Can AI perform the work of human designers?

A qualitative study on the impact of AI on digital design professions.

Main Subject area: Informatics
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JÖNKÖPING 2023 June
This final thesis has been carried out at the School of Engineering at Jönköping University within informatics. The authors are responsible for the presented opinions, conclusions and results.

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Abstract

Numerous facets of society have undergone major change as a result of the quick development of technology. Artificial Intelligence (AI) has established itself as a particularly remarkable and controversial breakthrough among the countless technical advancements, and is influencing numerous different industries. Given its transformational potential, it is critical to investigate how AI is affecting the digital design profession.

The research aims to discover how the digital design profession is influenced by the adoption of AI from the perspectives of industry professionals. Thus, the research explores factors such as current knowledge and usage of AI, experience with significant changes in work practices, and attitudes towards the use of AI-tools.

This study was conducted using a qualitative research methodology. Interviews with relevant designers working in the sector and literature reviews were part of the process. Important information was gathered during these interviews, which was then analysed. The major goals of the interviews were to understand the participants' perspectives on the matter, learn about their AI experiences, and determine how AI is affecting their work practices. The study sheds light on the overall attitudes regarding AI, encompassing expectations and concerns, by assessing the manner in which AI is used in creative processes.

The research's conclusions show that different respondents have various viewpoints and awareness about AI. Regardless of designers' explicit acknowledgement, AI has already found its way into different design processes and tools. As a result, it can be said that AI has had a big impact on the digital design industry and certain fields of work practices. However, depending on the various roles and tasks involved, various implications apply. While the majority of professionals exhibit a strong desire to explore and utilize AI, naturally occurring scepticism and a lack of knowledge might prevent its general acceptance and adoption.

Keywords: Graphic design, Digital Design professions, Artificial intelligence (AI)
# Table of content

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Abstract</strong></td>
<td>2</td>
</tr>
<tr>
<td><strong>1. Introduction</strong></td>
<td>5</td>
</tr>
<tr>
<td>1.1 Background</td>
<td>5</td>
</tr>
<tr>
<td>1.1.1 Digital design professions</td>
<td>6</td>
</tr>
<tr>
<td>1.1.2 Creative AI tools</td>
<td>7</td>
</tr>
<tr>
<td>1.2 Problem statement</td>
<td>9</td>
</tr>
<tr>
<td>1.3 Purpose and research questions</td>
<td>10</td>
</tr>
<tr>
<td>1.3.1 Research Questions</td>
<td>11</td>
</tr>
<tr>
<td>1.4 Scope and limitations</td>
<td>13</td>
</tr>
<tr>
<td>1.5 Disposition</td>
<td>15</td>
</tr>
<tr>
<td><strong>2. Literature review</strong></td>
<td>15</td>
</tr>
<tr>
<td><strong>3. Method and implementation</strong></td>
<td>18</td>
</tr>
<tr>
<td>3.1. Research approach</td>
<td>18</td>
</tr>
<tr>
<td>3.2 Data collection</td>
<td>18</td>
</tr>
<tr>
<td>3.2.1 Recruitment of Participants</td>
<td>19</td>
</tr>
<tr>
<td>3.2.2 Execution of interviews</td>
<td>20</td>
</tr>
<tr>
<td>3.2.3 Interview questions</td>
<td>21</td>
</tr>
<tr>
<td>3.3 Data analysis</td>
<td>21</td>
</tr>
<tr>
<td>3.3.1 Transcription</td>
<td>21</td>
</tr>
<tr>
<td>3.3.2 Thematic Analysis</td>
<td>22</td>
</tr>
<tr>
<td>3.4 Credibility, validity and reliability</td>
<td>23</td>
</tr>
<tr>
<td>3.5 Considerations</td>
<td>25</td>
</tr>
<tr>
<td><strong>4. Result</strong></td>
<td>26</td>
</tr>
<tr>
<td>4.1 Collected Data</td>
<td>27</td>
</tr>
<tr>
<td>4.1.1 Current knowledge &amp; usage of AI</td>
<td>27</td>
</tr>
<tr>
<td>4.1.2 The influence of AI on work processes</td>
<td>27</td>
</tr>
<tr>
<td>4.1.3 Feelings and Attitudes towards AI</td>
<td>28</td>
</tr>
<tr>
<td>4.1.4 Client needs</td>
<td>29</td>
</tr>
<tr>
<td>4.1.5 Expectations of AI within creative work</td>
<td>30</td>
</tr>
<tr>
<td>4.2 Analysis</td>
<td>31</td>
</tr>
<tr>
<td>4.2.1 AI implementation in digital design- Risks and Benefits (RQ1)</td>
<td>31</td>
</tr>
<tr>
<td>4.2.2 The affects of AI on work practices (RQ2)</td>
<td>33</td>
</tr>
</tbody>
</table>
1. Introduction

The implementation of artificial intelligence (AI) is currently revolutionizing the digital design industry, making workflows more efficient, productive, and streamlined. However, there are uncertainties about the loss of human creativity, innovation, and control in the design process.

The research revolves around the implementation of artificial intelligence (AI) in the field of digital design, and investigates the current utilization and knowledge of AI-powered tools within the digital design industry, as well as how the adoption of AI is altering certain fields of professionals work practices. Additionally, the research discusses feelings and attitudes toward the implementation and advancement of AI, and uncovers potential benefits and risks with the utilization in the industry.

Ultimately, the research emphasizes the need for designers to adapt to technological advances and act as innovation managers and art directors to optimize design solutions.

1.1 Background

The digital revolution has completely changed the workflows of various industries, including digital design. Previously, graphic design and web design relied on analog techniques, but they have now transformed into computer-based professions. The introduction of AI systems into digital design is further changing the design process. AI design tools, such as Adobe Sensei, are increasingly being used to automate certain aspects of design work, allowing designers to explore new ideas more efficiently and improve productivity.

One of the benefits of AI in digital design is its ability to generate layout suggestions and select color palettes, thereby enhancing creativity. AI systems can also reduce errors and help designers produce high-quality designs in less time. In a study conducted by Santoso et al. (2021), it was found that AI-assisted design tools can improve the efficiency and effectiveness of the design process. The study also found
that designers who used AI-assisted tools were more satisfied with the design process and produced higher-quality designs than those who did not use these tools. In a study conducted by Jansson et al. (2020), it was found that designers who used AI systems were more likely to experiment with new design ideas and explore alternative solutions. However, the study also found that designers who relied solely on AI-generated solutions were less likely to produce unique designs. However, the integration of AI in digital design also raises questions about its impact on the role of designers and the design process. For instance, AI systems could potentially reduce the need for designers, leading to job losses. In addition, the use of pre-made templates and AI-generated layouts could lead to a decrease in originality and creativity. One research gap in this area is understanding how AI systems affect the role of designers and the design process. To stay competitive as technology advances, it is critical to comprehend how designers and businesses can best integrate AI systems into their workflows as they become more prevalent in digital design.

1.1.1 Digital design professions
Digital design refers to the practice of utilizing digital interfaces to present information or promote a product or service. Essentially, it involves creating graphic design that is intended to be used exclusively on electronic devices such as computers (Levanier, 2020).

Digital design professions include a range of careers that involve the creation and production of digital media and products, including websites, mobile apps, video games, animation, and digital marketing materials. These professions require a combination of artistic and technical skills, as well as a deep understanding of user experience and interface design.

In the words of Garrett, J.J. (2010), a user experience (UX) designer creates the overall look and feel of digital products, ensuring they are intuitive, easy to use, and visually appealing to the target audience. Meanwhile, Tidwell (2010) states that a user interface (UI) designer focuses on the specific visual and interactive elements of
digital products, such as buttons, menus, and icons, to ensure they are aesthetically pleasing and functional. Based on Lupton & Phillips (2015), a graphic designer creates visual assets for digital products, including logos, illustrations, and infographics, using design software such as Adobe Photoshop or Illustrator. According to Freeman and Robson (2014), the profession of a web developer includes writing code to build and maintain websites, ensuring they are functional and user-friendly.

Digital design is an essential aspect of many industries and plays a crucial role in creating engaging and effective digital experiences for users. As technology continues to advance, new opportunities are constantly emerging in this field.

1.1.2 Creative AI tools

The potential for artificial intelligence (AI) to exhibit creativity is a topic of great interest among scholars, given that creativity is often considered a defining characteristic of human intelligence. However, according to a qualitative study by Andreas Pfeiffer on digital design professionals, the ability to generate innovative ideas is greatly influenced by the designer's connection to their environment, clients, and colleagues. This suggests that AI may not be able to replicate the insights and inspiration that come from human connections (Pfeiffer, 2018).

In the field of AI art, the question remains whether machines can excel in both originality and effectiveness, two essential components of creativity. While AI can use established data to create new content, it is unclear whether it can produce truly original work. Some argue that humans are not unique in their ability to create, as we build on what we have learned and what others have done before us. In contrast, machines can create from scratch, but this may not be enough to match human creativity (Olszewska, 2020).

Today's designers are dependent on essential tools like software, hardware, and online services for the creative process. A significant portion of frequently used software for digital design now includes artificial intelligence (AI), which enables it to make
autonomous or partially independent creative judgments and, as a result, eliminates various steps from the design process.

Adobe is one of the top software providers in the digital design industry and utilizes the ground-breaking AI platform Adobe Sensei, aimed at optimizing the digital design experience for professionals. With its advanced tools and features, Adobe Sensei has transformed the way digital design work is performed and brought about a paradigm shift in the industry by automating tasks such as image recognition, object selection, and masking. This not only results in faster delivery times but also leads to higher quality outputs. (Pfeiffer, 2018).

Several other new AI-driven tools have recently joined the digital design market, each with its own set of features and capabilities, giving designers greater freedom and power to use AI in their creative processes. One of these emerging tools is Adobe Firefly beta, which is the latest offering from Adobe products, launched in March 2023. Adobe Firefly, like Adobe Sensei, uses AI and machine learning (ML) algorithms to generate visuals, text effects, and a wide range of alternative design solutions from brief description inputs. Everything in Adobe Firefly is built to be seamlessly incorporated into current workflows in Adobe Creative Cloud, Document Cloud, Experience Cloud, and Adobe Express, with the goal of offering generative AI tools tailored to creative needs, use cases, and optimizing creative processes (Wadhwani, 2023).

Further, Midjourney emerges as a key player among the group of AI-driven platforms shaping the digital design industry. Midjourney is a generative AI program that excels at converting natural language prompts into imagery and allows users to create high-quality images by following simple text-based suggestions. One of Midjourney's advantages is its accessibility, which makes it simple and quick for anybody to produce realistic visuals (Wankhede, 2023).

Lastly, ChatGPT emerges as a key contributor in the field of AI language models, renowned for its ability to generate high-quality textual content. It excels at providing creative suggestions, generating design concepts, and delivering real-time feedback
According to their case study, ChatGPT was validated to be a valuable asset for designers seeking to streamline their workflows and explore new design possibilities.

1.2 Problem statement

Today, the digital design sector frequently uses AI technology to create value within the industry (Karaata, 2018). However, where the new technology best serves a function is still up for debate, and the field of AI tools is in its exploratory stages. Employees must constantly adapt to new technologies and change their ways of working. The question is how much AI is changing the workplace and conventional design procedures.

Recent research in the field of digital design and AI has highlighted the potential for AI tools to improve and streamline the design process, making the work of digital design professionals more efficient and productive. Irbite (2021) identifies viewpoints on AI's role in designers' future work and discusses the idea that artificial intelligence would make designers' jobs easier by utilizing their current tools rather than replacing them. Hence, AI tools are more likely to facilitate work practices, leading to increased productivity, improved accuracy, and reduced time-to-market. Irbite (2021) further implies how this approach thereby establishes a new business model of how designers should determine the need for new competencies and an overall change in work practices to optimize design solutions. Adapting to technological advances will thus require human designers to act as innovation managers and art directors with a focus on overseeing, taking important decisions, and defining what is meaningful to the design process.

