

Bringing Brands to Life:

A study on the impact of brand anthropomorphism and personalization on
advertisement attitudes in a social media context

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Executive summary

Brand anthropomorphism is a frequently used marketing strategy to enhance a brand's humanlike features and characteristics. Businesses use brand anthropomorphism to increase their brands' appeal, likeability, and memorability for consumers. They do this by imbuing a brand with human qualities like emotions, personality traits, and behaviors to build an emotional connection with consumers.

Brand anthropomorphism is becoming prevalent in the digital driven-marketplace, where its ability to improve social relationships between brands and consumers provides a more personalized experience. This personalized experience is further enhanced by vast amounts of consumer data which can create tailored messages that encourage a two-way relationship between brand and consumer. However, academic research is silent concerning the effects of combining brand anthropomorphism and personalization on advertising outcomes.

Additionally, the existing research is currently limited and presents conflicting results. Thus, this study investigates whether brand anthropomorphism and personalization influence advertising attitudes and whether brand trust and privacy concerns mediate this relationship.

Using a deductive approach and a 2×2 factorial survey-based experiment (N=203), the underlying hypotheses are tested through quantitative analysis. The results suggest no effects on advertisement attitudes, neither from brand anthropomorphism, personalization, or the combination. Therefore, our findings suggest that brand anthropomorphism and personalization do not positively affect advertisement attitudes in social media marketing. Instead, the findings indicate that brand anthropomorphism and personalization outcomes are complex and context-dependent. Our findings hold valuable theoretical and practical implications and relevant suggestions for future research.

Keywords: Brand Anthropomorphism, Personalization, Privacy Concerns, Brand Trust, Advertisement Attitudes.

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Definition of Concepts

Anthropomorphism: The tendency to imbue humanlike non-physical or physical features, characteristics, emotions, attributes, and behavior to nonhuman agents (Epley et al., 2007).

Brand Anthropomorphism: A brand positioning strategy drawing on “humanlike visual and verbal factors to enhance consumer attributions of humanlike features and characteristics to a brand” (Fazli-Salehi Reza et al., 2022, p.13).

Brand trust: “The willingness of the average consumer to rely on the ability of the brand to perform its stated function” (Chaudhuri & Holbrook, 2001, p.82).

Personalized marketing: A marketing strategy where companies proactively tailor products and experiences to individuals based upon their personal and preference information (Chellappa & Sin 2005).

Privacy concerns: Relating to personalized marketing, consumers experience privacy concerns as businesses take ownership of consumers’ personal information, leading to a feeling of lack of control and loss of privacy (Aiolfi et al., 2021).

1. Introduction

The introduction of this thesis covers a background to brand anthropomorphism, personalized marketing, and the problem area of the limited and contradicting academic research findings. Also, the research focus, expected knowledge contribution, and thesis disposition are outlined.

1.1 Background to Brand Anthropomorphism

It is common for people to notice human features in nature, such as on the moon and faces in the clouds. One can attribute human emotions, goals, and beliefs to animals, for example, by comparing the dynamics between birds to the love between a couple (Aggarwal & McGill, 2007). This phenomenon is called *anthropomorphism* (Epley et al., 2007). Likewise, people notice human features in brands. *Brand anthropomorphism* refers to people seeing a brand as human and imbuing it with human characteristics (Sharma & Rahman, 2022). Today, brand anthropomorphism is a frequently used marketing strategy to enhance a brand's humanlike features and characteristics (Fazli-Salehi Reza et al., 2022). Businesses use brand anthropomorphism to increase their brands' appeal, likeability, and memorability for consumers. They do this by imbuing a brand with human qualities like emotions, personality traits, and behaviors to build an emotional connection with consumers (Sharma & Rahman, 2022). Brand anthropomorphism can be found in visual and verbal cues, such as brand characters, mascots, spokespeople, communication, packaging, and logos (Puzakova et al., 2013; Sharma & Rahman, 2022). For instance, Colgate and Pepsodent have adopted a 'smiling' feature to their logos, which activates human schemas and leads to consumers seeing the brand as human (Agrawal et al., 2020).

Customers are increasingly fond of humanized brands as they attach importance to brands whose values align with theirs. Brands such as Patagonia, Nike, and TOMS have successfully positioned themselves around human values such as harmony, seeking pleasure, and social welfare (Voorn et al., 2021). The need for more authentic, humanlike brands is becoming more critical as customers nowadays relate to brands in the same way they relate to people (Fournier, 1998). Anthropomorphized brands can instill trust in the consumer, which is

essential in today's environment, where consumers are becoming more hesitant toward brands (Portal et al., 2019).

Today, online marketing and social media have blended commercial and personal spaces. On Facebook, Instagram, and Twitter, updates from friends, brands, and liked pages appear side-by-side, creating a unified newsfeed (Dahl, 2018). Companies have adopted their marketing strategies according to this new environment, using anthropomorphic communication. For instance, Planters' mascot, Mr. Peanut, is an anthropomorphized peanut informing his fifty thousand followers about his activities, such as 'working out' and 'having lunch in the park.' This new 'human' way of communicating and active consumer engagement alters the relationship between brands and consumers, which is comparable to the application of anthropomorphic communication techniques. This 'complete humanization of the brand' goes beyond the notion of anthropomorphism seen in conventional media (Dahl, 2018).

Brand anthropomorphism's ability to improve social relationships between brands and consumers provides a more personalized experience (Kim et al., 2020). Especially in social media, where the vast amount of data available for organizations to use in personalizing social media ads can enhance the ability to create tailored messages to appear more participative and encourage dialogue between consumers and organizations (Shanahan et al., 2019). The essence of *personalization* lies in the ability to tailor a company's marketing efforts to the individual consumer, which benefits both the firm and the consumer (Puzakova et al., 2013). With the surge in online interactions since the onset of the pandemic, consumers' opinions have shifted regarding how they expect to receive commercial efforts from firms. Consumers today demand that firms deliver personalized and relevant interactions (Arora et al., 2021).

However, as personalization requires businesses to collect consumer data to generate consumer insights, privacy, and data protection questions have risen. It may be considered an invasive tactic resulting in negative perceptions of firms (Aguirre et al., 2015). As businesses take ownership of consumers' personal information, consumers feel a lack of control over personal data and a loss of privacy (Aiolfi et al., 2021). The traction between personalization's positive and negative outcomes results in the *personalization paradox*.

While personalization provides relevance and utility for consumers, it also raises privacy concerns (Aguirre et al., 2015). Yet, brands have the possibility to balance out consumers' privacy concerns resulting from personalized experiences. Consumers seem more accepting of vulnerable feelings due to personalization if they have more brand trust, and trust-building strategies can balance out adverse reactions due to vulnerability (Urban et al., 2009; Bleier & Eisenbeiss, 2015; Chellappa & Sin, 2005).

Brand anthropomorphism is on the rise in today's digital marketplace, where extensive consumer data allows customized messages that promote a two-way interaction between the brand and the consumer, enhancing the personalized experience. The interplay of the two strategies may further enhance their effectiveness in driving consumer behavior. However, companies must pay attention when using brand anthropomorphism in their marketing campaigns and consider how it may or may not alleviate the risks of personalization. Thus, it is essential to understand how combining these two marketing strategies affect advertising outcomes.

1.2 Problem Area: Combining Brand Anthropomorphism and Personalized Marketing

Brand anthropomorphism is gaining traction in marketing research and practice. For creating humanlike brand resemblance, previous scholars have investigated the function of product attributes, such as product design, features, or shapes (Aggarwal & McGill, 2007), packaging attributes (Kniazeva & Belk, 2010), brand design elements such as logos (Daryanto et al., 2022), and spokescharacters (Zhou et al., 2021). Findings imply primarily positive effects. These are, for instance, improved consumer-brand relationships (Chen & Lin, 2021), brand trust (Möller & Herm, 2013), increased brand liking (Orth et al., 2017), positive sentiments (Delbaere et al., 2011), favorable attitudes (Aggarwal & McGill, 2007), increased purchase intentions (Chandler & Schwarz, 2010), and improved willingness to pay (Yuan & Dennis, 2019). Some adverse effects are negative brand evaluations when facing wrongdoings and a diminished sense of agency (Puzakova et al., 2013), greater feelings of betrayal (Alvarez & Fournier, 2016), as well as negative reactions to anthropomorphized brands based on consumerism, financial status and need for individuality (Kim & Kramer, 2015; Kim & McGill, 2018). Brand anthropomorphism is becoming increasingly prevalent in the

digital-driven marketplace, where vast amounts of consumer data can create tailored messages that encourage a two-way relationship between brand and consumer and enhance the personalized experience (Kim et al., 2020; Shanahan et al., 2019).

Similarly, personalized marketing, which aims to provide a customized consumer experience, has been the subject of research by several scholars. Research has been conducted on adaptive personalization (Kazienko & Adamski, 2007), digital interactive television advertising (Lekakos & Giaglis, 2004), e-commerce sales promotions (Changchien et al., 2004), web advertising (Kazienko & Adamski, 2007), and one-to-one marketing (Hung, 2005). Positive effects of personalization are brand love (Tran et al., 2022), brand engagement (Shanahan et al., 2019), and purchase intentions (Li, 2016). Negative effects of personalization are, for instance, privacy concerns (Aguirre et al., 2015), negative perceptions, and feelings of vulnerability (Sutanto et al., 2013).

Despite today's widespread usage of combining brand anthropomorphism and personalization and research on the two marketing strategies independently, there is a significant lack of research on the effects of using them together. Additionally, the limited research findings are contradicting. Some scholars have found that brand anthropomorphism, in combination with personalization, leads to more negative brand perceptions, increases privacy concerns, and minimizes willingness to disclose intimate information (Puzakova et al., 2013; Gretry et al., 2017). However, Zhu & Kanjanamekanant (2021) found that perceived personification positively affects willingness to disclose information, improving ad effectiveness and purchase intentions. Likewise, Ischen et al. (2020) found that anthropomorphized chatbots lead to increased information disclosure and favorable attitudes, which also was prominent for anthropomorphized websites.

The limited research and conflicting results pose an issue; it is not apparent what the outcomes are from the combined use of brand anthropomorphism and personalization. Given the substantial need for examples and theories related to brand anthropomorphism and personalized marketing, further research is required.

1.3 Purpose

Considering the challenges, opportunities, and theoretical gaps discussed above, we seek to explore the components of brand anthropomorphism and personalization from a consumer marketing perspective. This thesis investigates how brand anthropomorphism and personalized marketing affect consumers' attitudes toward advertisements in a social media context. Although brand anthropomorphism and personalization likely influence one another, these elements have yet to be studied together. According to previous research, brand trust is related to both brand anthropomorphism and personalization. Further, privacy concerns are a natural effect of personalization due to the collection of consumer data, thus making them essential to understanding in the context of brand anthropomorphism and personalization. In addition, attitudes are typically seen as suitable markers of the effectiveness of advertising. Including advertisement attitudes as a dependent variable is suitable to help understand the human process through which advertising influences consumer behavior. Attitudes toward advertisements are proven to influence brand attitude and purchase intentions, thus making it a variable that can guide the development of successful advertising campaigns and improve overall marketing outcomes (MacKenzie et al., 1986). The advertisement attitude variable will be discussed in further detail in Chapter 2.

Given this purpose, our research seeks to answer the following question:

Can the use of (a) brand anthropomorphism and (b) personalization have a positive effect on consumers' attitudes toward advertisements?

1.4 Expected Knowledge Contribution

Scholars have repeatedly proved the impact of brand anthropomorphism in marketing. However, despite the progress in brand anthropomorphism literature, research on brand anthropomorphism in online marketing is significantly limited and requires further exploration (Sharma & Rahman, 2022). One area where brand anthropomorphism lacks research is in conjunction with personalized marketing. Considering these subjects together becomes interesting since brand anthropomorphism can help generate a more personalized experience (Kim et al., 2020).

First, this study extends the limited research on understanding the combined use of brand anthropomorphism and personalization. Our study is among the first to consider the combination of these strategies and their effects on consumer attitudes. Thus, we intend to contribute to brand anthropomorphism research by investigating consumers' attitudes toward an ad when combining brand anthropomorphism and personalization. Second, we will assess the mediating roles of brand trust and privacy concerns, explaining the mechanisms through which brand anthropomorphism and personalization affect attitudes toward an ad.

Third, we aim to provide practical implications for marketers trying to improve the effectiveness of their advertising. With the new 'human' way for brands and consumers to communicate online, brand anthropomorphism is becoming evident in the online setting (Dahl, 2018). Brand anthropomorphism also helps improve personalized experiences (Kim et al., 2020), and the demand for personalization is increasing as consumers value communication that suits them (Arora et al., 2021). Hence, looking at brand anthropomorphism and personalization allows us to provide practical implications based on the effects of utilizing these strategies together.

To conduct our research, we draw upon previous research on the relationship between brand anthropomorphism and personalization, as well as theories on brand anthropomorphism and theories on personalization that explain the proposed relationship between the two marketing strategies. In addition, we consider theories on attitudes, brand trust, and privacy concerns to understand outcomes from combining the strategies and the mediating factors on the attitudes toward advertisements in the research setting. We have performed quantitative research with valid data from 203 respondents to understand the effects. By doing so, this study extends the research concerning brand anthropomorphism and personalization by investigating the attitudes resulting from the combined use of these two strategies.

1.5 Disposition

The thesis is divided into five main chapters, each beginning with a summary that directs the reader to its sub-chapters and key takeaways. After the introduction chapter, chapter two offers a theoretical background on previous research on brand anthropomorphism and

personalization and a theoretical framework that presents and investigates current theories on brand anthropomorphism, attitudes, personalization, privacy concerns, and brand trust. Lastly, the hypotheses formulated based on the theoretical implications discussed concludes the chapter.

Chapter three presents the method of the thesis, including everything from research design and methodology to survey design, tools used for analysis, and a discussion of the results' reliability, validity, and potential criticism. Chapter four then contains the data results and analysis and the findings from the hypothesis testing. The results are discussed in chapter five, including theoretical and practical implications. The chapter ends with a review of the study's limitations and the researchers' recommendations for future research.

2. Theory and Hypotheses Formulation

This chapter presents the theoretical framework and basis for our hypothesis generation. The study examines the relationship between brand anthropomorphism, personalization, attitudes, privacy concerns, brand trust, and their impact on attitudes toward advertisements. The chapter begins with a literature review that explores brand anthropomorphism and personalization and provides an overview of current research findings. Next, we outline the theories of anthropomorphism, brand anthropomorphism, brand trust, attitudes, personalization, and privacy concerns. Our hypotheses are presented throughout the chapter, derived from the explored theories.

2.1 Theoretical Background and Research Gap

As explained in the previous chapter, limited research has focused on combining brand anthropomorphism and personalized marketing. However, some studies have explored related topics that can illuminate the subject.

First, brand anthropomorphism is closely related to the concepts of brand personality and brand personification. Brand personality is based on the concept that brands can possess human-like personality characteristics (Aaker, 1997). Brand personification is the process of “imbuing trademarked or otherwise proprietary-named products and services with a human form and/or human attributes, including a generally distinctive physical appearance and personality” (Cohen, 2014, p.3). In essence, brand personality and brand personification use anthropomorphism as a foundation for understanding the constructs (Sharma & Rahman, 2022). Therefore, they can help understand the theoretical underpinnings of brand anthropomorphism and personalization, and its potential effects on consumer behavior, thus aiding in developing this research’s hypotheses.

