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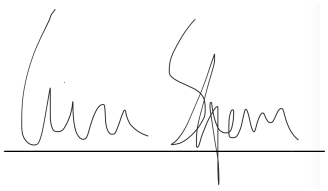
Best regards,



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Abstract

AI technology's rapid growth and integration across various sectors signal a transformative era in technological adoption, with AI proving increasingly valuable. This study aims to investigate the impact of disclosing and being transparent about the use of artificial intelligence in visual advertisements, and how this affects brand authenticity as a mediating factor to brand trust. As AI becomes increasingly integrated into marketing strategies, this study assesses whether transparent disclosure of AI use affects consumer perception and trust toward brands.

Employing a quantitative research approach, the study utilizes an experimental questionnaire to gather responses from a sample of Norwegian consumers. The findings reveal that failing to disclose AI usage in advertisements significantly reduces perceived brand authenticity as a mediating factor to brand trust. On the other hand, while transparent disclosure of AI does not increase brand trust, it mitigates the negative impacts of non-disclosure. These results underscore that while transparency may not directly enhance trust, it is essential for preventing the possible decay of brand authenticity and trust. This research gives input for marketing strategies by highlighting the need for ethical practices and transparency in AI applications in advertising, meeting consumer expectations for honesty. Additionally, this study provides insights for future research in the field of AI and marketing.

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1. Introduction

Artificial intelligence (AI) is the buzzword currently taking the world by storm. The widespread increasing availability of various AI technologies makes it particularly interesting to investigate its impact across different fields. AI is a growing field where the market size is expected to increase from 241.8 billion US dollars in 2023 to around 740 in 2030 allowing for a 17.3% compound annual growth rate (Thormundsson, 2023). Companies and individuals are working hard to determine the best ways to leverage this new innovative tool. Driven by promises and ideas, utilizing it right may lead to productivity, cost efficiency, and overall, a better business model. This raises the question as to whether this is too good to be true.

Several studies have found that companies are financially benefiting from their investments in AI. For instance, 92% of large enterprises have reported achieving returns on their investments from AI (NewVantage Partners, 2022). Moreover, a McKinsey & Company (2021) global survey on AI revealed an upward trend in the proportion of respondents indicating that at least 5% of their revenues are attributable to AI, increasing from 22% in previous surveys to 27%. This demonstrates AI's substantial value as a business investment. Thus, mastering AI utilization is crucial to efficiently maintaining a competitive advantage and avoiding being outpaced by industry rivals.

With its significant investment value, AI has also emerged as a leverageable trend across industries. AI is among the top trends in marketing for 2024, exemplified in various aspects such as automation and hyper-personalization, visual concepts, generating ideas, and analysis. (Patel, 2023; Kantar, 2023; Dentsu Creative, 2023; Wilson, 2023; Gartner, 2024; Kiely & Scott, 2023). A significant 67% of marketers express optimism about the potential of generative AI, indicating a likely increase in AI technology integration within future marketing (Kantar, 2023). An extensive analysis conducted by McKinsey (n.d.), which covered more than 400 AI use cases across 19 industries and 9 business functions, revealed that the greatest potential value of AI is predominantly found within the fields of marketing and sales (Chui et al., 2018). Moreover, there is anticipated to be a steady increase in the global market worth of AI in marketing. By 2028, this value

is forecasted to surpass 107.5 billion (Statista & The Insight Partners. 2021). Thus, demonstrating the efficient utilization of AI in marketing strategy yields substantial value, making it a relevant field of study.

Businesses have already begun utilizing strategies to implement AI in the creation of advertisements. Google has created an AI tool to assist businesses in enhancing their search campaigns through a chat-based experience (Thakur, 2024). Advertising agencies, such as WPP, are exploring potential cost-saving measures by utilizing AI to create campaigns from Adobe and Getty Images. This eliminates the need for on-location production, increasing the scale and efficiency of creating across campaign types. (Ziady, 2023). Where XXL has started doing something similar by utilizing AI to customize the background for the same advertisement to appeal to different Nordic countries (Høiby, 2024b). Simplifying the process of creating adverts also raises important discussions about how it should be used ethically.

In order to optimize the use of AI marketing (AIM), it becomes essential to investigate aspects and assess customer perceptions regarding the technology. Although AI presents numerous benefits, concerns about its appropriate usage and the need for potential regulations to prevent misuse have emerged. Firms, such as Sparebank1 Østlandet, Eiendomsmegler.no, and XXL have already used AI-generated images without disclosing it, while the gym chain SATS tried to start the discussion of new regulations of AIM disclosure, as a continuation of the Norwegian Marketing Act Section 2, Paragraph 2 (Kinapel, 2023; Jerijervi, R. D., 2023; Høiby, 2024a; Høiby, 2024b). Norwegians have reacted strongly about the firms not disclosing the use of AI in their advertisements, calling it misleading and even repellent (Kinapel, 2023; Høiby, 2024a). Misusing AI can also cause fake information to spread through deep learning to make deep fake images of fake events (Sample, 2020). This has for instance been observed during the current American presidential campaign. Instances of manipulated photos, convincingly resembling reality, have misled voters unable to discern between authentic and AI-generated images (Dorn, 2023). Hence, when used improperly, AI has the potential to deceive recipients, which can have unforeseen consequences.

Consequently, authorities and corporations are discussing implementing necessary regulatory actions. Managing director of Coright, Eirik Grønlie, underscores the need for transparent AI usage to ensure that audiences can easily discern content created by AI, thereby fostering trust and preserving the integrity of the sender (Rumbl AS, 2024). Norwegian marketers stress the importance of transparent and ethical use of AI in marketing. Some advocate for clearly labeling AI-generated advertisements, similar to the requirement for retouched images of people under the Norwegian Marketing Act, as not disclosing it violates ethical and moral standards (Brønseth, 2024). Schaake (2023) points out that AI is a relatively new technology to the public. There is limited widespread understanding of it, which makes it challenging for people to understand its usage and its impact on them, which calls for its transparent use. Partner at Deloitte, Tjeerd Wassenaar, underscores the importance of being transparent when using AI and that exploiting the technology can result in severe reputational damage, as well as loss of trust and loyal customers (Deloitte, 2019). Gino Sesto (2023) highlights that AI can disseminate misinformation and introduce bias in advertising, thus he asserts that transparency will be crucial for a brand building accountability and maintaining public trust.

The Consumer Authority in Norway has acknowledged the issue and stated that they are working on strategies to address the use of AI in advertising campaigns (Jerijervi, R. D., 2023; Fredø, T., 2024). Google will require verified advertisers to “prominently disclose” when a campaign ad “inauthentically depicts” people or events, in a bid to combat the spread of digitally manipulated images for political gain (Rogers & Kinders, 2023). Meta introduced a new policy prohibiting advertisers from using its generative AI software for political ads on Facebook and Instagram (Roush, 2023). Although there are no active international laws by authorities yet, the European Parliament (2024) passed the AI Act on the 13th of March 2024. The AI Act suggests that generative foundation models should adhere to heightened transparency standards. This includes disclosing AI-generated content. The law is expected to take effect in 2026 (European Parliament, 2023). While awaiting the integration of the AI Act and other regulatory frameworks, organizations may need to establish internal guidelines in the meantime. Given the current absence of comprehensive regulations governing AI use in advertising, it becomes relevant to investigate consumer perceptions of

brands that either disclose or withhold their use of AI in campaigns. This exploration is crucial for understanding whether AIM poses a risk or benefit to brand perception.

Although the idea is promising, Norway has seen firsthand how such an act can be hard to maneuver. Following the Norwegian Marketing Act Section 2, Paragraph 2 which was put into place on the 1st of July 2022 to prevent false depiction of bodies, discussions arose among photographers and influencers, both voicing their dismay. The regulators' limited understanding of photo editing significantly constrained photographers' creative processes and their ability to produce advertising materials (Kampanje, 2022). The issue lies in the practicality of regulatory frameworks; for them to be effective, they must be feasible to implement and accommodate varying contexts. Further, small adjustments to a photo required watermarking it, thus illustrating that everything in the photo could be edited. This may give the recipient a false sense of editing in the photo and reflect negatively on the brand, even though the editing was not of the person in the photo. This prompts a critical inquiry into the implications of incorporating AI technologies: how might watermarking impact brand perception when AI is disclosed in a visual advertisement?

People are split regarding personal perceptions of AI and its consequences on society. Most people find it unsettling that AI can pass as humans, and more than 75% of consumers express apprehension regarding misinformation generated by AI (Datatilsynet, 2024; Haan, 2023). This perception highlights AI's ability to deceive the public, indicating people's awareness of this capability. Jago (2019) conducted a study comparing human and algorithmic output, finding that people perceive algorithmic output as less authentic. This perception arises because the moral authenticity attributed to technological actors is not seen as equivalent to that of human beings. Additionally, it has been found that humans are hesitant to autonomous machines making moral decisions (Bigman & Gray, 2018). The reason for this was that machines could not fully think and feel. However, the majority of consumers still trust brands that employ AI technology, which implies that through responsible and transparent use of AI, businesses can uphold consumer confidence while leveraging AI's capabilities (Haan, 2023). Although just half of consumers place the same level of trust in companies employing AI

technology as they do in other businesses, people who are more familiar with AI tend to have a greater level of trust (McKendrick, 2022). Therefore, as the population becomes more familiar with and utilizes AI, it is reasonable to anticipate an increase in AI trust. This prompts further discussion regarding the significance of transparency regarding a brand's authenticity in utilizing AI. Thus, disclosing the use of AI in marketing may prove quite important when managing customer perception of the brand.

As AI is increasingly integrated into marketing, understanding the implications on consumer perceptions of brands becomes important. This research paper aims to explore consumers' perceptions when they become aware that a visual advertisement has been generated by AI rather than by humans. Additionally, the study will consider the impact of transparency on these perceptions, investigating whether being open about the implementation of AI influences consumer attitudes regarding brand authenticity and trust. Thus, the authors propose the following research question; *How does the transparent disclosure of the use of artificial intelligence in visual advertisement impact brand authenticity as a mediating factor to brand trust?*

2. Literature review

2.1 AI

AI is defined as the affordance of human intelligence to machines (Ma & Sun, 2020, pp. 482). This refers to machines' ability to perform tasks requiring human intelligence. AI is a relatively young field, with its roots tracing back to the aftermath of the Second World War, spanning a mere sixty years. While John Von Neumann and Alan Turing didn't originate the term AI, they emerged as the pioneering minds behind its foundational technology in the early 1950s. Their work marked an important transition from 19th-century decimal logic and machinery to the binary logic that underpins artificial intelligence today (Council of Europe, n.d.).

In his renowned 1950s article "Computing Machinery and Intelligence", Turing initiated the investigation into the potential intelligence of machines. He introduced the concept of an "imitation game", where a person must discern through teletype dialogue whether they are conversing with a human or a machine (Council of Europe, n.d.). Already back then, Turing (1950) proposed that an intelligent machine should possess the capability to deceive a human user. Other papers discuss this hypothesis, illustrating the possibility for intelligent machines to deceive humans when it comes to troubles distinguishing between AI and human interactions, being able to spread misinformation about various topics, and creating believable deepfake videos and images (Weizenbaum, 1966; Tarsney, 2024; Hagendorff, 2023; Samoilenko & Suvorova, 2023). The discussion of machines' ability to think like humans was continued by John McCarthy in 1955 when he organized a research project at Dartmouth College focused on creating machines that could exhibit human-like intelligence (McCarty et al., 1955). This conference is for many referred to as the birth of *the term* Artificial Intelligence (Stone, et al., 2016). The popularity of AI technology was on and off until its new boom in the 2010s, due to access to massive amounts of data and the high efficiency of computer graphics card processors to accelerate the calculation of learning algorithms (Council of Europe, n.d.). Today, AI has progressed to a point where it represents a practical reality, with machines designed to emulate human thought processes and cognitive abilities, challenging both human skills and perception of what is real or not (Nath, 2020).

2.1.1 Natural Language Processing

Natural Language Processing (NLP) is a subfield of AI dedicated to enabling interactions between computers and humans using natural language. Its objective is to enable machines to understand, interpret, and generate human language that is meaningful and contextually relevant. NLP relies on different techniques, such as machine learning, to understand and develop human-like language. Recent advances in NLP have led to the development of advanced Large Language Models (LLMs) (Liu, et al., 2023). There are two types of LLMs: proprietary- and open-source LLMs. *Corporations own proprietary LLMs* which can only be accessed by customers who acquire a license. Whereas *open sourc*e denotes that the LLM code and underlying architecture are accessible to the public, rendering them more accessible not only to the general public but also to marketing firms seeking efficient marketing solutions. There are various types of open-source LLMs for different purposes (IBM, 2023a).

The utilization of AI offers numerous distinctive advantages across various domains. AI possesses the capacity to acquire knowledge and improve task performance through learning algorithms, thereby becoming increasingly intelligent over time. As a result, this technology can be applied in a wide range of fields, effectively streamlining tasks previously exclusive to human involvement. Huang & Rust (2021) define three different types of AIM; mechanical, thinking, and feeling. Mechanical AI has been developed to automate mundane and repetitive tasks. Thinking AI, on the other hand, is specifically engineered to process vast amounts of unstructured data to generate original conclusions or make informed decisions. This type of AI excels at recognizing patterns and regularities within complex datasets, enabling it to uncover valuable insights that might otherwise go unnoticed. Feeling AI is specifically designed to facilitate two-way interactions between humans and machines, enabling seamless communication and understanding. Moreover, feeling AI is adept at analyzing and comprehending human emotions and feelings (Huang & Rust, 2021). All three types of AI - mechanical AI, thinking AI, and feeling AI - have the potential to individually and conjointly bring significant benefits to a brand's marketing efforts in different ways that have previously required persons with distinct educational backgrounds to execute.

2.1.2 Generative AI

The type of AI utilized in this paper is defined as generative AI, which leverages NLP to comprehend and analyze language patterns, structures, and semantics within the training data (Pathak, n.d.). Similarly, NLP techniques can utilize generative AI models to improve text generation tasks by providing more context-aware responses or enhancing the quality of the generated text. According to Gartner (n.d.), generative AI refers to a form of AI that possesses the capability to learn from pre-existing artifacts and generate new, realistic artifacts on a large scale. Thus, making it more efficient to generate content. The scope of generative AI extends to diverse domains, allowing it to produce a wide array of new original content, including images, videos, music, speech, text, software code, and more, introducing several ways for marketers to utilize this tool in content-creation (Gartner, n.d.). As a result, generative AI can develop original human-like content, which causes growing apprehension regarding humans' capacity to discern between AI-generated and human-made content (Hagendorff, 2023). Generative AI can be referred to as a black box, indicating that its outputs are not entirely transparent or its origin is not clear (Dwivedi et al., 2023; Robinson, 2020; Lee et al., 2024). This raises ethical questions about copyright and the acceptability of claiming AI-generated content as one's creation, due to its origin from these artifacts, and to what extent one can use this content. However, these newly generated artifacts retain the underlying characteristics of the training data but do not always replicate it, meaning it is only based on these artifacts and could be considered original content.

The LLM ChatGPT, text-to-image generator AdobeFirefly, Midjourney, and DALL-E are all examples of generative AI that are highly accessible to the public. As ChatGPT may be more suitable for tasks related to competitive analysis, content production, market research, and various marketing assignments, models such as AdobeFirefly are most suitable for creating images in response to prompts. OpenAI introduced Contrastive Language-Image Pre-training (CLIP), which was trained on an internet scale size dataset of 400 million image and text pairs, which aimed to acquire knowledge for a multimodal embedding space that integrates both text and image-understanding (Radford et al.,2021). This later laid the groundwork for DALL-E, which is capable of executing image operations, conducting style transfer, and generating innovative combinations of elements

(Liu & Chilton, 2021). AdobeFirfly is similar to DALL-E, although it gathers data from licensed content such as Adobe Stock, and public domain content where the copyright has expired, making it commercially safer compared to DALL-E (Adobe, n.d.; Rajkumar, 2024). Making it suitable for marketers to efficiently generate adverts in a short amount of time while also creating realistic images.