In line with the need for a modified work model, there are also beliefs that the adoption of AI tools in the digital design process may have unintended consequences. Irbite (2021) addresses that the increasing use of AI may lead to a decrease in demand for designers with traditional design education. As a result, it poses new challenges for these professionals and potentially decreases their job security.
While technological advancements in the industry have given new opportunities and allowed designers to work more effectively, there have been concerns raised about the use of artificial intelligence (AI) in creative works. Pfeiffer's research (2018) suggests that many designers worry that AI produces copies of original works for the benefit of the masses rather than individuals. Depending on which creative elements are prioritized, achieving the desired outcomes may require different approaches. While AI technologies may improve efficiency in producing visually appealing artwork, developing original works that represent both the designer's unique creative style and client needs is an important aspect of the creative process. Designers agree that over-reliance on AI might limit human creativity, perhaps resulting in a loss of originality and uniqueness in digital design products. As machines are given more autonomy in decision-making, some fear that an over-reliance on AI may result in a loss of control over the design process. Moreover, designers express concerns that the increasing usage of AI might cause homogenization of visual output, devaluing the unique creative skills that designers bring to the table (Pfeiffer, 2018).

Innovations in AI are challenging existing notions and hold the potential to elevate output and effectiveness. Moreover, the implementation of these technologies necessitates a continuous need for employees to adapt and transform. While it is evident that AI is transforming the workplace and standard design practices, the extent and ways in which this revolution will unfold remain unclear.

1.3 Purpose and research questions

The digital design industry is rapidly evolving, and staying up to date with the latest technology advancements is essential for businesses to remain competitive. While there has been prior studies on the use of AI and its influence on other professions, there is presently a shortage of research on AI in the field of digital design. Therefore, this study aims to address this gap.

The research aims to discover how the digital design profession is influenced by the adoption of AI. Thus, factors such as current knowledge and adoption of AI,
experience with significant changes in work practices, and attitudes towards the use of AI-tools will be included in the study.

As Stephen Barley (1986) demonstrated in his qualitative case study of the implementation of CT scanners, technology can fundamentally transform the nature of work and the skills required, leading to new job roles and the displacement of certain occupations. Similarly, the adoption of AI in digital design may lead to new job roles and skill requirements, as well as the displacement of certain tasks that were previously done by designers.

Digital design, unlike other industries that may rely on more routine and predictable tasks, requires a certain level of creativity and intuition, making it more challenging to predict the impact of AI on the profession. The integration of technology into the creative process makes the impact of AI on digital design professionals even more complex. For instance, while AI may be able to perform certain tasks more efficiently, such as generating layouts or suggesting color schemes, it may not be able to replicate the creative thinking and decision-making skills of a human designer.

Thereby, the purpose of this empirical investigation is to examine the current state of the adoption of AI within the industry from the perspective of digital design professionals by providing subjective insights into the complex field.

1.3.1 Research Questions

RQ1: What are the potential benefits and risks with the adoption of AI-tools in digital design professions?

This research question can help to promote a more balanced and nuanced understanding of the role of AI in digital design. By considering the benefits and risks with the adoption of AI from the perspective of previous findings together with professionals' experiences and attitudes, valuable insights can be provided into how AI can be used in a proper way to facilitate the profession and enhance the design process, while also ensuring that the unique value of human creativity and innovation is not lost.
Moreover, the integration of creative AI-tools in digital design has sparked interest in exploring their impact on the work practices of design professionals. This leads to the second research question.

**RQ 2: In what ways has the integration of AI affected work practices within the creative industry?**

The question looks into the effects of AI on the industry with a particular emphasis on how particular fields of work processes could be altered. It enables for an understanding of how the industry is evolving by looking at the potential impacts of AI on the creative process, project strategy, and general work practices. Additionally, the question communicates how the use of AI-tools will impact traditional notions of creativity in digital design professions. AI tools have the potential to automate certain tasks and make some decisions that were previously thought to be the exclusive domain of human creativity. By understanding these changes for the future of design work and the skills that will be required of designers, the research question aims to contribute to the ongoing discussion related to the changing role of technology in the workplace.

**RQ 3: How does the implementation of AI in the digital design industry influence clients' needs and preferences?**

This question intends to provide a more comprehensive perspective of the diverse impacts of AI on the profession, particularly in cases where adoption has not yet occurred and knowledge of AI is limited, by collecting data on these indirect effects. AI can help create unique designs that are tailored to clients' needs, but it may not always be clear how this affects their preferences. Therefore, exploring the indirect effects of AI implementation on clients' needs and preferences can provide a comprehensive understanding of the diverse impacts of AI on the industry. This understanding can help designers create effective design solutions that meet clients' expectations and develop strategies for integrating AI into the design process in a way that benefits clients. Overall, this research question contributes to the ongoing
discussion of how technology impacts the digital design industry and how the industry can adapt to provide efficient design solutions.

1.4 Scope and limitations

The research will be established from previous investigations and studies in recent years. Hence, AI tools and the technology for graphic design are under constant change and development. This creates opportunities for new studies to investigate how AI tools can affect a selected profession to a certain degree. The study has chosen to focus on communication agencies with workers in graphic design, UI and photography.

The research questions provide clarity in which preparations and expectations need to be defined. The research questions highlight the purpose and impact that today's communication agencies may experience with this rapid development and demand for AI tools. Collecting data through in-depth interviews with relevant employees in the industry will generate a reliable and accurate first-hand view of the business design process. The interviews will be conducted by gathering data from four different communication agencies in Sweden, geographically dispersed. We Are More is a design and communication agency based in Gothenburg, Studio Mint is a creative photo and image studio specialized in visual communication based in Gothenburg. Grand Public is a design agency based in Jönköping and Sockholm. To get a perspective on how the affect may differents on different types of companies, the reseach will include a fourth company with a self-employed freelancer based in Sundsvall.

The selection of our target group for the company interviews was a critical part of our research design, as it helped us to obtain a diverse range of perspectives on the implementation of AI in the digital design industry. The scope was carefully considered based on several factors, including the size of the companies, company's level of competence in using AI, and geographical location.
Size was a crucial factor in the selection process, as larger companies typically have more resources and capacity to adopt and integrate AI into their digital design processes. On the other hand, smaller companies may face more significant challenges in adopting AI due to limited resources and expertise. Therefore, interviewing a mix of small, medium, and large companies enabled the research to get a broader understanding of the various challenges and opportunities that each company faces in implementing AI in design work.

Competence was another critical factor in the selection process, as it played a significant role in determining the level of familiarity and expertise that companies had in utilizing AI tools. By interviewing companies with varying levels of competence, the research aimed to identify the different ways that companies currently is utilizing AI-generated tools and the potential areas for growth.

Geographical location was also considered, as the availability and accessibility of AI technology can vary depending on the location of the company. Companies located in bigger cities may have better knowledge about AI tools and higher demand of implementing it in workpractises, compared to companies located in smaller cities.

By ensuring the quality and focus of the study some limitations needed to be made. The questions for the interviews needed to be short, guiding and relevant in order to answer the study's research questions. The selection of interview participants required a minimum of 5 years of work experience in the business, which was valuable to determine what specific work practices the participants have experienced any changes with the advancement of AI tools.

This study aimed to gather valuable information and perspectives on AI tools in the digital design industry. By doing so, it sought to provide insights that will help professionals stay ahead of technological advancements and navigate the future direction of the industry.

1.5 Disposition

The remaining part of this thesis is organised as follows:
Chapter two, Method and Implementation, describes the research methods employed in this study. The primary method of data collection was individual interviews, and the chosen approach to analyze the collected data is also presented. Moreover, the chapter incorporates the reasonings behind the selected methods. Chapter three, literature review, examines previous related research and highlights relevant literature which relates to the research purpose and research questions. Chapter four, Analysis, reviews the results from the collected data in a structured manner, presenting the identified themes established through a thematic analysis together with the findings that related to each theme. The following chapter, Discussion, provides a discussion of the results in relation to previous studies, and highlights significant insights from the findings together with the implications and limitations of the research. The last chapter, Conclusions, this chapter presents the conclusions of the study together with practical implications, scientific implications and possible topics for further research. The paper ends with presenting the appendix of the transcribed participant interviews.

2. Literature review

Andreas Pfeiffer (2018) conducted a qualitative study, interviewing over 75 professionals working in digital design to better understand the relationship between creativity and human insights, clients' needs, and the environment in which the creative process takes place. Pfeiffer argues that creative professionals must remain connected to the outside world, including clients, colleagues, and their surroundings, in order to be truly innovative. This connection can provide valuable insight and inspiration that cannot be replicated by AI. Additionally, the study found that creative processes are often enhanced by spontaneous connections between seemingly unrelated concepts. This finding highlights the importance of external influences and environment in the creative process (Pfeiffer, 2018).

The article "Graphic design and artificial intelligence: Interdisciplinary challenges for designers in the search for research collaboration" by Meron (2022) discusses the impact of AI on the graphic design profession and the challenges it poses for
designers in terms of interdisciplinary collaboration. The article argues that designers need to integrate AI into their design thinking processes and develop new methods and frameworks for working with AI. As Meron (2022) notes, "designers need to embrace a culture of experimentation and collaboration, and be willing to explore new methods and tools". This approach emphasizes the complementary roles of humans and AI, where designers can focus on higher-level creative tasks while AI can handle more mundane or repetitive tasks. Additionally, the approach supports the claims of Irbite (2021) who highlights the potential need for an overall change in work practices and a newly developed business model for professionals in order to optimize design solutions. Additionally, Holmquist (2017) highlights that a designer's decisions are greatly influenced by the materials at their disposal, and as AI becomes a more vital part of everyday products, designers will have to figure out how to work with intelligence as a new material. Hence, designers must familiarize themselves with the capabilities and limitations of AI in digital design in order to create aesthetically pleasing and functional design solutions.

Moreover, it is important to consider the impact of people's natural skepticism towards new inventions, including AI. According to a study by Zinkhan, Solomon, and Gwin (1985), individuals who are more skeptical are less likely to adopt new technologies. This finding emphasizes the significance of addressing skepticism to encourage the adoption of AI tools in the design profession. Considering that people are generally hesitant to accept something unfamiliar and uncertain about the outcome, this skepticism can impact the ability to utilize AI on a broader scale. Therefore, professionals need to embrace a culture of experimentation with new approaches and methods, while also addressing skepticism, to better navigate the unavoidable progress of AI and stay competitive in the industry.

Furthermore, Meron (2021) addresses in his article that professional graphic design programs like InDesign and Illustrator can be challenging for beginners to use, but in recent years, there has been an increase in easily accessible online graphic design tools. Some applications, such as Canva and Adobe Spark, are geared toward amateur designers and leverage artificial intelligence (AI) and machine generation
technologies to generate design-templates for users. These tools, however, can not be customized or sophisticated enough for usage in the professional sector. It is possible for designers to expect to face more competition from amateur designers who can now create simple designs using these tools due to the accessibility of online tools that favor non-professionals (Meron, 2021). Pfeiffer (2018) supports a similar theory that AI allows for the democratization of sophisticated visuals, meaning that AI can generate visuals that would otherwise take significant time and skill to produce using complex techniques and methods. As a result, AI is lowering the barrier to entry to the point where creative professionals' skills and expertise may be undervalued. Pfeiffer (2018) further argues that this trend is anticipated to continue and will have a significant impact on how creatives express and demonstrate their unique creative abilities.

The findings raise the concern of whether professional work practices will be impacted by a potential change in client demand since non-professionals now have easy access to AI-driven tools that facilitate their needs at a low cost. Further on,, the usage of AI tools in graphic design, according to Meron (2021), could perhaps lessen the demand for professionals' creative input. AI-driven design tools may uphold constrained and standardized concepts of aesthetics, thus limiting the creative freedom of designers. Several academics in the area, such as Drucker and McVarish (2013) and Helfand (2002), have voiced similar concerns about the functionalization of graphic design and the following de-professionalization of the profession. Meron (2021) notes, however, that AI still seems to be in the industry's early experimental stages. Along with the rapid advancements in AI technology, significant changes have been made in the field of AI, and even more changes are anticipated for the future. Nevertheless, for now, designers can take solace in the fact that current successful advancements in AI still enable them to sustain overall creative control and originality over their work.