Relating to brand personality, Vinhas Da Silva and Faridah Syed Alwi (2006) explain how using personalized marketing efforts positively affects brand personality perceptions in online marketing. Zhu & Kanjanamekanant (2021) found that perceived brand personification positively relates to perceived privacy, where perceived privacy was considered the extent to which the consumer felt comfortable disclosing her information. The positive relationship

between personification and perceived privacy was then found to improve ad effectiveness and purchase intentions (Zhu & Kanjanamekanant, 2021). Similarly, another stream of research found that a way to allay privacy concerns in personalized advertisements is through building strong consumer-brand relationships or human-like friendships, which can moderate consumers' feelings of intrusiveness (Jackson, 2018).

Second, previous research on the combined use of brand anthropomorphism and personalization generally focuses on anthropomorphized recommendation agents, anthropomorphic language in social media, robots, and AI. While the above research on brand personality and personification has highlighted the benefits of personalization, another body of research has contradicted these findings. This research suggests combining brand anthropomorphism with personalization or privacy concerns can lead to adverse outcomes. For instance, Puzakova et al. (2013) found that customized messages from an anthropomorphized recommendation agent negatively affect attitudes toward advertisements. Similarly, another study found that incorporating anthropomorphic elements in robots exacerbates consumers' privacy concerns in online marketing (Xie et al., 2020). Barcelos et al. (2018) argue that adopting a humanized tone of voice on social media sites raises customers' perception of risk associated with anthropomorphism and decreases consumers' propensity to purchase in circumstances when they are involved. Another experiment found that brand anthropomorphism decreases the will to disclose private personal information (Gretry et al., 2017).

Moreover, studies on anthropomorphized AI show, for example, that humanized artificial intelligence assistants, such as Amazon's Alexa, may negatively affect users and create further privacy concerns (Uysal et al., 2022). Comparably, Xie and Lei (2022) show that consumers experience deeper privacy concerns when AI robots are anthropomorphized. The common denominator of studies showing negative effects resulting from anthropomorphism and privacy concerns derives from the fact that humanized brands and entities are regarded as mindful and capable of assessing others, which can lead to the perception of being scrutinized, causing negative feelings (Waytz et al., 2010a). However, Ischen et al. (2020) found that human-like chatbots lead to more information disclosure, lower privacy concerns, and positive attitudes.

Notably, the related research on combining brand anthropomorphism and personalization is limited and contradictory, suggesting that more research is required to increase the field's understanding. Therefore, based on this research, one should be careful to conclude the combination of brand anthropomorphism and personalization since it does not guide the outcomes. A literature gap exists on the effects of combining brand anthropomorphism and personalization, and more research is needed to understand its implications.

2.2 Theoretical Framework and Hypotheses Formulation

2.2.1 Anthropomorphism

People frequently observe human traits in the natural world, such as faces in the clouds and on the moon. The scientific expression for this phenomenon is anthropomorphism (Aggarwal & McGill, 2007). Academics have observed anthropomorphism in numerous disciplines of study, for instance, in psychology (Epley et al., 2007) and in marketing (Aggarwal & McGill, 2012). The collective definition of anthropomorphism is the tendency to imbue humanlike non-physical or physical features, characteristics, emotions, attributes, and behavior to nonhuman agents (Epley et al., 2007). Empirical studies have shown individuals giving anthropomorphic descriptions of entities ranging from computer-animated blobs, animals, and geometric shapes to God (Epley et al., 2007).

The phenomenon of anthropomorphism is comparable to a cognitive bias, suggesting that people elicit categorical knowledge about humans, particularly egocentric knowledge about the self, as an inductive base for anthropomorphism (Epley et al., 2007). In addition, anthropomorphic tendencies can be derived from the need for people to satisfy effectance motivation, meaning the motivation of wanting to attain mastery of one's environment (Waytz et al., 2010b). Specifically, humans tend to anthropomorphize nonhuman entities to interpret their surrounding environment more easily (Guthrie, 1997). Puzakova et al. (2013) discuss the underlying reasons for anthropomorphism, connecting it to the activation of human schemas. This process is initiated automatically, by which subtle anthropomorphic cues stimulate the activation and projection of readily available human schemas onto the anthropomorphized entity. Since the tendency to anthropomorphize nonhuman entities is a prevalent human behavior, it is no surprise that humans also anthropomorphize brands.

2.2.2 Brand Anthropomorphism

In the marketing field, companies increasingly adopt the phenomenon of anthropomorphism to create humanlike brands. This is done by imbuing the brand with values, a sense of purpose, communication, and interactions, which forms a distinct personality and is proven to be a successful way of increasing brand attitudes and loyalty (Sharma & Rahman, 2022).

Thus, brand anthropomorphism is considered a brand positioning strategy drawing on “humanlike visual and verbal factors to enhance consumer attributions of humanlike features and characteristics to a brand” (Fazli-Salehi Reza et al., 2022, p.13). Companies use brand anthropomorphism to make their brands more relatable, likable, and memorable to their target audience. They create an emotional connection with consumers by giving a brand humanlike characteristics such as emotions, personality traits, and behaviors (Sharma & Rahman, 2022). From the consumer point-of-view, brand anthropomorphism relates to customers perceiving a brand as a human person and imbuing it with human characteristics (Sharma & Rahman, 2022).

Based on the literature review by Sharma and Rahman (2022), brand anthropomorphism can be divided into designed or perceived brand anthropomorphism, where designed brand anthropomorphism refers to firms constructing humanlike brands, forming a branding positioning strategy perspective. From this dimension, firms design and manage anthropomorphic stimuli (Sharma & Rahman, 2022). Brands may resemble humans concerning internal and external traits, emotions, cognitions, and behaviors (Golossenko et al., 2020). To create an anthropomorphized brand, firms may use elements from the marketing mix (i.e., product, price, packaging, people, promotion, processes, or physical evidence). One can create human resemblance by mimicking human physical characteristics (e.g., facial features) or symbolic design attributes which are associated with human traits (e.g., gender or personality) (Sharma & Rahman, 2022). These anthropomorphic cues can be verbal and visual and communicated through communication strategy (Wu et al., 2023).

Instead, perceived brand anthropomorphism proceeds from a psychological consumer perspective, referring to how consumers experience brands as humanlike (Sharma & Rahman, 2022). Consumers make sense of anthropomorphic cues, and psychological motives are the basis behind perceived brand anthropomorphism (Sharma & Rahman, 2022). Therefore,

although managers can design anthropomorphic cues, it is not given that the consumer will interpret the cues as anticipated (Sharma & Rahman, 2022).

Consumers are involved in developing and realizing anthropomorphic brand identities and are dependent on how they experience and interpret anthropomorphic stimuli. They may have motivations for anthropomorphizing brands, and the interpretation of anthropomorphic cues depends on information type and processing (Sharma & Rahman, 2022). Consumers tend to be more comfortable with companies that exhibit human characteristics since most people who long for more personal connections utilize brands to bridge this gap (Guthrie, 1997). Anthropomorphizing brands thus may fulfill social needs by facilitating consumer-brand relationships and forming perceived humanlike connections. The satisfaction of social connections is part of the psychological motives behind why consumers anthropomorphize brands (Epley et al., 2007; Shaman & Rahman, 2022).

Additionally, seeing brands as humanlike can satisfy a desire to comprehend and interact with them by making it easier to make sense of the brand's actions and reducing uncertainty (Sharma & Rahman, 2022). Brands aid in expanding consumers' sense of self as a connection forms with the consumers' perceived identity, which increases anthropomorphic tendencies. (Sharma & Rahman, 2022). However, different mental processes may be activated depending on the nature of everyday interactions with the brand and the different stimuli and information the customer receives. These psychological processes could be imagination, perceived sense of self, or egocentric projections of self, which stimulates cognitive understanding of unobservable brand characteristics. Consumers may also use prior information, such as first impressions, contextual information, affect, or priming, to interpret stimuli and form brand inferences (Sharma & Rahman, 2022).

In addition to the cognitive sense-making and motivations within the consumer, situational and contextual factors also influence consumers' anthropomorphic perceptions and the outcomes of brand anthropomorphism. These factors could be culture, firm type, or product category. These may make stimuli more recognizable, facilitating anthropomorphic perceptions and creating effects on brand anthropomorphism's evaluation results (Sharma & Rahman, 2022).

2.2.3 Brand Trust as an Effect of Brand Anthropomorphism

Dam (2020) posited that trust is an essential component between consumer and brand, like how trust is vital in a human relationship (Fournier, 1998). According to Portal et al. (2019), anthropomorphized brands can instill trust in the consumer. In addition, through brand anthropomorphism, marketers aim to create humanlike brands described as friendly or trustworthy (Ha et al., 2022). *Brand trust* is defined as “the willingness of the average consumer to rely on the ability of the brand to perform its stated function” (Chaudhuri & Holbrook, 2001, p. 82). It is critical for establishing brand loyalty and brand-consumer relationships (Samarah et al., 2022).

Several scholars have studied the function of anthropomorphism in increasing brand trust. Waytz et al. (2014) found that technological products that appear humanlike may increase trust as an anthropomorphized product is considered capable of doing a better job than non-humanlike ones. In addition, Cheng et al. (2022) found that anthropomorphic attributes such as warmth and competence positively affect consumers’ perceived trust in chatbots. Furthermore, research suggests that some aspects of brand personality positively influence brand trust (Sung & Kim, 2010; Louis & Lombart, 2010). As anthropomorphism is an underlying factor behind brand personality (Aaker, 1997), it is conceivable that brand anthropomorphism affects trust. This reasoning is supported by Golossenko et al. (2020), who found that brand anthropomorphism positively affects brand trust. Likewise, although studied in a charity organizational context, Ha et al. (2022) also found support for the positive relationship between brand anthropomorphism and brand trust. In line with these findings, we hypothesize the following:

H1: Brand anthropomorphism increases brand trust.

Previous research and theories propose that brand anthropomorphism positively impacts brand and advertisement attitudes (Sharma & Rahman, 2022). To properly analyze the effect of brand anthropomorphism and personalization on advertisement attitudes, we will next explore the theoretical aspects and sources of attitudes in general and toward advertisements.

2.2.4 Attitudes

An attitude is defined as “the predisposition of the individual to evaluate some symbol or object or aspect of this world in a favorable or unfavorable manner” (Katz, 1960, p. 168).

Further, Katz (1960) explains how an opinion is a verbal voicing of an attitude, although an attitude can also become apparent in a non-verbal way, for example, through actions.

Attitudes are described as a general evaluation of objects (Lee et al., 2015), reflecting the extent to which the response to the object is either positive and approach-oriented or negative and avoidance-oriented (Eaton et al., 2008). In addition, Lee et al.’s (2015) research summary shows that the degree of favorability toward objects depends on individuals’ beliefs, feelings, and prior experiences of the objects in question.

Eagly and Chaiken (1993) present a tripartite view of attitudes, suggesting that attitudes are built from three components: affection, cognition, and behavior, or a combination of all three. This tripartite view on attitudes has been suggested in numerous conceptualizations of attitude theory (Lee et al., 2015; Kwon & Vogt, 2010). Eagly and Chaiken (1993) explain how the affective component of an attitude is based on emotional experiences or preferences. Consumers with positive affective reactions to an experience are likelier to evaluate an attitude object more favorably compared to consumers with negative affective reactions (Eagly & Chaiken, 1993). The cognitive component of an attitude refers to the individual’s processing of information concerning the attitude object and explains how the individuals form their beliefs (Eagly & Chaiken, 1993). Lastly, the behavioral component of an attitude consists of overt actions that an individual has concerning an attitude object. Eagly and Chaiken (1993) explain how attitudes originate from past behavior influenced by direct and indirect experiences and that people tend to form attitudes consistent with their prior behavior. Generally, when people hold a positive attitude toward an object, their attitudinal components tend to align. The cognitive, affective, and behavioral aspects are collectively favorable toward the object in question. On the other hand, a negative attitude toward an object builds on unfavorable affective, cognitive, and behavioral components (Lee et al., 2015).

2.2.5 Attitudes Toward Advertisements

Measuring attitudes is commonly regarded as a suitable way of measuring the effectiveness of advertising efforts. Looking at advertisement attitudes allows an understanding of the human process through which advertising influences consumer behavior. The variable is relevant since advertisement attitudes are proven to influence brand attitudes and purchase intentions. Hence, it is a variable capable of guiding successful advertising campaigns' development and improving overall marketing outcomes (MacKenzie et al., 1986).

Lutz et al. (1983) present a model describing five potential sources of an individual's attitude toward an advertisement. These are (1) the credibility of the ad; (2) ad perception; (3) attitude toward the advertiser; (4) attitude toward advertising in general; and (5) the recipient's general affective state at the time of the ad exposure.

The *Credibility of the Ad* concerns how truthful or believable the receiver of the ad finds the claims made about the brand and is considered one aspect of Ad Perceptions. Lutz et al. (1983) propose three underlying determinants of Ad Credibility: (a) the perceived claim discrepancy of the ad; (b) the credibility of the advertiser; and (c) the credibility of advertising in general. Receivers of an ad are likely to recognize a relationship between the credibility of a given advertiser and the credibility of the advertisements from that advertiser (Lutz et al., 1983).

Ad Perception influences the attitude toward an ad in a central processing mode, where the advertisement attitude is formed based on perception and analysis of the ad. Lutz et al. (1983) explain that many other perceptions than credibility affect a person's attitude toward an ad and present four perceptual dimensions that have been shown to influence attitudes toward advertisements. These four dimensions are annoying, enjoyable, informative, and offensive. Other researchers have found these perceptual dimensions relevant factors in forming advertisement attitudes. Wells et al. (1971) have identified six factors affecting advertisement attitude: humor, vigor, sensuousness, uniqueness, personal relevance, and irritation.

Attitude toward the advertiser concerns the receiver's affective feelings about the advertiser behind the ad (Lutz et al., 1983). This process is described as a straightforward generalization

of effect, where the feelings about the advertiser affect the feelings about the ad. Lutz et al. (1983) describe this process as automatic with limited cognitive processes from the receiver. An individual's perception of the advertiser is believed to be the underlying factor of advertiser attitudes. Some key perceptual dimensions of the advertiser include attractiveness, reputability, and similarity (Lutz et al., 1983).

Attitude toward advertising in general refers to the receiver's affective response to advertising in general and is automatically transferred to an individual's attitude toward any specific ad (Lutz et al., 1983).

Recipients' general affective state or '*mood*' concerns the general affective state of the ad receiver at the time of ad exposure. These feelings are believed to transfer to and affect the attitude toward the ad. The sources that determine peoples' affective state are individual differences and the reception context, for example, concerning the nature of the exposure, e.g., if the ad has an intrusive or customer-instigated exposure resulting from an information search (Lutz et al., 1983).

Lutz et al. (1983) explain how *Ad Credibility* and *Ad Perceptions* affect individual attitudes toward an ad through central cognitive processing, where attitudes are formed based on perception and analysis of the ad. In contrast, *Attitude toward the advertiser*, *Attitude toward advertising in general*, and recipients' '*Mood*' affects advertisement attitude through peripheral processing, with a mechanism that transfers affect rather than elaborate cognitive processing (Lutz et al., 1983).

2.2.6 Brand Trust and its Effect on Advertisement Attitude

Lutz et al. (1983) posited that a consumer's evaluation of a brand significantly impacts their opinion of an advertisement, with the individual's perception of the advertiser as the fundamental driver of attitudes toward an ad. Likewise, consumers with positive affective reactions to an experience are likelier to evaluate an attitude object more favorably (Eagly & Chaiken, 1993). In other words, consumers' positive attitudes toward brands are expected to generate positive attitudes toward ads. In addition, Rammile (2015) found that trust is essential in generating positive brand attitudes. Thus, brand trust is predicted to affect the

individual's perception of the advertiser and therefore affect a consumer's attitude toward an ad.

