping up with the AI news require extensive care, and fast working style with adjustments. Besides, AI in media and film could be analyzed from various perspectives, and narrowing the focus required careful consideration. For this reason, I concentrated on three interrelated themes, agency, authorship, and creativity as the central focus of the discussion. The interviews inspired me to include a section on

the evolution of the space in filmmaking with the emerging technologies. The theoretical framework also draws on multiple perspectives, including machine gaze, author-function and Actor-Network Theory. This multiplicity of concepts and theories can be seen as a challenge, however I argue that these concepts complement one another and can be efficiently tied together to analyze the shifting dynamics of human-machine collaboration in filmmaking.

Chapter 2 is the literature review of the authorship and creativity in the age of AI. This chapter is divided into two sections; first one "Machines, Authorship and Creativity" delves into how creativity is shaped and changed over the years as new technologies and generative AI is integrated into creative practices. The second section "Background of AI in Filmmaking" explains how AI has been advancing its role in filmmaking, including the evolution of AI in arts, media and entertainment, the historical overview of AI in filmmaking practices, integration of AI in different phases of filmmaking, from pre-production to post-production.

In Chapter 3, the theoretical framework of the study is explained; key terms, concepts and theories are explained. Machine gaze is introduced as a concept that ties theories of Foucault's author-function and Latour's Actor-Network Theory (ANT). These theories are suitable to analyze the case studies, as they can be combined under the concept of machine gaze. Author-function highlights how authorship is constructed and distributed with discourse and institutions and ANT emphasizes interconnected networks of human and non-human actors. With the concept of machine gaze, we can argue how machines not only act as non-human actors within networks but also participate in shaping authorship, creativity, and vision. In this sense, machine gaze becomes an

umbrella concept that helps us to examine the distributed agencies of filmmaking through ANT and the shifting conditions of authorship through the author-function.

Chapter 4 explains the methodology, case studies and theoretical reflections. Semi-structured interviews are conducted with industry professionals, ranging from company owners, AI artist, digital artist, creative technologist and virtual production studio supervisor. The data sampling method, selection of the interviewees and the interview questions are explained in detail in this chapter.

Chapter 5 analyzes the case studies through the theories of ANT and author-function with the larger perspective of the machine gaze. The making of the digital series *Prens* by MGX Studio, the making of the commercial film *Pioli* by Novus Film, and the making of the experimental film *MYth* by İrem Çoban are explored along with the interconnected Actor-Networks of Deniz Türkeri and Ayşa Turan and their author-functions. Overall the case studies and their analysis show that each case is an interconnected network of human and non-human actors, where authorship is distributed and attributed through how machines perceive.

Chapter 6 investigates the blurring boundaries between human and non-human agency. Divergences and convergences among the case studies are explored, and the transformation of the author is analyzed. Agency, authorship, and creativity in AI filmmaking are central concerns of this dissertation, and the evolution of their roles and meanings are discussed. Can AI be an author, a pressing question that is debated in the literature is revisited, and the anonymity and authority of AI as a shifting author are explored. In addition, in this chapter the transformation and evolution of spatial experiences of filmmaking practices with advances technologies like AI, VR and virtual production are analyzed. The meaning of space is challenged with the emerging

technologies in filmmaking, and the cinematic space is dematerialized and redefined. As a result, a new kind of non-place is born, with the digital creations of places contemporary filmmaking.

Chapter 7 is the conclusion, which draws together the insights from the case studies and theoretical frameworks. AI filmmaking is situated within broader debates on authorship, creativity, and human-machine collaboration. The conclusion explains how this dissertation is a contribution to the literature and discusses further research to investigate audience reception of AI generated contents, ethical debates, and institutional shifts as AI technologies continue to reshape visual culture.

2. FILMMAKING IN TRANSITION: TECHNOLOGY, INNOVATION, AND CREATIVITY

This chapter provides a comprehensive literature review of authorship and creativity in the age of AI. The chapter is divided into two main sections, the first, "Machines, Authorship and Creativity" delves into how creativity and authorship are explored when AI, machines and algorithms are part of the creation process. The second section "Background of AI in Filmmaking" interrogates the evolution of AI in arts, media and entertainment, and focuses more on the filmmaking side, including the historical overview of filmmaking technologies and the usage of AI in different production phases.

2.1 Machines, Authorship and Creativity

2.1.1 Creativity: How it is Shaped and Changed

According to Bringsjord and Ferrucci (1999) "Creativity is generally regarded to involve breaking the kind of rigid rules standing at the heart of logic; creativity, at least of the artistic variety, is commonly identified with the emotions and the "irrational." (p.xiii) Bringsjord and Ferrucci (1999) refer to Margeret Boden, who is considered as "the leading authority on computational creativity" (p.xvii). According to Boden there are two types of creativity; one is about creating music like "Yesterday" by the Beatles and the other is about creating non-Euclidean geometry. Computers will have no difficulty with the second version of creativity, but what about creating art or writing?

Writing is complex although there are certain elements to it, like plot, characters, imagery etc. In most cases, these are unpredictable. Nevertheless, according to Bringsjord and Ferrucci (1999) if BRUTUS, an algorithmic system they explain in their study, can be able to write in future, it would be in the genre of romance and mystery, because they

have the most predictable elements. Although Bringsjord and Ferrucci (1999) do not use the word “pattern”, it is actually the key point here. Indeed, in these two genres patterns are more predictable and thus it is less surprising to see a machine write in these styles. In today’s world, we see that the patterns are very important in understanding how AI works. An AI program recognizes the patterns and based on the data it can regenerate in the same pattern. This is basically what AI can create, within the limits of the already-existing data, therefore there are debates whether it can or cannot be considered as real creativity.

The discussions about machine creativity were different 30 years ago, as we can see from Bringsjord and Ferrucci (1999)’s work. What they discuss is the ability of machines to be creative like a human, while today we see more discussions about the problem of cyclical creation with AI. Today’s AI can write like a human, the level of agency of the machines in creating a work has increased, but at the expense of possible ethical or legal problems.

The role of artificial intelligence in creative areas has been debated in recent studies, but its potential was foreseen in the past. Lady Ada Lovelace in the 1840s foresaw the potential power of a machine, saying that in the future, a machine can compose a musical piece, or express “great facts of the natural world” (Boden, 2016, p.7). According to Boden (2016), Lovelace could see that processing of symbols could be used across various subjects, but “how” was still a question. About a century later, explains Boden (2016), Alan Turing showed that any computations could be done with a mathematical system and combination of binary symbols, 0s and 1s.

Assessing creativity in general is a debated topic in literature, and assessing the creativity of AI is another controversial topic. Bridy (2015) explains that AI researchers

did not want to complicate the issue by getting into details about the philosophical debates about creativity, but focused on computers to create works of creativity. This brings us to the Turing Test, which takes its name from Alan Turing. With the Turing Test, a computer's linguistic abilities are compared with the abilities of a human (Bridy, 2015). If we cannot understand the difference between a human made artwork and a machine made artwork, then the machine made artwork passes the creativity test, meaning that it exhibits creativity.

Creativity issues of AI generated works usually come from the way AI works in generating this new work. There are a limited number of studies on the area of AI scripted films, and most studies discuss the first examples and their roles and implications about the filmmaking industry. In his paper, Hatalova focuses more on the data-driven nature of algorithmically produced films. Hatalova compares *Meshes of the Afternoon* (1943) with *Sunspring* (2016), the first AI written film, and aims to detect the main differences between a film that is written by humans and a film that is written by an AI system. Hatalova claims that AI created media is based on cyclical knowledge, so we have to reevaluate dependence of technology on artistic endeavors. Indeed, in the production of *Sunspring*, the AI system was fed with hundreds of science fiction scripts, and the algorithms learned the style and 'wrote' a new script based on the previous data. As a result, the new script is the product of the conventions, and thus the ability of an AI system in artistic creation is challenged.

If AI created works are cyclical in nature, mirroring the conventions of the previous works, then what can we say about creativity? In their paper, Mazzone and Elgammal (2019) explore the connection between machine creativity and art. They state that they want to explore what "creativity might mean within the confines of

computation" (p.6) and claim that the best outcome would be a result of collaboration of the artist and the AI system. Ng (2021) takes a different approach towards creativity of AI, suggesting that trying to understand the creativity of AI in human terms is an illogical attempt, because simply, machines are not humans. Humans and machines are incommensurable. In this direction, Ng goes ahead to "de-familiarise creativity" by trying to see from the perspective of AI, the "technological Other" (p.57). The paper also touches on the "lack of transparency of AI's workings" which almost becomes a blackbox.

"Sometimes creativity is a combination of familiar ideas in unfamiliar ways. In other cases, it involves the exploration - " (Boden, 2004, p.xi). With AI writing, the data that is fed to the AI system encapsulates the familiar, while the outcome is a mystery, because it can be an unfamiliar combination of the data. So can we say that in Boden's terms, AI scripts are creative?

Murphy (2022) refers to Deleuze's perspective on creativity of a scientist and a philosopher for understanding the distinction between creativity of humans and AI. Deleuze claims that a scientist is someone who is capable of inventing and creating functions. These functions are based on rules and structures, grounding on empirical data. On the other hand, a philosopher invents concepts with abstract thought. Though both activities occur within space-time, in Deleuze terms, the nature of their creativity diverges. This distinction parallels the current understanding of human and AI creativity. Human creativity is often perceived as spontaneous and unpredictable, while AI creativity is typically constrained by algorithms and data sets.

Happle (2024) analyzes the interaction between ChatGPT and a human writer, as an amateur screenwriter utilizing the AI as a tool. When humans collaborate with AI, the

creativity is enhanced and the agency is distributed. Happle (2024) calls this "human AI agency synergy", which highlights the "mutual influence between machine agency and user agency" (p.10). The synergy between AI and human agency signals a collaboration, for which the human writer and the AI model provide their own strengths in the creation.

Writing with AI is more of a "hands-off" authorship, Happle (2024) explains, and the algorithms make the creation process easier. Barthes's idea of "author-as-scriptor" sees creation as a "recombination of existing cultural elements" (p.11) instead of having a genius creating based on inspiration, and this point of view is similar to the creation process of AI, Happle explains. According to Barthes, the modern scriptor mixes writings and benefits from culture, and we can see AI benefiting from previous creations and mixing them into a new version. In this model of "author-as-scriptor", assembling and reassembling play an important role in the creation process, and the existing elements are arranged instead of creating something from scratch. In the age of AI, as opposed to writing in the traditional sense, the human writer takes the AI generated texts and assembles and reassembles them in a new way and this process carries the human writer to Barthes's "author-as-scriptor" model. Happle (2024) also refers to Pott, who believes that creativity is about generating "new ideas or recombination of existing concepts into something novel, and this is precisely what prompting ChatGPT facilitates" (p.20). With this perspective, AI does not inhibit creativity of humans; on the contrary, it enhances human creativity.

Creating with AI in the digital age blurs the lines of authorship, and causes a need for a new understanding of authorship. The dynamics of the relationship between human and machine becomes even more complex as AI generates ideas, redefines narratives and challenges the creativity and decision making process of the human writer (Happle,

2024). Authorship issues about AI raise questions whether the code writers, or "the creators of algorithms" are the authors of the creative output, as they are the ones who set the rules and conditions for the creation (Happle, 2024). For Happle, this can be a new form of authorship.

Nevertheless, based on her personal journey of using ChatGPT in writing a script, Happle (2024) claims that a "strong sense of authorship persists" on the human writer's side, because her inputs are what makes the script a more meaningful creation. Happle (2024) believes that the experience of writing with ChatGPT requires a shift from a traditional role of author to a role that is more similar to a director. In this new writing style, the human author navigates "through a landscape shaped by both human and machine intelligence" (p.33). The dynamics of the relationship between the AI and the human writer defines a new form of collaborative authorship, and the humans act as directors of the creative process. When humans interact with AI systems, humans make choices and control the computer actions to a certain degree. Manovich (2019) explains three aspects of the creation process when working with AI, where humans curate and control; first, humans write the codes and design the network architecture; second, humans create the training set; third, humans select the artifact among the ones that the machine generates.

It is quite interesting to think that when an author works with AI to write something, it is not only a human machine interaction. As Happle (2024) explains, as a human interacts with the AI, they also interact with all the writers and writings that the AI system has in its dataset, and the seemingly single interaction becomes a network of interactions. The AI responds to the current human writer with the vast information from

the “multi-author knowledge base” (p.18). This makes the collaborative process more complex and takes ChatGPT from the position of a tool to a collaborator.

As Happle (2024) explains, the limitations inherent in AI assisted writing require constant negotiation to direct content in the desired path and remain open to the contributions of AI. The dialogue between the human writer and the AI model evolves as the dynamics between them requires them to negotiate and adapt, and eventually there is a “continuous loop of co-creation” (p.24). The downsides of writing with the assistance of AI is that sometimes there could be an “echo chamber effect” as Happle explains, which means that the AI model “echoes or slightly alters” (p.25) the text that the human writer writes instead of providing new ideas or content. Happle specifically works with ChatGPT 4 to write a script and the prompts that this model provides can hinder originality due to the limited data of AI. As a result, the narrative paths can be repetitive, lacking originality.

With the collaboration between ChatGPT, the human writer’s agency is weakened, because AI brings “its own agency to the table” (Happle, 2024, p.27). As a result, the agency is distributed, and each part can change the direction of the output. In this new sense of collaborative work model, the creativity is enhanced beyond human abilities with integrating the abilities of AI. Happle (2024) calls this “agency augmentation,” which means that the contents provided by the human and AI “are not merely additive but synergistic,” (p.30) and this partnership helps the creative output to possibly be beyond its initial potential.

AI creativity makes us question where the data comes from, what are the sources and who are the code writers. The creative outcome is not solely machine made, as it is

not solely human made. This is a true collaboration between human and non-human agents, and naturally the ownership and authorship of the creative outcome is blurred.

2.1.2 Is Non-Human Creativity Possible?

Discussions about whether machines can create have long been a subject of academic debate. Historically, this discussion centered on human artists and thinkers. However, as the lines blur between humans and non-humans, the interconnectedness of humans and non-humans opened up a new debate: can creativity be a quality of non-human entities? As Lapinska (2020) notes, the idea of creativity has changed in postmodernism after modernism; in modernism the concepts like self-determination and autonomy were explored and creativity was seen as the individual's ability to dominate and shape the physical world, as the human was the main and only "subject" to creatively control the non-human. In contrast, the posthumanist perspective challenges this human-centric perspective. Lapinska refers to Kerry Chappell's work on post-humanizing creativity. Chappell (2018) works on creativity in education and she argues that creativity is a collaborative process involving human and non-human actors, or in her words "other-than-human actants" (p.3). This broader understanding of creativity allows us to move beyond the limitations of humanism, and break the cycle of having only human factors in the creativity. In this way, emergent ethics of creativity is shaped, which incorporates all factors in a community, not only humans. Posthumanizing creativity decenters humans and focuses on the intra-action of humans and other-than-humans (Chappell, 2022). According to Lapinksa (2020) the concept of posthumanizing creativity underlies the "symbiotic co-existence of various components of the world" (p.339), helping us to understand our role and influence in life.

Harris and Holman Jones (2022) proposes a new way of looking at the posthuman creativity. In their manifesto, they refuse the bilateral perspective of human versus non-human creative agency, and explain that there needs to be a better understanding of creativity, which is more encompassing and nuanced. They refer to Haraway, who likes to keep away from "anthro-", which centers humans in the discussions. Braidotti (2006) explains that Haraway, unlike Bruno Latour, maintains a focus on the subject, the individual or entity, as central to both ethical and political accountabilities. By doing so, she contributes significantly to both critical theory and the social critique of science, both decentering the human as the exclusive source of creativity and reaffirming the importance of responsibility within posthuman assemblages.

According to Cohn (2021) algorithmically created works "obscure or entirely erase otherness" (p.4). Cohn also refers to Boudrillard, who believed that otherness is becoming a more valuable element with the rise of digital technologies and globalism" which make people "insular, arrogant, and narcissistic" (p.4) Otherness is always a relation, Cohn explains, because we need to look for the difference to recognize otherness. Looking for the familiar can make us miss some important points. For example, we can look at *Sunspring* (2016), the first algorithmically written short film, and look for the 'familiar' but then we would be missing out on the interesting creation process. Therefore, Cohn finds it "potentially unethical" to force all texts to make sense that are not necessarily made to do so, because "it reduces difference to sameness". With Cohn's point of view, we should not read things to make sense, then we would be devaluing otherness. "When we only look for ourselves in the data that surrounds us, we too often dismiss and discard everything that doesn't remind us of ourselves as meaningless excess or noise." (p.4) In this sense, considering *Sunspring* as a text opens up the "possibility of

an alternative ethics of algorithmic culture - one grounded in an attention to otherness rather than to one's extant expectations and desires." Indeed, algorithms create recycles of past data, creating different versions of already existing data, whether they are images or texts. The practice of AI generation is biased so when we read the AI generated works with familiarity we double the bias, obscuring the originality or otherness, and emphasizing sameness even more.

According to Craig and Kerr (2020) the term 'author' "requires participation in the social, relational and dialogic practice of authorship" however "this is neither what AI does, nor what it is" (p.19). Craig and Kerr (2020) refers to Balkin who cites Bridy's idea about AI art and law; according to Bridy, a court can consider AI generated art as human 'work made for hire' and in this way there would be no need to change copyright law. However, Craig and Kerr find this problematic, because it means treating AIs as humans. This is linked to the idea of anthropomorphic framing, which is further discussed in Chapter 3.

2.1.3 Authorship and Creativity in the Age of AI

Agency and creativity are closely related concepts. Agency is about the ability to decide and act independently, while creativity is about the ability to find new solutions and ideas. Without agency, creativity will be dependent on external factors and powers. On the other hand, with agency of the writer, intrinsic motivation leads to risk-taking, therefore creating a free environment to find unconventional ideas and solutions.

According to Harris and Holman Jones (2022), the power of creative agency lies in its unpredictability, if we are willing to accept the uncertainty that comes with it. With agency, the agent bears the responsibility and power to act, and thus discussions about

agency come with power struggles. The changing levels of agency results in the changing levels of power in creating, in this case writing the script.

The research questions of this dissertation are in the direction of creativity and authorship issues: How is the authorship of artistic works challenged with the use of AI and algorithms in screenwriting, and what can we learn from AI scripted films about creativity in the digital age? With this research I aim to understand the level of autonomy and authenticity of AI in creating a work and to see the changing levels of agency in human-machine collaboration. With the framing of Foucault's author-function, AI filmmaking can be analyzed with discourse analysis, with a systematic examination of the representation of language, power relations and social context in the scripts.

The reliance on previous works and past data come forth in the discussions about authorship of AI generated work. Thorne (2020) explores creativity in general and creativity of AI, and explains AI application in the entertainment industry, with a brief history of AI agents and AI storytelling. The mirroring nature of how AI produces and the reliance of AI on previous works tells so much about the culture of AI technology and AI authorship, directing us to concerns about copyright and creativity issues of AI art and narratives. According to Thorne, AI does not need to be compensated, and does not have "desire to participate", which make the AI works "infinitely exploitable" and "quite unpredictable" (p.812). In this sense, AI creativity can be differentiated from human creativity.

Who owns that AI generated works? What about the works that are co-created by AI and a human? Does the coder have any right in creation? These are important questions; weather AI generated content can be copyrightable and the extent of the copyright determine the law practices and regulations to guide us in cases of infringement.

Kasap (2018) explains that the copyright laws of today are about human creativity. However, we need to find an answer to the question "Who is the author of AI-generated works?" (p.337) as Kasap asks, to understand who holds the economic rights of the AI created works, and what happens in the case of infringement. According to Kasap, first we need to understand the difference between machine creativity and human creativity, and to see human roles in AI created works. In order to answer questions about AI authorship, we need to understand human agency in AI generated works. Kasap writes about the legal regulations, AI system and AI authorship from the point of view of the United States legal system, yet it offers extensive knowledge on AI authorship and copyright issues. Similarly, Kaminski (2017) explains AI generated works and related copyright and authorship issues from the United States legal point of view, referring to the First Amendment law. Can machines write a creative piece and own the content? The authorship algorithms also blur the picture. Kaminski refers to the chair of Pratt Institute, proposing that the algorithm writers need credit.

We see authorship and creativity issues in the case of collaboration between AI and humans. Sanghrajka (2019) provides insight into the creative writing and narrative creation with the collaboration between human and computational systems, trying to analyze computational narrative generation. "Collaborative narrative authoring" tools can be developed when "narrative understanding, narrative planning, and reasoning about cognitive models in narratives," (p.225) are understood, which Sanghrajka focuses on in his research. Even if Sanghrajka's work is a proposal to look at human-machine collaboration in narrative authoring, it gives technological insight into collaboration between humans and machines in creative writing endeavors.

In order to answer questions about authorship and creativity, we need to understand more about agency. When algorithms create work, how important is the human factor? How much of the creativity can be attributed to the human and to the algorithms? Agency is an important issue in human machine interaction and creativity. We need to understand the level of autonomy in creation and the issue of agency in order to answer questions about authorship and creativity, whether we are assessing a film script, or any creative content. Meany (2016) writes about comedy and AI help in the creative process of creating comedy. Seeing comedy as a structured cultural product, Meany tries to see the relationship between creativity and comedy by using two chatbots engaging in a "vaudevillian two-act" dialogue. This is an interdisciplinary project of screenwriting, humor theory and HCI theory. These chatbots act as AI agents created with Artificial Linguistic Internet Computer Entity, ALICE for short, and the user is able to interact with these chatbots. Similarly, *Do You Love Me?* (2013), the short film that is created by the interaction between Chris R. Wilson and a chatbot.

Do You Love Me (2013) is a short film that is co-written by Chris R. Wilson and Cleverbot. Cleverbot is an algorithmic chatbot, and it produced replies to Wilson's inputs and even came up with the title of the film (Bosker, 2017). Wilson's process of creating a script with the help of AI is different from the process that Sharp went through while creating *Sunspring* (2016), because Wilson co-wrote the script with Cleverbot, while Sharp and Goodwin used AI to write a script from scratch. In either case, the screenwriters benefit from AI when they need new ideas or go through writer's block, and they can take inspiration from the AI and take the output as suggestions. Since the AI cannot produce human-like coherent writing, there is no risk of being replaced by AI yet. Screenwriters

can interpret the AI scripted films as a way to get inspiration and possibly use AI or algorithms for starting off a script.

As discussed above, there are studies about AI in creative practices, but the important point is to have a methodology and tools for further research, to go beyond descriptive or explanatory analysis. Kurt (2018) aims to understand machine agency in art creation and analyzes the authenticity of AI art works with Actor-Network Theory by Latour, suggesting to define AI generated art as a genre that is autonomous, and seeing AI as an actor. As opposed to Kasap's point of view, as discussed above, Kurt claims that in creating art, the AI has the agency, because the AI programmer, or the code writer cannot know the outcome and the AI produces the creation on its own.

Each year there are more studies done in AI generated works, and AI in creative endeavors. Nevertheless, screenwriting with AI is a rather new field of research. It is interesting to see filmmakers use AI programs to write scripts, adapting to the needs of the industry, society and technology. In the end, the films are products of collaboration or interaction between humans and machines, and the issues of authorship and creativity are inevitable. In this thesis, the changing levels of agency, authenticity and autonomy in AI generated works come to the forefront.

2.2 Background of AI in Filmmaking

2.2.1 Evolution of AI in Arts, Media and Entertainment

When we first met AI, the main aim was to teach computers to do certain tasks to increase efficiency. Playing chess, recognizing contents of images, language abilities were only some of these tasks. Lev Manovich (2017) argues that today AI is a huge part of the economies and it is used across various serious jobs like filtering applications or

detecting fraud. Yet, one big area that AI has an enormous effect on is the image culture and the notions of aesthetics. AI provides automation and eventually has the power to actually diminish the cultural diversity of images. Indeed, the cyclical nature of feeding data and creating data based on previous data is problematic and needs addressing. What about the artworks that benefit from AI? What happens to the agency and the creativity?

Working with AI and researching AI let humans enter a world of unknowns and uncertainties. Even though the algorithms are created by humans, artificial intelligence has evolved into a creative entity with agency to create. AI generated contents and AI art are much debated topics not only in the literature but also in daily life, yet it is not easy to cope with the concepts and definitions that are not easily manageable. According to Manovich (2019), it is not possible to have a definition for "AI art", as there is no definition of "art" that is commonly accepted by artists, philosophers, professors, or critics; it is not possible to ask machines to create something that is not defined. The best we can do is to call "AI art" when humans use computers to create new artifacts or experiences, and exert a certain level of autonomy in the creation, which is considered as "contemporary art" by the professionals in the art world (Manovich, 2019). Computer arts have been around for decades, but in the 2010s, machine learning (ML) and deep neural networks (DNN) have become more prominent. Manovich (2019) points out that ML and DNN are only two areas of AI and with these areas. We can analyze vast datasets with AI and "generate complex narratives and investigate unconventional story structures" (Pradeep et al., p.2). Given the significant advancements in AI, it is important to analyze the potential impact of AI on the future of filmmaking and the role of human creativity within this context, where creativity and technology intersect.