2.2 AIM

The academic literature on AIM can be categorized into four primary types (Huang & Rust, 2020); (1) Technical AI algorithms for addressing specific marketing challenges, as explored in studies such as Chung et al. (2016), and Dzyabura and Hauser (2019). (2) Investigation of customers' psychological responses to AI, as demonstrated in research such as Luo et al. (2019) and Mende et al. (2019). (3) Exploring the impact of AI on jobs and society, as examined in studies like Frey and Osborne (2017), Huang and Rust (2018). (4) Managerial and strategic considerations related to AI in marketing, as discussed in works such as Fountaine et al. (2019) and Huang and Rust (2020). This paper will focus on investigating consumers' psychological responses to AI, as the authors aim to understand how consumers perceive the transparency of AIM by a brand.

2.3 Transparency in advertisement

Researchers have developed several definitions of transparency. Parris et al. (2015) conducted a study where one of the aims was to define transparency. Transparency, as defined by Parris et al. (2015, pp. 233), refers to the degree to which stakeholders perceive an organization as offering learning opportunities about itself. In broader terms, transparency encompasses the values of openness and accountability (Parris et al., 2015; Yang & Battocchio, 2020; Grimmelikhuijsen & Meijer, 2014). These understandings of transparency will be utilized consistently throughout this paper as the guiding definition.

There are several requirements for disclosure for different purposes in marketing in Norway. For instance, influencers engaging in marketing activities on social platforms must ensure that their posts are clearly identified as promotional content if it is in cooperation with a brand. However, the regulations do not describe a specific method for such disclosures. It can be in the text or the picture (Forbrukertilsynet, 2024b). Further, it is required to mark advertisements that

involve retouched individuals that have been manipulated regarding body shape, body size, and/or skin. This has to be done with a symbol in the top left corner that takes up 7% of the ad (Forbrukertilsynet, 2024a).

As there is no current law for the disclosure of AI, there are several methods to consider. Regarding AI-generated content, it is possible to deploy different methods depending on the creative outlet. As of now, SynthID has made it possible for a digital watermark directly into the pixels of AI-generated images, making it imperceptible to the human eye and helping users assess whether the content was generated specifically by Imagen (Jansen, 2024). Further, it is possible to adopt a form of watermark, such as in the retouched person symbol from the Norwegian Marketing Act Section 2, Paragraph 2.

2.4 Transparency in AIM

Currently, literature on transparency in the realm of AIM remains limited and mostly captures the user's understanding of AI systems and GDPR, rather than the transparency of use in visual advertisement (Haresamudram et al., 2023; Thiebes et al., 2021; Jobin et al., 2019). However, it is still worth examining for the purpose of this study to understand its importance. Transparency has been emphasized as a critical ethical requirement for establishing trustworthy AI by scholars (Haresamudram et al., 2023). Trustworthy AI involves enhancing AI to maximize its benefits while minimizing or preventing its risks and dangers (Thiebes et al., 2021). Trustworthy AI rests on the premise that trust lays the foundation for societies, economies, and sustainable development (Jobin et al., 2019). Díaz-Rodríguez et al. (2023) underscore communication as important, ensuring that all dimensions of transparency are communicated to the audience in a way that is suited to their knowledge. Kumar et al. (2024) affirm that brands should openly disclose their use of AI, ensuring fairness in algorithm design, and establishing transparent accountability structures. Israfilzade (2023) stresses the importance of informing the end-user that they are interacting with AI and maintaining transparency. Without this, the end-user may experience deceit. Gupta et al. (2024) emphasizes that managers considering the adoption of generative AI face ethical considerations, with transparency being a vital aspect. They stress the importance of clearly indicating when AI systems are in use to prevent misleading customers and to uphold trust. Consequently, examining

transparency in visual advertising is essential for understanding ethical AI practices in marketing, how to foster trust in AI, and how to maintain strong customer-brand relationships.

Due to the importance of transparency in AIM, there is consensus among scholars that there is a need for industry standards and regulations. Tartaro et al. (2023) argue that industry-led and voluntary standards can offer flexibility and clarity for companies, helping them navigate and align with technological advancements in AI. Díaz-Rodríguez et al. (2023) underscores that regulation has historically built consensus on the benefits and limitations of rapidly integrated technologies, such as social networks, the internet, and mobile communications. They emphasize that AI should be no exception, as effective regulations can guide the technology's fast-paced evolution, which in turn maximizes benefits while at the same time addressing risks. Sands et al. (2024) propose that transparency should serve as a foundational principle for responsible advertising with the aid of generative AI. They base their approach on the premise that disclosing AI-generated content not only meets an ethical responsibility but also enhances trust, which in turn improves the relationship between brands and their consumers. To conclude on transparency in AIM, establishing regulatory frameworks and standards is important to uphold both ethical standards and to foster trust between consumers and brands.

2.5 Transparency on brand trust

Scholars have pointed out the importance of transparency for brands. Leitch (2017) underscores the importance of transparency in marketing, highlighting its role in establishing and maintaining trusted relationships between organizations and their stakeholders. She further points out that in the digital age, transparency is even more crucial, as information can be disseminated widely and quickly. A study by Karagür et al. (2022) reveals that disclosing an Instagram post as advertising negatively affects engagement, and the different disclosure types have distinct effects. Disclosure relates negatively to the influencer's perceived trustworthiness, thereby decreasing consumer engagement. A study by Cambier & Poncin (2020) illustrates that a brand’s transparency signal increases perceived brand integrity, which encompasses trustworthiness. The study also examines how brands with established good reputations are less vulnerable when their

transparency is challenged by third parties, whereas brands facing reputation issues may gain greater benefits from both marketing-controlled and non-marketing-controlled transparency signals. They also note that due to its positive effects, the transparency signal could serve as a mechanism to mitigate or overshadow previous, unrelated brand scandals. Kang & Hustvedt (2014) found that a company's transparency level plays a significant role in building trust and fostering a positive attitude toward the company. Transparency is also mentioned in an article from Medium as a source for firms to build consumer trust (Tabler, 2023). Trust can be built because transparency addresses consumers' concerns concerning privacy and ethical use. It has been proven that data transparency is a way for businesses to build trust with consumers (Palmaccio et al., 2021; Trabucchi et al., 2023; Kim & Kim, 2016). It is important to note that these studies are based on different scenarios and may not directly translate to an AI-setting. Therefore, it is imperative to explore this topic specifically within the context of AI-disclosure.

It is possible to look into the disclosure of retouched photos in ads as an example of why disclosure can be beneficial. Earlier research has provided substantial evidence linking the prevalence of unrealistic depictions of idealized physical beauty to individuals' satisfaction with their physical appearance (Kee & Farid 2011; Petrescu et al., 2019). This type of unrealistic beauty is also possible to create with generative AI, which opened the discussion that AI-generated pictures can create the same effect as retouched photos. Studies have also found a possibility that younger people might start an obsession with physical attractiveness and compare themselves with the models in the ads (Petrescu et al., 2019). Advertisements are used to persuade consumers and improve attitudes. With new software solutions and programs, marketers have enhanced and altered photos. Editing photos raises ethical concerns (Herbst et al., 2013; Watson & DeJong 2011; Petrescu et al., 2019). Because the use of digitally altered images, despite being a common practice, can still be seen as deceptive, leading to a potential erosion of consumers' trust. This might argue that AI-generated pictures in advertisements have the same effect.

Furthermore, research has found that consumers appreciate advertising transparency when influencers promote a brand (Karagür et al., 2022). Where the

brand and the influencer experience greater trustworthiness and intention to like. Although the research emphasized the negative effect of an influencer post being an advertisement, transparency still had a positive effect. Additionally, Karagür et al. (2022) found that the type of disclosure that was used by the influencer affected consumers. Being more transparent in how the post was disclosed as an advertisement leads to better consumer perception of the advertising. Hence, this positive effect of influencers disclosing advertisements can argue for a positive effect on transparency when utilizing AI in advertisements. In line with this Petrescu et al. (2019) found in their study, that ads that disclosed their use of digital alterations performed better in regard to manufacturer trust, and influencing consumer intentions to use the product, as compared to advertisements that did not incorporate any such notice. Where the disclaimer acts as an indicator of ethical behavior and transparency. Given the commonness of digitally enhanced images in marketing, it's plausible that consumers anticipate advertisements to employ digital alterations. Thus, a disclaimer stating so merely aligns with consumer expectations. The transparency offered by acknowledging the utilization of digital alterations can be perceived as an admission of guilt that is subsequently partially absolved (Petrescu et al., 2019). The increasing normalization of AI-generated photos could likely extend similar effects, where the act of disclosure might also positively influence consumer perception and behavior.

2.6 Transparency and disclosure on brand authenticity

Brun, et al. (2012) have found that transparency is part of what makes consumers understand a brand as authentic. The study found that clear appearance and unambiguous communication strategies contribute to a brand being authentic for consumers. Busser and Shulga (2018) conducted a study on transparency and authenticity in consumer-generated advertising, and their findings emphasize the significance of adopting transparent communication to achieve perceived brand authenticity. Thus, transparency is found to be a tool for marketers to enhance their brand's authenticity through the utilization of transparent brand communication. Brand clarity, which reduces signal ambiguity in marketing and communication strategies, positively influences authenticity (Fritz et al., 2017). Where brand clarity serves as a method of promoting transparency. Yang & Battocchio (2020) affirm that brands are perceived as more authentic when they

disclose additional information in marketing activities. To be recognized for integrity, which is crucial to a brand's perceived authenticity, marketing activities must be conducted with honesty and transparency in interactions with consumers (Murphy, 1999). These findings make it interesting to study whether the impact of transparency on authenticity is generalizable in an AIM setting, considering some consumers' hesitancy toward the technology (Bigman & Gray, 2018). Based on the literature, the authors formulated the following hypothesis:

H_1: *The non-disclosure of the utilization of AI in visual advertisement has a negative significant effect on brand authenticity.*
H_2: *The non-disclosure of the utilization of AI in a visual advertisement has a negative significant effect on reliability.*
H_3: *The non-disclosure of the utilization of AI in a visual advertisement has a negative significant effect on continuity.*
H_4: *The non-disclosure of the utilization of AI in a visual advertisement has a negative significant effect on originality.*
H_5: *The non-disclosure of the utilization of AI in a visual advertisement has a negative significant effect on naturalness.*

2.7 Brand authenticity

Brand authenticity is considered one of the foundations of modern marketing, as a brand's marketing communications significantly influence consumers' perceptions of the brand's authenticity (Brown et al., 2003; Grazian, 2003). It can be viewed as a subjective evaluation by consumers, influenced by their interests, knowledge, interpretation, and personal tastes (Grazian, 2003; Leigh et al., 2006). Delving into the term, scholars have formulated multiple definitions that include various influencing factors. Morhart et al. (2015) developed a comprehensive framework for assessing consumer perceptions of brand authenticity, comprising four dimensions: credibility, integrity, symbolism, and continuity, embodied in a 15-item scale that evaluates perceived brand authenticity across these dimensions. In parallel, Schallehn et al. (2014) proposed a model with three dimensions to gauge a brand’s authenticity; consistency, continuity, and individuality. Additionally, a study by Napoli et al. (2014) revealed that brand authenticity could be dissected into three interconnected components; quality commitment, sincerity, and heritage.

This study will utilize Bruhn et al.'s (2012) approach to measure brand authenticity, due to its inclusiveness and alignment with the earlier described operationalizations. The approach consists of four dimensions to measure the strength of consumer-perceived authenticity; Continuity, originality, reliability, and naturalness. Continuity encompasses stability, endurance, and consistency. Originality is associated with particularity, individuality, and innovativeness. Reliability involves trustfulness, credibility, and keeping promises. Naturalness is defined by genuineness, realness, and non-artificiality (Bruhn et al., 2012). The authors have found these dimensions adequate to capture the main characteristics of brand authenticity when tracking changes in brand perception during any type of marketing activity. Incorporating AI disclosure into marketing campaigns can alter consumer perceptions of a brand, potentially resulting in diminished evaluations across the four dimensions.

2.8 Brand Trust

Trust has been found to be a complex term to define and is often recognized as a multidimensional concept (Hobbs & Goddard, 2015; Mayer et al., 1995). Mayer et al. (1995) found that three characteristics of trustees often appear in the literature regarding trust: ability, benevolence, and integrity. Ability is the set of skills, competence, and characteristics to influence. Benevolence is about wanting to do good, and integrity is about adhering to a set of principles that the other party finds acceptable. A simplified way to define trust is the general expectancy that one can depend on the word of another (Rotter, 1967). Building on this trustworthiness can be demonstrated when an individual/company follows through on their commitments. Thus, a person/company can only be considered trustworthy within the context of a statement affirming their possession of the intention, capability, and determination to regulate their actions in a defined manner. If their actions align with the ideal behavioral standard, it is possible that the company could be regarded as trustworthy (O'Hara, 2012).

Thus, when a company utilizes AIM without disclosing it, this might break with the ideal behavioral standard of transparency and negatively affect brand trust. Delgado-Ballester (2004) conceptualizes brand trust with two distinct dimensions; brand reliability and brand intentions. These dimensions represent varied

viewpoints for making subjective probability assessments regarding a brand's trustworthiness and will be used in this study.

2.8.1 Brand reliability

Brand reliability is based on the degree to which consumers trust that the brand delivers on its promised value proposition, as the fulfillment of the brand's promise to the market instills confidence in consumers regarding future satisfaction (Delgado-Ballester, 2004). As a result, whether a consumer views a brand positively or negatively due to its reliability can influence purchase decisions in either a favorable or unfavorable manner. A brand may be deemed unreliable if consumers perceive it as lacking brand authenticity in not disclosing its use of AI technology, ultimately negatively affecting brand trust. However, a brand's reliability may not be affected by this. Brand reliability serves as the starting point in defining brand trust, with further factors contributing to its establishment and maintenance (Delgado-Ballester, 2004).