As explained in section 2.2.3, brand anthropomorphism can increase brand trust. In addition, previous research shows that brand anthropomorphism can lead to favorable attitudes (Aggarwal & McGill, 2007). Given the relationship between brand anthropomorphism, brand trust, and attitudes, we suggest that an individual's attitude formation can be influenced by applying brand anthropomorphism in advertising, where brand trust becomes a significant factor in this attitude formation. Accordingly, our second hypothesis reads as follows.

H2: A positive relationship exists between brand trust and attitudes toward an advertisement.

Trust has also shown importance in personalization because of its ability to mitigate feelings of vulnerability and privacy concerns (Urban et al., 2009). Therefore, we will now present the main aspects of personalization, including its purpose, advantages, and risks.

2.2.7 Personalization

In marketing, there are many definitions of *personalization* (Fan & Poole, 2006). Surprenant and Solomon (1987, p.87) define personalization as “any behaviors occurring in the interaction intended to contribute to the individuation of the customer.” Another definition is made by Chellappa and Sin (2005, p.181), who define personalization as “the ability to proactively tailor products and product purchasing experiences to tastes of individual consumers based upon their personal and preference information.” As a marketing strategy focused on the consumer, personalization aims to deliver the right content to the correct receiver at the right time (Aguirre et al., 2015).

By leveraging consumers' data, personalization allows businesses to improve their services by increasing accuracy, resulting in advantages for both firms and their customers. For customers, personalization allows better-tailored products and services to their needs, improved convenience, and reduced cognitive overload (Aguirre et al., 2015). Studies have also shown that high-personalized ads increase relevance and positively influence brand attitude and the relationship between personalization and attitude (de Groot, 2022). For firms, personalization allows for better insight into customers' needs, ultimately increasing customer

satisfaction and loyalty. As a result, firms can charge higher prices and improve profitability (Aguirre et al., 2015). Personalization can be a potential source of competitive advantage (Karwatzki et al., 2017).

Firms use personalization routinely. For example, search engines refine users' search results by including their prior search behavior. Moreover, online retailers give personalized recommendations to their customers using collaborative filtering, i.e., based on the user's similarity to other users' preferences (Aguirre et al., 2015). Personalization is also prominent in online advertising through behaviorally targeted advertisements. This strategy includes advertisers basing advertisements on users' online behavior (Boerman et al., 2017). A pattern here is how a fundamental necessity and prerequisite for personalized advertising is companies' gathering of individuals' data. Firms need to be aware of how their customers react to this data collection, as it, according to research, can increase their sense of vulnerability and create privacy concerns (Aguirre et al., 2015).

2.2.8 Privacy Concerns

According to Aguirre et al. (2015), personalized marketing can be either effective or ineffective. The outcome depends on the phenomenon discussed as the personalization paradox, which explains how personalization increases relevance and adoption for the customer, yet, since it requires the collection of personal data, it also increases customers' privacy concerns and sense of vulnerability, resulting in lower adoption rates (Aguirre et al., 2015). Aiolfi et al. (2021) found that consumers solely avoid personalized ads because of privacy concerns. Likewise, Sutanto et al. (2013) describe privacy concerns as one of the central problems for online advertising because of its ability to generate negative perceptions in users and feelings of vulnerability. Collecting personal data may increase skepticism about personalized advertising and questions regarding the persuasive intent of marketers (Aiolfi et al., 2021). If consumers believe the purpose of being manipulative, worries about the invasion of privacy exceed the potential advantages regarding relevance (Ham, 2017). Following previous research, we hypothesize the following:

H3: Personalization increases privacy concerns.

So, what underlies the privacy concerns of individuals and their sense of vulnerability? Partially in line with the tripartite view of attitudes explained in section 2.2.4, there are cognitive and affective theories relating to individuals' privacy concerns and willingness to share their data (Aguirre et al., 2015). Cognitive theories suggest that consumers act as rational economic agents by performing a cost-benefit analysis considering the benefits and risks of sharing their data with firms. Performing this analysis is how they form their perceptions of personalized advertisement (Awad & Krishnan, 2006). In contrast, affective theories argue that consumers form their attitudes instinctively by reacting to a stimulus (Aguirre et al., 2015). Contrasting to cognitive theories, the feeling of vulnerability to personalization and data collection emerges unconsciously, and research suggests that this feeling of vulnerability can shape privacy concerns (Aguirre et al., 2015).

White et al.'s (2008) research on e-mail personalization showed that consumers experience personalization reactance responding to personalized ads if the firm does not explicitly justify the fit between the ad's offer and consumers' characteristics. As a result, the consumers will not respond positively to the ad, negatively affecting their attitude (White et al., 2008). As companies take ownership of the consumers' data, it results in a loss of privacy, ultimately creating privacy concerns. These privacy concerns may lead to negative attitudes toward an advertiser (Aiolfi et al., 2021). Further, increased privacy concerns and feelings of vulnerability can result in lower adoption rates, suggesting it affects a person's attitude toward the ad (Aguirre et al., 2015). With this research in mind, our fourth hypothesis reads as follows:

H4: A negative relationship exists between privacy concerns and attitudes toward an advertisement.

Although not the main focus of this study, other researchers have investigated the effect of utility on privacy concerns. White et al. (2008) found that privacy concerns are more prominent for consumers who perceive an offer as having low utility. Suppose the consumer instead perceives a higher utility of the offer. In that case, the justification of personalization becomes less critical as the personalized ad is less likely to trigger reactance and privacy concerns. In line with these findings, Chellappa and Sin (2005) found that a consumer's privacy concerns begin to be outweighed as the value of the personalized offer increases.

2.2.9 Combining Brand Anthropomorphism and Personalization

As previously mentioned, brand anthropomorphism can increase emotional connections, intensify brand personality perceptions, and generate more favorable attitudes (Puzakova et al., 2013; Aggarwal & McGill, 2007, 2012; Sharma & Rahman, 2022). Brand anthropomorphism can also help foster stronger consumer-brand relationships (Chen & Lin, 2021; Kim et al., 2020) and increase brand trust (Golossenko et al., 2020). As such, creating an emotional connection with consumers by giving a brand human-like characteristic may impact the affective component of how individuals form attitudes.

In personalized marketing, consumers enjoy personalized ads as personalization increases relevance and adoption for the customer. However, personalization also increases customers' privacy concerns and sense of vulnerability, as it requires collecting personal data (Aguirre et al., 2015). Research has found that consumers seem more accepting of these vulnerable feelings due to personalization if they have more brand trust and that trust-building strategies can balance out adverse reactions due to vulnerability (Urban et al., 2009). Creating trust is essential in an online environment because of information asymmetries and uncertainties inherent to the internet (Stewart, 2003).

Additionally, Bleier and Eisenbeiss (2015) found that if a firm is well-trusted, employing high personalization can increase the perceived usefulness of an advertisement without increasing the customer's privacy concerns (Bleier & Eisenbeiss, 2015). They also found that less trusted firms using personalization trigger increased privacy concerns and are found to be less valuable. Since these effects directly impact consumers' click-through intentions and thus the effectiveness of online advertisements, trust is an essential consideration for firms using personalization strategies (Bleier & Eisenbeiss, 2015). In line with this, Chellappa and Sin's (2005) research found that consumers' intention to use personalized services is positively influenced by their trust in the firm. Thus, online actors can strengthen their ability to collect and leverage consumer information through trust-building activities. They found that trust-building factors affect consumers' use of personalized services while decreasing their privacy concerns (Chellappa & Sin, 2005).

According to our first hypothesis, brand anthropomorphism increases brand trust. This aligns with previous research on brand anthropomorphism and its positive effects on brand trust. In

a personalized marketing context, high trust is essential to generate positive advertisement effects (Bleier & Eisenbeiss, 2015) and mitigate privacy concerns and uncertainty (Urban et al., 2009). In addition, previous research suggests that anthropomorphizing brands may satisfy the need to understand and interact successfully with them by improving understanding of their behaviors, which reduces uncertainty and increases confidence in future brand predictions (Sharma & Rahman, 2022). Therefore, one can presume that brand anthropomorphism may improve personalization outcomes. This can be further supported by Jackson (2018), who found that a way to allay privacy concerns in personalized advertisements is through building human-like friendships between consumer and brand. A strong consumer-brand relationship moderates consumers' feelings of intrusiveness (Jackson, 2018). As brand anthropomorphism helps build consumer-brand relationships (Chen & Lin, 2021), we believe that brand anthropomorphism may mitigate privacy concerns in personalized advertising. This reasoning can be supported by Zhu & Kanjanamekanant (2021), whose findings show that personification aids in consumers' willingness to disclose information, leading to improved ad effectiveness.

Altogether, both brand anthropomorphism and personalization may generate positive marketing effects. Personalization increases advertisement relevance, improving attitudes and adoption rates but also increasing privacy concerns. Research shows that trust-building strategies are a way to mitigate these concerns. Since trust is needed to surpass privacy concerns and feelings of vulnerability, brand anthropomorphism's ability to affect brand trust could be considered an effective strategy to reach the positive and mitigate the negative outcomes of personalized marketing. Thus, we believe that combining the two strategies of brand anthropomorphism and personalization will improve advertisement attitudes. Hence, our fifth hypothesis reads as follows:

***H5:** Brand anthropomorphism and personalization will lead to more favorable advertisement attitudes when combined than in isolation.*

2.2.10 Brand Trust and Privacy Concerns as Mediators

Previous research has established a connection between brand trust, brand anthropomorphism, and personalization. As noted, personalization requires collecting individuals' data, leading to privacy concerns. Therefore, it is necessary to comprehend

privacy concerns and brand trust in the context of brand anthropomorphism and personalization, as they play a role in shaping advertisement outcomes.

Baron and Kenny (1986) outline the concept of a mediation variable, which clarifies the underlying mechanism and reasoning for the relationship between the independent and dependent variables. Thus, the mediation variable ultimately contextualizes the reason for the effect. This variable explains the "why" and "how" of the observed effect by acting as a causal outcome of the independent variable and a preceding influence on the dependent variable. The independent variable does not directly affect the dependent variable but through a third variable, a mediator (Baron & Kenny, 1986).

In line with the reasoning above, we believe brand trust mediates attitudes toward an advertisement. Research shows that companies can use anthropomorphism to increase trust and create stronger customer relationships (Möller & Herm, 2013; Golossenko et al., 2020). Theories also suggest that a person's feelings about the advertiser, e.g., trust, is the primary driver of advertisement attitudes (Lutz et al., 1983). Therefore, we believe that a consumer's trust in a brand mediates her attitude toward the anthropomorphized advertisement.

Further, we believe a consumer's privacy concerns mediate her attitude toward an advertisement. Since privacy concerns result from personalization (Aguirre et al., 2015), and a person's experienced privacy concerns can negatively affect their attitude toward the personalized ad (White et al., 2008), we believe privacy concerns mediate a person's attitude toward the personalized advertisement.

Hence, our sixth hypothesis reads as follows:

H6: The positive effect of brand anthropomorphism and personalization on advertisement attitudes is mediated by brand trust and privacy concerns.

2.3 Summary of Hypotheses

This section summarizes our hypotheses and conceptualizes our theoretical framework. See Table 1 below for an overview of the hypotheses.

H1	Brand anthropomorphism increases brand trust.
H2	A positive relationship exists between brand trust and attitudes toward an advertisement.
H3	Personalization increases privacy concerns.
H4	A negative relationship exists between privacy concerns and attitudes toward an advertisement.
H5	Brand anthropomorphism and personalization will lead to more favorable advertisement attitudes when combined than in isolation.
H6	The positive effect of brand anthropomorphism and personalization on advertisement attitudes is mediated by brand trust and privacy concerns.

Table 1: Summary of Hypotheses

In addition, see Figure 1 below to conceptualize our theoretical framework. The figure visualizes the hypothesized relationships between the impact of brand anthropomorphism and personalization on attitudes toward an ad and trust and privacy concerns as mediators.

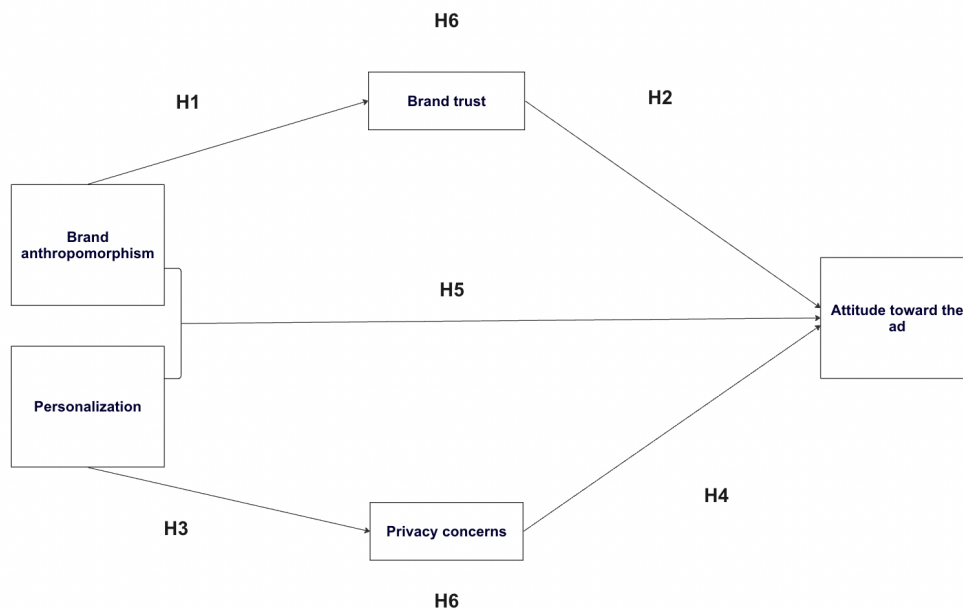


Figure 1: Conceptual Framework of Theory

3. Method

This section outlines the scientific approach, research design, and methodology used in the study. It includes a detailed description of both the pre-study and main experiment. The process for organizing and analyzing the data is presented, followed by a discussion of the study's validity and reliability. Finally, a section addressing potential criticisms of the methodology is included.

3.1 Scientific Approach

This study followed a deductive approach, where the researchers formulated and subsequently tested hypotheses. The hypotheses were developed based on relevant theories, as there has been comprehensive independent research on brand anthropomorphism and personalization. Despite the large quantity of research on brand anthropomorphism and personalization independently, limited research explores how these phenomena interact, especially online or on social media, where we found a gap in the literature.

Moreover, this study followed a quantitative research process, a particular research strategy that includes gathering numerical data. In quantitative research, the relationship between theory and research is often deductive (Bryman & Bell, 2017). Also, the quantitative research approach uses numerical data and statistical methods to examine the relationship between measured variables (Saunders et al., 2019).

3.2 Research Design

The research design serves as a framework for collecting, analyzing, and generalizing empirical data. The researcher's choice of a design carries implications for factors such as the external validity of results and the researcher's capacity to establish causation in the findings (Bryman & Bell, 2017). In addition, the design influences other aspects of the study, such as the methods, measures, and statistical analyses used (Bryman & Bell, 2017). Further, the experimental design gives the researcher directives on managing the interplay between the number of treatments, groups, and statistical tests used for data analysis (Söderlund, 2010).