These theories provide a foundation for examining the work practices in which digital design professionals have experienced improvements and disimprovements with the adoption of AI tools, as well as the changing nature of design work in the age of AI.
3. Method and implementation

In this part of the thesis, the research approach will be presented, followed by the methods used to carry out the study through data collection and analysis.

3.1. Research approach

The study include the philosophical theories of constructivism and pragmatism in order to fulfill the research purpose and answer the research questions.

Constructivism emphasizes that everyone's experience and understanding of the world is different (Creswell, 2014). From a research standpoint, it may be necessary to examine designers' attitudes and approaches to the use of AI in their work, and the ways in which AI systems might be understood based on experience. Consequently, this approach is necessary to incorporate in order to explore how AI affects professionals from an individual standpoint. Pragmatism, on the other hand, focuses on practical problem-solving and gathering evidence to make informed decisions (Creswell, 2014). A pragmatic approach for this study include analyzing the practical implications of adopting AI in digital design, such as its influence on productivity, creativity, and user experience.

Both constructivism and pragmatism are relevant approaches for the study’s research to get valuable insights based on subjective experiences and empirical evidence and aims to help answer the study’s research questions.

3.2 Data collection

A qualitative method is an appropriate method to use when obtaining participants nuanced experiences towards the research topic. Therefore, individual interviews with relevant designers actively employed in the field were chosen as the primary method of data collection for this study. The study uses interviews to determine how much AI is incorporated into creative processes and to give information on overall attitudes concerning AI in order to get an understanding of how professionals in the industry perceive, experience, and understand AI in their work.
3.2.1 Recruitment of Participants

In the process of selecting participants for the study, an assessment was made of three different factors. The goal was to find candidates with different job descriptions, areas of expertise, and at least five years of work experience in the digital design industry. The recruitment aimed at creating a selection of active workers from different communication, design, and photography agencies, with a wide spectrum of both female and male participants of varying ages. The selection of different roles and skills was essential, as their specific field of work may have been affected by the development of AI tools.

As previously mentioned, the study chose to focus on four communication agencies in Sweden. These agencies were carefully selected to provide a diverse and representative sample of the Swedish digital design industry. The companies varied in size, both in relation to the number of employees, skill supply, and client base. Moreover, the chosen sample of agencies was located in Jönköping, Gothenburg, and Sundsvall.

The recruitment process for the study consisted of contacting suitable companies, determining the requirements profile, sorting out candidates according to the requirements profile, and finally scheduling an interview with the participant. The recruitment process aimed to ensure that the selected participants were active workers in the communication industry with relevant expertise and experience.
3.2.2 Execution of interviews

The data collection process involved a collaborative approach between the two thesis writers. Gathering qualitative data from individual interviews with a total of eight participants, the interviews were conducted over a period of one to one and a half hours, allowing ample time for the participants to thoroughly discuss and provide feedback on the questions posed to them. During the interviews, participants were also given the opportunity to add comments and insights to the collected data, ensuring that their perspectives were fully captured.

One author was responsible for leading the interview and asking the questions, while the other author was responsible for taking detailed notes and observing the participant's nonverbal cues. This collaborative approach allowed for a more thorough and nuanced data collection process. While one author was leading the interview and asking questions, the other author was able to observe the participants' reactions and take note of any additional comments or insights that they provided. This allowed for a more comprehensive understanding of the participants' perspectives and ensured that their feedback was fully captured.

Furthermore, the use of two interviewers helped minimize the potential for bias in the data collection process. With two authors involved in the interviews, any biases or assumptions that one writer may have held could be challenged or balanced out by the other author's perspective. The list of questions was carefully crafted to ensure that the interview covered all relevant topics related to the study while also allowing for participant input and insight. The use of both closed-ended and open-ended questions provided a balance between obtaining specific information and allowing for more in-depth discussion.

During the interview, the interviewer was able to generate additional questions if the participant provided responses that resulted in a new and engaging direction that was considered essential for the research topic. This allowed for a more flexible and adaptable interview process, while still maintaining a focus on the research question.
3.2.3 Interview questions

The answers to questions 1 through 5 helped to contextualize and improve the understanding of the experiences and opinions that were revealed by providing some background information on the participants. (See appendix 1) The following interview questions encompass open-ended questions that are organized into established key themes. (See appendix 2) The themes are demonstrated and further explained in the following section in this chapter, which presents the thematic analysis.

3.3 Data analysis

In this section a description of the data analysis will be provided, where the execution of the transcription as well as the thematic analysis is described in detail. Based on guidance from Creswell and Creswell (2018), the analysis is organized into numerous stages.

3.3.1 Transcription

The initial stage in the analysis process was to transcribe the recordings from the eight interviews. According to Hawkins (2017), Parcell & Rafferty (2017), transcription is the process of turning spoken words into written form. At this step, the researcher employs careful listening to consider the context of the participant's responses, which aids in the goal of documenting what was said during the interviews in a representative manner that is both legible and accurate.

To ensure consistency and uniformity in transcriptions throughout all interviews, the transcriptions were done manually using two interview templates. One of the templates was adapted for full verbatim, also called denaturalized transcription (McMullin, 2023), which was written in Swedish and aimed to include everything that was said, including utterances, mistakes, repetitions, and other nonverbal cues that might affect the meaning or intention of what was said. Since the subject matter of the study necessitates a particular amount of detailed data owing to the lengthy and open-ended interview questions that rely on various experiences and approaches
among the respondents, full verbatim transcription was determined as the initial step of the transcription.

The second template was filled as the following step, which was converting the initial transcribing template to English with subjective decisions on what to include by using intelligent verbatim, also called naturalized transcription (McMullin, 2023). This technique enables the transcriptionist to exclude instances where, for example, a respondent speaks incorrectly and corrects themselves, allowing the transcriptionist to capture more accurately what was meant and evaluate how the respondent may have represented themselves in writing. (McMullin, 2023).

### 3.3.2 Thematic Analysis

The second part of the analysis involved carrying out a thematic analysis, which is the process of turning collected data into distinct themes. At this step, the analysis involved careful reading of the collected data to identify themes based on the interview questions and participants' responses. This structured approach, as recommended by Braun and Clarke (2006), allowed for the identification of common patterns and the exploration of topics to facilitate in drawing conclusions.

o each of the questions, the following themes were identified:

**Current knowledge and usage of AI:** This category seeks to provide an overview of the current state of AI implementation in the industry, as well as overall awareness and knowledge about AI. It also identifies the AI-powered software applications that are used by professionals, enabling a thorough analysis of the situation and an in-depth investigation of these particular programs.

**Feelings and attitudes towards AI:** This category is focused on exploring the participants' emotional responses and overall approaches to AI technology in creative industries. By identifying the participants' beliefs and opinions about the use of AI in
their work, including their levels of skepticism or optimism, it aims to discover whether certain attitudes towards AI may influence the outcomes of AI implementation.

**AI influence on work practices:** This category aims to capture the experiences of using AI-tools in their work, with a particular focus on how adopting AI may alter certain fields and stages of work processes. Moreover, it explores the ways in which AI is transforming the nature of work processes, job roles, and responsibilities, which aids in identifying challenges and opportunities that professionals may encounter. As a result, it seeks to address the continuing discussion about the changing role of technology in the workplace by educating readers about the potential effects AI may have on certain work practices and procedures.

**Client needs (External factors):** This category aims to identify additional effects of AI on the sector that have not yet been studied. For instance, it might reveal shifts in customer demands or a rise in the number of clients who can produce designs using AI-powered tools. By analyzing the indirect effects, it aims to give a broader overview of the diverse impacts of AI on the profession, notably in situations where adoption has not yet occurred and awareness about AI is low.

**Expectations of AI:** This category aims to explore the potential expectations of AI adoption in the design profession. It investigates the anticipated benefits of using AI-assisted tools for daily work tasks. Furthermore, it might provide a broader overview of contrasting perspectives on the value of manual tasks in relation to maintaining creativity and control. By analyzing these expectations, the data may provide valuable insights into the diverse impacts of AI on the design profession, including improvements in efficiency and creative enhancement.

**3.4 Credibility, validity and reliability**

This study applies the philosophical theories of constructivism and pragmatism to fulfill the research purpose and answer the research questions. Constructivism
emphasizes that individuals' experiences and understandings of the world are different (Creswell, J. W, 2014). This perspective aligns with the need to examine designers' attitudes and approaches to the use of AI in their work based on their unique experiences. Pragmatism, on the other hand, according to March and Smith (1995), focuses on practical problem-solving and gathering evidence to make informed decisions, which is crucial for analyzing the practical implications of adopting AI in digital design and understanding its influence on productivity, creativity, and user experience.

To collect data that captured nuanced experiences and insights from participants, individual interviews with relevant designers actively employed in the field was chosen as the primary method of data collection. This qualitative approach allowed for in-depth exploration of participants' perspectives and provided valuable insights into how AI is incorporated into creative processes and how professionals perceive, experience, and understand AI in their work.

The recruitment of participants was carefully conducted to ensure diversity in job descriptions, areas of expertise, and years of work experience in the communication industry. By selecting participants from different communication, design, and photography agencies, with varying sizes, skill sets, and client bases, we aimed to create a representative sample that provided a broad spectrum of insights into the impact of AI on the digital design industry in Sweden.

During the interviews, we adopted a collaborative approach, following the guidelines outlined by Seidman (2013). One author led the interview and asked questions, while the other author took detailed notes and observed nonverbal cues. This collaborative technique facilitated a thorough data collection process, minimizing potential biases and accurately capturing participants' perspectives. The interviews were transcribed carefully to ensure consistency and accuracy, providing detailed data necessary for the analysis.

In conclusion, our study used qualitative methods, diverse interviews, and collaborative techniques to ensure the credibility, validity, and reliability of our
findings. Through careful transcription and thematic analysis, we aimed to provide accurate insights into the impact of AI on the digital design industry.

3.5 Considerations

In this section, the relevant considerations taken into account for this study are described and justified. These considerations were essential to ensure a reliable and trustworthy outcome given the size and scope of the research. Throughout the study, special attention was given to ethical considerations. Before participating, all participants were informed that their involvement was voluntary and they could withdraw at any time. Participants gave permission for interviews that involved voice and video recording through Zoom. To respect confidentiality, the data was presented in a way that ensured participants' identities remained anonymous. The companies were based in Sweden, and the interviews were conducted in Swedish, based on participants' preferences. Conducting interviews in Swedish was important to avoid language barriers and allow participants to express themselves accurately. All materials were translated into English to maintain the intended context of the thesis.

During data collection, efforts were made to build trust and ensure participant comfort. Respect for participants and their settings was shown, and participants had the option to choose whether the interviews were conducted online through Zoom or at their workplace. At the beginning of each interview, the purpose of the study and the definition of AI were explained. Participants were reassured about the voluntary nature of the study and given the option to skip any questions they felt uncomfortable or unwilling to answer. Questions were asked in an unbiased manner, emphasizing that there were no right or wrong answers.

Trust was established through open discussions, allowing flexibility deviating from the interview protocol if necessary. Participants were encouraged to share personal experiences to foster a friendly and open environment, promoting their willingness to share. In the analysis, the privacy and anonymity of the participants were respected,
ensuring that their information remained confidential. Information that could have been harmful to participants or their companies was not revealed. After the interviews, participants were given the opportunity to contribute any additional insights or input regarding the collected data, if they wished to do so. The aim was to provide a complete and clear understanding of the situation. All perspectives and contrasting findings were objectively reported using unbiased language.

4. Result

This chapter presents the findings gathered from the interviews conducted with eight professionals from diverse backgrounds in the field of creative work. In the first part, 4.1 Collected Data, the data is presented objectively and without bias along with the established key themes that were made through the thematic analysis. The second part, 4.2 Analysis, presents a detailed analysis of the results, including significant insights and learnings that provide answers to the study’s research questions.

