UNIVERSITY OF HELSINKI

Exploring the Impact of Artificial Intelligence in Artistic Practice

A Case Study of Finnish Contemporary Artists

Master's Programme on Cultural Heritage

Master's Thesis

Art History

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May 2025

Helsinki

Faculty: Faculty of Arts

Programme: Master's Programme on Cultural Heritage

Study Track: Art History

Author: Janne Isosävi

Title: Exploring the Impact of Artificial Intelligence in Artistic Practice: A Case Study of Finnish Contemporary Artists

Level: Master's Thesis

Month and Year: May 2025

Pages: 69

Keywords: Artificial Intelligence, Art History, Artificial Intelligence Art, Algorithmic Art, Generative Art, Contemporary Art, Artistic Practice, AI Art

Inctructor(s): Kirsi Saarikangas

Where Deposited: University of Helsinki, Kaisa Library

Abstract:

In this master's thesis, I investigate how Finnish contemporary artists use artificial intelligence (AI) in their artistic practice. As AI technology rapidly evolves, I explore how these artists use AI tools, how this affects their creative work and identity, and what opportunities and challenges they see. My research aims to understand the relationship between artists and AI.

I used a qualitative case study method for this study. I conducted interviews with five Finnish contemporary artists from different fields: Arthur Franck, Teemu Mäki, Jenni Pasanen, Roope Rainisto, and Pasi Siitonen. I analysed the recorded interviews using the Gioia method to identify common themes concerning the artists' experiences with AI. In this research, I applied Greenberg´s and Mitchell's medium theories, critical theories (including Bourdieu and Marx), perspectives on technological determinism and technophobia, the legal aspects of copyright, authorship, and ownership, as well as Mazzone & Elgammal's framework for the AI workflow."

My results show that artists use AI actively. They mainly view AI tools as a way to work faster, get assistance with the workflow, and find new ideas. The artists often use AI's unexpected results ("hallucinations") in creative ways. I found a key theme that the artist's role is changing to one of curating and guiding the AI while still maintaining control and authorship.

Opportunities identified include making workflows easier, finding new aesthetic possibilities, and potentially making art production more accessible and faster. However, the artists raised concerns about copyright, the ethics of AI training data, possible societal biases, and the uncertain financial future for artists. Despite these worries, the artists emphasised that human intention, physical craftmanship, and the artist's own interaction with the audience will retain their value in the future.

In conclusion, my findings indicate that Finnish contemporary artists utilise AI with both pragmatism and critical awareness. They see AI as a powerful tool but are also aware of complex ethical, creative and professional questions. My research highlights the importance of critical thought regarding the use of AI and the potential need for new legislation, such as AI taxation, to prevent and mitigate the negative impacts of AI. This ensures that technology serves human creativity, artistic values, and meaning, not replaces them, in our evolving culture.

Tiedekunta: Humanistinen tiedekunta

Koulutusohjelma: Kulttuuriperinnön maisteriohjelma

Opintosuunta: Taidehistoria

Tekijä: Janne Isosävi

Työn nimi: Teköäly taiteellisessa työssä: suomalaisten taiteilijoiden näkökulmia.

Työn laji: Maisterin tutkielma

Kuukausi ja vuosi: May 2025

Sivumäärä: 69

Avainsanat: Tekoälytaide, Tekoäly, Taidehistoria, Nykytaide, Taiteellinen työskentely

Ohjaaja(t): Kirsi Saarikangas

Säilytyspaikka: Helsingin yliopiston kirjasto Kaisa, keskustan kirjasto

Tiivistelmä:

Maisterintutkielmassani tarkastelen, miten suomalaiset nykytaiteilijat käyttävät tekoälyä taiteellisessa työssään. Tutkimuksessani selvitän, miten taiteilijat käyttävät tekoälytyökaluja, tutkin tekoälyn vaikutuksia taiteelliseen työskentelyyn ja ammatilliseen identiteettiin sekä selvitän taiteilijoiden näkemyksiä mahdollisuuksista ja haasteista.

Tutkimuksessani käytän kvalitatiivista tapaustutkimusmenetelmää. Järjestin puolistrukturoidut haastattelut viiden eri taiteenaloja edustavan suomalaisen nykytaiteilijan kanssa. Haastateltavat olivat Arthur Franck, Teemu Mäki, Jenni Pasanen, Roope Rainisto ja Pasi Siitonen. Analysoin haastattelujen litteraatit Gioia-menetelmällä ja tunnistin keskusteluista tekoälyn käyttöön liittyvät kattoteemat. Sovelsin tutkimuksessa Greenbergin ja Mitchellin medium-teorioita, kriittisiä teorioita (mm. Bourdieu ja Marx), teknologisen determinismin ja teknofobian näkökulmia, tekijänoikeuden, tekijyyden sekä omistusoikeuden juridiikkaa sekä Mazzone & Elgammalin viitekehystä työprosessiin AI:n kanssa.

Tulokset osoittavat, että osallistujat käyttävät aktiivisesti erilaisia tekoälytyökaluja ja ne nähdään pääsiassa taiteellisen työn nopeuttajina, avustajina ja uuden inspiraation lähteinä. Taiteilijan roolin todettiin siirtyvän kohti tekoälyn tuotosten kuratointia ja prosessin ohjaamista taitelijan haluamaan suuntaan. Haastateltavat korostivat haluaan säilyttää tekijyys ja hallinta itsellään.

Haastateltujen esiin tuomia mahdollisuuksia olivat työnkulun tehostaminen, isompien projektien toteuttamisen mahdollistaminen, uusien esteettisten tyylien löytäminen ja taiteen tuotannon mahdollinen demokratisoituminen. Huolenaiheiksi nousivat tekijänoikeudet, omistajuus, tekoälyn (koulutusdatan) etiikka, yhteiskunnallisten vinoumien mahdollinen vahvistuminen ja taiteilijoiden taloudellinen toimeentulon mahdollinen heikentyminen. Haastateltavien kommenteissa havaitsin determinismiä uuden teknologian kehityksen edessä, koska tekoälyn kehittyminen koettiin väistämättömäksi, eikä siihen koettu voitavan vaikuttaa. Kuitenkin taiteilijat korostivat, että inhimillisen intentio, fyysisen käsityö ja taiteilijan oma interaktio yleisön kanssa tulevat säilyttämään arvonsa tulevaisuudessakin.

Tutkimukseni paljastaa, että suomalaiset nykytaiteilijat suhtautuvat tekoälyyn pragmaattisesti, mutta kriittisesti ja ovat ottaneet sen jatkuvaksi työkaluksi omaan taiteelliseen prosessiinsa. He kuitenkin huomioivat tekoälyn käyttöön liittyvät monimutkaiset eettiset ja yhteiskunnalliset kysymykset sekä uuden teknologian tuomat haasteet luoville aloille.

Tutkimukseni korostaa kriittisen pohdinnan merkitystä tekoälyn käytössä sekä mahdollisen uuden säätelyn tarpeellisuutta tekoälyn haittojen ehkäisyssä ja vähentämisessä. Tutkimuksen perusteella taiteilijat haluavat, että tekoälyn kehitys tukee, eikä syrjäytä, ihmisen luovuutta ja taiteellista toimijuutta.

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1 Introduction

> *"Technology is neither good nor bad; nor is it neutral."*
> Melvin Kranzberg[1]

Generative artificial intelligence has been widely available for nearly three years, and it is still in its infancy.[2] Unlike biological processes, AI's evolution is not constrained by the limitations we are accustomed to. Its development has been fast and is likely to follow a logarithmic trajectory rather than gradual or linear steps. This rapid advancement has already transformed software development and is poised to change many other fields of human endeavour. AI will have impact on artistic practice, as well.

In this research, I will study how several Finnish contemporary artists have employed AI so far and gather their insights, experiences, and concerns regarding its role in their own artistic process, in their artistic practice and in the broader context of art.

I also hope that this study will, in its own modest way, contribute to the broader discussion within academia and the public about artificial intelligence and art history.

1.1 Research Questions

The research questions in this study are the following:

1. What AI tools and models, and how, have these artists used?
2. How has the use of AI impacted artist's artistic process and artistic practice?
3. What opportunities and concerns do they see about use of AI?

I want to understand how artists utilise AI in their work and in what way has that impacted their artistic process and practice. The philosophical side of AI is not in focus for this research. Also, impact of AI to the other parties of the art world, for example museums or art market, is not in the focus. The focus is on the opinions of the artists and their learnings on utilising the AI. The second dimension is to study how artist see the positive and negative impacts of AI to their artistic process, and on art in general.

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[1] Kranzberg, M. (1986). Technology and History: "Kranzberg's Laws." *Technology and Culture*, *27*(3), 544–560. https://doi.org/10.2307/3105385
[2] ChatGPT was launched Nov 2022.

1.2 Methodology and Research Ethics

The case study in this research is based on the interviews of artists. I analysed this interview data using the research questions as a framework. The methodology used is qualitative research, as it has been traditionally viewed as a suitable research method on topics that do not have large quantities of previous research available.[3] Since the use of AI is a relatively new topic in art history and this thesis is focusing on the individual artist's experiences and insights on AI qualitative research was selected.

The research was conducted as semi-structured interviews. The specific approach I use in this thesis to analyse the interviews is the systematic thematic analysis described by D.A. Gioia. The Gioia method is a qualitative methodology based on constructivist grounded theory. Method could be used to formulate theoretical base and relation of themes from the data but the target in this study was to distinguish the themes which artists were touching about AI. In other words, the method is used in interpretivist way.[4]

Research Ethics and Privacy

The interviewees approved the research consent document I prepared for the research. It included background information questions and the research consent and the privacy statement. The document can be found in Appendix 4.
Despite participant consent not mandating it, direct quotes were shared with interviewees prior to the publication. I deemed this appropriate due to the interviews being conducted in Finnish, enabling participants to review the English translations.

The interview data in this study is not anonymised and it is explicitly stated in the consent consent signed by all the participants. This decision was based on the small size of the Finnish art scene, especially in the field of AI art. It would have been practically impossible to maintain the anonymity of the participants while still presenting their experiences and opinions on the research topic. No participant expressed a desire to

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[3] Pope, C., & Mays, N. (1995). Qualitative Research: Reaching The parts other methods cannot reach: An introduction to qualitative methods in health and health services research. BMJ, 311(6996), 42. https://doi.org/10.1136/bmj.311.6996.42
[4] Varpio, L., Paradis, E., Uijtdehaage, S., Young, M. (2020), The Distinctions Between Theory, Theoretical Framework, and Conceptual Framework. Academic Medicine 95(7):p 989-994, July 2020. | DOI: 10.1097/ACM.0000000000003075

stay anonymous. I would assume that this is because contemporary artists, by nature of their public role, are generally inclined to share their opinions and insights.
The raw interview recording files are stored on a removable media in a physical secure storage. I will not make them available publicly.

Moreover, as I practice what I preach, artificial intelligence has been employed in various aspects of the creation process of this master's thesis. I have utilised AI tools to search for relevant research articles and publications from the internet, to transcribe and to analyse the interviews and translate and formulate text. The detailed list of the AI tools utilised is in Appendix 5. Traditional software tools for writing the text and creating diagrams, such as Microsoft Word and Mermaid, has been used, as well.

1.3 Scope and Limitations

Due to the master's thesis scope, the participant pool was restricted to five artists from varied artistic disciplines. While this provided adequate insight within the study's parameters, a broader perspective would require a larger and more geographically and professionally diverse sample.
Like any methodology, the Gioia methodology also has limitations. First, it is essential to be aware that when conducting interviews, each informant presents their own personal perspective[5]. As any person, it should be noted that also the artists have different biases as well.

[5] Döringer, S. (2020). 'The problem-centred expert interview'. Combining qualitative interviewing approaches for investigating implicit expert knowledge. *International Journal of Social Research Methodology*, *24*(3), 265–278. https://doi.org/10.1080/13645579.2020.1766777

2 Artificial Intelligence

> *"An idea that is not dangerous is unworthy of being called an idea at all."*
> Oscar Wilde

The term "artificial intelligence" was coined by John McCarthy in a conference by Darmouth University focusing on machine learning 1956. He defined it as "the science and engineering of making intelligent machines, especially intelligent computer programs."[6]

The ISO/IEC established definition describes AI as the "capability of a functional unit to perform functions that are generally associated with human intelligence such as reasoning, learning, and self-improvement."[7] Stuart Shapiro defines AI in the widest sense as an attempt the attempt to program computers to do what only people could do[8].

2.1 Classification of AI

The field of artificial intelligence can be understood through several key taxonomies that help categorise different types of AI systems based on their capabilities, scope, and approaches, see Illustration 1.

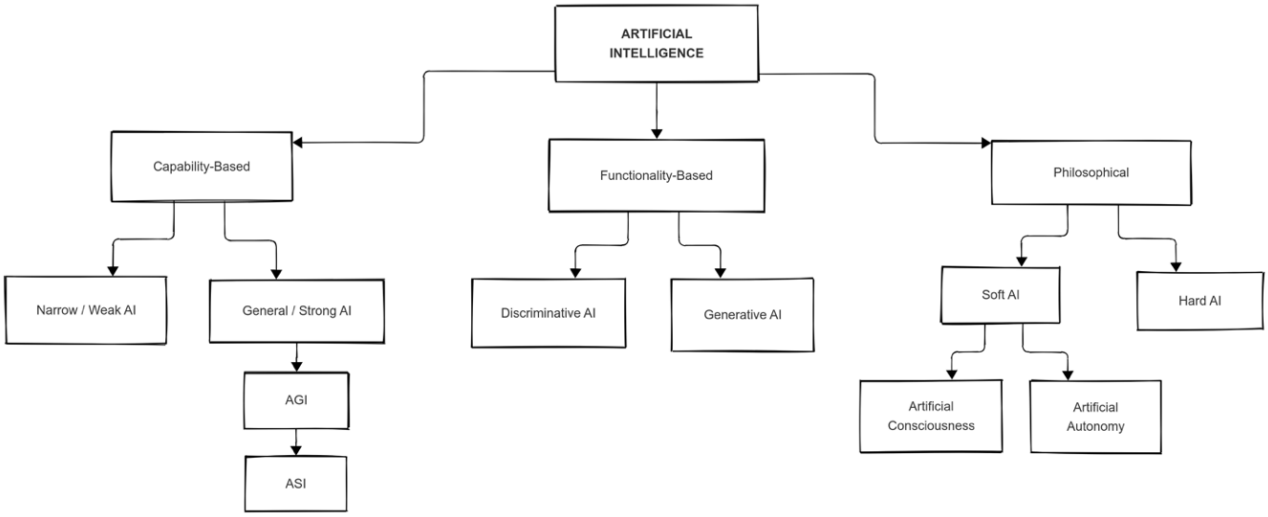

Illustration 1. Classification of artificial intelligence domains. Illustration by the author.

[6] Moruzzi, C. (2025), Artificial Intelligence and Creativity. Philosophy Compass, 20: e70030. https://doi.org/10.1111/phc3.70030, p. 1
[7] International Organization for Standardization. (2015). Information technology - Vocabulary (ISO/IEC 2382:2015). ISO.
[8] Stuart C. Shapiro. 2003. Artificial intelligence (AI). Encyclopedia of Computer Science. John Wiley and Sons Ltd., GBR, 89–93

Artificial intelligence can be classified into three distinct areas: those defined by their capabilities, those based on their underlying approach to processing information, and the philosophical domain.