This study follows an experimental research design involving manipulating independent variables to assess their impact on a dependent variable (Bryman & Bell, 2017). An experiment systematically attempts to attain knowledge about causality and examines if reactions result from a specific treatment (Söderlund, 2010). Individuals are randomly allocated to groups during an experiment and receive different treatments. Later their reactions are compared post-treatment (Söderlund, 2010). An advantage of experiments is that it allows the researcher to produce explanations by comparing the different groups' reactions after the experimental treatment. Also, experiments are unparalleled in offering explicit evidence of causation when testing theory-driven hypotheses about causal relationships (Söderlund, 2010).

3.3 Research Method

A research method concerns the researcher's technique for collecting data (Bryman & Bell, 2017). This study used online surveys to gather the empirical data needed to test the six hypotheses and answer the research question. The reasons for this are several. Firstly, many psychological reactions can be easily measured using survey questions (Söderlund, 2010), and thus a survey is a good technique for measuring attitudes. Additionally, an online survey gave us the customization needed for our experiment. Online surveys can be customized to suit the research objectives by allowing filtering, branching, and randomization of questions (Bryman & Bell, 2017). In our case, this customization allowed us to allocate treatment randomly to different respondents.

Furthermore, online surveys enable quick and efficient data collection as they can be distributed globally, reaching many participants quickly (Andrade, 2020). This efficient data collection made it easier to obtain a large enough sample size for statistical analysis (Bryman & Bell, 2017). These aspects aligned well with our quantitative approach, allowing us to collect enough numerical data to test our hypotheses and answer our research question.

3.4 Initial Work

3.4.1 Literature Review

We performed a comprehensive literature review on brand anthropomorphism and personalization. By doing this, we were able to find a current gap in research, namely how these two phenomena interact in creating attitudes in a social media environment. Literature and theories on privacy concerns, brand trust, and attitudes became essential for us to examine. In addition, we examined related theories and themes, for instance, brand personality, brand personification, and anthropomorphism in the context of AI and robots. Secondary data was utilized to examine the theoretical foundation and generate hypotheses. To guarantee the reliability of the study, we restricted ourselves to peer-reviewed articles, journals, academic books, and industry reports. Most theoretical articles were obtained online, utilizing several academic search databases accessible through the Stockholm School of Economics library.

3.4.2 Forming of Hypotheses

After a comprehensive literature review, we formed our hypotheses. Our six hypotheses were developed based on theories in brand anthropomorphism, attitudes, brand trust, personalization, privacy concerns, and the currently limited research on the combined use of brand anthropomorphism and personalization.

3.4.3 Pre-study

In this study, we employed an iterative process for designing stimuli. Before collecting data through the main experiment, we conducted a pre-study to ensure the stimuli's quality, following Pallant's (2016) suggestion.

In the pre-study, we assessed stimuli brand anthropomorphism and personalization by asking about the advertisement's perceived degree of these phenomena. These questions served as manipulation checks for these variables. Having these manipulation checks allowed us to, later in the main study, control the relationship between the independent variables (brand anthropomorphism and personalization) and the treatment that is supposed to represent this

variable (the stimulus) (Söderlund, 2010). In addition, we queried participants about the perceived realism of the advertisement and its setting. The survey presented the stimuli in a social networking site (SNS) neutral media flow to reduce the potential influence of participants' preferences toward a specific social media platform. We assessed the neutrality of the social media flow by asking participants the extent to which it appeared generic to them.

The stimuli in the pre-study presented four different scenarios, following the 2x2 experimental design testing anthropomorphic vs. non-anthropomorphic and personalized vs. non-personalized stimuli advertisements. Our stimuli featured a fictional airline company, Worldwide Airlines, advertising airline tickets in a social media feed. The stimuli endorsed with anthropomorphic elements included a smile added to the nose of an airplane and text including first-person pronouns to generate an anthropomorphic feeling (Sharma & Rahman, 2022). The personalized stimuli did not include these elements. Instead, the participants were exposed to a situation wherein they had searched for airline tickets to a specific destination, and the advertisement was directed toward the respondent, using words like 'you' to create a personalized feeling. A more thorough argumentation of why these stimuli were chosen will follow in section 3.5.2.

The participants in the pre-test survey were randomly assigned to one of four groups, each with a different set of stimuli. 28 respondents participated in this pre-study, evenly spread to the four groups. The first group received a stimulus that was both anthropomorphized and personalized. The second group received an anthropomorphized but non-personalized stimulus. The third group was exposed to a stimulus that was personalized but non-anthropomorphized. Lastly, the fourth group received neither anthropomorphized nor personalized stimulus. The same survey with the same questions was used to ensure comparability regardless of the stimuli being tested.

To test the manipulation checks regarding brand anthropomorphism and personalization, we conducted independent-sample t-tests in SPSS. This method allowed us to compare the level of anthropomorphism experienced in the anthropomorphized vs. non-anthropomorphized stimuli and the level of personalization experienced in the personalized vs. non-personalized stimuli.

Concerning the anthropomorphism manipulation check, we found a significant difference in the perceived level of anthropomorphism for the anthropomorphized ($M = 4.0769$, $SD = 1.44115$) and non-anthropomorphized ($M = 3.0667$, $SD = 1.03280$; $t(28) = 2.153$, $p = 0.041$, two-tailed) stimuli. Since $p < 0.05$, the two groups have a significant difference (Pallant, 2016). Thus, the manipulation check for brand anthropomorphism was successful.

Concerning the personalization manipulation check, we also found a significant difference in the perceived level of personalization for the personalized ($M = 3.46$, $SD = 1.664$) and non-personalized ($M = 2.07$, $SD = 0.961$; $t(28) = 2.763$, $p = 0.010$, two-tailed) stimuli. Since $p < 0.05$, the two groups have a significant difference (Pallant, 2016). Thus, the manipulation check for personalization was successful.

Even though we found significant differences between the groups, the observed means were still relatively low on the seven-point scale measured, with $M = 4.076$ for brand anthropomorphism and $M = 3.46$ for personalization. After a discussion with our supervisor, we wanted to find ways to improve these scores by slightly adjusting the stimuli. Since the variable of brand anthropomorphism had a smaller mean difference between the anthropomorphized and non-anthropomorphized stimuli, we worked to increase the anthropomorphic cues in the stimuli. The final four stimuli are presented in Appendix 1.

3.5 Main Study

3.5.1 Experiment

To test our six hypotheses and answer our research question, a 2x2 survey-based factorial experiment was designed. A factorial design with more than one independent variable allowed us to build a higher degree of learning in our experiment (Söderlund, 2010). Besides the main effects for each independent variable, a factorial design allows the experimenter to discover if and how different factors interact in producing a specific reaction, which presents a clear advantage compared to one-factor experiments (Söderlund, 2010). Our 2x2 experiment tested anthropomorphic vs. non-anthropomorphic and personalized vs. non-personalized stimuli advertisements. Thus, personalization and brand anthropomorphism were the independent variables that we controlled and used as a treatment to see the respondents' reactions. See Table 2 for the design of our factorial experiment. The dependent

variable measured in the experiment was the respondents' attitudes toward the advertisement. As explained in section 2.2.10, brand trust and privacy concerns were believed to act as mediators in this experiment.

Furthermore, the experiment had a posttest-only control group design, meaning that at least two groups were getting different variations of a specific treatment and that the researcher only measured the effects in each group post-treatment (Söderlund, 2010).

		Personalization	
		Yes	No
Brand anthropomorphism	Yes	Stimulus 1	Stimulus 2
	No	Stimulus 3	Stimulus 4

Table 2: 2x2 Factorial Experiment Design

3.5.2 Survey Design and Stimuli

We wanted to experiment with the combined use of brand anthropomorphism and personalized advertisement in social media. There are several reasons why we find this field relevant to explore. Firstly, in the last ten years, mobile devices like cell phones and tablets have become a crucial aspect of our daily lives, making it difficult to imagine going about our day-to-day lives without them (Kaplan, 2012). These devices have allowed social media to become as widespread as today (Kaplan, 2012). The number of social media users worldwide in 2022 reached 4,59 billion, which is expected to grow to 5,85 billion in 2027 (Dixon, 2023).

Furthermore, social media is a groundbreaking trend that should capture the attention of companies conducting operations in the online sphere (Kaplan & Haenlein, 2010). Through social media, businesses can access unique information about their customers unavailable through any other channel, such as data regarding the customer's location and time. This allows companies to gain new insights into their clients and see them differently (Kaplan, 2012). As a result, social media has firmly established itself as a critical component of the marketing mix (Meltwater, 2023).

Additionally, the realm of social media is advancing at an incredibly rapid pace. Mobile devices will likely continue to imbue the world rapidly, ultimately becoming the remaining communication tool capable of reaching diverse customers across various geographies and demographics (Kaplan, 2012).

Moreover, since social media allows for personalized communication between companies and their customers, it presents a significant opportunity for companies to leverage (Kaplan, 2012). However, as explained in the theoretical framework, personalization remains a paradox as it requires companies to gather customer data, increasing their privacy concerns and feelings of vulnerability (Aguirre et al., 2015). This reasoning aligns with what Kaplan (2012) describes as the challenges of social media, namely those related to security, privacy, and brand trust.

As previously explained, our 2x2 experiment tested anthropomorphic vs. non-anthropomorphic and personalized vs. non-personalized stimuli advertisements. Our stimuli featured a fictional airline company, Worldwide Airlines, advertising airline tickets. The reason for choosing this example of a brand and product is that it was well fitting with the personalization aspect of the study. Because the use of electronic ticketing has proliferated, searching for and booking airline tickets online is something many people have experienced. Almost all airline tickets used in the US in 2013 were acquired electronically (Crespo-Almendros & Del Barrio-García, 2016). Hence, by deciding on this example, the aim was to make the advertisement and scenario as realistic as possible.

Additionally, the stimuli endorsed with anthropomorphic elements included a smile added to the nose of an airplane, as shown in Appendix 1. The decision to use these anthropomorphic visual cues was based on Aggarwal and McGill's (2007) research on brand anthropomorphism and attitudes. They suggest that a smile is consistent with the general human schema, as a smiling face is perceived as familiar (Baudouin et al., 2000), and the expectation of a smile is a component of the human face schema (Martin & Rovira, 1982). Also, the stimuli featured verbal cues through the advertisement text, as suggested by Sharma and Rahman (2022), wherein first-person pronouns were used in the anthropomorphized stimuli.

Moreover, in the personalized stimuli, the participants were exposed to a situation wherein they had searched for airline tickets to a specific destination. Hence the advertisement was tailored based on online search behavior (Boerman et al., 2017). Also, the advertisement was directed toward the respondent, using words like ‘you’ to create a personalized feeling.

Furthermore, the stimuli were presented within an SNS-neutral social media flow in the survey. This approach was used to mitigate the potential impact of respondents’ preference or bias toward a specific social media platform on the study’s outcomes. In this generic social media flow, we tested visual and verbal cues concerning brand anthropomorphism and personalization. The four stimuli are presented in Appendix 1, and the survey questionnaire is in Appendix 2.

3.5.3 Scales and Measures

3.5.3.1 Measurement of the Dependent Variable

We employed established measures of advertisement attitudes developed by Mitchell and Olson (1981) to measure the dependent variable. The attitude measurements used included evaluations of bad/good, dislike/like, irritating/non-irritating, and uninteresting/interesting. Mitchell and Olson (1981) interpreted the means of the four evaluative measures as attitude toward the ad. They found this scale to be internally consistent with a coefficient alpha of 0.87.

3.5.3.2 Measurement of Mediating Variables

The two mediating variables, brand trust, and privacy concerns, were also measured using established measures. Brand trust was measured using Chaudhuri and Holbrook’s (2001) measure. They measure brand trust as a four-item index of “I trust this brand,” “I rely on this brand,” “This is an honest brand,” and “This brand is safe.” They found this measure internally consistent with a coefficient alpha of 0.81.

Moreover, privacy concerns were measured using Bleier and Eisenbeiss’s (2015) measure, where the respondent rate the extent to which they agree to the following statements: “It bothers me that [brand name] can track information about me,” “I am concerned that [brand name] has too much information about me,” and “It bothers me that [brand name] can access

information about me.” Bleier and Eisenbeiss (2015) found this measure internally consistent with a coefficient alpha of 0.92.

3.5.3.3 Scales Employed

An interval scale, one of Steven’s four scale types (Söderlund, 2005), measured the dependent variable of advertisement attitudes. An interval scale is appropriate and regularly used when measuring peoples’ attitudes, and it allows the researcher to calculate and compare the means of the different groups (Söderlund, 2005). We used a semantic differential scale, a type of itemized rating scale, and one of the standard interval scales. In this type of scale, the two extremes are specified by a pair of opposites, usually by two adjectives. Following Söderlund’s (2005) rule of thumb of including an uneven amount of answering alternatives, seven answer alternatives were available to the respondents in all questions. By having an uneven number of answer alternatives, there is always a neutral alternative in the middle, allowing respondents with neither a positive nor negative attitude to answer the question truthfully. In addition, by providing seven answer alternatives, our range of possible scores was expanded, which resulted in a greater variety of statistical analyses that could be utilized (Pallant, 2016).

Regarding the order of the answer alternatives, we decided to include answer alternatives such as ‘bad,’ ‘dislike,’ ‘irritating,’ and ‘uninteresting’ at the far left on the horizontal scale, aligning with Söderlund’s (2005) suggestion. Alternatives such as ‘good,’ ‘like,’ ‘non-irritating,’ and ‘interesting’ were placed on the far right. Having the answer alternatives presented like this creates a more natural environment for the respondents when answering, as this is the setup that most people have been exposed to during their educational years (Söderlund, 2005).

3.5.3.4 Confounding Variables

A *confounding variable* is a variable that may provide an alternative explanation for the outcomes of the study. By measuring these variables, we could control for them statistically (Pallant, 2016).

We performed a mood test at the beginning of the survey, asking the respondents about their general emotional state. The reason for this is because of Lutz et al.’s (1983) argument,

described in section 2.2.5, that the recipient's mood affects their attitude toward an ad. In addition, we included questions concerning other factors capable of impacting a person's attitude toward an advertisement. These concerned factors, such as the perceived relevance of the ad, attitude toward the brand, and their attitudes toward advertisements in general, aligning Lutz et al.'s (1983) and Wells et al.'s (1971) arguments.

3.5.4 Sample

When performing experiments, it is essential to ensure that the groups do not differ from each other regarding personal characteristics that will affect their reactions (Söderlund, 2010). To make a possible causal relationship clear, the researcher must ensure the groups do not differ in ways outside the frame for treatment. Söderlund (2010) explains how the researcher can use random assignment to mitigate this issue. Random assignment means that each participant has an equal opportunity to end up in either of the groups in the experiment. Söderlund (2010, p. 24) refers to this as a "true experiment." Random assignment allows the researcher to spread individual differences between the groups, where they can cancel each other out (Söderlund, 2010).

We leveraged random assignment in our experiment by having four versions of the same survey containing different stimuli but the same questions. The stimulus that a specific respondent was shown was therefore randomized. This random assignment of participants to groups made it easier to show that the treatment was the reason for the groups' differences, increasing our chances of drawing reasonably clear conclusions.

We collected 210 answers to the survey, out of which 203 were valid after we removed those respondents that failed any attention tasks. These 203 respondents were randomly assigned to one of the four stimuli. See the exact distribution of respondents to stimuli in Table 3 below. The survey was distributed via postings on various online social networks and the researchers' networks. In this way, the sampling contained only social media users. The sample of 203 consisted of 112 female and 91 male respondents, with a median age of 26, going on a scale from 18 to 68.