2.8.2 Brand intentions

The credibility of a brand's intentions is determined by the extent to which consumers perceive the brand prioritizing their interests over its own when unforeseen issues arise during product consumption. These deeply held convictions are enacted now with a sense of certainty, anticipating that upcoming exchanges will validate their accuracy (Delgado-Ballester, 2004). Thus, this revolves around the belief that the brand will not exploit the vulnerability of the consumer. When a consumer experiences that the brand takes advantage of their vulnerability, for example with the undisclosed use of AI in marketing, this may negatively affect the consumer's perception of brand intentions ultimately weakening brand trust. However, this depends on whether this non-disclosure will be perceived as taking advantage of a consumer's vulnerability. Either way, this will give the authors a pinpoint on the importance of disclosure or non-disclosure of the use of AI may positively or negatively affect brand trust in conjunction with brand reliability. Thus, the authors formulated the following hypothesis:

H_6: *The non-disclosure of the utilization of AI in a visual advertisement has a negative significant effect on brand trust.*
H_7: *The non-disclosure of the utilization of AI in a visual advertisement has a negative significant effect on brand reliability.*
H_8: *The non-disclosure of the utilization of AI in a visual advertisement has a negative significant effect on brand intentions*

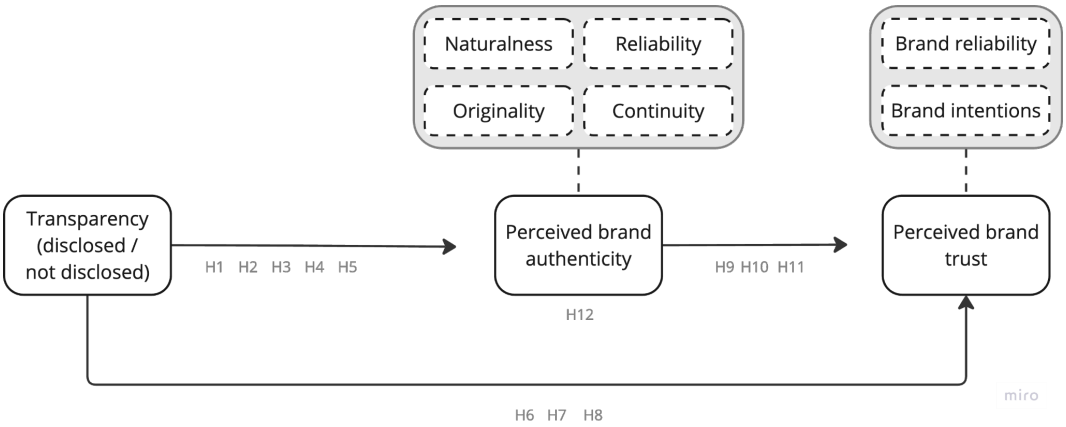
2.9 The mediating effect of authenticity on brand trust

Research has found that brand authenticity has a direct impact on brand trust (Portal et al., 2019; Schallehn et al. 2014). The studies found that consumers perceived the trustworthy brand as committed to their values and believed they delivered on their promises, consequently creating meaningful relationships with their customers. Hernandez-Fernandez & Lewis (2019) also found that brand authenticity exhibited a noteworthy influence on brand trust. Among the five relationship variables examined, the connection between brand individuality and brand authenticity proved to be the most significant. Coary (2013) illustrated that respondents who held high perceptions of authenticity reported greater perceptions of brand trust compared to those with lower perceptions of authenticity. Illustrating the importance of a brand's authenticity when building brand trust. Thus, when a company is perceived as authentic, its brand trust is proven to be stronger. Therefore, could incorporating an AI watermark in visual advertisements be a tangible way for brands to demonstrate their commitment to transparency, potentially enhancing the perception of the brand's authenticity, and subsequently increasing brand trust? Based on the literature, these hypotheses were derived:

H_9: An increase in brand authenticity has a positive significant effect on brand trust.
H_{10}: An increase in brand authenticity has a positive significant effect on brand intentions.
H_{11}: An increase in brand authenticity has a positive significant effect on brand reliability
H_{12}: The relationship between the disclosure of the utilization of AI in a visual advertisement and trust is mediated by authenticity.

3. Conceptual framework

A set of hypotheses has been derived through an extensive review of the existing literature on transparency, brand authenticity, and brand trust. These hypotheses serve as the foundation for the research question posed in this paper. These hypotheses can be organized and visually represented within a conceptual model to facilitate a clear understanding of the subject under investigation, as presented in Model 1.



Model 1: Conceptual model

The framework is based on the independent variable (IV) whether disclosing the use of AI or not in a campaign has a direct effect on the dependent variable (DV) perceived brand trust, consisting of the variable's reliability and intentions. Moreover, the model introduces perceived brand authenticity as a mediating variable. It suggests that the impact of transparency on perceived brand trust is mediated by the brand's perceived authenticity. This perceived authenticity is further dissected into four key dimensions: naturalness, originality, reliability, and continuity. Each dimension is hypothesized to contribute to the overall authenticity of the brand, which in turn affects the level of trust consumers place in the brand.

4. Methodology

The purpose of this paper is to research the disclosure of utilizing AI in visual advertisement and how this influences consumer perception of brand authenticity.. Thus, the following research question was developed: "*How does the transparent disclosure of the use of artificial intelligence in visual advertisement impact brand authenticity as a mediating factor to brand trust?*"

4.1 Research design

The study tests specific hypotheses, hence conducting a conclusive research design with quantitative data (Malhotra, 2019). Additionally, the research is going to determine a cause-and-effect relationship where the authors manipulate one IV and look at the effect it has on a DV in an experimental survey. Thus, the authors can categorize it as causal research. However, because the study collects data through a survey, descriptive research is also utilized to find evidence for the causal relationship (Malhotra, 2019). The visual advertisement condition will be randomly selected at the start of the survey. Then the test objects will be asked different questions related to the condition they were exposed to.

The authors have chosen to make a visual advertisement for Vipps, a Norwegian company that offers payment and ID solutions. After careful consideration, the authors have selected Vipps as the brand for the study due to its widespread usage among consumers in Norway. Where they have listed 4.1 million registered users on their web page (Vipps, 2021). Hence, a brand most consumers are familiar with and use. This is to avoid biases where the test subjects would be affected by whether they like other brands better or not when answering. Additionally, Vipps has been ranked as the strongest brand in terms of overall brand image in Norway for 2023 according to the YouGov BrandIndex, keeping its position from the year before. The index score measures overall brand health, determined by averaging impression, quality, value, satisfaction, recommendation, and reputation (YouGov, 2024). Thus, amplifying that Vipps is a brand most consumers have a positive perception of. The authors found that choosing Vipps as the brand for our survey helps minimize potential biases related to personal preferences. The widespread usage and positive consumer perception of Vipps make it a reliable and relevant choice for our study. By selecting a brand that is widely recognized

and utilized, the authors ensure that respondents have a high likelihood of being familiar with the brand and its services. This familiarity allows participants to provide informed responses based on their actual experiences and perceptions of the brand, rather than relying on external biases or preferences for other brands.

4.2 Sample size

For the study, the authors have opted to gather data from the population of Norwegian citizens aged 17 and above. The sample size consists of 342 individuals, thus approximately 100 test objects in each of the three conditions, which is deemed adequate for representing the wider population. This is based on time and money constraints. By selecting participants from this demographic, the authors aim to obtain insights specific to Norwegian consumers and their perceptions of brands utilizing AI in their campaigns.

To gather respondents for the survey, the authors will employ internet sampling, specifically utilizing the online intercept sampling method mentioned by Malhotra (2019), which concerns intercepting visitors to the web with an opportunity to participate in the survey with no incentives being offered, which also can be referred to as a convenience sample (Malhotra, 2019). The authors distributed the questionnaire via their personal and professional social networks, including Facebook, LinkedIn, Instagram, and Snapchat. Additionally, QR codes were used to share the survey throughout the BI Norwegian Business School campus in Oslo and the University of Oslo.

4.3 Validity

To be able to draw valid conclusions about the effects of the IVs on the study group, and make valid generalizations about the larger population, one needs to ensure internal and external validity (Malhotra, 2019). To ensure internal validity, the authors need to ensure that the (non)disclosure of AI in visual advertisement causes the effects on perceived brand trust, and not by variables other than the treatment condition. To do so, the experiment will be conducted in an artificial environment, as a fake advertisement, on a randomized sample in the short time span of 3 weeks, in the form of a survey, to control for extraneous variables. This avoids external events occurring at the same time as the experiment, changes to the test units that can occur over time, and a greater loss of test units in the

process (Malhotra, 2019). Further, to ensure external validity, the cause-and-effect relationship of the experiment should be generalizable beyond the experimental situation. However, experiments in artificial environments may limit the generalizability, thus reducing external validity. But then again, an experiment lets the authors monitor the environments to a greater extent, accounting for external variables.

4.4 Experimental questionnaire

4.4.1 Conditions

Respondents are randomly assigned to one of three conditions, each involving the same introductory vignette and advertisement from Vipps differentiated by a watermark and a vignette (Illustration 1; Illustration 2). A vignette is a short, descriptive scenario presented to survey respondents to elicit their reactions, opinions, or decisions to understand attitudes, beliefs, and behaviors in a controlled manner (Atzmüller et al., 2017). Thus, the conditions aid the authors in measuring respondents' reactions to the disclosure/non-disclosure of the use of AI in advertisement and their differences in attitudes toward Vipps' authenticity and trustworthiness. The respondents can be exposed to one of three conditions: the disclosed-group are shown an advert with a watermark telling them that the advertisement is made from AI; the non-disclosed-group is shown the AI-generated advertisement without the watermark, but followed up with a vignette telling them it is AI-generated and that they were not made aware by the brand; lastly the control-group is exposed to the AI-generated advertisement without the watermark and followed up with a vignette saying that they have seen an advert by Vipps.

A manipulation check was incorporated to ensure that respondents in the disclosed group were aware of the stimuli they were exposed to. The results revealed that 56.4% of the respondents were aware of the manipulation, while 43.6% were not (Appendix 23). The manipulation check indicated that a slight majority of the disclosed-group recognized the stimuli, however, a substantial portion of the respondents were unaware. The authors recognize that there may be room for improvement in the presentation of the stimuli. All respondents were included as

they might have subconsciously perceived the stimuli, even if they cannot clearly remember due to self-reporting bias (Malhotra, 2019).

Illustration 1: Introduction-vignette

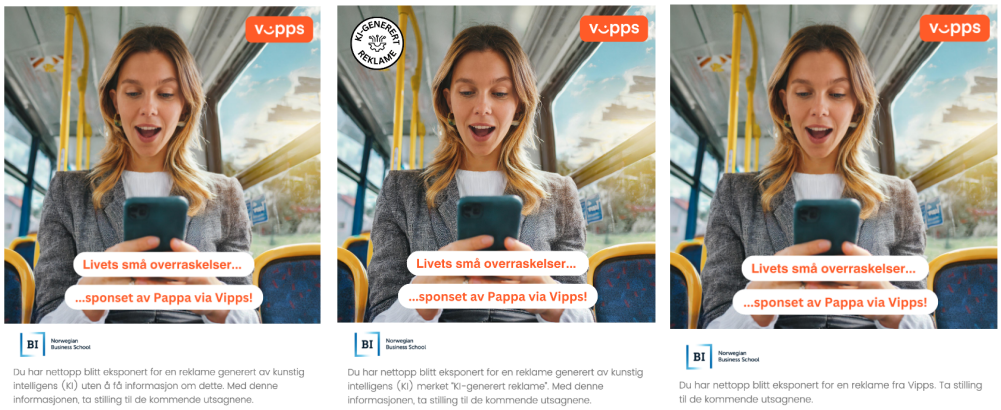


Illustration 2: the three conditions resp.: disclosed-group, non-disclosed-group, and control-group

4.4.2 Operationalization

A structured-direct survey is conducted to obtain relevant information to our research questions and hypotheses. Standardized parameters ensure a structured data collection process, while an introduction of the utilization of AI in the visual advertisement in the introduction of the survey illustrates a direct approach. Fixed-alternative questions make it simple to administer, and data is reliable due to limited alternatives, making coding, analysis, and interpretation of the data simple to decode (Malhotra 2019). The questionnaire will consist of a mixture of multiple-choice questions and scales.

The authors will utilize fixed-alternative questions to measure authenticity in the form of a Likert-scale, hence an itemized rating scale (Malhotra, 2019). A Likert-scale is ordinal data that allows respondents to indicate their level of agreement or disagreement with a series of statements related to their perceptions of Vipps'

authenticity after (non)disclosure of utilizing AI in their visual advertisement. Participants will be presented with a set of statements and asked to rate their agreement or disagreement on a 5-point Likert-scale, ranging from "strongly disagree" to "strongly agree". The exception will be for some demographic variables, in which the authors will utilize nominal variables, such as gender, and employment status.

The questionnaire relies a great deal on the studies from Bruhn et al. (2012) which measure a brand's authenticity in terms of reliability, continuity, originality, and naturalness with a Cronbach's alpha of respectively .96, .90, .90, and .95. It further relies on the study of Delgado-Ballester (2004) that measures brand trust based on brand reliability and brand intentions. Presenting an overlap in the dimension of reliability within both constructs. This overlap raises a relevant methodological consideration - the potential inflation of correlation between brand authenticity and brand trust due to shared facets of reliability.

Brand authenticity's reliability is about a brand's genuine presentation and consistency of brand essence over time, whereas reliability in brand trust focuses more on the brand's ability to meet consumer expectations and keep its promises (Bruhn et al., 2012; Delgado-Ballester, 2004). Additionally, we find that all of the questions are asking about different things. Thus, diminishing the potential of inflation of correlation. Additionally, there will be a multicollinearity test to ensure there is no inflation of correlation.

4.4.3 Pre-test

Before executing the questionnaire, a pretest was conducted to identify and eliminate potential issues. The pretest was conducted on a smaller sample of 10 Norwegian adults, representing the same population as the main experiment. Although the questionnaire will be distributed through social media, personal interviews with 5 respondents were also conducted to gain deeper insights into their reactions and attitudes by observing them think out loud while responding to the questions (Malhotra, 2019). Consequently, the authors adjusted based on the feedback resulting in the final version of the questionnaire (Appendix 26). The respondents generally agreed that the survey was too lengthy and that some

questions required rephrasing. Consequently, the authors removed questions that were highly similar within variables such as reliability within both authenticity and trust and rephrased questions regarding age and income to make them more understandable.

4.4.4 Prompt Engineering

The creation of input inquiries, instructions, or prompts to generate desired outcomes from language models or other AI-systems is referred to as *prompt engineering* (Liu & Chilton, 2021). Prompt engineering plays a role in shaping model output, guaranteeing the AI responds with meaning and coherence (Wang et al., 2023). Thus, effective prompting techniques ensure that AI models generate useful and valuable output. Choosing topics that can complement the selected style in terms of abstractness and using optimization lengths that are between 100 and 500 iterations is sufficient (Liu & Chilton, 2021). The authors decided to use the zero-shot prompting technique, where the AI was not provided with examples before the image generation (IBM, 2023b). To yield the best visual output, the authors employ the Parallel Art-framework introduced by Guo et al. (2023; Appendix 25). ChatGPT was utilized ahead of the generative model as the art knowledge model to produce a text-based painting prompt according to the authors' specific requirements. Thus, the following prompt was developed: "A young woman sitting on the bus with her phone in her hand. She is looking at the phone with a startled expression on her face." The prompt was tested on a variety of different text-to-image generative AI tools, but Adobe Firefly generated the most realistic result (Appendix 27).

4.4.5 Back translation

Because the research targets the Norwegian adult population, survey translation is necessary to translate from the source language (in this case English) into the target language (Norwegian). To achieve this, the authors apply a method called *back translation*, which ensures that the translations into Norwegian are asking the same questions as the original questionnaire. This is within the authors' budget and time frame.

A translator translates the questionnaire from the source language to the target language. Subsequently, another translator translates the questionnaire back from the target language to the source language to ensure that the wording stays true to its original meaning. The authors then assess how closely the back translation aligns with the original questionnaire in the source language. By comparing the two, the authors can conclude potential errors in the target language translation that may need correction. While this method only identifies certain translation errors and does not identify how translators should fix problems, back translations prove effective in spotting mistranslations while simultaneously being efficient in terms of time and resources (Salazar, 2022). To implement this approach, the authors have outsourced the task to an acquaintance with both a master's in language and linguistics and experience in translating for different firms, and with knowledge of both text cultures to ensure that correct wording of the questions will be achieved.

4.5 Legal and ethical concerns

The study adhered to Norwegian and BI Norwegian Business School's regulations for data collection and storage, meaning no IP addresses or personal data that can be used to identify and track respondents were not collected. The participation in the experiment was completely anonymous, which the respondents were informed of before participating in the survey (Appendix 26). The authors ensured that respondents were adequately informed before participating and could give informed consent (Bell. et al., 2022). Additionally, respondents were informed that Vipps was only used as an example and that the ad they were exposed to did not have affiliation with the brand. Lastly, all groups were informed at the end of the survey that they had been exposed to an ad created by AI (Appendix 26).

5. Data analysis and results

In this study, all data analyses were executed utilizing IBM SPSS Statistics software, complemented by the PROCESS macro plugin developed by Andrew F. Hayes. Firstly, the questionnaire was checked for incomplete answers, inadequate response patterns, little variance in response, and answers from people not in the defined population (Malhotra, 2019). Further, additional variables were consolidated to ensure the comprehensive inclusion of essential components

within our data analysis framework. A categorical dummy variable was established to represent the experimental condition assigned to each participant and two individual dummy variables, with one reference group. Age was made into intervals.