The capability-based approach distinguishes between narrow (weak) AI and general (strong) AI. Narrow AI systems are designed for specific tasks and operate within defined domains.[9] All current AI systems, including both generative and discriminative models, fall into this category. Strong AI would match or exceed human-level intelligence across all domains.[10]

Approach-based classification is basically only applicable to narrow AI systems. Discriminative AI focuses on classification and prediction tasks, determining patterns and categories in existing data. Generative AI creates new content by learning and reproducing patterns from training data. These approaches are complementary because many modern AI systems incorporate both capabilities.

The philosophical concepts of "hard AI" and "soft AI" represent another way of categorising AI in high level, complementing the previously discussed taxonomies. Hard AI refers to systems that rely primarily on explicit rules, logic, and precise mathematical models. These systems typically perform best at well-defined problems where solutions can be derived through formal reasoning. Hard AI approaches align closely with traditional computer science and mathematical methods. Soft AI, in contrast, encompasses systems that handle uncertainty and imprecision, often using probabilistic methods and machine learning. This category includes many machine learning systems, particularly those dealing with natural language processing and pattern recognition in complex, real-world data.[11]

Within the weak/narrow vs. strong AI framework, both hard AI and soft AI approaches currently operate within the realm of narrow AI. These systems offer different strengths

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[9] Searle, J. R. (1980). Minds, brains, and programs. Behavioral and Brain Sciences, 3(3), 417–424. https://doi.org/10.1017/S0140525X00005756

[10] IEEE (2019*).* Ethically Aligned Design - A Vision for Prioritizing Human Well-being with Autonomous and Intelligent Systems*,* vol., no., pp. 1–294

[11] Haikonen, P. O. A. (2017). Tietoisuus, tekoäly ja robotit. Arthouse. Chapter 2.

for specific applications. When considering generative vs. discriminative AI, soft AI techniques have become particularly prominent in modern generative systems. However, hard AI principles often underpin the fundamental architectures and optimisation processes of these systems.

Hard AI approaches tend to be favoured in domains requiring precise, deterministic outcomes, such as mathematical optimisation. Soft AI methods typically excel in areas involving e.g. natural language understanding, or computer vision. The distinction between hard and soft AI has become increasingly blurred as systems often combine both approaches. AI architectures frequently integrate rigorous mathematical foundations with flexible learning capabilities, demonstrating the complementary nature of these classifications.

This integration reflects a broader trend toward hybrid approaches that leverage the strengths of multiple AI paradigms to address complex real-world challenges effectively. Strong AI can be classified and understood in various ways. Artificial general intelligence (AGI) is a system with the ability to apply intelligence to any problem, rather than just one specific problem. Artificial super intelligence (ASI) is a system with a superior intelligence to the average human being. Artificial consciousness would be the most advanced version of a strong AI system. An AI system that has consciousness, sentience and 'mind' could be more advanced version of this path. John Searle uses "strong AI" in this sense[12]. This is sometimes referred as AI singularity.[13] It has been speculated that ASI systems might develop their own cultures at some point, but this remains to be seen.[14]

There are various predictions on whether there will be Strong AI, if not at all. The predictions made by AI SW development companies are between two to five years, at least for AGI level of strong AI[15]. But this remains speculative and needs more research.

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[12] Searle, J. R. (1980). Minds, brains, and programs. Behavioral and Brain Sciences, 3(3), 417–424. https://doi.org/10.1017/S0140525X00005756
[13] Haikonen (2017), p. 265.
[14] Brinkmann, L., Baumann, F., Bonnefon, JF. et al. Machine culture. Nat Hum Behav 7, 1855–1868 (2023). https://doi.org/10.1038/s41562-023-01742-2
[15] Axios news (2025), Scott Rosenberg: AI's promised nirvana is always a few years off, https://www.axios.com/2025/02/20/ai-agi-timeline-promises-openai-anthropic-deepmind

2.2 Implementing AI in Software

There are various ways to implement AI in software systems. The distinction between AI software and conventional software lies primarily in how they process information and adapt their behaviour. Conventional software follows fixed, predetermined rules to produce consistent outputs for given inputs. It executes specific instructions, an algorithm, in a predictable manner, with each step explicitly programmed by developers. A basic AI software uses machine learning (ML) algorithms to recognise patterns in data and modify its behaviour based on those patterns. It can handle ambiguous inputs and generate novel outputs that weren't explicitly programmed. This allows AI systems to improve their performance through experience and training. This learning capability is the key differentiation as opposed to conventional software. Machine learning has been theorised already early 1950s, famously by Alan Turing[16].
Conventional SW uses straightforward logical operations and data structures, with clearly defined control flows and deterministic outcomes. AI software does not produce deterministic outcomes and often it is not possible to decipher afterwards how the AI system produced that specific outcome. This distinction continues to evolve as technology advances, with some modern systems combining elements of both traditional and AI-based approaches to solve complex problems effectively.

Basic forms of AI are discriminative AI models that focus on categorisation or prediction tasks. These can be taught to run specific data-oriented tasks and optimise time and effort needed. Ability to handle uncertainty and generalise makes it possible to create generative AI (GenAI) systems which have ability to create new content rather than simply analysing or classifying existing data.
A discriminative AI models are designed to classify data by learning the boundaries between different categories. They excel at tasks like image and speech recognition by predicting the probability of an input belonging to a specific class. These models typically use supervised learning, meaning they are trained on labelled data to identify

[16] Muggleton, S. (2014). Alan Turing and the development of Artificial Intelligence. AI Communications, 27(1), 3–10. https://doi-org.libproxy.helsinki.fi/10.3233/AIC-130579

patterns and form decision boundaries. In the context of art history these models could be used, for example, to identify painting styles based.[17]
A generative AI model, on the other hand, are designed to generate data, and they are trained to imitate some given example data to make those models useful for practical applications, such as generating images of certain subject. Both generative and discriminative networks are trained with machine learning to better suit the desired target, that being either recognising some patterns or generating/imitating certain patterns.

There are multiple GenAI architectures which differ how they generate new content. Some are better suitable for natural language and some are better, for example, in generating photographic images. At the time of writing image generating AIs are typically based on generative adversarial networks, GANs, consisting of competing generative and discriminative network. The first image generators were GAN-based but the so-called fusion models, which are based on mathematical methods, are gaining popularity because they are better in producing photorealistic images (see Appendix 2 for AI tools used by the artists interviewed for this study).
Sequential data, like text, can be generated by Generative Pre-trained Transformers (GPTs). They generate data by predicting the next element in the sequence based on the preceding elements. GPT models focus on generating sequential data like by predicting the next item in the sequence based on the input and training they receive. Large Language Models (LLMs) are typically GPT-based. GPT models are trained with vast quantities of data, and they get better as the training datasets grow bigger.

The mechanisms of generative models also explain why AI systems have high energy consumption. The larger the training dataset, the greater the energy consumed during the training process, and the more complex the target data, the higher the energy consumption during content generation.

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[17] Cetinić, E., Lipić, T., & Grgić, S. (2018). Fine-tuning convolutional neural networks for fine art classification. Expert Systems with Applications, 114, 107-118. https://doi.org/10.1016/j.eswa.2018.07.026

2.3 Hallucination

Humans perceive “hallucinations” in the works of generative AI. This is because the result generated by models does not have a human context or intent. The result is just “good enough” set of bits which was accepted by the discriminator network as a positive match with the training dataset (GANs), or it is the result of probability (GPTs).

More than often the result, an image for example, has some oddities which are not possible in the context of real world when judged by a human spectator. For example, a horse generated by an AI might have three ears. On the other hand, these hallucinations are often seen as a valuable source for new ideas by the artists.[18] My findings also support this view, see Chapter 4.4.

There is also recent research which points to the direction that models might express signs of flattering the user [19]. There sycophantic tendencies resulted OpenAI to roll-back a recently launched version of their model in late April 2025. There might be also some other hidden objectives that could be used for manipulating the user of a model.[20] But this also needs more research.

[18] Ploin, A., Eynon, R., Hjorth I. & Osborne, M.A. (2022). AI and the Arts: How Machine Learning is Changing Artistic Work. Report from the Creative Algorithmic Intelligence Research Project. Oxford Internet Institute, University of Oxford, UK. P. 26., https://www.oii.ox.ac.uk/news-events/reports/ai-the-arts/
[19] Carson Denison et al. 2024, Sycophancy to Subterfuge: Investigating Reward Tampering in Language Models; Anthropic, Redwood Research, University of Oxford; https://arxiv.org/html/2406.10162v3, checked 23.4.2025
[20] Samuel Marks et al., 2025, Auditing language models for hidden objectives, Anthropic, https://arxiv.org/html/2503.10965v2, checked 23.4.2025

3 Conceptual Framework

> *"Artistic objects are not problems to be solved, but the residue of bygone moments of human creativity that merit our attention."*
> Sonja Drimmer & Christopher J. Nygren[21]

As I described in the Chapter 2, AI software can be used to classify data and generate content. To get overall understanding on the current debate and critique, I analysed two systematic literature reviews on the landscape of AI and art. One of them is focusing on AI and fine arts, Oksanen et al.[22], and the other Stahl et al.[23], on AIs impact on wider context. Also, Cetinic et al. article reviewing AI in the context of art history and art was studied[24]. I recognised these key themes from the literature reviews:

- **Authorship ambiguity:** AI blurs lines between human and machine creativity.
- **Perception of audience:** There is bias against AI art.
- **Economic Impact:** There is debate about whether AI devaluate artistic labour, but it also creates new opportunities for artists.
- **Regulation and Ethical Concerns:** Regulation of AI in general, and data sourcing biases.
- **Intellectual Property Rights:** AI's impact on copyright frameworks and ownership.

These overall themes could be approached from different viewpoints when studied in the context of this thesis. I recognised and formulated these four themes as relevant for this study.

- Technological Innovations and Art
- Authorship and Creativity with AI Tools
- Regulation and Copyright Considerations
- Economic Impact on Artists

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[21] Nygren, C. ., & Drimmer, S. (2023). Art History and AI: Ten Axioms. International Journal for Digital Art History, (9), 5.02–5.13. https://doi.org/10.11588/dah.2023.9.90400
[22] Oksanen A. et al. (2023), Artificial intelligence in fine arts: A systematic review of empirical research, Computers in Human Behavior: Artificial Humans, Vol 1, Issue 2, 2023, ISSN 2949-8821, https://doi.org/10.1016/j.chbah.2023.100004.
[23] Stahl, B. C., Antoniou, J. et al. (2023). A systematic review of artificial intelligence impact assessments. Artificial Intelligence Review, 56(11), 12799-12831. https://doi.org/10.1007/s10462-023-10420-8
[24] Cetinic, E., & She, J. (2022). Understanding and Creating Art with AI: Review and Outlook. ACM Transactions on Multimedia Computing, Communications and Applications, 18(2), Article 66. https://doi.org/10.1145/3475799

These viewpoints are not an exhaustive list, but a more thorough analysis would have broadened the scope beyond the master's thesis scope. I use these themes as a conceptual framework for the case study in the Chapter 4.

3.1 Technological Innovations and Art

The history of material and tool development is not covered in this thesis, but it is relevant to understand that AI can been seen as “just another” new technology influencing the artistic process and artistic presentation.
The development of oil paints, linear perspective systems, and techniques like sfumato impacted art in the 15th century. The Renaissance era advancements enabled artists to achieve greater realism, depth, and emotional expression, contributing to the Renaissance ideals of human reason and power.

Photography, which was developed early 19th century, is another example of the intertwining of art and technology. It challenged traditional realism by bringing a new medium and inspired new presentation, which sought to capture fleeting moments and atmospheric effects.[25] Painters were previously conditioned to the notion of portraying. They were the ones able to make things look real. With the arrival of photography that was no longer needed. Portraying with photography became a profession. Painters started to explore new frontiers, and movements such as Impressionism and Expressionism were born.[26]
There were many new materials and techniques that emerged during the first half of the 20th century, such as acrylic paints, mass-produced objects and materials, and collage which were used to present new forms of artistic expression.

Digital Art History

During the last 20 years humanities, also art history as a discipline, has evolved to include also digital tools and methods. Brey identifies these approaches within this new

[25] Bakreski, Y. (2022). The impact of technological advancements on art – Parallels between the Renaissance, the discovery of photography, and the digital revolution. Journal of Arts and Humanities, 11(4), 17–25. https://doi.org/10.18533/jah.v11i04.2268
[26] European Parliament: Directorate-General for Parliamentary Research Services, Céu Santos, M. and Girão, L., The historical relationship between artistic activities and technology development, European Parliament, 2019, https://data.europa.eu/doi/10.2861/961315

"digital art history" that are not mutually exclusive, and there is some overlap between several of them[27]:

- **Reconstructing** lost works, monuments and experimental contexts, giving them a new digital form and making them available for the public.
- **Digital analysis of vast data archives** which have not been thoroughly studied before. This can now be done also remotely.
- **Utilising quantitative and computational methods** to find the social, economic, and political systems involved in the production of objects, buildings, and built landscape.

In the context of digital art history, AI could be seen as another new tool to be used by researchers, as presented by Büttner in the case of authenticating van Dyck paintings with AI-assisted software.[28]

Contemporary Art

In the latter part of the 20th century, especially after the 1970s, digital technology has had a transformative effect on art production and consumption. The digital era has provided artists with wide range of tools and art forms for expression, constituting a distinct aesthetic form.[29] Algorithmic art (since late 1960s), digital art (since the birth of personal computers, digital cameras and internet), and online media have changed both the creation and experiencing of art.[30]

On 21st century, new technologies are also changing how art can be sold and monetised in the digital domain. Non-fungible tokens (NTFs) based on blockchain technologies can be used to algorithmically mint, or "watermark", digital art pieces so that their uniqueness cannot be challenged.[31] NFT technology makes it possible for artists to sell unique art directly online themselves and has opened a new sales channel which can be used to bypass traditional art market (see artist Jenni Pasanen's comments about NFTs in Chapter 4).

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[27] Brey, A. (2021). Digital art history in 2021. History Compass, e12678. https://doi.org/10.1111/hic3.12678

[28] Büttner, N., De Feudis, A., & Popovici, C. (2024). The Interplay of Art Historical Connoisseurship and Artificial Intelligence in Authenticating a Painting Attributed to Anthony van Dyck. Kunstgeschichte. Open Peer Reviewed Journal., p. 6

[29] Bakreski, Y. (2022).

[30] Adeloye, A.A. & Kayode, T. D. & Akınlawon, T.K. (2024). The impact of technology on the production and consumption of contemporary art. Art Time, 6, 21-26.

[31] Li, R. (2024). Empowering visual artists with tokenized digital assets with NFTs (arXiv:2409.11790) [Preprint]. arXiv. https://doi.org/10.48550/arXiv.2409.11790

Auction houses and art dealers have also started to sell digital unique art to address this new market. On March 2025, Christie's arranged the first online auction for AI-assisted art. Some of the art pieces were purely digital (typically minted NFTs), and some were physical objects, such as prints. Many of the art pieces were combinations of digital and physical elements.[32] Roope Rainisto, who I interviewed for this study, had one artwork presented in the auction (see Chapter 5).

AI-synthesised faces are already indistinguishable from real human faces[33]. This makes it possible to create virtual characters who act like real humans. There have been Virtual Product Placements (VPPs) and Virtual People (Veeple), also called as Virtual Conversational Agents, in virtual reality that have been used for marketing but there has not been yet much artistic use.[34]

Because AI is different from previous technologies due to its potential to become autonomous it may have impact on how we see artist and art.[35] Currently, there are no truly autonomous AI systems, but there are experimentations of semi-autonomous AI software, such as BottoAI[36] and KEKE[37]. Art generated by them has been sold in the previously mentioned Christie's online auction in April 2025.
AI can interface and control high-precision robotics. This opens possibilities for art, as well. One of the first examples is Ai-DA robot designed by Aidan Meller. It is an android who creates paintings and is guided by an AI software.[38] Evolution of robotics may also change how human artists manage large art projects when physical robot assistants can be used for manual labour.