<table>
<thead>
<tr>
<th></th>
<th>Title</th>
<th>Age</th>
<th>Company</th>
<th>Work Experience (Years)</th>
<th>Daily tasks</th>
<th>Software used</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Graphic designer, Art director &amp; Communicator</td>
<td>54</td>
<td>Self-employed</td>
<td>27</td>
<td>Project management, copywrite, produce brand identities and style guides</td>
<td>Most Adobe Creative Cloud programmes</td>
</tr>
<tr>
<td>2</td>
<td>Digital Designer</td>
<td>37</td>
<td>Design-driven Brand Agency</td>
<td>8</td>
<td>Coding, web design, UI/UX design, web development, creating visual concepts</td>
<td>Figma, Novo, bubble, Adobe Illustrator</td>
</tr>
<tr>
<td>3</td>
<td>Digital Content Specialist &amp; Creator</td>
<td>29</td>
<td>Design-driven Brand Agency</td>
<td>8</td>
<td>Developing content strategies, creating and distributing digital content, and analyzing performance</td>
<td>Most Adobe Creative Cloud programmes, Figma &amp; Nation</td>
</tr>
<tr>
<td>4</td>
<td>Producer &amp; Senior Retoucher</td>
<td>39</td>
<td>Image Studio/ Advertising Agency</td>
<td>18</td>
<td>Film production, image retouch, project management, creative direction</td>
<td>Adobe Photoshop—and After Effects, Cinema 3D</td>
</tr>
<tr>
<td>5</td>
<td>Digital Artist</td>
<td>33</td>
<td>Image Studio/ Advertising Agency</td>
<td>6</td>
<td>Digital art, 3D graphics, 3D (3D production), retouching</td>
<td>Adobe Photoshop, Unreal Engine (3D), Blender open source (3D)</td>
</tr>
<tr>
<td>6</td>
<td>Photographer &amp; Digital Artist</td>
<td>31</td>
<td>Image Studio/ Advertising Agency</td>
<td>14</td>
<td>Image production, image retouching, photography</td>
<td>Photoshop, Unreal Engine, Blender open source</td>
</tr>
<tr>
<td>7</td>
<td>Digital Design Director</td>
<td>44</td>
<td>Design-driven Brand Agency</td>
<td>23</td>
<td>UI and UX design, programming, project management, administration</td>
<td>Figma, Visual Studio Code</td>
</tr>
<tr>
<td>8</td>
<td>Graphic Designer</td>
<td>48</td>
<td>Communication Design Agency</td>
<td>30</td>
<td>UI designer, produce brand identities and style guides</td>
<td>Adobe Indesign, Illustrator, Photoshop, Figma</td>
</tr>
</tbody>
</table>

*Chart of interview participants. Displayed in tables of title, age, company, work experience, daily tasks and software used.*
4.1 Collected Data

4.1.1 Current knowledge & usage of AI

The findings show that the respondents have an uneven amount of knowledge with AI. Notably, some are unaware that AI has been integrated in certain software programs. While the majority of respondents utilize Adobe tools such as XD, Illustrator, InDesign, and Photoshop, only a few are aware of Adobe Sensei's AI-powered features. For instance, the self employed graphic designer and art director stated they used only Adobe software but claimed not to utilize any AI technologies.

Three of the respondents working at the same agency expressed widespread knowledge and usage of AI. Their organization is presently experimenting with AI tools in their projects, but does not yet have a clear framework or strategy in place for how to properly employ AI within their work practices. This is partly due to the current exploratory stage, and mainly due to a lack of knowledge about prospective lawsuits and regulations around the usage of AI in artwork. The primary AI-assisted software the respondents mentioned using is Chat GPT, Midjourney, and Notion AI. Chat GPT was explained to be used for writing, editing texts, and coding assistance, but also as an inspiration-and brainstorming tool for different stages of the work process. Secondly, the respondents mentioned Midjourney as a tool for developing brand concepts by generating visual assets such as logotypes, imagery, product visualizations, and conceptual moodboards. Lastly, Notion AI was stated to be used to organize and streamline individual work spaces, such as meeting notes and to-do-lists.

4.1.2 The influence of AI on work processes

The majority of the participants stated that AI has not yet been a vital factor in changing current work processes, however, it has had varying levels of impact. While some participants have not noticed significant changes, others have found AI-assisted tools to make work practices more efficient and optimized.
Participant number 1 expressed that the use of AI-generated art tools has not impacted the traditional tasks performed. However, she recognized the improvement in Adobe programs compared to previous years. Although this has not altered her working methods, she appreciated the optimization that technology offers in these softwares. Participant number 2 agreed on the benefits of implementing AI in work processes and has lately seen AI-tools such as Chat GPT as an essential tool for text and fact-checking. Currently, he used it as an external tool for experimentation, but he believed AI could play an even more critical role in the future.

Participant number 3 highlighted the efficiency and optimization that AI-assisted tools can offer. For administrative work, these tools have made tasks easier to manage by organizing meeting notes and to-do lists. Additionally, they have helped overcome creative blocks, brainstorm content ideas, and thus streamline work time.

In addition to being an aid in aspects of time efficiency and structuring, AI tools have had an influence on motivation and been a source of inspiration. As participant number 8 stated: "These tools have opened up creative doors, allowed for experimentation with different ideas, and optimized my work to be more effective."

Overall, the participants' opinions suggest that AI is viewed as a tool that has the potential to improve efficiency and effectiveness, but its impact may vary depending on the specific field and the individual's use of AI-assisted tools.

4.1.3 Feelings and Attitudes towards AI
The study shows considerably mixed attitudes among the respondents toward the adoption of AI. While only two of the respondents (1, 5) expressed concerns about losing their job in the future, the remaining respondents noted other disadvantages of applying AI to creative tasks. One concern among the majority of the respondents was the leveling effect of AI on the way visual output looks, which in turn could lead to devaluation of human creative expertise. Therefore, they are afraid of losing control over the creative parts of the process. Essentially, all the respondents acknowledged the overall importance of maintaining the human touch on a piece of artwork.
Likewise, most respondents expressed that using AI-assisted tools would affect their sense of ownership of the creative output to a certain degree due to concerns and uncertainties around the matter of copyright infringement, and the digital content specialist specifically referred this prospect to AI-softwares like Midjourney, since this particular program generates visual assets such as imagery and logotypes in high quality that can be re-used by others.

Additionally, respondents highlighted the unintended ethical consequences resulting from AI outputs. They mentioned their own experiences using AI algorithms that occasionally resulted in biased, offensive, or inappropriate results. The digital content specialist demonstrated this concern as particularly relatable for her job role, as her responsibilities entail being thoughtful about inclusivity for all audiences on digital channels. On the other hand, the majority of respondents also indicated positive feelings and attitudes towards the use and advancement of AI. Instead of seeing AI technologies as a threat to their professions, many viewed them as a tool to simplify work procedures. Furthermore, the positive outlook towards AI was strongly demonstrated by participant 2, 3 and 7 who expressed an interest and enthusiasm for the advancement of AI and saw it as an exciting challenge to embrace within the industry in order to gain new skills and knowledge.

4.1.4 Client needs

Most of the participants did not notice any changes in customer requests and needs in line with the development of AI tools. The ordinary tasks and assignments in projects remain. Participant number 2 stated that the agency has the same demand and same type of customers now as in recent years, and implied that their organization, on the other hand, has recently started proposing collaborations with AI-generated work for client projects. Moreover, participant 3 stated that, at her agency, there is a rising demand for strategic advice in brand development and digital optimization across multiple channels. However, she also mentioned an observation that client requests can vary depending on the type of client and their level of expertise in content
creation and digital channels. She also expressed a recurring pattern where older generations and smaller businesses tend to have less expertise while younger generations and larger businesses tend to have more.

Participant number 7 suggested that clients have begun to request the agency's knowledge and project management skills on how to utilize AI in their businesses, but there may be a decline in demand for smaller, more isolated jobs that can now be automated. However, the agency's profitable business is mainly driven by its expertise in long-term strategy and brand development.

Participant 4, 5 and 6 however stated that their agency has a wide range of skills and expertise, and a broad customer base with many returning customers. They were convinced that their clients value their specific expertise and results, and as long as they continue to meet those needs, their requests will remain the same.

4.1.5 Expectations of AI within creative work

The process of moving from creative purpose and ideation to a final and given result is complex, and many of the tasks involved in this transition involve time-consuming manual operations that are frequently regarded as tedious and repetitive tasks, such as data analysis, planning and customer support. The majority of respondents believe this is the area where using AI-assisted tools in their jobs will be beneficial and have the largest potential. The result indicate that participants 3, 7, and 6 expressed a desire for AI to handle more administrative work. Examples that were mentioned were tasks such as posting and scheduling content for social media, managing project documentation and reports, as well as planning and managing schedules and time reporting. Thereby, incorporating AI into the repressive tasks would have given the designers time to focus on more creative aspects of the job.

Participant 3 communicated a desire to use AI during brainstorming and implementation stages to ensure the human touch and authentic quality of the work. AI could be implemented to ensure creative freedom and allocate more resources to optimize strategic brand development and content creation. However, participant 1
and 8 stated that manual, repetitive, and less creative tasks are actually necessary in their everyday workflow to break away from creative thinking, and for the purpose of having control over their work.

4.2 Analysis

4.2.1 AI implementation in digital design- Risks and Benefits (RQ1)

The analysis finds mixed concerns about the implementation of AI within the industry, which relate to the potential risks associated with the adoption of AI-tools. Firstly, the findings show that one potential risk revolves around AI-generated outputs that conflict with ownership and copyright regulations, particularly in light of current uncertainties in prospective lawsuits around the usage of AI in artwork. As one participant expressed: "I sense concerns and uncertainties around the matter of copyright infringement when it comes to AI-generated artwork, especially regarding generating an artpiece entirely through AI with the use of i.e. Midjourney."

Secondly, the findings have highlighted the risks of unintentional ethical consequences, implying that professionals have observed how AI algorithms occasionally generate outputs that are biased, normative, inappropriate, or even offensive. As another participant stated, “In my role as a digital content specialist, I believe it's essential to consider ethical implications and inclusivity. The absence of clear regulations and biases in AI-generated outputs raises ethical concerns.”

Thirdly, the study has identified a common concern among the participants related to the risk of undervaluing human artistic skills along with AI advancement. As AI grows more powerful and capable of artistic endeavors, it seems apparent that a gradual transition away from traditional human-centered work processes will occur. Based on the responses from the interview participants, this transformation in the field of creative work may lead to a potential loss of recognition for the unique skills that human creatives bring to the table. Few of the participants raised concerns about whether AI systems could replace some of the tasks that human designers already perform, but with a higher quality, greater time efficiency, and at a lower cost. As one
participant expressed, “Of course there are concerns about the capacity that AI will be able to convey. I can feel a concern that the value of genuine craftsmanship will decrease and clients will look for time-efficient solutions. And that is a factor we need to take into consideration in order to keep up with the external factors.”

However, one noteworthy insight from the results was that two of the respondents with particularly broad AI knowledge and usage stated the importance of expertise in handling AI-powered tools. The participants stated how the disadvantages concerning the homogenization of visual outputs are dependent on the humans' ability to communicate with an AI tool. Thus, AI tools need to be learned and controlled to get the desired result. As one respondent stated: “Creating art through AI is in itself an art form because the AI tool would not be able to produce successful results if it did not have the right conditions and references implemented by human personal skills, originality, and creativity.” The other respondent provided a similar response by stating an example of how professionals in the industry can use their established expertise in order to collaborate with AI to their advantage: “If you for instance want to build and design a website, it is much more effective to collaborate with an AI if you are equipped with coding skills, as you can make more adequate requests with professional language, which will provide you with the desired result.”