		Personalization	
		Yes	No
Brand anthropomorphism	Yes	48	53
	No	53	49

Table 3: Distribution of Study Participants Along the Four Stimuli

3.5.5 Handling of Information

All data in this study was collected and handled following the guidelines of GDPR. No personal or sensitive data was collected. We did ask the participants about their age and gender. However, this information was optional for them to provide and was not used in the analysis. The sole purpose of collecting this information was to ensure a normally distributed sample. As soon as this was ensured, this information was deleted.

Moreover, the survey was entirely anonymous and entailed no information that could identify any of the participants. Further, the survey also included information about GDPR, how we would handle the provided information, and a reference to where the respondents could get more information about the topic. In addition, everyone had to consent to us collecting their data to participate in the survey. Lastly, all data was permanently deleted after the finalization of the project.

3.6 Structure and Analysis of Data

After collecting the data, we performed our data analysis using SPSS. Following the guidelines established by Pallant (2016), we first examined the data for errors in the coding of variables and corrected any errors found.

Next, we performed a preliminary analysis, a necessary step to conduct specific statistical techniques (Pallant, 2016). This step was initiated through descriptive statistics that we used to check our variables for any violation of the assumptions underlying the statistical techniques we aimed to use to address our research question. These tests include independent

sample t-tests, Pearson product-moment correlation coefficient (r), Spearman's rank order correlation (ρ) (for variables violating the normal distribution assumption), Two-way ANOVA, and regression analysis. Further, we employed a significance level of 0.05 for our statistical tests, meaning that our results have a 95% confidence level. Below in Figure 2 is our statistical model, explaining which tests were used to test which relations.

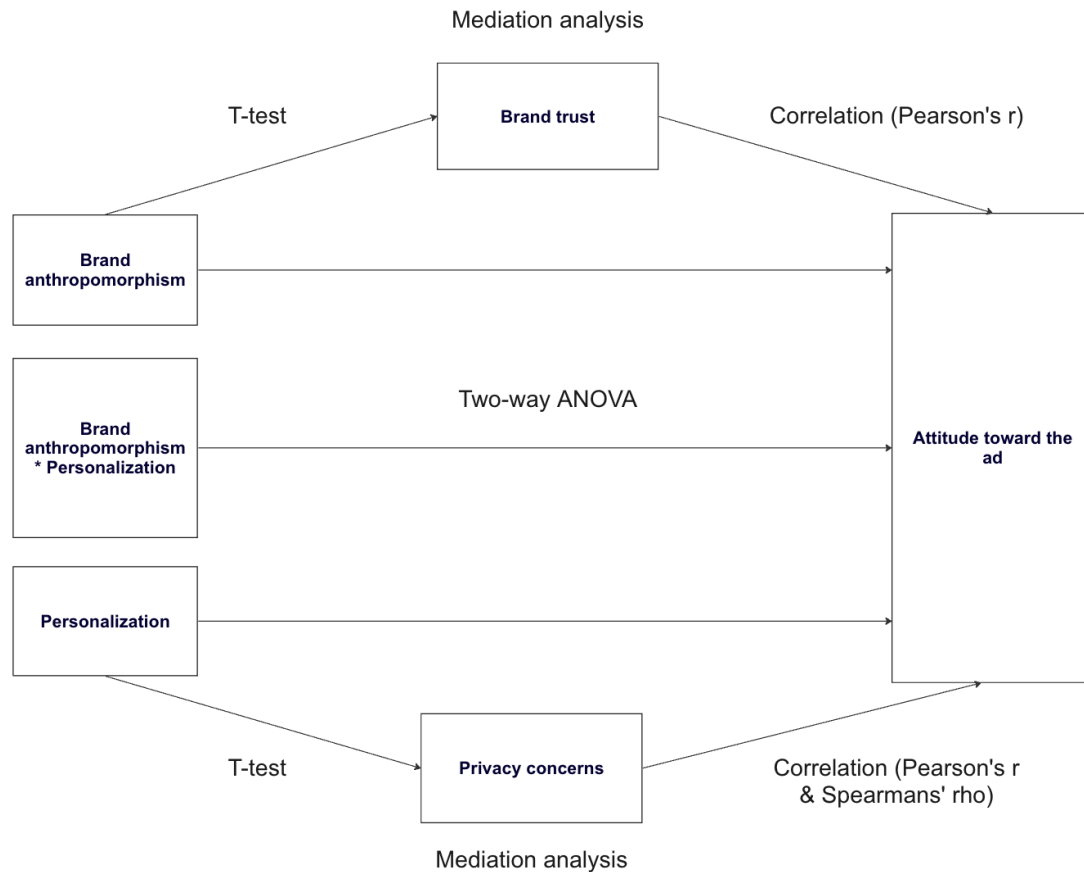


Figure 2: Statistical Model

The descriptive statistics included obtaining the mean, standard deviation, range of scores, skewness, and kurtosis of our dependent variable. We also checked our data file for missing data and outliers. We assessed the data's normality for the dependent variable and our other variables, a prerequisite for two-way ANOVA, and the other parametric statistical tests used (Pallant, 2016). We used graphs such as histograms to visually explore the normativity of our data (Pallant, 2016). We found the data normally distributed for our dependent variable, attitude toward advertisement. We also found brand trust as a normally distributed variable, making the t-test suitable. When controlling privacy concerns for normality, we found this variable not normally distributed. However, due to our large sample of over 200 respondents,

we found the t-test still applicable to test this variable, as t-tests are quite robust (Pallant, 2016). According to Stevens (1996), with a sample size larger than 100 or more participants, the power of a test is not an issue.

After checking the accuracy of our data, we next manipulated the raw data into a form where we could analyze it to test our hypotheses (Pallant, 2016). This manipulation included adding up the scores for the sub-questions for our dependent variable to give an overall score for the attitude toward advertisement. This process was repeated for all measurements that included several sub-questions.

After that, we assessed the reliability and internal consistency of the scale and data. This assessment is critical in survey research and studies using scales to assess personality traits like attitudes (Pallant, 2016). The scale's internal consistency was measured using Cronbach's alpha. As explained in section 3.5.3.1, this study employs a scale by Mitchell and Olson (1981) to measure the dependent variable of advertisement attitude. Mitchell and Olson (1981) interpreted the means of the four evaluative measures as attitude toward the ad. They found this scale to be internally consistent with a coefficient alpha of 0.87. Our assessment of internal consistency, with an alpha score of 0.78, aligned with their findings.

For our primary statistical test to test our central hypothesis (hypothesis 5), we used a two-way ANOVA. We chose this test because a two-way analysis of variance allowed us to test the impact of two independent variables (brand anthropomorphism and personalization) on one dependent variable (attitude toward ad). Additionally, a two-way ANOVA allowed us to test for an interaction effect between brand anthropomorphism and personalization, besides the primary outcome of the overall effect of each independent variable (Pallant, 2016).

When interpreting the output from the two-way ANOVA, we first used descriptive statistics to ensure the correctness of all values for Mean scores, Std deviations, and N for each sub-group. By inspecting the pattern of these values, we could get an indication of the impact on our independent variables (Pallant, 2016). We then used Levene's Test of Equality of Error Variances to test the null hypothesis that the error variance of the dependent variable is equal across groups. The next step was to check the data for significant interaction effects between brand anthropomorphism and personalization. After that, we looked for the main effects of each independent variable on the dependent variable.

As described, we employed a significance level of 0.05 for our statistical tests, meaning our results have a 95% confidence level. This allowed us to minimize the possibility of Type I errors (Pallant, 2016). According to Pallant (2016), just because the differences in groups are significant implies nothing of practical or theoretical significance. A low p-value, meaning a significant result, does not mean a specific treatment had a strong effect. The researcher needs to complement the p-value with an explicit description of the effect size (Söderlund, 2010). The effect size using Eta Squared was calculated for all significant results, as Pallant (2016) recommended.

Furthermore, a significant ANOVA means that the researcher can reject the null hypothesis of the means being equal in all participant groups. However, it does not imply any significant differences between specific pairs of groups (Söderlund, 2010). Instead, the researcher must perform a post-hoc-test (Söderlund, 2010; Pallant, 2016). We had planned to employ the Tukey Honestly Significant Difference test, one of the most used tests (Pallant, 2016). However, since our two-way ANOVA was insignificant, this step was unnecessary.

In addition, we had planned to perform a mediation analysis to test hypothesis six concerning brand trust and privacy concerns acting as mediators by employing Andrew F. Hayes's mediation analysis. However, as we found no significant main effects for either brand anthropomorphism or personalization on the dependent variable or any interaction effect, performing a mediation analysis was redundant.

Lastly, the potential confounding variables brand attitude, ad relevance, attitude toward advertising in general, and mood were also tested for, using regression analysis. By doing this, we could see how these variables related to all other variables and how they affected the dependent variable.

3.7 Reliability and Validity of Data and Results

3.7.1 Reliability

The focus of reliability is ensuring data consistency and measuring consistency across responses. Reliability refers to the extent to which repeated measurements produce similar results (Söderlund, 2010).

As described in section 3.2, primary data was obtained through an experimental design, wherein empirical data was gathered through online surveys. Each question inquired about only one matter, and we utilized multiple indicator questions to enhance the reliability of our measurements (Bryman & Bell, 2017). In addition, we also used established measures for advertisement attitudes from Mitchell and Olson (1981), presented in section 3.5.3.1, and established measures for several other variables.

To obtain a comprehensive measurement of the dependent variable (attitude toward the advertisement), we used the means of the respondent's answers to the four sub-questions that were asked to assess it, as Söderlund (2005) suggests. Consequently, we needed to ensure that the internal consistency of the four sub-questions was satisfactory (Söderlund, 2005). To accomplish this, we employed Cronbach's alpha to obtain a measure of reliability and assess the level of internal consistency. The alpha coefficient ranges from 0 (no reliability) to 1 (perfect internal consistency), with 0.7 typically considered an acceptable level of internal reliability (Pallant, 2016). When employing Cronbach's alpha on our data on the measured dependent variable, we got an alpha coefficient of 0.78, indicating more than an acceptable level of internal reliability. This initial assessment showed us that the four sub-questions could capture similar qualities.

According to Söderlund (2005), perfect reliability is achieved by having no random measurement errors, as these cause temporary deviations between the observed and actual values. These errors are problematic, leading to mixed results when the measurement is repeated (Söderlund, 2005). We included multiple attention checks in the experiment survey to mitigate these measurement errors. We eliminated any answers that failed these checks and ensured that only valid answers were considered in the final analysis.

3.7.2 Validity

Validity concerns the extent to which a specific measurement measures what it intends to measure and the level to which a measurement is without random and systematic errors. The validity can, however, only be estimated (Söderlund, 2010). According to Söderlund (2005), achieving a ‘perfect’ measurement is unattainable. Therefore, researchers should aim for a more realistic ‘good’ measurement goal. A ‘good’ measurement is executed in a way that results in an acceptable level of deviation between the observed and actual values (Söderlund, 2005).

Systematic measurement errors produce consistent deviations between observed and actual values. The most critical form of systematic measurement error comes from the researcher’s methods of gathering data. These can be, for example, having vague questions or cryptic answering options or a mismatch between the content of the questions or response options and the measured, theoretical variable (Söderlund, 2005). We mitigated these errors by employing established and well-used scales and measurements with high internal consistency for the theoretical variables.

External validity concerns the degree to which the result of an experiment can be reasoned to pertain to different scenarios, different versions of the treatment, alternative measures of the effects, and different people. Ultimately it refers to the extent to which the findings can be generalized (Söderlund, 2010). As presented in section 3.5.4, the median age in the study was 26 years, meaning we cannot generalize the findings to an entire population but rather to a younger demographic. Further, a threat toward external validity concerns the artificial situation of an experiment that might make it difficult to generalize to a real-life situation (Söderlund, 2010). Given the experimental design employed, this is one criticism of the study, which is explained more in section 3.8. However, to mitigate this threat of external validity, we studied and took inspiration from similar advertisements within the airline industry, making it more true to life. We also presented the stimuli with a situation for the respondent to put themselves into, making it more relatable. In addition, we presented the ad in a social media feed to make the context more relevant to what we wanted to measure - how brand anthropomorphism and personalization interact to form attitudes in a social media environment.

3.8 Criticism of Method

Despite our efforts to ensure high reliability and validity in our study through multiple measures, there are still potential criticisms that may apply to our research and methodology.

One common criticism of experiments with people is that they can be artificial. When a researcher translates a general independent variable to a specific treatment, this can result in artificial situations that differ considerably from reality (Söderlund, 2010). Our experiment in this study is no exception. Seeing a stimulus of an advertisement in a mock-up social media flow in a survey is not the same as seeing an actual advertisement on a phone while scrolling through social media. While personalization is a widespread phenomenon in marketing and people's everyday life (Arora et al., 2021), it is essential to note that experiencing personalization in actual internet search behavior differs from participating in a controlled experiment. In our experiment, respondents had to imagine themselves in an artificial situation that may not accurately reflect their real-life experiences, despite the likelihood of encountering similar situations in their daily lives.

However, this criticism can be met since theory can still be tested if the experiment has the same structural qualities as an actual situation and is controlled by the same theoretical laws (Söderlund, 2010). We presented the advertisement in a social media flow perceived as SNS-neutral and generic throughout the pre-study. The pre-study also showed that the respondents experienced the ad and its environment as realistic.

Another critique is that having random assignments will not guarantee that the groups in question are similar in terms of variables that affect the reactions to the treatment. The only way to make sure is that the experiment is repeated several times (Söderlund, 2010). Given the limitations considering the time aspect, experimenting several times was impossible.

A final criticism of this study and experiments involving human participants pertains to the concept of hypotheses-interested individuals. This criticism stems from the participants' awareness that they are taking part in an experiment, which could motivate them to attempt to discern the experiment's purpose or hypotheses, also known as hypothesis guessing. This phenomenon can be problematic as it may influence their reactions to the treatment being studied (Söderlund, 2010). Nonetheless, the potential threat posed by hypothesis guessing has

been addressed in our study, as we incorporated two independent variables to mitigate this issue. Additionally, participants were randomly assigned to one of four groups, each receiving a distinct stimulus, which made it difficult for them to understand the overall purpose of the experiment, as Söderlund (2010) explains.

4. Analysis and Results

This section presents the result of the study, including an analysis of collected data and testing each hypothesis. Additionally, we assess potential confounding factors that might have influenced the study's findings. The chapter concludes with a summary of the main results.

4.1 Hypotheses Testing

4.1.1 The Relationship Between Brand Anthropomorphism and Brand Trust

H1: Brand anthropomorphism increases brand trust.

To test if brand anthropomorphism increases brand trust, we performed an independent sample t-test between the anthropomorphized stimuli without personalization (stimuli 2) and the control group with neither anthropomorphism nor personalization (stimuli 4). This allowed us to test if anthropomorphism in isolation increases brand trust compared to non-anthropomorphism. This independent-sample t-test was conducted to compare the levels of brand trust between the two groups. There was no significant difference in scores for the group with the anthropomorphized stimuli ($M = 3.9198$, $SD = 1.00692$) and the control group ($M = 4.0918$, $SD = 0.84578$; $t(101) = -0.930$, $p = 0.354$, two-tailed), see Table 4. The magnitude of the differences in the means (mean difference = 0.172, 95% CI: -0.539 to 0.195) was minimal (eta-squared = 0.00857).

Further, a correlation analysis of our entire sample (203) using the Pearson product-moment correlation coefficient showed no significant correlation between brand anthropomorphism and brand trust.