When analyzing the data to address the study's hypothesis, the authors utilized regression analysis. Regression analysis is the procedure to look into the relationship between a DV and one or more IVs (Malhotra, 2019). Hence, finding out if there is a relationship between IV and DV. Additionally, with this statistical method, it is possible to look into the strength of the relationship which is important for the study. Furthermore, the authors will conduct an ANOVA test, to find significant differences in the mean positive responses across the different demographic variables. Lastly, a Process macro test will be conducted to check for mediation and determine whether there are direct or indirect effects of the IV on the DV.

5.1 Data screening

Data screening entails removing any abnormal, inaccurately entered, or otherwise unconventional results that could skew the analysis outcomes. Initially, the authors had 507 respondents. After discarding 159 incomplete surveys, identifying 2 outliers, and 4 inconsistent responses the authors were left with 342 respondents. Despite encountering 165 insufficient answers, the number of respondents retained in each condition was deemed satisfactory for further analysis. It is a representative population sample with over 100 respondents in each condition.

5.2 Descriptive analysis

The sample consists of 342 respondents, with a nearly equal distribution of men and women from various regions across Norway (Appendix 7). However, the authors observed that 86% of the sample originates from Østlandet, which is disproportionately higher than its 49% representation in the general population (SSB, 2024; Appendix 4). Meanwhile, Vestlandet is notably underrepresented. This disparity indicates that our sample lacks full representativeness, potentially introducing biases into our findings.

The majority of respondents have completed higher education, with 64% holding at least a bachelor's degree, compared to 36.9% of the general population. This illustrated that the sample is slightly more educated than the overall population. However, younger generations tend to have higher levels of education. Therefore, it makes sense that many respondents have attained higher education, given the number of young participants (SSB, 2023). Additionally, the sample primarily consists of individuals in stable employment, with 54% working full-time and 30% being students engaged in part-time work (Appendix 5). The income distribution reveals that the largest group, comprising 31% of respondents, earns between 0 and 299,999 NOK annually. The authors suggest that this distribution correlates with the high number of students in the sample. Notably, the next significant segments include 18% of respondents each in the 300,000 to 499,999 NOK and 500,000 to 699,999 NOK brackets (Appendix 3). Smaller percentages are observed in higher income ranges, indicating a concentration of lower to middle-income levels within the sample. Nevertheless, despite the few limitations, the authors deem the sample suitable for further analysis, given the challenges associated with accessing and gathering data from other regions and age groups.

Table 1 displays the outcomes of the ANOVA test, assessing potential discrepancies among the three participant groups concerning sociodemographic variables. Overall, the ANOVA tests conducted yielded consistent results. Across all tests, the p-values were not statistically significant at the .050 significance level. Therefore, we retain the null hypothesis for each variable, indicating insufficient evidence to suggest significant differences in sociodemographic variables among the participant groups. In other words, the distributions of age, gender, personal income, and education level appear to be similar across the different conditions, thus they are deemed comparable for further analysis.

Variable	Sum of Squares (Between Groups)	Sum of Squares (Within Groups)	F-value	Sig. (p-value)
Region of Residence	5.717	579.677	1.672	0.189
Gender	0.004	84.923	0.008	0.992
Age	553.162	86,262.265	1.087	0.338
Personal Annual Income Before Tax	16.031	994.756	2.731	0.067
Current Employment Status	0.447	612.094	0.124	0.884
Highest Completed Education Level	0.548	217.607	0.427	0.653

Table 1: ANOVA-analysis assessing discrepancies among sociodemographic variables

5.3 Control variables

Extraneous variables provide different potential explanations for the results observed in an experiment. They can influence the findings and suggest other reasons for the observed effects, apart from the intentionally studied variables (Malhotra, 2020). The authors conducted multiple regression analyses on the variable's authenticity and trust to measure collineari. Collinearity refers to the situation where two or more predictor variables in a regression model exhibit strong correlations with each other (Malhotra, 2020).

Observing the control variables' effect on authenticity in Appendix 10, the Variance Inflation Factor (VIF) does not indicate multicollinearity on any of the variables, as the VIF is less than 10 and the tolerance is about .1. Some of the variables have a significant p-value, meaning they independently have a significant relationship with the DV authenticity. Additionally, looking at the table for the control variables' effect on trust in Appendix 11 yields the same results. The VIF and tolerance values do not indicate multicollinearity, confirming the robustness of the data analysis. Consequently, the variables do not exhibit collinearity, therefore they do not influence the findings.

Past experience with AI and frequency of use of AI were used in linear regressions to test the assumption that these variables would potentially affect a participant's perception of the brand's authenticity and trust. This assumption was primarily investigated to determine whether authenticity and trust increase when initial hypotheses fail to provide valuable insights, potentially revealing a challenge to the study. The following regression equations were formed:

Brand authenticity = 3.716 + 0.121 × Experience with AI − 0.243 × Non-disclosed + 0.016 × Disclosed + ϵ
Brand trust = 3.614 + 0.134 × Experience with AI - 0.216 × Non-disclosed + 0.075 × Disclosed + ε

The regression models, adjusted to control for disclosure and experience with AI, provide insights into the determinants of brand authenticity and brand trust. For brand authenticity, after accounting for disclosure and experience with AI (adjusted R square: .042, $p < .001$), there remains a statistically significant positive relationship with experience in AI ($\beta = .164$, $p = .002$). This suggests that individuals more familiar with AI tend to perceive brands as more authentic, independent of their disclosure behaviors. Similarly, the regression model for brand trust, controlling for disclosure and experience with AI (adjusted R square: .056, $p < .001$), reveals a significant positive association with experience in AI ($\beta = .190$, $p < .001$). This indicates that individuals with greater exposure to AI technologies tend to place higher trust in brands, even when considering how transparent these brands are about their practices. However, the adjusted R-squared values for both authenticity (.042) and trust (.056) suggest that while disclosure and experience with AI are significant control variables, they alone provide only modest explanatory power regarding perceptions of brand authenticity and trust (Appendix 10; Appendix 11).

5.4 Hypothesis testing

The conceptual framework consists of two main factors; *authenticity* and *trust*. Contrary to the authors' expectations, the results from the exploratory factor analysis did not confirm the hypothesized groupings of these variables into their expected factors. The principal component analysis revealed that the factor loadings did not align with the theoretical constructs, suggesting an alternative factor structure with three recommended factors (Appendix 9).

Several factors might explain the discrepancies observed. The constructs of authenticity and trust could be more multidimensional than previously thought, potentially causing variables to share variance with components outside their expected domains. The characteristics of the sample might have affected the factor analysis results. Respondents' varied perceptions or prior experiences may

have skewed the empirical representation of the constructs (Mooi, E., & Sarstedt, M. 2011).

Potential measurement inaccuracies might have arisen from how survey items were operationalized, possibly leading to ambiguous or misleading phrasings and unintended factor loadings. The translation of the survey questions from English to Norwegian could have influenced the results, potentially affecting the clarity and interpretation of the items (Mooi, E., & Sarstedt, M. 2011).

An assessment of internal consistency reliability using Cronbach's alpha coefficient reveals strong consistency among variables that measure brand authenticity, with Cronbach's alpha coefficients indicating robust reliability: Continuity ($\alpha = .860$), Originality ($\alpha = .910$), Reliability ($\alpha = .847$), and Naturalness ($\alpha = .854$). These findings confirm the scale's effectiveness in capturing diverse aspects of brand authenticity. When evaluating brand trust, Cronbach's alpha demonstrates a high level of consistency among the variables measuring this construct as well. The Cronbach's alpha coefficient shows robust reliability ($\alpha = .913$) for the combined set of variables: Expectations ($\alpha = .903$), Security ($\alpha = .900$), NoDisappointment ($\alpha = .901$), Guarantee ($\alpha = .895$), Honesty ($\alpha = .898$), UserSupport ($\alpha = .894$), Satisfaction ($\alpha = .896$), and Compensation ($\alpha = .922$) that together make up the variable’s reliability and intention. These results confirm the scale's effectiveness in capturing the diverse aspects of brand trust (Appendix 24).

The variables were derived from questions informed by several theoretical frameworks, and the authors deemed these studies sufficient to categorize them according to the factors identified by existing theories (Bruhn et al., 2012; Delgado-Ballester, 2004). To establish the factors, the authors determined that calculating the mean of the variables associated with each factor was adequate.

5.4.1 The effect on brand authenticity

H_1: *The non-disclosure of the utilization of AI in the visual advertisement has a negative significant effect on brand authenticity.*

Table 2 illustrates that the adjusted R-squared value indicates that 1.8% of the variance in the DV "authenticity" is explained by the variance in the IV "disclosure of AI". According to Table 3, the p-value is significant (.016), indicating a strong fit between the data and the assumed regression model. Because of the significant p-value, looking into the coefficient table is valuable. The IV is categorical and made into dummy variables. Hence, the standardized coefficients beta compares the variables Non-disclosed-group and Disclosed-group to our control group (Table 4). Non-disclosed differs significantly from zero ($p = .022$, $\beta = -.252$). This indicates that compared to the control group, participants scored significantly lower by .252 points on brand authenticity. The disclosed group does not differ significantly from zero ($p = .737$, $\beta = .038$), suggesting a higher effect compared to the control group, although this difference is not significant. Thus, supporting the hypothesis that the non-disclosure of the utilization of AI in a visual advertisement has a negative significant effect on brand authenticity.

Model	R	R Square	Adjusted R	Std. Error of the Estimate
1	.155	.024	.018	.83358

Table 2: Model summary

Model	Source	Sum of Squ	df	Mean Squa	F	Sig.
1	Regression	5.820	2	2.910	4.188	.016
	Residual	235.557	339	.695		
	Total	241.376	341			

Table 3: ANOVA-table

Model	Term	B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	Constant	4.049	.079		51.178	<.001		
1	Disclosed	.038	.112	-.021	-.337	.737	.740	1.351
1	Non-disclosed	-.252	.110	-.144	-2.302	.022	.740	1.351

Table 4: Coefficients-table

H_2: *The non-disclosure of the utilization of AI in a visual advertisement has a negative significant effect on reliability.*

The model summary reveals a small positive correlation (R = .190) between the predictors and "reliability." The model explains 3.6% of the variance in reliability (R Square = .036), which adjusts to 3% when accounting for the number of predictors (Adjusted R Square = .030) (Appendix 12). Although the model explains a relatively small portion of the variance, this finding is still important as it highlights that the predictors do have a measurable impact on reliability.

The regression analysis reveals significant insights into the impact of disclosing AI usage on brand reliability. The overall model is statistically significant (p = .002), indicating that the predictors collectively influence the DV's reliability (Appendix 12). Although disclosing AI usage with a watermark does not significantly affect brand reliability (p = .722), not disclosing AI usage has a significant negative effect on reliability (p = .004) with $\beta < 0$ (-.354) (Appendix 12). Consequently, the regression analysis supports the hypothesis that the non-disclosure of AI utilization in visual advertisements has a significant negative effect on perceived reliability.

H_3: *The non-disclosure of the utilization of AI in a visual advertisement has a negative significant effect on continuity.*

The adjusted R-square indicates that 1,6% of the variance in the DV “continuity” is explained by the variation in the IV “disclosure of AI” (Appendix 13). The ANOVA table suggests that there is a good fit between the data and the assumed regression model because the p-value is significantly statistical (p = .025) (Appendix 13). Non-disclosed differs significantly from zero (.045). The variable Non-disclosed $\beta < 0$ (-.224), indicates that compared to the control group, participants scored significantly lower by .224 points on brand authenticity than the control group. The disclosed group does not differ significantly from zero (p = .577, β = .063), suggesting a higher effect compared to the control group, although this difference is not significant (Appendix 13). This supports the hypothesis that the non-disclosure of the utilization of AI in a visual advertisement has a negative significant effect on brand authenticity.

H_4: *The non-disclosure of the utilization of AI in a visual advertisement has a negative significant effect on originality.*

Looking at the ANOVA table, one can observe that the significance level of .069 is not significant at the .05 level, meaning the predictors collectively do not have a significant effect on the DV originality (Appendix 14). Consequently, the regression analysis does not support the hypothesis that the non-disclosure of AI utilization in visual advertisements has a negative significant effect on originality.

H_5: *The non-disclosure of the utilization of AI in a visual advertisement has a negative significant effect on naturalness.*

The ANOVA results suggest that the overall model is not statistically significant at the .05 level ($p = .167$) (Appendix 15). Neither disclosing AI usage with a watermark ($p = .554$) nor disclosing AI usage ($p = .065$) have statistically significant effects on the DV, though the effect of non-disclosure is near the threshold for significance (Appendix 15). Thus, the regression analysis does not support the hypothesis that the non-disclosure of AI utilization in visual advertisements has a negative significant effect on naturalness.

5.4.2 The effect of disclosure on brand trust

H_6: *The non-disclosure of the utilization of AI in a visual advertisement has a negative significant effect on brand trust.*

The adjusted R-squared value of 2.9% indicates that a small proportion of the variance in the DV trust is explained by the variance in the IV "disclosure of AI" (Table 5). The significant p-value of .007, according to the ANOVA table, suggests a strong fit between the data and the assumed regression model. Because of the significant p-value, looking into the coefficient table is valuable (Table 7). Non-disclosed differs significantly from zero (.032). The variable non-disclosed ($\beta = -.227$), indicates that compared to the control group, participants scored significantly lower by .227 points on brand authenticity. The variable disclosed does not differ significantly from zero ($p = .36$, $\beta = .099$) (Table 7).

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.171	.029	.023	.79983

Table 5: Model summary

Model	Source	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	6.501	2	3.250	5.081	.007
	Residual	216.865	339	.640		
	Total	223.366	341			

Table 6: ANOVA-table

Model	Term	B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	Constant	3.984	.076		52.482	<.001		
1	Disclosed	.099	.108	-.057	-.917	.360	.740	1.351
1	Non-disclosed	-.227	.105	-.134	-2.159	.032	.740	1.351

Table 7: Coefficients-table

H_7: *The non-disclosure of the utilization of AI in a visual advertisement has a negative significant effect on brand reliability.*

The overall model is statistically significant (p = .014), indicating that the predictors collectively influence the DV reliability (Appendix 16). However, neither the disclosure of AI usage with a watermark (p = .232) nor the non-disclosure of AI usage (p = .090) have statistically significant effects individually, though the effect of non-disclosure is closer to the threshold for significance. By adding the control group in the linear regression, the results yield significant results indicating a significant negative effect for the non-disclosed group on reliability (Appendix 17). Thus, the regression analysis does not support the hypothesis that the non-disclosure of the utilization of AI in a visual advertisement has a negative significant effect on brand reliability.

H_8: *The non-disclosure of the utilization of AI in a visual advertisement has a negative significant effect on brand intentions*

The coefficient of determination, which measures the proportion of variance in the DV brand intentions explained by the IV (non-disclosure of AI utilization), is .027. Meaning that approximately 2.7% of the variance in brand intentions can be accounted for by the non-disclosure of AI utilization (Appendix 18).

With a statistically significant overall model (p = .009), it's evident that the combined effects of the predictors influence the DV brand intentions (Appendix 18). Although disclosing AI usage with a watermark does not significantly affect brand intentions (p = .581, β = .066), not disclosing AI usage has a significant negative effect on brand intentions (p = .02, β = -.272) (Appendix 18). Consequently, the regression analysis supports the hypothesis that the non-disclosure of the utilization of AI in a visual advertisement has a negative significant effect on brand intentions

5.4.4 The effect of authenticity on brand trust

H_9: An increase in brand authenticity has a positive significant effect on brand trust.