Through this research, the main benefits of AI implementation within the industry have been found to be centered around work optimization- and efficiency. First off, using AI-tools is primarily considered to help save time and resources, since it enables the automation of repetitive and time-consuming tasks such as project administration, planning, managing invoices, and customer follow-up. This further enables professionals to take quick decisions and refine ideas, but it also gives businesses the opportunity to grow and extend their operations. Businesses may use AI to increase productivity and deploy greater assets toward strategy and growth-oriented activities by simplifying routine tasks. Time-and-cost efficiency were also said to potentially optimize work activities as well as communication between stakeholders, which can be seen as a benefit within a project group or towards a client. As one respondent noted: “When AI has the potential to streamline our creative work processes, it will
also allow faster idea sharing and decision-making within a project group, as well as quicker provision of refinements and solutions to clients.”

4.2.2 The affects of AI on work practices (RQ2)

The observation implies that the integration of AI in work practices is more or less challenging traditional notions of creativity among the participants. While few of them have yet not adapted to any new approaches in work processes, the majority have indicated varying degrees of change in their daily work as a result of using AI-tools. The respondents utilizing AI-tools, stated the way in which they currently are learning how to utilize AI-tools.

It was noted that the software Chat GPT, Midjourney, and Notion AI, to some extent has changed certain work practices among some of the participants. Mainly, Chat GPT was observed to be the most explored AI tool and was noted to come into use for purposes such as coding assistance among web developers, text-writing assistance among others, and even assistance in setting up workshop - all of which, optimize work time and productivity. As one of the participants stated, “AI-assisted tools have enhanced my efficiency in administrative work, particularly ChatGPT for text and fact-checking in my daily tasks.” Another respondent noted, “You can get more angles and perspectives of ideas in the brainstorming stage of a project. Turning to Chat GPT as a sounding board to bounce ideas is helping to explore a wider range of creative ideas and perspectives in different stages of the work process, which improves optimization and efficiency.”

While most of the respondents viewed AI in their work practices as an efficient tool to become more productive and are optimistic towards the idea that AI tools have the ability to automate administrative and tedious tasks, two of the respondents had a different view. One of the respondents noted: “I appreciate breaking away from creative tasks with administration and manual operations in between. I see them as a break for my brain. It is draining to apply creative thinking 100% of the time, and breaking away from it is therefore important to me.” The findings suggest that the
integration of AI tools is indeed affecting certain fields of work practices, which most respondents view as significantly positive. On the other hand, it is essential to carefully consider the extent to which AI technologies should automate laborious tasks, taking into account the importance of maintaining those tasks for the benefit and well-being of professionals.

4.2.3 The affects of AI on client demand-and preferences (RQ 3)

The result indicates that client demands remain stable in line with the development of AI according to all participants, but suggests a slight change in preferences among a few of them. While most of the respondents indicated no significant influence on client demand or preferences, three of them noted a slight decline in requests for smaller and more isolated jobs that became automated. However, the same respondents indicated increased requests for long-term strategic advice, such as brand development, concept development, and digital optimization across multiple channels. Respondent 7 states: “Businesses can use online design tools for their advantage to create simple designs and various forms of marketing content, etc. But those types of jobs are not really what we make a profitable business out of anyway. Clients mainly request our expertise in strategy and brand development, which incorporates our skills in providing the tonality, a concept, and something entirely unique that provides real value to the client in the long term.” This suggests that the level of client demand remains stable, while their preferences tends to change.

The findings acknowledged other insights, such as how the client demand-and preferences varied among the participants depending on the size of agency or business they worked at, their respective field of work, and their client base. It was observed that the employees and clients of the same design-driven brand agency with the largest number of employees and clients, showed a strong interest in actual AI-generated solutions, indicating a possible increase in client demand and designer supply for such collaborations. However, the small agencies and their clients was observed to have little or no interest of such collaborations, which may be due to the
current uncertainty towards the outcomes of AI, including those related to regulation of ownership rights which is suggested to be a factor in rejecting its implementation.

However, one of the respondents critically evaluated the larger implications that the industry might soon be facing if the entire industry adopts an AI-driven work model. The respondent states: “I see AI as a threat to my industry. The world is driven by capitalism, and in the end, it is all about money and results. If AI can make work processes better, faster and more efficient, the workforces and agencies will definitely create competition between clients and the profession.” Client needs and demands might get affected if professionals and organization compete under this new AI-driven model, which for instance could affect market pricing. While the use of AI technologies in the workplace has the potential to significantly improve time efficiency and optimization and possibly aid in performing tasks twice as fast as it would normally take, the billing process would be altered as well. Nonetheless, striking a delicate balance—charging for both actual time and expertise—becomes critical in order for professionals and organizations to remain profitable. Ultimately, clients seek and pay for value in the form of knowledge and expertise, and not just for the time spent on a certain activity. The relationship between time and cost is also dependent on aspects such as project complexity, designer qualifications, and client preferences. In conclusion, the industry should be prepared and conscious of the ways in which to calculate client charges when transitioning to a workforce that utilizes AI.

5. Discussion
In this chapter, the research findings will be discussed in relation to previous research. Moreover, this chapter further evaluates the results in relation to the study’s purpose and research questions.
5.1 Result Discussion

5.1.1 The Correlation between Knowledge and Attitudes of AI

The results indicate that the knowledge and usage of AI in work practices are varied among the participants. Based on the fact that all participants utilize AI-powered features to a certain degree whether acknowledged or not, it indicates a mixed level of awareness of AI. As noted from the results, two of the respondents stated using only Adobe software but claimed not to utilize AI technologies. Such remarks indicate insufficient awareness of AI's potential and how it could be used in digital design. Moreover, one significant insight gained from that fact, is that the participants' state of knowledge and usage of AI was indirectly connected to their attitudes towards AI. Notably, those participants who indicated a low level of awareness and usage of AI-assisted tools also exhibited a certain amount of skepticism toward AI. Meanwhile, the participants with a higher level of awareness demonstrated optimistic attitudes toward the overall implementation and advancement of AI.

Research conducted by Zinkhan, Solomon, and Gwin (1985) found that people's natural skepticism of new inventions is a factor to consider in their acceptance. Individuals who are more skeptical of new inventions are less likely to adopt them. This highlights the importance of addressing skepticism in order to increase the adoption of new technology. Therefore, the fact that people are less likely to accept something if they aren't entirely familiar with it and are hesitant about the outcome can impact the adoption of new technology. In light of this, the dilemma to address is whether professionals have a better chance of maintaining their position in the industry if they are willing to embrace a culture of experimentation with new approaches and methods since the advancement of AI is unavoidable. This approach would further support the claims of Irbite (2021) and Holmquist (2017) who highlight the need for an overall change in work practices within the sector, as well as the importance of figuring out how to work with artificial intelligence as a new material by acknowledging the capabilities and limitations of AI in digital design.
5.1.2 Approaching the Risks and Benefits

In light of these two diverse attitudes towards AI that were observed as a pattern among the interview respondents, the question is how professionals in the industry can approach the potential risks with the implementation of AI, and how to take advantage of the benefits.

Pheiffers (2018) found that there is a risk that an over-reliance on AI may stifle human creativity, leading to a loss of originality in digital design products and homogenization of visual output that might devalue professionals creative skills. Pheiffers findings thereby support the results of this research related to RQ 1, as most interview respondents indicated the same concern about potential risks with the implementation of AI. However, the findings from this research also indicated ways in which professionals could prevent facing this risk. As identified from the data analysis, two of the respondents with notably wider knowledge and usage of AI stated the importance of learning how to utilize and handle AI-tools for their own benefit to avoid the risks of being negatively affected by the adoption of AI. This contradiction opens up the argument that professionals within the industry might not risk facing AI as a threat to their occupation as long as they learn how to utilize and handle AI-powered tools accurately while also benefiting from their own established human skills within their respective fields of work. Thus, professionals might be required to avoid relying entirely on AI and rather use it as a collaborative tool in combination with their unique creative expertise in order to maintain their originality as a digital designer.

5.1.3 Implementation of AI on work practices

One consideration and limitation to address is the complexity in clearly detecting the results of RQ 2, which examines the current effects of AI on work practices. The complexity arises from the fact that the implementation of AI in the digital design sector is still in its earliest stages of exploration and research. As a result, there is presently no clear framework or regulations for accurate AI integration into work
practises. Additionally, there seem to be uncertainties regarding lawsuits around the usage of AI in artwork, which may explain why the implementation of it has not changed the current work practices in a significant way among the respondents. However, the respondents indicated that AI tools are in fact changing some fields of work practices, are using these tools mainly for personal use in order to learn and explore the functionality of the tools. Based on their exploratory experiences with AI, the findings imply that the present deployment of AI mainly improves the efficiency of existing tools rather than replacing them, thereby facilitating certain parts of work practices. The result supports the claimings of Irbite (2021), who identifies theories on AI’s role in designers’ future work, stating that AI tools are considered to improve and facilitate work practices rather than replacing them, leading to increased productivity, improved accuracy, and reduced time-to-market.

5.1.4 Client demands and preferences

Meron (2021) emphasizes the emergence of easily accessible online graphic design tools such as Canva and Adobe Spark, which leverage AI and machine generation to offer design templates aimed primarily at amateur designers. The study further implies that this ease of access to web tools may enhance competition from non-professionals in generating basic designs. Meron's claim contradicts the results of this research, as the analysis implies that the overall client demand among the interview participants remains consistent and stable. However, some of the participants' responses contributed to the conclusion that clients' preferences tend to evolve along with the implementation of AI. As a result, the findings suggest that clients tend to seek assistance in staying ahead of the continuously changing digital world and shifting trends.

5.1.5 Implications and limitations

Implications and limitations to address from the findings of this research, is that the result was grounded on responses from participants with varying backgrounds, experiences, and competences. Moreover, the small sample size and the narrow scope of the interview participants, with a primary focus on the four organizations in
Sweden, are further limitations of the results. One vital factor that may have affected the final result is the differences in agency size among the participants' employment, as the analysis indicates that the smaller agencies and freelancers provided a particular instance of a related responses, while the larger agencies provided a different instance of related responses. On one hand, the chosen sample of participants that offers a variety of insights may be seen as an advantage for this research. On the other hand, the constrained selection of participants might be viewed as a drawback, as a different set of participants applied to the same study could possibly provide different results. Moreover, the open-ended nature of the interview questions may lead to different interpretations among the respondents, potentially impacting the outcome of the study.

5.2 Method Discussion

This chapter discusses the methods chosen for this study and evaluates their strengths, weaknesses, and overall effectiveness. Furthermore, it assesses the extent to which the research purpose has been fulfilled and the research questions have been answered based on these methods. It also highlights what worked well and what didn't work effectively, along with possible alternative approaches. Lastly, the validity and reliability of the study are evaluated.

To gather nuanced insights and perspectives from designers actively employed in the field, a qualitative approach was employed for this research. The primary method of data collection involved conducting individual interviews, which allowed for a comprehensive exploration of participants' experiences and understanding of AI in their work. The chosen methods exhibited several strengths. The interviews provided in-depth information and enabled participants to extensively discuss their attitudes, experiences, and perceptions of AI. The collaborative approach between the two thesis authors facilitated a comprehensive data collection process, minimizing biases and accurately capturing participants' perspectives.

However, several challenges were encountered during the execution. Time constraints limited the number of interviews conducted, potentially impacting the diversity and
depth of the collected data. Additionally, relying on self-reported data from participants introduced a subjective element and potential recall bias. Overall, the chosen methods provided valuable insights into the impact of AI in the digital design industry. Through the analysis of interview data, the research questions were addressed, and the research purpose was fulfilled.

To ensure validity, the interview recordings were carefully transcribed, and a thematic analysis was conducted, to maintain consistency and accuracy. The collaborative approach in data collection further reduced potential biases. In terms of reliability, the limited number of interviews and the reliance on self-reported data may impose some limitations. However, efforts were made to mitigate these limitations by selecting a diverse sample of participants and employing systematic analysis techniques.

