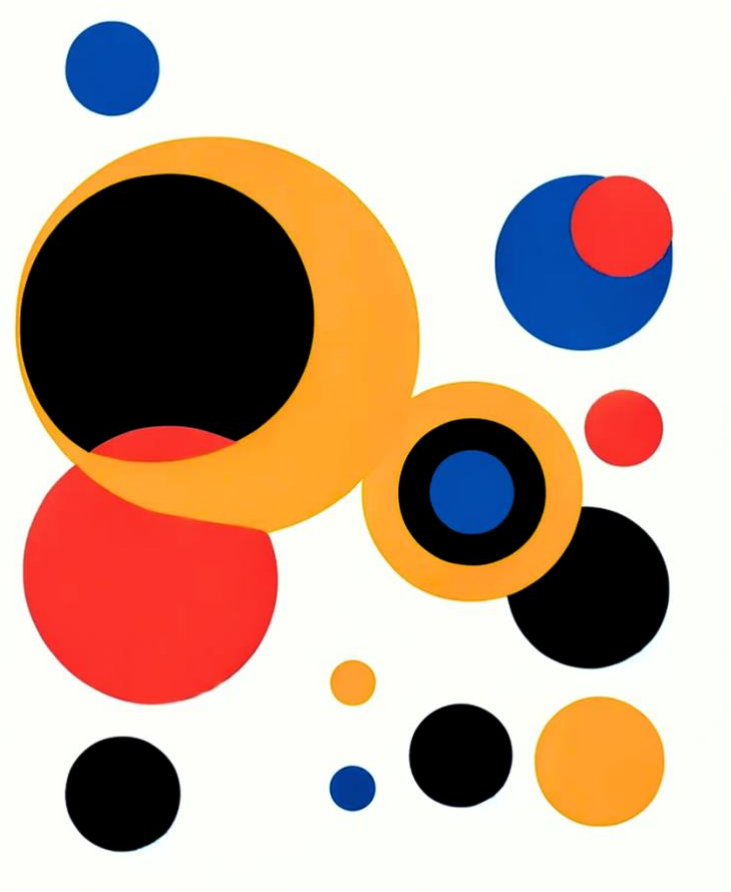
Generative artificial intelligence and design



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Summery

Generative Artificial Intelligence (GenAI) is a cutting-edge technology that aims to ease human tasks by processing information at impressive speeds, especially in pattern recognition. However, its integration into the creative industry presents challenges. Traditionally, creating art, music, and designs was considered an exclusively human skill. Now that GenAI can produce creative content at a human-like level, it is essential to consider the impact it should have on our society.

Through a series of four interviews, I carried out a Dialogical Action Research cycle with Designer Daniel Maul, who is the graphic designer at Homerunner and has 12 years of industry experience. Together, we explored the concept of authenticity in graphic design through the three themes of consistency, conformity, and connection from the Authenticity review by Lehman et al. (2019).
The most relevant theme was consistency. It is focused on the inner self and how a person's intentions must be aligned with their external expression for others to evaluate them as authentic. Through this theme, I found that Daniel Maul is an authentic designer with a strong consistency in his work. I also learned that being authentic is a principle to live by and it takes effort to maintain true consistent authenticity.

In the interviews, Daniel and I discovered that GenAI can help alleviate mundane or trivial tasks in the design process. For instance, GenAI can be used as a tool to summarise briefs or create visuals from ideas to assist in communicating a concept. However, it is essential not to become overly reliant on the model's output, as this could influence the authenticity of the creative expression. Heavy use of the model in the early stages of the research process could lead to fixation on the initial generated images. A consequence of this practice could be a loss of creative control and an inauthentic process.

From the interview analysis, two lessons were formed:
1. While technology defines, authentic creativity refines
2. Authentic Designers: Advancing creativity with GenAI tools.
The lessons are meant as a guide for experienced and upcoming designers to help them maintain authenticity in their future work. It seems too easy to become overly reliant on using GenAI to produce creative work with. I would rather urge all designers to cherish their creativity and pour effort into the process. The consistent development of skills and techniques will keep the designers relevant in the AI era.

For future research, I would recommend that another research cycle be carried out with an upcoming designer. It might be second nature for an inexperienced designer to incorporate GenAI models into their work process. It would be interesting to explore whether the consequences amount to the same and if authenticity is still validated via consistency. Another recommendation is to assemble a research team to gain knowledge about the effects that AI have on the creative industries.

To conclude the summary, I suggest that graphic designers, first and foremost, rely on developing their craft rather than depend on GenAI models to augment their work. When using GenAI it is important to use it as a tool to maintain control of the creative process. To keep authenticity in the design it is also important to preserve the link between the intentions of the designers backstage and the expression of their work.

English abstract

Generative Artificial intelligence (GenAI) is an advanced technology that promises to alleviate human tasks by processing information with remarkable speed, particularly in pattern recognition. However, it´s integration into the creative industry poses challenges. Before GenAI, the ability to create art, music and designs was considered to a be competence that only humans had. As GenAI is now able to generate creative content at a level that is similar to that of a human, it seems prudent to reflect on the influence it should have in our society.
Through a series of 4 interviews, I carried out a Dialogical Action Research (Dialogical DR) cycle with Designer Daniel Maul, who is the graphic designer at Homerunner and has 12 years of industry experience. Together, we explore the concept of authenticity in graphic design through three themes from the Authenticity review by Lehman et al. (2019).
In the interviews, we discovered that GenAI can help reduce mundane or trivial tasks in the design process. For instance, GenAI can be used as a tool to summarise briefs or create visuals from ideas to assist in communicating a concept. However, it is essential not to become overly reliant on the model's output, as this could influence the authenticity of the creative expression. Heavy use of the model in the early stages of the research process could lead to fixation on the initial generated images. A consequence of this practice could be a loss of creative control.
From the analysis, two lessons were formed:
1. While technology defines, authentic creativity refines
2. Authentic Designers: Advancing creativity with GenAI tools.
The lessons are meant as a guide for experienced and upcoming designers to help them maintain authenticity in their future work with GenAI.

Keywords: Authenticity, Generative artificial intelligence, GenAI, Graphic design, Creativity, Design, Consequences.

Danish abstract

Generativ kunstig intelligens (GenAI) er en avanceret teknologi, der lover at lette menneskelige opgaver ved at behandle information med bemærkelsesværdig hastighed, især inden for mønstergenkendelse. Imidlertid indebærer dens integration i den kreative industri udfordringer. Før GenAI blev evnen til at skabe kunst, musik og design betragtet som en kompetence, som kun mennesker besad. Da GenAI nu er i stand til at generere kreativt indhold på et niveau, der ligner det menneskelige, virker det klogt at reflektere over, hvilken indflydelse den bør have i vores samfund. Gennem en serie på fire interviews udførte jeg en dialogisk aktionsforskningscyklus med designer Daniel Maul, som er grafisk designer hos Homerunner og har 12 års erfaring. Sammen udforsker vi begrebet autenticitet i grafisk design gennem tre temaer fra Lehman et al.'s (2018) Authenticity review.
I interviewene lærte vi, at GenAI kan afhjælpe med kedelige eller trivielle opgaver i designprocessen. For eksempel kan GenAI bruges som et værktøj til at opsummere opgavebeskrivelser eller skabe billeder fra ideer for at hjælpe med at kommunikere et koncept. Det er dog essentielt ikke at blive afhængig af modellens output, da dette kan påvirke autenticiteten af det kreative udtryk. Over forbrug af modellen, i de tidlige stadier af forskningsprocessen, kan føre til fiksering af de oprindeligt genererede billeder. En konsekvens af denne praksis kan være et tab af kreativ kontrol.
Udfra analysen er der dannet to lærersætninger:
1. Teknologi definerer, autentisk kreativitet rafinnere.
2. Autentiske designere: Avancere kreativitet med GenAI-værktøjer.
Læresætningerne er ment som en guide for erfarne og kommende designere til at hjælpe dem med at bevare autenticiteten i deres fremtidige arbejde med GenAI.

Emneord: Autencitet, Generativ kunstig intelligens, Grafisk design, kreativitet, Design, Konsekvenser.

1. Introduction

The arrival of artificial intelligence (AI) has the ability to alleviate tasks previously performed by humans. The prospects of AI are great with its ability to utilize information across different academic and practical fields. When it comes to finding patterns in images or audio recordings the benefits are apparent in tasks no human would be able to carry out with the same speed. When it comes to the creative industry the benefits may be more challenging. The introduction of generative artificial intelligence (GenAI) into the industry has sparked a wave of hype. Media reports suggested that AI would disrupt various sectors and replace creators in design and software development. (Lutkevich, 2023) This was a change that started to make me worried. After a long career as a designer, I switched to IT seeking job consistency and stability. When OpenAI launched ChatGPT in 2022, I was one semester into my IT degree and immediately feared that my prospects of a stable and secure future, were vanishing before I had even graduated. If GenAI could generate creative content faster than a designer and write code more efficiently than a developer, I questioned what value I could bring to the industry. While contemplating my future, I began to wonder if anything created with GenAI could ever be considered truly original or authentic and if the ability to create authentic work is uniquely human.

This study concentrates on the graphic design industry, a creative field where GenAI is already being used. In collaboration with designer Daniel Maul, from the organization Homerunner. I conducted four interviews, to investigate the problem statement: What consequences does the utilization of GenAI have on the authenticity of design?
The keyword in the statement is authenticity, as advanced technology makes it increasingly crucial to reflect on what is genuine in our society. The understanding of authenticity will provide a framework for assessing whether something or someone can be considered authentic. The authenticity concept is explained in the review by Lehman et al. (2019), which describes three themes: consistency, connection, and conformity.
Through Dialogical Action Research (Dialogical AR) the study has combined the practical knowledge from designer Daniel Maul with academia, which resulted in a better understanding of the subject. It also enhanced my knowledge of the complexity that GenAI inflicts on the modern interpretation of authentic design. The analysis formed two lessons to inspire and guide future designers in their work with GenAI.