When looking at the model summary in Table 8, the R-value of .843 indicates a very strong relationship between authenticity and brand trust. The R square value of .711 means that authenticity explains 71.1% of the variance in brand trust. Observing the ANOVA in Table 9, it is evident that brand authenticity significantly affects brand trust at the .05 level. Further, the coefficients presented in Table 10 demonstrate a statistically significant positive relationship between brand authenticity (β = .811) and brand trust, indicating that an increase in brand authenticity corresponds to an increase in brand trust. Thus, we maintain the hypothesis that an increase in brand authenticity significantly positively influences brand trust.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.843	.711	.710	.43595

Table 8: Model summary

Model	Source	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	158.750	1	158.750	835.312	<.001
	Residual	64.616	340	.190		
	Total	223.366	341			

Table 9: ANOVA-table

Model	Term	B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	Constant	-.714	.114		-6.271	<.001		
1	Authenticity	.811	.028	.843	28.902	<.001	1.000	1.000

Table 10: Coefficient-table

H_{10}: An increase in brand authenticity has a positive significant effect on brand intentions.

The linear regression model explains 59.2% of the variance in brand intentions with brand authenticity (Appendix 19). Brand Authenticity is significant with a p-value = < .001 (β = .821) (Appendix 19). The coefficients illustrate that there is a positive significant effect on brand intentions (Appendix 19). Thus, an increase in brand authenticity yields an increase in brand intentions.

H_{11}: An increase in brand authenticity has a positive significant effect on brand reliability.

The adjusted R-square indicates that 82% of the variance in brand trust is explained by the variation in brand authenticity (Appendix 20). The ANOVA table suggests that there is a good fit between the data and the assumed regression. Looking at the model summary, one can observe that there is a significant effect (p = <.001) (Appendix 20). Authenticity is positively significant from zero (p= <.001, β = 1.027) (Appendix 20). This supports the hypothesis that an increase in brand authenticity has a positive significant effect on brand reliability.

5.4.5 The mediating effect of authenticity

H_{12}: The relationship between the disclosure of the utilization of AI in a visual advertisement and trust is mediated by authenticity.

Table 11 shows that the p-value is significant for both outcome variables in the test p = .016 with an R-square of .0241 for authenticity and p = <.001 with an R-square of .713 for trust. Suggesting that the overall regression model is significant and both models as a whole explain a significant portion of the variance in the DV, demonstrating an improvement over a model with no predictors.

Model Summary for Brand Authenticity (Mediator)

Variable	R	R-sq	MSE	F	df1	df2	p-value
Authenticity	0.1553	0.0241	0.6949	4.1876	2	339	0.0160

Model Summary for Brand Trust (Outcome Variable)

Variable	R	R-sq	MSE	F	df1	df2	p-value
Tot_tru	0.8444	0.7130	0.1897	279.9130	3	338	<0.001

Table 11: Model summary

X1 (control group vs. disclosed) β = .0378, t(339)=.3367, p = .7366. These variable yields no significant difference in authenticity scores between the control condition and the disclosed condition (Table 12).

X2 (control group vs. non-disclosed) β = -.2522, t(339)=-2.3017, p = .022. The p-value is significant (p = .022) for the non-disclosed condition. There are significant differences in authenticity scores between the control condition and the non-disclosed condition. Hence, the non-disclosed condition has a significant impact on authenticity.

Effects on Brand Authenticity (Tot_aut)

Predictor	Coefficient	Standard Err	t-value	p-value	LLCI	ULCI
Constant	4.0492	0.0791	51.1776	<0.001	3.8935	4.21
X1 (Disclosed)	0.0378	0.1121	0.3367	0.7366	-0.1828	0.2583
X2 (Non-disclosed)	-0.2522	0.1096	-2.3017	0.0220	-0.4677	-0.0367

Table 12: Effect on brand authenticity

The findings indicate a statistically significant direct effect of authenticity on brand trust (β = .805, t(28.38), p < .001) (Table 13). This means that as authenticity increases, there is a corresponding increase in trust towards the brand.

X1 β = .0683, t(338) = 1.17, p = .25
X2 β = -.024, (338) = -.42, p = .68

The p-value is not significant for any of the variables. Meaning that the IV has no direct effect on DV in the presence of a mediator. In the presence of a mediator, there is no direct effect for any of the conditions on trust. Thus, our model is a full mediation model because there is just a significant indirect effect.

Effects on Brand Trust (Tot_tru)

Predictor	Coefficient	Standard Err	t-value	p-value	LLCI	ULCI
Constant	0.7234	0.1221	2683194	<0.001	0.4832	0.9636
X1 (Disclosed)	0.0683	0.0586	1.1658	0.2445	-0.0470	0.1836
X2 (Non-disclosed)	-0.0239	0.0577	-0.4149	0.6785	-0.1374	0.0895
Authenticity	0.8053	0.0284	28.3807	<0.001	0.7495	0.8611

Table 13: Effects on brand trust

X1 indirect = .0304, SE = .0785, 95% CI[-.13,.184], since include zero, mediation has not occurred

X2 indirect = -.2031, SE = .0926, 95% CI[-.3931, -.0307], since does not include zero, mediation has occurred

Table 14 shows a significant indirect effect for x2 (non-disclosed). Meaning that the relationship between the disclosure of the utilization of AI in a visual advertisement and trust is mediated by authenticity. Hence, the analysis supports our hypothesis.

Direct and Indirect Effects of X on Brand Trust (Tot_tru)

Direct Effects

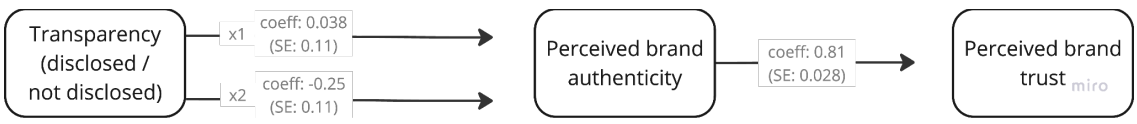
Predictor	Effect	Standard Err	t-value	p-value	LLCI	ULCI
X1 (Disclosed)	0.0683	0.0586	1.1658	0.2445	-0.0470	0.1836
X2 (Non-disclosed)	-0.0239	0.0577	-0.4149	0.6785	-0.1374	0.0895

Indirect Effects (Bootstrap)

Predictor	Effect	BootSE	BootLLCI	BootULCI
X1 (Disclosed)	0.0304	0.0785	-0.1269	0.1840
X2 (Non-disclosed)	-0.2031	0.0926	-0.3931	-0.0307

Table 14: Direct and indirect effect of X on brand trust

From the process macro test, the authors designed a path model to visualize the findings and highlight the mediation effect.



Model 2: Path model

6. Discussion

The study's main focus explored the effects of (not) disclosing AI use in visual advertisements on the consumer perception of brand authenticity and brand trust. The initial hypothesis proposed by the authors is that the population's apprehension towards the emerging and rapidly advancing AI-technology (Datatilsynet, 2024; Haan, 2023; Hagendorff, 2023), coupled with the potential for these technologies to be misused for deceptive purposes (Sample, 2020; Dorn, 2023), would affect the population's perception of a brand that engages in deceitful practices. Thus, the following research question was developed:

How does the transparent disclosure of the use of artificial intelligence in visual advertisement impact brand authenticity as a mediating factor to brand trust?

A study was then conducted to test the authors' hypothesis in the form of an experiment in which the participants were exposed to one of three conditions. The results indicate that non-disclosure of AI usage in visual advertisements has a significant negative impact on brand authenticity. Meaning, that failing to disclose the use of AI in these ads significantly and negatively affects the perceived authenticity of the brand. However, the act of disclosing the use of AI does not result in a significant impact on a brand's authenticity. Furthermore, the study has demonstrated that the connection between disclosing the use of AI in visual advertisements and trust is mediated through authenticity. Thus, non-disclosure of AI in advertisements does not have a significant direct effect on brand trust, however, it does have an indirect effect through authenticity. The results from the coefficients and the adjusted R-squared values were low across all linear regression tests and the Process macro analyses. These results suggest that while there is a relationship between the variables and the outcomes, the strength of these relationships is relatively low. Despite their small size, the statistical significance of the coefficients for not disclosing the use of AI confirms a relationship. However, it is crucial to distinguish between statistical significance and effect size. The low coefficient values indicate that the IVs, while significantly associated with the DV, contribute only a small amount to the variance explained.

Relationship between AI disclosure and authenticity

The linear regression analysis revealed a significant negative relationship for the overall brand authenticity-term for the non-disclosed condition ($p = .022$, $\beta = -.252$). This indicates a negative perception of a brand's authenticity when the use of AI is revealed only after initial engagement. Although the results for the disclosed condition ($p = .737$, $\beta = .038$) do not comply with the literature stating that transparency has a positive significant effect on brand authenticity (Brun et al., 2012; Busser & Schulga, 2018; Fritz, et al., 2017; Yang & Battocchio, 2020), it does emphasize the importance transparency has to avoid negative repercussions on authenticity. This also suggests that people's perception of a brand will not significantly change if there is transparency about the use of AI. Further, while the overall result for authenticity was significant, only reliability and continuity showed a significant negative relationship with the non-disclosure condition. The authors did not find any significant relationship for the variables originality and naturalness. This result can be explained by the combined effects of all sub-variables, where the significant contributions of reliability and continuity likely compensated for the lesser impacts of originality and naturalness. Combining these components into a single measure of authenticity may have enhanced statistical power, revealing a stronger collective influence on disclosure practices than what was observed in the separate analyses of each component.

Relationship between AI disclosure and trust, and the mediating effect of authenticity

When analyzing the impact disclosure has on brand trust, the linear regression analysis yielded a significant effect ($p = 016$), and that not disclosing the use of AI has a negative significant effect on trust ($p = .022$, $\beta = -.252$) and disclosure of AI-use is merely unaffected ($p = .737$, $\beta = .038$). When looking into the terms that make up total trust, the linear regression analysis identified a significant negative relationship between intentions within the trust-term and not disclosing the usage of AI ($p = .02$, $\beta = -.272$). Further, although reliability within the trust-term did yield significant results ($p = .014$), neither disclosing nor not disclosing the use of AI has a significant impact on reliability (resp. $p = .232$, $p = .09$). Indicating that there are no significant differences in the pairwise comparisons between these two conditions. This could be due to the low R-squared value, indicating it doesn't explain much of the variance in the variable. Overall, this signals the importance

disclosure and transparency have on a brand's perceived trust, indicating that not disclosing the use of AI in visual advertisement can negatively affect a brand. Although the findings of this study do not support literature that shows a positive relationship between being transparent and brand trust (Karagür, et al., 2022; Cambier & Poncin, 2020; Kang & Hustvedt, 2014; Tabler, 2023; Palmaccio et al., 2021; Trabucchi et al., 2023; Kim & Kim, 2016), it does illustrate the importance of being transparent to prevent negative repercussions on brand trust in an AIM-setting.

The process macro analysis gave a closer understanding of the conceptual model, analyzing both the direct and indirect effects. The analysis did not find a significant direct effect of disclosing AI on trust. Linear regression primarily assesses the total effect of an IV on a DV. This approach does not account for the complexities introduced by mediating variables. Process Macro analysis provides a more nuanced understanding of our conceptual model. In the analysis, the authors observed a scenario of full mediation, as the direct effect of the IV disclosure of AI on the DV trust is not significant. This indicates that the entire effect of disclosure of AI on trust is mediated, with the mediator's authenticity fully accounting for the relationship between the two variables.

The literature supports these findings, emphasizing the critical role of authenticity in cultivating brand trust. Portal et al. (2019) and Schallehn et al. (2014) identify a direct relationship between brand authenticity and trust, with consumers favoring brands that remain true to their values and consistently deliver on promises. Similarly, Hernandez-Fernandez & Lewis (2019) highlights the significant link between brand trust and authenticity. Non-disclosure of AI use in advertisements can indirectly diminish consumer perceptions of brand trust.

Furthermore, transparency is a key part of building trust between brands and consumers (Kang & Hustvedt, 2014; Kim & Kim, 2016; Yang & Battocchio, 2020). Transparency has also been shown to impact brand authenticity positively (Brun, et al. 2012; Busser & Shulga, 2018). This study's findings build on this literature and suggest that authenticity is indeed a mediation factor in building trust.

As mentioned, there was no significant positive relationship between disclosing the use of AI and any of the variables. Considering that the study compared different conditions to one reference group is important. The reference group was exposed to the same advertisement without any information that AI created it. Therefore, the lack of a significant relationship when disclosing AI use compared to the reference group implies that transparency did not negatively impact the brand, suggesting a potentially positive relationship in terms of maintaining baseline perceptions. The fact that not disclosing the use of AI has a significant negative effect implies that transparency may be beneficial to a brand. This is because it helps avoid the potential negative repercussions that could arise if the use of AI is later discovered.

7. Conclusion

	Hyptheses	Results
H1	The non-disclosure of the utilization of AI in visual advertisement has a negative significant effect on authenticity.	Supported
H2	The non-disclosure of the utilization of AI in a visual advertisement has a negative significant effect on reliability.	Supported
H3	The non-disclosure of the utilization of AI in a visual advertisement has a negative significant effect on continuity.	Supported
H4	The non-disclosure of the utilization of AI in a visual advertisement has a negative significant effect on originality.	Not supported
H5	The non-disclosure of the utilization of AI in a visual advertisement has a negative significant effect on naturalness.	Not supported
H6	The non-disclosure of the utilization of AI in a visual advertisement has a negative significant effect on brand trust.	Supported
H7	The non-disclosure of the utilization of AI in a visual advertisement has a negative significant effect on brand reliability.	Not supported
H8	The non-disclosure of the utilization of AI in a visual advertisement has a negative significant effect on brand intentions.	Supported
H9	An increase in brand authenticity has a positive significant effect on brand trust.	Supported
H10	An increase in brand authenticity has a positive significant effect on brand intentions.	Supported
H11	An increase in brand authenticity has a positive significant effect on brand reliability.	Supported

Summary of results

The rapid rise of general AI use has caused uncertainty in how consumers react to its professional use, e.g., marketing efforts. Although there have been a comprehensive amount of studies conducted on transparency's impact on brand authenticity and trust, it has not yet been heavily conducted in terms of transparent use in AIM. In this study, the aim was to figure out how the transparent disclosure of the use of artificial intelligence in visual advertisement impacts brand authenticity as a mediating factor to brand trust.

The study's main findings revealed that failing to disclose AI usage in advertisements can significantly harm a brand's authenticity. This reduction in perceived authenticity mediates a negative impact on brand trust. Therefore, non-disclosure of AI usage undermines the brand's perceived authenticity and, consequently, its trustworthiness. While disclosing AI use does not significantly enhance perceived brand authenticity or trust, transparency about AI usage can

prevent the negative repercussions that might arise if its use is discovered later. Therefore, these findings highlight transparency and disclosure as a strategic tool that enables brands to employ AI technology without compromising trust and authenticity.

8. Managerial implications

Based on existing literature and the findings of this study, marketing managers can incorporate several measures into their daily business to mitigate the risk of reduced brand authenticity and trust when conducting AIM.

Due to the negative perception associated with non-disclosure of AI use, managers should implement an internal AI-policy for marketing initiatives. Defining explicit guidelines for disclosing the use of AI in advertisements may help safeguard against negative repercussions from non-disclosure that have been proven to occur in this study if the recipient were to find out about its use after the fact. Marketing managers can proactively stay ahead of the upcoming regulatory changes, ensuring organizational consistency in AI use before such regulations are officially established (Jerijervi, R. D., 2023; Fredø, T., 2024; European Parliament, 2023).

By conducting workshops to familiarize employees with AI, integrating its use in marketing would ensure that they apply it correctly. This training would aim to enhance employees' proficiency and confidence in effectively integrating AI technologies. Promoting transparent AI implementation reduces the risk of recipients perceiving the brand as inauthentic or untrustworthy, as emphasized in this study.