AI is used in different arts, media and entertainment products to enhance creativity and efficiency. Rashmi (2024), who analyzes how AI influenced the photography and image capture abilities, explains that "generative models, particularly those fueled by Generative Adversarial Networks (GANs) are crucial" (p.38) in the advancements of artistic expression, challenging the established ways of visual narrative. Rashmi phrases the whole process as "AI and photography working together to create a synergy between technological innovation and artistic expression" (p.32) which clearly means that Rashmi sees it as a collaborative work. Collaboration between the artist and the AI technologies improve the work and as Rashmi claims that "AI will become an increasingly powerful ally" (p.32). The synergy between human creativity and AI technology has already started revolutionizing the way we perceive and experience art and media and it is going to continue to do so.

AI is involved in creation processes but the humans are still holding the autonomy in the final say. Manovich gives examples about this; the creators of Game of Thrones asked AI to generate ideas for the plot, but in the end the human writers wrote the script and they made the final decisions. IBM announced that IBM's Watson created an AI-created trailer, when in fact the AI suggested clips to use in the trailer and the human editor created the trailer. Manovich (2017) explains that we can only talk about AI-driven culture when the AI systems create from scratch to the end product. Now, humans have the final say and they make the decisions. Nevertheless, Manovich (2017) has some significant questions about the AI-driven culture: "Are the results of machine learning interpretable, or is it only a black box, efficient in production but useless for human understanding of the domain?" (p.4) According to Manovich, we can train AI on recognizing if a film belongs to a certain era, like the classical Hollywood cinema, but

we cannot know how the computer reaches this decision. Scholars however, write the book and explain the reasoning. Similarly, we can train AI to tell apart the works of certain directors or artists, we can even ask AI to generate a new object in similar style, however in the end, we cannot know what AI has learned over the process. This blackbox is yet to be discovered and Manovich questions whether the ML results will ever be interpretable or understandable for people outside of computer science.

AI created art works are discussed in the literature, and they find a place in generative art debates, asking if AI art can be generative art. In order to understand this issue, we first need to define generative art, which is a blurry area in the literature. Can we accept any technological input in the creation to call it a generative art, or what happens when AI is used in the creation process? For AI art, the definitions and the labeling can change from artist to artist, or with the wording of critiques. To give an example, we can refer to Refik Anadol's artworks, which are sometimes called technology-driven art, can be also called data-driven art, or new media art. Miller (2019) explains that different art fields benefit from AI, from visual arts to playwriting; machine powered design and machine creativity are influenced by AI, and each artist uses AI differently. Olszewska (2020) names Refik Anadol's and Mario Klingemann's works as "digital archive mashups". The taxonomy of AI generated art can be confusing, but it is important to know them to be able to research and also find a place in the literature.

Galanter (2003) defines generative arts, and explains using AI in different areas of art. According to Galanter, when an artist "uses a system", like "a set of natural language rules, a computer program, a machine, or other procedural invention, which is set into motion with some degree of autonomy" (p.4) helping the completion of the artwork, it can be considered as generative art. Based on Galanter's definition, films that

are written by AI can be called generative art, because AI programs are computer systems of algorithms, and these algorithms create lines of the script.

In recent years, art galleries and museums have expanded their collections to incorporate digital and computational works, which is a significant shift from the dominance of traditional art forms. While painting, sculpture, and other material-based practices once defined the boundaries of what was collected and exhibited, today, algorithmic art, computer-generated works, and AI-assisted creations increasingly find a place in institutional archives. This transformation reflects broader cultural and technological changes, where art is no longer confined to tangible mediums but extends into hybrid, networked, and immaterial domains. As Tugan and Köksal (2024) note, "Computational content encompasses technology-based artworks, including computer art, algorithmic art, and (new) media art. Mixed content, in contrast, incorporates both traditional and technology-based works of art" (p. 9). In their study, Tugan and Köksal also propose the Algorithmic Art Praxis Framework, designed to guide researchers and students in digital art, further demonstrating how algorithms are increasingly intertwined with artistic production and education. This research shows that algorithms are intertwined with art and education. Such a perspective situates AI filmmaking within a larger ecosystem of computational art practices, underscoring how cultural institutions are adapting their frameworks to legitimize digital creativity alongside more conventional artistic forms.

2.2.2 Historical Overview of Filmmaking Technology

The digitalization of filmmaking techniques is not a recent development, but a part of a longer period of technological innovations and applications in the industry.

Digitalization of filmmaking did not only influence the way the films were shot, but also how they were edited, stored and distributed.

The first digital camera was invented in 1975 by Kodak (Goodrich, 2023), which resulted in a shift from analog to digital technologies. A major change in camera work was introduced in the 1970s, with the motion control camera technology. The new computer-assisted camera technology freed the "locked down camera" and allowed "intensive layering of elements and motion effects" (Keil & Whissel, 2016, p.119-120). Technological advancements such as in-camera timecode have significantly impacted the industry. This innovation facilitated film-to-tape transfers and paved the way for digital, nonlinear editing systems (DNLE) (Ohanian & Phillips, 2013) As a result, productions were now able to benefit from the advantages of in-camera timecode. Digital cameras allowed filmmakers to record and review footage immediately, without the need for developing film. This breakthrough reduced costs and enabled more experimentation in cinematography. High-definition digital cameras further enhanced image quality, making digital technology an industry standard by the early 2000s.

As Sharma (2015) explains, digitalization extends beyond cameras; digital editing has revolutionized the industry by transitioning from linear to nonlinear editing. This innovation not only reduced costs but also fostered greater creative flexibility. In terms of creativity, integration of technology in the editing process has changed the role of the editors in the eyes of the filmmakers (Keil & Whissel, 2016). Richard Marks, well known editor and a "recipient of Career Achievement Award from American Cinema Editors" (p.7) explains that the change in filmmaking technologies have changed the role of the editor. With digital filming, the directors were able to record "on mag stock rather than optical tracks", in other words, the directors were now shooting more and relying on the

editing process. “Editors were no longer a pair of hands cutting off slates, they were people who had to think, have opinions, and have some feeling for the material.” (p.7) In 1924 Moviola was introduced, and it was a way to standardize the editing process. Movialo made the process easier for editors with its viewfinder to magnify the film image and electrified motor to make the film “to run through at an even speed” (p.7). In the following decades, technical and some technological additions were applied to the process, like use of crab dollies, supplemental viewing screen. In the 1970s, a new flatbed editing machine was introduced, known as the Steenbeck or the KEM. Many editors in the industry were not willing to change their editing techniques as they were used to Maviola's vertical mechanical system. In the 1980s, a major change happened when computing electronic editing was introduced and in the 1990s manual editing was replaced by digital editing. Digital editing systems allowed editors to jump between scenes, rearrange footage easily, and experiment with effects without fear of damaging the original material. Nonlinear editing was a significant change in filmmaking because it fundamentally altered the relationship between time, narrative, and technology. Editors were no longer limited by the physicality of film, and they could explore and experiment, which probably laid groundwork for the AI-assisted storytelling and virtual production techniques.

The emergence of digital technology, with its reliance on binary code, has revolutionized the filmmaking process, opening up new avenues for creativity and innovation. Binary coding enabled storing of digital information, and the digits of 0s and 1s globally reshaped not only media and entertainment but all industries. These two digits “signify words and images” (Sharma, 2015, p.423) and the filmmaking was also influenced by this digitalization. Binary coding has not only transformed the technical

aspects of filmmaking but also the creative possibilities by enabling techniques like CGI (computer-generated imagery) and digital color grading. This evolution in digital technology has revolutionized not only how films are made but also how cinematic narratives are crafted and experienced.

As Keil & Whissel (2016) explain, while the availability of new technologies presents opportunities for filmmakers, their adoption is ultimately shaped by a multitude of factors, including industry standards, economic conditions, and cultural influences. While these technologies, such as digitalization and AI, offer filmmakers new creative opportunities, their implementation depends on this broader context. The combination of digitalization and AI systems, in particular, allowed AI filmmaking possible; digitalization provided the technological infrastructure, while AI has introduced new capabilities and possibilities within that infrastructure.

The rise of technology and the digital age welcomed more non-human agents in the filmmaking process, like more advanced cameras which can track faces or adjust lights, digital editing tools, color grading algorithms, CGI (computer-generated imagery) and more. Filmmaking is inherently a collaborative work between humans. The non-human tools, like camera, linear editing and lights are tools that help making the film, whereas the non-human digital and AI powered factors actually collaborate with the humans in the making of the film. I claim that the digitalization and the rise of AI have turned the non-human tools into non-human agents.

2.2.3 Human-Technology Collaboration in Filmmaking

In her famous essay “Cyborg Manifesto” (1985) Donna Haraway explains that humans have become “chimeras, theorized and fabricated hybrids of machine and organism; in short,… cyborgs” (p.191). According to Haraway, humans have become

inseparable from technology, and the traditional distinction between humans and machines have become less relevant in the last century as technology is more integrated in the humans' lives. Haraway's cyborg metaphor can also be helpful for understanding the evolving human non-human collaboration in filmmaking, particularly in the age of AI. Haraway describes the cyborg as a hybrid of machine and organism, an entity that blurs traditional boundaries between the natural and the artificial, the human and the technological. In filmmaking, this hybridity can be seen in the increasingly networked filmmaking practice and authorship of film works, where AI, digital tools, and human creators interact as co-agents in the creation process.

Just as Haraway challenges the binary distinction of human and machine, contemporary filmmaking moves beyond human authorship, integrating AI as an active collaborator rather than just a tool. Virtual production, AI-assisted editing and screenwriting, and algorithmic creations do not simply serve as extensions of human vision and creativity, they also introduce new forms of agency, shaping new possibilities for cinema and filmmaking.

Haraway explains that "the relation between organism and machine has been a border war" (p.191) and this can be linked to the ongoing debates about creativity and authorship in AI-generated filmmaking. If AI plays a role in writing, composing, or editing a film, who (or what) holds creative authority? AI's role in filmmaking forces us to reconsider rigid distinctions between human creators and non-human agents, originality and recreating based on data, human labor and algorithmic automation. Haraway's post-human perspective is similar to the concept of post-human cinema, where films are authored not by a human but through a network of human and non-human actors. This vision challenges traditional notions of filmmaking as a human-centered craft and

instead presents it as an entangled, collaborative process, where agency is shared and negotiated rather than possessed.

The emergence of a hyper-connected society, driven by artificial intelligence (AI) and advanced technologies that digitalize the world, is reshaping the relationship between humans and non-human agents. According to Gu (2023), a digital transformation is happening with the convergence of Internet of Things (IoT) and AI, and these advanced technologies are not only tools anymore but they are agents participating in creative decisions, challenging traditional notions of authorship, agency and creativity. With the digital transformation humans are positioned in a human-machine network, and they are becoming "digital subjects" as Katherine Hayles explains in her book How We Become Postman (1999). Gu (2023) explains that "technologically mediated humans will emerge" (p.24) in this new era, and the boundaries of this post-human will be constructed and reconstructed by technological mediation. The new post-human era will have humans "seamlessly bonded to intelligence machines" (p.25). Even though this is a manifestation of technological conquer of humans, there is no denying in the increasing influence of machine intelligence on humans and how humans are increasingly connected in this digital world. In the realm of filmmaking, we can see the effects of this digital transformation in AI's abilities in screenwriting, cinematography and editing. Humans and machines are now co-creating narratives, and the boundaries between human creations and AI creations are blurred. As AI becomes a part of the creative process in filmmaking, we can see the changing dynamics between human intuition and algorithmic pace.

The intersection of art and industry is long recognized in cinema, as Nowell-Smith (1996) refers to the documentarist Paul Rotha, who claimed that the cinema "'is the great

unresolved equation between art and industry". This observation of the 1930s remains relevant in the age of AI, that the cinema is still a complex concept between art and industry. One can even argue that this dynamic between art and industry is further complicated by the emergence of AI. Artists and filmmakers benefit from AI as the industry demands more efficient solutions in terms of finances and time, complicating authorship and creativity agencies in the process. The ongoing evolution of filmmaking technology, from early analog experiments to AI-driven processes, highlights this tension. Bodini (2023) explains that even though Lumière Brothers are thought to be the pioneers of cinema, there were other inventors who attempted to capture moving images. Léon Bouly developed a version of cinematography in 1892, while Edison patented Kinetoscope in 1891, and Muybridge captured images of horses galloping in 1878 (Bodini, 2023). These earlier inventions laid the groundwork for the technological advancements and further developments of techniques and tools in the following decades. Filmmaking has always been a collaborative effort between human creativity and technological innovation. Today, AI represents the latest chapter in this ongoing evolution, reshaping production design, editing, and cinematography by introducing machine-driven capabilities that challenge traditional notions of authorship and creative control. While some view AI as an enabler of artistic possibilities, offering efficiency, precision, and new creative potentials, others express concerns about a dystopian future where human agency is diminished, leading to what some scholars term Promethean anxiety (fear of losing control to technology). The dual perspective of techno-utopianism and techno-dystopianism continues to influence discussions about AI's role in the future of filmmaking, reflecting both optimism for enhanced collaboration and apprehension about the potential erosion of human-led storytelling.

We can also look at AI from another point of view. The discussions often center on how AI enhances human creativity. We can actually say the same thing the other way around, that human creativity and human inputs enhance AI abilities and creative power. Rather than an independent creative force, AI performs better with human collaboration. This underlies the fact that AI and humans work together, and AI is not only a tool but an agent, or an agent with tool purposes, or a tool with agency. In this way, the discussions about AI broadens, and we can go beyond the arguments about the linear or one-way influence of AI in humans or humans on AI.

This section delves into the evolving nature of human-technology collaboration in filmmaking, examining how AI agents are reshaping the creative landscape. I will analyze the collaborative processes between human creators and these non-human agents, exploring how AI technologies are influencing key aspects such as production design, screenwriting, editing, and cinematography. Furthermore, I will investigate shifts in creative decision-making, particularly in writing and visual storytelling, as AI input becomes increasingly integrated. This analysis will cover a range of perspectives, from optimistic visions of a techno-utopia where AI augments human creativity to the anxieties surrounding potential job displacement and the erosion of artistic control. By examining these contrasting viewpoints, I aim to understand the potential impact of AI on the future of cinema.

2.2.4 AI and Pre-Production

Artificial intelligence has become a popular subject of discussion across various disciplines. The film industry has also been influenced by the increasing role of AI. Cinema has always been in close relationship with technology; cameras, microphones, editing softwares, CGI technology are only some of the technological elements of

filmmaking. Yet, technology enters the filmmaking process even before the actual filming starts. AI integration in the pre-production phase allows production companies to see if their project can be successful and profitable. Based on the data and insights, they can decide to proceed with the filming or not. The industry dynamics prioritize economic profitability over artistic quality, and AI tools help the large companies with portability concerns.

Since the earliest examples of film, technology is a significant part of filmmaking. Cinema is an art form that benefits from technology, and with the rise of artificial intelligence, all the steps in filmmaking have been heavily influenced by technology, more than ever. In recent years, artificial intelligence has become a significant player in pre-production, filming and post-production of films. Algorithms are widely used in decision making and analyzing. Netflix uses data to decide what works to be done, and *House of Cards* (2011) was the result of an algorithmic analysis of the mass data that Netflix collected. According to the data Netflix saw that there was a strong correlation between Kevin Spacey and BBC's *House of Cards* mini-series lovers. Based on this finding Netflix decided to recreate *House of Cards* with Kevin Spacey and it turned out to be a success (Piñeros, 2020). Having seen the success of Netflix with data analysis, Hollywood started to use algorithms to analyze actors and forecast box office (Frohlick, 2020). More interestingly, algorithms are also used in the creative process of filmmaking. For example, 20th Fox Century worked with IBM's AI - called Watson - to have a trailer that is algorithmically edited (Piñeros, 2020). Algorithms are not only used in the process of greenlighting and box office forecasting, they are also used in the creative process of filmmaking, like in cinematography, editing, animations and more.

In the greenlighting stage producers make decisions regarding the making of the film. If the film is greenlit, then the production company proceeds with the filming process. The role of AI is increasing in this stage, and Chow (2020) introduces two companies, Cinelytic and ScriptBook, which target the needs of the producers about the success of future projects. Warner Bros has announced in 2020, that they have signed a deal with Cinelytic to "adopt their AI-driven project management workflow system" (Chow, 2020, p.199). Similar to Cinelytic, ScriptBook provides AI-driven management tools, like natural language processing and data mining, that help production companies with the aim of having a more efficient decision making process before the production begins. When AI tools are involved in the process, the concerns about replacement of human labor arise. The reliance on previous data in determining the future of cinema is another concern in the industry. For instance, AI-driven tools can analyze the success of casts in their previous works and influence casting decisions, which can prevent the recognition of new talents. These AI-driven management companies leave the final say to the production companies, and the tools act as a help in the process. Nevertheless, the issues regarding authorship and creativity arise in AI-driven works and analysis.

It is more comprehensible to have algorithms analyzing data on film and casting history, but what about having them for the creative process? In recent years, artworks created by generative AI have been gaining popularity. Cinema is a "creative field that relies on human ingenuity, craftsmanship, and expertise." (Chow, 2020, p.202). Script writing is a more structured version of creative writing and AI has influenced this realm of filmmaking as well. DeepStory is an AI writing page of ScriptBook, which helps writers to collaborate with AI in their script writing processes. It may be still early to have fully AI-autonomous script writing process, the algorithms are getting better with each

input of the users. Currently, DeepStory or similar AI tools can be considered as technological tools to inspire writers or to overcome writer's block.

There have been short films that are entirely written or co-written by AI systems. The first ever entirely AI written short film is *Sunspring* (2016) by David Sharp and Ross Goodwin. Prior to *Sunspring*, Chris R. Wilson made a short film *Do You Love Me* (2013) which was co-written by Wilson and Cleverbot, a chatbot, in the style of a conversation of a human and machine. The creation process of these two films are different, yet both rely on algorithms to create a script. According to Song (2022), AI systems can only "mimic human writer's style" and "the lack of experience naturally makes artificial intelligence creation cannot be equated with human cultural creation." (Song, p.694).

Despite the growing interest in AI in creative areas, academic research in AI filmmaking is still scarce. As Momot (2022) explains, AI in filmmaking is mostly covered in news articles, blog posts, and media coverage about the updates on AI tools and applications in the film industry. This dissertation aims to fill this research gap by examining AI's role in filmmaking and addressing the issues of creativity and authorship that arise from it.

The use of AI in creative work raises a fundamental question about agency. Who has the agency? The creator, code writer, prompt writer, human collaborator, or the corporation that owns the system all have an influence on the output. AI machines are not "entitled to obtain legal personality" (Momot, 2022, p.27), which means that the machines cannot be considered as authors in the traditional sense. This reality highlights a critical need for a new regulatory system, a topic largely explored in the literature, in the context of copyright when AI is involved in creation.

2.2.5 AI and Screenwriting

Artificial intelligence has been a popular subject in the creative areas especially in the last decade. AI can be used in a variety of creative fields, from art to music, from digital creations to creative writing and filmmaking. One of the most interesting applications of AI is in creative writing, because writing is thought to be heavily influenced by human intelligence, emotions and experiences. Screenwriting is different from other writing practices, it is very structured and different from literary art. McMerrin (2005) compares screenwriting to other types of writing; a novelist writes for individual consumption, a playwright writes to be performed many times and thus the text is usually kept in the original form. However, the screenwriter writes for one time only, for the production of a film. A script is not a literary piece, but a text that is read, "rewritten and reinterpreted" (p.32) by the collaborators. The screenwriter is aware of the restrictions in the film production and the film industry. McMerrin (2005) sees this issue as a "conundrum"; indeed the screenwriter's wish to be creative has to be in accordance with the awareness of the restrictions imposed throughout the production.

There are a limited number of short films that are written or co-written by algorithms. Different AI programs are used to create the scripts of these films, like Recurrent Neural Network (RNN), Chatbot, or GPT3. *Sunspring* (2016) is the first short film that is known to be written by AI, by Oscar Sharp and Ross Goodwin. *Sunspring* was created with the LSTM model, short for long short term memory, which is a version of RNN. Another example is *Do You Love Me* (2013) by Chris R. Wilson, which is a collaboration of a chatbot called Cleverbot and a human. How can a code write a piece of writing? In fact, codes and algorithms have been used in creative writing, especially in poetry. The absence of logical sentence flow in AI produced writings makes a perfect

match for poetry, where figurative language and abstract meanings can find a place. However, screenwriting is strictly styled compared to other creative writings and there are certain places in the writing where the writer needs to indicate the stage directions, the dialogues and character movements. Interestingly, artificial intelligence can learn this specific style and produce writing based on the learnings. Oscar Sharp collaborated with Ross Goodwin in creating the short film *Sunspring* (2016), the first film ever that is entirely written by artificial intelligence, for a science fiction short film competition which required the contestants to stick to certain guidelines and limited the filmmaking process into 48 hours (Reddy, 2020). Sharp and Goodwin used Long-Short Term Memory (LSTM) recurrent neural network (Cohn, 2021) and they collected a number of science fiction film scripts of the past and fed the algorithm with these scripts. The AI learned the style and conventions of science fiction scripts and produced a script. As a result, the short film *Sunspring* was born, a film that is surreal and nonsense.

A limited number of AI scripted films followed *Sunspring*. Some other short films co-written by AI followed, and *Do You Love Me* (2016) is an example of this kind. Wilson did not use LSTM for creating the script of his film; he used Cleverbot, which produced dialogues for the film. There are other examples of AI made short films, with different software programs, and the filmmakers are at the stage of discovering the use of algorithms in the writing process.

Filmmakers may want to use AI to make an impact in film history and also try new tools for creativity. Even though the filmmakers are willing to try this new tool for scriptwriting, having a machine-written text can be arduous when it comes to meaning making. Gault interviewed two young filmmakers of the short film *Date Night* (2021) on the process of filmmaking and working with AI. Eli Weiss and Jacob Vaus, the producers

of the film, used a computer software program GPT-3 ShortlyAI, which is an AI program that aims to help writers who struggle with writing (Gault, 2021). When fed with some initial prompts, the algorithm produces more text based on the input. Weiss and Vaus did not interfere with the script that the AI produced, but tried multiple times and chose the best script to film. Then they filmed the script and shared it on Youtube. In the film, the characters realize that they are in the film and one of the comments of the video expresses that it is impressive that the characters or the AI realizes that they are in the film. This reflexivity of the AI scripted film brings out an interesting aspect of relying on technology for creativity, surprises can happen any time. Nevertheless, the creators of *Date Night* (2021) acknowledge that the AI comes with certain limitations and human needs to interpret what AI produces to make sense and therefore with each director the film will turn out to be a different one.

Reddy (2020) explains GT-3 (Generative Pre-trained Transformer 3) as an "autoregressive language model" which produces human-like texts; GT-3 can produce pieces of writing that can resemble coherent human writing. There is also LSTM, long short-term memory recurrent neural network as another AI software that can create scripts from scratch, and was used to produce *Sunspring* (2016). According to Reddy, DNNs (Deep Neural Networks) need to be implemented in the algorithms to enhance the AI and make the AI mimic the human brain when creating a film from scratch. In this way, all the steps of filmmaking, including acting, directing, cinematography, music scores, editing can be made with AI. However, the star system of the film industry would be harmed if AI can produce films and there would be no need for the stars. Technology enthusiasts see the AI scripted films as an area to test the role of technology in creativity, and creative writing.

The reception of AI in creative platforms, particularly in scriptwriting, is far from uniform. The short film *Sunspring* (2016) exemplifies this division, with IMDb reviews ranging from high praise for its innovative use of AI to brutal criticism of the script as nonsensical. Some see such films as a new genre, while others are uncomfortable with the incoherent style of AI scripts (IMDB reviews of *Sunpring,* 2016). This debate extends beyond casual viewers. Pat Cadigan, a distinguished science fiction writer who served as a judge for the Sci-Fi London festival, noted that she would give *Sunspring* a high score only if the filmmakers promised they would not repeat the experiment (Newitz, 2021). This highlights a central tension: while some critics are disturbed by the 'nonsense' produced by AI, others find value in the final product's surreal and quirky nature, seeing the flawed dialogue as a unique artistic element rather than a defect.

When a machine is involved in the creation of an artwork, or in this case, a piece of writing, the agency of the writer is challenged. In the age of digital storytelling, who owns the stories, who is actually responsible for the writing, human or the machine? It is a quite interesting subject that the agency changes when algorithms are involved in the creative process, and eventually the issues of authorship and creativity arise. Therefore, the research questions of this thesis are in the direction of agency, authorship and creativity.