The report contains seven chapters**.** Starting with the theoretical framework in chapter two which describes what GenAI is and presents information about graphic design the chapter culminates in a comparison of GenAI models to offer a visual context.
Chapter three investigates the concept of authenticity, offering three themes to evaluate the authenticity in design.
The fourth chapter explains how the Dialogical AR method is used to perform four interviews, that explore GenAI graphic design through a natural conversation with a practitioner.
In Chapter five the discussion presents two lessons based on the analysis, together with limitations and future work. The final chapter, six contains the conclusion of the study.

2. Generative AI and design

This chapter describes GenAI and design to provide background knowledge about graphic design, what GenAI is, and a comparison of the output made with the three models mentioned in the interviews. The comparison will give context to GenAI's use in the design process.

2.1 Generative AI

To better understand the role of GenAI in graphic design, it is important to know how it works. GenAI employs deep learning, a type of machine learning using artificial neural networks, which is particularly effective at finding structure in large datasets (LeCun et al., 2015, s. 436) This is a type of unsupervised learning that allows the models to analyze and identify patterns in the data, creating foundation models that generate new content based on these patterns, guided by user prompts (Klusaitė, 2024). In 2022, tech companies Midjourney and OpenAI launched their models, Midjourney and DALL-E, contributing to the rise of GenAI. These are two of the most recognized generative image tools, both built on diffusion models (Feuerriegel et al., 2023, s. 114) They are trained by adding random noise to data, called forward diffusion and learning to recover the data, called backward diffusion. After training, the models can generate new images from random noise patterns. (Klusaitė, 2024) When a user interacts with a GenAI model, the only control they have is the prompt used to instigate it. The model generates results based on what it 'thinks' will satisfy the prompt. The lack of transparency, in how GenAI models source the information, means users should understand the intention or true purpose behind their work before using the GenAI outputs.

2.2 GenAI in graphic design

Visual communication is ever-present, from supermarket signage to online ads on social media. It guides our daily lives and shapes our perception of the world. (Medina, 2023) Graphic design, once an art form requiring creativity and originality, was beautifully described by Paul Rand in his 1947 book, *Thoughts on Design.* He stated that any visual communication, whether an advertisement or a birth announcement, should be seen as the "embodiment of form and function" (Rand, 2014, p. 9).
He saw every form of communication as a worthwhile chance to express creativity, even something as trivial as a coupon should, by his standard be visually engaging.
Designing an effective concept used to be a time-consuming process. Today, digital tools have made the process much more efficient and faster. In the “Art and the science of generative AI: A deeper dive” article by Ziv Epstein et. al. (2023) GenAI, is described as the latest technological advancement that allows for even faster production of visual communication, to meet the instant consumption driven by maximising engagement on social media (Epstein et al., 7 Jun 2023, p. 6). The rapid adoption of digital tools has had both positive and negative effects on the industry. The article “Effects of Generative AI on Design Fixation and Divergent Thinking” by Wadinambiarachchi et al. (2024) investigates if the consequences of using GenAI tools in the creative process can limit the quality of creative work. The authors found that while GenAI can enhance creativity, it also led to higher fixation on initial images in the discovery phase. This resulted in fewer, less original ideas compared to conventional methods. Wadinambiarachchi et al. also points out that for novice designers, AI-generated images may hinder creativity and that their time is better spent developing skills like sketching. Their research advocates for GenAI tools that promote effective ideation techniques rather than just generating stimuli. The Balance between seeking inspiration with GenAI and using the images as the final result is difficult. However, there are other ways of using GenAI to assist the design process. Werker et al. argue that for example DALL-E, can help visualize an idea

that you have in mind, serving as a helpful communication tool, something that was previously done by searching image examples on Google or Pinterest. (Werker & Beneich, 2023) It means that creative control is maintained by using the model as a tool. It is, however, important to critically evaluate the output before it is used in designs. This practice is a good way of maintaining a clear distinction between the designer and the GenAI model, as it helps differentiate the work by a designer from the results produced by GenAI.
This critical attitude is not shared by everyone as described in the article, "Designing with AI - A User Study to Explore the Future Role of AI as a Collaborative Tool in Graphics Design," Where it was revealed that some designers wanted an AI that was better at replicating human touch and creativity. (Fatima, 2023, s. 10) All designers may not embrace this belief, but some designers would strive for a level of collaboration, where the distinction between human and GenAI designs becomes unnoticeable, which is cause for concern. It is a step towards a future where GenAI can supplant designers entirely. This discussion helps answer the problem statement as it is crucial to recognize that an enormous consequence of utilizing GenAI in design could diminish the designer's role, potentially stripping away the authenticity of visual communication.

2.3 Comparison

To further highlight, what GenAI models can offer the creative process, a brief comparison of GenAI models will provide a visual demonstration of its potential.
The four images below are generated with three different models, using the same prompt. “A photorealistic image of the statue `the thinker´ by Rodin”. The results are quite different and vary in quality.

Figure 1. Image by Midjourney

Figure 2. Image by Adobe firefly

Figure 3. Image by Adobe firefly

Figure 4. Image by DALL-E

Figure 1is an image by Midjourney which has an almost cartoon-like expression. There are two examples from Firefly because the first output, Figure 2 had such little resemblance to `the thinker´ that it was necessary to edit the prompt and try again. The Second result, Figure 3 is closer to the

expected output and looks more like `the thinker´. Figure 4 Is an image by Dall-E and it is by far the best quality because it has a natural background that bears a likeness to the location of the original statue of `the thinker´ in the Museé Rodin in Paris. Although all the models have taken liberties with the details and the proportions of the limbs, the output by the DALL-E model could be useful in the design process.

3. Authenticity

Authenticity is a complex subject with roots in philosophy and psychology. As primary background literature my supervisor, John S. Persson recommended the review *Authenticity* by Lehman, D. W., O'Connor, K., Kovács, B., & Newman, G. E. (2018)The authors critically appraise the various views from the research and pinpoint the similarities, differences, and relationships amongst them. (Lehman et al., 2019, p. 1) The review helps explore the concept and offers a framework of three key themes to evaluate the consequences of GenAI.

3.1 The themes

The point about authenticity is that it is not a "property of entities" (Lehman et al., 2019, p. 2) it cannot be possessed. It is something closer to a label asserted onto something or someone and assessed by others. (Lehman et al., 2019, p. 2) There are three themes from which authenticity can be evaluated "Authenticity as (1) consistency between an entity's internal values and its external expressions, (2) conformity of an entity to the norms of its social category, and (3) connection between an entity and a person, place, or time as claimed". (Lehman et al., 2019, p. 1).

The conformity theme

This theme originates from the cognitive science in the field of categorisation. It presents authenticity "as conformity of an entity to the norms of its social category". Research related to the theme was focused on examining the consequences of belonging to a category and the development of changes to the categorical boundaries. (Lehman et al., 2019, p. 13) When understanding conformity, it is important to know that authentic evaluation of this theme is based on how others perceive an entity. For example, it can be used to evaluate if the graphic design master, Paul Rand was an authentic designer. He would be deemed authentic by conformity because he studied at the Pratt Institute, Parsons School of Design including the Arts Student League of New York, all renowned for their art programs. This is where he would have developed his creative skills and methods. The schools also aligned his view of design, with the level of quality that was expected by the industry and design community. (Rand, Life, 2023)

The connection theme

Lehman et al. base this theme on psychological essentialism and symbols. This interpretation of authenticity is the link between an artefact and a person, time or place. The research on this theme highlights the meaning of authenticity as a connection via origin, symbolism or transference. (Lehman et al., 2019, p. 16) Authenticity as a connection is best described by revisiting Rand as an example. His work has a strong connection to Americas cultural and temporal context in the 1950s. The logos and concepts he created for world-known companies are still recognised decades after their creation. (Rand, Life, 2023) This argument makes Rand an authentic designer by connecting him to a time and place where he was one of the defining designers.

The consistency theme

This theme is rooted in philosophy and spans from ancient Greeks like Aristotle and Socrates to existentialists such as Heidegger and Sartre, including many more scholars. It presents authentic consistency as an alignment between an entity's internal values and external presentation. (Lehman et al., 2019, p. 5)

This is also referred to as the self-concept, and a way of understanding it is with reference to the theatre. Surface acting is a method where the actors control their expression and manipulate their facade for the audience. This is considered inauthentic. The opposite is called deep acting. Which is a method where the actors regulate their emotions to truly communicate what they feel inside on the backstage level and attempt to align it with the external expression of their frontstage. (Lehman et al., 2019, p. 7) This means that when a person reflects their true personality, they are considered by others to be authentic.

Regarding the temporal aspect of authenticity, there's a level of uncertainty as the authentic self could be uncovered or even constructed over time. (Lehman et al., 2019, p. 27) Research also shows that a person will create their backstage over time, as they discover who they really are. In this self-discovery process, they might learn that there is a misalignment between their front and backstage which would mean that they have led or are leading an inauthentic lifestyle. (Lehman et al., 2019, p. 8)

4. Dialogical Action research method

This chapter explores the method of Dialogical action research (Dialogical AR) and describes its application in the study. The aim of the study is to connect the concept of authenticity with practical knowledge from an industry that utilizes GenAI.