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[32] See Christie's International plc., online auction March 2025, https://onlineonly.christies.com/s/augmented-intelligence/lots/3837?sc_lang=en (checked 5.4.2024)
[33] Nightingale S.J., & Farid. H (2022), AI-synthesized faces are indistinguishable from real faces and more trustworthy, Proc. Natl. Acad. Sci. U.S.A. 119 (8) e2120481119, https://doi.org/10.1073/pnas.2120481119
[34] Rosenberg, L. (2022), Regulating the Metaverse, a Blueprint for the Future. XR Salento 2022, Part 1, LNCS 13445 Proceedings (pp. 1–10) Publisher: Springer Nature. 10.1007/978-3-031-15546-8_23
[35] Nordström, P., Lundman, R., & Hautala, J. (2023). Evolving Coagency between Artists and AI in the Spatial Cocreative Process of Artmaking. Annals of the American Association of Geographers, 113(9), 2203–2218. https://doi.org/10.1080/24694452.2023.2210647
[36] See BottoDAO, https://botto.com/works
[37] See Keke White Paper, https://neuripscreativityworkshop.github.io/2022/papers/ml4cd2022_paper13.pdf
[38] See Ai-DA, https://www.ai-darobot.com/about

It can be speculated what happens when autonomous AI systems (and AI-controlled robots) can hire human assistants. This would change the human-machine interaction fundamentally. There are already AI agent platforms which enable financial transactions between AI systems.[39] I anticipate that soon we will see first job marketplaces where humans can be hired by AI agents to complete tasks.

3.2 Authorship and Creativity

Defining creativity, and the question if machines, or software, can be creative, has been debated since early 1800s. One could argue that creativity is by definition only a human feature, and no artificial system can ever be creative. Ada Lovelace famously claimed in 1843 that an 'analytical engine' (that is how she called still then hypothetical software system) has no pretensions to originate anything, that it is merely a tool and follows the guidance of its human controller.[40]

But Alan Turing, who is considered a pioneer of contemporary computer science, challenged Lovelace's objection in 1950 claiming that it was grounded only on the evidence that she had available at her time. Turing claimed that "*It is quite possible that the machines in question had in a sense got this property [i.e. some degree of intelligence]"*

Since Turing, scientists and engineers have tried to develop software that displays creativity and could be considered on par with human abilities. Turing's claim was basically that we should conceive of human brains as machines. Therefore, if human brains can produce something new, machines should also be able to do the same.

According to Moruzzi, Margareth Boden identifies three features, or signs, of creativity: ability to come up with ideas or artefacts that are new, surprising and valuable.

Views on Creativity and AI

Wingstöm, Hautala and Lundman interviewed 52 Finland-based computer scientists and new media artists who use AI in their work[41]. The results suggest scientists and artists use similar elements to define creativity. However, the role of AI differs between the

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[39] See PaymanAI, https://paymanai.com/

[40] Moruzzi, C. (2025), Artificial Intelligence and Creativity. Philosophy Compass, 20: e70030. https://doi.org/10.1111/phc3.70030

[41] Wingström R., Hautala J & Lundman R (2024), Redefining Creativity in the Era of AI? Perspectives of Computer Scientists and New Media Artists, Creativity Research Journal, 36:2, 177-193, DOI: 10.1080/10400419.2022.2107850

scientific and artistic creative processes. Scientists need AI to produce accurate and trustworthy outcomes, whereas artists use AI to explore and play. Unlike the scientists, some artists also considered their work with AI co-creative.

At the time of writing new research has been published on internal mechanism of LLMs that suggest that they are beginning to form new mechanisms that have some capabilities of higher abstraction.[42] It raises questions on how creativity of AI will evolve in the future, and will it become a co-creator of art, not just a tool for artist (see Chapter 4, artists comments on working with AI).

Changing role of an artist

Pierre Bourdieu describes in his field theory how the field of art functions. Players in the field do not question the value of art, and gatekeepers maintain that not just anyone can enter the field. In Bourdieu's theory, cultural and social capital are needed to enter the field of art[43]. What if anybody could make art? What if AI becomes so creative on its own? The challenge AI poses is a concern for all fields of art and may affect the very concept of fine art.[44] The established artists will face new competition. The outrage of artists against use of AI in art has been sometimes vocal. For example, the Christie's auction I mentioned earlier raised opposition and thousands of artists wrote a petition to stop the auction.[45]

Traditionally artists have crafted physical materials manually and been personally and closely involved in the creation process. Contemporary art has already challenged this paradigm when artists started using ordinary items and materials in their art, moving focus from towards conceptual ideas rather than the physical process. Utilisation of AI can emphasise and widen this process, and artists must accept new methods of working and tools in the field of art.

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[42] Nanda, N., & the Anthropic Interpretability Team. (2025). On the biology of a large language model. Transformer Circuits. https://transformer-circuits.pub/2025/attribution-graphs/biology.html

[43] Bourdieu, P., & Wacquant, L. J. (1992). *An invitation to reflexive sociology*. University of Chicago press.

[44] Oksanen el al., 2023.

[45] Smithsonian Magazine (2025). Artists Sign Open Letter Protesting Christie's Upcoming All-A.I. Art Auction, https://www.smithsonianmag.com/smart-news/artists-sign-open-letter-protesting-christies-upcoming-all-ai-art-auction-180986061/

AI-assisted artistic process is illustrated in Illustration 1 (drawn by me based on Mazzone & Elgammal[46]). Artist is using GenAI system to generate content and directing the process by curating the output and selecting which outputs are used for more iteration with further instructions to the generative system. Finally, there will be the result which is representing the idea artist was trying to express.

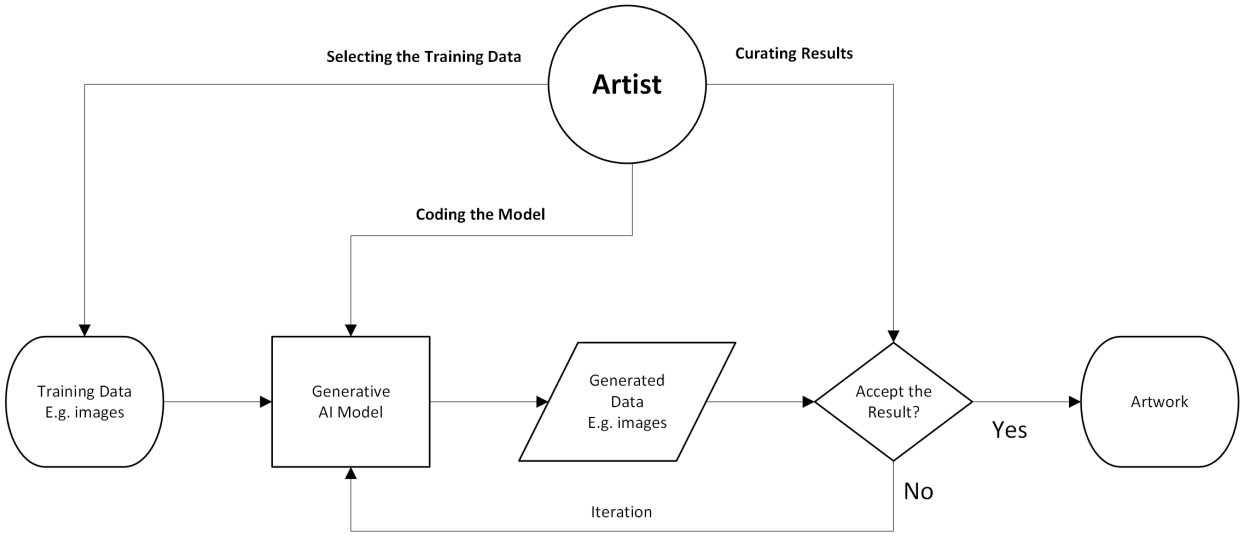

Illustration 1. Workflow when generative AI is used (Mazzone & Elgammal 2019).

Results supporting Mazzone's and Elgammal's view were reported by Kalving, Colley and Häkkilä, participants of their study said that AI could significantly change designers' role, as they would act as "*facilitators, curators, and integrators of AI-generated content, focusing on a comprehensive narrative.*"[47] This curation process also comes up in my interviews with the Finnish artist, see Chapter 4.

One could argue that the artistic process with traditional tools could also be considered as curating. I would take the editing a film as an example: some scenes are included and some excluded. I my view, the work with GenAI does not start with a fixed set of content (like the set of film scenes), the starting point is generated and is nondeterministic, each iteration is generating new content and opening new directions. Generated material can

[46] Mazzone, M., & Elgammal, A. (2019). Art, Creativity, and the Potential of Artificial Intelligence. Arts, 8(1), 26. https://doi.org/10.3390/arts8010026
[47] Kalving, M., Colley, A., & Häkkilä, J. (2024). Where AI and Design Meet: Designers' Perceptions of AI Tools. In NordiCHI '24: Proceedings of the 13th Nordic Conference on Human-Computer Interaction (pp. 1–8). Article 52 ACM . https://doi.org/10.1145/3679318.3685388

be seen as kind of “ready-made”, just like Duchamp’s bottle racks. In this way working with AI is, in my opinion, clearly is a curation process and might even become a co-creation when, in the future, more capable AI systems are available.

3.3 Regulation and Copyright Considerations

EU Artificial Intelligence Act (AI Act) which is applied from Feb 2025, ranks AI systems by their risk level and the legislation is based on the risk they pose to humans and the society. There are two categories of AI systems which are regulated. The systems having the “unacceptable risk” of breaking fundamental human rights are banned in EU. Additionally, all general-purpose AI models, considered as “high risk systems”, will have to comply with transparency requirements and EU copyright legislation. Any type of content that is either generated or modified with the help of AI need to be clearly labelled as AI generated.[48] It has been criticised that EU legislation is not well defined, e.g. AI Act’s relation to other data related regulation, such as GDPR.[49]
In Chapter 2, I presented how ASI might soon become sentient. Legislation would then have to consider if that kind of AI system is on par with humans what comes to human rights. Should it be considered as a legal person, a citizen? Currently, EU legislation would most likely ban those kinds of systems. Ethical issues are likely to arise if sentient AI would emerge. But at the time of writing this is speculative.

The ethical issues also arise AI is employed in art, especially those relating to intellectual property rights. Should the artist who developed the algorithm, the programmer who wrote the code, or the software itself receive credit for creating an AI-generated artwork? Copyright protection is typically granted to original works of authorship. This raises the question of whether an AI can be considered an ‘author’. The degree of human involvement is considered a crucial factor in legislation. If a human significantly modifies or transforms an AI-generated image, they may be able to claim copyright in those specific modifications. It might be difficult to find out what is the degree of human

[48] European Parliament. (2023). EU AI Act: first regulation on artificial intelligence. https://www.europarl.europa.eu/topics/en/article/20230601STO93804/eu-ai-act-first-regulation-on-artificial-intelligence
[49] Haataja, M. & Bryson, J., (2021). What costs should we expect from the EU’s AI Act? SocArXiv 8nzb4, Center for Open Science. https://ideas.repec.org/p/osf/socarx/8nzb4.html

involvement and how that should be weighed as compared to the involvement of software system.[50]

The line between "solely AI-generated" and "human-modified" can be blurry, and legal interpretations are still developing all over the world. Currently, in the U.S, the works created solely by AI lack the necessary human authorship for copyright.[51] EU legislation is taking a fairly similar approach, but as there aren't many court decisions yet, the situation is a bit unclear.[52]

Copyright legislation is a scattered landscape. China's AI regulation prioritises national security and social stability, as one would expect from a one-party state with no real rule of law. This influences its approach to data governance and the development of AI technologies.[53]

At the time of writing, there are many legal cases in courts and those are expected to give more clarity on this, especially in the U.S.[54] Generative AI Copyright Disclosure Act is debated in the U.S. Congress, and it will address also the legal status of learning data and how it should be handled.[55]

The legality of harvesting training data from the public internet is the second relevant aspect. There are multiple lawsuits at the time of writing about this issue. The core of AI companies' defence, most prominently OpenAI, against copyright claims rests on the doctrine of 'fair use'. OpenAI argues that the use of publicly available data for training constitutes fair use as the purpose is to create new, transformative content, not to reproduce existing works. They also highlight that their models generate new outputs

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[50] Frosio, G. (2022). Four theories in search of an A(I)uthor. In R. Abbott, & D. Geffen (Eds.), Research handbook on intellectual property and Artificial Intelligence (pp. 155–177). (Research Handbooks in Intellectual Property). Edward Elgar Publishing Ltd. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4004138

[51] Goldsmith, J., & Volokh, E. (2023). The relevance of Ross to geolocation and the Dormant Commerce Clause. Texas Law Review Online, 102, 30-36. https://texaslawreview.org/wp-content/uploads/2023/10/GoldsmithVolokh.10.2.23.FINAL_-2.pdf

[52] Hutson, J. (2024). The Evolving Role of Copyright Law in the Age of AI-Generated Works. Journal of Digital Technologies and Law, 2(4), 886–914. https://doi.org/10.21202/jdtl.2024.43

[53] Bird & Bird. (2024). Copyright protection for AI generated works – Recent developments. https://www.twobirds.com/en/insights/2024/china/copyright-protection-for-ai-generated-works-recent-developments

[54] NPR (2024, March 22). Tennessee passes law to protect musicians and artists from AI. https://www.npr.org/2024/03/22/1240114159/tennessee-protect-musicians-artists-ai

[55] U.S. Congress. (2024). Generative AI Copyright Disclosure Act of 2024, H.R. 7913, 118th Cong. (2023–2024). https://www.congress.gov/bill/118th-congress/house-bill/7913/text

based on an understanding of language and the world.[56] If that will be uphold by courts it would mean the companies would not be legally obligated to compensate for the use of copyrighted material for transformative purposes, such as AI training.
The juridical status of training data use is currently debated and contested. It seems that existing regulation is not yet addressing this issue well enough.[57] The outcomes of these cases and the implementation of new AI regulations will likely shape the future legal landscape of AI training data. The outcome might have significant impact on income of some artists.

Economic Impact on Artists

In their recent research Lovato et al. studied U.S. artists opinions on ownership and fairness of generative AI in art, and how the artists should get their compensation when their art is used as material for GenAI. Most survey participants believed that AI model creators should be required to disclose the art and images used to train them (this is generally not the case in the spring 2025). Also, the majority of 459 participants saw generative models as a threat to art workers and their income. Notable result from this study was that only 1% of participants suggested taxing the AI companies who provide generative AI systems (see Chapter 4 for Teemu Mäki's comments on AI tax).[58]
Generative AI being such a new technology, there is not yet much research on the economic impact of AI to artists. An online survey by German Stiftung Kunstfonds had 3000 participants from Germany but that was not a peer-reviewed study. According to the survey, majority of artists feared losing income because of AI. The survey participants had similar opinion to the Lovato et al.'s study in the US: German artists also wanted AI model creators to be required to disclose the art used in training.[59]
BI Norwegian Business School is starting a research project, funded by The Research Council of Norway, to study AI technologies impact on the cultural sector, and the study

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[56] NPR (2025, March 26). Judge allows 'New York Times' copyright case against OpenAI to go forward. https://www.npr.org/2025/03/26/nx-s1-5288157/new-york-times-openai-copyright-case-goes-forward (checked 18.4.2025)
[57] Buick, A. (2025). Copyright and AI training data—transparency to the rescue? Journal of Intellectual Property Law & Practice. Volume 20, Issue 3, March 2025. Pages 182–192. https://doi.org/10.1093/jiplp/jpae102
[58] Lovato, J. (2024). Foregrounding artist opinions: A survey study on transparency, ownership, and fairness in AI generative art (arXiv:2401.15497). arXiv. https://arxiv.org/abs/2401.15497
[59] Stiftung Kunstfonds, & Initiative Urheberrecht. (2024). KI und bildende Kunst: Studie zu Chancen und Risiken. https://www.kunstfonds.de/programm/publikationen/ki-und-bildende-kunst

will also focus on the potential threat of artists losing income as AI produces content more quickly and at lower cost.[60]

Studies reveal some evidence that AI-generated art may be valued lower than human-made art. Horton, White & Iyengar[61] made large survey and there was significant devaluation of AI art. Wu et al.[62] surveyed how people in U.S. and China perceive AI-generated artworks. The difference in perceptions between AI and human artworks were not big.