What happens to the role of screenwriter when AI becomes the screenwriter? AI does not have the cultural and social skills or memories to engage thoughts and ideas in the script. AI cannot think of the production restrictions or imagine the filmic process. AI cannot be inspired from something. In fact, such comparisons are signs that we are falling into the trap of anthropomorphic framing and we start to evaluate AI as a human.

Screenwriting is a craft of human creativity, and now it is encountering the transformative power of artificial intelligence. The intersection of artificial intelligence and screenwriting presents both exciting possibilities and complex challenges. This section examines the emerging role of artificial intelligence in screenwriting, exploring how it can be used as a tool to enhance creativity, experiment with narrative forms, and potentially revolutionize the way stories are told on screen.

Luchen and Zhongwei (2023) refers to Professor Liu Tuo about the semantic expression of AI technology. According to Tuo, there are two aspects of AI's integration into film and television production, first to understand the human language and second to understand the film language, that is unique to the profession. AI is based on a deep learning foundation for performing human language tasks. For a successful AI integration in film and television production, a semantic level of deep learning is required for AI to grasp deeper meanings and emotions in the stories. Without this semantic understanding, AI could not perform well in practices that call for humanistic values and artistic creative process. As Luchen and Zhongwei explain, as the level of emotional content increases, the demands on the AI increases as well.

Fictional writing is challenging for machines, because narrative style and linguistics create a challenge for the machines. It is a process to have AI getting better in fiction writing. In this sense, Liu Tuo offers a framework for AI integration in film and television writing, and divides the process into four stages. The first stage is called the "Pseudo-original stage", which tells about the mechanical substitutions of characters or phrases. The second one is called the "auxiliary creation stage", which is more formulaic, routinized writing. The third one is called the "proposition stage", where AI adapts based on learned event models, character relationships, and thematic elements. Finally, the

fourth stage is called the "fully autonomous stage" which is machine-independent creation of content, though not yet fully realized. Luchen and Zhongwei (2023) explain that the abilities of AI for creative writing has not yet reached the fourth stage of Tuo's framework, and the current state is between the third and fourth stage. Although the power of non-human has "gradually surpassed human control" (p.2) it is still early to have a fully automated creative writing process with a machine.

Sun (2024) explains that there are certain benefits of working with AI in scriptwriting. First, the technology of AI increases efficiency by decreasing the time necessary to write a script and the human writer can later work on the draft. Secondly, AI can be used to collect data that can be helpful when writing the script; this would allow the human writer to work on the plot and the narrative with depth. Thirdly, AI can be a source of inspiration for human writers. Sun (2024) also acknowledges the disadvantages of relying on AI in scriptwriting, emphasizing the lack of emotional depth and complexity of humans. Apart from writing the script, AI can be used to analyze the script, Sun explains. The laborsome script-deconstructing is an important part of pre-production and AI can help with casting and budgeting as well.

AI's scriptwriting abilities were tested in 2016, when Andy Herd fed the script of the show Friends into the "Google's open source machine learning toolkit Tensorflow" (Li, 2022, p.1). The program analyzed and generated an episode. Although the style was similar, there were illogical parts and awkward expressions. Similarly, when AI program Benjamin wrote *Sunspring* in 2016 the genre conventions of science fiction were more or less followed, but there was no coherence and logic in the script. These examples show that the AI is not writing fully autonomously, and the writing abilities of an AI program

is enhanced with human integration, just like human writers' writing abilities are enhanced by AI. This signals a collaboration between human and non-human in writing.

2.2.6 AI and Cinematography: Machine Gaze

Narrative, which refers to the content and structure of a story, has traditionally been shaped by human experience, cultural influences, and artistic intuition. Meanwhile, narration, the way a story is told through framing, pacing, and visual choices, has been the domain of human filmmakers who bring subjective and emotional depth to storytelling. According to Bordwell (2013), narrative can be approached in three ways. The first one is to see it as a representation, which considers the story's world, its portrayal of reality, and broader meanings relevant to that world. Secondly, narrative can be seen as a structure, which focuses on how various elements are combined to form a cohesive whole. And thirdly, narrative can be studied as a process, which involves selecting, arranging, and presenting story material to achieve specific effects on the audience. Bordwell refers to the last approach as narration (p.xi). Narration is about how the story of the film is told and it involves arranging the sequence of events, characters to tell a specific story and emotion. In this sense, cinematography, director's role, the script of the film and editing are all part of how a narration unfolds in a film.

Sezen (2020) explains that machine vision has fundamentally altered human-centered visual culture, influencing how images are ranked, filtered, predicted, and even censored. This aligns with the idea of machine gaze and AI cinematography, the way AI perceives, processes, and generates cinematic visuals. Sezen argues that machine vision is not neutral, it retains existing power struggles in visual culture, and unlike human vision, AI perception is shaped by training data, probability, and computational logic. According to Sezen there are also glitches and errors with the way machines perceive and

therefore machines can fail to recognize some patterns. This raises questions about the possibility of an autonomous AI, and the risks associated with it.

With the rise of AI in filmmaking, the role of machine gaze is becoming increasingly significant, as this concept challenges traditional notions of both narrative and narration by introducing a non-human perspective into the creative process. Machine gaze refers to how AI systems "perceive" and "interpret" visual and narrative elements based on patterns derived from data, rather than human intuition. Human filmmakers add cultural, emotional, and psychological depth to the narration; on the other hand, AI's narration is shaped by algorithms and data. AI systems analyze vast amounts of data to see patterns, generate content based on these patterns, and automate some aspects of the storytelling process. Unlike human vision, which is shaped by lived experience and creative intuition, machine gaze operates based on algorithms, and thus, reflects the biases embedded in the data. Does AI simply recombine existing cultural elements, or does it have a creative agency that reshapes cinematic vision? Although AI enhances the filmmaking process by offering efficiency and new creative possibilities, there are concerns about the homogenization of storytelling and the potential loss of human touch. The interplay between human and non-human agents in filmmaking highlights the evolving tension between creative control and technological optimization. This is an evolving landscape, and it is crucial to have a balance of AI and human, with AI serving as a collaborative tool rather than a replacement.

2.2.7 AI and Editing

Editing is the most digitalized aspect of filmmaking. The digitization of photography has made the filmmaking more efficient, as the time-consuming and costly traditional film taping were replaced, the cost of production and the time required to make

a film dropped, explains Sun (2024). Special effects and video restorations are also possible with the advanced technologies, as Li (2022) explains. The editing department can be overwhelmed with the shooting materials and Sun explains that AI can help with the choosing the best shooting for the film. In 2019, a short part of the video of CCTV News coverage of National Day celebrations were edited with the help of AI. In this case, the human director is still involved in the editing process, but the AI served as an assistant to the human director, notes Sun. This is a collaboration between human and non-human in the editing process. Yet, Sun still sees AI as a tool which can be used to help the filmmakers to speed up the production, but over reliance on the AI generated content will be void of human element, the emotional depth would be missing.

Caballero and Sora-Domenjó (2024) explain that over the last thirty years the editing "has evolved towards the use of semi-automated or fully automated techniques" (p.202). AI has the potential to revolutionize the editing of films, with the technical efficiency also offering creativity. Yet, cinema has not adopted AI fully, due to editors' lack of programming skills and concerns about creative control, explains Caballero and Sora-Domenjó. This can be linked to broader tensions between technological innovation and artistic resistance. AI can automate tedious editing tasks, however, many filmmakers still see editing as a deeply intuitive, artistic process that cannot be easily "outsourced" to a machine. This is similar to the resistance of some directors to virtual production methods, as Piran and Mertgil explained in their interview. There are possible reasons for this resistance, and concerns over authorship, creative control, or unfamiliarity with the technology can be some of the reasons.

Editing is a complex process that is both creative and cognitive, as Caballero and Sora-Domenjó explains, and this process happens with "collaboration between the editor,

the director and the uncut filmed material" (p.202). In this case, even before the AI comes into the picture, the non-human element, the uncut filmed material, is part of the collaboration that is necessary for editing.

Editing can also be linked to machine gaze. Human editors focus on coherence, emotional beats, and aesthetic choices in the narrative. AI, however, "sees" the footage through data points, identifying patterns based on pre-existing models of editing. Can this be considered as a new stylistic possibility for editing? Or is it going to follow the existing patterns in editing? In this case, fully autonomous AI editing tools can be questionable, but collaboration with AI can yield more creative and efficient results.

3. THEORETICAL FRAMEWORKS

In this chapter, important terms, concepts and theories are discussed, which lay the groundwork for the analysis of the case studies in a comprehensive way. The section "Key Terms and Concepts" explains techno-utopia, techno-dystopia, anthropomorphism and machine gaze. Machine gaze is an important concept here, because it is used as an umbrella term that connects author-function and Actor-Network Theory. The authorship and creativity of films created with AI tools are negotiated, and the author becomes a function of human non-human collaboration within the production network. After the machine gaze section come the theories of author-function and Actor-Network Theory. The evolution of both theories in the age of AI are also explain in this chapter.

3.1 Conceptual Context: Human-Machine Perception

Techno-utopia, techno-dystopia, anthropomorphic framing and 'Promethean Anxiety' are discussed in this chapter as conceptual foundations and they are not analytical tools. These perspectives reveal how humans treat, perceive and make sense of machines.

3.1.1 Techno-Utopia and Techno-Dystopia

AI represents a new technology with the potential to reshape our understanding of reality and creativity. Virtual reality (VR) is similar to AI in the sense that it is also a relatively new technology challenging the established notions of reality and creativity. Both technologies challenge traditional understanding of concepts like authorship and human agency, raising questions about the nature of original thought and the boundaries between the real and the virtual. "Since its inception, VR has emerged both conceptually and technologically as a model for a techno-utopic paradigm that seeks to construct an

autonomous image, not only from the mediation of the artist but also from the material, spatial, and, by extension, social and political determinations of reality." (Çam, 2019, p.8) Can we have a similar outlook to analyze the emergence of AI? Can AI be considered as a techno-utopic model with autonomy?

Techno-utopia depicts a vision of a future that is desired and different from the present (Dickel & Schrape, 2017). But before techno-utopia we need to understand how the idea of utopia evolved over the centuries. Starting from the 1500s the utopia was a major theme of European literature, and it meant an idealized perfect future that is achieved through progress (Adam & Groves, 2007). Thomas More's "Utopia" (1519) was quite influential in developing the idea of progress, linking the idea of "transformable social reality" with social structure analysis. More compared contemporary Europe with the "mythical society of Utopia" and developed a "wish image" for the future, providing "a model for thinking about different possible societies" in contrast to deeply rooted feudal structure and divine order (Adam & Groves, 2007, p.66). Imagining alternative social arrangements and having a critical point of view for the existing societal models created the core of the utopian thinking. Modern utopianism introduced a new understanding of time and a "paradigm of an open future" that can be shaped by human agency (Dickel & Schrape, 2017, p.289). The dawn of technological utopianism is most clearly exemplified in Francis Bacon's "New Atlantis" (1627), which portrays a society where human perfection is achieved not through social or moral progress, but by science and technology advancements (Dai & Hao, 2018). This idea was strengthened in the 19th century with industrialism, and in the 20th century, technological utopianism took various forms, "from scientific and technological utopias to scientistic and technocratic movements" (Dai & Hao, 2018, p.1). At its core, technological utopianism envisions

using current technologies to shape the future, guided by scientific rationality, with the belief that progress will inevitably lead to "affluence, order, justice and freedom" (Dai & Hao, 2018, p.1). The narrative of techno-utopianism is similar to that of the emergence of AI. Discussions about AI and its potential benefits for humanity are widespread. AI is believed to be capable of anything and everything, from doing automated jobs to creative tasks, to taking commands from humans but also to influence humans in their decisions.

Nevertheless, we need to see both sides of the coin; just as utopic AI narratives, there are dystopian AI narratives too. Utopia is always about the future, and there is no way of reaching the utopia, as Dickel and Schrape (2017) explain, it is like a rainbow. Not only are techno-utopias unrealistically attainable, they often make technological and social issues more simple than they actually are (Dickel & Schrape, 2017). On the other hand, there is techno-dystopianism, which is a response to rapidly progressing science and technology. Techno-utopians have a negative future outlook and believe that technological advancements deprive humans of "freedom and dignity" and lead to corruption. With this point of view, the past is seen as a time of harmony and there is a nostalgic yearning for the past; the relationship between humans and nature is disrupted by science and technology (Dai & Hao, 2018). The immense capabilities of AI is also viewed as a threat to humanity, and the main fear is the possibility of AI replacing humans. This dystopian narrative is also prominent in AI discussions.

Dai and Hao (2018) refers to Kevin Kelly, who discusses the dichotomy between humans and machines. Kelly changes the perspective of humans' dominant role in the relationship with technology and provides a more equal role to both humans and technology, which is a "huge paradigm shift" in the discussions of techno-utopianism and techno-dystopianism (p.4-5). This perspective can be linked to collaboration between

humans and non-humans. There are no two opposite sides that try to dominate one another, but instead there is collaboration between them to a better version of the artifacts and experiences they create. In creativity discussions, therefore, we can talk about how humans and technology interact and help each other. Concepts like techno-utopia and techno-dystopia are about how technology is perceived by society. My research is about the practices about AI integration in the creative process and how humans interact with technology in the filmmaking process. Nevertheless, it is important to understand how technology and AI is perceived to see if this perception has any influence on the collaboration.

3.1.2 Anthropomorphic Framing and "Promethean Anxiety"

With the rapidly advancing technology, the relationship between humans and machines has become complex. The way we understand and make sense of machines has changed as the machines evolved from being tools to creator companions. The traditional practices of creating, learning and making have transformed, and so does our understanding of machines. Storytelling has also been challenged with the rise of AI, and the level of agency in the creation of stories has become blurred. We try to understand machines, make sense of them in different ways, like anthropomorphism or sometimes fear from the abilities of technology.

There is a tendency to anthropomorphize AIs and also robots, which is linked to the ethical and legal issues. Craig and Kerr (2020) refers to Kate Darling, who works on HCI and legal literature, calls this effect "anthropomorphic framing" and suggests not only to this tendency but also to the effects of it. Anthropomorphism is "our human tendency to imbue non-human entities with human characteristics" (Craig & Kerr, 2020, p.22) and when we give AI systems human names, or personal backstories, character

descriptions we are framing or influencing people to treat AI as humans, or anthropomorphizing AI.

Interestingly, a similar version of this happened with *Sunspring* and the AI program that generated the script. The organizer of the short film competition that *Sunspring* entered interviewed with the AI program which wrote the film. During this interview, the AI named itself as Benjamin. From then on, Sharp and Goodwin started to refer to the AI as 'he' and called him Benjamin. This is an example of anthropomorphic framing.

In the writing process of *Sunspring,* the LSTM algorithm is trained to learn the science fiction scripts of previous years. LSTM can predict not only which letters follow each other, but also can do the same with words and phrases. In one of his interviews (Newitz, 2021), Goodwin explains that he chose to work with LSTM neural net instead of Markov chains, because LSTM can produce longer letter strings, and thus produce paragraphs, not just words. Can we call it authorship when LSTM creates a text by predicting which words follow others as authorship? According to Craig and Kerr (2020) the algorithm that creates the string of words does not actually understand the meaning, and does not appreciate the project and the purpose; therefore, it is a "romantic anthropomorphic framing" to assume that the machine is the only creator of the text, when in fact it does not participate in the interpretation of the creation or the social practice of writing. Afterall, it is the human writing that the AI extracts from, and it is the creativity of the human that the AI benefits from, so the creativity of AI depends on human creativity.

We assess the abilities and creativity of machines and algorithms with human values and systems. Bajohr (2022) refers to German philosopher Günther Anders's visit

to a technology exhibition, where a friend acted “curiously”, “as if he were ashamed to be a human not a machine” (p.203), and Anders noted it in a journal entry in 1942, as a “novel phenomenon”, a form of shape that has not existed before. The idea behind this concept is that when humans confront the high abilities of machines they feel humiliated or deficient. Humans are unreliable and fragile compared to the repeatable and reliable abilities of machines. Bajohr (2022) finds Anders’ approach rather too apocalyptic, and prefers to call this an anxiety rather than a shame, names it “Promethean Anxiety”, and defines it as “the fear of losing the status of maker and a reversal of the hierarchy of human and machine” (p.204). In fact, in today’s technology and AI we see that technology is unreliable and not perfect but these approaches still reflect how humans make sense of machines in the process of understanding themselves.

3.2 Machine Gaze: A Bridge Between Human and Non-Human Perspectives

In the section above, I analyze how humans perceive machines, but what about the machines and how they perceive humans? Posthumanist thinking is concerned with a non-human intelligence with agency in the human world, where the humans are at the center of the discussion, “in an anthropocentric realm” (Niebuurt, 2021, p.2). Digital machines exist in an anthropocentric world where their performance is regarded from a human point of view, and the concept of machine gaze is about how the machines “perceive” and in what ways this “perception” is affected by anthropocentrism (Niebuurt , 2021, p.2). Technology is not a neutral tool, as Niebuurt explains, and “the relation of co-determination between technologies and practices challenges the notion that creative agency resides solely within the human user.” (p.10) In order to understand the impact of technology and the relationship between humans and technology, we must shift our focus

from a solely human-centered view to consider the machine gaze and its role in shaping our reality.

Machines have a way of seeing different from humans. Sezen (2020) refers to Trevor Paglen, who claims that the visual culture of today's world is going through a "tectonic shift" that is invisible to humans. The images are captured by machines in a digital form that is readable to other machines, with the numerical information of colors and light. This data is for machine-eye only, Sezen explains, and this is the base of "machine vision technologies" (MVTs) (p.273). Similar to Manovich, Sezen considers algorithms as "black box constructs" (p.274), and most people do not understand how these algorithms work, how they decide and how they can become a threat to humans. According to Niebuurt (2021), the agency of the coders increases. Sezen refers to Donna Haraway's paper Situated Knowledges (1988), which "reminds us that vision is always a question of the power to see" (p.274). Haraway's claims about how humans are "embedded in the visual technologies" and how these technologies affect society, politics and culture, being far from objective. Indeed, the way the machines see has never been unbiased or objective but they always had the power to influence societies, discourses and institutions.

Algorithms tend to recreate and perpetuate biases and Sezen refers to Joy Buolamvini, who works on algorithmic bias and suggests the concept of "coded gaze" (p.275). Coded gaze explains how the views of the coders are embedded in the algorithms and thus the outcomes have a certain vision or perspective. Sezen gives the example of computers being unable to recognize facial features of dark skinned women as opposed to successfully detecting the faces of the white males. This is considered as "algorithmic oppression" and is not a coincidence or a glitch, but it is about how the computers and AI

systems are coded and trained to see and understand data. As Niebuurt (2021) claims, it is important to recognize the agency of the digital machines "for the upcoming paradigm shift" (p.10). The notion of "coded gaze" where algorithms reflect the biases of their creators, extends into the realm of filmmaking through the "machine gaze", an AI-driven perspective that shapes not only what the camera "sees" but also how narratives unfold, embedding certain biases and perspectives into the visual storytelling process.

In one sense, machine gaze can be considered as a case of anthropomorphic framing, as we are attributing human gaze to machines. As Chesher and Andreallo (2022) explain, in technologies, the abilities of eye are "mimicked, contested and exceeded" (p.2071), builders of softwares and machines are carrying their own experiences and cultural meanings about seeing, or vision. They argue that human and non-human eyes are essential in human-robot interactions. In their study they focus on eye machines, and introduce three interrelated phenomena regarding the eye: the eye, vision and gaze. The vision of the of the robots or machines are extensive with the sensors and the abilities range from heat, depth or ultraviolet vision fields. Gaze is a part of how eye and vision works, but it cannot be reduced to one, and it is "culturally bound inter-subjective force" (p.2071). We may not see the eye itself, but we feel the presence of the gaze.

Chesher and Andreallo (2022) refer to Sartre, Lacan and Foucault and their views about gaze, society and power. Jean Paul Sartre explains that the object is not aware of the gaze of the "other", and what comes front is the feeling of shame or pride that comes with the gaze (Chesher and Andreallo, 2022, p.2076-2077). In Sartre's terms, "look" is the symbol of power (Vaz, 1995). Jacques Lacan explains that gaze is related to the subconsciousness, more than the experience, emerges from childhood and often "invisible" or "unconscious". Foucault discusses gaze in contexts of institution and

society “to establish relationships of power” which influences individuals in the form of disciplinary gaze, like the gaze in medical or school environments or the surveillance state (Chesher and Andreallo, 2022, p.2077). Gaze is a source of force and power and when the machine has this kind of power, the human non-human interaction in affected deeply.

The following theories, author-function and Actor-Network Theory link to this concept of machine gaze, as machine gaze influences the networks and how the authorship is created, attributed and distributed.

3.3 Foucault’s Author-Function

Identification of a single author of a work does not only belong to cinema studies, but it has been a tradition to determine a main artist as a creative force. Cinema has been seen as a mere popular entertainment form and in order to consider it as an art form there had to be an artist. Gerstner (2013) explains that the history of film scholarship “fits into this historical discourse that stitches together artist-and-masterpiece theories in order to signal film’s stake in the realm of the so-called high arts.” (p.5). Even though cinema is collaborative, a clearly defined author figure helps with marketing of the film and stimulates theoretical discussions. However, there have been some changes in the way authorship is discussed in the literature, which is discussed further in this section.

AI-generated films, whether AI is used for script generation or video generation, can be analyzed with Foucault’s author-function. Foucault refers to Barthes’s essay *Death of the Author* and asks “What is an author?” introducing the idea of author-function. In his essay that he wrote in 1968, Barthes offers to remove the author, then analyze the text, considering writing as an act and also a product (Moulaison, Dykas & Budd, 2014). Barthes’s *Death of the Author* was criticized by many, including Foucault, who believed

that writing was not the death of the author, but it showed evidence to the absence of the author, Staiger (2013) explains. The death of the author actually silences the writers, but we need to talk about authors and authorship. Since authorship is a political concept, forgetting discourses is to forget history. As Stegier (2013) notes, "authorship is necessary for humanism and capitalism," (p.28). Failing to remember individuals and authorship "takes away a history necessary for social activism and utopic imaginings." (Staiger, 2013, p.30), and authorship has a positive effect on political activities. Therefore, the issue is not whether we should be discussing why we study authorship but how we study it.

In his work "What is an author?" Foucault saw the author as a function in society, as a tool of capitalism. According to Foucault (1998) "it is a matter of depriving the subject of its role as the originator, and of analyzing the subject as a variable and complex function of discourse" (p.221). In other words, we need to look at the author as a variable or a function of discourse, and we can even say that the subject does not shape the discourse but the discourse shapes the subject. In this way, the author is not a fixed identity, but rather an ever-changing and fluid one that is shaped by the discourse that it participates in.

According to Foucault, there are four characteristics of author-function. First, author-function is linked to a juridical system; the legal and industrial system defines and shapes the realm of discourses. Second, the author-function does not have the same being and influence across all times and places, and its application changes in different cultures and contexts. Third, the author-function is a complex concept, so we cannot easily attribute a discourse to an author. Discourses are shaped by complex operations, including the power mechanisms, norm establishments, and attribution of authorship. Fourth, there

is not just one human to attribute the authorship, and author-function is not a reflection of an author that produced the discourse. Author-function is different from the self that writes the text, and there can be multiple selves and subjects simultaneously. These characteristics of author-function tells us how to evaluate the evolving role of the author and the transformation of the discourses around the function of the author.

Real individuals were recognized as authors only when they faced potential charges because of what they had created, or their discourse. Discourse had not been a thing or a possession to be discussed before, but an action that is rather risky, because discourse was in the field of bipolarity, like lawful or unlawful, sacred or profane. Texts came to be considered as property only when copyright rules and ownership systems were established. In this way, the author was accepted in the society as a right-holder or property-owner and in return, the author rediscovered the "old bipolar field of discourse," (Foucault, 1998, p.212) by engaging in previous patterns of transgression, and restoring the dangers associated with writing, which was now legally protected by ownership rules.

Foucault also goes back in time to analyze the role of the author of literary texts versus scientific texts. There was a time when literary works like stories, tragedies or comedies, were accepted as anonymous, the identity of their authors were not questioned. However, the scientific works were accepted as true only when their authors were known. In the Middle Ages, when the findings were marked with a name like Hippocrates or Pliny, the discourses were proven as truth. Foucault claims that this was not about asserting authority with the names of the authors, but about how the discourse was received. This changed after the seventeenth and eighteenth centuries, and now the scientific discourses were accepted as themselves, without the need to be associated with an author, and thus "the author-function faded away" (p.213). Literary discourses were

accepted only when "endowed with the author-function" (p.213). Literary anonymity is not bearable; thus the society tries to pin down a time frame or find the author of a work. Whether the author purposefully chose to be anonymous, or the work accidentally became anonymous, rediscovering the author is like a game. Therefore, the author-function today plays a significant role in our perspective of literary works, explains Foucault in 1998. What about now? Almost three decades later, we now talk about machines as writers, and discuss whether the machines can be considered as authors. Foucault himself explains that the notions of author and author-function change according to time and place, so how did author and author-function change in the age of AI?