Dialogical AR is a cyclical research format comprising a collaboration between a practitioner and a researcher. The aim is to bridge the scientific theory with real-world problem-solving. It is constructed around periodical dialogues to initiate a cycle of action and learning. During one-on-one conversations, the researcher will try to understand the practitioner’s environment from their perspective and accept the practitioner as being on the same intellectual level by not imposing scientific knowledge or phrases on them during the conversations (Mårtensson & Lee, 2004, p. 508). A natural conversation will guide the researcher in carrying out the process and is a vehicle for the practitioner to reflect on their own experience and gain new insights into their field. (Mårtensson & Lee, 2004, p. 511)

Figure 5 shows how an experimental action can address a real-world problem. The reaction from the problem stimuli serves two purposes: it provides evidence for scientific theories and help solve the problem. This approach not only fixes the issue but also enhances understanding of its cause and nature. (Mårtensson & Lee, 2004, p. 509) When Daniel and I encounter issues related to GenAI in design, I will seek solutions in academia and invite Daniel to discuss these issues, drawing on his practical knowledge and experience. From this reflective dialogue, we can identify actions that would benefit his industry. This process will be detailed in the interview analysis and summarised in the lessons learned.

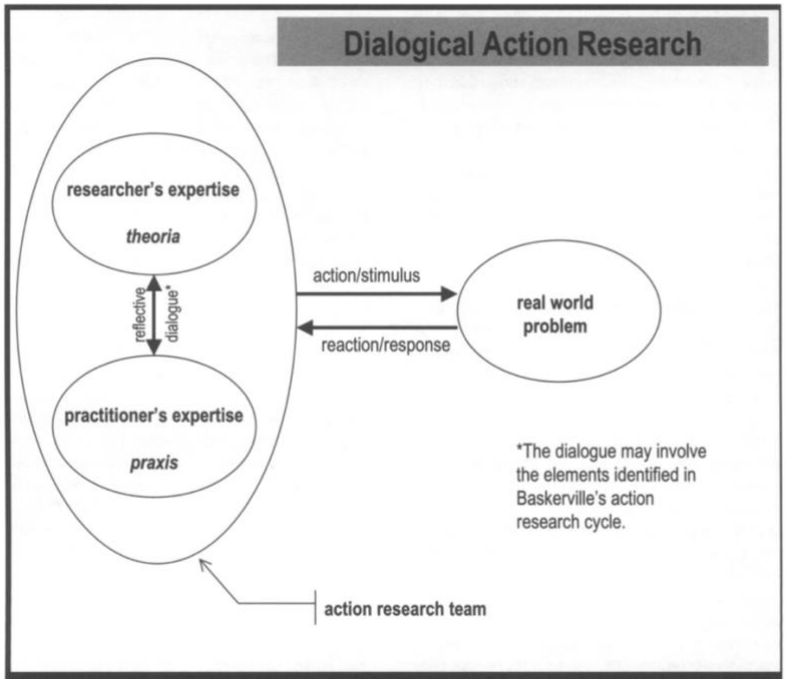

Figure 5. Illustration of Dialogical Action Research process (Mårtensson & Lee, 2004, p. 510)

Four key features have been presented to distinguish Dialogical AR from the work of a consultant hired to solve organisational problems. The authors of *Dialogical AR at Omega Corporation*, Pär Mårtensson and Allen S. Lee, identified concepts from the philosopher and social scientist Alfred Schutz, particularly his ideas on the scientific and natural attitudes of everyday life. These attitudes form the foundation of the four distinguishing features of Dialogical AR. (Mårtensson & Lee, 2004, p. 512)

Features:

1. The everyday perspective: In dialogical AR, the researcher can use or set aside the scientific mindset when proposing actions for the practitioner. While the researcher adopts a scientific approach, they use natural language when communicating with the practitioner to understand their first-hand experiences and organisational issues, temporarily setting aside the scientific mindset during these interactions.
2. The everyday thinking: Regular people use common sense and everyday thinking, shaped by their community, to understand their organisation and solve problems. In dialogical AR, practitioners naturally use this everyday thinking. Researchers must remain mindful and attuned to this perspective, to help them understand the practitioners organisation.
3. Influence of social and historical context: In dialogical AR, the researcher acknowledges that scientific theories and approaches are context-specific and cannot be fully understood outside the scientific community. Similarly, based on personal experiences or formal insights, the practitioner's knowledge is tied to their organisation’s unique social and historical context and cannot be easily transferred to outsiders. Bridging the gap between scientific and practitioner knowledge is a key challenge in dialogical AR.
4. The Social and Historical circumstances: Knowledge of a specific social and historical environment can develop naturally over time, such as when someone becomes an employee of an organisation. It can also be gained when an anthropologist conducts an ethnographic study. In dialogical AR, the researcher must intentionally and attentively understand the organisation's social and historical context and analyse its challenges. (Mårtensson & Lee, 2004, pp. 512 - 515)

I have a background as a designer, which provides insight into the environment that is being investigated. It has also formed the perspective that the problem statement is built on and adds an advantage regarding the methods distinguishing features. Experience in the field allows for a natural understanding of the everyday thinking that Daniel uses in his work, as well as a connection to the social and historical context driving his organisation. It also allows for a comprehensive grasp of the environment and work processes. This background knowledge makes it easier to set aside the scientific mindset and connect with Daniel.

Regarding the practical process of dialogical AR, Baskerville's action research cycle is presented in Figure 6 below. The graphic shows how the researcher and practitioner work together to diagnose the real-life issue which will be remedied through action or stimuli. This action serves as both a solution for the practitioner and an experimental test for the researcher.

1. Action planning: Plan the steps they will take.
2. Action taking: Implement the procedure.
3. Evaluating: Assess the outcomes of the action.
4. Specifying learning: Enhance the knowledge by identifying lessons from the action's outcomes.
5. Diagnosing: Begin a new action research cycle by analysing and diagnosing the real-life situation.

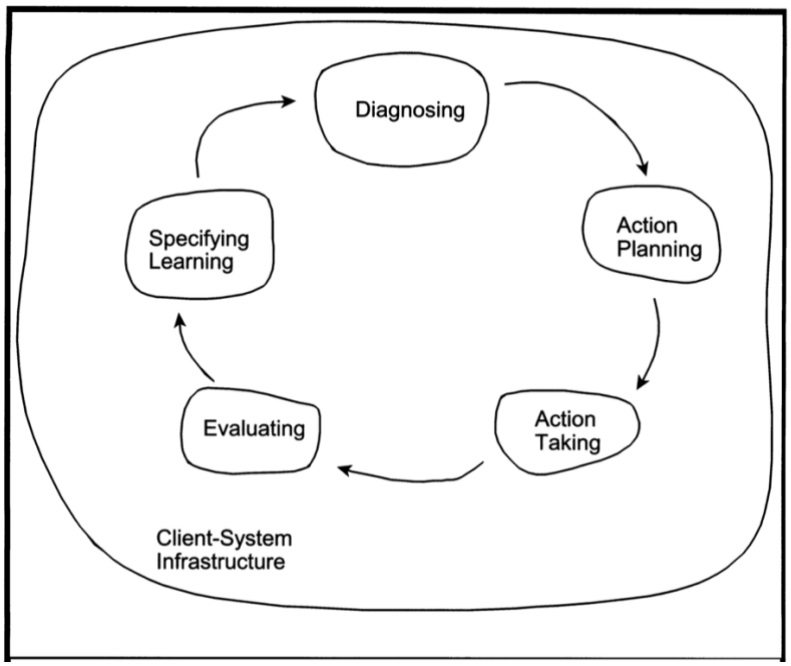

Figure 6. The Action Research cycle by R. Baskerville (Mårtensson & Lee, 2004, p. 511)

This study involved four interviews that took place over six weeks. The first interview served as an introduction, allowing me to get to know Daniel. The second interview marked the initial exploration of the problem, where I presented the theory of authenticity and conducted an authenticity evaluation of Daniel. The third interview continued exploring the issue with GenAI in the design industry, moving closer to a solution. The fourth interview summarised key points and included a final reflection.

Conducting interviews that aim to build reflective conversation rather than neutrality can be perceived as qualitative interviewing. This is characterised by three types of questions:

Primary questions: To initiate and guide the interview.

Probe questions: To elaborate or clarify responses or request additional examples and
Follow-up questions: To explore the consequences of answers to primary questions (Mårtensson & Lee, 2004, p. 521)
To fulfil these criteria, I created interview guides for each part of the series; see Appendix A-D. The most elaborate guide was made for the first interview. The following examples are from the same interview and present the structure. Initially, four main questions were formed: Who are you? How do you design? What is good design? And how do you use GenAI? These were used to create four topics: Identity, praxis, values and GenAI. From these four topics, 23 primary questions were formulated to guide the conversations towards answers that would bring satisfactory insight to the topics. An example of a primary question is: How do you gather inspiration? One or two probe questions were included with each primary question for elaborating purposes in case the interviewee was unsure about the meaning of the question. This example is the same as the primary question including the question: *How do you gather inspiration? Do you have a Pinterest or use Instagram?* Follow-up questions were not constructed in the guide but would be a natural consequence of curiosity. The open-ended questions should inspire long reflective answers and would hopefully keep the conversation more natural and moving freely.

5. Interviews

This chapter will contain four interviews with designer Daniel Maul, present an analysis of each interview and conclude with a summary.
I conducted a personal reporting of the data findings, drawing on my knowledge from past university studies and career experience.
After each interview, I carried out a meticulous process of editing the entire transcript before collecting the quotes into statements and converting them into key points. To create an easy overview of recurring points, I labelled each statement with the letters corresponding to the quotes they originated from (see Appendix A-D). This allowed me to present the data in a table that could facilitate the analysis. The four transcripts cover a total of 207 pages and are available on request. For coherence, the quotes used in the report are translated from Danish to English (see Appendix A-D for the original Danish quotes).