These results mean we reject our first hypothesis that brand anthropomorphism increases brand trust. Possible implications and reasons for these findings are discussed in Chapter 5 of the thesis.

Brand anthropomorphism	Brand trust	
	Mean	p-value
Yes	3.9198	.354
No	4.0918	

Table 4: Statistical Analysis for Hypothesis 1

4.1.2 The Relationship Between Brand Trust and Advertisement Attitude

H2: *A positive relationship exists between brand trust and attitudes toward an advertisement.*

The relationship between brand trust and attitude toward advertisement was investigated using Pearson product-moment correlation coefficient. Preliminary analyses were performed to ensure that no normality, linearity, and homoscedasticity assumptions were violated. There was a strong, positive correlation between the two variables, $r = 0.614$, $n = 203$, $p < 0.001$, with high brand trust correlated with higher levels of favorable attitudes toward the advertisement. See Table 5 below. The coefficient of determination was calculated to be 0.377, meaning that brand trust helps to explain nearly 38% of the variance in the respondents' attitudes toward the advertisements.

This result supports our second hypothesis that a positive relationship exists between brand trust and attitudes toward an advertisement. Hence, we accept this hypothesis.

	Ad attitude	
	r	p-value
Brand trust	0.614	< .001

Table 5: Statistical Analysis for Hypothesis 2

4.1.3 The Relationship Between Personalization and Privacy Concerns

H3: Personalization increases privacy concerns.

To test if personalized advertising increases privacy concerns, we performed an independent sample t-test between the personalized stimuli (stimuli 3) and the control group (stimuli 4). This allowed us to test if personalization in isolation increases privacy concerns compared to non-personalization. This independent-sample t-test was conducted to compare the perceived privacy concerns between the two groups. There was a significant difference in scores for the group with the personalized stimuli ($M = 5.0943$, $SD = 1.1554$) and the control group with no personalized stimuli ($M = 4.2245$, $SD = 1.71511$; $t(102) = 2.980$, $p = 0.004$). See Table 6 below. The magnitude of the differences in the means (mean difference = 0.8698, 95% CI: 0.28924 to 1.45046) was moderate (eta-squared = 0.0816).

Further, a correlation analysis of our entire sample (203) using the Pearson product-moment correlation coefficient showed a significant positive correlation of 0.169 between personalization and privacy concerns.

This result supports our third hypothesis that personalized advertising increases privacy concerns. Thus, we accept our third hypothesis.

Personalization	Privacy concerns	
	Mean	p-value
Yes	5.0943	0.004
No	4.2245	

Table 6: Statistical Analysis for Hypothesis 3

4.1.4 The Relationship Between Privacy Concerns and Advertisement Attitude

H4: A negative relationship exists between privacy concerns and attitudes toward an advertisement.

As stated in section 3.6, our preliminary analysis found that the privacy concerns variable was not normally distributed. Hence, instead of only using Pearson product-moment correlation coefficient that assumes normality, we also used its non-parametric alternative, Spearman's rank order correlation, which does not assume normality (Pallant, 2016).

Using Pearson product-moment correlation coefficient, we found no significant correlation between privacy concerns and advertisement attitude, see Table 7. However, through Spearman's rank order correlation, we found a significant negative correlation of -0.138 ($p = 0.05$). As a person's privacy concerns increase, their attitude toward the advertisement is negatively impacted, and vice versa. The coefficient of determination was calculated to be 0.019, meaning that privacy concerns help explain only 2% of the variance in the respondents' attitudes toward the advertisement.

Based on these findings, we partially accept hypothesis 4.

	Ad attitude			
	Pearson		Spearman	
	r	p-value	rho	p-value
Privacy concerns	-.107	.130	-.138	.05

Table 7: Statistical Analysis for Hypothesis 4

4.1.5 Combining Brand Anthropomorphism and Personalization

H5: Brand anthropomorphism and personalization will lead to more favorable advertisement attitudes when combined than in isolation.

A two-way between-groups analysis of variance was conducted to explore the impact of brand anthropomorphism and personalization on advertisement attitudes; see Table 8 below. The interaction effect between brand anthropomorphism and personalization was not statistically significant, $F(1, 199) = 0.009, p = 0.926$. Moreover, there was no statistically significant main effect for brand anthropomorphism, $F(1, 199) = 0.946, p = 0.332$. Lastly, the main effect for personalization, $F(1, 199) = 0.005, p = 0.946$, did not reach statistical significance.

Because we found no interaction effects between our two independent variables, nor any main effects for the variables independently, there was no reason to look at post hoc comparisons or effect sizes. These findings mean we reject hypothesis 5, that brand anthropomorphism and personalization will lead to more favorable advertisement attitudes when combined than in isolation.

	Ad attitude	
	Mean	p-value
Brand anthropomorphism * Personalization	4.2448	0.926
Brand anthropomorphism	4.2406	0.332
Personalization	4.3915	0.946

Table 8: Statistical Analysis for Hypothesis 5

4.1.6 Trust and Privacy Concerns as Mediators

H6: *The positive effect of brand anthropomorphism and personalization on advertisement attitudes is mediated by brand trust and privacy concerns.*

As explained in section 2.2.10, we posit that brand trust and privacy concerns mediate the link between brand anthropomorphism, personalization, and advertisement attitudes. Hence, a mediation analysis becomes appropriate to conduct. Using Baron and Kenny's (1986) classical approach to mediation, the following conditions must exist:

- A should be significant.
- B should be significant.
- C should be significant.
- C' (direct effect) should be closer to zero than C (total effect).

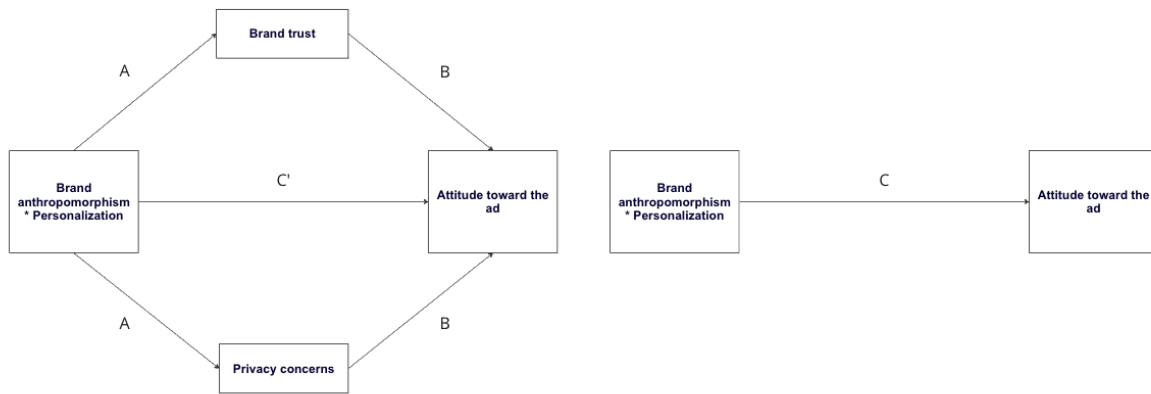


Figure 3: A Mediation Analysis of Brand trust and Privacy concerns

We had intended to employ Andrew F. Hayes's mediation analysis to test hypothesis 6. However, testing for a mediation effect became irrelevant since we established no significant relationship between brand anthropomorphism and brand trust (line A in Figure 3 above) and rejected hypothesis 1. We also established no significant relationship between brand anthropomorphism or personalization with the dependent variable (line C in Figure 3 above).

With this reasoning in mind, we reject our last hypothesis that brand trust and privacy concerns mediate the relationship in Hypothesis 5.

4.1.7 Confounding Variables

We found no significant relationship between brand anthropomorphism or personalization on advertisement attitude. Nonetheless, we still wanted to test the impact of our potentially confounding variables on the dependent variable and whether these variables impacted any relationship in our theoretical framework. The regression analysis tested these variables. The main findings from the regression analysis will be presented below; however, a full table showing all results can be found in Appendix 3.

The regression analysis showed several significant correlations between the confounding and dependent variables. There was a strong positive correlation between brand attitude and advertisement attitude of 0.826 ($p = 0.000$). Additionally, there was a moderate positive correlation of 0.313 ($p = 0.000$) between a person's general attitude toward advertising and their advertisement attitude. Further, we saw a small positive correlation of 0.283 ($p = 0.000$) between a person's mood at ad exposure and attitude toward the ad. A small positive correlation of 0.187 ($p = 0.004$) was found between ad relevance and attitude.

Also, we noticed small but significant correlations between brand trust and our four believed confounding variables. There was a strong positive correlation of 0.678 between brand trust and brand attitude ($p = 0.000$). There was also a positive correlation of 0.231 ($p = 0.000$) between brand trust and general attitude toward advertising, between brand trust and ad relevance (0.176, $p = 0.006$), and between brand trust and mood (0.146, $p = 0.019$). Likewise, we saw small but significant negative correlations between privacy concerns and brand attitude (-0.186, $p = 0.004$) and between privacy concerns and ad relevance (-0.188, $p = 0.004$).

Moreover, the regression analysis showed an R square value of 0.739, which means that our model (including independent variables, hypothesized mediating variables, and potential confounding variables) explained 73.9% of the variance in advertisement attitudes. The model reached statistical significance as the p-value was < 0.001 (Pallant, 2016).

Further, the regression analysis also compared the contribution of each variable to the dependent variable. Brand attitude made the strongest unique contribution to advertisement attitude, with a Beta value of 0.733 ($p < 0.001$). Additionally, brand attitude uniquely explained 28.2% of the total variance in advertisement attitudes. We also saw other variables making less but still significant unique contributions to explaining advertisement attitudes. These are personalization (Beta: 0.088, $p = 0.022$), general attitude toward advertising (Beta: 0.157, $p < 0.001$), and mood (Beta: 0.122, $p = 0.001$).

4.2 Summary of Main Results

This section summarizes the results of the hypothesis testing. See Table 9 below for an overview of supported and rejected hypotheses.

H1: Brand anthropomorphism increases brand trust.	Rejected
H2: A positive relationship exists between brand trust and attitudes toward an advertisement.	Accepted
H3: Personalization increases privacy concerns.	Accepted
H4: A negative relationship exists between privacy concerns and attitudes toward an advertisement.	Partially accepted
H5: Brand anthropomorphism and personalization will lead to more favorable advertisement attitudes when combined than in isolation.	Rejected
H6: The positive effect of brand anthropomorphism and personalization on advertisement attitudes is mediated by brand trust and privacy concerns.	Rejected

Table 9: Overview of Accepted and Rejected Hypotheses

5. Discussion

This section outlines the discussion of the results of the study. Further, it discusses the theoretical and practical implications of the study's findings. Lastly, it discusses the study's limitations and the researchers' suggestions for future research.

5.1 Discussion of Results

The study has aimed at answering the following research question:

Can the use of (a) brand anthropomorphism and (b) personalization have a positive effect on consumers' attitudes toward advertisements?

We have addressed this research question using a deductive, quantitative approach, including forming and testing hypotheses based on relevant theory and research. Further, following an experimental research design allowed us to manipulate our independent variables to assess their impact on the dependent variable. Our 2x2 factorial experiment design tested anthropomorphic vs. non-anthropomorphic and personalized vs. non-personalized stimuli advertisements, allowing us to investigate how these two phenomena interact in forming attitudes in a social media context.

5.1.1 The Relationship Between Brand Anthropomorphism and Brand Trust

As presented in the analysis and results, we performed independent sample t-tests to test whether brand anthropomorphism increases brand trust. We found no significant differences between the two groups (the anthropomorphized stimuli vs. the control group) concerning their trust in the brand. In addition, we found no correlation between brand anthropomorphism and brand trust, both with and without personalization. Although the difference was not statistically significant, we noted a higher trust score in the control group than in the anthropomorphized group, implying that anthropomorphism might harm a brand's trust in this scenario. These results indicate that brand anthropomorphism does not augment trust in a brand in the context of social media advertising, thereby challenging current theories and prior research that suggests otherwise. Our findings challenge, for example, both Ha et

al.'s (2022) and Golossenko et al.'s (2020) research stating that brand anthropomorphism positively affects brand trust. Similarly, our findings are inconsistent with Sung and Kim's (2010) and Louis and Lombart's (2010) research, which concluded that brand personality positively impacts brand trust.

Our findings could contradict previous research on brand anthropomorphism and brand trust for several reasons. The first reason could concern the type of brand used in the study. Our study used a fictional brand, Worldwide Airlines, as we did not want the participants' prior relation to or knowledge of a brand to affect their answers or attitudes. However, both Ha et al. (2022), Louis and Lombart (2010), and Sung and Kim (2010) used already existing well-known brands such as Red Cross, Coca-Cola, and Polo Ralph Lauren. Golossenko et al. (2020), similarly to us, also used a fictional brand but a different type of industry and product, which leads to a second potential reason why our findings contradict previous research.

Our fictional brand operates in the airline industry, which is a different industry type than what previous research has investigated. Ha et al. (2022) researched charity organizations, while both Golossenko et al. (2020) and Louis and Lombart (2010) focused on the beverage industry within fast-moving consumer goods, and Sung and Kim (2010) investigated brand trust in the apparel, watch, and fragrance industries. These differences in industries could imply that the type of industry and product has an impact on if brand anthropomorphism positively affects brand trust. In an industry where consumers value safety, brand anthropomorphism in the airline industry could make a brand seem unsafe or unserious. In charity organizations, brand anthropomorphism could help increase an emotional connection, where brand trust incentivizes people to donate more, as Ha et al. (2022) found. Alternatively, in fragrance or apparel, brand anthropomorphism helps increase perceived quality or sophistication (Sung & Kim, 2010).

A last reason why our findings contradict previous research could have to do with designed vs. perceived anthropomorphism. Even though our pre-study measured perceived anthropomorphism to ensure our manipulation checks were successful, our main study only employed designed anthropomorphism through our stimuli. According to Sharma and Rahman (2022), it is not given that consumers will interpret designed anthropomorphic cues as anticipated, which could be the case in our study, and why anthropomorphism did not positively affect brand trust. Our research differs from previous ones as both Sung and Kim

(2010) and Louis and Lombart (2010) focused on perceived brand personality and trust, and as both Golossenko et al. (2020) and Ha et al. (2022) measured perceived brand anthropomorphism with brand trust.

The complexity of creating a brand trust can be inferred from these findings and comparisons to prior research. Brand trust results from several components, and solely enhancing brand anthropomorphism do not seem enough to create brand trust.

5.1.2 The Relationship Between Brand Trust and Advertisement Attitude

As showcased in the analysis and results, the relationship between brand trust and advertisement attitude was investigated through correlation analysis. We found a large, positive correlation between the two variables, with a correlation of $r = 0.614$. This outcome suggests that increased brand trust is associated with more favorable attitudes toward the advertisement.

These findings align with Lutz et al.'s (1983) theory on the sources of advertisement attitudes. They argue that a consumer's evaluation of a brand significantly impacts their opinion of an advertisement and that an individual's perception of an advertiser is the fundamental driver of advertisement attitudes (Lutz et al., 1983).

There was, however, no extensive research to investigate the relationship between brand trust and advertisement attitudes. Researchers looking into brand trust have mainly focused on the impact of brand trust on brand attitudes (Bora Semiz & Paylan, 2023), brand loyalty (DelgadoBallester & Luis MunueraAlemln, 2005; Chaudhuri & Holbrook, 2001; Lau & Lee, 1999), and behavioral intentions, such as charity support intention (Ha et al., 2022) and click-through intentions (Bleier & Eisenbeiss, 2015; Chellappa & Sin, 2005), among other topics, but not on advertisement attitudes. Hence, it becomes difficult to compare our findings to previous research.