Foucault's author-function deals mostly about the literary author and it does not talk about filmmaking and authorship in cinema, but there are similarities between the author-function and auteur theory. Cristian (2008) explains that the literary author is transformed to a more complex concept in the film theory: the auteur. Similar to Foucault's author-function, the auteur is an ideological figure, who is defined by his/her films, yet the concept of the auteur has evolved and today, authorship is recognized as encompassing not just the director, but a wider creative team including producers, cinematographers, screenwriters, stars and more.

The transformation of the author in the digital age requires us to think about how we read an artwork, not about how generative AI tools create content or an artwork. The experience of the viewer determines how the artwork is evaluated. Audry and Ippolito (2019) explains that "artist function differs from the artist because it is produced by the viewers" (p.3). This means that what is important is not whether machines can be considered artists, but whether machines can be considered in the discourse of authorship, in the sense of Foucault's author-function.

3.3.1 Author-Function in the Age of AI

The author-function does not designate the text to an individual, but as Hanchett Hanson (2013) explains, “it is a means of classifying, limiting and controlling the circulation of ideas” (p.22). Different types of writing require different types of signing; letters and emails are signed, novels and stories are authored. Author-function is not about an individual writer, and the name of the author signifies more than the individual, it is used as a function to classify, group and differentiate.

We can see a similar classification for AI scripted films; when the script is written by algorithms we label it as an AI scripted film and who wrote the script is less important, what we are talking about is the author-function of AI.

If there can be multiple selves and subjects, then what can we say about agency? Although Foucault does not directly address agency in *What is an Author?*, he indirectly explains that the author-function is not a concept that emerges from individual creativity or agency but rather a social construct that is shaped by various historical and cultural contexts. “Foucault's concept places the author beyond the individual creator, such as the screenwriter,...” (McMerrin, 2005, p.11). With Foucault’s author-function, the authority is not solely on the person who writes, and we can pay attention to “the discourse enabled by the work” (Moulaison et al., 2014, p.31) which is more important than the author. Therefore, the agency of the author is limited, and even trivial compared to the discourse enabled by the author. However, we can still talk about the changing levels of agency in the writing process, because the author has the power when writing a text, but then the power is laid on the society and time to construct the author-function.

Authorship and creativity evolve as technology enters in the creation process, yet this is a rather technological deterministic point of view. In fact, technology is also

affected by human creativity, because AI is dominated and directed by human creativity. Humans feed the AI, and AI can create based on human creations. As Craig and Kerr (2020) explain, it is no longer possible to trace the creativity of a product that an AI produces, because the connection between the product and the creative process is not clear anymore.

Foucault's author-function can offer an effective lens to analyze generative AI, and also provide insight into the power struggles in the filmmaking process. Foucault's thoughts on power and discourse can be helpful to understand and explain the agency issues that come with AI and creating content with AI.

McMerrin (2005) explains that Barthes's approach to author "disregards any idea of the author as a human agent that originates and creates prior to the act of determining meaning." (p.11) McMerrin sees this as a negative approach as it also kills the role of the screenwriter in the filmic process.

Through the lens of Foucault's author-function theory, I aim to understand the power relations in the creation process when AI is involved. Working with AI results in biased results and the power relations in this relationship is worth analyzing. AI can manipulate humans in the creation process, by giving ideas or inspiring the writers or artists, but also hindering their ability by replacing them in certain occasions.

The agency of the writer or artist and the power relations are strongly related. In fact, depending on the point of view, the AI can be used as a tool that helps the creator in the creation process, and thus enhance human agency. On the other hand, the AI can also limit human agency by asserting a certain approach or a voice in the generated work.

The definition of cinema as an art form or as a medium is constantly debated in our era. The mainstream films are dominated by Marvel, DC or Disney with heavy use

of CGI and now with the rise of artificial intelligence in the generation of art works and deepfakes further complicates the discussions about authenticity in cinema (LaRocca, 2023). According to LaRocca (2023), "artificial" is the opposite of "authentic" and "authentic intelligence" is human though not always accurate or wise. LaRocca asks ChatGPT "What is AI Cinema?" and shares the response:

> AI cinema, also known as "AI-generated films" or "AI-assisted filmmaking," refers to the use of artificial intelligence (AI) in various aspects of the filmmaking process, such as scriptwriting, character development, visual effects, and even the creation of entire scenes.
>
> AI cinema involves the use of machine learning algorithms, natural language processing, computer vision, and other advanced technologies to automate certain tasks and assist filmmakers in bringing their vision to life. For example, AI algorithms can analyze vast amounts of data to identify patterns and generate scripts, while machine learning can be used to improve the realism and quality of computer-generated visual effects.
>
> While AI cinema is still in its early stages, there have already been a few notable examples of AI-generated films, including *Zone Out*, a short film created entirely by AI and *Sunspring*, a sci-fi short film written by an AI algorithm named Benjamin. (LaRocca, 2023, p.41)

LaRocca (2023) points out that even though ChatGPT refers to these works as "AI made" there is human touch in all of them. Indeed, humans are involved in AI made films from writing the codes to directing, and more. The role of humans in AI made films is major in the recent state of AI, but the future of AI is debated in the literature.

In an attempt to see how AI systems define AI cinema, I asked both Gemini (Google's AI assistant) and ChatGPT what they know about AI cinema. The responses were quite interesting, signaling the machine gaze. In the literature and news articles *Sunspring* (2016) is introduced as the first AI made film, and the director of the film Oscar Sharp and the writer of the algorithm Ross Goodwin are always attached to the name of the film. Benjamin, the name of the AI system, is also stated as the writer or screenwriter of the film. However when ChatGPT introduces *Sunspring*, it only mentions Benjamin, the name of the algorithm. I wanted to test if the same result will show up with another try, and asked ChatGPT and also Gemini (Google's AI assistant). In my first try with the question of "What is AI cinema?" both yielded results where they explain the technology and algorithm side of it. I had to further ask "What are examples of AI cinema?" and then both explained *Sunspring* as made by Benjamin, not mentioning Oscar Sharp, the director's name. ChatGPT included Ross Goodwin as one of the researchers that developed Benjamin. Oscar Sharp's name only showed up when I specifically asked more about *Sunspring*. On the other hand, the news articles (Kooser 2016; Kraft, 2016; Newitz, 2021) and literature review (Cohn, 2020; Luchen & Zhongwei, 2023; Parikh, 2019; Sugiarto & Widiastuti, 2021; Wicke & Veale, 2020) shows that the film is always associated with the human creators along with the AI system Benjamin. It is interesting to see how AI introduces *Sunspring* with Benjamin, leaving human creators for further questions, while human written news articles or articles in the literature introduce the film with human creators along with the AI collaborator. This might mean that humans are very accustomed to associating a film with a director, probably due to the long familiarity with auteur theory. The current state of AI made cinema keeps the human element a part of it. This may also signal the case of machine gaze, showing that the machines tend to

prioritize the agency of the algorithms rather than the human agency. This issue can be further studied in another work.

3.4 Actor-Network Theory

Author-function sees author as a function rather than a single person, and similar in the Actor-Network Theory, the interactions are never single sided. The network is interrelated, and all entities in the network, human and non-human, interact to form alliances. Foucault approaches the issue of authorship through the concept of the author-function, whereas ANT provides a complementary lens for an analysis of authorship and collaborative creation.

Actor-Network Theory (ANT), originally developed by Bruno Latour, and received contributions from Michel Callon, and John Law, is not a traditional theory of society, rather a methodological theory of the social and how it is assembled. As Czarniawska (2006) explains, ANT is a theory to understand how to study the social, rather than being a "theory of the social" (p. 1553). One of the most important points of this theory and methodology is to avoid explaining nature with social influences, or explaining society with natural or technological parameters, because the theory positions nature, technology and society as "explanandums" not "explanans" (Spöhrer, 2017, p.117). Best and Walters (2013) note that, unlike other frameworks, ANT positions society as a much less stable stance, where representation and governance are more contested and social order is more fragile.

ANT is especially known for its symmetrical treatment of human and non-human agents, with the concept of "actor" or "actant". Actors of a network are not only human, because non-human entities, like technology, algorithms or texts, also influence and are influenced by the various dynamics of the network. Importantly, with the framing of

ANT, we can see that what we consider an actor can sometimes turn out to be a network of heterogeneous elements acting together (Czarniawska, 2006, p. 1554). As Best and Walters (2013) explain, one of the important points of ANT is that we need to "follow the actors", and observe these actors, not just their sayings but also actions and relations.

It is important to note that ANT does not equate human and non-human actors in terms of their significance for the network or their capacity. Yet, this treatment of actors with analytical symmetry does not mean that human and non-human actors are identical, but they should be treated symmetrically. The roles, influences and interactions of actors within the network, whether they are human or non-human, can shape the network, regardless of any prior assumptions about their agency or significance.

Within ANT, associations are key to understand and explain the actors and their motivations. An actor is defined not by essential properties but through its relations and alliances with other actors. The strength and durability of the associations determine whether an actor becomes influential in the network. Weak associations may fade or be disregarded, while strong connections can shift trajectories and sustain change within the network. In addition, networks are formed through interactions and negotiations between both human and non-human actors. Within these interactions various actors are assigned to specific roles, capacities, and functions. As Spöhrer (2017) notes, these negotiations will be referred to as "translations," drawing on the conceptualizations of Callon and Latour.

ANT avoids dichotomies, and as Spöhrer (2017) explains, this principle is the center of Michel Callon's work on ANT, "Some Elements of a Sociology of Translation: Domestication of the Scallops and the Fishermen of St Brieuc Bay" (1986). In this study Callon analyzes how three marine biologists try to conserve scallop population in the St.

Brieuc Bay, with three principles (agnosticism, generalised symmetry and free association), and four moments (problematisation, interessement, enrolment and mobilisation).

ANT and Latour's approach to ANT has been criticized in the literature, just as celebrated. Czarniawska (2006) responds to the criticisms that Latour ignores power structures in the macro-level by explaining that ANT in fact views power differently, explaining it relationally. Czarniawska explains that ANT does not focus on what happened but rather how it happened through social connections. Power comes from the stability and strength of associations within a network. This perspective provides a powerful and empirical lens for tracking how influence, resistance and authority work in real-world contexts.

One of the criticisms point the texts as objects and how ANT fails to capture certain details. Couldry (2008) refers to Latour's point about the social and the technical: "the social is always already technical, just as the technical is always already social." (p.95). The technical and the social cannot be separated and they are intertwined. In this direction, ANT shows that "purely material" (p.102) processes, like production lines or electricity distributions, actually are influenced by interpretations. Some interpretations of certain actors gain more significance or dominance, and this is how the interests are translated. Nevertheless, Couldry notes that this does not address the case of the texts as objects, which are specifically made to be interpreted. Besides, this point of view does not explain other objects; once objects move beyond their initial context, they remain open to diverse reinterpretations by users, consumers, and audiences. Therefore, Couldry points out the criticisms regarding the theory, saying that the theory creates exclusion of social processes, ending up discussing culture but not technology.

3.4.1 Actor-Network Theory in the Age of AI

Artificial intelligence technologies increasingly influence creative practices, and ANT becomes a useful lens to analyze complex interactions between humans and machines. In the context of AI filmmaking, agency is distributed not only among human agents like directors, screenwriters, and producers but also across algorithmic tools, datasets, prompts, software and hardware infrastructures. AI does not act in isolation but operates as a networked effect of multiple actors, including machine learning models, algorithms, datasets, data training methods and more. ANT treats humans and non-humans symmetrically, and the hybrid nature of AI filmmaking makes ANT a suitable lens to analyze the changing levels of agencies of humans and non-humans in hybrid creative ecologies. In this hybrid area of AI filmmaking, the boundaries between author, tool, and system are blurred and redefined.

In this light, AI itself is not just a tool but a mediator that actively transforms inputs, decisions, and outcomes. It interacts with human users like prompt engineers and creators, shapes narratives through algorithmic models. The data that the AI program is trained on carries the biases and assumptions and this further complicates the creation process of AI. In this digital age where AI is widely used and discussed, ANT allows researchers to follow the associations within a network to create an AI-generated content. In this way how these associations are constantly negotiated, stabilized, or resisted by other actors in the network can be seen and analyzed.

In the age of AI decision-making and agency are distributed and shared, challenging traditional notions of creativity and authorship. Rather than seeing AI as a singular autonomous tool, ANT encourages us to consider it as a socio-technical network

comprising coders, datasets and data models, interface designs, algorithms, and user inputs, each playing a role in how humans and AI collaborate in AI filmmaking.

Foucault's author-function offers a helpful framework to analyze how AI can or cannot be treated as an author, as the definition of author changes with the shifts in digital technologies in the age of digital storytelling. Foucault's concept of the author-function is used to analyze how creators position themselves in relation to AI tools, particularly in questions of authorship, legitimacy, and creative agency. The traditional notion of the author as human is challenged with the emerging role of AI in creating content, as humans collaborate with machines to create or automate machines to author. This collaboration between human and non-human creates a network of actors, and thus Actor-Network Theory (ANT) provides a lens to analyze and understand the evolving relationship between human and non-human actors in AI filmmaking. ANT treats technology, algorithms, and interfaces as non-human actors within a network, allowing for a balanced analysis of human non-human collaboration in AI filmmaking. ANT enables mapping relations and transformations without assuming fixed agency or centralized control. The concept of machine gaze can function as an umbrella framework that merges author-function and Actor-Network Theory, as it captures how authorship is redistributed while also situating human and non-human actors within networks of production. Therefore, machine gaze reframes cinematic vision, and also offers a way to understand shifting agencies, creativity, and authorship in AI filmmaking.

4. METHODOLOGY

In this section I first explain the data, sampling and method. Then I elaborate on findings in respect to the theories, Foucault's author-function and Latour's Actor-Network Theory and how the machine gaze connects these theories, influencing the authorship, agency and creativity in the interconnected networks. The following section presents the case studies, composed of semi-structured interviews with a diverse range of film industry professionals, independent artists and creative technologists. These interviewees provide valuable insights into creating content with advanced technologies in the age of AI. Each of the participants shares their personal experiences with AI tools, discusses their collaborative approaches, and provides their perspectives on the current state and future of AI creativity, including the crucial ethical dimensions of working with these advanced technologies.

4.1 Case Studies: Data, Sampling and Analysis

Conducting interviews with the industry professionals can contribute to the understanding of how humans interact with technology in their professions. Kim et al. (2024) conducted industry interviews to understand the effect of AI on creativity and agency of filmmakers when AI is used in the pre-production phase of filmmaking. Expert interviews highlighted the pre-production stage as a key area where filmmakers can showcase their unique creativity. While AI demonstrated potential in enhancing content quality, participants raised concerns about its tendency to produce conventional and generic material. They emphasized the importance of human creativity in infusing originality into AI-generated content to ensure audience enjoyment. Despite these concerns, participants expressed positive views on AI's role in enhancing efficiency

during the filmmaking planning stage. This suggests that AI can be a valuable tool without diminishing the filmmaker's sense of agency. With the help of the interviews, the dynamic interplay between human and non-human can be explored.

Similarly, in this thesis, industry professionals and independent artists are interviewed to gain insight about the current state of AI filmmaking from different perspectives. With the help of these interviews, authorship, creativity and agency issues regarding AI generated content and AI filmmaking can be discovered and discussed.

In this qualitative research, snowball sampling methods as a purposeful sampling is used. AI filmmaking is a relatively new area in the industry, and there are different versions of AI filmmaking. For example, an independent artist might be working on personal projects with the help of AI tools, and create AI films or motioned visuals. In addition to these independent projects there are filmmakers who come from traditional filmmaking practices and experiment with AI's capabilities in creating a film. Since the expertise of working with AI tools and creating AI-generated films is still rare and unique, sampling of the interviewees required even more research. In this case, nonprobability sampling is better suited for this thesis. As Naderifar, Goli & Ghaljaie (2017) explain, nonprobability sampling involves samples that are selected by the researcher and the aim of qualitative research is deep understanding. Therefore, the right sampling method is necessary to reach the right people for the interviews. In this research, the interviewees are selected with purposeful snowball sampling, based on their expertise in AI-driven creative works and relevance to the research. Although this method is too person-dependent and rather exploratory, the area of research is niche and emerging, and the experts in these areas are yet to be proliferated. Therefore, purposeful sampling with semi-structured interviews is the best suited method for this research.

Semi-structured interviews constituted the primary data collection methodology for this research. Ruslin et al. (2022) explain that semi-structured interview method is a widely used method in social sciences, and compared to structured interviews, semi-structured interviews are more flexible, allowing the interviewer to ask questions based on what the interviewee says. Similarly, in this research, the interview process was flexible in the sense that the interviewees were given space to elaborate on their works and understandings of collaborating with AI.

Before conducting the interviews, dual questions were prepared for the interview process, based on the research questions. Dual questions prevent technology deterministic or human deterministic approach. In this way, the interviewees are not faced with one sided questions, instead a more balanced inquiry is presented to interviewees. These dual questions inquire about the same issues with two sides; the human side and the technology side. The first interview was with MGX Studio. The semi-structured format based on a dual-perspective question set was initially implemented during the interview at MGX Studio. However, as the research progressed, more individual and diverse practices of AI filmmaking were encountered. Therefore, the method gradually shifted toward a more open-ended and flexible interview style. Instead of strictly following the original question set, which required a long interview time, prioritization was given into learning the creative process of the interviewees. In this way, the interviewees were given a more open space to express themselves and reflect their practices. Nevertheless, guiding the interviewee into a specific perspective was avoided to prevent a deterministic approach. This adaptive interviewing practice is thus a method of semi-structured interview, which helped create a richer data collection and deeper insights into the evolving practices of AI-integrated filmmaking.

4.1.1 Selection of Interviewees

This research includes seven interviews, shedding light on seven cases. Negin Piran and Okan Mertgil were interviewed for MGX Studio, Gökdeniz Uslu was interviewed for the making of the digital series *Prens*. Bilgehan Yoldaş was interviewed for his own journey of using AI and also for his company Novus Film. Similarly, Deniz Türkeri was interviewed for her own creations with AI and also for her company AIMania. Both İrem Çoban and Ayça Turan were interviewed for their personal journeys of collaborating with AI in their creations. In this way, a diverse selection of cases were collected and analyzed.

Why were these interviewees selected and how do they matter for this research? This research focuses on the changing levels of agency, creativity and authorship when AI is used in the creation process. Therefore, the aim of interviews is to gain insight into the creation process of AI filmmaking. Each interviewee integrates AI into their creative and technical workflows in distinct ways, shaped by their backgrounds, professional priorities, and understandings of AI's role in cinema. Gökdeniz Uslu joined the interviewee pool for his expertise in dealing with VR environments and AI integration in filmmaking, for the analysis of the digital series *Prens*.

The interviewees were either recommended by academic mentors due to their visibility and experimentation in the field, or they were found through their professional showcase of their works. Each case represents a different level of AI implementation, and they range from large-scale studios implementing virtual production, to hybrid production companies integrating AI into commercial workflows, to independent artists exploring AI as a creative companion. The diversity of cases is quite significant for this research, as it aims to understand how human and non-human actors negotiate authorship,

creativity, and agency in AI filmmaking. By including both commercial and independent perspectives, the research highlights not only the technological possibilities of AI in filmmaking, but also the social, ethical, and practical negotiations involved in these collaborations.

The first interviewee was MGX Studio, as it is a prominent name in the industry with its high technology implementation and innovative approach to filmmaking. Nevertheless, during the interview it came into light that AI-driven content is a portion of what they do in their daily filmmaking practices. AI powered cameras (tracking abilities of the cameras) and AI generated content library are supportive tools for MGX. There are different versions of AI filmmaking, and MGX is a highly commercial company with aims of using AI and high technologies to increase efficiency. Two professionals from MGX Studio were interviewed, Operations Manager and VP Supervisor Okan Mertgil and PR coordinator Negin Piran, and both of them gave insights into different aspects of the studio and AI's role in filmmaking. For a better analysis of the case of *Prens*, Gökdeniz Uslu was contacted and interviewed. To explore different versions of AI filmmaking, the next interview was with İrem Çoban, and she represented an independent artistic AI filmmaking, which is very different from MGX and its productions. İrem Çoban works alone, without worrying about industry needs and demands, focusing on her personal inspirations. AI works as a motion generator of her drawings, and she sees AI as a tool, just like other tools in creating art. The third case was Ayça Turan, a creative technologist, who works on AI workflows. Despite the initial two cases, Turan heavily utilizes AI, exploring AI filmmaking in various levels, from AI generated videos to AI generated scripts. Turan is still an independent creator who creates films and videos without industry demands and her approach to creativity is thus more

open and exploratory. The fourth case was Bilgehan Yoldaş and his company Novus Film. Based on Yoldaş's interview, the case of *Pioli* was chosen for a detailed Actor-Network analysis. The fifth case was Deniz Türkeri and her company AIMania. The interviews with Bilgehan Yoldaş and Deniz Türkeri differ from the previous interviews, because both Yoldaş and Türkeri are co-founders of AI film studios and they actively engage in creating AI driven films and commercials. Therefore, their insights about the collaboration between human and non-human actors in making a film with AI are quite specific and industry driven. Previous interviews with İrem Çoban and Ayça Turan were similar in the sense that they were both independent artists or technologists working on their own projects, and therefore the dynamics involved in their creation process were different from creating for an industry. The interview with MGX Studio has shown another aspect of the filmmaking industry, heavily influenced by technology and some level of AI.

4.1.2 Questionnaire

The intricate design of the questionnaire, as seen below, ensures that participants are not led toward a technologically deterministic viewpoint or a human-centric one. Therefore, the questions are dual-phrased, meaning that they have both a human-centered version and technology-centered version. In this way, the answers are expected to be more thorough and insightful, without overly leaning on one approach. These questions interrogate the perspectives, experiences and insights of the participants during their interactions with AI systems, machines and advanced technologies in their creative processes.

1. First set of questions are about creative decision-making and authorship, as follows:

Human-Centered:

How do human creators (directors, writers, and other creatives) influence key creative decisions in filmmaking, visual style and narrative structure when using advanced technologies?

How do human creatives benefit from the content library in the production process?

Technology-Centered:

How do technologies like AI or automated tools contribute to key creative decisions (e.g., visual style or narrative choices) in filmmaking and how do they complement or challenge human input?

How does your extensive content library inform your creative process and decision-making?

2. The second set of questions are on the role of technology in visual storytelling ("machine gaze"), as follows:

Human-Centered:

How do human filmmakers maintain creative control over cinematography and camera work when using AI-powered systems or automated technologies during production?

Technology-Centered:

How do advanced technologies, such as AI or automated tools, shape the visual storytelling process in filmmaking?

3. Third set of questions are on human-machine collaboration, as follows:

Human-Centered:

How does human creativity interact with technological tools in the filmmaking process?

Technology-Centered:

In what ways do technological tools complement or enhance the creative process in filmmaking?

4. Fourth set of questions are on the evolution of authorship, as follows:

Human-Centered:

How do human creators maintain their creative vision when working with new technologies in film production?

Technology-Centered:

How do technologies influence or contribute to the overall creative vision of a film alongside human creators?

5. Fifth set of questions are on audience reception and creative intent, as follows:

Human-Centered:

How do you think the human creative input is perceived by audiences when they watch content that has been shaped by both human and technological collaboration?

Technology-Centered:

How do you think technological contributions, such as AI, affect audience perception of creativity in film?

In addition to the dual questions, I have additional, more generic questions about the company, projects and the understanding of AI and other technologies on the MGX side. These questions are:

How is AI being used in your company's filmmaking projects, and what specific tasks does it assist with?

What ethical considerations do you take into account when using AI in filmmaking?

How do you envision the future of extended reality (XR) and AI in filmmaking?

How do you balance the use of technology with your own artistic vision and intuition?

What are the potential limitations or drawbacks of collaborating with technology in filmmaking?

5. CASE STUDIES

This dissertation analyzes the cases of *Prens*, *Pioli*, *Myth*, and the works of independent creators, through the lenses of Foucault's author-function and Latour's Actor-Network Theory (ANT) under the umbrella of machine gaze. ANT helps us to understand the heterogeneous networks of human and non-human actors in AI filmmaking, and the author-function provides insight into how authorship and creativity are attributed and distributed within these networks. The concept of machine gaze serves as a bridging framework, as it highlights the shifting agencies between humans and machines, and highlights how creativity and authorship emerge through their interaction and collaboration. With the help of this approach, the case studies are not analyzed through separate theoretical lenses, but considered as examples of how machine gaze redefines agency, authorship, and creativity in contemporary filmmaking.