In conclusion, the chosen methods, particularly individual interviews, provided valuable insights into the impact of AI in the digital design industry. Despite encountering some challenges during the execution, the strengths of the methods outweighed these limitations. The collected data successfully addressed the research purpose and questions. Validity was ensured through meticulous transcription and analysis techniques, while reliability was upheld through careful participant selection and systematic analysis.

6. Conclusions and further research

The rise of artificial intelligence (AI) is revolutionizing the digital design industry, impacting the roles and work practices of creative professionals. As individuals enter this profession, they face both excitement and challenges. This study addresses the specific areas influenced by AI adoption in digital design, considering factors such as knowledge, experience, attitudes, client needs, and work practices. It offers a fresh perspective on AI within the workplace, building upon previous research. The impact of AI on the digital design profession varies due to differences in understanding its versatility, influenced by industry experience, personal interest, demographics, workplace dynamics, and specific tasks.
However, it becomes evident that AI has indeed altered work processes in digital design, regardless of whether individuals acknowledge it. Many participants reported using software equipped with AI-powered features, resulting in significant time savings for tasks that would typically be time-consuming. This newfound efficiency empowers designers to enhance their creativity, facilitating exploration and experimentation with diverse design solutions.

AI simplifies designers' work by automating repetitive and monotonous tasks. This allows designers to focus on areas where their unique human abilities shine, going beyond their own limitations. While extensive knowledge about AI is not always required, understanding its potential is crucial. This understanding helps people make the most of AI systems and get the greatest advantages from them.

This study has twofold implications. Firstly, it highlights the need for designers to adapt their skills and practices to effectively utilize AI tools and optimize the design process. The impact of AI varies based on the designer's role and tasks, with coding-oriented designers experiencing more significant changes than those focused on creativity, such as creative directors. Secondly, the study raises awareness of potential risks, such as job insecurity and loss of creativity, associated with AI adoption. By recognizing these implications, professionals can navigate changes and find a balance between the benefits and drawbacks of AI integration.

6.1 Practical implications

The results of this study have important practical implications for the industry, the public sector, and society as a whole. By understanding how AI impacts digital design, professionals in the industry can adapt their practices and skills to stay competitive. This knowledge helps organizations make better decisions, allocate resources effectively, and develop talented individuals. Additionally, considering the potential competition and price changes caused by AI can help businesses navigate the evolving landscape and remain profitable. Embracing AI in digital design
promotes innovation and efficiency. Additionally, it opens up new creative opportunities, benefiting both the industry and society.

6.2 Scientific implications

The scientific implications of this study are significant, as it contributes to the existing knowledge about AI adoption in the digital design industry. By examining how AI affects creativity, work processes, and interactions between clients and designers, this research enhances our understanding of how AI shapes professional practices. It provides valuable insights into the complex dynamics between humans and AI, shedding light on the challenges and opportunities that arise from their integration. This study expands the knowledge base in this field, paving the way for further research and advancements in understanding and applying AI in the digital design industry.

6.3 Further research

Based on the results and conclusions of this study, there are several areas for further research that can be explored. Firstly, future research could focus on strategies and approaches that digital design professionals can adopt to effectively adapt to the changes brought about by AI adoption. This could involve investigating training programs or educational initiatives that enhance designers' competencies in utilizing AI tools while maintaining profitability.

Additionally, studying the long-term effects of AI adoption in the digital design industry is crucial. This could involve examining the evolving roles and skill requirements for digital designers, as well as exploring the impact of AI on employment opportunities and job security in the industry.

Furthermore, it is important to investigate the ethical implications of AI adoption in digital design. Research in this area could concentrate on issues such as privacy, bias,
and inclusivity in AI-driven design processes, aiming to develop ethical guidelines and best practices for designers working with AI tools.

Moreover, understanding how to accurately estimate time and cost to strike a balance between the time spent on a project and the actual value of professionals' expertise in meeting client needs and expectations while maintaining profitability. It is essential to consider the potential competition and reduced market prices that could arise as AI becomes more dominant in the industry.

Finally, exploring the potential of AI to expand the scope of digital design beyond traditional media could be an exciting area for future research. For instance, AI may enable designers to create interactive and personalized experiences that go beyond static visuals. Understanding the potential applications of AI in new design media could provide insights into the future of the digital design industry. Overall, these areas of further research can contribute to a deeper understanding of the implications and possibilities of AI adoption in the digital design industry.
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8. Appendixes

Appendix 1. Introduction questions

- Background information
  - What is your current occupation?
  - How old are you?
  - How long have you been working in this profession?
  - What are your daily tasks?
  - What software programs do you use?

Appendix 2. Main questions

01. Current knowledge & usage of AI
  - Does your organization use AI in design projects? If yes, please specify how and for what purpose?

02. Feelings & attitudes towards AI
  - What do you consider to be the main advantages and disadvantages of using AI-assisted tools in digital design work?
  - Would using an AI tool affect your sense of ownership over your creative outcome?
  - Are you concerned that the adoption and development of AI tools could threaten your job?

03. AI’s influence on work practices
  - Have AI-assisted tools opened up new possibilities or changed your way of working?

04. Client needs (External factors)
  - Have you recognized any shifts in client requests and demands in line with the development of AI tools?

05. Expectations of AI
  - How much of your work is spent on repetitive, uncreative tasks? Is there certain tasks that you find tedious/boring?
  - Would you be willing to collaborate with an AI in your creative process? If yes, in which stages of the process?
Appendix 3. Participant protocols

Interview - Participant no. 1 (Audio and text correspondent)

**Current job role:** Self-employed Graphic Designer, Art Director, and Communications Coordinator
**Age:** 54 year old
**Years of experience:** 27 years
**Daily tasks:** Project management, copywrite, produce brand identities and styleguides
**Software used:** Adobe Creative Cloud: InDesign, Illustrator, After Effects, Lightroom, Photoshop.

**Q:** Does your organization use AI-assisted software in design projects? If yes, please specify how and for what purpose.
I guess I have used AI features through Adobe Sensai without being aware of it, as it has come to my knowledge recently that Adobe has embedded artificial intelligence of Sensai into many functions within the system that enhances the overall user experience of tools. But apart from that, no, I do not use AI-powered software.

**Q:** Have AI-assisted tools opened up new opportunities or changed your way of working? Or are traditional tasks still performed, but with AI as an aid?
No, since I do not use AI-generated art tools, the traditional tasks remain the same. But of course I can notice how the Adobe programmes serves you better now to an extent compared with how they served you many years ago. But it is nothing that has significantly changed my way of working.

**Q:** Have you noticed any changes in customer requests and needs in line with the development of AI tools? Are there certain design projects/design products that have been transformed in demand?
No, I have not noticed any changes in customer requests other than that I’ve gotten some more requests that implement motion graphics which seem to become more popular.

**Q:** What do you consider to be the main advantages and disadvantages of using AI-assisted tools in design work?
Advantages: Helpful for sparking ideas along with improving productivity with copywriting assistance.
Disadvantages: Over-reliance on AI tools may result in the loss of originality and artistic legitimacy in the work. The nuanced viewpoint and distinct ideas that come from human experience and creativity may also be lost in AI-generated work.

Q: Would the use of an AI tool affect your sense of ownership over your creative output? Yes, to an extent I feel like it would diminish my sense of ownership to the creative output.

Q: Are you worried that the assumption and development of AI tools may threaten your job? Yes I am quite worried.

Q: How much of your work is spent on repetitive, uncreative tasks? Are there certain tasks that you find boring/slow/inefficient in your daily work routine? Quite a lot of uncreative, monotone and repetitive tasks such as project administration, planning, managing invoices, customer follow-up, etc. However, I consider these tasks as necessary in my daily work routine. It would be exhausting if I had to constantly leverage creativity 100% of my work time. These “breaks” are therefore valuable to me.

Q: What kind of design work would you like to do/produce more of if the process was easier for you? More animations and motion graphics, as I feel like Adobe After Effects and Premiere Pro are currently very complicated programmes to learn and work efficiently in.

Q: Would you be willing to collaborate with an AI in your creative process? If yes, in which stages of the process? What role would the AI tool have? I would be willing to collaborate with an AI to facilitate ideas and get inspiration for copywriting.
Current job role: Digital designer
Age: 37
Years of experience: 8 years
Daily tasks: Coding, web design, UX/UI design, web development, creating visual concepts
Software used: Figma, Nova, Subline, Illustrator (inspiration: Pinterest, Behance)

Q: Does your organization use AI-assisted software in design projects? If yes, please specify how and for what purpose. 
A: Yes, the AD roles use it. Visual AI engines like Midjourney have started to be explored in design projects. ChatGPT is also used as a tool to find solutions to coding problems or copywriting, or to set up a customized workshop, thus optimizing certain parts of the workflow. I myself have also used Notion's AI tool recently to streamline and transform texts and notes as part of my workspace.

Q: Have AI-assisted tools opened up new opportunities or changed your way of working? Or are traditional tasks still performed, but with AI as an aid?
A: So far, it has not changed my daily tasks. However, it is a tool for text and fact checking. Currently, it is a tool, but in the future, it could become a bigger aid. It can be an effective assistant, critical to the purpose.

Q: Have you noticed any changes in customer requests and needs in line with the development of AI tools? Are there certain design projects/design products that have been transformed in demand?
A: No. Same demand and same type of customers. It is rather in the last year that AI tools have become something that we as a design agency want to explore by proposing collaboration with AI tools for client projects.

Q: What do you consider to be the main advantages and disadvantages of using AI-assisted tools in design work?
A: Advantages: Tools that create better design, content, and efficient solutions. It changes the processes rather than removing them: comparison with a calculator. Disadvantage: The older generation who do not keep up with new technology. A larger perspective: blurs the lines of what is true and what is not true. It is difficult to assess whether the work is taken from reality or if it is AI-generated. Also, the
Q: Would the use of an AI tool affect your sense of ownership over your creative output? A: Yes and no. No, because creating art through AI is in itself an art form, because the AI tool could not create a work if it did not have the right conditions and references implemented by human personal feelings and creativity, and therefore can take credit for the result. Yes, if one used AI with the help of references from someone else’s source or work. So it depends on how one views the art form.

Q: Are you worried that the assumption and development of AI tools may threaten your job? A: Avoided thinking so far, but right now I see it as a tool, not a threat. As long as I stay updated and can adapt to the new conditions, through curiosity and responsiveness, I am not worried that future design professions will be wiped out by AI. I do not believe that they will be able to create products from scratch according to customer needs without reference information, because we are the ones who possess it.

Q: How much of your work is spent on repetitive, uncreative tasks? Are there certain tasks that you find boring/slow/inefficient in your daily work routine? A: Not much, but some. Examples of repetitive tasks could be text writing for the design of concepts and planning, but recently the AI tool Chat GPT has helped to create versatility and efficient solutions, and has helped to optimize the work process. The most boring task is time reporting.

Q: What kind of design work would you like to do/produce more of if the process was easier for you? A: Develop interfaces in contexts other than the web. For example, create interfaces for car panels and other technical products to develop improved interface interaction with control panels.

Q: Would you be willing to collaborate with an AI in your creative process? If yes, in which stages of the process? What role would the AI tool have? A: Yes, I am! By helping to structure and streamline certain parts. Being able to spend more time on the creative aspects of the project. Experiment with the visual parts. It would be helpful if the AI tool could help me to efficiently bring
out the visions I have in my head and thus become the new source of inspiration.

**Additional comment:** By improving work processes and lowering the time and cost involved with client projects, the adoption of AI technology might revolutionise the workplace. But as AI develops, it could be essential to reach a balance between charging for expertise and time. In the end, the emphasis should be on providing value to the client, focusing on the skills and experience that professionals bring to the table, and charging accordingly. It will be fundamental to adapt as conditions shift and discover new means of offering clients real value while still making a profit.
Interview- Participant no. 3 (Audio and text correspondent)

Current job role: Digital Content Creator-and Specialist at Grand Public
Age: 26
Years of experience: 7 years with content creation, 2 years at Grand Public
Daily tasks: Building content strategies, producing content, and analyzing results. This includes establishing content-and social media plans together with communication concepts, producing digital content through photography, film and editing, distribution for the web, social media platforms and newsletters, etc.