5.1 Introduction and Authenticity Interview

Initially, organising the interviews proved to be more complicated than I had expected. My criteria might have been unrealistic, but I wanted someone with 10 - 15 years of experience. This was important because the designer would have graduated when the digitalisation of the design process was progressing. I know this because I used the tools during my first degree in design. I remember learning to trace on a light table and simultaneously creating digital illustrations in the Adobe package. It meant that a designer from the same era could reflect on what changes had been brought on by different programs and which effect they had. However, I was getting ready to lower my expectations to anyone with a design degree who wanted to express a thought about their work and AI. Luckily, Daniel stepped up, and it was clear that he was able to reflect on his experiences. This was an important criterion because he might have had to adapt his work process when a new system emerged. Reflecting on the effects of past technological advancements and possibly witnessing how

efficient the new technology could be would help me investigate what utilising GenAI would mean for design.

Table 1 presents the themes of authenticity: Consistency, Connection, and Conformity along the top bar, with the four topics outlined in the interview guide listed on the left sidebar. The table aims to illustrate Daniel's identity, praxis, values, and relationship with GenAI, providing a framework for understanding him as a designer and situating him within the themes of authenticity.

Table 1 - Introduction and Authenticity interview.

	Consistency	Connection	Conformity
Identity	• Creative by nature.		• Practical experience and a degree shaped him as a designer.
Praxis	• Work became a hobby. • Design and development became a lifestyle. • Analogue designer by default.		
Values	• Being thorough throughout the work process.		
GenAI	• AI is quantity and not quality. • AI is not effective enough. • Technology optimist.		

5.1.1 Analysis

Before diving headfirst into AI, I want to unfold what makes Daniel an authentic designer.
When looking into the identity category in Table 1. I want to highlight two themes of authenticity. One is consistency because it relates to the self-concept and explains why Daniel is true to his inner self. The other is conformity because he attended a design degree. In a quote related to his school, he says,*" I did a vocational degree as a media graphic designer. The first year, we only learned about the craft".* The craft is an element of design that Daniel returns to throughout the interviews. It is significant to know that he cares about the craft of design. It reflects his attitude towards the work process and shows that he cares about skills, techniques, methods and competencies.

By taking a degree, he was presented with a foundation of work methods and techniques. It also prepared him to create his own work to a standard dictated by the industry. By following the guidelines set by his educational institution, Daniel became an authentic designer, adhering to the category of designers who hold a diploma from a recognised institution.
From an early age, he already showed a quality that made him a match for the consistency theme, which is demonstrated by a very sincere quote: *"I just had to make a living out of drawing"* It is as simple as that the core of his inner self, propelled his direction in life. On an identity level, Daniel is authentic because his reaction to his inner passion for creating led him to choose an education that would satisfy his need for creative expression. By first being true to himself and later conforming to societal standards, he began a journey of being consistent before he could truly be considered authentic by the consistency theme. Daniel's expression of his true self relates to the self-concept of Lehman et al. while he was on the path to becoming a designer through consistency in his younger years, he had to gain experience to align his inner and outer self to be valued as authentic.
There are three key points in the praxis table category. They are all placed in the consistency theme because Daniel worked hard to evolve as a designer. One quote that supports this is the *"work became a hobby"* quote, along with *"I worked on independent projects and had a design blog and many other things along the road that meant that I just worked as much as possible, back then"* and *"It was a passion for the craft, hobby and work just blended together and I ultimately work so many hours that it became work, hobby, leisure and everything "* He created a lifestyle around his work which means that he aligned his backstage with his work and is living the most authentic lifestyle as a designer.

In the values table category, I want to highlight the following quote, *"I think the important thing is to understand what needs to be done on different levels and to understand who the customer is and what they really want"* because it supports the key point: Being thorough throughout the work process. Every time I asked Daniel about his values as a designer, his answers always amounted to being thorough. I might have had an answer in mind like *"Not stealing from other designers"* because it could be used as an argument against using a GenAI model in the process, as the users can never know what the output consists of. Instead, he gave me an answer that inspire the collaboration between designer and GenAI.
The two key points: AI is quantity and not quality, and AI is not effective enough. In the GenAI table category, originate from two quotes. They describe Daniel as a technology optimist who wants to embrace anything that he can use to support his work: *"I think it is a positive thing because it removes the boring work and I think it can optimise other tasks to be done faster"* and as a GenAI sceptic who takes a step back from technology. He wants a quality tool with high functionality: "*I have experienced a lot of barriers by testing different GenAI stuff, but I think it is so early for many of the production levels"*. If it cannot deliver quality on a high level, he would rather wait until it improves.

By examining Daniel's identity, praxis, values, and use of GenAI, I have the foundation to initiate the Baskerville research cycle in Figure 6 and plan an action. However, following the cycle precisely is challenging since the problem statement is preconstructed. In this interview, I focused on situating Daniel as an authentic designer rather than having him present a real-life problem for investigation.
To summarise the interview, Daniel is an authentic designer to his core by the theme of consistency and conformity because he studied at a recognised institution. Just as Daniel's self-concept evolved over time, shaping him into the creative person he is today, his career has also continued to grow and develop. Throughout this continuous, authentic evolution, he has maintained a commitment to thoroughness in his work while reviewing new technology to support his endeavours.

5.2 The Designer and GenAI interview

The second interview will be the first iteration of exploring the problem statement. I have created another interview guide, see Appendix B, to keep the conversation on track. I had three main topics: Designer, work and GenAI, which covered questions about Daniel's work as an authentic designer with GenAI and what it means to him. During the conversation, I tried to follow the interview guide, but I often got carried down a different conversation path. I learned the hard way that one of the challenges of dialogical AR is for the researcher to keep on track. In the end, I got relevant data on two of the topics: The designer and GenAI. The key points from the interview are presented in Table 2 under the same topic names. I also introduce key points in a table category called: Actions based on conversation. This is because the dialogical AR method encourages the investigation of a real-life problem and possibly a solution caused by the practitioner taking action.
Even though I have not introduced dialogical AR as a method and asked him to take action or bring the problems that we discus to his work, Daniel was doing it on his own accord. I have noted the key points from all topics in the table below and will expand on their relevance in the analysis.

Table 2 – the Designer and GenAI interview

Key points from the Designer and GenAI interview	
Designer	**GenAI**
• Nerdy designer. • The designer is better than AI.	• GenAI can make work tasks easier. • GenAI used for creative work. • Creative work can be bought instead of developed.
Actions based on conversation	
• GenAI is used for the wrong work. • A designer does not need GenAI.	

5.2.1 Analysis

Following the second interview, one question captured the conversation: How does Daniel utilise GenAI in his work? The analysis explored the question and was supported by the key points outlined in the table categories: Designer and GenAI.
To emphasise that a passion for learning is integral to the lifestyle of a designer, I have chosen the key point: Nerdy designer to support the following quote: "*I just channelise it (curiosity) into anything because I am so nerdy about it, I think it all just reaches a point of making sense".* The quote describes his natural way of developing. His nerdiness is a quality that drives his motivation to gather new methods and skills. This internal desire to evolve is relevant in the perspective of authentic

design work. Lehman et al. discovered that people who live a life that they believe to be the authentic experience, benefit from a better general psychological welfare. (Lehman et al., 2019, p. 8) I can concur that being nerdy about design is a genuine and immersive experience. Your mind is constantly generating new ideas and searching for methods to bring them to life.

The next key point: The designer is better, is supported by two quotes*: "I just wrote a prompt for him (boss) with Coca-cola Christmas truck, something, something blue lighting so that it fits into the environment around it. And yes, the output was fine, but I already had everything (the vision) in my mind*" and *"The idea is there, and I can do it just fine without, but it is easy to communicate with it, if it makes a good enough result and over time, I think it will get better"*. This means that Daniel wants quality before he will allow a GenAI model to do his work for him, and when his boss asked him if he wanted access to ChatGPT4, he declined. He already had a vision in his mind, and if the model cannot compete, there is no reason to use it. He is a designer with principles who is interested in moving forward with the times but wants the highest-level quality before he incorporates new technology into his process.

It is worth considering what the results of this conversation would look like if Daniel had been using GenAI in his work already. As a designer, I am without hesitation on Daniel's side, but as a researcher, I want to emphasise the limitations of having an interviewee who is tentative about GenAI. It makes the discussions one-sided, in favour of methods of the past and critical of the technology of the future. I can also feel my bias on this point because I am overly fond of my designer lifestyle and worry that the consequences of GenAI might limit it.

Two quotes support the three key points in the GenAI category of Table 2:

"If I am having a meeting, I can ask it (ChatGPT) to do a quick run-through of the points (from a brief) that make sense to bring along, and maybe these 2 (points) are even better". This highlights how GenAI can facilitate an efficient work process without doing the creative work. The next quote, *"I think that GenAI will have the same impact as when WordPress was invented people can just make a website and they just used the templates. You can just buy the template or have it made for you or make it yourself"* brings me back to why I was pleased to have Daniel participate in this study. He is reflecting on a disruption that happened in the past and notes that it is not a bad development; it just makes the work with interface design much more accessible. Anyone can just buy a template or quickly learn to use the program and do it without any prior experience. This point is relevant when considering the problem statement and what consequences the utilisation of GenAI can have. It is impossible to know in 2024 what the full effect of GenAI will be on the design industry. Still, it is reasonable to compare the introduction of GenAI to the launch of previous technological advancements, as this comparison will enhance the argument and support reasoning grounded in historical precedents.

Actions based on conversation.