Spöhrer (2017) offers ANT to analyze production studies, referring to Latour's argument saying that ANT is a suitable frame for analyzing organizations where things are rapidly changing. A film production is an organization with rapid changes and with ANT, the film itself becomes an actor. In his study, he explores the production of the film *Barbarosa* (1982) through the frame of ANT, which he notes, could be an alternative approach to analyze productions. This approach to production studies can be also useful for the analysis of the productions of AI films, whether they are series to be streamed on digital platforms, commercial films to circulate in the media or artistic films to be exhibited on digital exhibitions. Based on the interviews conducted for this dissertation, these three versions of AI filmmaking became prominent and they are analyzed through the lens of Actor-Network Theory, similar to the way Spöhrer (2017) analyzed the production of *Barbarosa* (1982). The three cases are chosen as: virtual production with

AI support in the making of the series *Prens* (2023-present)*;* production of AI generated commercial film for the brand *Pioli* by Novus Film; the artistic digital film production for İrem Çoban's experimental film *MYth* (2025).

Films are different from regular goods, as the production of films faces greater risks and possibility of cancellations; therefore, Spöhrer (2017) offers to analyze films as "epistemic things" (p.130). During the production, films are still vague and not finalized, and thus they can be considered as research objects. Spöhrer refers to Hans-Jörg Rheinberger's *Toward a History of Epistemic Things* (1997) and German film theorist Lorenz Engell (2010) and discuss that the epistemic things are defined by their "terminological indefiniteness", "produced in experimental systems", where human actors and non-human entities are interrelated (Spöhrer, 2017, p.130). According to this approach, epistemic things, or films in this case, are constantly redefined and never fully stable. Similar to a scientific research object, which has to go through multiple series of trials, during the production, the production elements have to go through a series of trials and translation processes.

5.1 Actor-Network of Virtual Production With AI Support: The Case of *Prens*

Before analyzing the digital series *Prens*, I would like to introduce the production company MGX, "Turkey's very first virtual production house which aims to combine traditional and innovative cinematography techniques by bridging real world and LED screen" (mgxfilm.com). Camera tracking, curved LED screens instead of greenbox (allowing 3D production instead of 2D), in camera VFX (visual effects) are some of the technologies that MGX use for pre and post-production, which allow "filmmakers to make real time interactions". Combining the traditional and innovative cinematography, MGX provides efficiency and minimized costs. The interviews for the analysis of the

case of *Prens* include Okan Mertgil, Operations Manager and VP Supervisor, and Negin Piran, PR coordinator of MGX Studio, and Gökdeniz Uslu, the director of the second season of *Prens*.

Prens is a Turkish digital series that is broadcasted on BluTV (later evolved to HBOMax) and it is one the most watched contents of the channel. Created by Giray Altınok and produced by MGX Studios, this satirical fantasy series presents a rich case for the analysis through the lens of Actor-Network Theory, because the making of this series includes a diverse interplay of human and non-human actors, shaping the production, narrative and reception.

The storyline of *Prens* focuses on the inept Prince gaining power after his father's unexpected death. The narrative unfolds as the eccentric characters find themselves in a comedy of errors and mishaps in the fictional kingdom of Bongomia. The series is an absurd, satirical dark comedy with slapstick moments, subverting traditional fantasy genre tropes. The making of the series includes diverse heterogeneous elements, creating an interconnected network of human and non-human actors. Human actors include the creative team like the writers, directors and producers, the cast, the technical crew like the camera operators, set and costume designers, research and development team who work for the technology MGX Studio uses, the marketing team, the team on the streaming side, and the audience of the series. Non-human actors include the streaming platform (BluTV, later became HBOMax), the script, the set, prop and design elements, production equipment like the cameras, lighting, sound systems and editing softwares, AI tools used to support the production, Unreal Engine they use for the virtual production, social media platforms where the series is advertised and the discussions about the series happen.

The production of *Prens* shows continuous translations and negotiations among human and non-human actors. The translation from an idea to script, from script to actor performances with the support of creative team, technical team and equipments, from the content to digital stream, to audiences. Yet, this is not a linear production process, as the failures or successes can result in going back and forth between the stages and the alliances can shift in this complex network. With the analysis of the production of *Prens* through the lens of ANT, we can explore the shifting agencies of human and non-human actors, and the evolution of the interconnected network. The analysis is done using the interviews with the MGX professionals Okan Mertgil, Negin Piran and the director Gökdeniz Uslu.

5.1.1 Analyzing Prens Through ANT: Formation of the Network and Building the World of Prens

The series *Prens* is considered as an epistemic thing, meaning that the film itself is constantly redefined throughout the production process and it is a project that is shaped by human and non-human collaborators. The network of *Prens* evolves over time, as the dynamic forces interact in the making of the series, shifting the agencies of human and non-human actors, creating and sustaining the popularity of the project, and shaping its cultural impact. In this section, pre-production, production and post-production processes of *Prens* are analyzed with ANT concepts like translation of interests, obligatory passage points, trials of strength.

Prens is Turkey's first project that is created with virtual production. The story of how the series was born begins with Giray Altınok, the creator, writer and actor of the series, and his social media sketch character, later named as "Prince". Among all the characters that he created and shared on his social media account, Prince was the most

popular one and Altınok decided to make a project with this character. After a long pitching period, his path crossed with Müşvik Guluzade, the owner of MGX. MGX, as Turkey's first virtual production studio, was looking for ideas to make use of the virtual set and other advanced technologies they brought. Altınok's idea of creating a fantasy kingdom suited well with MGX Studio's wish to create a project with the use of the LED walls and the virtual set. As Gökdeniz Uslu, the director of the second season of *Prens*, explains during his interview for this dissertation, the project could come into being with the perfect match of Altınok and Guluzade at the right time.

The problematization started with the question of how to make the series a reality. Making a historical comedy in a cost-effective way was the initial challenge. According to Callon (1986), during the problematization phase, the actors and the relationships are still hypothetical and untested. During the interessement phase, various trials of strength take place, and the results of these trials determine whether the initial framing by Altınok and the production team still holds. Interessement tells how roles were assigned, and this brings us to obligatory passage point (OPP). The formation of alliances could fail when there is no obligatory passage point. The obligatory passage point refers to a specific condition or process that all actors must go through in order to achieve the goals assigned to them by the central actor. By defining this pathway, the central actor ensures that they become essential to the entire network.

Uslu explains that Müşvik Guluzade saw a gap in the Turkish production landscape and seized the opportunity to explore virtual production. When Altınok and Guluzade's paths had crossed, the project began to take shape. It was a difficult production process, because it was during the Covid, so the post-production was not easy and took a long time. Uslu joined the *Prens* team in its second season, a move he describes

as daunting. He did not have any experience in virtual production, and he explains himself as an old-school director. As a director, he likes having things ready at hand. In virtual production, however, it is different, just like in greenbox. He explains that he felt like he stepped into an unknown area, and it took about a week or ten days to adapt.

5.1.2 Pre-Production

MGX Studio initiates the network through its capacity to offer virtual production. It enrolls both creative and technical actors, whether they are human or non-human. MGX is the technological enabler and production coordinator; it defines how the other actors (directors, cameras, software) will interact. As an enrolment strategy, MGX attracts productions by offering cost-effective, innovative production infrastructure.

MGX Studio is the center of this network, and it functions as the OPP, due to the virtual studio access. MGX Studio, as explained by PR coordinator Niran Piran, employs AI alongside other advanced tools like curved LED screens, 3D production techniques, camera tracking and in-camera VFX. These are only some of the non-human actors in the network. AI, Piran argues, is a powerful tool for boosting efficiency, not a substitute for human creativity. These technologies are enrolled in the network to make the production possible.

Uslu explains that the production of *Prens* was only possible thanks to MGX in-house virtual studio. MGX Studio's unique advantage of possessing its own virtual production capabilities meant that had the project gone elsewhere, the costs would not necessarily have been higher; rather, the fundamental nature of the production might have changed. What would *Prens* look like if it had not been made in a virtual studio? Could it have evolved into a historical fiction, or simply a vastly different work? This remains

a significant point for discussion. The infrastructure that MGX brings made it possible to make the series, and this makes the studio the OPP of the network.

With this initial alliance between Altınok and Guluzade initiated the network assemblage in pre-production. Since MGX Studio came with all the advanced technologies, the enrolment of most non-human actors into the network was already done at the beginning, before the production began.

Enrolment of other actors in the network takes place in the pre-production phase. Casting, costume and prop designs, gathering the team of art directors, technicians and designers all take place in the pre-production phase. Even though *Prens* was mostly shot in a virtual studio and there was no need to build a palace or a fortress in real life, or find one and get it ready for shooting, the crew could use the virtual set for the location of the series. Yet, this does not mean that the pre-production phase was shorter, because the technical crew and the design crew had to work hard to make the project as realistic as possible. In film and media, AI's primary role is in pre-production and post-production, where it drives efficiency, reduces expenses, and boosts overall quality.

Okan Mertgil, Operations Manager and VP supervisor, explains that the majority of the studio work happens in the pre-production. In the post-production and editing process they do not have an immense influence. This emphasis stems from the understanding that a well-executed pre-production phase is crucial for the success of both the actual shooting process and the subsequent post-production and editing stages. They care a lot about the background shot; with the VFX supervisor they assist post-production, giving digital renderings of the background. The collaboration illustrates interessement, the phase in which other actors (such as post-production editors) are locked into roles

envisioned during problematization. These renderings act as non-human intermediaries that stabilize the network.

5.1.3 Production: Trials of Strength, Translation, Conflicts

Throughout the production of *Prens*, multiple trials of strength tested if the network is durable and sustainable. Actors adjusting to green screen vs. LED screen, AI tools shaping light, color, and environment decisions are only some of the trials of strengths in the making of *Prens*.

Director Gökdeniz Uslu is a central actor in the second season of *Prens*, navigating new tools like laser positioning and the virtual set. In this way, the directing practice is redefined and Uslu adapts to new workflows of virtual production. This process requires close coordination with the art director and director of photography, setting new limitations and offering freedoms within a virtual environment.

During the production phase, the actors had to be kept in the network so that they could act out their agencies. One of the key points of ANT is that the agencies of human and non-human actors have to be followed. All the actors in the network must negotiate their interests and translate their identities to go through the OPP. The interests and goals must shift for the network, which illustrates the continuous translation process in the production phase. There are efforts to stabilize the network, like adapting camera work, rehearsing differently, extra planning were necessary steps. For instance, Uslu was used to traditional filmmaking practices, and he knew intuitively where to put the camera with his decades of physical engagement with real locations. In the production of *Prens* the majority of the environment was virtual, which felt like being in outer space for Uslu. In the virtual world, there is nothing to hold onto, Uslu explains. In this case, Uslu translates intuitive staging methods into digital space logic.

There are positives and negatives of being on a virtual set, and the negative aspects can interrupt the production. One of the positive aspects of a virtual set is having a set that will not be affected by external factors, like the passersby, weather, sound complications. Spöhrer (2017) explains that extreme weather conditions can create difficulties for the film production, like delays or instability, requiring new translations and redefinitions. With the use of a virtual studio, the unpredictable weather conditions are eliminated.

Delays or challenges can take place when AI or virtual production does not respond like traditional sets. For example, Steadicam can cause restrictions in the virtual set, unlike the traditional sets. In traditional sets, changes are tangible and quick. However, in virtual production having to change the light coming through the window or a mountain in the background takes the same amount of time as changing the location of a chair. But in reality removing a chair takes only two minutes. It is more difficult to change things when they are not real, Uslu explains.

Virtual production presents its own set of technical and creative challenges. Laser-based positioning is a complex system. They place the camera's coordinates within space, and wherever that 'eye' turns, the camera turns with it. There's a reflector above and a transmitter on the camera; the camera's coordinates are constantly updated using transmitters and reflectors. However, the system has some limitations. For example, when you want to make a complex move, the system just cannot keep up. Or, you cannot work with a fourth camera in virtual production because the camera visions can intersect with each other. Using a fourth camera, or wide and narrow shots simultaneously, with the same background, can create visual conflicts. In Season 2, Steadicam was not feasible, and by Season 3, improvements allowed for more dynamic shots, Uslu notes. This shows

that the network is adjusted and re-stabilized in the next season. Uslu believes that if you work well, can dekupe (isolate/mask) elements, and have enough time to pre-design what and how you will shoot, virtual production will make your job easier.

5.1.4 Post-Production

In the post-production of *Prens,* we can see different kinds of AI integration and technological support. As Uslu explains, AI can be used in editing, sound design and color correction. He adds that there are musicians who benefit from AI's abilities in song writing and also music generation. Additionally, AI is easily used for voice-overs. As we are exposed to AI, it becomes a part of our culture. And as AI becomes more integrated into our culture, we are even referencing it in our work. In the second season of *Prens*, following the passing of actor Yılmaz Gruda, a note written by the new historian character was voiced by an AI. AI anomalies are becoming normal, Uslu notes, though he personally still prefers traditional methods.

AI is often used for sound design or for coloring, with human professionals refining the output. Easy tasks can be taken care of in this way. However, for complex tasks, there is no assurance about the end product. It is like rolling dice; the outcome is still a surprise. You cannot revise the generated content directly. If you do not like what is generated you cannot tell AI to revise it, it simply generates a new version. Uslu here talks about the limits and affordances of AI in filmmaking.

AI is used in the post-production as a supporting element in poster design. Piran explains that instead of arranging expensive poster shoots, they can generate promotional materials using AI, saving both time and money. Piran underlies the fact that in this film industry time equals money and in some cases costs can go up unreasonably high. With the help of AI, they can adjust our focus accordingly.

5.1.5 Stabilization and Network Expansion

As Spöhrer (2017) explains, "some actors are thoroughly more stabilized and are more resistant to translations and redefinitions over a longer period of time" (p.129). In the case of *Prens*, we can argue that the virtual set as an actor was less stabilized compared to other actors, as it was redefined continuously by other actors in the network.

The network of *Prens* succeeded in cost reduction and visual innovation. It resisted in terms of difficulty of adapting conventional methods and allowing for training or adjusting time for the team. The series' final shape was a result of all these negotiated translations. In fact, since this analysis is not of a film, unlike Spöhrer's (2017) analysis of *Barbarosa*, and as a digital series that is still going on after the third season, we cannot really talk about a 'final shape'. The negotiations are still going on, and certain actors are joining in the network after seasons, while certain actors leave. For example, in terms of human actors, directors have been changing for each season, some actors leave and new actors join the cast. In terms of non-human actors, AI was only a supportive tool at the very beginning, while in the third season, the technological side of the production evolved, allowing for a better integration of AI. AI anomalies are becoming normal, as Uslu notes, and AI is becoming a part of our daily lives. This cultural embeddedness shifts audience tolerances and expectations, allowing for a more technology integrated production process for future projects.

With the experiences during the filming of the Season 2, the cast and crew were transitioned to the making of the Season 3, after a number of trials and translations. We can argue that in between the seasons, the actor-network around *Prens* reaches a temporary stabilization. Uslu notes that despite the challenges of working in a virtual

space, it has been a wonderful experience. This signals network durability, which means that the actors adjust to the constraints and affordances in the process.

Even after the post-production of the filmmaking process, the closure is not yet achieved, Spöhrer (2017) notes. The film undergoes further translations even after it is produced, from streaming to circulation. The streaming side of *Prens* also points to the network expansion, because new actors join the network. The audience "who develop an affective relationship with the story" (Thwaites Diken, 2025, p.362), press and film critics, streaming platforms all become a part of this extended network. In the case of *Prens*, BluTV later became HBO Max, and this transformed the network into a global network, because global audiences now can see the series. Very recently, The Hollywood Reporter wrote about the success of the series as "Max's Best-Performing Local Original Production" (Szalai, 2025). With this global attention to the series, the network extends into a global network.

5.1.6 Conclusion: Prens as a Prototype for Hybrid Networked Filmmaking

In summary, *Prens* exemplifies a hybrid actor-network. Human and non-human creativity collaborate in producing the aesthetics of the production. In the making of the series *Prens*, AI was used as an assistant to make the filmmaking process smoother, and the power asymmetries remain. AI cannot fully replace humans and humans are the decision makers throughout the process of negotiations and conflicts, aiming for stabilization.

The interviews of Uslu, Piran, and Mertgil have shown that AI and virtual production practices and tools require a collaboration between humans and non-humans. The technology used in the production has the agency to shape the workflows. Thus, the

Prens network is not fixed and final, going through realignments with technological evolution and creativity.

Following Spöhrer's (2017) study, this analysis considers *Prens,* the digital series, as an epistemic thing, meaning that the series itself is an actor, shaping the behavior of other actors. *Prens* has a dynamic identity; it is a digital series made with virtual production and AI technologies, while it is a historical parody of the mediaeval times. *Prens* is shaped by, and shapes, the virtual production landscape in Turkey.

ANT provides a useful and valuable methodology to understand AI production and technological filmmaking, tracing the collaborative, technological, and creative processes of *Prens*. *Prens* is not just a product but a network, a crystallization of negotiations between humans, machines, and ideas.

In the ANT analysis of *Prens*, the network includes virtual production technologies, AI tools, the creative team such as directors, actors, producers, supervisors, and industrial constraints regarding the time, budget, and agreements with streaming platforms. Here, the author-function shifts from the individual, in this case Gökdeniz Uslu as director, toward a distributed authorship that is inherent in the network. The director does not hold full creative dominance; instead, the author-function is negotiated among virtual production processes, AI-generated content, and the corporate interrelations at MGX. This demonstrates Foucault's claim that authorship is not simply personal expression but a function produced and constrained by institutional, technological, and legal systems. In *Prens*, authorship emerges as a hybrid function, where human and machine actants co-define the creative signature of the work. The machine gaze is central here, as the virtual production and AI-generated visuals shape what can be seen, staged

and even imagined. In this way, the director's relationship to cinematic space and vision is altered.

5.2 Actor-Network of Virtual Production With AI Support: The Case of *Pioli* by Novus Film

Pioli is a brand of Porland, and their recent commercial film was made by Novus Film. Novus Film worked on the project utilizing AI tools, and this commercial film is a perfect example of how generative AI technologies are integrated in filmmaking in the commercial sector. Before delving into the details of the making of the *Pioli* commercial, understanding Novus Film and its collaboration with AI is crucial to see how AI becomes integrated into filmmaking practices in the commercial sector.

Bilgehan Yoldaş, a director with an extensive background in film production, co-founded Novus Film with his friend Çağlasın Yılmaz. Novus Film is an Istanbul-based production company that merges traditional filmmaking techniques with AI technologies. He also collaborates with Dreamflier to make GenAI animations and comics, refining his skills in AI filmmaking. Yoldaş graduated from Galatasaray University's Philosophy program, Prague Film School and Istanbul Bilgi University's Film and TV Masters program. With experience in writing and directing short films and working as assistant director and director for TV commercials, he brings both a theoretical and practical understanding of filmmaking.

As someone who has a traditional cinema background, Yoldaş was first skeptical about AI and its abilities. He describes the launch of Midjourney as a critical moment; it started out as a game and everyone was downloading it to play with it, and he did not really pay attention to it too much at the time. However, his friend Yılmaz, with a strong background in post-production, had the foresight to sense that something big was coming.

The whole experience of working with AI is very dependent on the technology and the technological advancements, explains Yoldaş and adds that we do not know when the technology giants are going to release a new feature or what is coming next. This unpredictability can be frustrating. While investment in AI filmmaking is high, demand is still developing, making it an experimental space with financial risks.

At first, GenAI filmmaking was not profitable in Turkey, whereas in the United States, AI-driven campaigns were already emerging by 2024. The U.S. is far ahead in exploring AI works, explains Yoldaş, especially in Los Angeles, where industry leaders embrace AI in advertising and visual effects. The trend was comparable to early influencer marketing, where AI itself became a branding strategy rather than a production method. They were using the AI as a PR name, without expecting a realistic high quality of the work. Yoldaş and Yılmaz collaborated with Jeremy Somers, a creator who has worked with major brands like Batiste and Rihanna's Fenty, they did retouching work for Somer's projects. Although they did not make much money from these collaborations, they gained valuable industry insights.

At that time, GenAI video clip quality was still primitive in motion, resembling early cinema experiments. As an experienced filmmaker, Yoldaş found AI-generated video unsatisfactory; he would not use these GenAI clips in his films, nor would he present them to advertising agencies. GenAI image/photography had more promise, especially when combined with retouching techniques, but AI-generated video was not yet at a professional level. The graphical design aspect of AI was better compared to AI filmmaking.

Between 2022 and 2023, AI filmmaking started gaining popularity. However, Yoldaş remained skeptical, as the technology was still in its experimental phase, and the

commercial demand was weak. Yoldaş and Yılmaz intensified their focus on AI-generated video, although AI filmmaking still did not have a demand in the industry and it was thus not yet profitable. By the second half of 2023, AI filmmaking reached a turning point. The technology had improved, enabling visual production without traditional filming methods. The technology companies started sharing these generative technologies with creators. Demand surged, creating a window of opportunity. Yoldaş points out the fast moving AI abilities, referring to their AI-generated Porland *Pioli* commercial. It was produced in fall 2024, but already feels old, says Yoldaş.

Despite growing interest, brands remain cautious when it comes to AI-driven filmmaking. While top directors have reached out to Yoldaş for AI-driven commercials, corporate decision-making is slow and risk-averse. However, Porland took a chance on AI, embracing the technology to produce a commercial. Yoldaş explains that compared to other brands, Porland can make fast decisions, because they have different risk parameters. Porland and Novus Film came together for the commercial of *Pioli*, marketing durable high-end plates for high segmented restaurants. The enrolment of other human and non-human actors happened after this point.

5.2.1 Analyzing Pioli by Novus Film Through ANT

The making of the commercial film *Pioli* by Novus Film provides a unique example of human and non-human collaboration in contemporary media production. AI tools like Midjourney and Runway increasingly influence the visual creation realm, by helping the creators and also redefining the authorship, agency, and creativity. ANT offers a valuable lens to analyze this transformation, treating nonn-human and human elements in the creation process symmetrically. Technology is not a passive tool, but

rather a non-human entity in a network of filmmakers, audience, AI models, datasets, prompts, visual outputs and clients.

This section analyzes production of the commercial *Pioli* through the lens of ANT. This analysis aims to understand the dynamics of commercial production in the age of AI, by determining the translation of interests, enrolment of actors, and the trials of strength that occurred in the making of the commercial film. In this way, it is possible to see how authorship and agencies are distributed and negotiated while technological forces influence the decision making process. The case of *Pioli* represents a semi-AI filmmaking model in a commercial context. ANT helps to understand the stages of the making of the film, shedding light on how the actors are enrolled going through the OPP and how the interests are translated.

In ANT, both human and non-human actors form alliances that enable a network to function. Strong alliances signal the key actors in the network. Human actors of this network include the creative team (Bilgehan Yoldaş as the focal actor, designer of the workflow), post-production team, clients as the initiator of demands, and the audience. These human actors branch out to more specific roles, like retouchers, scriptwriters, agency representatives, brand managers etc. On the non-human side, the actors range from AI image and video generators like Runway, Midjourney, Sora, etc., to AI screenwriting tools like ChatGPT to market demand, algorithms, prompts, data models, the script and the AI-generated content.

These actors create an actor-network where AI is not fully autonomous but acts as a collaborator, requiring strong human mediation. ANT encourages the symmetry between human and non-human actors and with the list of actors above, equal weight of importance is given to both human and non-human actors.

As in the case of Prens, *Pioli* commercial is considered as an epistemic thing, in Spöhrer's (2017) words for the film *Barbarosa* (1982). This means that the commercial film is an actor in the network and it is constantly redefined throughout the filming process and it is never fully stable. With this approach we can analyze the commercial film *Pioli* as a network of collaboration of human and non-human actors.

5.2.2 Pre-Production Phase: Problematization and Interessement in the Network of Pioli

In the pre-production phase of *Pioli*, Yoldaş and the Novus Film team positioned themselves as central actors in the network. This network consists of diverse actors, like the clients, AI tools, branding goals and aesthetic aims. The team of Yoldaş and Yılmaz at Novus Film becomes the focal actor in the network of the production of *Pioli* commercial. This phase is a critical moment of problematization in the ANT framework, because it is the phase where the production team defined the creative and technical challenges of the project. The problematization is based on the aim of creating a high-quality commercial, navigating the challenges of time, budget and creative expectations with AI tools. In addition to the problematization, the obligatory passage point is established in this phase. As Callon (1986) explains, if there is no OPP found, then the alliances among the actors can fail. In the case of *Pioli*, OPP is the successful integration of AI tools so that the expectations on both client and creative expectations are met. All human and non-human actors have to go through this OPP, to reach the aim of creating a commercial that balances innovation with the brand goals with pleasing aesthetics.

One of the core components of this problematization was the visual language of the *Pioli* brand. Since AI visual generation tools are still evolving, the outcome was unpredictable, and this required a strong pre-production phase.