Further, marketing managers can explore methods to disclose AI-generated content across different media platforms. Utilizing existing transparency symbols, such as those on Facebook and Instagram, or developing new ones tailored for contexts where standardized symbols are currently unavailable, such as news media or outdoor advertisements could prove beneficial to avoid negative repercussions. One can utilize A/B testing internally to compare different AI disclosure methods. This approach helps identify transparency strategies that align

with consumer expectations and also whether it has been perceived by the recipient, thereby mitigating potential negative reactions from not disclosing AI-generated marketing. While not empirically demonstrated in this study, existing literature suggests that transparency enhances a brand's authenticity (Busser & Shulga, 2018; Fritz et al., 2017; Yang & Battocchio, 2020), thereby potentially positively affecting brand trust (Portal et al., 2019; Schallehn et al., 2014; Hernandez-Fernandez & Lewis, 2019; Coary, 2013). In essence, while watermarking ads may prevent negative repercussions on brand authenticity and trust, it could also yield positive effects on the aforementioned factors.

9. Limitations and future research

9.1 Limitations

Measuring the impact an advertisement has on its recipients can present challenges, with some limitations to consider. The authors decided to conduct an experiment in the form of a questionnaire, due to time and budget constraints. The experiment took place in a controlled and hypothetical setting, which does not fully replicate a real-life event. The questionnaire might have made it challenging for the respondents to naturally feel positive about disclosure or deceit of non-disclosure creating an issue with ecological validity (Bell et al., 2022). As this experiment happened over a span of 3 weeks, it only captures the short-term reactions to the advert. The study may not reflect the long-term impact over time through frequent exposure. Additionally, the study only focuses on general visual advertisement, and the results could vary between different mediums and platforms. This lack of external validity can limit the generalizability of the findings of the study to broader populations or real-world contexts (Malhotra, 2019).

Because the experiment was conducted as a survey, participants had the flexibility to respond at their convenience, both in terms of time and location. This flexibility makes it more challenging to ensure causality, as external factors unique to each participant's environment at the time of responding could influence their answers. Thus, other factors such as respondents being in a hurry and not reading the survey thoroughly could describe why there are correlations between the variables and create issues with the internal validity of the study (Bell et al., 2022). These

variables can influence the accuracy of the responses and potentially compromise the integrity of the data collected. Another limitation that arises when using a survey is the possibility of respondents disregarding the page exposing them for a condition. Leading to answering the following questions without being affected by the advertisement.

Due to limited time and resources, the study focused on a single brand encompassing high familiarity and reputation. Consequently, it is difficult to determine if the results would be consistent across brands. Cambier & Pocin (2020) identified variations in how brands with different reputation levels benefit from transparency signals, suggesting that a similar scenario might occur in this study's scenario as well. This situation presents a challenge to the external validity of the findings, as they may not be generalizable to brands with different levels of awareness and/or liking (Bell et al., 2022).

Furthermore, as the authors used a non-probability convenience sampling method, the unevenness of some of the demographic variables illustrated that the experiment experienced an overrepresentation of highly educated people and young adults, as well as people from Østlandet. Therefore, it is possible that our sample does not adequately represent the Norwegian population, especially when it comes to older generations, low income, low education, and certain geographical areas. This could limit the study's external validity (Malhotra, 2019). However, while the study may not fully capture these demographic variables, it is likely to be understated rather than artificially inflated.

The back translation of the variables from English to Norwegian may have affected the construct validity creating a measurement error (Malhotra, 2019). The failure of the variables measuring authenticity and trust to pass the principal component analysis may have adversely affected the reliability and validity of the scales. Ensuring that the translated questionnaire accurately measures the same constructs as the original literature could be challenging. Variability in responses due to translation issues could have complicated the statistical analysis. Furthermore, certain concepts or phrases may not resonate uniformly across English and Norwegian cultures, even when accurately translated by a professional. This may have potentially impacted the consistency and

comparability of responses. However, as indicated by Cronbach's Alpha results, the variables did successfully measure the same constructs in Norwegian (Appendix 24).

The unsupported hypothesis for the sub-variables for authenticity indicates that the influence of authenticity is complex and may be mediated by factors not fully explored in this study. Other studies have found various methods to measure authenticity, and using these alternative measurements could potentially yield different results (Napoli et al., 2014; Schallehn et al. 2014; Morhart et al., 2015).

9.2 Future research

Due to the limitations of the study, some aspects can be interesting to look at in future research. It would be beneficial to extend the study to a diverse range of brands with varying levels of customer preference and brand awareness. This would provide a more comprehensive understanding of how AI disclosure affects brands with both high and low consumer liking, as well as those with differing degrees of awareness. As this study takes on the perceptions of a Norwegian brand that inhibits high awareness and liking in the population, it could have skewed the results. Additionally, conducting the study across different countries could provide valuable cross-cultural insights, helping to identify potential variations in consumer perceptions and responses to the transparency of AI-use in advertisements. This study only focuses on the Norwegian population with its own specific culture. Thus, such an approach could reveal nuanced insights into the relationship between AI disclosure, brand authenticity, and trust across different market segments, thereby enhancing the generalizability and applicability of the findings.

Further, as this study focuses on general visual advertisements, it would be beneficial to examine how AI disclosure's impact on authenticity and trust is affected by different advertising platforms. Future research could investigate whether the impact of AI transparency varies across e.g. digital ads, print media, social media campaigns, television commercials, and outdoor advertisements by delegating respondents into different conditions based on these. Different advertising platforms have varying engagement patterns, which could modulate the effect of AI disclosure. It would be insightful to analyze the impact of AI

disclosure on consumer engagement metrics across different platforms, such as click-through rates, conversion rates, and social media interactions. Further, consumers might react differently to AI disclosure in highly interactive social media ads compared to more passive print or outdoor advertisements. Adding to this, the population may differ in demographics from platform to platform, making it crucial to understand the reactions of the different audiences to AI disclosure. Understanding these variations could help brands tailor their AI disclosure strategies to specific contexts, thus optimizing brand trust and brand authenticity across different advertising platforms. This could also emphasize the potential variations in consumer responses, adding depth and direction for future research.

Future research could also dive into the long-term implications of AI transparency. As this study was conducted as a survey-based experiment over a short time-period, it is possible to conduct a field experiment. A field experiment could be particularly valuable in this context, providing real-world insights into how AI disclosure affects consumer behavior over an extended period. By conducting field experiments in diverse market settings, researchers could assess how different levels of AI transparency impact consumer perceptions and behaviors in a natural environment. Additionally, exploring the role of repeated exposure to AI transparency in advertisements could reveal whether consumers become more accepting or skeptical over time. This may help identify any potential shifts in brand authenticity and trust over time, offering a more comprehensive understanding of the sustained effects of AI disclosure.

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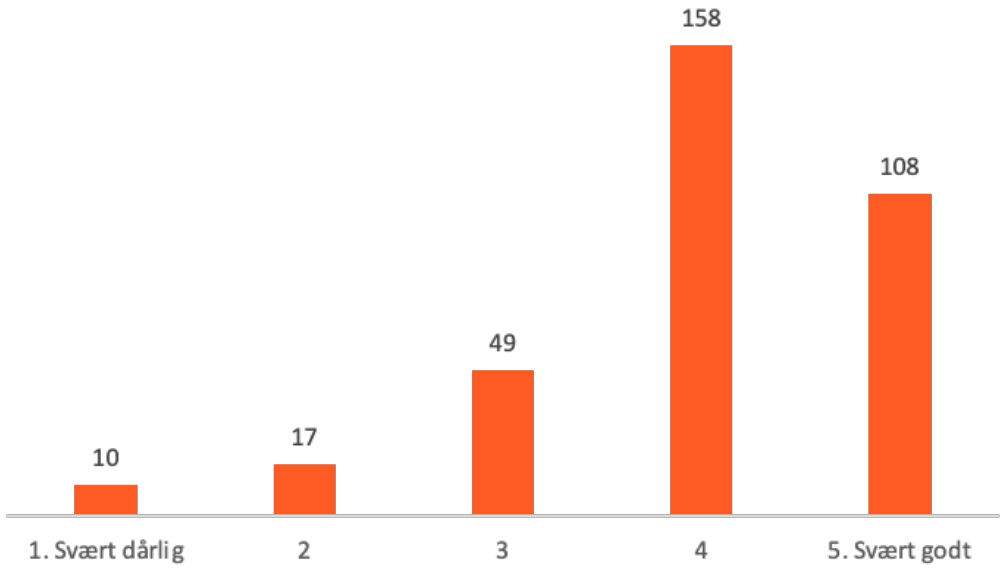
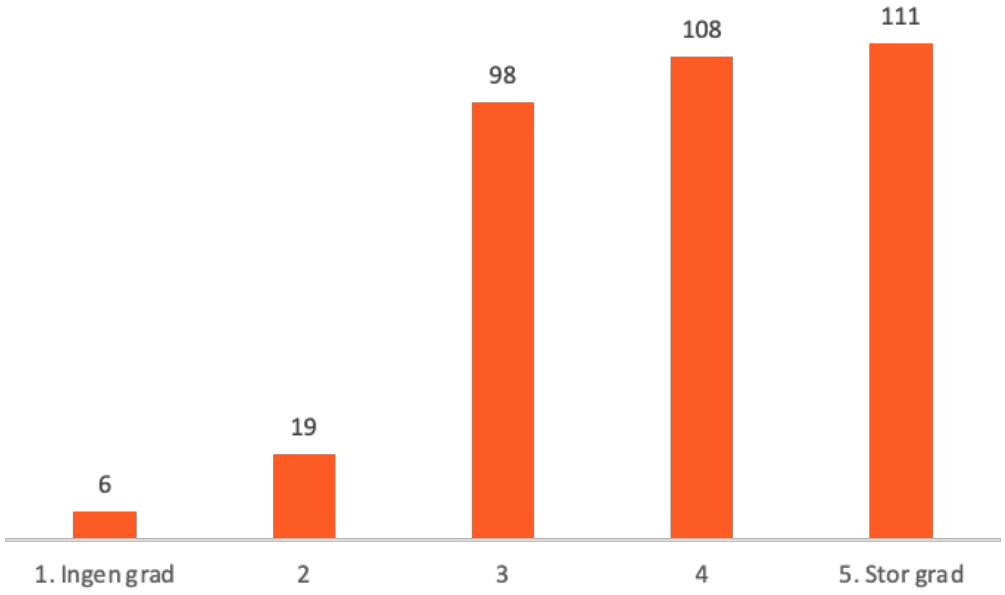
11. Appendices

Appendix 1: How well or poorly do you think the advertisement conveys that you can easily transfer money between individuals with Vipps?



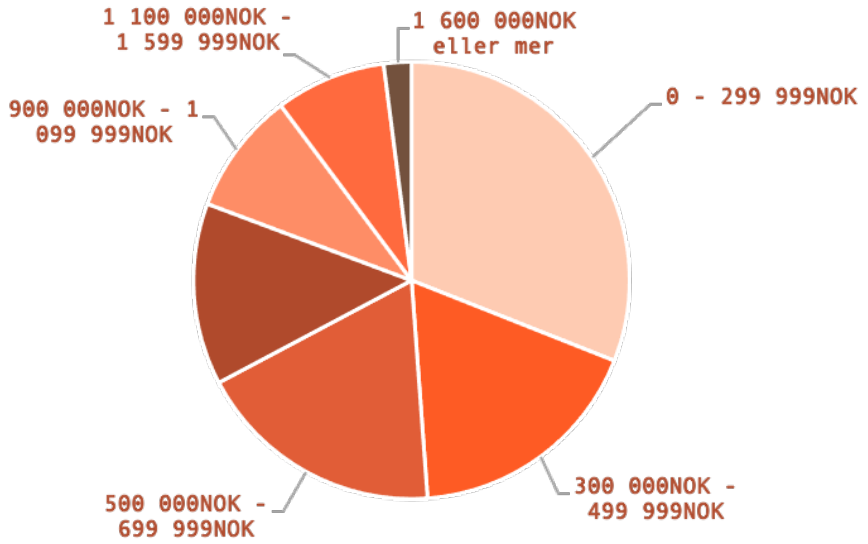
Descriptive statistics	N	Minimum	Maximum	Mean	Std. Deviation
	342	1	5	3,99	0,96

Appendix 2: To what extent does this advertisement fit in with Vipps' previous advertisements and marketing campaigns?



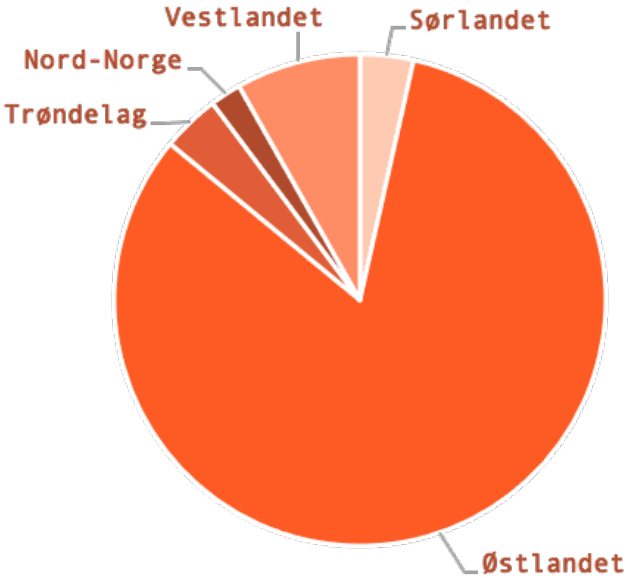
Descriptive statistics	N	Minimum	Maximum	Mean	Std. Deviation
	342	1	5	3,87	0,99

Appendix 3: What is your approximate annual income before tax?



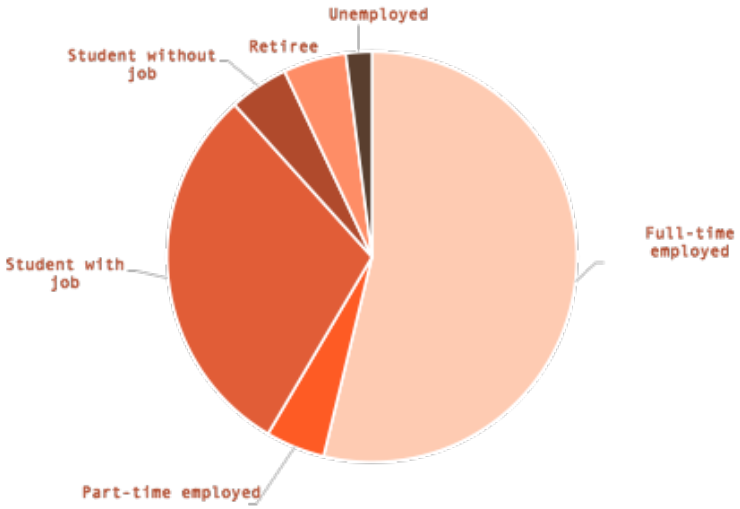
0 - 299 999NOK	300 000NOK - 499 999NOK	500 000NOK - 699 999NOK	700 000NOK - 899 999NOK	900 000NOK - 1 099 999NOK	1 100 000NOK - 1 599 999NOK	1 600 000NOK eller mer
31 %	18 %	18 %	13 %	9 %	8 %	2 %

Appendix 4: What region are you currently living in?