Daniel´s unwitting facilitation of the method started with reflecting on the effects that GenAI might have on his work with his peers. The quote: "*I talked to my brother (also his colleague), and it is interesting with all the GenAI coming out now because we have had lots of machine learning for a while and with everything that is coming now, it is just replacing all the things we think is fun to do"* and "*It replaces all the creative tasks, like writing, designing, art and also the creative projects that involve a skill"* supports the key points: GenAI is used for the wrong work and A designer does not need GenAI, in table 2. While pinpointing the problem in their industry, they are assisting me in diagnosing one of the initial consequences that GenAI might have. GenAI is removing parts of the work they enjoy the most, limiting the desire to use the tools. The third quote from Daniel highlights the issue: *"My brother then points out that designers are still left with the trivial jobs, and that is what I want to change. It is not supposed to be the people that are unemployed (replaced by GenAI) they*

should just do something that makes more sense". In the quote, Daniel emphasises that he does not want a future where GenAI is used for the interesting work. He is also aware that the emerging trend of doing creative work primarily through GenAI could have consequences for the work of future designers. I think Daniel's opposition to GenAI is the counter effect from professionals that can remedy the tendency and maintain the interesting and creative jobs. By bringing the issues into his work life, Daniel has moved this study through to action taking in the Baskerville cycle, Figure 6. In summation, the first iteration presents that an authentic designer is driven by his backstage to continue developing himself and his skills. It is a quality that makes him critical of using new technology for designs without quality assurance. To assess the tendency of using GenAI for creative production or to understand the consequences of utilising GenAI. We need to study and evaluate past examples, such as WordPress, to avoid a future where GenAI is used in a way that might eliminate creative practitioners.

5.3 The In-depth interview

I look forward to another interview because Daniel is an open vein of references from culture and art. A delightful reaction to introducing him to the findings of the study is that he has started to give me homework in the best way possible. He sends me links to designers or films that he thinks are interesting to me and follows up the next time we talk. I think it is marvellous. When you have a creative mindset, this kind of exchange is like giving each other gifts. He has thought of something that might enrich my creative exploration and possibly inspire new ideas. He told me about Paul Rand, the modernist master and David A. Smith, an English sign maker with a unique and original art form. I think it is safe to say that in the name of dialogical AR, I have invested myself thoroughly in the method and gone beyond avoiding scientific talk to find a common language with Daniel.

The third interview guide, see Appendix C, is based on the questions from the second interview guide that I did not manage to ask Daniel the first time. It is also focused more on GenAI and what it means for both the creative work and the design results to use GenAI in the process.

Table 3 - The In-depth interview

Key points from the In-depth interview
GenAI
• Concerned about negative effect of GenAI. • GenAI as an assistant or tool. • Wants efficiency and optimization. • Maintain control.
Actions based on conversation

- GenAI can make creative work more accessible.

5.3.1 Analysis

The second iteration will help further explore what consequences GenAI have on authentic design. From the first iteration in the design and GenAI interview, we learned that there might already be some effects based on previous experience. Now, we dive deeper into how we can work with GenAI to keep moving in a positive direction.

During our third conversation, I discovered that despite Daniel being curious about new technology, he also has reservations and is apprehensive about the future of the creative industries. The key point: Concerned that GenAI and new technology will have a negative consequence in table 3 is supported by Daniels's rather sceptic quote: *"I think there will be fewer real musicians because it is not a livelihood anymore. It is not a dream anymore because you won't see people on a stage playing (instruments) most of it is done in a studio or on a computer."* It is the first time he has expressed a pessimistic attitude towards technology, but his concerns about the long-term consequences of GenAI are not without merit. He is simply aware that if the creative mindset is diminished, it will affect the quality of the outcome, which he also states in the quote, "*Is the creative mindset being eliminated because they all want the same sound? A GenAI model can make something that sounds like Bob Dylan and write good lyrics."* Regarding authenticity, there is a point about creative work done with GenAI because the model essentially copies existing material and creates a new version. I wonder how to argue that a GenAI model copying other material is more inauthentic than an artist doing the same. I could defend that the creative process is the most authentic because it is a true experience driven by my inner creative self-expression based on self-concept (Lehman et al., 2019, p. 7) But I will also admit that I have unconsciously copied other designers and artists. In the past I would argue that you can´t control what the mind absorbs and how it is processed. However, if both humans and GenAI are copying, this can´t be the criterion on which the argument for authenticity is made. Instead, it might need to stem from the ability to control the narrative, similar to how Daniel creates a prompt for a Coca-Cola-style truck in the design and GenAI interview to support his creative vision. Thus, Incorporating the GenAI model into the creative process, with a clear understanding of the source of reference is essential. For Daniel, maintaining control throughout the process is a priority, reflecting his broader aspirations for the future. Two quotes encapsulate this: *"I want to use GenAI for many things. If it can help with stuff and make some things easier or if it can optimise some things, that would be nice."* And "*I want the combination of using it for the boring tasks and to optimise the creative tasks. For example, if I am explaining how something might look, I could just write a prompt (for a GenAI model)".* He envisions GenAI bringing value to the creative industry by using it as a tool, like a painter using a paintbrush. His approach would benefit the quality of the products and optimise the process. If this approach was the new reality, there would still be consequences to the industry, but it might be a smaller shift; one thought example for the job market could be that copywriters would have to do light creative work for visual communication to accompany their writing. This would, in effect, eliminate a graphic design job at a small news website. It could also be a scenario where a graphic designer might have more of an editor role for creative tasks carried out by non-creatives.

Actions based on conversations.
Sceptic or not, there is no way around GenAI being part of the creative process in the future; it is simply up to the practitioners to take charge of the outcome.
In the, Actions based on conversations category in Table 3. I make an effort to enlighten Daniel´s gloomy scenario and bring out a point: Epstein et al. give an example of how the creative industries have been disrupted through time. One quote revolves around the music industry: "*The digitisation of music production (e.g., digital sampling and sound synthesis) was described as "the end of music." Instead, it altered the ways we produce and listen to music and helped spawn new genres, like Hip Hop and Drum'n'bass*" (Epstein et al., 7 Jun 2023, p. 2) My argument to Daniel is that digitisation has been a disruption in the past, but the effect was not the demise of instrumental music. Instead, it made music more accessible to anyone with a dream. Today, you do not need to go into a production studio solely to test your skills; you just need access to the software. The long journey of getting your music published is one of the elements that has been reduced, and becoming a music artist is much easier today than when the production was more elaborate. Fortunately, he agrees with the perspective, and I refer once more to Epstein et al. Who has an optimistic outlook on the future "*Generative AI is not necessarily the harbinger of art's demise, but rather is a new medium with its own distinct affordances. As a suite of tools used by human creators, generative AI is positioned to upend many sectors of the creative industry and beyond—threatening existing jobs and labor models in the short term, while ultimately enabling new models of creative labor"*. (Epstein et al., 7 Jun 2023, p. 3) The two quotes from Epstein paint a positive picture of the future, and I recognise that Daniel's example of the effects of WordPress proves that he has the same mindset as Epstein et al. It also adds another perspective to the problem statement, where it brings out the nuances of GenAI´s effects by contrasting the good consequence of easy accessibility against a potential bad consequence that might result in the decline of experience and expertise. This contrast is also related to the fourth stage of the Baskerville research cycle, Figure 6. Where, the evaluation of the issue enhances the understanding of the issues identified in the interviews.
In summation, to achieve a positive future in design, it is crucial to nurture a creative mindset to prevent everything from sounding the same and to preserve authentic expression. To avoid negative disruption and maintain control, designers must not rely too heavily on technology to produce their work. Instead, they should use it as a tool to optimise the process by assisting with mundane tasks. This approach allows more time and space for designers to create original and inspired work.

5.4 The summary interview.
The final interview was used to assert the most important key points from the interview series. What did we actually learn, and how did it answer the problem statement? An interview guide was made with questions that would probe a new response or bring an elaborating answer to a key point made earlier.

Table 4 - The Summary interview

Key points from the Summery interview
Overview
• Keep evolving professionally.

- Use GenAI as a tool.
- GenAI can take control of creative process.
- GenAI is inventible.

Actions based on conversation

- GenAI to optimise mundane tasks.
- Optimize non-creative parts of the work

5.4.1 Analysis

One of the discoveries in the In-depth interview was regarding the importance of creators maintaining creative control. Daniel contributes to this notion in the following quote: *"You can definitely depend too much on it (the GenAI model), and then it will control the process"* This statement adds to the point of using GenAI as a tool to enhance the work process. By keeping control of the process you are able to stay consistent in your work and expression. If you depend too much on the outcome of GenAI, the link between the intention of the backstage and the work that is displayed is broken, and the experience becomes inauthentic.

To elaborate on the key point of making the work more accessible with a GenAI tool, in table 3. Daniel looks at the field of advertisement. *"Things evolve. Like the computer making advertisement illustration easier. It made it more accessible, and it was faster and smarter and if you had to do amendments you did not have to start over or erase everything"* This meant that we might have to look at the creative development process differently to move forward with the times. His second quote:*"The more quality it absorbs, the better quality it will deliver; however some things (creativity) might get lost, but I think it is a matter of attitude in thinking of it as a loss or just modern times."* underlines that GenAI is the future, and if you do not want to lose the control to GenAI, you need to use it as a tool and to find a new cooperative work method to develop the creative process.

In the context of enhancing the creative development another aspect is to avoid loss of authenticity. Daniel has a tip to keep staying authentic to your craft. *"The old masters were never really done and they never achieved becoming a master until they died".*

In essence, if you think that you are finished developing your authentic expression, you are figuratively speaking dead, or your creativity might be.

Actions based on conversation.