In traditional filmmaking, pre-production starts with a script, followed by mood boards, storyboards, and production design meetings. These steps allow actors, costume designers, and designers at the art department to align their creative vision. In the case of commercials, the production design folder and pre-production meeting (ppm) folders are prepared, which tell the project to the clients, producers and the crew. It is a process of going back and forth with the client. In the case of cinema, the process is similar, from script to moodboards and storyboards, moving step by step. When working with AI, a similar structure is followed, but with an added experimental phase. AI-generated visuals require multiple iterations, meaning extensive pre-production planning is needed before moving forward with the final render. For AI-driven projects, pre-production plays a much larger role than in traditional filmmaking. The chips brand commercial was more conventional; the Porland commercial, however, was narrative-driven, requiring a different creative strategy. The entire ad was AI-generated except for the voiceover. The testing phase was long, but both sides eventually adjusted to the workflow. One of the biggest challenges was animating AI-generated human figures. At times, the actors' bodies appeared distorted, requiring extensive retouching to correct unnatural visuals.

ANT examines how actors align their interests to stabilize a network. As Latour (1987) explains, "Translating interests means at once offering new interpretations of these interests and channelling people in different directions" (p.117). In Novus Film's network, AI does not only assist filmmakers but also transforms their creative processes. Filmmakers, whether in writing or video generating, initially use AI as a tool for efficiency, yet AI-generated content starts influencing their storytelling approaches. Prompt engineering is an important example of how filmmakers must actively shape AI outputs in the way that the machines understand. In other words, the way that the prompt

is worded has a direct influence on the way that the machine produces an output, meaning that interests are not simply transferred but reinterpreted within the network.

During the phase of interessement, the actors are locked to specific roles by the focal actor. These roles are defined during the problematization phase. Before the production phase began, Novus team had to align the interests of the actors; the creative side and the business side had specific aesthetic goals. However, little did the clients know, the AI tools like Midjourney had limitations as well as affordances. Even though AI tools allowed the team to create visuals, it was not with just one click. The human team had to have a visual plan. In this process, prompts acted as mediating non-human actors, working as strategies to translate the brand goals into a form that AI could understand and perform. Therefore, prompt engineering is a key technique of translation, as it is the bridge between human and non-humans, carrying human aims to machine outputs. Yoldaş notes that achieving visual coherence in line with brand identity required numerous iterations and adjustments. The outputs sometimes were not in the direction of what they expected, which showed that the tools resisted. These resistances were early signs of trials of strength, an important term of ANT; they are the tests for actors to affirm their place and influence within the network.

The commercial was for Porland's *Pioli* brand, which markets durable, high-end plates, targeting high segmented Michelin restaurants and good chefs in the western market. They wanted to showcase their plates' strength in the commercial. The unbreakable plates were something that Yoldaş found useful in creating the ad. Creating the visuals of breaking the plates with AI would pose a great challenge, because AI-generated visuals would not be enough and 3D modeling and animation support would be necessary to create the visuals of breaking plates. Yet depicting unbreakable plates

realistically was still a challenge, and they still had to work hard because AI generated plates based on its database, but they specifically wanted to place Porland plates. This trail of strength required the team to work even harder, and they had to work on the plate visuals with retouch to integrate the visuals they wanted. This meant many trials with AI and hours on retouch.

5.2.3 Production Phase: Trials of Strength and Reconfiguration of Human Non-Human Roles

A trial of strength in ANT refers to moments when the network is tested, either reinforcing or disrupting existing relationships. Latour (1987) explains trial of strength with the analogy of a boxer defeating his opponent. The authority cannot be achieved without the trial of strength, "any more than a boxer can claim to be a world champion without convincingly defeating the previous world champion" (p.78). In other words, authority must be 'earned' through a convincing defeat of the opponent. In a network, this defeat might take place in various ways from discrediting evidence to challenging alliances, or demonstrating the weakness of a particular actor's position. In the case of *Pioli*, the trial of strength could be seen in the efforts to create coherent and aesthetic AI generated visuals in line with the narrative and the brand goals.

Novus Film faces several trials of strength in adopting AI. For example, the team had to convince clients that AI filmmaking is not instant; it requires time, effort and expertise in the area of using AI tools. However, many brands are unaware of this and they expect AI to generate high-quality visuals and make commercials instantly. Novus Film educates clients on AI's experimental nature and sets realistic expectations. There has been an occasion where a client left for a competitor who promised to make AI-made commercials at a quite low cost, testing the strength of Novus Film's approach.

Achieving visual consistency in AI-generated content is another trial of strength. AI does not always maintain consistent character design or motion flow. Trial-and-error process in editing and post-production is a significant part of working with AI, requiring human retouchers to refine details AI cannot handle. Distortions or unreliable visuals require going back and forth between the prompt and the AI generated content. The network is tested with this inconsistency, the filmmakers can go back to traditional filmmaking techniques if AI does not work in the way they expect or want, and if they choose to stay in AI filmmaking, they will have to work even harder.

In the making of *Pioli* commercial, the Novus team did not work in a traditional set, with cameras and actors. Instead, they created a visual narrative with AI visual generating tools, and refined the visuals with human touch. As a result, the production became an assemblage rather than shooting. The team combined their skills with AI visuals and the boundaries of creativity were tested with this collaboration. Even with AI, some scenes take an enormous amount of time to generate. For instance, a simple scene of a hand pushing a bell took two days to perfect. Since AI generates visuals based on existing data, the output is not always as expected. Certain movements, like a three-fingered hand pressing a bell, are incredibly difficult for AI to generate accurately, requiring extensive trial and error.

The tension between automation and control were apparent throughout the production of the commercial. AI could generate visuals and video clips but these were not always predictable. In addition, they were not easily editable. Yoldaş notes AI imagery can lack consistency and in this case it becomes a challenge to match the expectations of the brand. In such cases, the team had to intervene manually, or work on the prompts. The software tools and retouching can be considered as non-human actors

that aim to stabilize the network, as they offer a bridge between human and non-human in the face of unpredictability. Even with AI generation tools, the degree of human intervention is high and this underlines the fact that AI was not autonomous but rather an actor in the production network, collaborating with human labor and expertise. The prompts and refinement tools translated the interests of human creativity and they played an important role for the network's stability.

Another trial of strength is the opposing views of traditional filmmakers and AI enthusiasts. Some industry professionals reject AI practices in filmmaking, preferring practical effects and traditional shoots; others see AI as an inevitable industry shift. Novus Film navigates both points of view, incorporating AI while still using traditional film techniques when needed. In the case of the commercial film of *Pioli*, Porland embraced the technology and approached the production with an open mind, which helped with the network continuation. İmge Pamukçu, board member of Porland, notes that for the production of the *Pioli* commercial, collaborating with AI aligned with their brand vision, which reflects the brand's bold and dynamic identity (Pazarlamasyon, 2025).

Budget and time constraints also test the network in a positive way, as AI reduces some production costs with fewer crew members and no need for certain set designs. This reinforces the existing relationships and makes the actors stay in the network because of increased efficiency. However, AI tools are costly and AI-driven pre-production takes longer time and requires more testing than traditional methods. This shift challenges existing budget structures in filmmaking.

Resistance in ANT is crucial because it shows actors who do not align with the dominant interest of the network. Some traditional filmmakers, clients and brands resist and refuse AI because they are not accustomed to using such a high level of technology.

Concerns about entering in a new era of filmmaking and fears about losing creative power result in resistance to AI adoption. In the case of Novus Film, ad agencies hesitate to embrace AI-driven advertising, fearing unpredictable results. The AI models also 'resist'; AI-generated visuals are often unreliable, with issues like distorted hands or inconsistent motion. AI does not always follow exact creative directions, forcing human intervention to correct errors. These different examples of resistance slow down full AI integration but also ensures that human agency remains central in AI filmmaking.

In summary, in the case of Novus Film, the dynamics of translation and trials of strength are particularly visible. One key site of negotiation occurs in the company's interaction with clients, where resistance emerges when AI-generated content fails to meet corporate expectations for realism or quality. This tension constitutes a trial of strength, highlighting the ongoing struggle between traditional filmmaking standards and the experimental potential of AI tools. Prompt engineering serves as a crucial form of translation within this network, representing the human effort to convert creative intent into inputs that AI systems can understand. However, even with skilled prompt writing, expectations from clients and audiences can result in conflicts. When the final product does not align with their assumptions of cinematic realism, it can destabilize the actor-network, leading to a reevaluation of the roles and responsibilities among human and non-human actors.

5.2.4 Post-Production Phase: Stabilization and the Reinforcement of the Network

The post-production phase in *Pioli* was an important stage for the stabilization of the network, as the stage of final touches. The AI tools and editing softwares functioned as a "black box", because their internal complexities are unknown or invisible to a regular

user. Nevertheless, within this black box, important decisions are made regarding the aesthetic and visual look of the output.

The post-production stage is not only about refinement of the film and visuals; the Novus team retranslate the AI outputs based on the needs and wants of the brand. This process underlines that AI is not autonomous, but they are active actors in the network, just like the human and actors.

The final approval of the brand was important, as it was a checkpoint within the network. If the brand goals were not met, the labor on the human side would continue, which would mean that the translation was broken and the team would step back in the revision stage. Here we can see that the brand as the client of Novus is an important actor of the network, not only an external force. The interessement of the brand continues until the acceptance of the work.

This recursive and iterative editing phase is linked to ANT's claim about networks never being completely fixed. The networks are negotiated and adjusted with the efforts of human and non-human actors. *Pioli* commercial film itself is also an actor within the network and is subject to redefinitions as the film screened and shared. On their LinkedIn account, Porland shared that the *Pioli* commercial "has been awarded the Bronze Award in the category of Use of AI in Design at this year's Brandverse Awards." (Porland, 2025). This shows that the commercial film, as an epistemic thing, is subject to constant redefinitions, even after the post-production.

5.2.5 Conclusion: Pioli as a Prototype for Hybrid Networked Filmmaking

Novus Film operates a semi-AI filmmaking model; AI is used in pre-production, visual design, and concept development. AI-generated visuals are integrated into traditional workflows, yet human intervention is needed at every stage, from directing to

editing. AI does not fully replace human decision-making in storytelling. AI alone cannot yet meet the industry standards for high-end production. Novus Film still relies on traditional filmmaking structures and industry relationships to maintain professional standards.

The making of the commercial film *Pioli* is an example of hybrid filmmaking with the GenAI technologies, and the network is subject to constant negotiations. Human and non-human actors collaborate in the making of the film, starting from the pre-production stage to post-production stage.

Overall, Novus Film represents a transitional phase in AI filmmaking where AI is integrated in the filmmaking practices in different levels of dominance depending on the project. human creativity and control remain central in shaping the final cinematic product.

The alliances between human and non-human actors, including AI tools, in the network are constantly evolving, requiring an ongoing adaptation on both human and non-human sides. AI's introduction into filmmaking creates new challenges, including resistance from traditional industry players and difficulties in achieving visual consistency and coherent screenwriting. AI is not yet fully autonomous and it is not fully subordinate; it functions as a collaborator in a semi-AI workflow.

In Novus Film's case, the introduction of AI led to shifting perspectives. For example, Bilgehan Yoldaş was initially skeptical, viewing AI as an experimental, low-quality tool. He later adopted AI as a way to stay competitive, but he remains critical of its limitations. Yoldaş sees AI as a practical tool rather than a creative force, balancing AI with human input. Çağlasın Yılmaz saw AI as the future of filmmaking from the start, and preferred to only take on AI-driven projects he believed in, making him selective in

client choices. Client expectations and market demand started with early skepticism, especially among brands, about AI's reliability. Once AI-generated visuals became more polished, clients became more open but expected instant results. The team had to educate clients that AI filmmaking still requires extensive work.

AI's role in the network evolved over time for Novus Film. At first, AI was just a curiosity for Novus Film. As AI technology improved, it became an integral part of the workflow, particularly for concept art, pre-visualization, and commercial production. In this hybrid filmmaking model, authority is decentralized, and agency is shared across a network of human and non-human actors.

In the case of *Pioli*, ANT highlights the trials of strength between expectations of the clients, limitations of GenAI, and the negotiation in the creative team's decision making process. Bilgehan Yoldaş and Çağlasın Yılmaz hold crucial positions in the network, as they mediate between the demands of corporate clients, needs and capabilities of AI tools and needs and wants of post-production teams. From the perspective of author-function, authorship is not attributed to a single person, rather emerges through a constant negotiation. Branding, advertising and client approval play decisive roles in defining authorship. The clients also become part of the author-function, since their risk aversion and concerns about branding and budget shape the film as much as the creative team or AI. In this way, the author-function becomes instrumental and collective, influenced by market forces and institutional demands, which means that that the authorship is beyond the expression of a singular creative individual. In the making of *Pioli* the machine gaze comes front in the way how AI takes an active role shaping the commercial film by imposing certain limitations like distorted hands and mismatched movements, while also

enabling creative expression. This challenges traditional expectations of realism and redefine the limits of aesthetics in commercial filmmaking.

5.3 Actor-Network of AI-Assisted Experimental Filmmaking: The Case of *MYth* by İrem Çoban

İrem Çoban is an academician, media artist and filmmaker; she designs artistic worlds using AI and XR technologies, and specializes in video art. She is also interested in how digitalization is reshaping cinematographic narratives. Çoban first met AI tools when she learned about AI abilities to add motion to images. Having experience in 2D and 3D drawings she wanted to experiment with AI tools to see what came out of it. This curiosity led her to integrate AI into her artistic practices. Currently, she is focusing on experimental videos, and her latest film is combining her own drawings, AI and real images to create a holistic film experience. She is at the editing stage of the film and her film *MYth* joined a festival in London in March 2025.

Beyond her academic role and artistic practice, Çoban is also a curator and a co-founder of Capitartx, "decentralised global digital art and x-media initiative, featuring collaborative curatorial projects, in-house events and collective learning programs with three main portals in London, Istanbul and Dubai" (capitartx.com). Through her curatorial work, she has observed that there is a growing demand for AI artworks, particularly in Dubai.

CapitartX (2025) introduces the film as "an audiovisual journey weaving high-tech storytelling with ancient mythology", and the integration of AI in the making of the film positions it as an AI supported digital artistic creation.

Even though Çoban is interested in how to integrate AI into her own art, she does not like relying heavily on AI and creating everything with AI. She questions the role of

authorship of AI-generated works; if a human does not add their own artistic perspective, then does the final artwork belong to that person or to an AI system, like Runway? For Çoban, using AI is like a painter using a brush, or a photographer working with an analog camera. Similarly, AI is a tool to influence human artistic endeavors.

Çoban believes that prompt engineering will become even more important in the future, positioning the human who writes the prompt as a potential artist. Nevertheless, this raises more questions about what defines art and artist. What is art and who is an artist? According to Çoban, there is no end to this discussion, and it is about what is accepted as 'art' in the market. Referencing art history, Çoban notes that Van Gogh was not recognized as an artist at his time, despite his talent and his invention of a special shade of yellow. After his death, his works were recognized and now we are talking about him with great recognition. The art's recognition depends on economic and cultural dynamics, notes Çoban and adds that similar uncertainties apply to AI art as well.

Though Çoban admits that the world is transitioning into digital, she still sees art in the traditional sense. According to Çoban, art is still a human endeavor, and it should be an output of a spiritual journey. In this sense, using AI as a tool protects this unique human element in the work. In her perspective, AI is the new material in creating art.

5.3.1 Analyzing MYth by İrem Çoban Through ANT

The case of *MYth* is different from the previous two networks, because as an independent digital artist, the network of the production of *MYth* is much smaller. In the cases of *Prens* and *Pioli* commercial, the production team consisted of multiple stakeholders, whereas here, the network consists of a smaller number of human and non-human actors. Human actors are İrem Çoban, the audience of the film, the curators of the film festival, and the art enthusiasts who will be viewing the film. Non-human actors

include Photoshop, AI tools like Midjourney, editing tools, even pen and paper she uses to note her inspirations. İrem Çoban is the focal actor and initiator of the project, so the problematization starts with her.

5.3.2 Pre-Production Phase: Problematization and Interessement in the Network of MYth

In the early stages of her creative process, the central question is identified by İrem Çoban who is the main actor in the network. The question is how to bring motion to her hand-drawn illustrations, maintaining her creative lens and achieving an aesthetic quality. This question is the start of her project, and in this case, her experimental film *MYth.* As the focal actor, Çoban is the creator and also the translator of her own artistic intent into moving images. The OPP of the network lies in the aim of Çoban's works: the transformation of her own drawings into emotionally resonant moving visuals without losing her artistic identity. All actors, whether human or non-human, have to go through this OPP to find a place in the network.

During the interview with Çoban, she noted that she saw the AI as a tool, like a painter's brush, not as a creative agent. In her creation process she likes to make the decisions regarding the work, and she does not want to surrender authorship to AI. Instead, she likes to experiment with AI tools, testing the affordances and limitations as she is creating her artistic work.

The human and non-human actors are assigned distinct roles in the enrolment stage. Çoban's illustrations act as input material, and the prompts act as the communicative bridge between her creative intent and the generative capacity of the AI. In her case, AI programs are treated as software tools rather than co-authors or co-creators.

Problematization occurs when Çoban positions AI tools as assistants, not as autonomous artists with creative decision making. During interessement phase, she experiments with AI tools and tests their abilities to see the affordances and limitations. The AI tools act as allies of Çoban in the attempts of crafting her work and allowing for visual experimentation, and she is the focal actor, negotiating their roles in the creative process. The AI tools function within the boundaries Çoban sets like the stylistic compatibility and technical efficiency into her existing practices.

5.3.3 Production Phase: Trials of Strength and Reconfiguration of Human Non-Human Roles

The refinement of the prompt and the evaluation of the AI output are the main elements of the translation process. If Çoban likes the output and its rhythm, aesthetic style and emotional resonance, she approves the work. If not, she works on the prompt or switches tools. The translation of interests takes place here, as she balances her artistic intentions with algorithmic logic.

Since *MYth* is a solo production, there is no cast or crew. Yet there is a clear network of human and non-human actors like AI programs, datasets, illustrator tools, digital art festival and art critics. The dynamic interplay between human and non-human actors shows that the making of an experimental artistic film with a single creator can actually become a network of actors. In this case, the network is not as large as the networks of mainstream or commercial productions, because the number of actors are still limited.

Çoban explains that AI possesses a distinct visual style, which she likens to science fiction or neon aesthetics. Maybe due to her traditional film education, she does not like using AI from the start to end in her works. She prefers starting with her own

imagination, playing with ideas in her mind and then refining them through sketching. Çoban loves to draw and sketch, and she uses sketches to express her emotional state, and sometimes she works on sketching based on the photographs she takes. She uses programs like Illustrator or Photoshop to work on her drawings. Her hand-drawn works, collages, and digital compositions are initially fixed. Later in the process, she uses AI tools, like Runway, to create a motion in her drawings. In Çoban's creative process, the human marks the beginning, and it is the core of the work. The technological non-human input adds the motion. In this sense, her approach to AI remains human-centered, ensuring that her artistic vision is preserved while benefiting from AI's capabilities.

5.3.4 Post-Production Phase: Stabilization and the Reinforcement of the Network

For Çoban, AI is not replacing human artistry but pushing creative expression further. She believes artistic creation begins with a feeling rather than structured logic, which is why she often starts with drawing rather than text. Text is more systematic, she explains. She prefers benefitting from the abilities of AI in the editing stage. The film she is currently working on has no linear narrative, no dialogues or monologues but it still has a narrative.

In the post-production stage, Çoban assembles the outputs using traditional editing softwares, and at this stage AI generated motioned visuals become mobilized into the film. These editing tools, unlike generative AI, allow for more precise control and give her full authorship over the final product.

This process is experimental and the stabilization is partial. The finished work temporarily stabilizes the actor-network, which means that human creativity and non-human algorithmic help are aligned successfully. Since the algorithms and the

algorithmic tools constantly evolve, the production process will never be the same for the future experimental films.

Çoban's film *MYth* does not circulate on digital platforms like the series *Prens* or the commercial *Pioli*. As an artistic creation, the film circulates in digital art platforms, like digital art exhibitions. Youtube and Instagram also act as mediators in the distribution, as the teaser of the film is shared online. In this way, the network expands into reception and interpretation.

5.3.5 Conclusion: Stabilization and Expansion of Actor-Network of MYth as an AI-Assisted Experimental Film

There are festivals or competitions special for AI works, and at such platforms you know that these works are made with AI, explains Çoban. Yet, this transparency is not happening all the time, sometimes artists can use an AI work as their own creation. Çoban refers to ArtStation, a website to share portfolios and artworks, which has declared that they banned artists from uploading AI generated works. This is linked to ethical authorship concerns regarding AI-driven art. Çoban explains, considering how AI systems work, everyone who has created with AI has committed violation of rights to some degree, because you cannot track which part of the image comes from what source image. AI is rapidly improving and it has gone beyond only using images in the database. AI has gained the ability to generate new images, because it has learned from data and now it can build upon this knowledge. However, this does not prevent us from questioning whether AI generates original works from scratch. The debate is open, at least for the time being. Therefore, Çoban thinks it is best to start with her own drawings as reference images, so that the end work feels like really her own creation. In this sense, AI is a tool for her to bring her imagination and creations to one step further.

Çoban believes that there is still no audience for AI films. Only people who are interested in the subject matter can search and find such films. This gap in visibility, she believes, is partly due to the lack of human emotional depth in AI-generated narratives. There are also works where the humans write and produce all details while leaving the visuals to the AI. Çoban gives an example, The Frost, a short film which has visuals entirely generated by DALL-E 2, and although it is far from perfect it has some implications about the improving abilities of AI in filmmaking.

According to Çoban, filmmaking is sectoral, industry-specific, and as long as AI is reducing costs and increasing efficiency, studios are going to adopt this technology. She also notes that digitalization has decreased our patience and changed audience expectations. New generation has been born into this technology. This generation is now thinking how to make their jobs easier with AI, and if you have that mentality then you can lose yourself to AI. Hopes of getting profits in a short amount of time lead people to use AI. This fashion positions humans at the center of discussions about collaborating with AI.

Discussions about the disadvantages of working with AI bring us to the human intention. Working all the way through with AI and owning the final content as a human-created work is a violation, Çoban explains. Çoban is against evaluating AI integration into artistic creations in a deterministic way, resisting putting emphasis on human only or on machine only. She does not believe that AI will destroy the organic, the human. The interaction with AI depends on the human and machine relationship and where the human stands in this relationship. It is about where the human creator stands in ethics, morality, and conscience.

In the case of *Myth* by İrem Çoban, ANT analysis highlights a much simpler network: the artist, technological tools like Photoshop, Illustrator or AI tools, prompts, and the audience. Since in this case there is no studios, clients or branding concerns, the creation process is more independent and personal. Yet, as an experimental artistic film, *MYth* circulates in the digital art realm, and eventually curators and art enthusiasts join the network. Nevertheless, the network is less dense and less structured than the networks of *Prens* and *Pioli*, as they both have studio, branding and industry dynamics influencing the alliances. The author-function in this case emphasizes individual creative expression, even though it still cannot be reduced to the artist alone. AI acts as a co-creator, which blurs authorship. Although Çoban considers AI as a "brush" or "tool," the generated content contributes to how authorship is perceived. As Foucault explains, authorship is cultural function rather than an innate property as seen in this case. The audience may still debate about who the author is in the creation of *MYth*, solely Çoban, the AI, or the collaboration between the two. As a result, author-function becomes a negotiation of legitimacy, creativity, and ownership in the case of independent practice. The machine gaze in *MYth* shapes motion from static drawings, and in this process the algorithmic interpretation of the Çoban's prompt creates the motion in the way that the machine foresees, which makes the authorship a co-visioning process with the machine.

5.4 Actor-Networks, Author-Function and AI Filmmaking

The case studies above are examples of networks. In the making of *Prens*, *Pioli* and *MYth*, the interconnected networks of human and non-humans. Similarly, the cases of Ayça Turan and Deniz Türkeri are Actor-Networks, where human and non-human actors participate in interconnected systems. Turan and Türkeri are the initiators of the networks, just like Bilgehan Yoldaş in the case of his independent filmmaking projects,

or Novus Film productions, or İrem Çoban in her production of her digital art pieces. The productions of MGX Studio, similarly are initiated by names like Müşvik Guluzade, the owner, and other creators in specific projects, like the director Gökdeniz Uslu in the season 2 of *Prens*. In each cases, networks of humans and non-humans are initiated, and the authorship is attributed and distributed through the discourses attached to the networks.

In this section, the artistic and digital endeavors of Türkeri and Turan are analyzed through Foucault's author-function, while in fact these two cases are also examples of Actor-Networks, because just like the case studies above, both Turan and Türkeri are aiming to create a system, an interconnected Actor-Network, in their creations and productions. The author-function is attached to these networks, as the author-functions are distributed and attributed through these networks and beyond.

Foucault's concept of the author-function suggests that the "author" is not simply a person who writes a text, but a constructed notion within discourse, a label that carries authority, identity, and responsibility, shaped by social and institutional practices. As discussed in the theory section of this dissertation, Foucault outlines four main characteristics of the author-function: author-function is linked to a legal and industrial system, which shapes the discourses; author-function is not the same across all times and places; it is cultural and contextual; author-function cannot easily attribute a discourse to an author. Power mechanisms, norm establishments, and attribution of authorship matter in the formation of discourses; author-function is different from the self that writes the text. There can be multiple selves and subjects simultaneously and authorship cannot be linked to a single human.