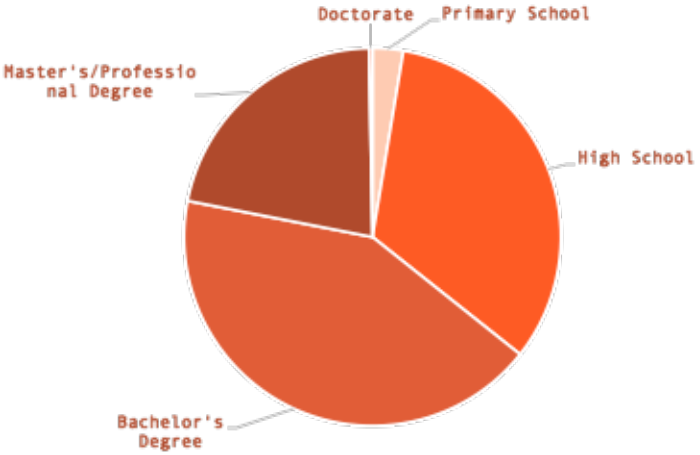
Sørlandet	Østlandet	Trøndelag	Nord-Norge	Vestlandet
4 %	82 %	4 %	2 %	8 %

Appendix 5: What is your employment status?



Full-time employed	Part-time employed	Student with job	Student without job	Retiree	Unemployed
54%	5%	30%	5%	5%	2%

Appendix 6: What is your highest level of education?



Primary School	High School	Bachelor's Degree	Master's/Professional Degree	Doctorate
3%	33%	42%	22%	0,3%

Appendix 7: What gender do you identify as?

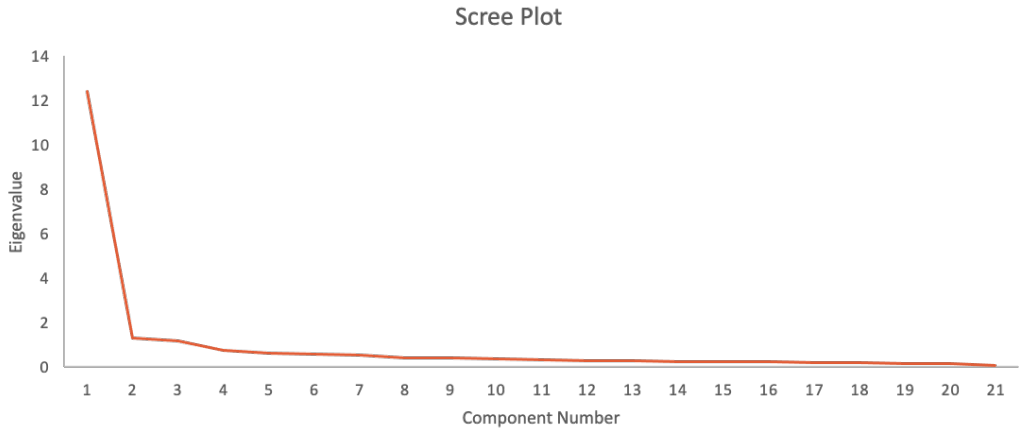
Woman	Man
54%	46%

Appendix 8: Descriptive statistics

Gender	Disclosed-group	Non-disclosed-group	Control-group	Total	Relative frequency %
Male	50	56	51	157	46 %
Female	60	65	60	185	54 %
Total	110	121	111	342	100 %
Age					
17-25 yrs	35	50	48	133	39 %
26-35 yrs	22	26	22	70	20 %
36-45 yrs	14	7	8	29	8 %
46-55 yrs	12	21	13	46	13 %
56-65 yrs	23	11	15	49	14 %
66-75 yrs	4	4	5	13	4 %
76 yrs and up	0	2	0	2	1 %
Total	110	121	111	342	100 %
Income Bracket					
0 - 299,999 NOK	28	38	40	106	31 %
300,000 - 499,999 NOK	16	24	21	61	18 %
500,000 - 699,999 NOK	24	20	19	63	18 %
700,000 - 899,999 NOK	16	17	13	46	13 %
900,000 - 1,099,999 NOK	9	13	9	31	9 %
1,100,000 - 1,599,999 NOK	14	6	8	28	8 %
1,600,000 NOK or more	3	3	1	7	2 %
Total	110	121	111	342	100 %
Employment Status					
Full-time employed	62	68	54	184	54 %
Part-time employed	6	5	5	16	5 %
Student with job	26	35	41	102	30 %
Student without job	7	3	6	16	5 %
Retired	6	7	4	17	5 %
Unemployed	3	3	1	7	2 %
Total	110	121	111	342	100 %
Highest Education Level					
Primary school	1	6	2	9	3 %
High school	34	39	40	113	33 %
Bachelor's degree	52	50	43	145	42 %
Master's/professional studies	22	26	26	74	22 %
Doctorate	1	0	0	1	0 %
Total	110	121	111	342	100 %
Region					
Sørlandet	3	4	5	12	4 %
Østlandet	92	95	95	282	82 %
Trøndelag	2	6	5	13	4 %
Nord-Norge	2	3	2	7	2 %
Vestlandet	11	13	4	28	8 %
Total	110	121	111	342	100 %

Appendix 9: Principal component analysis of all the variables

Component	Initial Eigenvalues Total	Initial Eigenvalues % of Variance	Initial Eigenvalues Cumulative %	Extraction Sums of Squared Loadings Total	Extraction Sums of Squared Loadings % of Variance	Extraction Sums of Squared Loadings Cumulative %
1	12.406	59.074	59.074	12.406	59.074	59.074
2	1.308	6.231	65.305	1.308	6.231	65.305
3	1.168	5.562	70.867	1.168	5.562	70.867
4	0.755	3.597	74.464			
5	0.644	3.067	77.531			
6	0.562	2.674	80.205			
7	0.52	2.475	82.679			
8	0.426	2.029	84.708			
9	0.407	1.937	86.645			
10	0.373	1.774	88.419			
11	0.337	1.605	90.025			
12	0.303	1.442	91.467			
13	0.275	1.31	92.777			
14	0.258	1.228	94.005			
15	0.237	1.131	95.135			
16	0.231	1.099	96.234			
17	0.205	0.976	97.211			
18	0.192	0.912	98.123			
19	0.175	0.833	98.955			
20	0.138	0.656	99.611			
21	0.082	0.389	100			



Descriptive Statistics	N	Minimum	Maximum	Mean	Std. Deviation
To what extent are you familiar with Vipps?	342	3	5	4.59	0.532
How familiar are you with payment solutions via app/third party?	342	1	5	3.88	1.048
What is your overall impression of Vipps as a brand?	342	1	5	4.39	0.64
How often do you use Vipps?	342	2	5	4.22	0.692

Based on the ad you just saw, assess the following statements regarding Vipps:	Component 1	Component 2	Component 3
I perceive the Vipps brand as consistent over time	0.741	-0.163	-0.3
I perceive the Vipps brand as true to itself	0.815	-0.13	-0.282
Vipps offers continuity	0.796	-0.176	-0.201
Vipps has a clear concept that they follow	0.783	-0.168	-0.282
The Vipps brand is different from other brands	0.701	0.527	-0.191
The Vipps brand is unique	0.693	0.627	-0.081
The Vipps brand stands out from other brands	0.707	0.583	-0.147
Vipps has shown that they keep their promises	0.847	-0.089	-0.096
Vipps' promises are credible	0.875	-0.152	-0.032
Vipps' promises are reliable/trustworthy	0.868	-0.158	-0.02
Vipps doesn't seem superficial	0.696	0.016	0.042
Vipps makes a genuine impression	0.844	0.068	-0.059
Vipps gives the impression of being natural	0.741	-0.036	0.031
Vipps is a brand that meets my expectations	0.793	-0.142	-0.144
I feel secure with Vipps' brand	0.82	-0.215	-0.117
Vipps is a brand that never disappoints me	0.722	-0.137	0.247
Vipps guarantees satisfaction	0.765	-0.076	0.333
Vipps' brand will handle my issues in an honest and sincere manner	0.768	-0.07	0.33
I can rely on Vipps to resolve user experience issues	0.793	-0.016	0.302
Vipps would do what is possible to make me satisfied	0.774	-0.002	0.341
Vipps will provide me some form of compensation for service issues	0.518	0.19	0.524

Appendix 10: MANOVA analysis on authenticity

	Unstandardized coefficients		Standardized Coefficients			Collinearity statistics	
Model	B	Std. Error	Beta	t	Sig.	Tolerance	VIF
(Constant)	-0.535	0.511		-1.048	0.296		
Gender (1 = man)	0.212	0.083	0.126	2.568	0.011	0.862	1.160
How often do you use Vipps?	0.021	0.035	0.032	0.599	0.550	0.744	1.344
How well do you know Vipps?	0.199	0.083	0.126	2.393	0.017	0.753	1.328
Knowledge of payment solutions through apps/third parties	0.048	0.037	0.060	1.296	0.196	0.975	1.025
What is your overall impression of Vipps as a brand?	0.356	0.066	0.271	5.406	<0.001	0.828	1.207
Ad conveys easy money transfer	0.090	0.040	0.126	2.247	0.025	0.662	1.511
Ad fits with previous campaigns	0.213	0.048	0.250	4.467	<0.001	0.664	1.507
Age	0.004	0.003	0.069	1.082	0.280	0.515	1.940
Personal approximate annual income before tax	0.005	0.031	0.009	0.150	0.881	0.521	1.919
Disclosed-group	-0.039	0.097	-0.022	-0.401	0.688	0.717	1.394
Non-dislosed-group	-0.274	0.093	-0.156	-2.937	0.004	0.734	1.362

Appendix 11: MANOVA analysis on trust

	Unstandardized coefficients		Coefficients			Collinearity statistics	
Model	B	Std. Error	Beta	t	Sig.	Tolerance	VIF
(Constant)	.180	.509		.353	.724		
Gender (1 = man)	0.237	0.082	0.146	2.878	0.004	0.862	1.160
How often do you use Vipps?	0.007	0.035	0.011	0.197	0.844	0.744	1.344
How well do you know Vipps?	0.135	0.083	0.089	1.635	0.103	0.753	1.328
Knowledge of payment solutions through apps/third parties	0.046	0.037	0.059	1.234	0.218	0.975	1.025
What is your overall impression of Vipps as a brand?	0.290	0.066	0.229	4.412	<0.001	0.828	1.207
Ad conveys easy money transfer	0.141	0.040	0.205	3.538	<0.001	0.662	1.511
Ad fits with previous campaigns	0.116	0.047	0.141	2.435	0.015	0.664	1.507
Age	0.005	0.003	0.089	1.353	0.177	0.515	1.940
Personal approximate annual income before tax	-0.037	0.031	-0.078	-1.189	0.235	0.521	1.919
Disclosed-group	0.048	0.096	0.028	0.501	0.617	0.717	1.394
Non-disclosed-group	-0.237	0.093	-0.140	-2.541	0.012	0.734	1.362

Appendix 12: Linear regression

Effect of AI Disclosure on Reliability (Authenticity)

Model	R	R Square	Adjusted R	Std. Error of the Estimate
1	.190	.036	.030	.93740

Model summary

Model	Source	Sum of Squ	df	Mean Squa	F	Sig.
1	Regression	11.168	2	5.584	6.355	.002
	Residual	297.886	339	.879		
	Total	309.054	341			

ANOVA-table

Model	Term	B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	Constant	4.279	.089		48.096	<.001		
1	Disclosed	-.045	.126	.022	.357	.722	.740	1.351
1	Non-disclosed	-.354	.123	-.178	-2.871	.004	.740	1.351

Coefficient-table

Appendix 13: Linear regression

Effect of AI Disclosure on Continuity (Authenticity)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.146	.021	.016	.84522

Model summary

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	5.311	2	2.656	3.717	.025
	Residual	242.182	339	.714		
	Total	247.493	341			

ANOVA-table

Model	Term	B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	Constant	4.230	.080		52.723	<.001		
	Disclosed	.063	.114	-.035	.558	.577	.740	1.351
	Non-disclosed	-.224	.111	-.126	-2.012	.045	.740	1.351

Coefficient-table

Appendix 14: Linear regression

Effect of AI Disclosure on Originality (Authenticity)

Model	R	R Square	Adjusted	Std. Error of the Estimate
1	.125	.016	.010	1.02807

Model summary

Model		Sum of Squ	df	Mean Squa	F	Sig.
1	Regression	5.687	2	2.843	2.690	.069
	Residual	358.295	339	1.057		
	Total	363.982	341			

ANOVA-table

Model	Term	B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	Constant	3.781	.098		38.746	<.001		
1	Disclosed	.122	.138	.055	.884	.377	.740	1.351
1	Non-disclosed	-.188	.135	-.087	-1.395	.164	.740	1.351

Coefficient-table

Appendix 15: Linear regression

Effect of AI Disclosure on Naturalness (Authenticity)

Model	R	R Square	Adjusted	Std. Error of the Estimate
1	.102	.011	.005	.99800

Model summary

Model	Source	Sum of Squ	df	Mean Squa	F	Sig.
1	Regression	3.584	2	1.792	1.799	.167
	Residual	337.644	339	.996		
	Total	341.228	341			

ANOVA-table

Model	Term	B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	Constant	3.907	.095		41.244	<.001		
1	Disclosed	-.080	.134	-.037	-.593	.554	.740	1.351
1	Non-disclosed	-.243	.131	-.116	-1.853	.065	.740	1.351

Coefficient-table

Appendix 16: Linear regression

Effect of AI Disclosure on Reliability (Trust)

Model	R	R Square	Adjusted	Std. Error of the Estimate
1	.158	.025	.019	.81556

Model summary for Disclosed and Non-disclosed

Model	Source	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	5.757	2	2.878	4.327	.014
	Residual	225.483	339	.665		
	Total	231.240	341			

ANOVA-table for Disclosed and Non-disclosed

Model	Term	B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	Constant	4.207	.077		54.350	<.001		
1	KI_merke_dummy	.131	.110	-.075	1.198	.232	.740	1.351
1	KI_lurt	-.187	.107	-.106	-1.702	.090	.740	1.351

Coefficient-table for Disclosed and Non-disclosed

Appendix 17: Linear regression

Effect of AI Disclosure on Reliability (Trust)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.158	0.025	0.019	0.81556

Model summary for control-group and non-disclosed

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	5.757	2	2.878	4.327	0.014
Residual	225.483	339	0.665		
Total	231.240	341			

ANOVA for control-group and non-disclosed

	Unstandardized coefficients			
Model	B	Std. Error	t	Sig.
(Constant)	4.339		55.795	<0.001
Control-group	-0.131	-0.075	-1.198	0.232
Non-disclosed	-0.314	-0.182	-2.921	0.004

Coefficients for control-group and non-disclosed

Appendix 18: Linear regression

Effect of AI Disclosure on Intention (Trust)

Model	R	R Square	Adjusted	Std. Error of the Estimate
1	.165	.027	.022	.88738

Model summary

Model	Source	Sum of Squares	df	Mean Square	F	Sig.
1	Regressior	7.488	2	3.744	4.755	.009
	Residual	266.941	339	.787		
	Total	274.429	341			

ANOVA-table

Model	Term	B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	Constant	3.761	.084		44.657	<.001		
1	Disclosed	.066	.119	-.034	-.553	.581	.740	1.351
1	Non-disclosed	-.272	.117	-.145	-2.329	.020	.740	1.351

Coefficient-table

Appendix 19: Linear regression

Effect of Authenticity on Intention (Trust)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.770	.592	.591	.57354

Model summary

Model	Source	Sum of Squares	df	Mean Square	F	Sig.
1	Regressio	162.585	1	162.585	494.251	<.001
	Residual	111.844	340	.329		
	Total	274.429	341			

ANOVA-table

Model	Term	B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	Constant	.426	.150		2.845	.005		
1	Authenticity	.821	.037	.770	22.232	<.001	1.000	1.000

Coefficient-table

Appendix 20: Linear regression

Effect of Authenticity on Reliability (Trust)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.908	.824	.823	.40009

Model summary

Model	Source	Sum of Squares	df	Mean Square	F	Sig.
1	Regressio	254.630	1	254.630	1590.722	<.001
	Residual	54.424	340	.160		
	Total	309.054	341			

ANOVA-table

Model	Term	B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	Constant	.089	.105		.850	.396		
1	Authenticity	1.027	.026	.908	39.884	<.001	1.000	1.000

Coefficient-table

Appendix 21: Conditions

Norwegian Business School

Du vil nå bli eksponert for en reklame fra Vipps. Annonsen illustrerer hvordan appen kan brukes til å enkelt overføre penger mellom personer.