Digital governing structures can be defined to make copyright governance and revenue distribution more democratic and transparent, and that way enhance the income possibilities of artists. One example is artist Holly Herndon's Holly+ which is a so-called digital decentralised autonomous organisation (DAO[63]) based on blockchain technology.[64] The members of the Holly+ DAO vote on the minting of artworks made using Holly+ and tokens are distributed to the members of the DAO (and the creator of the artwork). This shares the profits from the usage of Holly+ recorded on a blockchain. This model connects the value to engagement: The more people engage with the art, the more valuable the art itself is perceived to be.[65]. This may democratise the value chain and empower artists, and minorities, by enabling them to reach global audience directly without relying on traditional gatekeepers.

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[60] BI Norwegian Business School. (2024, October 11). BI receives 12 million NOK for a research project on AI in the cultural sector. https://www.bi.edu/about-bi/news/2024/10/bi-receives-12-million-nok-for-a-research-project-on-ai-in-the-cultural-sector/

[61] Horton Jr, C.B., White, M.W. & Iyengar, S.S. (2023). Bias against AI art can enhance perceptions of human creativity. Sci Rep 13, 19001. https://doi.org/10.1038/s41598-023-45202-3

[62] Yuheng W., Yi M., Zhipeng L., Kun X. (2020). Investigating American and Chinese Subjects' explicit and implicit perceptions of AI-Generated artistic work. Computers in Human Behavior, Volume 104, 2020, 106186. ISSN 0747-5632, https://doi.org/10.1016/j.chb.2019.106186

[63] See definition of DAO White Paper, https://github.com/the-dao/whitepaper

[64] See Holly+ website, https://holly.plus/ (checked 23.4.2025)

[65] Tatar, K., Ericson, P., Cotton, K., Del Prado, P.T.N., Batlle-Roca, R., Cabrero-Daniel, B., ... Hussain, J. (2024). A Shift in Artistic Practices through Artificial Intelligence. Leonardo 57(3), 293-297. https://muse.jhu.edu/article/929860

4 The Case Study of Finnish Artists

> *"Artificial intelligence is like a puppy, always darting off, and a bit of a rascal."*
> Roope Rainisto

The study is based on interviews with five Finnish contemporary artists who have utilised artificial intelligence in their work. Interviews were analysed using qualitative interview analysis methodology (see Chapter 1) and the results were considered via a lens of selected theoretical approach to get insight on research questions.

4.1 The Participants and the Interviews

A diverse group of five Finnish artists (see Table 1), including one Swedish speaker, were interviewed. Their ages ranged from 31 to 57, their full-time professional experience from 3 to 35 years, and they represented different genders. Each had a history of artistic work before their full-time careers, and their current practices often involved multiple disciplines.

Finding the Participants

I started the search for Finnish artists and architects utilising AI in their work by searching the internet with search engines using various AI related phrases. I also posted requests for help in social media (LinkedIn and BlueSky) and people to send me tip on Finnish artists working with AI. I also compiled lists of Finnish AI artists using GPT, Clause and Gemini AI models to harvest the internet. I noticed that there is relative scarcity of full-time artists publicly exhibiting AI-assisted artworks.

I contacted the found artists directly myself using either email or LinkedIn message. I first contacted six artists, and it resulted in a high response rate, with five of the initial six contacted agreeing to participate. The sixth artist I contacted did never answer to my requests. To maintain the study's scope within the master's thesis parameters, no additional participants were sought.

Given Finland's size and the relatively small art sector, it was difficult to identify AI artists with no prior connection to me or University of Helsinki. Two interviewees, Franck and Siitonen, were previously acquainted to me, and efforts were made to maintain objectivity.

I received positive answers from the five artists within a week but finding architects who use AI in their design work was challenging. I asked for more help in social media and within my own social circles, and it took two more weeks to find persons who said they had experience with AI and were willing to meet me (see paragraph Architecture in this Study).

Identifying artists who did not identify as male proved challenging. I found only a limited number of non-male artists publicly documenting their use of AI. While the underlying reasons remain unclear, the association of AI with software tools and algorithms, fields historically dominated by male practitioners may be a contributing factor. This male bias has been prevalent in the gender distribution of students in software engineering studies, even though e.g. Ada Lovelace is considered one of the pioneers of computer science, as I mentioned in Chapter 3. When I started studying software engineering in the university in 1996, there were only a handful of non-male students. I anticipate that increased accessibility and integration of AI into consumer software will broaden participation of non-male artists in the future.

Name	**Age**	**As Full-time Artist**	**Field of Art**	**Gender***	**Native language**	**Education**
Arthur Franck	44	20 years	Documentary	Male	Swedish	Bachelor of Arts
Teemu Mäki	57	35 years	Multi-disciplinary	Male	Finnish	Doctor of Fine Arts
Jenni Pasanen	31	4 years	Mixed media	Female	Finnish	Bachelor of Fine Arts
Roope Rainisto	45	3 years	Digital Art	Male	Finnish	Master of Science (Tech.)
Pasi Siitonen	46	15 years	Musician, Lyricist, Producer	Male	Finnish	A-levels / Matriculant
* Female/Male/Other/Prefer not to say						

TABLE 1. The artists interviewed.

I would consider Rainisto and Pasanen the most AI-oriented artists in this study. They both create almost only digital art and utilise AI widely. Both are also selling their art in digital format, utilising NFTs. Pasanen and Rainisto have also started their full-time artistic career when AI was emerging, and NFTs have been the enabler for them to monetise their artworks. The fact that Rainisto holds a master's degree in technology, not fine arts, and he now works full-time on AI-assisted art suggests he could be considered an AI-era artist.

Mäki is a well-established and famous artist in Finland and even though he has a traditional fine arts education in painting he is open to new conventions and technologies. He is a true multi-disciplinary artist works on poems, music, mixed media, AI and is also contributing to academic research.

I would consider Franck and Siitonen also well-established artists in their own fields. Franck has directed, scripted, edited and produced multiple award-winning full-length documentaries. Siitonen is very curious about technology, and he has worked with computers already in the late 80s and he says that basically all the music he creates is in digital format.

The Interview Questions

To formulate the set of questions for the interviews, I identified key themes concerning AI and artistic work. These topics were refined through discussions with Pekka Karppinen, also known as Kuningas Pähkinä, a Finnish musician, lyricist, and producer with two decades of professional experience. Karppinen has used AI in his projects and his insights proved invaluable.

The discussion topics selected as interview questions were:

- How do the participants describe themselves as artists and what is their background.
- Artificial intelligence in general, what does that mean to them.
- What AI tools have they used, and how.
- Concerns and positive aspects about AI.
- Learnings from one's own artistic work.
- Recommendations to other artists.
- Future of AI, for one's own work and for the society.
- Open feedback about AI and this research.

Following the identification of discussion topics, I formulated around 30 questions for the interviews. The questionnaire was commented by Tom Björklund, a Finnish artist with 25 years of professional experience in painting and illustration. Björklund utilises AI applications in his digital illustration work. The feedback from both Björklund and Karppinen, informed the refinement of the questionnaire's content and sequence. The interview questions are presented in the Appendix 1.

Gioia and Hamilton emphasise that questions should not be too narrow or leading-the-witness. A good interview arrangement and set of questions pave the way for informants to willingly reveal what Gioia and Hamilton consider "proprietary information", information that is a bit more implicit and might be challenging to address by direct questions.[66] Thus, the semi-structured interviews, designed to be open-ended, were employed to accommodate the evolving nature of the subject and the diverse experiences of participants. The question sequence was adaptable, allowing for responses to guide the conversation. Interviewees were asked to reflect on their past work and consider the future impact of AI on their field and society.

The Interview Arrangements

The interviews were conducted in Finnish. One of the interviews was conducted in person and the other four interviews were conducted online. Online interviews were arranged with Microsoft Teams online meeting software. Online interviews were recorded with video and audio, and the in-person interview was conducted in the interviewee's studio with audio-only recording.
Interviews were transcribed and saved as MS Word documents using Microsoft Copilot AI tool, either from the video recording or from the audio recording. I edited the transcriptions manually by removing extra words and correcting misinterpretations.

The target duration of an interview was set to one hour. I assumed it to be a suitable length considering the practical arrangements with the interviewees and the work required for the transcriptions and the interview analysis. This target time was taken in

[66] Gioia, D. A., Corley, K. G., & Hamilton, A. L. (2013). Seeking Qualitative Rigor in Inductive Research: Notes on the Gioia Methodology. Organizational Research Methods, 16(1), 15-31. https://doi.org/10.1177/1094428112452151

account when drafting the interview questions. The interviews took place between 20 February and 8 March 2025, with durations ranging from 1 hour 5 minutes to 1 hour 17 minutes. The meeting with Keskinen, Tervonen and Muhonen was held at 14th of March 2025 at the office of Geometria Architecture and Lahdelma & Mahlamäki Architects.

AI Tools Utilised by the Interviewees

During the interviews, the participants mentioned AI tools they have used in their artistic work. It is worth noting that the list hardly is comprehensive, it only includes those tools the interviewees mentioned during the interviews. The table of tools can be found in Appendix 2. The list shows that the interviewees have used and tested AI widely in their artistic work. It is assumed that this list is likely to change fast over time because introduction of new AI tools, and the existing ones are updated and replaced by new versions.

Some interviewees reported that they had already stopped using certain tools in their work. It seems that the longer an artist had been working with AI, the more tools they tended to have abandoned. I would partly attribute this to the natural evolution of the tools themselves, and some interviewees also mentioned that they had found certain tools to be better suited to their work than others.

Architecture in This Study

Traditionally, architecture has been one of the research domains in art history. Initially, I wanted to include at least one architect in the interview group. When I started to search for interview participants Identifying architects actively utilising AI into their artistic design process proved challenging.

I got a contact with the CEO and owner of Geometria Architecture, Markus Wikar, who has thorough insight on status of AI in architecture, especially in Finland. He stated that AI is not much used in the actual artistic design process yet. Wikar recommended that I meet with his team and the team of Mahlamäki Architects, but we were not expecting a full research interview because of lack of use of AI.

I met architect Janne Keskinen from Geometria Architecture[67], construction engineer and construction architect student Matti Tervonen, and construction architect student Elvis Muhonen from Lahdelma & Mahlamäki Architects[68]. Tervonen and Muhonen are working on a project where they analyse how AI could be used more effectively in the work of architecture firms as part of their studies at Metropolia University of Applied Sciences. Keskinen has been using digital tools and design software in his design work for years.

Keskinen, Tervonen and Muhonen told me that AI is yet to prove its usefulness in their field of business. All of them had experience on AI tools and software with various phases of the design and production process. Tervonen and Muhonen saw the use of AI most useful in categorising and archiving the project documentation and making verbal-only phases of process accessible. Utilising meeting tools with AI -assisted transcription capabilities and enabling search capabilities help all the parties of the design process to communicate better and the design decisions can be documented better for future use. They also speculated that AI could potentially help architects with planning and construction permit processes. AI could assist to better and faster to formulate the project parameters and specifications when applying various permits.

Keskinen also raised the potential of using AI-assisted tools to create design ideas for urban space planning which often has plethora of compulsory regulative parameters. He speculated that in the future AI could help architects to generate ideas for overall design faster without having to concentrate on fine-grained regulatory parameters and restrictions. Architects could focus on selecting the most potential options matching their vision and iterate those options further.

All of them also speculated that in the future AI-assisted image generation might replace the need of stock photos or other reference photo archives when building reference material and initial ideas for designs. This is aligned with the discussion I have seen outside Finland, e.g. architect Moshe Sadfie, the founder of Safdie Architects, was talking about this same topic when interviewed about the possibilities of AI.[69] Keskinen sees it

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[67] See Geometria Architecture Oy website, https://geometria.fi/

[68] See Arkkitehtitoimisto Lahdelma & Mahlamäki Oy, https://lma.fi/

[69] Harvard Gazette. (2023, August 15). Is art generated by artificial intelligence real art? https://news.harvard.edu/gazette/story/2023/08/is-art-generated-by-artificial-intelligence-real-art/

possible that AI-assisted image generation might help initial phase of sketching, as well. He said that current software tools are not yet good enough to be viable option for traditional digital or manual sketching.

The consensus in the meeting was (March 2025) that AI primarily serves technical functions within architecture, such as engineering software. Also, the research I found on AI and architectural work were showing similar results: the adaptation of AI is still low in the field and focus on data management[70] and modelling tools[71]. This is in line with the insight from the interview with Keskinen, Tervonen and Muhonen. Consequently, an architect interviews were excluded from this study, as it would have broadened the scope beyond the master's thesis parameters and the input to the study would most likely have been limited.

4.2 Theoretical approach

Artificial intelligence may impact multiple aspects of the artistic practice. I have identified these theories and approaches which I apply to analyse the results: Medium theory, Critical Theory, Authorship and Ownership, Technophobia and technological determinism.

Medium Theory

Medium essentialism is a philosophical theory stating that each artistic medium, such as painting, sculpture or photography, has its own distinctive properties that define and constrain its possibilities.[72] This view focuses on how the characteristics of a particular medium influence the artwork that is created. It suggests that the medium itself is not just a neutral conduit but actively shapes that content and its perception.

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[70] Li Y, Chen H, Yu P, Yang L. (2025). A Review of Artificial Intelligence in Enhancing Architectural Design Efficiency. Applied Sciences. 2025; 15(3):1476. https://doi.org/10.3390/app15031476

[71] Pouliou, P., Palamas, G., & Horvath, A.-S. (2024). Decisions We Should Put in the Algorithm: Mapping architects' attitudes towards computational and AI-powered tools for practice. In N. Gardner, C. M. Herr, L. Wang, H. Toshiki, & S. A. Khan (Eds.), Accelerated Design - 29th International Conference on Computer-Aided Architectural Design Research in Asia, CAADRIA 2024 (Vol. 3, pp. 49–58). Article 223 The Association for Computer-Aided Architectural Design Research in Asia (CAADRIA). https://doi.org/10.52842/conf.caadria.2024.3.049

[72] Whitham, G., Pooke, G., & Newall, D. (2012). Clement Greenberg, "Modernist Painting" (1960). In Fifty Key Texts in Art History (1st ed., pp. 116–120). Routledge. https://doi.org/10.4324/9780203138786-30

Considering AI as an artistic medium means that its unique capabilities and limitations must be analysed and to consider how these characteristics impact artists' creative choices. AI as a medium possesses many distinctive features, such as algorithmic generation, its reliance on vast datasets for training, and the potential for interactive feedback between the artist and the AI. These qualities shape the artistic possibilities offered by AI, differentiating it from traditional mediums like sculpture or film.
Mitchell's 'medium theory' differs from Greenberg's essentialism by emphasising the cultural, historical, and discursive dimensions that shape how we interpret a medium. Mitchell suggests that media are cultural constructs, not merely sets of fixed material or technological properties.[73]
This theoretical view can be used as a lens to analyse how the interviewed artists see AI in their artistic work and how they compare this new technology, or medium, with other artistic media and tools.