Based on these main characteristics of an author, the following sections analyze two cases; first the case of Deniz Türkeri, who is an AI filmmaker, and the second case is Ayça Turan, who is a creative technologist who works with AI. In both cases, technology is the main collaborator, and the role of author is challenged.

5.4.1 The Case of Deniz Türkeri

Deniz Türkeri is an architect and AI filmmaker, co-founder of AIMania, a production company that integrates AI techniques into filmmaking. She first used AI to visualize her dreams. She wanted to draw her dreams and exhibit these visuals, seeing AI as a way to bring her imagination into reality. Over time, she realized that AI could also be beneficial in design and architecture, allowing her to visualize her creative ideas and feed her curiosity. She spent months learning how to use AI effectively, but her passion for cinema eventually led her in a new direction.

Deniz Türkeri's creative process can be analyzed with Foucault's author-function, as her work exemplifies the shifting nature of authorship in the age of generative AI. First, her work operates within a distinct industrial system. AI filmmaking is a quite new area in the industry, and it is a very specific area, which still struggles to find its place in the traditional realm of filmmaking. The boundaries of intellectual property and authorship in relation to AI-generated content is still blurred, so when Türkeri creates content with AI tools, she is not just the author, but someone who navigates and co-creates within a system.

Second, the application of the author-function in Türkeri's work shifts depending on the cultural and technological context. In the contemporary media landscape, especially within experimental and hybrid forms, her role as a creator is perceived less as

a singular genius and more as a curator, synthesizer, or instigator. The traditional image of the auteur is replaced by a more fluid identity shaped by socio-technical infrastructures.

Third, the complexity of the author-function can be seen in how Türkeri engages with AI. AI tools, prompts, aesthetic decisions, and audience expectations contribute to the final creative output. Her authorship is not just an act of writing or directing but a dynamic interplay of decisions, trials, and negotiations with both human and non-human collaborators.

Finally, we cannot talk about a single author in the case of Türkeri. Even herself decides to create different works under her personal name and her company she co-owns, AIMania. Multiplicity of selves is central to Türkeri's work of style. As Türkeri explains during the interview, she continues her independent creative work under her personal brand, Deniz Türkeri, where she can experiment freely without corporate constraints. She can imagine and create a work and share it spontaneously, showing her creative side. However, AIMania operates on a global scale, often working with private clients who prefer not to make their AI projects public. She works with multiple AI tools, and it becomes impossible to trace a singular, stable authorial identity. In this way, her authorship aligns with Foucault's notion that the author is not the originator of discourse, but rather a function produced by and situated within discursive, institutional, and technological structures.

Türkeri does not write or direct in the traditional sense; she orchestrates the collaboration between human and non-human elements in filmmaking with the use of generative AI tools. Prompt writing requires a constant back and forth dialogue between human and non-human, and the authorship and agency is shared in the creation. Yet, the ultimate say is on the lead, Türkeri, as she is the final decision maker in the process. The

role of the author shifts from traditional author to a creator who designs prompts and selects outputs. The author-function is redefined, as Türkeri becomes the person who engineers, refines and shapes the context in which the scripts and visuals emerge. The blurring of the boundaries of authorship and creativity is a result of how generative AI works, collaboration. The prompt becomes Türkeri's authorial act, with her creative intent, curation and interpretation. Türkeri also shares her experience with collaborating with AI systems in the interviews, and this public persona reinforces the author-function. She becomes the name with which her works are associated and circulated. Her works and creations are a product of collaborations with AI, and at the end her works are linked to her name, anchoring the work through her authorship. The reason for this is that Türkeri is the decision maker, and she operates within a discursive system that assigns power and value to the 'author', in the case of AI authorship. This shows that author-function remains institutional and discursive in the cases of hybrid creations. The author-function here is not erased but restructured: Türkeri's name continues to anchor the work within cultural and institutional discourse, allowing her to claim visibility and legitimacy as the creator. In this way, AI becomes both a medium and a collaborator, while the human author remains the function through which the work is validated and circulated.

5.4.2 The Case of Ayça Turan

Ayça Turan is a creative technologist who designs AR environments and AR effects, makes films with AI, and in one of her projects she has used AI for art restoration of ancient artifacts. She is one of the OpenAI Sora Alpha Artists who is given early access to use and experiment with the new text-to-video model. While her current work showcases the diverse applications of AI, Turan's engagement with the technology began during her academic training. Turan graduated from Electrical and Electronics

Engineering at Istanbul Bilgi University and her thesis was about large language models (LLMs), machine learning (ML) and data visualizations. She aimed to analyze articles without having to read all of them, and she aimed to make education more accessible through the help of AI. This was the first time she met AI, and later on she started using AI to work on her augmented reality (AR) projects. She benefited from AI's ability to create images and with the help of AI she could work on projects of AR effects. At the time, the AR community was even smaller, and as one of the early adopters of AI visual tools, she was in contact with the pioneers like Don Ellen, and she was given early access to DALL-E 2. This experience deepened her interest and experience in the creative potential of AI and she kept following the advancements in AI technology.

Coming from an engineering background, Turan explains that she can see AI through an information hierarchy while designers approach it more abstractly. This is the reason she calls herself a creative technologist rather than an artist. Turan values the interdisciplinary nature of AI, and she collaborates with architects too, and she appreciates the abilities of architects to think abstract and analytical at the same time.

First, author-function is linked to juridical and institutional structures, and Turan's works are a part of an ecosystem of art and media in the age of technology, as her workflows include various AI tools, such as image and video generators. The author is situated within a legal and industrial system where the discourse around the author-function is defined and the AI tools create this industry and bring the legal debates. Turan's creative experiments with the AI and XR technologies offer a compelling case of how the author-function is being reshaped in the digital age. The boundaries are yet to be set in this new ecosystem and the legal and ownership issues are still debated. Despite her enthusiasm for AI's creative potential, Turan recognizes the risks associated with data

ownership and privacy. One of the trickiest aspects of AI, she explains, is the illusion of working in private when interacting with AI systems. Working in front of a computer and interacting with AI tools may feel like working independently and privately, when in fact there is no privacy in the way AI platforms operate. She acknowledges that offering one's creative thought process to a company is risky. The challenge, she notes, is finding a balance between utilizing AI's efficiency and maintaining control over one's creative output.

Second, the author-function is contextual, variable across time and culture. This is evident in Turan's hybrid status: although she considers herself as a creative technologist rather than an artist, she participates in the artistic area, she is a prompt designer, a learner and researcher at the same time. AI-driven creative landscape redefines authorship, which is different from conventional cinema or visual art. Rather than producing full length films, Turan often works in exploratory mode, experimenting with the technologies and testing herself and the technological tools. Her role as a creator also includes the role of a mediator, and her projects are shaped by her and the technology.

Third, the author-function is complex because of the power mechanisms involved around the creation of the discourses. In Turan's work, human and non-human elements are involved and the outputs she works with are shaped by datasets, algorithms and training biases. In this sense, authorship is not solitary but distributed, shaped by user interactions, technological affordances and limitations. Her role includes initiating, editing, prompting, experimenting and curating, which means that the authorship is shared across machines, datasets, and interfaces and users of AI models. Turan sees the AI community as non-hierarchic in terms of information. She explains that people are open to sharing their experiences with AI, so it is more about what you can do with a

machine as opposed to what a human can do against other humans. Keeping information away from others does not yield a gain in this area, notes Turan and she is a firm believer of sharing information to grow together. The inclusion of the machine in the collaboration takes away the inter-human competition. The non-hierarchical nature of the information system of AI makes the experience of working with AI both local and global, explains Turan, and she finds it fascinating that when she works on a project and goes to sleep, she knows that some other creator in the other part of the world is creating using the same system and in the end it benefits her own work too. So overall it is an ever-going process and each creator works with the system, they work for others too. This is a true collaboration.

Lastly, the author-function is not the same with the self who writes the text. In the case of Turan, she produces visuals, texts and video clips and her projects involve multiple "selves". The intention of the prompt, the dataset which bears the traces of numerous users, feedback from fellow creators and audience, and machine gaze all contribute to the creations and influence the outputs. Thus, there is no single author when collaborating with AI, and Turan has a role of a mediator, leader and sometimes observer when working with technology. This multiplicity of author-function can be seen in contemporary authorship with the help of AI generative tools.

The author-function is more than who wrote a text; it is a cultural and institutional role that shapes how we make sense of a work. It guides how meaning and value are assigned, and how the authorship and authority are recognized. It also influences and is influenced by how the work circulates through systems like festivals, archives, or academia. Since author-function is socially constructed, it evolves as media and technologies evolve. In the age of AI, the author-function and the discourses change and

we can see this in the case of Ayça Turan. Her work does not follow the traditional trajectory of writing, producing and sharing. Her title as a creative technologist underlines the shift in our understanding and interaction with technology; creativity and technology can now go hand in hand. Experimentation and exploration are the core of this relationship because, as seen in the case of Turan, the important point is the creative process itself.

Turan establishes her authorship through navigating a network of technologies, platforms, and discourses. The prompt becomes her main creative tool, and she starts off by writing everything on paper. She writes prompts on paper rather than using AI to generate prompts. She has found out that writing a prompt with a GPT makes her feel lazy and passive. She does not want to automate everything and that is why using a paper and a pen to write a prompt makes her feel better. Manually crafting prompts keeps her engaged and in control of the artistic direction. Her presence structures the work and prompt engineering becomes a key authorial act. By designing the prompts, she directs tone and visual style. As can be seen in Turan's practice, author-function in AI-driven creations happens through curation and interpretation. In this way, the author-function in the age of AI does not disappear; it is shared and distributed across creative choices, tools, and platforms, but ultimately anchored by the human identity.

6. DISCUSSION: BLURRING BOUNDARIES OF HUMAN AND NON-HUMAN AGENCY

Working with a generative AI program requires interactive communication between humans and machines. As Ayça Turan explained during the interview, AI is modular and working with AI is rather iterative. Or as the interview with MGX professionals have shown that there is no "one-click" solution to AI generations. Working with AI is a process, and the agency of the human is interacting with the agency of the machine during this interaction. Stiles and Shanken (2011) highlight agency as a central goal in interactive multimedia technologies, suggesting that for interaction to be meaningful, it must go beyond mechanical engagement and enable true creative agency. This aligns with discussions in AI filmmaking, where AI is often framed as either a co-creative partner that enhances human agency, or a restrictive tool that limits human decision-making by automating creative choices. In AI-driven filmmaking, who holds agency, the human or the AI? Although study of Stiles and Shannon is primarily about Human Computer Interaction (HCI), not specifically about AI, their work sheds light into discussions about agency between human and machine. Stiles and Shanken suggest that mere interactivity is not enough; true agency requires meaningful, intentional participation, not just algorithmic recombination of pre-existing elements. In this sense, AI's role in filmmaking should enhance rather than diminish human creative agency.

Stiles and Shanken argue that meaning in interactive media comes from the artist's decisions, even when users engage with the work interactively. This raises a key question: If AI generates visuals, scripts, or edits based on patterns in its dataset, does the meaning reside in AI's "choices" or in the artist/filmmaker who curates, selects, and refines AI's outputs? This connects to machine gaze, as AI does not create meaning autonomously, it

operates through patterns and probabilities, relying on data rather than personal experience or intention. The important point is to discuss whether AI filmmaking offers new forms of meaning-making, or whether AI merely reorganizes existing cinematic structures without true creative agency. Stiles and Shanken critiques simplistic definitions of interactivity. Just because a system reacts to input does not mean it grants meaningful agency. Similarly, in AI filmmaking, there's a debate about whether AI is an active creative agent, or whether AI is merely a tool that recombines pre-existing cinematic elements without true authorship.

The interviews with the professionals in different areas of filmmaking have provided valuable insights about the integration of AI in creative practices. Filmmaking has always been a collaborative practice, but the emerging technologies like AI shift the agencies and authorship even more.

6.1 Convergences and Divergences

The semi-structured interviews are aimed to have insights from the industry professionals as well independent artists and creators. Each interviewee has provided a different perspective on the details and realities of working with AI and other advanced technologies in their filmmaking practices. The insights from MGX, İrem Çoban, Ayça Turan, Bilgehan Yoldaş and Deniz Türkeri offer a multi-faceted perspective on human non-human collaboration in filmmaking, each engaging with AI in different ways but ultimately converging on key questions of agency, authorship, and creativity. While MGX Studio, Novus Film and AIMania represent studio-level, industry-driven approaches to AI and virtual production, Çoban, Turan, Yoldaş and Türkeri offer perspectives from individual artists and creative technologists, reflecting independent applications of AI in filmmaking.

Among the cases, Yoldaş and Türkeri have two sides of the story in their interviews, both the individual journeys in collaborating with AI and also industry experiences with their AI film companies. Their personal experiences of creating with AI is different from experiences with their companies. The interview with MGX highlights that AI and virtual production technologies are transforming the filmmaking landscape, offering significant time and cost efficiencies while also posing challenges related to creative adaptation and ethical considerations. The production company's approach emphasizes a collaborative model where AI serves as an enabler of human creativity rather than a replacement.

There are points where the practices and points of views of the interviewees converge.

AI as an Assistant: There are key trends like seeing AI as an assistive technology. Most interviewees view AI as a tool that enhances human creativity rather than replacing traditional filmmaking roles. On the other hand, Türkeri expressed that she sees AI as a business companion rather than a tool. Whether AI is seen as a companion or a tool, it is treated as an assistant in the creation process. AI is primarily used in pre-production (concept design, mood boards, visualization), production (virtual production), and post-production (motion generation, VFX, editing) rather than as a fully autonomous storytelling or a creative agent.

AI to Increase Efficiency: From the interviews, it is understood that AI is seen as a way to reduce costs and speed up the production process in the industry driven cases. Novus Film and AIMania spend significantly more time in pre-production when using AI than in traditional workflows, where filming takes the longest. MGX also noted that

virtual production, which incorporates AI, facilitates the filmmaking process by reducing set related costs and post-production burdens.

AI Consistency and Control: A recurring issue among interviewees was the difficulty of achieving consistency, especially in maintaining a uniform style for characters, their actions and environments across different AI-generated visuals. Türkeri mentioned overcoming this challenge by using multiple AI programs to ensure character continuity, while Yoldaş noted that achieving consistent outputs from AI often requires extensive trial and error.

AI in Narrative and Editing: AI is used for storyboarding and pre-visualization, and there is also a growing interest in using AI for narrative construction. Turan, Türkeri and Yoldaş engage AI in scriptwriting, though they emphasize the necessity of human intervention to refine and structure the output. Türkeri works with AI to refine her stories, while Turan experiments with AI's ability in scriptwriting. Yoldaş sees AI as an assistant in scriptwriting, focusing on AI's ability on parts like creating treatments, outlines and character descriptions. As Yoldaş explains, AI can be a great helper in screenwriting with language barriers, cultural differences. Yoldaş explains that he used AI to make one of his characters talk with a British accent of the 1940s. This collaborative act of writing together with AI results in a shared agency and creativity, where the human and machine collaborate and negotiate.

Editing has been influenced by technology and AI, just like other steps of filmmaking. AI tools to make the editing process easier have gained more popularity, yet we still cannot talk about fully AI-generated editing processes. Editing is another area of experimentation; Turan focuses on prompt-based editing in AI filmmaking, while Novus Film and AIMania combine AI-generated content with traditional post-production

techniques. Çoban uses AI as a motion tool in her editing process. None of the interviewees has expressed that their editing was made truly by AI. Role of human refinement is still significant, and the decision making process is directed by humans although machines take a part in post-production. In fact, the interviews have shown that the pre-production process gains more importance when working with AI, as Mertgil from MGX and Yoldaş noted in their interviews.

Ethical and Aesthetic Considerations: The ethical implications of AI in filmmaking were frequently discussed. Authorship, ownership, and originality were major concerns, and the interviewees highlighted the importance of ethical AI use. Türkeri pointed out the AI-generated content resembling copyrighted works like Disney visuals, while Yoldaş expressed concern over clients expecting AI to do everything with a single click, which undervalues human creativity. Piran from MGX Studio emphasized the importance of education in AI to better understand the technological shift in the industry and to make sure that the new graduates know about this new era in the industry. Çoban pointed out the ethical concerns about using AI to create a work and owning the content.

Despite these shared themes, there was also a divergence of attitudes, expectations and applications of AI in filmmaking in the practices of each interviewee.

The Role of Human Agency in AI Filmmaking: Çoban sees AI as a tool just like a painter's brush, while Turan explores AI as a collaborator that influences but does not dictate the creative process. Both emphasized prompt engineering as an emerging creative skill. Türkeri takes a hybrid approach, seeing AI as a business partner in corporate-level filmmaking while also creating highly personalized AI-generated films under her name. Yoldaş, coming from a traditional film background, remains focused on human creative

control, seeing AI as a supplement rather than a leading creative force. MGX Studio uses technology heavily, and sees AI as a helper in making the filmmaking process more efficient. The human creative control is the focus and the technological aspect of the process is seen as the facilitator.

Commercial vs. Experimental Approaches: Novus Film and AIMania cater to the commercial side of AI filmmaking, producing AI-driven advertisements and promotional films for brands. They both integrate AI into their workflow while ensuring that their works meet industry standards. They also aim to make narrative films and short films, and both Yoldaş and Türkeri have produced such films under their personal names. MGX, as a virtual production studio, uses AI primarily for production efficiency, such as in-camera VFX, content creation for their content library. They value the needs of the project, and thus they do not rely heavily only on AI.

On the other hand, İrem Çoban and Ayça Turan are more experimental in their AI use, exploring new visual aesthetics, narrative forms, and machine-human interactions in storytelling. Since they create more independently, they are more free in terms of playing with different creative agencies. Yet, they both express their wish to protect their human thinking process in creating a piece. When working on their own projects, both Yoldaş and Türkeri work more freely. In summary, working for the industry with clients requires the creators to be less experimental and more cautious in terms of working with AI, while independent creators feel more free to see how their creative process transforms with AI.

Degree of AI Integration: Türkeri experiments with full AI-generated filmmaking, focusing on digital storytelling, motion design, character development, and personalization in AI-driven animation. AIMania, however, can choose to work hybrid depending on the needs of the clients. Similarly, Novus Film combines traditional

cinematography with AI-enhanced visuals rather than relying entirely on AI-generated content. Just like MGX Studio, AIMania and Novus Film are working on projects with clients, so they all need to be careful about industry standards and expectations. Çoban likes to start with her own drawings and add AI in later steps of her creations, while Turan sees AI as part of an evolving digital aesthetic, emphasizing its non-hierarchical and collaborative nature. Across all cases, the degree of AI integration differs based on the projects.

6.2 Rethinking the Author: Agency, Authorship, and Creativity in AI Filmmaking

The interviews provide critical insights into the ongoing transformation of authorship, agency, and creativity in AI filmmaking. The role of AI in filmmaking and the shifting boundaries of agency transform the authorship and creativity notions. Discussions about collaboration between human and non-human brings discussions about agency. Is AI a tool? Or is it more than a tool, an agent with creative and decision-making power, and an actor in a creative network?

Authorship is a constructed, institutional, and functional concept, not an inherent quality. AI challenges or reshapes authorship in filmmaking by blurring the boundaries between human and non-human, which both have agencies to create. Actor-Network Theory and Foucault's author-function reveal how authorship and agency in AI filmmaking are not fixed, but negotiated and fluid notions. Networks of creators, tools, algorithms, and audiences collectively define what counts as authorship and where agency lies. In the case of independent creators, authorship remains deeply tied to the creator's narrative control and style, while in commercial production, authorship is institutionalized through brand control and hierarchical workflows. Across all cases, AI shifts from being a passive tool to an active agent.

The interviews show that AI is treated as a co-creator or a business partner, not an autonomous author. AI is perceived as supporting and augmenting human creativity rather than replacing it. Whether AI is used for scriptwriting or video generation, human input is crucial for refining and structuring the output of the machine. Even when the creators see AI as a tool, they in fact collaborate with AI and negotiate on the agency to create. Therefore, AI's role in authorship is collaborative rather than autonomous. The hybrid practices of AI generated content and traditional filmmaking show that humans are in collaboration with the machines and the technology in their creative practices.

As the role of AI in filmmaking increases, the dynamics of the human and non-human agencies shift. AI is reshaping traditional filmmaking workflows, but human decision-making still drives the creative process; humans make the final decisions about the AI-assisted creative content. Whether it is prompt engineering (Çoban, Turan), AI-assisted cinematography (MGX, Novus Film), or AI-generated animation (Türkeri), the human-machine collaboration defines a new understanding of agency in these new forms of storytelling. In this collaborative creation process, the creative agency is effectively shared between human and non-human collaborators.

The ethical concerns regarding AI art remains complex, because who owns an AI-generated work is still a question to be answered. As Türkeri points out, AI can easily replicate copyrighted works, which is a threat to originality and fair use. Yoldaş notes that when working with AI in the filmmaking industry, the expectations of the clients tend to minimize the effort of the filmmakers, and it is important to teach everyone that not everything can be produced at the push of a button. This shows that human intervention is a big part of AI filmmaking, and there is no full automation yet.

The interviews show that AI is an industry disruptor. While some fear that AI will

replace jobs, the interviews show that AI is shifting the roles in filmmaking rather than eliminating them. For example, AI reduces manual labor in set design, animation, and post-production, but new expertise areas like AI prompt engineering, AI editing and refining are emerging roles in the industry. Some roles will gain more attention, like rendering, and some singular abilities will be faced with danger of elimination, as AI could easily perform these abilities. As Yoldaş explains, this new era requires humans to be versatile and courageous, so that AI cannot replace them and their abilities.

Based on the interviews, the current state of AI in filmmaking focuses on hybridity. Hybrid practices and approaches are becoming the norm. The most significant takeaway is that AI is evolving along with the traditional filmmaking, not replacing it. AI enhances but does not replace human effort. AI-generated art, films, advertisements, and animations are becoming available, but they still require human intervention and labor to refine. A cohesive narrative can be accomplished with human structuring and curation. In short, this is a collaboration between human and non-human actors.

The interviews show that there is a critical transition phase taking place in filmmaking. AI is not yet fully independent, and it is not just a tool but rather a creative collaborator. Whether used for pre-visualization (MGX), animation (Türkeri, Yoldaş), XR designs or AI workflows (Turan), digital art (Çoban) or commercial production (Novus Film, AIMania), AI is expanding the possibilities of filmmaking rather than replacing its foundational human elements. As Turan notes, AI has the power to democratize art and filmmaking, making them more accessible to everyone. The convergence of AI and human creativity is shaping a new, hybrid form of cinematic authorship, where agency is shared between humans and machines. In this new hybrid

form of filmmaking, storytelling is redefined through a data-driven digital lens. Machine gaze influences the digital landscape and thus digital storytelling.

Actor-networks across these cases vary in size, hierarchy, and stability. While MGX, Novus or AIMania relies on robust alliances between departments and tech, independent creators build lighter but fluid networks where agency shifts more rapidly between human and non-human actors. The author-function remains central to all cases, but its expression is context-dependent; institutional authorship in MGX, negotiated authorship in Novus and AIMania, and self-styled authorship in the independent examples of Çoban, Turan, Yoldaş and Türkeri. AI supports but does not override the author-function; instead, it complicates and expands its expression.

6.3 AI as Author? Anonymity or Authority of AI

Foucault's idea of the author-function questions the role and the meaning constructed around the author. Author is a position constructed through discourse, institutions, and expectations. Independent creators often do not consider AI as the author, they still claim authorship, even when using AI extensively. However, they acknowledge AI's influence, especially in creating visuals or dialogue styles they would not have thought of themselves. When working on individual projects, the creators are free to experiment with AI.

On the other hand, in the cases of MGX, Novus Film, or AIMania authorship is collective, AI is a contributor, but responsibility is maintained by human agents. In these cases, the author-function is maintained institutionally, the creative producer or director is named. In independent practices, on the other hand, authorship becomes more fluid, even performative, shaped by the creator's interaction with AI tools.

AI does not sign its work, yet audiences and brands react as if the "AI author" matters; they want to know if the visuals were made by AI, and whether that affects quality. Sometimes creators hide the AI use, other times they market it as "100% AI-generated". The author-function here is strategically announced or hidden, based on the expectations from the audience. When AI-generated content is seen as a selling point, the "AI author" becomes visible. When it is seen as a threat to quality or credibility, the human author steps forward to claim legitimacy.

Foucault's author-function reframes authorship in AI filmmaking not as an origin of meaning but as a function distributed across the network. In other words, Foucault challenged the traditional notion of the author as a creative genius, who is the sole owner of the text. If the author is not a person but rather a construct that society uses to classify, categorize, and control discourses, then AI film is not authored by AI or by a human, rather it is a function of collaborative work between human and machine. Authorship in AI filmmaking is structured and distributed across the entire network of actors involved in the process. This network includes human creators (like directors, writers, cinematographers), AI tools and algorithms, the data used to train the AI, and the audience, who may interact with and interpret the film in various ways.