In discussing what optimisation might mean, I bring up Philip Galanter, who has written an article called *Artificial Intelligence and Problems in Generative Art Theory*. In this context, I align art and design because Galanter provides a clear explanation of what optimisation might entail. He describes a generative system to simply be a practical tool that helps with production. For instance, in making an animated film, someone might use a generative tool based on L-systems to quickly fill a forest

scene with trees. This method is much cheaper and easier than creating each tree individually by hand. However, the film isn't actually about the generative art, L-systems, or even trees.
(Galanter, 2019, s. 117) I find Galanter's perspective refreshing. After extensively contemplating the meaning of GenAI and design, I realised I might have become overly fixated on control. Galanter's example brings me back to the basics, reminding me that GenAI does not inherently control the narrative simply by being used. A tool is just a tool in the process of creating the final product.
Daniel has a similar thought when he describes how there might not be a huge loss of creative control by having GenAI produce an image. *"Eventually, I think it will replace photography jobs and possibly some design jobs and other creative subjects, but how creative is a photographer anyway if he takes the exact picture that I tell him to?".* In other words, there are times when it is important to assert creative control and times when it might be helpful to have assistance, allowing designers to focus on the most rewarding aspects of the job.

Summary of analysis
As indicated by step 3 in the Baskervilles cycle in Figure 6, the outcome of the action is due to be assessed. By the end of the fourth interview, we had outlined the most evident issues through Daniel's discussions with his peers and my review of academic material, we have discovered that a designer who takes design and visual communication seriously and consistently strives to improve their craft is perceived as an authentic designer. Daniel exemplifies this with his curiosity for learning new methods to elevate his work and his reluctance to relinquish total creative control to digital tools that promise to augment the creative process. Following Daniel's example, controlling the creative narrative is crucial. This approach directly addresses the problem statement, as over-reliance on GenAI to produce final work can diminish the time and effort needed to develop original and meaningful designs.

6. Discussion

This chapter contains the discussion which is based on the results from interview analysis and collected into two lessons. The limitation paragraph acknowledges the constraints of the study and the future research paragraph is a guide to suggested areas that might need further research.

6.1 Lessons

The study and literature provide valuable insights into the field of graphic design as GenAI is being incorporated into the work process. I have summarised them into two lessons to help experienced designers maintain a high level of authenticity in their future work with GenAI and to guide upcoming designers who may be trained to use GenAI tools as an industry standard.

Lesson 1: While technology defines, authentic creativity refines.
This lesson is for future designers who may not be trained in developing non-digital design skills. Technology is defining the future, particularly in graphic design, where social media's demands have reduced visual communication to mere fragments of flashing words and images. It is more important than ever to define the role of digital tools, and determine where to draw the line and rely on our own creativity.
Cultivating new ideas and inspiration into mature concepts with a visual impact is a step-by-step process. Paul Rand describes how to treat the first step of ideation. A designer does not start the design process with the predetermined idea. The idea should be the result of a meticulous study and observations, from that idea the final product will emerge. (Rand, Thoughts on design, 2014, s. 12)

Rand's belief that the idea should not be the final product resonates with Daniel's experience which he described in the design and GenAI interview. He delivered his vision of a Coca-cola style truck with lights as a prompt to explain the idea visually. This undeveloped idea had the potential of becoming the final product if his boss had accepted it as it was without cultivating it into a mature concept. However, Daniel's opposition to leaving creative development to GenAI is highlighted in the summary interview, where he argues that relying too heavily on GenAI can lead to losing control of the creative process. Wadinambiarachchi et al. echo this concern in Chapter 3.2 warning against becoming dependent on GenAI for creativity, as it could result in a fixation on underdeveloped or unexplored material. The focus should instead be on developing a true artistic expression.
During my studies, the focus was on methods to express ideas and how to develop them. I stress the importance of creative skills as it is essential to consistently be able to work with the ideas that emerge from the backstage and develop them into an authentic expression. I mention this because it seems too easy to fall into the shallow process of feeding ideas into a GenAI model. To prevent graphic design from becoming a shell of half-baked ideas, I urge all upcoming designers to explore every aspect of art and design. Be curious and work as hard as possible to make creativity a natural part of your lifestyle.

Lesson 2: Authentic Designers: Advancing creativity with GenAI tools.
This lesson is for the experienced graphic designers. They hold the power to set an example for the future and maintain the highest level of authenticity, while using GenAI tools.
If we want to offer the world original work it is of great priority to keep exploring art and develop design. Paul Rand explains that truly being a designer means to engage in a mental process.
"*He analyses, interprets, formulates. He is aware of the scientific and technological developments in his own and kindred fields. He improvises, invents, or discovers new techniques and combinations. He co-ordinates and integrates his material so that he may restate his problem in terms of ideas, signs, symbols, pictures*". (Rand, Thoughts on design, 2014, s. 12) Rand believes that to achieve good design, you must infuse your true self into the work. It requires sacrificing your inner self to the process and wholeheartedly explore ideas and solutions to reach genuine, authentic expression.
In an in-depth interview, Daniel expresses concern about the impact of GenAI on the creative industry, questioning whether creativity is being relinquished in the process of unintentionally creating a new industry standard where everything looks and sounds the same. A similar topic is addressed in the design and GenAI interview, where he recounts a conversation with his brother about creative work being taken over by GenAI, leaving mundane tasks for designers.
These two examples, together with the limitations outlined in the report by Iram Fatima, where designers desired a model that could better replicate human touch and creativity, indicate a trend that could potentially steer the industry in the wrong direction.
To avoid this scenario, we must regulate how much GenAI influences the creative work process. Epstein et al. argues that to maintain control, GenAI would have to be used as a tool. The authors explain that a generative system should be able to produce results based on a human author's desires. They also note that if the user has no specific goal at first, the system should support exploration driven by curiosity. As the user interacts more and their goal becomes clearer, the system should help shape and achieve this goal. Epstein et al. suggest, that these systems need to be somewhat predictable, so users can understand how they work and expect certain outcomes from their actions. Under these conditions, we can hold the human user responsible for what the system creates. The authors only think the system can be successful if human creators can use it to express themselves creatively and achieve results that reflect their intentions and personal style. (Epstein et al., 7 Jun 2023, p. 4) In this example, Epstein et al. tackle part of the problem statement and highlight that a lack of control could potentially be a big consequence. Instead, the authors propose a restrained method

that allows for humans and models to co-work and remain authentic. This approach ensures that the backstage and frontstage aspects of the designer's expression are consistently aligned with their work. (Lehman et al., 2019, p. 5)
In the spirit of authenticity, I urge experienced designers to use GenAI to alleviate mundane work tasks instead of exploring GenAI to augment the creative product or striving for a level of collaboration where the distinction between human and AI-generated designs becomes unnoticeable. The consequence could have an immense effect that might diminish authentic human expression.

6.2 Limitation

I recognise that there are several limitations in the study. Firstly, GenAI was still being introduced into industries and different work processes when it was conducted. Users are still acquiring knowledge and testing the tools to understand the best way to use it to its fullest potential. This is why the description of the models and usage might appear superficial. We do not fully understand what GenAI can do or what it means for the future. This uncertainty initially made my narrative sceptical, which is atypical for a researcher who is expected to remain neutral; this also highlights my primary limitation regarding Dialogical AR. I am a designer first and a researcher second. I have too much background knowledge as a designer, which makes it difficult to distance myself from industry issues. This is evident in the problem statement, where I pre-emptively assume that GenAI will have consequences for the design industry rather than posing an unbiased question that invites an investigation into whether GenAI will impact the industry.
Another limitation appears in the interviews. My supervisor warned me that the conversations should not be too implicit, leaving outsiders struggling to grasp the meaning. I tried to prevent this during the interviews by summarising and describing the points, but it was a challenge to extract direct quotes without having to overexplain the entire context. I chose instead to use parenthesis in the quotes to describe the context and improve readability.
The final limitation is the study's timeframe. The master thesis term lasted only four months, providing a narrow research window and allowing time for only one research cycle. This made it challenging to properly confirm the core problems related to GenAI in graphic design without added time for further investigation. Additionally, it's difficult to conclude whether the dialogical AR cycle was successful, as its success is evaluated based on real-world reactions to the practitioner's actions (Mårtensson & Lee, 2004, p. 508).
During the interviews, Daniel demonstrated a willingness to address the issues in graphic design posed by GenAI. Unfortunately, I cannot include those results, as the impact of incorporating GenAI into his work process will only become evident over time. Only then can I assess if the theory behind the action is applicable and whether Dialogical AR can improve the real-world problem.
However, I can determine that Daniel's and my understanding of the issues have improved. Daniel mentioned in the In-depth interview that he is now more aware of what constitutes authentic design and uses this knowledge to assess his team's work. (Mårtensson & Lee, 2004, p. 508)

6.3 Future research

For the future research I would recommend that another research cycle be carried out with an upcoming designer. There is a different attitude towards technology from a generation that is living with it every day. It might be second nature for an inexperienced designer to incorporate GenAI models into their work process, and it would be interesting to explore whether the consequences amount to the same and if authenticity is still validated via consistency.

Another recommendation is for the creative labourers to assemble a research team to explore the consequences of AI and GenAI in the different fields of Art, design, writing and film. It would be fascinating to learn how such a team would influence the new industry standards of creative work with GenAI and to find a unified way of maintaining authenticity in the creative work.

7. Conclusion

Generative AI can assist graphical designers in the creative process by alleviating mundane tasks and help develop ideas in the creative process. Relying on GenAI tools may, however, limit human creativity and authenticity, resulting in both uninspired and standardised work. I suggest that graphic designers, first and foremost, must rely on developing their craft rather than depend on GenAI models to augment their work. When using GenAI, it is important to use it as a tool to maintain control of the creative process and preserve the authentic link between the intentions of the designers backstage and the expression in their work.