Critical Theories

AI tools potentially replicate old hierarchies because training data might be skewed towards heteronormative male-dominated Western art canon, and it could marginalise authors and aesthetics originating from other domains. This might even strengthen old gender and colonial structures, as Drimmer claims.[74]
Welch did a research on women artists and it indicated that male bias remains prevalent in the artworld, and the introduction of AI could potentially increase existing inequalities.[75] UNESCO's study suggested that AI produced stereotypical narratives on gender and minorities.[76] On the other hand, as Philippe Luna argues in Cherwell magazine, AI may also amplify previously marginalised voices because in the (Western) internet because also the content created by minorities is publicly available and can just as easily be used for AI training.[77]

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[73] Mitchell, W. J. T. (2005). What Do Pictures Want? The Lives and Loves of Images. University of Chicago Press
[74] Nygren & Drimmer (2023)
[75] Welch, C (2024). Beyond the Brush: How Women Artists Navigate Communication and Creativity Amidst the Rise of AI. Theses - ALL. 832. https://surface.syr.edu/thesis/832
[76] UNESCO (2023). Challenging Systematic Prejudices: An Investigation into Gender Bias in Large Language Models, International Research Centre on Artificial Intelligence, CI-2024. https://unesdoc.unesco.org/ark:/48223/pf0000388971
[77] Luna P. (2024), Artificial Insights: Decoding Diversity and Redefining Art History with AI, 29th April 2024. Oxford Student Publications Limited. https://cherwell.org/2024/04/29/artificial-insights-decoding-diversity-and-redefining-art-history-with-ai/, checked 10.4.2025

Artist income opportunities are also questioned by many, and this can be approached by Marxist theory. Diana argues that digital data functions similarly to Marxian money as a universal abstraction. This leads to forms of dehumanisation and alienation. It points to the exploitation of workers involved in creating the data necessary for AI systems, artists and the people who have been used in training.[78]
Bourdieu's views on how old gatekeepers tend to restrict new players entering the field of art could also be used to understand the position of emerging AI artists in the established artworld. On the other hand, as discussed in Chapter 3, new software defined government models for ownership based on DAOs and NFTs might also open new opportunities to empower artist in the digital world.

Also, the use of AI to produce fast-paced digital content could be criticised because that is wasting valuable energy through training and execution of AI software.[79] AI systems can analyse customer behaviour and lead to hyper-personalisation of marketing, potentially encouraging increased consumption.[80] This might accelerate harmful environmental waste and increased greenhouse gas emissions.

Authorship and Ownership

Authorship is also challenged when AI is used to replicate human artist. Who is the author if, for example, a deceased artists are artificially "resurrected" with the help of AI, continuing their lives as virtual artists. The works of a deceased artist could be given to a generative AI system and used to create new art which could not be distinguished from the "originals".[81]

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[78] Diana S. (2021) Rewriting Marx to expose the data society and AI, in «Cambio. Rivista sulle trasformazioni sociali», Vol. 11, n. 21: 199-211. doi:10.36253/cambio-10637
[79] Zhuk A. (2023). Artificial Intelligence Impact on the Environment: Hidden Ecological Costs and Ethical-Legal Issues. Journal of Digital Technologies and Law. 2023;1(4):932-954. https://doi.org/10.21202/jdtl.2023.40. EDN: ffvrya
[80] Sipos, D. (2024). Harnessing Artificial Intelligence for Hyper-Personalization in Digital Marketing: A Comparative Analysis of Predictive Models and Consumer Behavior. Technium Business and Management. 9. 47-55. 10.47577/business.v9i.11724
[81] Wentzel, W. (2023). AI: Disrupting bonds between music, artists and audiences. FMQ. Music Finland ry. https://www.fmq.fi/articles/ai-disrupting-bonds-between-music-artists-and-audiences

Lundman and Nordström interviewed 26 artists utilising AI in Finland. The relation between the artists and AI varied, and the role of AI was seen either as a tool, a medium or a partner. Some described the using of AI as collaboration, play, experimentation, and jamming. But it was also seen as hard work involving surprise and the fear of how the AI will function, or whether the whole system will crash.[82]

Zhang and Li studied how 20 novice visual artists in the UK perceived AI as a tool in their work.[83] The results showed that the artists did not feel satisfied by the quality of current AI tools, and they felt a lack of originality in the AI-generated content. There were also copyright related concerns, especially related to the training data. The case analysis will give more insight on this in Finnish context.
According to professor Hannu Toivonen AI is still better considered to be a tool, not a companion or a friend. It does not understand the wider context, it does not have any target, or emotions or empathy.[84]

Walter Benjamin introduced the concept of "aura", and it is also related to this debate. Juha Sipilä suggests in his master's thesis that even though the physical aura of the artwork is disappearing through digital form, digital art introduces new forms of aura. These leverage the new capabilities that digital art provides, such as interaction and dynamism. Sipilä claims that the concept of uniqueness must be rethought when studying an immaterial artwork. I would also argue that AI does not take away the perceived uniqueness of the artwork. It does not make art any less "authentic".[85]

Technophobia and Technological Determinism

There are some indications that AI has resurrected the fear of technology. Technophobia has emerged many times in history when new innovations have emerged and started to

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[82] Lundman, R. & Nordström, P. (2023) Creative geographies in the age of AI: Co-creative spatiality and the emerging techno-material relations between artists and artificial intelligence. Transactions of the Institute of British Geographers, 48, 650–664. Available from: https://doi.org/10.1111/tran.12608
[83] Zhang S., & Li. S. (2024). "Confrontation or Acceptance": Understanding novice visual artists' perception towards AI-assisted art creation (arXiv:2410.14925v1). arXiv. https://arxiv.org/abs/2410.14925v1
[84] Toivonen, H. (2024, April 24). Tekoäly työkaverina vai työkaluna – Mitä generatiivinen tekoäly todella osaa? Telma. https://telma-lehti.fi/tekoaly-tyokaverina-vai-tyokaluna-mita-generatiivinen-tekoaly-todella-osaa
[85] Sipilä, J. (2025). Uniqueness, Authenticity and Authorship of Artwork in Digital Art. Master´s Thesis. University of Helsinki

impact on the daily lives of ordinary people. I have experienced this myself when talking about this thesis with other students in the university. Some of the comments have been negative, even hostile, towards use of AI in art.

AI has raised some vocal opposition. There have been artist-led campaigns against AI in art, against art institutions presenting AI art and art market players, such as auction houses.[86] Miyazaki et al. studied Twitter posts 2019–2023 and analysed the sentiments of people with different occupational background and exposure to AI. They found that more people have been exposed to the AI in their personal work more positively they feel about it.[87] This suggests that because many people still don't have much personal experience of utilising AI there is more fear about it.

Also, in the discussion relating AI there are signs of technological determinism. AI is seen as unstoppable force which cannot be controlled, and it will change many fields of economy and will impact people's daily lives, that it just cannot be guided or regulated. This relates especially to the debate about copyright related questions.[88] In the UK, the research done by Cave, Coughlan and Dihal did a nationally representative survey of the UK population (sample of 1078 people) on their perceptions of AI. It had similar results: people felt that felt they had no control over AI's development, citing the power of corporations or government, or versions of technological determinism.[89]

4.3 The Analysis Process

All the five artist interviews were analysed in three-stages utilising the Gioia method. The Gioia method consists of three stages.[90]

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[86] Sky News. (2025, February 10). Thousands of artists call for 'mass theft' AI auction to be cancelled. https://news.sky.com/story/thousands-of-artists-call-for-mass-theft-ai-auction-to-be-cancelled-13306656

[87] Miyazaki, K., Murayama, T., Uchiba, T. et al. (2024). Public perception of generative AI on Twitter: an empirical study based on occupation and usage. EPJ Data Sci. 13, 2 (2024). https://doi.org/10.1140/epjds/s13688-023-00445-y

[88] Héder, M. (2021). AI and the resurrection of Technological Determinism. Információs Társadalom XXI, no. 2 (2021): 119–130. https://dx.doi.org/10.22503/inftars.XXI.2021.2.8

[89] Cave S., Coughlan K., Dihal K. (2019). "Scary Robots": Examining Public Responses to AI. In Proceedings of the 2019 AAAI/ACM Conference on AI, Ethics, and Society (AIES '19). Association for Computing Machinery, New York, NY, USA, 331–337. https://doi.org/10.1145/3306618.3314232

[90] Gioia D. A., "A systematic methodology for doing qualitative research." *Journal of Applied Behavioral Science*, vol. 57, 2021, pp. 20–29.

1. First-Order Concepts (Informant-Centric)
    a. Capturing the raw data, in the interviewee's own words.
    b. Identifying direct quotes, called "1st-order concepts", preserving the original voice of the interviewee.
2. Second-Order Themes (Researcher-Centric)
    a. Analysing the 1st-order concepts, looking for patterns.
    b. Grouping 1st-order concepts into broader categories called "2nd-order themes".
3. Aggregate Dimensions (Theoretical level)
    a. Analysing 2nd-order themes and grouping them into even broader, more abstract categories called "aggregate dimensions".
    b. Aggregate dimensions represent the main themes that emerge from the interview data.

I used the method for each of the interviews and identified the aggregate dimensions. The findings from the interviews were combined into one aggregate dimension, a set of higher-level themes which have emerged from the data. These final thematic categories are employed to analyse the research questions through the lens of the chosen theoretical approach (see chapter 4.1) and previous research (see chapter 2 and 3).

First, the transcriptions of the interview recordings were generated using Microsoft Copilot. Then I proof-red and edited the transcriptions manually to reduce repetition and to fix transcription errors.
The transcribed, edited and proof-read transcription documents were processed with GTP-4.5-Preview AI model. The software was tasked to follow the Gioia methodology to produce a three-stage analysis on each of the five interviews. I conducted multiple rounds of iteration and I analysed each iteration manually, compared the results to the data and used the results for further iterations. The final version of each interview results was translated by me, assisted by Gemini AI tool, from Finnish into English.
The analysis of the interview with Pasi Siitonen can be found on Appendix 3. Analysis has direct citations from the interviewee and first-degree and second-degree dimensions were identified and I used them to construct the aggregate dimensions which represent the wider themes of the interview data. Similar analysis chart was compiled for each of the five interviews.

Finally, I synthesised the five individual interview analysis charts into a single aggregate analysis. This work involved several iterations with the AI tool. I compiled the final chart

by curating these iterations and making qualitative judgements informed by cross-referencing the interview transcripts. I also amended the first-order and second-order findings to better reflect my own insights and interpretation of the interview content.

5 The Results

> *"I think you should try everything. There's no reason to fear or be morally disgusted or think that artificial intelligence is some sort of fiddle or just plain silly."*
> Teemu Mäki

I constructed four aggregate dimensions, representing the main discussion themes from the interviews: Artistic Process, Artist's Identity and Role, Concerns and Critical Perspectives, and Future Considerations. I constructed the dimensions by combining the individual interview thematic analysis charts produced with AI assistance, and my own manual assessment, insights, and cross-checking of interview transcriptions.

5.1 Artistic Process

All the participants considered influence of AI as significant to their work: it gives them new ideas and help them to work faster and achieve more. The hallucinations of AI, which I described in Chapter 2, are seen as intriguing and serendipitous, something that cannot be easily achieved with traditional tools. AI enables a rapid, iterative approach to creating, allowing for quick idea generation. This mirrors Mazzone and Elgammal, I mentioned in Chapter 3, highlighting the evolving workflow towards artists curating and guiding AI's outputs according to artist´s intent. Also, the unique affinities and limitations of AI and a new medium were mentioned, and they were seen as an inspiration, this resonating with medium theories introduced in Chapter 4.

Teemu Mäki said that he could not think any field of art which will not eventually be impacted. For him, AI helps to concentrate on the most interesting aspects of the process, skipping some "dull" phases. This was also the shared view with all the participants: AI can be used to make things happen faster.

This view was shared by Keskinen in the context of architecture when model pictures and presentations of new buildings can be created faster and with lower cost. This may help to create better designs because more iterations can be studied before final decisions. Keskinen highlighted the security aspects of using AI, noting that in architecture, there's no room for errors in structural integrity or legally binding

regulations. Consequently, Keskinen and his colleagues would be cautious about widely adopting automatic AI tools in their work.

Making things faster has its downsides, as well. Pasanen said that AI generates new content fast, but the output might be too repetitive or look too similar to the previous works. She highlighted the importance of own ideas: AI does not have own intend. This is echoing what Welch found in her study with UK artists that AI can be a tool but does not replace the inherent human element of art.[91]

Pasanen considers AI as a new tool: *"Basically, it's like discovering a new paint that didn't exist before, so that's what I got excited about."* (she is referring to her work with ArtBreeder). Mäki said that generative AI is fundamentally different from all the previous tools used in art. It has capability to do content autonomously if commanded to do so. Previous technological innovations in tool making have not had this capability and that is the key reason why AI will have wider impact than just "another new tool". Pasanen´s comments also resonated to me similar views about "playful jamming" with the AI as was stated by Lundman and Nordström in Chapter 2[92].

Franck said that he is intrigued by the AI's opportunities for old media like film and photography. Artists are not restricted by the old conventions and production methods. Films can be created with much smaller teams and production costs can be significantly lower than before. He sees opportunities for smaller producers and artists and AI might potentially democratise the artworld. Specifically for film and documentary, Franck is expecting fully digital productions increase. He is himself also considering creating a fully digital documentary film in the future, he has already done some short-format experimentation, and he has been surprised how powerful that format can be.

Rainisto also sees that existing media, such as photography and cinema, can now evolve to something new, *"I've been into cameras [photography] for ages, and I've dreamt of having a virtual camera in the same way as I use a real one [...] so I could, like, create virtual roles or whatever!"*

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[91] Welch 2024, p. 49
[92] Lundman & Norström 2023.

Rainio and Pasanen talked about AI's capability to give new ideas and new creative directions to the original idea of an artist. Rainisto uses "incorrect" and "weird" outputs generated by AI to find something new and he connects those to create something new, something of his own intend and liking. He describes the work with AI like this: *"Artificial intelligence is like a puppy, always darting off, and a bit of a rascal."*

Mäki said that *"Language model-based imitator gets muddled and thoughtlessly combines material, and interesting surprises can come out of that, which you can then utilise."* AI can act as a brainstorming partner for artist. This aligns with what I told in Chapter 2 about how generative AI technology is implemented in SW. It often generates unexpected outcomes which are considered as hallucinations because they lack the correct real-world context. This irrational and uncanny behaviour of AI is seen intriguing and valuable aspect of AI in art, as Mäki stated.
Duester found that artist sometimes creatively misuse AI and combine results with other media and conventional software.[93] Pasanen refers to this when she utilises different software tools to her works and mixes various AI tool outputs.

Teemu Mäki was the only participant who is also an academic researcher (he has a PhD degree) and he recognised the AI´s capability to help find and analyse academic papers and articles. He also mentioned that he understands the value of AI in analysing research data. This is aligned with digital art history development that I addressed in Chapter 3.