Other findings in our study are consistent with previous research on brand trust. The correlation analysis showed a large positive significant correlation of 0.678 between brand trust and brand attitude, aligning with Bora Semiz and Paylan's (2023) findings. Moreover,

the analysis also showed a large positive significant correlation of 0.826 between brand attitudes and advertisement attitudes.

The strong, positive correlation between brand trust and advertisement attitudes is interpreted as that if a person feels a stronger sense of trust in a brand, they are also more likely to evaluate this brand's ads as more favorable than a less trusted brand's advertisements. Notably, this trust has no roots in brand anthropomorphism, as explained in section 5.1.1. These findings merely emphasize the significance of brand trust in shaping an individual's advertisement attitudes and are not necessarily related to anthropomorphism.

5.1.3 The Relationship Between Personalization and Privacy Concerns

As presented in the analysis and results, we performed independent sample t-tests to test if personalized advertising increases privacy concerns. We found a significant difference in scores for the group with the personalized stimuli and the control group, implying that personalization significantly affects privacy concerns.

These findings are consistent with previous research and theories on personalization and privacy concerns. Aguirre et al. (2015) discuss the phenomenon of the personalization paradox and how personalization increases relevance for the customer but also their privacy concerns and sense of vulnerability. Hence, in different contexts, personalization can be either effective or ineffective (Aguirre et al., 2015). The fact that privacy concerns are distinct negative responses to personalization and the collection of data has been shown by several other researchers, like Bleier and Eisenbeiss (2015), Goldfarb and Tucker (2011), and Chellappa and Sin (2005).

In addition to the independent sample t-tests, the correlation analysis showed a significant, however small, positive correlation of 0.169 between personalization and privacy concerns. One potential reason for this small correlation could be our experiment's artificial situation. The participants exposed to the personalized stimuli were experiencing an imaginary situation where their actual data had not been collected and leveraged to target them. Thus, the context in which the participants were exposed to the ad could have impacted their feelings of vulnerability, in which they experienced privacy concerns less significantly than they could have in an actual situation.

5.1.4 The Relationship Between Privacy Concerns and Advertisement Attitude

As explained in the analysis and results, we employed both Pearson product-moment correlation coefficient and Spearman's rank order correlation, as we found the variable of privacy concerns not normally distributed. Using Pearson product-moment correlation coefficient, we found no significant correlation between privacy concerns and advertisement attitude. However, when using Spearman's rank order correlation, we found a significant negative small correlation of -0.138, indicating that as a person's privacy concerns increase, their advertisement attitude is negatively impacted, and vice versa.

Previous research has focused mainly on the effect of privacy concerns on the willingness to disclose information (Olivero & Lunt, 2004), click-through rates (Bleier & Eisenbeiss, 2015), and adoption rates (Aguirre et al., 2015; Chellappa & Sin, 2005), and less on advertisement attitudes.

The results of Pearson's r that privacy concerns do not correlate with advertisement attitudes challenge current research, which found that privacy concerns may lead to negative attitudes toward an advertiser (Aiolfi et al., 2021) and that increased privacy concerns and feelings of vulnerability can result in lower adoption rates, suggesting it affects a person's attitude toward the ad (Aguirre et al., 2015). Nonetheless, when employing Spearman's ρ , a negative correlation aligns with previous research that privacy concerns could harm advertisement attitudes through personalization reactance and a negative response to the ad (White et al., 2008). However, this correlation is only small, which could again be a result of the experiment's artificial situation. However, the small correlation could also stem from a phenomenon referred to as the privacy paradox. As Barth and de Jong (2017) explained, how consumers express their privacy concerns does not always reflect their online behavior. Many express concerns about their privacy but take minimal action to protect their data (Barth & de Jong, 2017). With this reasoning in mind, one could believe that privacy concerns do not affect advertisement attitudes to the same extent as previously discussed.

5.1.5 Combining Brand Anthropomorphism and Personalization

As shown in the analysis and results, we used a two-way ANOVA to explore the impact of brand anthropomorphism and personalization on advertisement attitudes and their interaction.

We hypothesized that brand anthropomorphism and personalization would lead to more favorable advertisement attitudes when combined than in isolation. However, we found no significant interaction effect between brand anthropomorphism and personalization on advertisement attitudes. The findings imply that the combined use of brand anthropomorphism and personalization does not lead to more favorable advertisement attitudes, contradicting our hypothesis that including both anthropomorphism and personalization would lead to improved attitudes.

As explained throughout the thesis, the effects of combining brand anthropomorphism and personalization are under-researched. Current research that has investigated the two phenomena together has focused mainly on personalization and anthropomorphism in the form of AI, such as service robot anthropomorphism (Xie & Lei, 2022) and recommendations agents (Puzakova et al., 2013), making our study different, but still relevant for comparing our findings.

One study that has researched the interaction effect is one by Puzakova et al. (2013). They found a significant interaction effect between the anthropomorphism of a recommendation agent and a customized message on all their dependent variables; attitude toward the ad, reactance, and willingness to provide personal information. More specifically, Puzakova et al. (2013) found that the adverse impact of brand anthropomorphism was apparent in the customized message as opposed to the non-customized one, meaning that respondents held less favorable attitudes toward the website ad, exhibited increased levels of reactance, and were less willing to disclose both low- and high-sensitive information when the anthropomorphic element was present in the customized message (Puzakova et al., 2013). The results of our study challenge these findings, as we could see no effect of brand anthropomorphism and personalization on advertisement attitudes. A possible reason for these differences in results could be due to the type of personalization being studied. An anthropomorphized recommendation agent might be experienced as more of an actual person capable of evaluating others, making self-disclosing embarrassing, and increasing privacy concerns, as Gretry et al. (2017) suggest.

Another study by Xie et al. (2020) investigated anthropomorphism, personalization, and consumers' interaction needs. They observed a significant two-way interaction between

consumers' need for interaction and online anthropomorphism on privacy concerns. They found that people with a low need for interaction have increased privacy concerns and were more likely to believe their information was susceptible to misuse when engaging with an anthropomorphic website rather than a non-anthropomorphic one. In contrast, people with a high need for interaction reported lower privacy concerns. They were more likely to believe that their information was validly utilized during their visit to an anthropomorphic website than a non-anthropomorphic website (Xie et al., 2020). Even though this study employed a different perspective from ours, its findings could still be of interest to understanding what factors influence perceived privacy concerns and the relationship between brand anthropomorphism and personalization.

Further, a study by Xie and Lei (2022) investigated the relationship between anthropomorphic AI robots and privacy concerns. They found that consumers experience deeper privacy concerns when AI robots are anthropomorphized compared to non-anthropomorphized. Their findings align with Gretry et al.'s (2017), who found that brand anthropomorphism decreases intimate self-disclosure. As can be seen in the regression analysis in Appendix 3, we instead found a small but significant negative correlation between brand anthropomorphism and privacy concerns, suggesting that anthropomorphic cues in advertising could decrease privacy concerns, which contradicts most previous research. It, however, aligns with Zhu & Kanjanamekanant's (2021) findings that perceived personification positively affects willingness to disclose information, improving ad effectiveness and purchase intentions.

5.1.6 Trust and Privacy Concerns as Mediators

As explained in the analysis and results, we intended to employ Andrew F. Hayes's mediation analysis to test whether brand trust and privacy concerns mediate the relationship between brand anthropomorphism, personalization, and advertisement attitudes. However, there was no relationship to perform a mediation analysis because we found no significant relationship between brand anthropomorphism and brand trust or any significant relationship between brand anthropomorphism and personalization with the dependent variable.

Also, as there is a lack of research on brand anthropomorphism and personalization together, comparing these findings to previous research is challenging. We have not found any research investigating the mediation of brand trust and privacy concerns in the same study. In addition,

we found no research on the mediation effect of privacy concerns on the relationship between personalization and advertisement attitudes. Research on privacy concerns as a mediating variable has instead focused on other variables, such as Internet experience and intention to use mobile payment (Su et al., 2018) and website reputation and privacy disclosure (Weihong & Qian, 2022). We have also not found any research investigating the mediation effect of brand trust on the relationship between brand anthropomorphism and advertisement attitudes. Instead, previous research has focused on other variables, such as brand trust mediating the relationship between risk aversion and loyalty (Matzler et al., 2008) and the mediation effect of brand trust between brand image and loyalty (Gelaidan et al., 2022). Because of these limitations in research, our findings concerning brand trust and privacy concerns will be discussed further in the theoretical and practical implications.

However, we found a significant relationship between brand trust and privacy concerns. As can be seen in the regression analysis in Appendix 3, the analysis showed a small but significant negative correlation of -0.167 between brand trust and privacy concerns, which indicates that if a person has trust in a brand, they tend to feel fewer privacy concerns when exposed to an ad, which is consistent with previous research. Urban et al. (2009) found that consumers with greater trust in a brand seem to be more accepting of vulnerable feelings brought on by personalization and that trust-building strategies can counteract adverse reactions brought on by vulnerability. Our findings also align with Bleier and Eisenbeiss's (2015) argument that trust is an essential consideration for firms using personalization strategies and with Stewart's (2003) argument that creating trust is especially essential in an online environment due to information asymmetries and uncertainties inherent to the internet.

5.1.7 Confounding Variables

As the analysis and results explained, we tested for our believed confounding variables through regression analysis. The analysis showed a strong positive significant correlation between brand attitude and advertisement attitudes. This finding is consistent with Lutz et al.'s (1983) theory on the sources of advertisement attitudes since they mean that an individual's perception of an advertiser is the fundamental driver of advertisement attitudes.

Moreover, we found a moderately significant positive correlation between a person's general attitude toward advertising and their advertisement attitude, which also aligns with Lutz et

al.'s (1983) theory on advertisement attitudes. Additionally, we saw a small but significant positive correlation between a person's mood at ad exposure and attitude toward the ad, aligning with Lutz et al.'s (1983) theory. Lastly, a small but significant positive correlation between ad relevance and advertisement attitude aligns with Wells et al.'s (1971) findings.

Further, a small but significant positive correlation existed between brand anthropomorphism and a person's general attitude toward advertising. We also saw a small but significant positive correlation between ad relevance and brand attitude and between mood and brand attitude. Likewise, there was a small but significant positive correlation between ad relevance and general attitude toward advertising and between mood and general attitude toward advertising.

In addition, the analysis showed that ad relevance and privacy concerns have a small but significant negative correlation. These findings align with White et al.'s (2008) and Chellappa and Sin's (2005) arguments that a consumer's privacy concerns tend to become outweighed as the value and utility of the personalized offer increases.

Altogether, the findings for the confounding variables align with current theories on advertisement attitudes by Lutz et al. (1983) and Wells et al. (1971). Our findings also show that advertisement attitude is a complex variable dependent on several factors.

5.2 Theoretical Implications

This study contributes to the growing body of research on brand anthropomorphism by including another perspective on how brand anthropomorphism and personalization interact in forming advertisement attitudes. As explained throughout the thesis, the combined use of brand anthropomorphism and personalization is under-researched; hence, no current theories explain how these two phenomena interact. There are, however, established theories on brand anthropomorphism and how it is effective at increasing brand trust (Möller & Herm, 2013; Golossenko et al., 2020; Ha et al., 2022), improving brand-consumer relationships (Chen & Lin, 2021), and instilling loyalty (Sharma & Rahman, 2022). As explained in section 5.1.1, our findings challenge these theories as our findings suggest no indication that brand anthropomorphism significantly affects brand trust or that the two variables had any

significant correlation, both when including and excluding personalization. Our findings suggest that brand anthropomorphism's positive outcomes, such as brand trust, seem more complex and context-dependent.

Likewise, there are established theories on personalization, such as the personalization paradox by Aguirre et al. (2015). They explain how personalization increases relevance and privacy concerns simultaneously. Our findings align with this theory to a certain extent. We found that privacy concerns positively correlate with personalization, and we found a significant difference in scores for the group with the personalized stimuli and the control group. This result implies that personalization significantly affects privacy concerns. However, our experiment did not reveal any positive correlation between personalization and ad relevance, being one of the confounding variables. This result could be due to an experiment's artificial nature, which will be discussed further in the study's limitations. In addition, our findings align with Bleier and Eisenbeiss's (2015) theory, suggesting that trust is an essential consideration for firms using personalization strategies, as brand trust had a significant positive correlation with advertisement and brand attitudes and a significant negative correlation with privacy concerns.

Lastly, since brand trust was found to have a strong correlation with attitude toward the ad and brand attitude, Lutz et al.'s (1983) theory on advertisement attitudes becomes relevant to discuss further. Aligned with our findings, they suggest that brand attitude is the primary source of advertisement attitudes. Furthermore, they explain that the attitude toward an advertiser includes attractiveness, reputation, and similarity. Our findings, however, suggest that brand trust has a strong positive correlation with advertisement attitudes. This finding implies that brand trust can be considered a potential extension to the model proposed by Lutz et al. (1983), thus becoming a variable that further explains how consumers form attitudes.

5.3 Practical Implications for Managers

As presented throughout the thesis, findings are divided into the currently limited research on the combined use of anthropomorphism and personalization.

Our study found no significant effects of brand anthropomorphism and personalization on advertisement attitudes. The main practical implication of this finding is that marketers looking to improve advertisement attitudes should not expect brand anthropomorphism and personalization to reach this objective. Instead, they should focus on other advertisement elements. Hence, marketers should approach anthropomorphic cues in personalization cautiously, as the research on this topic is limited and mixed.

However, considering the discrepancies between our findings and previous research on the impact of brand anthropomorphism on brand trust, it is worth reflecting on the various factors that may influence consumers' perception of anthropomorphism. Sharma & Rahman (2022) suggest that situational and contextual factors such as firm type of product category influence consumers' anthropomorphic perceptions and the outcomes of brand anthropomorphism. As outlined in section 5.1.1, our study differs from previous studies regarding brand type and industry. These findings could imply that these factors affect whether brand anthropomorphism is suitable for building brand trust. While our fictional brand did not experience increased brand trust when anthropomorphized, Ha et al. (2022), Louis and Lombart (2010), and Sung and Kim (2010) found different results when anthropomorphizing established brands. These differences raise the question of whether anthropomorphism is more suitable for well-known brands, another implication for marketers to consider. In addition, the fact that our advertisement concerned airline tickets within the airline industry, while previous research has focused on industries such as charity, beverages, apparel, watches, and fragrances, suggests that the type of industry and product may also impact the effectiveness of brand anthropomorphism on brand trust. Therefore, marketers must consider these factors before incorporating anthropomorphic cues into their advertising strategy.

Another practical implication concerns designed vs. perceived anthropomorphism. As explained in section 5.1.1, our study differs from previous studies when looking at designed vs. perceived anthropomorphism. Both Sung and Kim (2010) and Louis and Lombart (2010) focused on perceived brand personality and trust, and both Golossenko et al. (2020) and Ha et al. (2022) measured perceived brand anthropomorphism with brand trust. According to Sharma and Rahman (2022), some people are more likely to anthropomorphize than others, and it is not given that consumers will interpret designed anthropomorphic cues as anticipated. Our results on brand trust differ from the other studies while also differing concerning designed vs. perceived anthropomorphism, making this distinction between

designed vs. perceived anthropomorphism relevant for marketers to consider. Designed anthropomorphic cues might not be perceived as anticipated.