Q: Does your organization use AI-assisted software in design projects? If yes, please specify how and for what purpose.
A: Yes we are currently exploring AI-tools in our projects in different ways and we are now trying to learn individually how these tools function. Chat GPT is used among our web developers for the purpose of testing various coding methods-and solutions, as well as our copywriters to explore and improve written content. Me myself am using Notion AI and Chat GPT. However, we do not have an established framework or strategy of how to employ AI within our work practices at the moment. Both because we still are in the exploring stage, but also because we don’t have enough knowledge about prospective lawsuits and regulations around the usage of AI in artwork.

Q: Have AI-assisted tools opened up new opportunities or changed your way of working? Or are traditional tasks still performed, but with AI as an aid?
Yes. Tasks such as organizing meeting notes and to-do lists with AI-assisted tools has made my administrative work tasks a lot more efficient in terms of optimizing my work time. It has also assisted me with brainstorming content ideas, such as prompting Chat GPT for Instagram captions which helps for generating a wider range of ideas and inspiration to take further. This is especially useful those days when you have a bit of creative block, which the AI-tools helps with in order to streamline my work time.

Q: Have you noticed any changes in customer requests and needs in line with the development of AI tools? Are there certain design projects/design products that have been transformed in demand?
A: No, not yet. Clients may have tools to create content, but there is a rising demand for strategic advice in brand development and digital optimization across multiple channels. As a result, customers seek our expertise to assist them in staying ahead of the continuously changing digital world and shifting trends. However, I can see that client requests can vary depending on the type of client and their level of expertise in content creation and digital channels. I also see a pattern where older generations and smaller businesses tend to have less expertise while younger generations and larger businesses tend to have more.

Q: What do you consider to be the main advantages and disadvantages of using AI-assisted tools in design work?
Advantages are: You can get more angles and perspectives of ideas in the brainstorming stage of a project. Turning to Chat GPT as a sounding board to bounce ideas is helping to explore a wider range of creative ideas and approaches which optimizes the work time.
Disadvantages: Firstly, there is currently no clear regulations behind the use of it in terms of copyright infringement. Secondly, my current experience is that much AI-generated output generally is biased. We know that artificial intelligence and machine learning algorithms rely on data, which is not always representative of minority groups, and outputs are there not always equally or morally correct. In my role as a digital content specialist I especially need to think ethically, since my role includes being inclusive with all audiences. Hence, I see a major value in applying the human touch to a piece of artwork.

Q: Would the use of an AI tool affect your sense of ownership over your creative output?
As for today, yes. I sense concerns and uncertainties around the matter of copyright infringement when it comes to AI-generated artwork, especially regarding generating an artwork entirely through AI with the use of i.e. Midjourney. I think that the use of AI-tools more or less decreases the authentic quality of an artwork, and therefore once again see a big value in applying the human touch to it. As I am trying out text generated AI-tools at the moment I am trying to be mindful of the matter on how to turn an output into my own if I am prompting i.e. Chat GPT for ideas. To contribute to my own sense of ownership I try to use it only as a tool for inspiration rather than relying fully upon the output that the tool provides.
Q: Are you worried that the assumption and development of AI tools may threaten your job?
A: No. As for today I see AI as a tool that optimizes my own work. I consider that the disadvantages needs to fully be taken into account before AI would actually be able to replace the human designer. I also see AI as an exciting challenge to embrace into our industry. As long as I am up to date with this development, I am not worried.

Q: How much of your work is spent on repetitive, uncreative tasks? Are there certain tasks that you find boring/slow/inefficient in your daily work routine?
A: Post och schedule content for social media. I would like AI to do more of the administrative work for me.

Q: What kind of design work would you like to do/produce more of if the process was easier for you?
A: I wish I had more creative freedom and resources to optimize strategic brand development and content development and fully explore innovative possibilities. To put it briefly, this entails creating an extensive branding strategy that takes into account all aspects of a brand's identity, such as its visual style, messaging, and tone, as well as producing innovative content that effectively conveys that brand identity to a larger audience. This kind of work requires extensive planning, ideation, and execution, which often involves collaboration between various teams and disciplines within a design agency, and involves a lot of administrative work which takes a lot of time.

Q: Would you be willing to collaborate with an AI in your creative process? If yes, in which stages of the process? What role would the AI tool have?
A: I would like to collaborate with an AI during the brainstorm-and implementation stages, while also working alongside with the tool to guarantee the human touch and authentic quality of the work.
Current job role: Producer/ senior retusch

Age: 38

Years of experience: 18 years in the business

Daily task: Reklamfilms producent, bild retusch, projekledare och creative director.

Software used: Photoshop, after affects, cinema 3D för rörligt material (spelmotor i realtid).

Q: Does your organization use AI-assisted software in design projects?
If yes, please specify how and for what purpose.
A: Yes, I have tested to include Ai tools in some projects. However, in collaboration with my own knowledge and in relation with seeing if AI can generate the same image results or better than what I create today. Mainly I have tested on Cinema 3D for moving and animated materials. But there are also other AI engines that can be a tool for specific parts, I combine software according to which part of the process I am working with.

Q: Have Al-assisted tools opened up new opportunities or changed your way of working? Or are traditional tasks still performed, but with AI as an aid?
A: Yes, it has definitely opened up new possibilities. I am curious and interested in the growing technology in AI and tools that can help us create even better results. It has definitely been a tool in the process of modding and rendering. However, it has not changed my way of working, but I am absolutely open to developing my own knowledge as technology continues to develop.

Q: Have you noticed any changes in customer requests and needs in line with the development of AI tools? Are there certain design projects/design products that have been transformed in demand?
A: No, not in recent years and my hope is that we will be able to continue working in the way we did before. We offer a wide range of skills ranging from photography, 3D/CGI, editing, retouching to animation and automated workflows. We at the agency have expertise in our knowledge and our clients are aware of what they are looking for.
Q: What do you consider to be the main advantages and disadvantages of using AI-assisted tools in design work?
A: The biggest advantage of the inclusion of AI tools is the efficiency of the work and the process, that AI can produce equivalent work in a fraction of the time a human can. However, I can see this as a disadvantage, I appreciate the time a job can take. That the process is about changing, improving and developing during the process. I see the value in the creative process, partly because it is a craft but also to the extent of taking in the perspective of work environment, health and sustainability.

Q: Would the use of an AI tool affect your sense of ownership over your creative output?
A: Yes, it would. We already see in practice today how platforms such as Instagram, TikTok and Facebook can create ready-made templates and tools for the audience to create high-quality content by them self. AI can open up opportunities for more people to create their own material, which can take away some of the personal ownership and time required to create something personal and unique.

Q: Are you worried that the assumption and development of AI tools may threaten your job?
A: I might sound cocky now, but no I don’t see AI as a threat to our industry. I have been in the business for many years, and during that time technology has constantly evolved and new tools have become available. I see AI as a tool, not something that will replace my work. At my agency, the workers are well trained with high expertise in our field, we have our own style of the work we produce. Which creates a unique result. Of course it can be a concern as there is a risk that you lose control with including AI, since the composition in our work is of the highest importance and the details make a big difference to the final result.

Q: How much of your work is spent on repetitive, uncreative tasks? Are there certain tasks that you find boring/slow/inefficient in your daily work routine?
A: I would probably say that retouching can contain several repetitive steps, when applying layers and editing. However, I believe that I do very few parts that are boring or repetitive, my work is very flexible and no project is the same. But I appreciate breaking away from creative tasks with administration and paperwork in between - breaks for the brain.
Q: What kind of design work would you like to do/produce more of if the process was easier for you?
A: Dream project outside of my agency studiomint would be to create film scripts to be helped in the process of being inspired, constructing and composing. Another process I would like to do more of would have been developing digital platforms in the form of coding and UI with the help of AI.

Q: Would you be willing to collaborate with an AI in your creative process? If yes, in which stages of the process? What role would the AI tool have?
A: Yes absolutely. I had wanted to produce a model with 3D for modeling purposes, to get help with producing structures. At the moment I buy ready-made models for this, but to have help generating objects for the modeling stage would have been a amazing benefit. If an AI tool had the ability to sketch and present different proposals to the modeling process, would have facilitated several aspects of my work.
Current job role: Digital artist  
Age: 33  
Years of experience: 6 years in the business  
Daily task: Digital artist, 3D grafiker, SGI (3D produktion), retusch.  
Software used: Adobe photoshop, Unreal engine (3d) och Blender open source (3d).

Q: Does your organization use AI-assisted software in design projects? If yes, please specify how and for what purpose.  
A: I have tested a few different AI tools, am very interested in AI technology and want to develop in the field. At work, we have included AI tools in the process of modulating, lighting and rendering. I mainly use Blender open source which is a 3D tool. Have also used Unreal engine which is also a 3D tool with focus animation and image generation.

Q: Have AI-assisted tools opened up new opportunities or changed your way of working? Or are traditional tasks still performed, but with AI as an aid?  
A: So far, I see no difference in the way I work or take care of tasks. However, I have chosen to include some of the new AI functions that I use on my everyday software, for example in Unreal engine. Through that aspect, the new AI tools have helped me to perform image editing and retouching in a new way than previous.

Q: Have you noticed any changes in customer requests and needs in line with the development of AI tools? Are there certain design projects/design products that have been transformed in demand?  
A: No I do not think so. I work at a small agency with few employees, we have knowledge in what we produce and I believe that as long as we deliver what the customer wants and asks for, our customer requests will be the same as today. But of course there can be a concern that customers will be able to produce their own high-quality material in the future and no longer need us in the same way.

Q: What do you consider to be the main advantages and disadvantages of using AI-assisted tools in design work?  
A: The advantages are that there is a large area of use, AI can be a tool to simplify the processes and create innovative concepts. The disadvantages are
that I am afraid that my job will not be necessary in 10 years, demand and supply will create new circumstances for the industry in general.

Q: Would the use of an AI tool affect your sense of ownership over your creative output? A: Of course there is a risk in that, I think how the development of AI is today and how it will continue to expand will effect many creators view on art. I think in near future AI will produce high quality of images, animation and film. And probably produce even better material than what we do today, through its knowledge and way of developing from what already exists. But today I see AI as a tool, a way to develop and create better material through smarter technology.

Q: Are you worried that the assumption and development of AI tools may threaten your job? A: Yes, I absolutely see AI as a threat to my industry. In the end, it's about money and results. If it is possible to make the process faster and more efficient, it will have consequences such as the number of employees and level of competence in the companies. For example, if a computer can replace human capacity for something, it is both cheaper and more efficient for the company to use machines for those parts. I definitely think there can be a shift in the workforce, where you are forced to develop and be open to new opportunities in the industry. Maybe sounds harsh, but the best in its niche will survive.

Q: How much of your work is spent on repetitive, uncreative tasks? Are there certain tasks that you find boring/slow/inefficient in your daily work routine? A: I feel of course that there are parts of my job that are more boring and slower, just like most jobs do at times. I can find that retchering and editing can be a repetitive process, but I can also appreciate those parts occasionally even though it would have been incredibly efficient if AI tools could help speed up the process.

Q: What kind of design work would you like to do/produce more of if the process was easier for you? A: I am very interested in the gaming industry, computer games and video games have developed to new heights recently. Getting to build a full-scale game, with a focus on storytelling, mood and film included. A game based on the main character, were his feelings and experiences build the characters of
the game. To be part of the process of developing how a story in combination with emotions and visual elements can interact.