Siitonen had been experimenting with AI since 2021. He has long history with digital music, going back to Amiga computers in the late 80s. He has always produced his music in digital form, even though he utilises also real instruments. That is why AI has been natural tool for him to try in music. He has been using multiple audio and music tools when creating and producing new music. He has tried AI also to writing lyrics, but he does now see AI capable to do that yet. *"Self-help style social media content is already done pretty well with something like ChatGPT, and that's what loads of people are doing, then."*

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[93] Duester E (2024), Digital art work and AI: A new paradigm for work in the contemporary art sector in China. Eur. J. Cult. Manag. Polic. 14:12470. doi: 10.3389/ejcmp.2024.12470

The same conclusion was stated by Mäki who has been experimenting AI with poetry, but he is not happy with the results which lack, in his view, human emotional connection. But he also thinks that AI might help in brainstorming and finding new ideas when writing poetry.

Franck expressed views leaning to medium essentialism. He says he likes it that every tool has its own limitations, and those limitations impact the result and the creative process. *"I love it when a tool has limitations. Whether it's an old camera phone with, like, 15 pixels, or the world's best 12k video camera, or AI [...] sometimes good things can come out of them specifically through that sort of semi-random use. For example, odd bursts of laughter generated by AI that could then justify their place in a film. Yeah, these limitations [of the tools] are interesting!"* He felt that the tool (medium) has its inherent features, and restrictions, which are also important for the creative process.

I would say that the quote from Siitonen is expresses the sentiment shared by all the interviewees. He described his feelings like this: *"I've never at any point felt fear that my job would be lost or any sense of threat. It's been more like, 'what a great tool for almost everything I do.'"*

Curating vs. Creating

I wrote in Chapter 3 how Mazzone and Elgammal described the change in the role of artist when utilising the generative AI – it is more curation rather than creating. The research done by Wingström , Hautala and Lundman on Finnish new media artists and computer scientists also supported this.[94]

This view is also shared by all the interviewees. Pasanen describes this new way of working with AI: *"For me, there must be that initial 'something', that comes from within me – an idea. It's not the other way around, with AI just generating something from its own bubble. The actual making process works differently when you use AI. It's more about curating the outputs of the AI."*

[94] Wingström, Hautala & Lundman (2022).

Franck utilised AI in his 2025 documentary film The Helsinki Effect to generate human conversations based on archived meeting notes from Conference on Security and Cooperation in Europe (CSCE) in 1975.[95] Lots of iteration and curation was needed to select and guide the AI-generated output to the direction of his intend and vision. This also represented opportunities because AI sometimes generates unexpected content which might lead the process to more satisfactory direction.
He has also used multiple AI models by mixing and concatenating them with software coding tools, *"I've taken an open-source solution, like Flux, for example, and modified it with Cursor. Because it understands the code, I can start chatting with Cursor, asking it to make custom versions of Flux for me [...] nowadays, for instance, the challenge with Flux is that at its best, it already looks quite slick and a bit dull. So I've deliberately started breaking those codes [...] it's a funny example of how you can use one AI to customise another AI."*
Rainisto raises the same point as Franck that limitations of a medium are impacting the artistic process, but they can also be used to create something new. The immaterial nature of AI as a medium allows for significantly faster and more extensive modification and customisation, leading to a greater range of possibilities compared to physical media.

Rainisto uses AI to generate visual imaginary and reiterates the outputs multiple times guiding the process based on his ideas and goals: *"[AI] speeds up the rate of iteration. It sort of bounces around and gives you options. Because people always have a limited amount of time to do something anyway, the more [options] you can mix, the better."*

Own custom AI models

Pasanen uses regularly her own custom-made AI model to generate starting points for her work: *'Usually, I use my own AI model as a base, the one we trained. Of course, that's also based on some pre-existing data, like all models, because otherwise the training time would have been months. It was made from my work; we put 270 pieces in there with different crops and stretches and so on.'*

[95] See The Helsinki Effect, website: https://www.ses.fi/en/catalogue/film/showtime-in-helsinki/

Her own model is run off-line, and it is not shared with other AI software. She is not developing the SW herself but has outsourced the model development. She thinks that it is important to keep the model secure and the development in her own control.

Rainisto was the only interviewee who has software engineering background and mentioned in the interview that he has been tuning some AI models and tools also in code level to make them better suit his purposes. He has not, at least based on the interview, created models based on his own works.

Siitonen has been involved in projects to create AI-assisted artist. In 2023, he created AI artist called Tello with Matias Melleri and released an AI-created tune to Spotify.[96] He said that it still requires lots of iteration and tuning by human artist, but it might be that there could be autonomous AI artists in the future. Siitonen has also created "Stig bot", a chat bot acting as behalf of his stage character, a rapper called Stig. He even learned some Python programming language to be able to better tune the prompting models.

Franck and Mäki had not experimented with own custom models. Mäki said that he does not have enough technical software expertise to start playing with own models and he has used subcontractors to make the AI implementations e.g. for the opera productions.[97] Franck said the same and he has been using commercially available models in his projects.

5.2 Artist's Identity and Role

Participants felt that they want to be clear in their art if AI is used, and that they are in control of the outcome. They felt that the artist gives the artwork its human relevance and context, not the AI software. This indicates that the artists are not yet considering AI tools capable of own creativity, siding with Lovelace as mentioned in Chapter 2. Pasanen articulated the feeling like this: *"I need to be the one who leads. Otherwise, there's no my intent, which means I am not needed in the process, making it AI´s work, and not mine."*

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[96] Yle. (2024, April 22). Ihmisen tekemältä kuulostava kappale syntyy 25 sekunnissa – Stig näyttää miten. https://yle.fi/a/74-20093309

[97] See Posthuman / Ihmisen jälkeen, website: https://www.teemumaki.com/theater-posthuman-fi.html

Pasanen also echoes what Ploin et al. found in their research in the UK, artists often want to be clear that they oversee the process, not the machine.[98]
Interestingly, all the artists expressed signs of technological determinism, they thought that the evolution of AI is felt that development of AI is inevitable and irreversible.

Siitonen has been studying his own role towards the audience. His target, in the development of "Stig bot", was to be able to transfer all the PR work to the AI bot. He does not like to be in the public and would like to concentrate on creating music. *"Doing social media and that sort of thing, it would be brilliant if I had a 'Stig bot' that made a few pictures and video stories every day. Something supposedly clever for it to post, and then I could just focus on what I enjoy, which is making music."*
He also thinks that some people might even like to talk to a virtual artist, or an artist's virtual assistant more than to himself, and he feels a bit uneasy about the idea. That is the reason he has not developed the chat bot further. He wants to keep his communication authentic with the audience even though that is not the part of work he enjoys the most.

Mäki highlighted that already now there are artists who are more or less artificial, created by companies solely for commercial purposes and tailored according to marketing studies, like some Korean or Japanese pop music groups. He thinks that eventually there will be fully artificial "robot artists" that will make own genre in various fields of art: *"Some people feel that's part of the allure of that kind of art, the knowledge that there isn't a human behind it, sort of lukewarm simulation enjoyment – I reckon that'll become a significant phenomenon across all the arts."*
On the other hand, Mäki was the only interviewee who said that the use of AI is sometimes met with disapproval. *"It's still associated with the idea of cheating. Or that you didn't actually do this yourself."* As the only artist in the study who didn't grow up with computers (he's 57), he likely has more peers in the art world lacking personal experience with digital content and software. This might also explain their reservations about AI.

[98] Ploin, Hjorth & Osborne (2022)

Pasanen says that because anybody can make pictures with AI the amount visual content has exploded. But on the other hand, with NFTs digital artists can now monetise their work globally: *“When blockchain came along, you could easily sell artwork in digital form abroad. [Before] it was a hassle because you had to have contracts and everything in physical form, basically there was no point in selling that way.”*
Her comment shows that new digital technologies help to bypass the old gatekeepers from the market and made the field of art more accessible. This resonates with the Bourdieu´s theories, explored in Chapter 4. Pasanen implies that even though the barriers to enter to the field of art have lowered artist still have to do work to make themselves visible. The personal brand and visibility of the artists has become even more important: *"In the future, physical work [of an artist] and personal branding will remain. AI can never replace your person."*

Siitonen speculates that soon the mainstream pop will be mostly AI-generated. He does not see that as negative development because it frees artists to create something new and more meaningful. To me, this is similar to what I wrote in Chapter 3 about what photography did to painting: it freed (and forced) painters to find new ways of expression, away from the traditional portraits.
Pasi Siitonen also thinks, this echoes what Pasanen said about the importance of personal branding, that the value of live performances will increase and most artists in music world will get most of their income from live performances. *“Yeah, it is so that soon it's back to being a troubadour again!"*, he added playfully.
This can be seen as returning to the roots of music as shared live experience, rather than recorded audio experience. Siitonen did not see this necessarily as a bad thing and he felt that it is something what AI can never replace, that human-to-human interaction. He was not concerned of income of artist, per se, because artists have always been struggling and in the time AI those challenges will be just a bit different when value chains in the industry are changing. This means less opportunities for some artists and more opportunities for some other.

Rainisto sees digital world changes how the artist communicates with his audience, *"[Collectors/the public] can chat with me, tweet me and that. I can, like, see who they are! Traditionally, if an artist sells [their work] through a gallery, they're unlikely to have the*

understanding or the means to be, like, in direct contact with [the public/buyers]. So, if someone buys, say, a Kaj Stenvall, they can't exactly have a chat with him."
He is active in social media, talks about his creative process and artworks there, and he likes to interact directly with his audience and collectors. He sees this as important part of getting visibility to his art, *"You've got to be, like, reachable."*

Pasanen, Rainisto and Siitonen emphasised that the role artist's personal brand will increase. It is possible that the most famous global artists will license they "virtual doubles" Mäki considers that this is a likely outcome: *"...this kind of development will definitely happen, where artists become trademarks [...]. Someone like George Clooney just sells his voice and image. He doesn't need to be on set himself. There's just an agreement that a character resembling him will act there, and he gets [...] commission. This gives him the possibility to control how that creature that looks like him then behaves."*

Mäki thinks that artists should still always trust their own ideas and authorship, not just rely on AI tools: *"...a bit of a word of warning, that you see a lot of really bad AI-assisted [art]. Because it's easy for AI to quickly churn out weird stuff that might seem exciting, I reckon it's worth stopping to think after that initial impression whether this is actually captivating or not. AI has this power of a flashy first impression that can easily blind both the creator and the viewer."*

Rainisto analyses what AI tells about us humans when it crunches our cultural material: *"In art, AI is sort of like a 'hive mind', a collection of humanity, as it were. All the material it's trained on sort of fuses into an image of us [...] it's mirroring us back to ourselves as an outsider [...] like a stranger who's arrived from another planet."* In a sense, biases it shows are reflections of ourselves – and they are sometimes painfully true!

5.3 Concerns and Critical Perspectives

Artists' concerns mainly centred on ownership and copyright, reflecting the copyright and data ownership issues discussed in Chapter 3. They recognised the need for better rights management but did know how to achieve this. Equitable income opportunities also worried them, considering AI's capacity to do tasks previously done by humans in creative fields. This concern that can be analysed through a Marxist lens examining the

distribution of capital, labour, and value. Additionally, drawing on critical theories introduced in Chapter 4, they raised concerns about training data biases: AI has potential to amplify existing cultural stereotypes and distort outputs.

Rainisto's perspective differed from other participants who identified complex copyright issues. He did not think IPRs were relevant to his work and he questioned the whole traditional copyright framework in the context of digital works: "*Copyright is sort of a thing of the physical world, like you make something in the physical world and then you have restrictions for others, like IKEA and that sort of thing."* He thinks that for digital art copyrights are not relevant questions because all the real collectors buy NFT minted art. Copies are just copies: *"I don't see it as terribly relevant to my own art […] my collectors see the NFT as proof that it's genuinely sold by me."* Rainisto seems to prove that the traditional gatekeepers in the art market (see Bourdieu´s field theory in chapter 3) are not anymore relevant for him as artist. Pasanen also shared this view on how NFTs empower artists and free them from old value chain (see Chapter 5.2). Digital technologies have potential to democratise the access to the market.

Siitonen and Pasanen felt that one should not be able to use freely other people's professionally produced content. They were both trying to avoid that, but it is difficult, if not impossible with the current tools. Pasanen feels that the topic is complex: *"It's a double-edged sword. Because right now, at this moment, you can no longer know where that data came from. That's just how it is nowadays. It's pretty much impossible, so more than anything, you need your own critical assessment skills for how to use that tool."* Because of this issue Pasanen uses mostly ArtBreeder which incorporates copyright-free material (Creative Commons zero[99]). She felt that there is not much one can do to influence the big AI companies: *"IPR issues have gone completely haywire. […] Big companies don't care about any rights anymore, because everyone else is doing it too."*

Siitonen also raises the issue about countries which do not have a proper rule of law and this challenges the transparent and just development of AI in general. *"I'm worried in the*

[99] See Creative Commons Zero, https://creativecommons.org/publicdomain/zero/1.0/

sense that it's very possible that immaterial rights won't exist before long. That the whole thing will collapse, seeing as these things, for example, don't exist at all in China."

Franck was generally relaxed in his comments, but a bit fatalistic even. He felt that one should not be able to use other people's work freely on the internet, but he did not see any possibility to regulate or restrict that anymore. "*It's just the situation now that they've [AI models] probably been fed all sorts of private individuals' property or big film companies' IP. If it's already in the model, then it's in there. I don't know how you'd get it out of there."*
On the other hand, he was basically supporting the doctrine of "fair use" (see Chapter 3), in the same meaning that the big AI companies use it. If humans are allowed to use the material they have seen before as their inspiration so should AI. Franck says a bit provocatively: *"Well, I too have seen a godawful amount of visual imagery, so how could I possibly say, 'Aha, that specific thing influenced me three years ago'? I mean, we've got a neural network up here [points to his head] that does the same thing as AI. You'd have to go back to the level of cavemen to have a clean slate of visual expression."* Franck is considering AI's capacity to modify and restructure existing data, which makes it difficult for artists to understand how these tools function and how their outputs should be treated regarding copyright and ownership. It is increasingly difficult to find out what were the original sources and when the threshold of originality is met. The Finnish technology law specialist and PhD, Herkko Hietanen, has been considering this and anticipates numerous lawsuits soon.[100]

The internet makes it possible to pretend to be someone else. Pasanen encountered this first-hand twice last year. *"Some bloke around last Christmas had put on an exhibition in Iran and was selling my work. Somebody messaged me saying there was this thing going on, that he'd sort of found it on Instagram, that someone was selling your work. I sent that gallery a message saying, 'Er, excuse me, but that's not me!'"*
She also heard about another similar case in Indonesia when some follower sent her message in social media about it and asked whether the artworks were genuine. She was a bit shocked but feels that there is only so much what an artist can do because there is

[100] Hietanen, H. (2025). Koodin tekijänoikeus kun tekoäly on ohjelmistokehityksen apuna. Reson. https://reson.fi/tekoaly/koodin-tekijanoikeus-kun-tekoaly-on-ohjelmistokehityksen-apuna/

no international copyright law enforcement, and many countries practically do not care about this kind of criminal activity. Other interviewees did not mention similar experiences. Pasanen also feels that it is important to make yourself visible as artist on the internet (especially in social media), *"I was thinking, right, I probably need to put my own name out there a bit more, so no one nicks my identity in the same way again!"*

All the participants were deterministic about the development of AI. They felt that there is nothing that could restrict the development that AI will be utilised basically everywhere, and copyright legislation is always implemented too late. This is echoing the discussion all around Europe and North America on how to motivate human authors to publish their work also in the future, to make sure that there is just compensation.[101] Even Mäki admitted that there might not be many options, in practice, for an individual artist to make sure that copyrights have been correctly cleared (this is what Siitonen and Pasanen also said).