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Appendix A

Introduction and authenticity interview guide

Hovedemner:
Hvem er du
Hvordan designer du
Hvad er godt design
Brugen af ai

Hvem er du:
1. Fortæl om dig selv?
2. Hvorfor blev du designer?
3. Hvordan var din uddannelse?
4. Hvad formede eller påvirkede dig mest?
5. Er du et kreativt menneske? hvordan bruger du din kreativitet?

Hvordan designer du:
1. Fortæl om din måde at designe på. Hvordan er din proces?
2. Hvilke programmer bruger du? og hvordan?
3. Hvordan søger du inspiration? Har du et pintrestboard eller bruger du instagram?
4. Hvordan bruger du din inspiration?
5. Investerer du dig selv i dit arbejde? beskriv hvordan
6. Er der nogle opgaver du ikke investere dig selv i, i lige så høj grad som andre? f.eks. arbejdet for en bestemt kunde?
7. Er der noget arbejde der er sjovere end andet? Kan du give et eksempel på et projekt som du fandt stor glæde i?
8. Har du oplevet at din proces har udviklet sig og hvordan?

Hvad er godt design:
1. Er der en bestemt designer eller et studio som du ser op til eller lader dig inspirere af?
2. Er der værdier indenfor design?
3. Er der nogle værdier du bestræber dig på at efterlever i dit eget design? (f.eks. ikke kopiere, finde ny inspiration til hvert projekt, bruge din personlige DNA i alt dit design)
4. Hvordan påvirkede det dit arbejde?

Brugen af AI:
1. Har du oplevet at design industien har udviklet sig igennem din karriere?
2. Har arbejdet ændret sig?
3. Beskriv din erfaring med AI. Hvordan bruger du det i dit arbejde?
4. Hvilken effekt har det haft på dit design og din arbejds proces? Er det måske mindre kreativt? eller mere effektivt?
6. Opfatter du at AI er godt eller dårligt for design industrien?

Quotes from the Introduction and Authenticity interview.

None translated quotes were extracted from Introduction and Authenticity interview and has been edited for readability.

A. “Jeg kan ****** godt lave alle de der design ting og præsentation og alt det, så det gjorde jeg og så var det egentlig meget sjovt”

B. “jeg tog en erhvervsuddannelse som mediegrafiker . . . Hvor vi så hele det første år kun lærte om håndværket”

C. “Jeg tror sgu altid jeg sådan godt kunne lide Sådan nogle kreative ting, Sådan nogle hobbyfag og Sådan noget håndværksmæssigt noget.”

D. “Jeg skal sgu bare leve af at tegne.”

E. “Så har jeg også arbejdet på selvstændige projekter og haft en design blog og alt muligt gennem tiden, som gør at jeg har bare arbejdet dengang, så meget som muligt.”

F. “Der var jeg heldig at få en læreplads . . . Der var en rigtig dygtig tegner dernede. Der tror jeg sgu bare jeg lærte rigtig meget af . . . der fik man bare fuld frihed til at lave noget, også til store kunder som Lego og British Airways”

G. “Altså gennem tiden. Det der med, at jeg bare har arbejdet meget. Det er nok bare fordi jeg skulle, du ved tilfredsstille min kreative udvikling”

H. “Det blev Sådan en passion efter det der med at terpe det håndværksmæssige i det . . . Det var sådan at hobby og arbejde det bare blendet sammen . . . Der arbejder jeg i princippet i så mange timer at det både var arbejde og hobby og fritid og alt”

I. “Jeg tegner næsten helt interface altså på papiret først”

J. ”at sætte sig nok ind i tingene”

K. “Jeg tror egentlig det vigtigste, er det der med at . . . forstå det man reelt skal lave og der kan man jo forstå det på forskellige parametre . . . at forstå hvem er kunden og hvad er det de gerne vil”

L. “Hvis jeg laver skitserne og får alt ide-arbejdet på forhånd, så skal jeg nok nå det sidste. Det skal nok komme ind på computeren, men alt det andet Det skal gerne ske på i blokken”

M. “Hvis jeg skal lave koncepter, som vi skal have ned på social media . . . så er det nemt at fylde ting i den (chat GPT) og så bare få spyttet budskaber ud, og så kan man lige selv give de sidste 5-10%”

N. “Vi kunne bruge det sådan at vi kunne få lavet en professionel tone of voice (med enGenAImodel) hvis vi har en virksomhed med 2 brands eller 2 med privat produkter og

erhvervsprodukter med med 2 forskellige navne. Og der kunne vi godt tænke os at den . . . fremadrettet har sådan en tone of voice, som ligesom definerer brandet og har alle de der forskellige værdier i det, at vi så kunne kunne bruge den til at bygge videre på."

O. "Vi har også brugt noget i forhold til Midjourney (tekst til billede generator) men meget light use fordi vi ikke har været helt tilfredse med resultatet"

P. "Midjourney, så skriver vi alt det, vi gerne vil have, og så kommer den med præcis det, Vi skal bruge . . . Jeg føler, at den ville erstatte Sådan noget som Shutterstock . . .
Den giver dig måske præcis det du søger efter, men den der kommer ikke noget kreativt indspark . . . . så kan det godt være det ikke er helt præcist det samme, som vi plejer at få. Men … det fanger det egentlig meget godt."

Q. "Jeg sidder ret meget i Figma og designer interface. Der er også begyndt at komme flere plugins. Men jeg oplever stadigvæk lige nu, at Der er rigtig mange ting, Der er fejl på. så det er mere Sådan en begrænsning eller den irritation,"

R. "Jeg har oplevet en masse barriere ved at sidde og teste nogle forskellige GenAI ting, men jeg tror det er så early på nogle af de der produktionsniveauer"

S. "Jeg tror altså Jeg tror at det er en positiv ting, for Jeg tror det fjerner meget af det …kedelige arbejde, og så tror jeg, at det kan optimere noget andet til at gå lidt hurtigere"

Key take aways:

1. Supported by quote: A, C, D
   Creative by nature.

2. Supported by quote: B.
   Practical experience and a degree shaped him as a designer.

3. Supported by quote: E, F, H.
   Work became a hobby.

4. Supported by quote: G.
   Design and development became a lifestyle.

5. Supported by quote: J, K.
   Being thorough throughout the work process.

6. Supported by quote: I, L.
   Analogue designer by default

7. Supported by quote: O, P.
   AI is quantity and not quality.

8. Supported by quote: Q, R.
   AI is not up to effective enough.

9. Supported by quote: S.
   Technology optimist.

Appendix B

The Designer and GenAI interview guide

Introducer ham for de 3 perspektiver og forklar hvordan han er rejst igennem perspektiverne for at til sidst at ende i consistency og hør om han er enig eller hvad hans mening er om det.

Designer:
Kan han se sig selv i tabellen og hvordan hans rejse har været?
Hvilke tanker har han om sin egen rejse?
Hvilken af dine evner værdsætter du mest? Håndværket? skitsering? den tekniske tankegang fra uddannelsen?
Du fordyber dig i dit arbejde som en del af din research proces. Kan man stadig fordybe sig i sit arbejde i dag?
Er det en luksus som måske forsvinder med tiden?

Arbejde:
Er Paul Rand autentisk og i hvilken kategori hører han til?
Hvordan har man den mest autentiske arbejds proces?
Hvordan oplever du at et design er autentisk udført eller mangler autencitet
Hører kreativitet og autencitet sammen? hvorfor, hvorfor ikke?

AI:
Hvordan ændrerGenAIautenciteten i arbejdet i dag?
Hvordan kan man sætte sit eget aftryk på sit arbejde i brugen afGenAIprogrammer?
Er det overhovedet nødvendigt?

Quotes from the Designer and GenAI interview

None translated quotes were extracted from the Designer and GenAI interview and have been edited for readability.

A. “Jeg tror bare at det er det der med at kanalisere det (nysgerrighed eller passion) ind til et eller andet og så fordi jeg så har nørdet det så meget, så tror jeg bare Det er gået Sådan op i en højere enhed”

B. “Hvis jeg lige skal holde et møde omkring et eller andet . . . så kan jeg bede den om at lave sådan en hurtig gennemgang af punkter som giver mening at tage med . . . og de her 2 (punkter) er måske også meget bedre”

C. “Jeg tror, atGenAIkommer til at have sådan en impact som ligesom da wordpress blev opfundet agtigt, så skulle alle folk selv lave hjemmesider. Og så havde de bare skabeloner. Altså du ved . . . så kan du bare købe en skabelon eller få lavet en skabelon eller selv lave det”

D. ”Så skrev jeg bare et prompt til ham . . . Coca cola christmas truck et eller andet blue lightning sådan at det passede til det og så noget med miljøet omkring det. Og ja der kom en masse fine . . . forslag fra den, men der havde jeg allerede det hele inde i hovedet”

E. ”Ideen var der, og Jeg kan sagtens udføre det uden, men den er nem til at formidle med, hvis Det er Sådan at den laver et nogenlunde resultat. Og så tror jeg bare over tid, så bliver det resultat bare bedre”

F. ”Så snakker jeg med min bror . . . at Det er sjovt at med alt det GenAI der kommer lige nu her, fordi man har jo masser af machining learning gennem tiden . . . og alt Det er der kommer nu her at det det gør Det er det egentlig erstatter de ting vi synes er sjovt”

G. ”Det erstatter alle de kreative opgaver altså du ved skrivearbejde og designarbejde og kunst og de der håndværksmæssige ting omkring det kreative”

H. ”Så siger han (bror/kollega). Og så har vi stadigvæk det lortearbejde. Altså du ved, at det er der jeg, så forsøger at lave det om . . . Det er ikke fordi menneskerne de skal være arbejdsløse, det er fordi de skal lave noget andet, der giver bedre mening”

Key take aways:

1. Supported by quote: A.
   Nerdy designer.

2. Supported by quote: E.
   The designer is better than AI.

3. Supported by quote: B.
   GenAI can make work tasks easier.

4. Supported by quote: C.
   Creative work can be bought instead of developed.

5. Supported by quote: G.
   GenAI used for creative.

6. Supported by quote: F, H.
   GenAI is used for the wrong work.

7. Supported by quote: D.
   A designer does not need GenAI.

Appendix C

The In-depth Interview guide.