Q: Would you be willing to collaborate with an AI in your creative process? If yes, in which stages of the process? What role would the AI tool have?
A: Yes, I absolutely am. As I mentioned earlier, I currently already include some AI generated tools in my images. But in the future I hope that AI would be able to help create 3D images and animations, so me as a user could instead prompt and not spend time on creating my own 3D modeling. However, there is a risk in losing control in the craft, which is an important part of my work. But if you could work together and have the possibility to choose according to your own preferences, this would have been a great aid from AI.
Interview- Participant no. 6 (Audio and text correspondent)

**Current job role:** Photographer/ Digital artist  
**Age:** 31  
**Years of experience:** 14 years in the business  
**Daily task:** Olle works mainly in the photographer and digital artist department. Which means that his daily tasks are in image production, image retouching, and photographer.  
**Software used:** Olle mainly uses the software photoshop, unreal engine and blender open source for 3D work.

Q: Does your organization use AI-assisted software in design projects? If yes, please specify how and for what purpose.  
A: Yes, I am curious about the development of AI tools and have included some tools in my recent projects. Mainly blender open source to modify the 3D tools, this is a tool that is in the early development of assisting AI tools so the software is still being updated and more new features are being developed.

Q: Have AI-assisted tools opened up new opportunities or changed your way of working? Or are traditional tasks still performed, but with AI as an aid?  
A: No, I wouldn't say that AI has changed the way I work recently. I have always chosen to see it as an asset and instead chosen to include functions to work more effective in purposes of lighting and rendering. But my previous way of working remains in most projects.

Q: Have you noticed any changes in customer requests and needs in line with the development of AI tools? Are there certain design projects/design products that have been transformed in demand?  
A: No, I wouldn't say that. We already have a broad customer base with many repeat customers for longer projects. Our clients want specific images that fulfill their vision and we are niched in our knowledge and results.

Q: What do you consider to be the main advantages and disadvantages of using AI-assisted tools in design work?  
A: I think AI is a big hype right now, it is relatively new on the market and many people have opened up their eyes to AI's tools. AI is a fantastic tool to
find inspiration and be time-efficient in your work. But I think it can be a bit "unsexy" to create projects only with the help of AI. It loses the creative worth in the work. It also requires expertise to be able to include AI with the knowledge there, it is a tool that needs to be learned and controlled to get the desired result. I have used Midjouney quite a bit, a tool that can generate realistic images with an inclusive diversity, something some other AI tools are not as developed in.

**Q: Would the use of an AI tool affect your sense of ownership over your creative output?**
**A:** Yes, in a way. I did a customer project a while ago where I created the image using AI tools. The picture turned out nice and created the intended result but there was no artistry in the picture. I don't think it's as fun to work that way.

**Q: Are you worried that the assumption and development of AI tools may threaten your job?**
**A:** Yes and no. Of course there are concerns about the capacity and knowledge AI will be able to convey and create. I can feel a concern that the value of genuine craftsmanship will decrease and customers will look for time-efficient solutions. And that is a factor we need to take into consideration, to be able to keep up with the external factors. However, I don't think our agency is at risk of being outcompeted by AI, our expertise is high and delivers for a specific target group that is looking for a specific result.

**Q: How much of your work is spent on repetitive, uncreative tasks? Are there certain tasks that you find boring/slow/inefficient in your daily work routine?**
**A:** In my process of digital creator and photographer, I often need to test myself. Many test shots are required in the form of model positions, scenography, and lighting before I can start shooting. These tasks can be seen as ineffective but very necessary to achieve the desired result.

**Q: What kind of design work would you like to do/produce more of if the process was easier for you?**
**A:** I have an interest in experimenting with the concept of going from product to character. Being able to include concept creation in a larger aspect, creating characters and environments using 3D scanning. Using software that
takes pictures from all angles and constructs them together in a 3D model. This is a process that is expensive and complicated to do at the moment, but something I would definitely want to do more of if the process was simpler.

Q: Would you be willing to collaborate with an AI in your creative process? If yes, in which stages of the process? What role would the AI tool have?

A: For me, AI would have been a tool for quick tests, small changes and changes to get a quick overview if the vision and the result will match. Optimally for me would be to use AI tools in the aspects of being able to optimize certain parts of the creative process. To be able to save time in certain tasks, that instead can be spent on parts that give greater creative dividends. Getting that type of help from an AI tool to interpret and generate that process more efficiently than I do myself today would have been a great help.
Current job role: Digital Design Director
Age: 44 year old
Years of experience: 25 years
Daily tasks: UX-and UI design including user journeys, programming, project management, administration
Software used: Figma, Visual Studio Code

Does your organization use AI-assisted software in design projects? If yes, please specify how and for what purpose.
Chat GPT and Midjourney. Chat GPT is often used for text editing or copywrite such as translation, shorten-or lengthen a piece of text, prompt for a certain tonality of a text which fits with a brand, etc. With code I use Chat GPT daily for code inspection-and debugging as well as auto-complete code, but also to prompt the AI for help or queries with natural language if I have a vision of something I want to build with code - then I may ask it to guide me through the course of action in order to achieve my desired vision. The purpose is to efficiently optimize the starting point of the work/project.

Have Al-assisted tools opened up new opportunities or changed your way of working? Or are traditional tasks still performed, but with AI as an aid? Has made my way of working more fun and inspiring. It has opened up creative doors in my head in my daily work, allowing me to try out different ideas early in the process when an idea strikes. Along with that, AI tools have optimized and made my work more effective.

Have you noticed any changes in customer requests and needs in line with the development of AI tools? Are there certain design projects/design products that have been transformed in demand?
Yes. Clients have actually begun to request our knowledge, project management, and process management on how to utilize AI in their businesses. It might be inquiries about how they can incorporate AI into their web-based Content Management System (CMS) through smart AI-assistants that optimize their web experience. It’s a bit too early to see if AI is affecting client requests tho. However, I can observe a slight decline in the demand for smaller and more isolated jobs that today are now more automated. For instance, businesses can use platforms like Canva.com for their advantage to use pre-made filters and templates to edit photos and create various forms of marketing content, etc. But those type of jobs are not really what we make a
profitable business out of anyway. Clients mainly requests our expertise in long-term strategy and brand development which incorporates our skills in providing the tonality, a concept and creativity to the clients brand.

What do you consider to be the main advantages and disadvantages of using AI-assisted tools in design work?

Advantages: I consider there are many advantages. Firstly I consider AI can significantly improve the overall customer experience by offering personalized content, instant support, and relevant recommendations, leading to higher customer satisfaction and brand loyalty. **(Enhanced customer experience)**

Secondly, AI-powered analytics enable businesses to make informed decisions based on data trends and customer behavior, resulting in more effective strategies. **(Data Driven Decision Making)**

Thirdly, by automating various aspects of branding, such as content creation and customer support, AI can save both time and resources, allowing businesses to focus on more strategic tasks. This gives me the opportunity to i.e. create and try out different forms of valuable assets in a short amount of time individually without having to coordinate with a hole project group - resulting in a reduced amount of obstacles and time-consuming matters. **(Cost and Time Efficiency)**. Additionally, this optimizes the progress of concept development, as we then can bring the knowledge and ideas that are gained individually into the project group as the next step where we then have the advantage to take quick decisions and refine ideas. Further, AI may be helpful when used towards clients since it can speed up the process of providing one or more estimated solutions to the client in order for them to continually visualize and approve the work to be performed.

Moreover, AI can assist in refining ideas for campaigns, products, or services by analyzing vast amounts of data and identifying patterns and trends, and therefore it is of great use for developing concepts for a brand. **(Concept Development)**

Disadvantages:
Firstly, the use of AI in branding involves the collection and analysis of vast amounts of customer data, and ensuring data privacy and security is crucial to maintain consumer trust and avoid potential legal issues. **(Data Privacy)**
Secondly, AI algorithms may occasionally generate outputs that are biased or even offensive and inappropriate. In terms of biased outputs this results in that the AI is not especially unique in its general expression. Therefore I consider that it may not be a good idea to depend entirely on the outputs that AI provide you if you for instance want to make a brand stick out and be unique, as the AI algorithm rely on existing data it gives you a quite average, ordinary or normative output. (Unintended Ethical Consequences)

Additional comment: I consider that the overall disadvantages mentioned about the current performance of AI-tools, results in that the overall adoption of these tools in our industry requires a certain form of knowledge and expertise in our profession in order to work effectively and to generate proper and desired results. For instance, it is much more effective to collaborate with an AI if you are skilled with coding, as you can make more adequate requests with more direct and professional language.

**Would the use of an AI tool affect your sense of ownership over your creative output?** No, not quite. I just see it as a helping tool of optimize work.

**Are you worried that the assumption and development of AI tools may threaten your job?** It may be a threat to my job in the future, but no, I am not worried. I rather see it as an exciting opportunity and challenge which I am thrilled to learn from and hopefully gain new skills and knowledge about. In my opinion, the key to uphold a good position in the industry is to be understanding of the continuous technical developments and find ways to adapt to the situation. It’s about broaden your skills and knowledge and improve yourself.

Additional comment: You should take a chance rather than not take a chance just because it could potentially turn out to be a negative outcome. We must have a healthy and balanced mindset on all of it and avoid living in ongoing scepticism. It is impossible to take into account the impact of each individual human being in the position of a world driven by capitalism and money.

**How much of your work is spent on repetitive, uncreative tasks? Are there certain tasks that you find boring/slow/inefficient in your daily work routine?** Quite a lot of administrative work such as managing project documentation and reports, planning and managing schedules, time reporting, etc.
What kind of design work would you like to do/produce more of if the process was easier for you?
3D modeling, animation, and film production.

Would you be willing to collaborate with an AI in your creative process? If yes, in which stages of the process? What role would the AI tool have?
In the middle of the process, I could have included AI (collecting and packaging all information, creating a uniqueness and an overall picture).
Current job role: Graphic Designer
Age: 46 years old
Years of experience: 20 years
Daily tasks: Graphic design, UX designer, Produce brand identities and style guides

Q: Does your organization use AI-assisted software in design projects? If yes, please specify how and for what purpose. Yes we do. We have used Midjourney, Dalli, Shutterstock to create storyboards and give the customer a visual idea of what the end result might look like. We have used ChatGPT for copywriting.

Q: Have AI-assisted tools opened up new opportunities or changed your way of working? Or are traditional tasks still performed, but with AI as an aid? Currently, we have only tested to include AI tools in certain processes. Therefore, I would not claim that it is part of my work routine yet. But certainly AI can be an aid for certain tasks.

Q: Have you noticed any changes in customer requests and needs in line with the development of AI tools? Are there certain design projects/design products that have been transformed in demand? No, I have yet not seen any change in either customer requests or assignments. I think that AI is relatively new for many customers and employees and a change in working methods will take time.

Q: What do you consider to be the main advantages and disadvantages of using AI-assisted tools in design work?
Advantages: Include AI in connection with developing visual concepts, storyboards, unique images and animations as well as a tool to optimize time.
Disadvantages: Many AI tools are not up to date with the outside world, do not
create innovative or innovative solutions but use existing material and recreate it.

Q: Would the use of an AI tool affect your sense of ownership over your creative output? I believe I would feel a concern of the copyrights of the art. When the product is produced who has the ownership over the brand design and artistic style. If I collaborate with AI tools from Midjourney, will the developers of Midjourney have the rights or will I?

Q: Are you worried that the assumption and development of AI tools may threaten your job? Of course there can be a concern for anything that is new and unexploited. AI will be a breakthrough in many industries. But I see it as an exciting opportunity, and am positively disposed to take on the challenge of developing and adapting to the new technology.

Q: How much of your work is spent on repetitive, uncreative tasks? Are there certain tasks that you find boring/slow/inefficient in your daily work routine? I am fortunate that my job is rarely boring or repetitive. But adapting the format of banners to different sizes could have been a task for AI.

Q: What kind of design work would you like to do/produce more of if the process was easier for you? Hmm, not really sure. But maybe more visual identities, moving graphics and animation. I think after affects can be a difficult piece of software, so get help with those parts.

Q: Would you be willing to collaborate with an AI in your creative process? If yes, in which stages of the process? What role would the AI tool have? Yes, I would definitely be able to collaborate with AI tools in my work. By testing different variants of a logo, help with image generation to bring up different options of my prompt and vision.