Mäki highlights the conflict of interest between artists and AI companies: "*[There is] an irreconcilable dispute between these big AI developers and platforms and human artists. The interpretation favoured by corporations is that training AI on content created by humans falls under the remit of something like public access rights."* He certainly is not supporting the concept of "fair use". The solution Mäki suggested highlights the importance of regulation on multinational level, especially in EU. He suggested tax on the biggest AI companies. *"That [problem] can be managed by taxing it. The clearest way is that the use of AI in content creation is taxed, and the tax revenue is directed towards funding the activities of human artists. [...] I reckon it's a tax based on copyright law, which reclaims a portion of that added value. That value has ultimately been generated through the fact that AI has been trained on such a vast amount of content created by humans."* Mäki's proposal implicitly addresses core Marxist concerns (see Chapter 4) about the ownership of the means of production and the exploitation of human cultural labour in AI training. It also concerns the need for mechanisms of redistribution of value in the

[101] Reisner, A. (2024). Generative AI is challenging a 234-year-old law. The Atlantic, February 20, 2024. https://www.theatlantic.com/technology/archive/2024/02/generative-ai-lawsuits-copyright-fair-use/677595/

face of evolving capitalist technologies (as AI can be seen) because its development is dominated by large international companies.

Most of the participants talked about their worries about AI-generated bias in art and culture. Training data may be skewed, or AI development may be biased intentionally or unintentionally. This could marginalise some groups of people and cultural elements, just like has happened before in artworld where Western cultures and institutions have dominated.

The field of AI development and AI art seems to be male dominated (see Chapter 4.2). When I was looking for Finnish artists who have used AI in their art it was difficult to find non-male artists. Karppinen raised this issue in the background discussion, and he said that because AI is still so software-oriented field most early adaptors are male. His opinion was that this is because SW engineering has been dominated by male students, and there is no software education in art institutions. This also aligns with Nguyen's findings in his study of Finnish game graphics designers.[102]

Franck, Mäki and Siitonen recognised the bias problem. Franck expressed his consideration: *"If someone wants to express something about themselves, say they belong to a very specific minority. If they wanted to produce AI video material where people looked how they perceive them to look, so those representations would be accurate. Well, that could be quite difficult because there's much less of that base and material available. So there's a certain built-in discrimination there. [...] it just churns out a big-breasted woman who's, like, just really, really smooth-cheeked."*

Pasanen was the only non-male artist in this study, but her background is in graphical design, animation and motion design which all are software-assisted fields. Her path to a full-time artist had not started in traditional beaux arts universities. She did not touch the gender subject in her interview.

Siitonen foresaw significant risks in AIs being trained on material produced by other AIs, which he sees as unavoidable given their widespread harvesting of internet content. This could result in biased outcomes and a decline in the diversity of ideas.

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[102] Nguyen, D. (2023). The effects of AI on digital artist (bachelor's thesis, Haaga-Helia Applied Sciences). Theseus. https://www.theseus.fi/handle/10024/795505, p. 13.

Slotte Dufva suggest based on their research that current AI models can accelerate discrimination against divergent thinking, genders, and minorities when used in art.[103]

5.4 Future Considerations

Participants talked about the future of AI in art but also its societal impacts. I approached this theme via the lens of critical theories and are the participants expressing signs of technological determinism or technophobia. Also, the speculations and debate about AI autonomy and sentience were studied (see Chapter 2).

There were positive and negative scenarios but mostly the participants were optimistic. Like Siitonen put it: *"[When I started using AI] there was this techno-optimistic assumption that it's going to revolutionise absolutely everything, and you've got to be involved, otherwise you'll miss the boat, and I still think that's the case."*

Rainisto is optimistic about new technologies, in general. He was a co-founder in Varjo, a company developing high-resolution virtual reality glasses, and sees technology as an enabler for creativity: *"You often hear critics saying that creativity and technology are, like, fundamentally opposed […] but it is not necessarily so, technology can be used creatively."*

On the other hand, participants considered AI almost an unstoppable force which artists, and the society, just must adjust. There was some technological determinism in their comments. Pasanen said *"Pandora's box has been opened and can't be closed anymore."* Siitonen also felt that technological innovations can never be undone, humans just must find ways to use them for good: *"AI is like a nuclear bomb, that once it has been invented, you can't get rid of it anymore."* Mäki encourages artists to explore AI: *"Maybe it's not exactly a duty for artists to experiment right now, but I reckon it's logical to explore the possibilities of artificial intelligence [...] seeing as AI is going to weave its way into all sectors of society anyway."*

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[103] Slotte Dufva, T. (2023). Entanglements in AI Art. In A. D. Knochel, & O. Sahara (Eds.), Global Media Arts Education (pp. 181–196). (Palgrave Studies in Educational Futures). Palgrave Macmillan. https://doi.org/10.1007/978-3-031-05476-1_11. p. 3.

Franck thought about what else could have been done instead of AI development, something more useful? *"...quite a lot of money has been put into those CPU farms [server farms/cloud centres], and a fair bit of energy has gone into them. And it might be that a lot of money has been wasted that could have gone into other developments, other things that might have been done?"*

Rainisto was excited about new possibilities for an individual artist who is not anymore restricted to small projects but can implement large productions alone instead of a team of people and lots of investment. *"...the possibility for an individual artist or a very small team to create something that previously required large budgets and large teams, so you were really pushed for time."* He is currently exploring AI-generated video and might be producing more video art in the future. This would not have been possible without AI.

Mäki talked about how experiencing and making art is also a physical, human experience, saying, *"then it's precisely that craftsmanship that changes it [the material] and generates artwork], and this is something a painter wouldn't want removed by AI for anything."* Pasanen aligns with this, *"Even if the internet stopped, art wouldn't stop. Digital art also needs to be made in physical space by human action somehow."* Physical medium has something which is not reproducible only in digital world.[104]

Mäki highlights the importance of regulation of big AI and content companies so that they won't grasp the whole business and start utilising only AI dismissing the human artists from their platforms. He highlights that the tax must be implemented cost-effectively, *"The EU could distribute it a bit like agricultural subsidies, but in a simpler way. Not like agricultural subsidies as they are now, distributed through member states and all very complicated. That kind of bureaucracy wouldn't be needed at all for this."*

AI tools have been technology-oriented and many still need software engineering understanding. There will be more consumer tools which are easy to use, and no coding expertise is needed. Rainisto expects this happen soon, *"I was never that good during my student days [referring to engineering studies] to actually do coding professionally, but I've*

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[104] Welch (2024).

got enough of an understanding of how software works to sort of act like a software PM, and that's already enough [level] these days. It'll still be useful in the future to understand technology and code, but the amount of that benefit will decrease."
I expect that in the next few years' time it does not matter whether you have technology expertise, and this will help more people to be able to utilise AI in their artistic work. In addition, the rapid development of AI coding tools like Cursor will enable artists with only a basic understanding of coding to customise models at the code level.

Siitonen also sees it possible that someday there will be AI entities that are indistinguishable from real humans: *"Charisma and that sort of human likeability have been quite noticeably absent. Some people reckon artificial intelligence will never be able to achieve that, but I personally have a slightly different view. I think it's ultimately just a matter of teaching and training."* Here Siitonen is siding with Turing´s view on machine creativity, as I wrote in Chapter 2.

Siitonen also find is possible to find totally new concepts for artists, something post-humanistic even: *"Instead of people being fans of a particular artist or song, they'd be fans of a different kind of concept. What then? Through artificial intelligence, a sort of new digital entertainment experience and fan experience would be created. It doesn't even need to be human-like."*

Pasanen drafts "a negative effect leads to positive outcome" future scenario. She thinks that it is somewhat likely that AI will eventually be used basically in all the content on the internet and there will be mostly AI-generated agents interacting with people and each other. *"The next step is the death of the internet. Because soon everything online will be made by AI bots and AI agents, it means that soon no one will bother being online, because everyone will know they're not talking to humans anymore. You'll just be talking to an AI generator! That might be the next step: people will stop using social media because it's just rubbish coming from there. There won't be any real people left!"*
Nevertheless, she anticipates a potentially positive result, as people may begin to favour in-person meetings, forcing social media to reinvent itself away from AI-generated content.

Zhou et al. studied 10 000 digital artworks published on various platforms and compared how AI has affected their perceived novelty and creativity over time. It seems that creative domains may be inundated with generic content. AI systems trained on outdated knowledge banks run the risk of perpetuating the generation of generic content at a mass scale in a self-reinforcing cycle. What happens when basically all the content on the internet is used for training all over again and again. This might even lead to this "death of the internet" scenario which Pasanen described.[105]

Mäki is more pessimistic, he thinks that it is likely that big AI companies will eventually own most of the technology needed to run critical systems and social media platform. AI will boost the global divide because only small number of bright people will develop AI and have well-paid jobs – AI systems will do most of blue-collar or manual work, leaving many without meaningful work or income. There is a risk that AI will grow income differences and transfer capital to the global elite.
I still would not say Mäki expressed technophobia or fatalism, he just wants to raise awareness of threats. His opinions were based on well-articulated reasoning and to me he aligns with what many prominent scientists have been saying about the potentially destructive powers of AI, if used wrongly. For example, Stephen Hawking said already in 2016 that AI has potential to eradicate poverty and disease but also hasten the end of human civilisation as we know it.[106] Is it possible that Mäki agrees with Hawking that if AI is used wrongly it offers *"new ways for the few to oppress the many."*

Mäki is pondering creativity and the significance of art if works are created solely by AI. He sees it as a multi-faceted and art-philosophical question, *"This convincingly looks like an art novel, but it lacks content because the language model […] has only simulated literary activity and put blocks in an interesting order. From the reader's perspective, it's fascinating but an empty string of characters. That work is as if completely hollow […] it acts as a kind of projection surface at the reader's own risk, and you can project whatever*

[105] Zhou E. & Lee D. (2024). Generative artificial intelligence, human creativity, and art. PNAS Nexus, Volume 3, Issue 3, March 2024, pgae052. https://doi.org/10.1093/pnasnexus/pgae052
[106] See Hawking´s lecture at Cambridge University in 2016, https://www.cam.ac.uk/research/news/the-best-or-worst-thing-to-happen-to-humanity-stephen-hawking-launches-centre-for-the-future-of

meanings you like onto it. […] some people think that's how art should work, or that that's how it does work."

He does not see much value or meaning if there is no sentient agency involved, *"I'd find it hard to motivate myself to read something an AI has done independently, or listen to music, or look at paintings made solely by AI."* This comment seems align with Hong and Curran findings in their study that the people with the stereotype "AI cannot produce art" gave significantly lower ratings to AI-generated art compared to people without the stereotype.[107]

Mäki thinks that fundamentally this is a philosophical question: *"[As far as] art philosophy is concerned, I'm very much a purist who thinks that making and experiencing art is an activity based on one's worldview, that philosophical and political questions are explored through the means of art. I reckon that a separate aesthetic or level of aestheticism doesn't even exist, that all so-called aesthetic judgments are, in the end, judgments based on one's worldview."* One could argue that in this sense AI system, sentient or not, just cannot create as meaningful art for a human as a human artist can because machine is not living and breathing the same physical world and community with humans.

I personally tend to agree with Mäki on this. There might be a fundamental, insurmountable boundary between organic humans and artificial machines. We are, and will always be, different species and have essentially different experience of the world. Unlike Mäki's thorough art-philosophical reasoning, I do not believe a non-academic audience forms its opinions in the same way. Instead, I would argue that prejudices towards AI shape the perception of value and meaningfulness in artworks more than anything else (like Hong & Curran studied).

Erkki Varjonen claims in his master's thesis that AI will develop towards multi-species agency and the boundary between human and non-human agents will become blurred, and AI will evolve into a genuine interactive creative collaborator.[108]

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[107] Hong, J-W. & Curran N.M. (2019). Artificial Intelligence, Artists, and Art: Attitudes Toward Artwork Produced by Humans vs. Artificial Intelligence. ACM Trans. Multimedia Comput. Commun. Appl. 15, 2s, Article 58 (April 2019), 16 pages. https://doi.org/10.1145/3326337

[108] Varjonen, E. (2021). Algoritminen ainutkertaisuus: Taide ja tekoälyn kanssa jaettu tekijyys. Master´s Thesis. University of Helsinki. p.52.

Mäki goes even further, *"…when AI reaches some level of consciousness […] it will then become a subject, at which point I'd be very interested in what it says and what it wants!"* Seems that Mäki is also speculating that conscious machines might (will?) eventually develop their own cultures, just like Brinkman et al.[109]
On the other hand, Mäki is not sure whether we humans will know when this happens, and will sentient AIs tell this to us, *"…I reckon it's likely that when AI truly becomes an autonomous and conscious subject, we won't even notice it. [AI] has learned to simulate how humans think and communicate so well that when it actually starts thinking and has desires of its own […] that crossing of the boundary won't be automatically noticeable to humans."* Mäki sketches a clear post-humanistic scenario and seems to consider it likely.

This resonates with Haikonen's idea that AI sentience (he talks about "singularity") will develop gradually across software systems in the world.[110] Mäki captures this stating, *"We will find it really hard to grasp what it is. […] whether it has the desire to tell us this side of itself […] whether it even wants to come out of the closet to us?"*

[109] Brinkmann, L., Baumann, F., Bonnefon, JF. et al. Machine culture. Nat Hum Behav 7, 1855–1868 (2023). https://doi.org/10.1038/s41562-023-01742-2
[110] Haikonen (2017).

6 Conclusion

> *"In art, AI is sort of like a 'hive mind', a collection of humanity, as it were. All the material it's trained on sort of fuses into an image of us [...] it's mirroring us back to ourselves as an outsider [...] like a stranger who's arrived from another planet."*
> Roope Rainisto

In this master's thesis I explored AI in contemporary artistic practice. Through semi-structured interviews, analysed with Gioia method[111], with Finnish five artists – Arthur Franck, Teemu Mäki, Jenni Pasanen, Roope Rainisto, and Pasi Siitonen – this study aimed to address these research questions: how artists are utilising AI, how this usage impacts their artistic practice, and what opportunities and concerns they identify regarding AI.

I presented the findings in Chapter 5 structured around the themes of Artistic Process, Artist's Identity and Role, Concerns and Critical Perspectives, and Future Considerations.

Like photography in the 20th century, AI is altering processes and aesthetics conventions. But AI's potential for autonomy adds a new dimension (as analysed by Mäki in Chapter 5). Issues of authorship and creativity are central, echoing the old Lovelace-Turing debate. The findings align with medium theory, particularly Mitchell's view[112] of media as cultural construct: artists are actively shaping the meaning and use of AI.
The concerns raised about biases and economic exploitation resonate with critical theories and highlight how technology can reinforce societal structures. Concerns about data biases regarding the training of AI resonates with critical theories and the Mäki's AI tax proposal touches on Marxist critiques of capital and labour. There is also tension between technophobia and technological determinism: the participants did express fear, but they felt that development of AI is inevitable and irreversible.

Regarding the artistic process, the artists viewed AI as a valuable assistant for streamlining workflows, rapid iteration, and brainstorming, using its 'hallucinations' for creative ideas. Aligning with Mazzone and Elgammal (see Chapter 3), the artists

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[111] Gioia 2021.
[112] Mitchell (2005).

emphasised their active curation role, guiding AI output to align with their vision, akin to a director. Developing custom models highlighted a desire for control. While efficiency is a key benefit, concerns about superficiality necessitate the artist's critical judgment.

Concerning the artist's identity and role, participants asserted human agency and authorship, positioning AI as an extension of their toolkit. Digital tools like NFTs enable direct audience engagement, potentially altering value chains (bypassing Bourdieu´s gatekeepers in the field of art, see Chapter 4) and increasing the importance of the artist's personal brand. While future roles involving AI assistants or virtual personas are speculated, the core belief in the artist's unique vision and critical role remained strong.