Instead of asking "Who is the author of this AI film?" and looking for one entity with a vision, recognizing that authorship as a complex process involving many contributors, both human and non-human, is a better approach. Foucault's author-function claims that the idea of the singular author is a construct, and many years later in the age of AI, a similar approach can be taken towards AI filmmaking. In this sense, in AI filmmaking it is more accurate to think of meaning as emerging from the interactions within the entire creative network. This perspective has significant implications for

understanding creativity, originality, ownership, and artistic responsibility in the age of AI.

6.4 AI as a Shifting Actor in Filmmaking

Novus Film operates a semi-AI filmmaking model; AI is used in pre-production, visual design, and concept development. AI-generated visuals are integrated into traditional workflows, yet human intervention is needed at every stage, from directing to editing. AI does not fully replace human decision-making in storytelling. AI alone cannot yet meet the industry standards for high-end production. Novus Film still relies on traditional filmmaking structures and industry relationships to maintain professional standards. AIMania has a very similar hybrid model where traditional and AI techniques of filmmaking are used together in the production. MGX also can be considered as a hybrid company, where high technology and traditional techniques are used together to make a film. In all these three cases, the AI is a significant actor in the network, with agency, yet compared to the other cases of independent creators the agency of AI is lower. In the case of independent creators, the creator can choose to use AI at a level based on her own wish and needs regarding the project, while in the case of companies the agency of AI is dependent on exterior factors such as market demands, client needs or audience expectations.

Through the lens of Actor-Network Theory, Novus Film and Turan's workflows exemplify how AI is not a passive tool but an active actor that reshapes workflows, decision-making, and creative processes. The alliances between human and AI actors in the network are constantly evolving, requiring an ongoing adaptation on both human and non-human sides. AI's introduction into filmmaking creates new challenges, including resistance from traditional industry players and difficulties in achieving visual

consistency and coherent screenwriting. AI is not yet fully autonomous and it is not fully subordinate; it functions as a collaborator in a semi-AI workflow. Overall, Novus Film represents a transitional phase in AI filmmaking where AI is integrated in the filmmaking practices in different levels of dominance depending on the project. Turan's case represents how a single human can create films with the collaboration with AI. Nevertheless, in all cases, human creativity and control remain central in shaping the final cinematic product.

6.5 AI, Space and the Non-Place: Rethinking Spatial Experience in AI Filmmaking

The interaction between human and non-human occurs at the very core of being, as humans interact with the space they inhabit. "A place that is fixed with time and space produces identities and a collective sense of belonging." (Bozgeyik, 2020, p.20). Since Thomas More's *Utopia* (1516), human's physical and philosophical connection to place is discussed in the literature. Concepts like Foucault's "heterotopia", Augé's "non-place", Bergson, Deleuze and Guattari's spatial concepts, Virilio's work on politics of space are only some of the well-known discussions about place in the literature. Contemporary works on the meaning of place include Yi-Fu Tuan's (1990) "topophilia", bond with a place, Trigg's (2017) "placelessness", absence of meaningful bond to places. "While non-places are socially produced, placelessness reflects a deeper alienation from all places, including those traditionally associated with meaning and identity." (Bozgeyik, 2025, p.449). Places are standardized with globalization, and more importantly, people are losing their attachments to their surroundings.

Virilio's "speed-space" is a valuable contribution to literature which focuses on how speed reshapes space. The advancement of technology is happening at a great acceleration, and because of this acceleration "time has conquered space" (Thommesen,

2003, p.149). This means that space does not matter anymore, because technology has enabled humans to communicate at the speed of light. As a result, Thommesen argues that as the importance of geographical distance diminishes, the cultural barriers also erode. In this sense, along with Vrilio's arguments about space and Trigg's placeness, one can argue that the acceleration of technology in filmmaking has also changed the way humans feel attached to the filming space.

Space in film is important in the creation of the narratives and the narration, as the interaction between the characters and the locations define the dynamics of how the story is told. Traditional understanding of location in film studies allows understanding how films construct and structure space for the characters in the diegetic world. On the other hand, focusing on filmmaking technologies allows us to analyze the non-diegetic world. In other words, when we shift the focus on how the film locations are designed and structured, the interaction between the filmmakers with the locations can be analyzed.

With the advancement of technology, the meaning of place has evolved in film. Emerging technologies like AI and virtual production reshape cinematic authorship and space. Virtual production and AI produce a new kind of non-place, which is digitally constructed, placeless, and rooted in data rather than geography. Different applications of technology, from VR to VFX to AI, produce different definitions and experiences of cinematic places. VR redefines place for the audience experience, while virtual production does the same for the production crew. AI can show up in both technologies as a supplement, supporting the creation of imagined places. The place is both textually and visually discovered, redefined and negotiated in different mediums due to the integration of high technologies in filmmaking, ranging from the stages of screenwriting to streaming.

6.5.1 Emerging Technologies in Filmmaking and Dematerialization of Cinematic Space

Hanzl (2019) considers VR as a significant innovation because it enables viewers to immerse themselves in the filmic locations virtually, despite the traditional "lean-back experiences" (p.28) of classic films. This immersive experience is more important than the storytelling, notes Hanzl, as the 'presence' in the VR place creates the illusion of the space, to a point that the spectators need some time to adjust to real time and space after they take off their VR goggles. The technical side of the VR production requires "a special position tracking hardware which supports the so-called '6 degrees of freedom' feature" (p.28). This is an advanced VR technique enabling the spectator to look around and move in this imagined space. VR provides a limitless spatiality; the only limit is the spectator's vision. The artist of this VR experience, who attempted to carry the specific time and space into the VR imaging, is therefore moved out of the ecosystem of the VR experience. Instead, the spectator has the autonomy to look around and direct the space as they want. As Çam (2019) explains, this absolute immersion removes the artist's mediation, increasing the power of the spectator over the VR image. The space that is constructed by the VR artist becomes a space directed by the spectator. Çam calls this a "circular experience" (p.10), where the spectator has power over the image as the maker or the artist, which is the result of the interactive nature of VR experience. Place is thus redefined, as the actual place is carried to virtual reality.

Collaboration between human and non-human elements in the effort of creating a filmic location on a virtual set. The interview with the director of the second season of the series *Prens,* Gökdeniz Uslu, shows that the absence of real locations could be a significant element of VFX, creating a challenge for the director and the actors. Uslu

explains that working on a virtual set was different from his past experiences, where he was traditionally placed in a real location. As a director who likes to touch the decor, costumes and feel the location, he found the experience of working on a virtual set as a challenge. He likens the experience of working in a virtual set to being in the outer space environment where there is nothing to hold on to, forcing the creatives on set to rely on their imaginations. The spatial intuition comes to the forefront with the absence of tactical interaction. Instead, the digital and artificial creation of the set details and background renderings foster a new understanding of place, challenging the set workers in many ways. These dematerialized spaces in virtual production are materialized with the help of technology, including AI.

With virtual production, the cinematic space is redefined as the space is dematerialized in reality and then materialized on the screens. This redefinition of space underlines the experience of the filmmakers on the set, especially the directors and actors.

6.5.2 AI Screenwriting and Redefinition of Cinematic Space

Redefinition and exploration of cinematic space does not only occur visually but also textually. AI screenwriting is an area where the place in film needs to be negotiated. In the making of the short film *Sunspring* (2016), the director Oscar Sharp had to negotiate with AI-generated script and the filmic realities, like actors and location. The AI program that Ross Goodwin created was unable to produce names or stage directions, and Sharp had to decide how to shoot a direction saying "He is standing in the stars and sitting on the floor" (Goodwin, 2016). This inefficiency created by the AI was turned into a creative challenge for the director Sharp, and he ended up filming the scene with his imagination. The notion of place had to be redefined in this experience on the behalf of filmmakers, specifically the director, actors and the editors, because the textual place had

to be created on the set, later to be conveyed to the audiences from their screens. The filmic space travels in this way, from the textual generation of the AI, to the imagination of the director to the comprehension of the audiences. Each time, the place is redefined and rediscovered due to the technological application in the creation.

6.5.3 Non-Place and Digital Creation of Places in Contemporary Filmmaking

Where is 'place' in AI cinema? And what happens to the agency of the filmmakers when high technology filmmaking practices are involved, like AI-generated visuals, sounds or scripts, VFX or VR sets?

Whether the film is created with AI, VFX or VR, the collaboration between human and machine remains at the center of the discussion. The agency shifts from human to machine and machine to human as the filmmaking starts; the making of the film and the streaming of it redistributed the agency, and autonomy to create and make meaning of the cinematic places.

Marc Augé's (1995) concept of the 'non-place' refers to transient and anonymous spaces like airports, shopping malls or highways, which are void of identity and history. These spaces emerged with capitalism and globalization, creating individuals who are detached from the place related experiences. Therefore, non-places are where people pass through with relational experience, not where they reside, making them markers of supermodernity. As filmmaking increasingly relies on virtual technologies like XR, VFX, VR or AI, the traditional sense of place changes and a new understanding of non-place emerges, which is the digital production environment. In contemporary filmmaking, an algorithmically created non-place is created with the advancement of technology.

In virtual sets, used in the production of projects like *The Mandalorian* (2019) or the Turkish series *Prens* (2025-present), physical locations are no longer needed and

spaces are not filmed but they are fabricated. In virtual production, spaces are designed in pre-production and refined in post-production or projected in real time using LED walls, Unreal Engine, and AI-powered tools. These fabricated spaces can be manipulated through algorithms, and this underlines the culturally and emotionally detached nature of AI places, making them computational non-places. The interviews with MGX Studio have shown that the virtual production helps construct the place of the narrative, blending different kinds of technology to create a place for the story. These environments are not physically tangible, yet they become immersive visual territories within the diegetic world. The space of the virtual set is created with VFX and AI, and it is not anchored in geographic specificity, but rather in code, data sets, and simulations. Similar to machine gaze, this machine originated space as the new kind of non-place. Thus, the physical site of production becomes layered with algorithmically constructed spatiality.

This feeling of placelessness that digital production creates on the set can become a challenge. For example, Gökdeniz Uslu, the director of *Prens*, notes that working on a virtual set feels like working in outer space, because a virtual set does not contain tangible details like a traditional set does. In traditional sets, directors rely on their senses and spatial understandings, however on a virtual set, it is almost like a digital void. This can give an immense freedom to create and play on uncertainties, but also it can be a source of unnerving placelessness. This virtual set can be considered as a non-place in the computational sense. The empty virtual set is transient and non-relational, that is navigated through the machine gaze.

In this void, the story is structured with imagination, so the set itself has no history or relation to the identities on the set. This non-place is used to construct places within the story. AI can generate visuals of detailed landscapes to be used as historical locations

or other fictional geographies. These constructed spaces become emotionally and culturally embedded spaces with the narrative. This technological shift means that place is not only a location anymore, it is also a simulation, due to the algorithmic integration behind the scenes. In this way, this constructed place is not architectural, but ontological.

As AI tools begin to propose, generate, and even manipulate visual landscapes based on prompts, we must ask: Who is creating the place? Is it the director? The machine? Or the interaction between the two? AI generated scripts and visuals are trained on global data that tends to erase cultural and local specificity, which results in placeless and generic locations. In this sense, AI non-place emerges, not only as a transient space void of history and identity, but also as a data-driven synthetic environment that does not depend on traditional sense of geography and human memory. This can be seen as a redefinition of cinematic space, from physical non-place in the Augé terms, to algorithmically constructed spaces, which challenge traditional understanding of authorship and locality in storytelling and cinema.

7. CONCLUSION

We are trying to understand new technologies in old-fashioned ways, explaining them “with existing terminologies” (Hanzl, 2019). While we try to understand the new technologies and emerging tools in our old ways, we try to tell our old stories with new technologies. Whether it is AI or VFX or XR, they all contribute to the way to make stories and make sense of these stories. As Hanzl explains, “In the twentieth century, the role of cinema was to capture and to store a visible reality. Now the reality can be constructed outside the film image” (p. 4). This shift challenges our traditional understanding of representation, and invites new possibilities of expression. Indeed, “technology can also be used for the creation of a new visual language” (p. 5), meaning that the evolution of tools with the advancement of technology can transform storytelling practices.

Continuity is an important concept that needs to be recognized. Technology has always been a collaborator in filmmaking, and with the emerging technologies such as generative AI, VFX cameras or virtual production methods, we see the continuation of this tradition. We can see continuity in multiple levels; continuity of film, continuity of myth making, continuity of technical and technological collaboration of filmmaking, and so on. Thus, the emergence of AI does not mark a break from the past, but rather a renewed phase in the ongoing traditions in filmmaking. While tools evolve, the cinematic creation dynamics continue to be persistent.

While creating content or constructing new worlds with these technologies, we are collaborating with machines. The interaction between human and non-human thus gains significance in this age of AI, as digital storytelling shapes the way we create and the way we create shapes storytelling. With AI technology, we teach algorithms how to

write, think and execute, yet there is still the danger of algorithms teaching us to become ordinary, repetitive and boring. Since the way algorithms create is based on past data, when an AI system creates a content, it is a version of previous creations in the data pool. Therefore, the notion of creativity is challenged and a new form of creativity, algorithmic creativity, is born. In this version of creativity, humans collaborate with machines to create content, and the agency is shared, while the authorship remains blurred.

AI authorship is still a debated topic, because who owns what and to what extent is still subject to discussions when working with AI systems. AI systems are 'fed with' millions of data, and human creators and their creations are diminished to single data points in this massive pool, to be used by algorithms with innumerable commands coming from all parts of the world. The interactive nature of communicating and collaborating with AI positions human machine interaction as the core element in working with AI.

Instead of trying to find definite answers to definite questions, I have realized that it is more important to understand the evolving dynamics in this technology. Therefore, this study should not be about if AI is a tool or a collaborator but rather about the changing levels of agency in human-machine collaboration.

The aim of this dissertation was to explore how the collaboration of human and non-human actors plays out in filmmaking in the age of AI. Nevertheless, the interviews have shown that the interaction between the human and non-human is not limited to simple cooperation. In the creation process, there are instances where the creator gets into conflict with the technology or the tools, or where the creator gives in to the limits of the AI programs and adjusts the aims according to the abilities of the generative AI. There are times when the practices of the AI content creators converge or diverge, as within each creation process, the technology and the human converge. Therefore, this study has

shown that the collaboration between humans and non-humans differs throughout the creation process, and the cooperation between them oscillates.

GenAI is used in different areas of filmmaking, from making digital series to commercial films to artistic films, and there is a gap in the literature about how AI practices are used in these areas. The advancement of technology in filmmaking has increased the non-human presence in filmmaking, and the shifting agencies of human and non-human elements change the traditional understanding of creativity. My research questions were: How does the collaboration between human and non-human elements in filmmaking redefine the concept of authorship and agency in the creative process? In what ways does the concept of machine gaze reshape cinematic vision and narrative structure in filmmaking in the age of AI?

This dissertation has explored the evolving role of AI in filmmaking through the concept of machine gaze, with lenses of Actor-Network Theory and Foucault's Author-Function, analyzing how human and non-human actors collaborate in the creative processes of filmmaking. With the help of diverse cases from different areas of filmmaking, from mainstream productions to commercial films to independent artistic film, this research shows that authorship and creativity are not singular concepts in filmmaking. The advancement of technologies that are integrated in the production processes collaborate with human creators, and the agencies of humans and machines are shared, as well as the authorship and labor. This study underlies the plurality of practices in the filmmaking industry, and whether it is a mainstream production or an independent work, the collaboration between humans and machines is the main focus. The case studies show that when human creativity works together with the algorithms, the filmmaking

process can be more efficient, yet the cultural, artistic and ethical dimensions of the discussion are still open debate.

Actor-Network Theory helps us to understand how human and non-human agencies shift in a production, while the concept of author-function helps us to understand discourses surrounding AI versus human authorship. Authorship brings questions about ownership, copyright, and intellectual property, which I tried to discuss briefly in the literature review section titled "Authorship and Creativity in the Age of AI". AI authorship is a highly debated topic and opens up new discussions about ownership and legal rights. Actor-Network Theory could be sufficient to analyze the collaboration between human and non-human elements in filmmaking. Nevertheless, author-function is necessary to see how the role of "author" evolves from a version of solely human to a technologically supported one. The interviews have shown that the creators working with AI want to make sure that the audiences know that their work is not a one-click solution. The training of the AI program, as well as the creative team, requires a diligent process; it is a creative work as much as a technical one. The creators emphasize that they are the ones who make the decisions in the final round, with their selection and curation of the generated content. This issue can be linked to the author-function in an interesting way, as the author is more than just the creator, more than a creator genius. In the news, the AI generated works are advertised with the emphasis on the AI, while the creators emphasize their creative decision making. The power struggle is evident here. This can also be linked to the "Promethean Anxiety", or fear of losing power in the face of technology. Foucault's author-function discusses legal issues, and has more than one function across different times, based on different discourses surrounding the function of the author, therefore it is a suitable lens to analyze how the role of the author evolves with the advancement of

technologies, especially generative AI. In the analysis of the cases, Actor-Network Theory provides a useful lens to analyze the pre-production, production, and post-production of the films, while author-function unravels the power struggles between humans and non-humans in claiming the authorship of the generated work.

The interviews have shown that in different cases, we see different levels of machine agencies and different approaches to human non-human collaboration. While a digital artist (İrem Çoban) sees AI as a tool, a creative technologist (Ayça Turan) can explore with a non-hierarchical lens. A production studio (MGX), catering to mainstream media makes decisions based on business dynamics and benefits from AI tools as a supporting element. The interviews with MGX Studio Operations Manager and VP supervisor Okan Mertgil and PR Coordinator Negin Piran has shown that a production studio like MGX can both develop technologies and use them in their productions. The new trends and applications of high technology in filmmaking practices can challenge creatives who come from traditional or classical cinema background, yet the opportunities attached to these new technologies excites directors like Gökdeniz Uslu. There are also production companies that prioritize AI filmmaking practices, like AIMania and Novus Film, as seen from the interviews from Deniz Türkeri and Bilgehan Yoldaş.

The analysis of different cases has shown that the Actor-Networks of mainstream production companies have a larger set of human and non-human actors, while independent creators, filmmakers or digital artists, have smaller actor-networks. The main actor of independent creators is the creator herself, so the OPP becomes the human creator, whereas in bigger productions with concerns about business dynamics, audience preferences and client demands the OPP cannot be a single human creator, because the

network in these cases are so large and the interactions between human and non-human actors are innumerable.

The role of author has evolved with the advancements of technology, and the authorship and creativity of creators are challenged. The rise of algorithmic creations introduces the concept of machine gaze, which can be described as a vision or interpretation of algorithms based on data sets. Machine gaze overrides or diminishes human subjectivity, redefining our traditional understanding of creative authorship. The established hierarchies between the creator and the tool are challenged as AI-driven programs gain more popularity and become active participants in generating content, ranging from images and videos to scripts. In this new system, the agencies of human and non-human actors are shared and distributed. Despite the traditional sense, authorship is co-produced through interactions between humans and generative models. This collaboration does not diminish human creativity; on the contrary, it opens new doors for experimentation by providing new tools and affordances. The creativity in the age of AI is relational and redefined with the increasing influence of prompting and curating outputs. This emerging creative era requires new literacies and awareness of biases and ethical issues, because the iterative nature of conversing and creating with AI technologies reflect broad dynamics of technology, culture and institution, which shape the contemporary creative industries.

Since AI has a very fast paced advancement trend due to its learning abilities from data, the studies on AI will require constant update. AI in filmmaking is becoming more prominent every year, and there will be more case studies available for analysis. Further studies can focus on such productions, and analyze the interaction between humans and

machines in creative areas. In the current state of AI, humans not only have to but also they like to hold the creative power when working with AI.

This dissertation has shown that AI filmmaking is not a linear technological adoption. It is rather a negotiated process where human and non-human actors work together in constructing creative, economic, and cultural realities. Agencies, networks and author-functions shift and evolve across practices from industry-led virtual productions to independent AI-driven experiments. In the age of machine gaze, the future of filmmaking depends on how humans and technology work together, redefining authorship, creativity, and collaboration.

The intersection of AI and labor is being debated in the film industry, highlighted very recently by the use of AI in the making of the digital series Tesseract. The film is made with the latest AI technologies and digital clones of Özcan Deniz and Akın Akınözü. The actors' guild has noted the concern over the use of AI in place of real actors and cited the potential dangers of this replacement. The media covered this development as news (sinemalar.com; Beyazperde; Yenidoğan). The labor side of the discussion extends beyond the use of digital twins of the actors. AI exploitation and exploitation of data workers has been discussed in the literature and further study can be done in the area of labor, ethics and AI in media and the film industries.

This dissertation contributes to the growing field of AI and filmmaking by showing how human and non-human actors collaborate in creative processes, reframing authorship, agency, and cinematic vision in ways that earlier literature has not fully captured. With the lens of Actor-Network Theory and Foucault's author-function, the case studies and the analysis demonstrate that the shifting alliances and translations between humans, machines and algorithms challenge the traditional notions of creativity

and authorship. The author or the creator is not a single human or an entity, but a network of collaboration between humans and non-humans. This study adds a new perspective to the literature that connects theoretical debates on posthuman creativity, machine gaze and AI authorship with actual filmmaking practices in Turkey. This research analyzes mainstream, commercial and artistic filmmaking practices in the age of AI, which further adds to the literature. Overall, this dissertation is a contribution to the literature spanning film studies, science and technology studies, and media studies. Future research could expand the analysis and insights into transnational context. Global works of AI in filmmaking and their impact on the industry, labor, media, politics and ethics can be further researched. Audience reception of AI generated content and their cultural and sociological impacts can also be a subject for further study. Ethical debates and institutional shifts in the visual culture are already subjects for discussion in the literature, which can be further analyzed.

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APPENDICES

APPENDIX A. CURRICULUM VITAE

Name-Surname: Övgü Bozgeyik

Education:

BA: Skidmore College, Saratoga Springs, New York - *BA* - Economics (2012 - 2016)

MA: State University of New York at Albany, New York - *MA* - Master of Economic Forecasting (2016 - 2018)

MA: Istanbul Bilgi University, Istanbul - *MA* - Master of Film and Television (2018 - 2020)

Work Experience:

Freelance Writer*:* EPISODE Magazine, Oct 2017 - Jan 2018

Student Team Coach: Skidmore College, Business Department, 2016

Student Assistant: Skidmore College, Economics Department, 2015-2016

Student Researcher-Assistant: Skidmore College, Government Department, 2014-2015

Peer Health Educator: Skidmore College, PATH Committee, 2014-2015

Retail and Merchandising Intern: The Walt Disney Company, Istanbul, 2013

Awards and Scholarships:

Magna Cum Laude: Skidmore College, 2016

Dean's List Honors: Skidmore College, all semesters 2012 - 2016

Economics Departmental Honors: Skidmore College, 2016

Phi Beta Kappa, The Oldest Honor Society for the Liberal Arts and Sciences in the US, 2016

Omicron Delta Epsilon, The International Honor Society for Economics, 2015

Marjorie Boutilier 1946 Scholarship: Skidmore College, 2015

Finalist at the Kenneth Freirich Business Plan Competition, 2015

Scientific Publications:

Bozgeyik, Ö. (2025). Bricolage ve Yapay Zeka ile Senaryo Yazımı: Sunspring (2016) Örneği In E. Yıldız (Ed.), *Değişen Dünyada Kültür ve Sanat* [Culture and Art in a Changing World] (pp. 187–206). Nobel Bilimsel Eserler.

Bozgeyik, Ö. (2025). Localized Marginalization: Migrant Spaces and Non-Places in Istanbul. *REFLEKTİF Sosyal Bilimler Dergisi*, *6*(2), 447–457. https://doi.org/10.47613/reflektif.2025.226

Bozgeyik, Ö. "Road Film Adventures: Crossing Borders in a Car" Journal of Popular *Culture* (revise and resubmit).

Bozgeyik, Ö. "Scripted by AI or Society? AI Films and the Social Construction of Technology" (work in progress)

Bozgeyik, Ö. (2018). "The Kindergarten Teacher" *Film Critique*. (Istanbul Bilgi University). https://ftvstudio.bilgi.edu.tr/en/filmcritique/issue/03

Scientific Presentations:

Bozgeyik, O. (July 2025). Localized Marginalization: Migrant Spaces and Non-Places in Istanbul. Reflektif New Issue Launch Panelist - Rethinking Localities in the Audiovisual Field, Online.

Bozgeyik, O. (June 2023). Bricolage and Screenwriting with Artificial Intelligence: The Case of Sunspring (2016). Culture and Art in a Changing World: Art and Culture Management Conference, Istanbul.

Bozgeyik, O. (June 2022). Taking a social perspective on the changes in film and TV: Social construction of technology for AI scripts and transnational dramas. Panel Presentation in Interdisciplinary PhD Communications Conference, Istanbul.