Hvordan ændrer AI autenciteten i arbejdet i dag?
Hvordan kan man sætte sit eget aftryk på sit arbejde i brugen af AI programmer?
Er det overhovedet nødvendigt?
Er AI kreativt?
Hvad kræver det at de bliver kreative? at vi bruger dem kreativt eller at de trænes?
I brugen af generative modeller har vi ikke indsigt i hvor den får sin inspiration fra. Vi overgiver derfor en del af kontrollen med vores arbejde. Er det et problem?
Hvorfor arbejder en designer med et system som overtager kontrollen af det kreative arbejde?
Hvem er designeren?
Givet at arbejdet er lavet af en ikke-følende og ikke-tænkende maskine er det færdige produkt så egentlig designet?
Bliver designet mindre værd?
Kan man undgå at bruge AI?

Quotes from the In-depth interview

None translated quotes were extracted from the In-depth interview and have been edited for readability.

A. " Jeg tror det bliver færre og færre lige så stille af rigtig, rigtig dygtige musikere, fordi . . . det er ikke en levevej mere, så det er ikke en drøm fordi du ser ikke så mange der står på scenen og spiller et eller andet . . . fordi det meste er egentlig lavet enten i et studie eller på en computer"

B. "Ryger den kreative tankegang fra det? fordi det de gerne vil have Det er noget der lyder på en bestemt måde . . . og det er der sådan set en GenAI der godt kan hjælpe med at lave. Noget der lyder som . . . en Bob Dylan . . . som skriver gode tekster"

C. "Jeg tror altså som udgangspunkt så vil jeg egentlig bare gerne bruge GenAI til en masse ting, hvis det er sådan det kan hjælpe med noget, hvis det er sådan det kan gøre nogle ting bedre, eller hvis det kan optimere noget eller et eller andet er mega fedt"

D. "Jeg tror egentlig kombinationen af at bruge det til både at de der rugbrøds opgaver . . . og bruge det Sådan at vi kunne hvad kan man sige? Bare optimere det kreative arbejde, så hvis vi skal sidde og forklare nogle ting, hvordan noget kunne se ud eller hvad vi tænker et eller andet, hvis vi så bare kan skrive en prompt"

E. " Det er ikke et tab fordi Jeg har smidt det (ideen) ind i et værktøj fordi jeg ville teste om den kan give mig et eller andet output jeg kan bruge til noget, så jeg føler ikke, jeg sådan giver. Sådan afkast på den del."

F. "Det bliver mere Sådan open source agtigt … Det er altså det kræver ikke særlig meget. Du skal have et lydkort og det instrument og så har du bare et stykke software der kan gøre det meste".

Key take aways:

1. Supported by quote: A, B.
   Concerned about negative effect of GenAI.

2. Supported by quote: C.
   Wants efficiency and optimization.

3. Supported by quote: D.
   Use GenAI as an assistant or tool.

4. Supported by quote: E.
   Maintain control.

5. Supported by quote: F.
   GenAI can make creative work more accessible.

Appendix D

The Summary interview guide

Opsamlende interview til afslutning af metode afsnit.

Som en afsluttende del af interview serien vil jeg præsentere Daniel for analyse resultaterne fra vores samtaler. Det er min forventning at Daniel enten erklærer sig enig i disse udsagn eller åbner op for dybere reflektion af emnerne.

Autencitet
Autentisk arbejde opstår når processen møder den ægte hensigt.
Grundig research og forståelsen af designets funktionalitet giver dybde til produktet.

AI
Positivt:
Vi oplever at AI, på nuværende tidspunkt bliver brugt til at lave billeder, musik og andet kreativt materiale med.
På sigt kan det åbne de design (kreative) industrier op så de er mere tilgængelige. Eventuelt uden formel uddannelse, men på samme niveau som man kan lærer at kode. Der findes selvfølgelig allerede online kurser i grafisk design.
Bruges AI som et redskab så bibeholder skaberen sit autoritet over sin udvikling og proces samt det færdige arbejde.

Skeptisk:
AI bliver brugt forkert i dag, da man bruger den til at fremstille kreativt materiale og den adfærd kan have en negativ effekt på den kreative udvikling og tankegang.
Bruger man AI som et redskab og
Bruges AI som en idemager eller en samarbejdspartner så er man under større indflydelse fra modellen og mister derved dele af kontrollen over arbejdet.

Afsluttende spørgsmål:

Når jeg spørg dig i dag, hvad er autentisk design så?
Kan autentisk design laves med AI?
Er der nogle værdier som man skal være opmærksom på i arbejdet med AI?

Quotes from the summary interview

None translated quotes were extracted from the Summary interview and have been edited for readability.

A. “Nogle af de gamle udøvere af forskellige kunsthåndværk. Det der med, at de aldrig var færdige, De er aldrig opnået at blive the master selv. Det er som om at det er jo først noget der kommer, når man er død”

B. “Så kan det godt være at du kan finde en, du ved, musikproducer eller et andet, som egentlig bruger det til det som jeg vil kalde noget fornuftigt, fordi man bruger den som et værktøj til noget kreativt, så Det kan være, at i stedet for at han skal sidde med et midikeyboard og alle mulige forskellige lyde og mikse det, at han egentlig måske kan bede den om at prøve at komme med nogle forslag . . . Jeg tror at hvis det fungerer, som et værktøj fremfor at den skal bare erstatte alt muligt.”

C. “Det gør det nok mere tilgængeligt, ligesom at internettet gjorde ting mere tilgængelig, og computeren har gjort ting mere tilgængelige”

D. “Så er det mere et spørgsmål om det der med, at hvis man kan bruge det som et craft I stedet for at man bare spytter ting ud . . . til højre og venstre.”

E. “Det var nok der, hvor jeg ville prioritere . . . at få den til at tage over. Men på de der opgaver . . . som jeg ikke vil bruge min tid på alligevel, eller som jeg ville sige, var simple funktioner”

F. “Vil jeg bruge det som et værktøj i stedet for, altså til at strømline tingene eller til at gøre det lidt overskueligt for mig”

G. “Jeg havde et langt brief . . . hvor jeg bare kunne smide det hele ind (i ChatGPT) og så bede den om at du ved nærmest at læse op, hvad de vigtige punkter var . . . Sådan optimerer du din tid”

H. “Du kan helt sikkert komme til at læne dig for meget op ad den (AI modellen), og så kommer det til at styre processen”

I. “Jeg tror det er også, . . . hvor bevidst man er om det man sidder og laver. Altså . . . både ens håndværk, men også hvad man bruger den til, for jeg kunne godt finde på og få den til at komme med alle mulige forslag til alt muligt, bare for at se hvad den kunne, og så kunne det godt være, at min underbevidsthed ville tage 5% af det med videre i min proces, som i at jeg havde set noget inspiration eller andet sted . . . men i så fald så tror jeg heller ikke jeg vil sige at den har at den har styret processen for dig”

J. “Der er nogle ting som bare flytter sig . . . Det er jo også ligesom det vi snakker om fra reklametegnerne og til (så) nu kommer en computer, så er der ligesom flere der kunne være med og ting kunne måske gå hurtigere og smartere og hvis du skal lave en rettelse på det, så skal du ikke tegne det hele forfra eller sidder og viske en masse ud”

K. “Det kan egentlig godt give dig et færdigt resultat, men du bestemmer selv om du bruger det som . . . dit færdige output, eller om du vil ændre lidt på det, eller om du ændrer meget på det, eller om du tager det med som inspiration”

L. “Over tid kan det sagtens være, at der er noget af, der bare kan gå ind og nærmest erstatte håndværksdelen”

M. “Hvis folk de spørger ”hej, kan du hjælpe med at lave logo?” . . . men det er ikke sikkert at det var et logo du skal have . . . jeg skal lige forstå din hensigt med det. Jeg skal forstå din forretning”

N. “Det mere den får der er kvalitet des . . . mere dybdegående kvalitet kan den levere tilbage, men altså, som du siger, det er som om, at der går et eller andet tabt, men så er det et spørgsmål om det er vores egen personlige holdning, til om der er noget der går tabt, eller om det er egentlig bare er en moderne tid”

O. “På sigt tror jeg i princippet godt, at det kunne erstatte . . . fotoarbejde og nok også noget designarbejde og sådan nogle ting de kreative fag, men . . . hvor kreativ ville en fotograf være, hvis jeg beder ham om at tage præcis de billeder, som jeg har bestemt?”

P. “At uddelegere de opgaver, som er rugbrødsskiverne eller de mindst kreative opgaver . . . dem som er iscenesat. Og så kan det godt være at de er kreative for min side, fordi jeg har iscenesat billedet som jeg gerne vil have det.”

Key take ways:

1. Supported by quote: A.
   Keep evolving professionally.

2. Supported by quote: B, D, E, F, H, M, P.
   Use GenAI as a tool.

3. Supported by quote: C.
   New technology makes design more accessible.

4. Supported by quote: G.
   GenAI to optimise mundane tasks.

5. Supported by quote: I, K.
   GenAI can take control of the creative process.

6. Supported by quote: J, L, N, O.
   GenAI is inevitable.

7. Supported by quote: P.
   Optimize non-creative parts of the work.