Med dagens utvikling av teknologi har det blitt mer vanlig for bedrifter å benytte kunstig intelligens (KI), i blant annet annonsering. KI er når maskiner lærer og tar beslutninger basert på tilgjengelig data og regler. KI kan for eksempel generere bilder, videoer og tekst. Ha dette i bakhodet under spørreundersøkelsen.

Videre vil du bli bedt om å ta stilling til ulike spørsmål tilknyttet annonsøren. Ta den tiden du trenger.

Condition: Disclosed

Vignette

Norwegian Business School

Du har nettopp blitt eksponert for en reklame generert av kunstig intelligens (KI) merket "KI-generert reklame". Med denne informasjonen, ta stilling til de kommende utsagnene.

Condition: Non-disclosed

Vignette

Du har nettopp blitt eksponert for en reklame generert av kunstig intelligens (KI) uten å få informasjon om dette. Med denne informasjonen, ta stilling til de kommende utsagnene.

Condition: Control

Vignette

Du har nettopp blitt eksponert for en reklame fra Vipps. Ta stilling til de kommende utsagnene.

Appendix 22: Control for transparency and experience

Authenticity

Model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.226	.051	.042	.82328

ANOVA

Model	Source	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	12.284	3	4.095	6.041	<.001
	Residual	229.092	338	.678		
	Total	241.376	341			

Coefficients

Model	Variable	B	Std. Error	Beta	t	Sig.
1	(Constant)	3.716	.133		27.879	<.001
	Experience_AI	.121	.039	.164	3.088	.002
	Non-disclosed	-.243	.108	-.138	-2.241	.026
	Disclosed	.016	.111	.009	.145	.885

Trust

Model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.254	.065	.056	.78617

ANOVA

Model	Source	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	14.460	3	4.820	7.799	<.001
	Residual	208.906	338	.618		
	Total	223.366	341			

Coefficients

Model	Variable	B	Std. Error	Beta	t	Sig.
1	(Constant)	3.614	.127		28.397	<.001
	Experience_AI	.134	.037	.190	3.589	<.001
	Non-disclosed	-.216	.103	-.128	-2.093	.037
	Disclosed	.075	.106	.043	.704	.482

Appendix 23: Manipulation check for disclosed-group

Did you notice that the advertisement was marked 'AI-generated advertisement'?	Frequency	Percent	Valid Percent	Cumulative Percent
Yes	62	18.1	56.4	56.4
No	48	14.0	43.6	100.0
Total	110	32.2	100.0	
Missing System	232	67.8		
Total	342	100.0		

Appendix 24: Cronbach's alpha on authenticity and trust

Authenticity

Reliability statistics

Measure	Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	Number of Items
Value	0.898	0.901	4

Item statistics

Variable	Mean	Std. Deviation	N
Continuity	4.1711	0.85193	342
Originality	3.7534	1.03315	342
Reliability	4.1686	0.95201	342
Naturalness	3.7953	1.00033	342

Inter-item correlation matrix

	Kontinuitet	Originalitet	Reliabilitet	Naturlighet
Continuity	1.000	0.603	0.808	0.737
Originality	0.603	1.000	0.609	0.632
Reliability	0.808	0.609	1.000	0.785
Naturalness	0.737	0.632	0.785	1.000

Item-total statistics

Variable	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Continuity	11.7173	6.973	0.806	0.689	0.860
Originality	12.1350	6.694	0.667	0.447	0.910
Reliability	11.7198	6.416	0.830	0.735	0.847
Naturalness	12.0931	6.269	0.810	0.671	0.854

Trust

Reliability statistics

Measure	Cronbach's Alpha	Cronbach's Alpha (Standardized Items)	N of Items
Value	0.913	0.916	8

Item statistics

Variable	Mean	Std. Deviation	N
Expectations	13606	0.962	342
Security	16893	0.918	342
NoDisappointment	33664	0.981	342
Guarantee	35855	0.992	342
Honesty	34394	1.075	342
UserSupport	45355	1.002	342
Satisfaction	33298	1.082	342
Compensation	31809	1.185	342

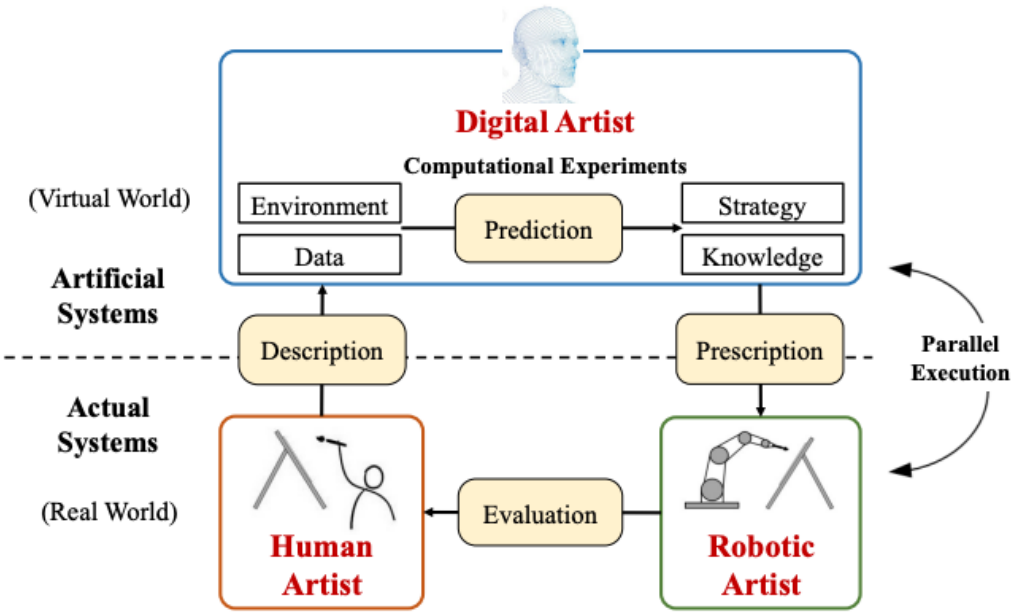
Inter-item correlation matrix

	Expectations	Security	No Disappointment	Guarantee	Honesty	User Support	Satisfaction	Compensation
Expectations	1.000	0.776	0.583	0.581	0.541	0.608	0.552	0.323
Security	0.776	1.000	0.632	0.614	0.597	0.612	0.599	0.307
NoDisappointment	0.583	0.632	1.000	0.667	0.547	0.629	0.560	0.415
Guarantee	0.581	0.614	0.667	1.000	0.703	0.690	0.640	0.454
Honesty	0.541	0.597	0.547	0.703	1.000	0.672	0.684	0.450
UserSupport	0.608	0.612	0.629	0.690	0.672	1.000	0.744	0.450
Satisfaction	0.552	0.599	0.560	0.640	0.684	0.744	1.000	0.498
Compensation	0.323	0.307	0.415	0.454	0.450	0.450	0.498	1.000

Item-total statistics

Item Name	Mean	Std. Deviation	N	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Expectations	4.37	0.962	342	0.699	0.635	0.903
Security	4.46	0.918	342	0.735	0.683	0.900
NoDisappointment	3.92	0.981	342	0.718	0.557	0.901
Guarantee	3.98	0.992	342	0.787	0.647	0.895
Honesty	3.94	1.075	342	0.755	0.612	0.898
UserSupport	4.03	1.002	342	0.798	0.671	0.894
Satisfaction	3.91	1.082	342	0.774	0.646	0.896
Compensation	2.87	1.185	342	0.505	0.305	0.922

Appendix 25: Parallel Art framework for image generation



Parallel Art framework. There are four stages (description, prediction, prescription, evaluation) in the iterative improvement between the artificial and actual systems, and three kinds of roles (human artist, digital artist in virtual world, robotic artist in real physical world) involved in the human cyber-physical hybrid collaboration systems (Guo et al., 2023, pp. 835).

Appendix 26: The complete survey

Takk for at du tar deg tid til å svare på denne undersøkelsen!

I forbindelse med masteroppgaven vår i Strategic Marketing Management ved handelshøyskolen BI Oslo, har vi utformet en undersøkelse angående annonsering. Først vil du få spørsmål om merkevaren Vipps, deretter vil du bli eksponert for en annonse og bli bedt om å ta stilling til annonsøren. Til slutt vil vi vite litt om deg!

Undersøkelsen tar noen få minutter og vi ønsker at du tar deg tid til å lese gjennom spørsmålene. Undersøkelsen er helt anonym.

Denne undersøkelsen er utført uavhengig og har ingen tilknytning til Vipps. Merkenavnet Vipps er kun benyttet illustrativt som et eksempel.

Dersom du har spørsmål til undersøkelsen kan du sende en mail til: s1915802@bi.no og s1912787@bi.no

Med vennlig hilsen,
Linn og Gina

→

Norwegian Business School

Hvor ofte bruker du Vipps?

- ◯ Aldri
- ◯ Sjeldent
- ◯ Av og til
- ◯ Ofte
- ◯ Veldig ofte

I hvilken grad kjenner du til Vipps?

- ◯ Kjenner ikke til
- ◯ Kjenner vagt til
- ◯ Kjenner delvis til
- ◯ Kjenner godt til
- ◯ Kjenner svært godt

Hvor god kjennskap har du til betalingsløsninger gjennom app/en tredjepart?

- ◯ Ingen grad
- ◯ Liten grad
- ◯ Noe grad
- ◯ Større grad
- ◯ Stor grad

Hva er ditt helhetlig inntrykk av Vipps som merkevare?

- ◯ Veldig negativt inntrykk
- ◯ Negativt inntrykk
- ◯ Nøytralt inntrykk
- ◯ Positivt inntrykk
- ◯ Veldig positivt inntrykk

→

Du vil nå bli eksponert for en reklame fra Vipps. Annonsen illustrerer hvordan appen kan brukes til å enkelt overføre penger mellom personer.

Med dagens utvikling av teknologi har det blitt mer vanlig for bedrifter å benytte kunstig intelligens (KI), i blant annet annonsering. KI er når maskiner lærer og tar beslutninger basert på tilgjengelig data og regler. KI kan for eksempel generere bilder, videoer og tekst. Ha dette i bakhodet under spørreundersøkelsen.

Videre vil du bli bedt om å ta stilling til ulike spørsmål tilknyttet annonsøren. Ta den tiden du trenger.

→

Condition: Disclosed

Vignette disclosed

Du har nettopp blitt eksponert for en reklame generert av kunstig intelligens (KI) merket "KI-generert reklame". Med denne informasjonen, ta stilling til de kommende utsagnene.

Condition: Non-disclosed

Vignette non-disclosed

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Du har nettopp blitt eksponert for en reklame generert av kunstig intelligens (KI) uten å få informasjon om dette. Med denne informasjonen, ta stilling til de kommende utsagnene.

Condition: Control

Vignette control

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Du har nettopp blitt eksponert for en reklame fra Vipps. Ta stilling til de kommende utsagnene.

BI Norwegian Business School

Med utgangspunkt i annonsen du akkurat så, ta stilling til følgende utsagn angående Vipps:

	Ingen grad	Liten grad	Verken/ eller	Noe grad	Stor grad
Jeg oppfatter merkevaren Vipps som konsistent over tid	○	○	○	○	○
Jeg oppfatter merkevaren Vipps som tro mot seg selv	○	○	○	○	○
Vipps tilbyr kontinuitet	○	○	○	○	○
Vipps har et tydelig konsept som de følger	○	○	○	○	○
Merkevaren Vipps er ulik andre merkevarer	○	○	○	○	○
Merkevaren Vipps er unikt	○	○	○	○	○
Merkevaren Vipps skiller seg ut fra andre merkevarer	○	○	○	○	○
Vipps har vist at de holder det de lover	○	○	○	○	○
Vipps sine løfter er troverdige	○	○	○	○	○
Vipps sine løfter er pålitelige/til å stole på	○	○	○	○	○
Vipps virker ikke overfladisk	○	○	○	○	○
Vipps gjør et genuint inntrykk	○	○	○	○	○
Vipps gir inntrykk av å være naturlig	○	○	○	○	○

Norwegian Business School

Med utgangspunkt i annonsen du akkurat så, ta stilling til følgende utsagn angående Vipps:

	Ingen grad	Liten grad	Verken/ eller	Noe grad	Stor grad
Vipps er et merke som svarer til forventningene mine	○	○	○	○	○
Jeg føler meg trygg med Vipps sin merkevare	○	○	○	○	○
Vipps er en merkevare som aldri skuffer meg	○	○	○	○	○
Vipps garanterer tilfredshet	○	○	○	○	○
Vipps sitt varemerke vil håndtere mine problemer på en ærlig og oppriktig måte	○	○	○	○	○
Jeg kan stole på Vipps for å løse problemer med brukeropplevelsen	○	○	○	○	○
Vipps ville gjøre det som er mulig for å gjøre meg tilfreds	○	○	○	○	○
Vipps vil gi meg en form for kompensasjon for problemer med tjenesten	○	○	○	○	○

→

Hvor godt eller dårlig syns du annonsen formidler at du med Vipps enkelt kan overføre penger mellom personer?

- ◯ Svært dårlig
- ◯ Dårlig
- ◯ Verken/ eller
- ◯ Godt
- ◯ Svært godt

I hvilken grad passer denne annonsen inn blant Vipps sine tidligere annonser og markedsføringskampanjer?

- ◯ Ingen grad
- ◯ Liten grad
- ◯ Verken/ eller
- ◯ Noe grad
- ◯ Stor grad

Var ditt førsteinntrykk at annonsen var KI-generert?

- ◯ Ja
- ◯ Nei

Ta stilling til disse utsagnene angående KI:

	Ingen grad	Liten grad	Verken/ eller	Noe grad	Stor grad
I hvilken grad bruker du KI-verktøy i din hverdag?	○	○	○	○	○
I hvilken grad har du tidligere erfaring med bruk av KI-verktøy?	○	○	○	○	○

→

Norwegian Business School

Hvilken landsdel bor du for øyeblikket i?

- ◯ Sørlandet
- ◯ Østlandet
- ◯ Trøndelag
- ◯ Nord-Norge
- ◯ Vestlandet

Hvilket kjønn identifiserer du deg som?

- ◯ Mann
- ◯ Kvinne
- ◯ Annet

Hva er din alder? (skriv som helt tall, eks: 43)

Hva er din personlige omtrentlige årlige inntekt før skatt?

- ◯ 0 - 299 999NOK
- ◯ 300 000NOK - 499 999NOK
- ◯ 500 000NOK - 699 999NOK
- ◯ 700 000NOK - 899 999NOK
- ◯ 900 000NOK - 1 099 999NOK
- ◯ 1 100 000NOK - 1 599 999NOK
- ◯ 1 600 000NOK eller mer

Hva er din nåværende arbeidsstatus?

- ◯ Fulltidsansatt
- ◯ Deltidsansatt
- ◯ Student med jobb
- ◯ Student uten jobb
- ◯ Pensjonist
- ◯ Arbeidsledig

Hva er din høyeste fullførte utdanning?

- ◯ Grunnskole
- ◯ Videregående
- ◯ Bachelor
- ◯ Master/profesjonsstudium
- ◯ Doktorgrad

Norwegian Business School

Takk for at du tok deg tid til å svare på denne spørreundersøkelsen!

Til slutt vil vi opplyse om at bildet i annonsen du ble eksponert for i undersøkelsen var generert av KI. Målet med vår forskning er å forstå folks oppfattelsen av KI-generert reklameinnhold. Vi verdsetter ditt bidrag til vår undersøkelse.

Appendix 27: Picture generated by Adobe Firefly