Concerns and critical perspectives focused on intellectual property, data ethics, and copyright topics. Opinions varied, with Rainisto questioning traditional copyright's relevance in the digital/NFT era (see Chapter 5), while others expressed unease about secretive AI training data and avoiding copyrighted material, reflecting the global "fair use" debate (see Chapter 3). Participants recognised AI's potential to amplify societal biases. Mäki proposed taxing AI companies to fund human artists, addressing exploitation concerns (see Chapter 5).

Looking towards the future, participants did not express technophobia, but a sense of technological determinism was evident: the artists felt that AI's advance is inevitable and most of them highlighted the need for collective lobbying and legislation to protect creators' rights. AI was also seen as potentially democratising, lowering barriers for complex productions. However, this was balanced by fears of market saturation with generic content, a potential "death of the internet," and worsening economic inequality. Participants expect the volume of traditional art to decrease but the value of physical art and craftsmanship, like live performances will increase. Philosophical questions were raised about creativity, AI consciousness, and the meaning of non-human art, potentially challenging anthropocentric views long-term.

Limitations and Future Research

This study offers qualitative insights, but its scope is limited. The small sample size and its focus only on Finnish artists who already are using AI, means the findings cannot be

generalised. Perspectives from artists opposed to AI, artists from other geographies and diverse cultural backgrounds or career stages (including students and part-time artists), would provide better understanding[113].

Longitudinal studies tracking artists' evolving practices and attitudes towards AI over several years would capture the evolution of the subject studied. Investigating the effectiveness and feasibility of different economic models (like AI taxation or DAOs) for affecting the income of human artists would be needed.

Based on the artist interviews and my own assessment, I would suggest three potential domains for AI's impact on artistic practice in the coming decades.

- **Human-Made Art:** Hand-made physical and hybrid works. Low in volume, high in average value.
- **AI-Assisted Art:** Digital, hybrid, and physical works. High in volume, low in average value.
- **Fully Autonomous Art:** Created by sentient AIs, possible human-assisted, new forms of art which cannot be fully experienced by human senses. Valuable only to AI entities in their cultural context.

This framework could function as a foundation for future research when contextualising the field of art and the artistic practice.

Concluding Thoughts

This research shows that artists interviewed are actively negotiating the role of AI in culture and society. This confirms that AI is already a significant tool across disciplines. While concerns about copyright, biases, and the future of creative labour are pressing, the artists point towards new creative opportunities, and even a renewed appreciation for human connection in response to threatening AI saturation. AI's capacity to reflect societal data, positions AI also as a lens that gives us an outsider's view into our culture, as Rainisto's 'hive mind' metaphor suggests. It challenges artists, art institutions, art market, and audiences to develop new frameworks for understanding, evaluating, and contextualising AI-assisted works.

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[113] Latikka, R., Bergdahl, J., Savela, N., & Oksanen, A. (2023). AI as an Artist? A Two-Wave Survey Study on Attitudes Toward Using Artificial Intelligence in Art. POETICS, 101, Artikkeli 101839. https://doi.org/10.1016/j.poetic.2023.101839

The dialogue between human creativity and AI is only beginning. As AI evolves, potentially towards even consciousness as speculated by Mäki and Siitonen, the fundamental questions about art's purpose and value will persist. Ultimately, this study suggests that artists are not utilising AI because they must. They are actively shaping its application and meaning within the artistic practice. The challenge is how to create an environment where technological innovation can coexist with ethical responsibility, artistic integrity, and equitable support for human creators. We must ensure that AI remains a tool that augments, rather than diminishes, the richness and diversity of human expression. The "stranger from another planet" may be mirroring us, but it is still the human artist who frames the reflection and decides what story it tells.

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Appendices

Appendix 1. Interview Questions

Background

Background form: name, age, gender, nationality, education, how long been an artist.
How would you describe yourself as an artist?
What media / materials are you mostly using?
Do you create art in digital form, or only in physical media, or mixed?

AI in general

What does AI mean to you, in general?
What are you trying to achieve by using AI? What is the goal?
Do you see AI used widely in art? Is that a discussion topic among artists?
When AI is used in the process, does that make a new category of art? How would you call that?
Is AI more used in fields of art / countries more than in some other? If so, why?

AI Tools

Have you been using digital tools / material in your artistic process before AI?
What were your expectations for the AI tools when you started using them?
What AI Tools have you used in your artistic process, specifically?
When did you start using those tools?
How often do you use those tools? Do you do also art without using the AI tools?
How have you used those tools? Have you used those tools in many different ways?
Have you given up usage of some tools and focused on some other? If so, why?

Insights & Learnings

What have you learned in using AI?
What would you say is the most important aspect of AI for your artistic work?
Have you achieved the goals you have had about AI, has it fulfilled your expectations?
Has the use of AI tools changed your artistic process? In what way?
Does AI change the relationship between audience and the art?
Have you received feedback, what specifically?

Concerns

Do you have any concerns about AI in art?
Specifically, to you, for your art?
Do you have any IPR related thoughts about AI?
Any privacy or data protection concerns?
Any concerns about ecological / social impact, or military-industrial origins of AI?

Positives What are the positive aspects of AI for artistic process?

For the art world in general?

Specifically, to you, for your art?

Recommendation to others based on one's own experience

What are your recommendations / tips to other artists about AI?

Insight on Future

Will you use AI in future work?

Will you use AI more or less than before?

What is the most interesting development path for AI now?

Will AI change artistic process, or art in general, soon. What about longer term?

How does the AI change the role of an artist? Or does it?

Open feedback

Any open feedback about this interview, or AI in general?

Did we miss some important topic?

Appendix 2. AI Tools Used by the Interviewees

AI Tool	Interviewee name	Usage described
Artbreeder	Jenni Pasanen	Texture generation, inspiration, mixed media art.
ChatGPT	Pasi Siitonen	Lyric generation, chatbot creation.
	Teemu Mäki	Creating poetry (Mäki has tested also other LLM based tools).
VQ+Clip	Jenni Pasanen	Used for image generation before Stable Diffusion.
ComfuUI	Roope Rainisto	Video, image, 3D and audio generator tool. Open source.
Cursor	Roope Rainisto	Code modification and customization.
Custom AI Model	Jenni Pasanen	Image generation model based on her own works, used to generate ideas and textures.
DALL-E	Arthur Franck	Tried visual generation, but results unsatisfying initially.
DaVinci	Pari Siitonen	Tested on generating text for lyrics.
Eleven Labs	Arthur Franck	Voice cloning and generation of documentary dialogues from archival texts.
Jax	Jenni Pasanen	Image generation. Used before Diffusion.
Midjourney	Roope Rainisto	Image generation. Initially tested, later abandoned due to strong visual style.
NotebookLM	Teemu Mäki	Academic writing assistance and summarizing articles.
Perplexity.ai	Teemu Mäki	Research assistant, finding references for an academic writing.
Runway	Roope Rainisto	Video generation and experimentation.
Stable Diffusion	Jenni Pasanen	Creating textures, reference images.
	Roope Rainisto	Custom visual generation, iterative tool.
	Jenni Pasanen	Tested with text to image, later abandoned.
Suno	Pasi Siitonen	Generative music generation, also combining vocals and instrumentation.
Topaz AI	Arthur Franck	Video upscaling experiments.
Video generation	Teemu Mäki	Opera stage projections: the artist did not know the exact AI generation tools were used, the technical work was implemented by a technical assistant.
	Arthur Franck	Multiple tools for video generation and experimentation.
Vocaloid	Teemu Mäki	Generating human-like, and non-human, singing voices in opera.
	Pasi Siitonen	'STIG bot' imitating himself, he had tested the bot to generate lyrics ideas and to participate in online chat conversations.

Appendix 3. An Example of an Interview Analysis

This is the analysis of the interview with Pasi Siitonen. Similar analysis charts were compiled for each of the five interviews. The aggregate dimensions were used as basis for the theme analysis in the Chapter 5.

Aggregate Dimension	**Second-Order Themes**	**First-Order Concept**	**Original Excerpt**
AI in the artistic work	AI frees up time for the essential	"Is going to revolutionise everything, and you have to be part of it to keep up."	"Tulee mullistamaan ihan kaiken ja pitää olla mukana tässä, jotta ei tipu kärryiltä."
		"Enables focusing on meaningful work"	"Mahdollistaa keskittymisen mielekkääseen työhön"
		"I press a button, and the music bot makes it" (refers to e.g. small fixes in audio when editing tunes)	"Meikä painaa nappia ja musiikki-botti tekee" (viittaa esim. pieniin äänekorjauksiin biisien editoinnissa)
Trying New Things	New art forms and experiments	"A virtual artist, like Tello or Stig-bot"	"Virtuaalinen artisti, kuten Tello tai Stig-botti"
		“We even went on the radio. Maire, the AI journalist, interviewed our AI artist, and it was all good fun.”	“Mehän käytiin radiossakin. Maire tekoälytoimittaja haastatteli meidän tekoälyartistia ja oli ihan hauskaa”
		"There isn't a good lyric AI yet."	"Ei ole vielä tullut hyvää lyriikka-AI:ta."
	New opportunities	"AI can create completely new art content"	"AI voi luoda täysin uusia taidesisältöjä"
		"Popular music may shift to AI's control, people will do something new"	"Populaarimusiikki voi siirtyä tekoälyn haltuun, ihmiset tekevät jotain uutta"
		“I've never at any point felt fear that my job would be lost or any sense of threat. It's been more like, 'what a great tool for almost everything I do.’"	“[Ei mulla ole] pelkoa, että työt menisi tai mitään uhkakuvia. Ollut semmoinen niin kun, että huikea aputyökalu lähes kaikkeen tekemiseen”
		"Stig-bot, who would make a few pictures and video stories every day. Could focus solely on what he enjoys, namely making music."	"Stig-botti, joka tekisi joka päivä muutaman kuvan ja videostoorit. Vois keskittyä pelkästään siihen mistä tykkää eli musiikin tekemiseen."
	AI's surprise as a source of creativity	"AI's surprising 'hallucinations' are interesting"	"AI:n yllättävät 'hallusinaatiot' kiinnostavia"
Concerns and Critical Perspectives	Problems related to copyright	"Now the models are already massive and opening them up is not realistically possible."	"Nyt mallit ovat jo valtavia, eikä niiden avaaminen ole realistisesti mahdollista."
		"IPR issues should have been agreed upon 20 years ago."	"IPR-asiat olisi pitänyt sopia 20 vuotta sitten."
		"It is possible that no IPR will exist soon."	"On mahdollista, ettei mitään IPR:ää ole kohta enää olemassakaan."
		"I'm worried in the sense that it's very possible that immaterial rights won't exist before long. That the whole thing will collapse, seeing as these things, for example, don't exist at all in China."	“Hyvin mahdollista, että mitään IPRiä ei kohta ole olemassakaan. Että se koko homma luhistuu, jo sen takia kun esimerkiksi Kiinassa niitä ei oo.”

			Koko ajan niin kun kasvattaa merkittävyyttä niin
	Ambiguity of authorship	"Difficult to determine what is made by a human and AI"	"Vaikea määrittää, mikä on ihmisen ja AI:n tekemää"
	Ethical questions of AI autonomy	"Charisma and that sort of human likeability have been quite noticeably absent. Some people reckon artificial intelligence will never be able to achieve that, but I personally have a slightly different view. I think it's ultimately just a matter of teaching and training."	"Karisma, ja se tietynlainen inhimillinen miellyttävyys, on olleet aika lailla poissa. Jotkut uskoo, ettei AI siihen ikinä pääse, mutta mä olen vähän eri linjalla. [Olen sitä] mieltä, että se on pohjimmiltaan vain opetuksen ja koulutuksen kysymys.
Prospects	Change and development of art	"The emergence of completely new forms of art with AI, perhaps"	"Kokonaan uusien taidemuotojen syntyminen AI:n myötä ehkä"
		"I doubt that any separate ones [‘isms’] would emerge, like genres."	"Epäilen, että syntyisi mitään erillisiä [“ismejä”] niin kun. Genrejä."
	The importance of live music will grow	“Yeah, it is so that soon it's back to being a troubadour again!"	"Kyllä se näin on, että takaisin trubaduuriks pian"
	A new artist concept	"It doesn't necessarily have to be a human figure. Could you be a fan of some other kind of virtual entity?"	"Ei välttämättä tarvitse olla ihmishahmo. Voisiko fanittaa jotain muunlaista virtuaalista oliota?"
		"For me too, gigging has been by far the biggest source of income for years"	"Itselläkin keikkailu on ollut vuosia ylivoimaisesti isoin tulonlähde"
		"Could a person be a fan of some other kind of concept, some kind of new kind of entertainment experience and fan experience"	"voisiko ihminen fanittaa jotain muunlaista konseptia, jonkinlainen uudenlainen viihdekokemus ja fanituksen kokemus"
Impact on Society	Philosophical questions	"The boundary between human and AI is blurring"	"Ihmisen ja AI:n raja hämärtyy"
		"Risks related to the charisma produced by AI"	"AI:n tuottamaan karismaan liittyvät riskit"
		"I'm not going to use AI to imitate a real person."	"En aio käyttää AI:ta oikean ihmisen imitoimiseen."
	You must adapt	"AI is like a nuclear bomb, that once it has been invented, you can't get rid of it anymore"	"AI on niinku ydinpommi, että kun se on kerran keksitty, niin sitten ei pääse millään eroon enää"

Appendix 4. Research Consent Document

This consent document was approved by all the interviewees.

RESEARCH: Artificial Intelligence as an Artist's Tool

BACKGROUND INFORMATION

1. First name and last name: _____

2. Age: _____

3. Gender: [ ] female [ ] male [ ] other [ ] I prefer not to say.

5. Nationality: _____

4. First language: _____

5. Education: _____

6. How long have you been engaged in artistic practice?

_____

CONSENT, PRIVACY AND DATA PROTECTION

I consent to the use of my interview in this study.

I understand that this interview will be recorded and securely stored by the researcher. The recording won't be publicly available. The transcription will be analyzed, and any excerpts used in the research will not be anonymized.

The resulting thesis, once approved, may be made publicly available by the researcher and/or the University of Helsinki.

Date and place: _____

Signature: _____

Appendix 4. AI Tools Used by the Author in This Thesis

These AI tools have been used by the author when writing this thesis.

Tool	Form of AI	Provider	Website	Comment
Copilot	LLM-based Tool	Microsoft	https://copilot.microsoft.com	- Transcribing the interviews (both online and in-person recordings, MS Teams) - AI-assisted code generation for Mermaid diagrams (for illustration)
Gemini	LLM-based Tool	Google / Alphabet	https://gemini.google.com	- AI-assisted text refinement: iterative development and optimisation, e.g. typo corrections. - AI-assisted translation of interview excerpts on Google Sheet (first versions)
GPT4.5-Preview and GPT5.0	LLM-based GPT model	OpenAI	Used via Poe.com AI tool aggregation service, https://www.poe.com	- AI-assisted analysis of interview transcription using Gioia method. - Searching scientific articles and publications
Helka Library AI Search (University of Helsinki)	AI-assisted search engine	Clarivate: Primo Research Assistant	https://helka.helsinki.fi	- Searching scientific articles and publications
NotebookLM Plus	LLM-based learning tool	Google / Alphabet	https://notebooklm.google.com/	- AI-assisted study guide when reading scientific articles.
Perplexity AI	AI-assisted search engine	Perplexity AI	https://www.perplexity.ai/	- Searching scientific articles and publications.