Furthermore, our findings reveal other practical implications marketers should consider: the significance of establishing brand trust. Even though brand anthropomorphism did not increase brand trust in our study, incorporating trust-building strategies should still be relevant for marketers, especially for a brand operating in a social media context or employing personalization. The reason is that brand trust is strongly positively correlated with advertisement and brand attitudes. In addition, it negatively correlates to privacy concerns, aligning with Urban et al.'s (2009) and Bleier and Eisenbeiss's (2015) findings that trust mitigates privacy concerns. Therefore, marketers should prioritize building trust with their customers to improve overall brand perceptions and decrease privacy concerns, regardless of whether they incorporate anthropomorphic cues in their advertising.

Lastly, even though ad relevance was not a primary variable in this study or our theoretical framework, we found when testing for our believed confounding variables the impact of ad relevance on both attitudes toward the ad, privacy concerns, brand trust, brand attitude, and attitude toward advertising in general. The fact that ad relevance has a significant negative correlation to privacy concerns is consistent with previous research findings that a consumer's privacy concerns tend to become outweighed as the value and utility of the personalized offer increases (White et al., 2008; Chellappa & Sin, 2005). The practical implications of these findings are that marketers need to pay close attention to ad relevance when planning their advertisements. Marketers should strive to create ads relevant to their target audience and respect their privacy concerns.

5.4 Conclusion

Our study intended to research if brand anthropomorphism and personalization positively affected consumers' attitudes toward advertisements in a social media marketing context. We found no effects on advertisement attitudes, neither from brand anthropomorphism, personalization, or the combination. Therefore, our findings suggest that brand anthropomorphism and personalization do not positively affect advertisement attitudes in social media marketing. The use of brand anthropomorphism and personalization and its

outcomes are complex and context-dependent. In the context of this study, we saw no favorable or unfavorable effects on advertisement attitudes when combining the two strategies.

Further, our findings indicate that the effect of brand anthropomorphism on brand trust may not be as given as previous researchers have found, as we found no connection between the two variables, suggesting it could be more context-dependent. Nonetheless, our findings suggest that building brand trust is essential for improving brand and advertisement attitudes and mitigating privacy concerns stemming from personalization. Moreover, the study highlights the importance of considering potential confounding variables when researching consumer attitudes toward advertising. Our analysis underlines the need for researchers to take a comprehensive approach to understanding consumer attitudes toward advertising, considering all relevant variables that may influence those attitudes.

5.5 Limitations of This Study

Although this study was designed and conducted methodically and with care, providing insights into brand anthropomorphism and personalization, several limitations should be considered.

The first limitation concerns the research design. This study followed an experimental research design involving manipulating independent variables to assess their impact on a dependent variable (Bryman & Bell, 2017). Even though experiments allow the researcher to produce explanations by comparing the different groups' reactions after the experimental treatment, and while experiments are unparalleled in offering explicit evidence of causation when testing theory-driven hypotheses about causal relationships (Söderlund, 2010), the experiment puts the participant in an artificial situation. This limitation also applies to our study. In the experiment, participants were not exposed to real personalization based on prior internet search behavior, and the advertisement was not tailored to them individually. Instead, respondents had to imagine themselves in a scenario that could have impacted the level of privacy concerns experienced, ultimately impacting the results.

A second limitation concerns the independent variable of brand anthropomorphism. We have in this study only tested a small part of brand anthropomorphism through an advertisement. Some researchers (Sharma & Rahman, 2022; Dahl, 2018) suggest that brand anthropomorphism is an inclusive branding strategy. The results could have been different if the experiment tested brand anthropomorphism as a branding strategy instead of just anthropomorphizing one ad.

A third limitation of our study is that we only tested for designed anthropomorphism in our experiment. As explained throughout the thesis, researchers differ between designed and perceived anthropomorphism. While we measured perceived anthropomorphism in our pre-study to ensure successful manipulation checks, our main study utilized only designed anthropomorphism in our stimuli. According to Sharma and Rahman (2022), it is not given that consumers will interpret designed anthropomorphic cues as anticipated, which could be the case in our study, and why brand anthropomorphism did not positively affect either brand trust or advertisement attitudes. This measurement of solely designed anthropomorphism may be a reason for our different results compared to previous research, as explained in section 5.1.1. Hence, it could be considered a limitation of our study. Nonetheless, it is also a noteworthy finding and practical implication as it highlights the importance of the perception of anthropomorphic cues.

A final limitation concerns the type of brand used in the experiment. We used a fictional brand in this experiment since we did not want the participants' prior relationship with or knowledge about a brand to affect the results. Our objective was to test the impact of brand anthropomorphism and personalization on advertisement attitudes. Having a fictional brand could have impacted the study's results and could be one of the reasons that our findings contradict other researchers that tested anthropomorphizing well-established brands. This limitation could nonetheless also be seen as a finding on its own, highlighting the importance of the brand when employing anthropomorphic branding strategies.

5.6 Future Research

As demonstrated in the thesis, the combined use of brand anthropomorphism and personalization is an under-researcher area that needs further exploration. Considering the

limitations highlighted in the previous section, we suggest that forthcoming studies incorporate anthropomorphism more holistically as a branding strategy instead of a single advertisement, as some researchers (Sharma & Rahman, 2022; Dahl, 2018) mean that brand anthropomorphism is more of an inclusive branding strategy.

In addition, investigating the impact of using designed vs. perceived anthropomorphism on several dependent variables could be an interesting area to explore further. This research area is interesting as we found differences in our results using only designed brand anthropomorphism from other researchers who measured perceived brand anthropomorphism. However, it is unclear whether this distinction between designed and perceived anthropomorphism played a role in these differences in results. Thus, it could be valuable to explore the role that actual perception of anthropomorphism plays in forming brand trust and advertisement attitudes.

Further, the results of this study suggest several avenues for future research. We have seen differences in the outcomes of brand anthropomorphism between our findings and previous research, indicating that the type of brand, product, and industry could impact whether anthropomorphism is a suitable strategy to build trust and form favorable attitudes. Hence, future research could investigate which brand types, industries, and products could benefit the most from brand anthropomorphism and which contexts could result in adverse effects.

Moreover, this study has highlighted the importance of building brand trust, even though brand anthropomorphism did not successfully establish brand trust in this study. Hence, it is interesting for future researchers to investigate the most effective trust-building strategies. This is especially interesting in personalized marketing as research has found consumers to be more accepting of vulnerable feelings, experiencing fewer privacy concerns if they have more trust in a brand (Urban et al., 2009). In addition, it is vital in today's online environment (Stewart, 2003).

Altogether, the modern marketing era offers many opportunities for businesses and marketers to create engaging and successful advertisements. Our research contributes to a better understanding of the mechanisms underpinning the increasing influence of brand anthropomorphism and personalization on advertising effectiveness in social media. We hope

this study will encourage future research into the intricate construct of brand anthropomorphism and personalized marketing.

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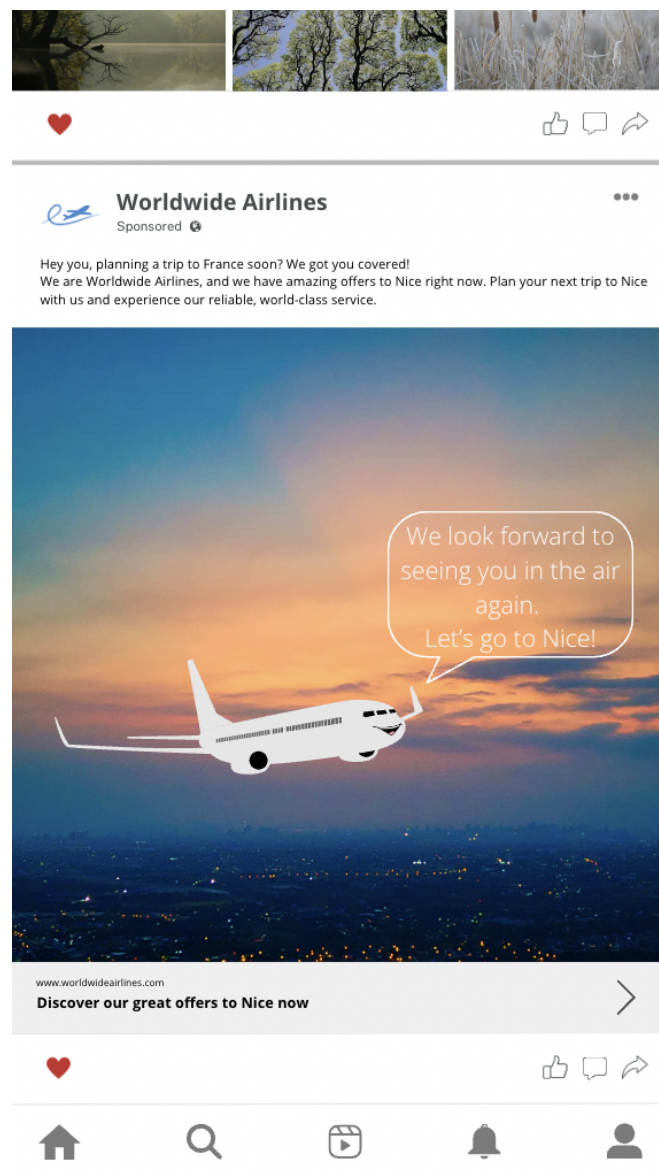
Appendices

Appendix 1 - Four Stimuli

Stimulus 1: Anthropomorphized and personalized ad

Imagine that you have been on the internet searching for plane tickets to Nice, France, for this summer. A few hours later, when you scroll through social media, the following ad is displayed in your feed.

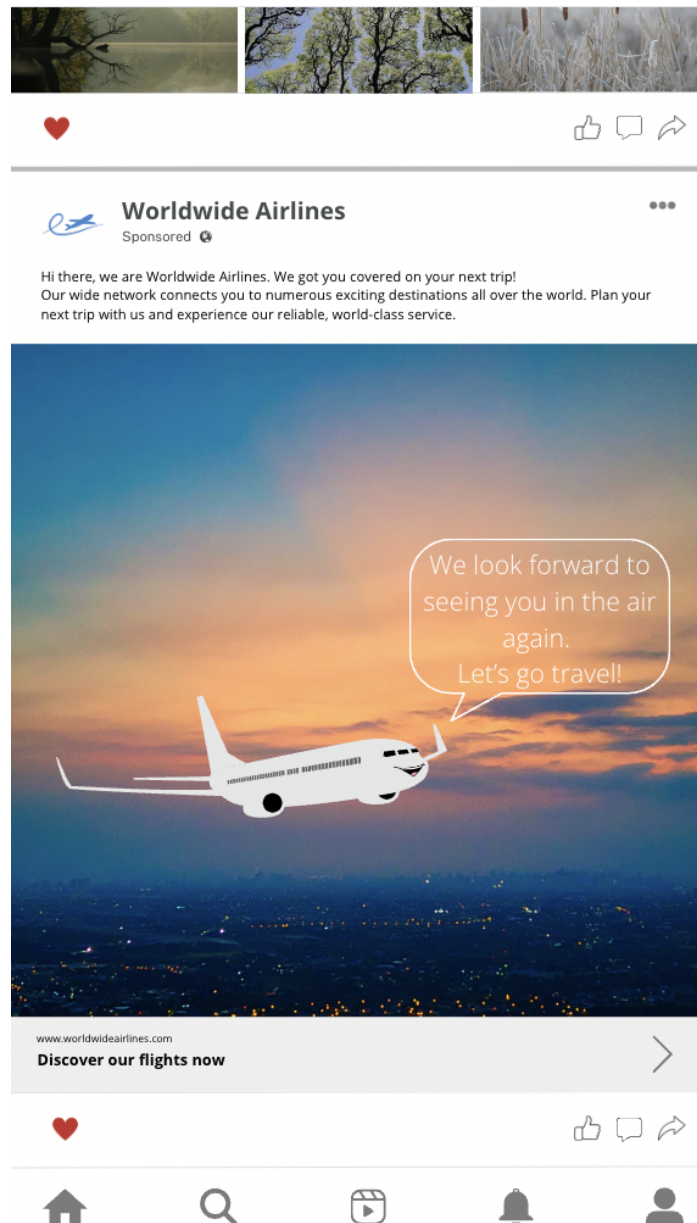
We are going to ask you a couple of questions regarding this ad. Therefore, you must observe it and read the text carefully. You will only see the ad once.



Stimulus 2: Anthropomorphized and non-personalized ad

Imagine you are scrolling through social media, and the following ad is displayed in your feed.

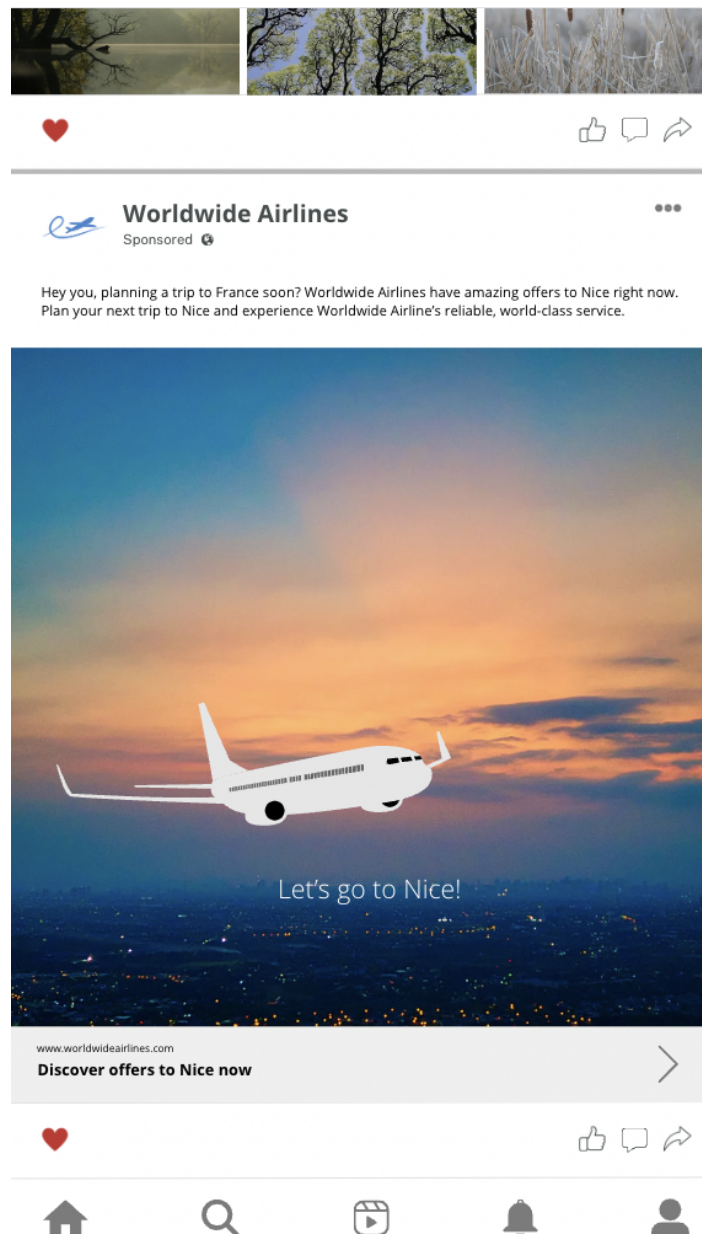
We are going to ask you a couple of questions regarding this ad. Therefore, you must observe it and read the text carefully. You will only see the ad once.



Stimulus 3: Non-anthropomorphized and personalized ad

Imagine that you have been on the internet searching for plane tickets to Nice, France, for this summer. A few hours later, when you scroll through social media, the following ad is displayed in your feed.

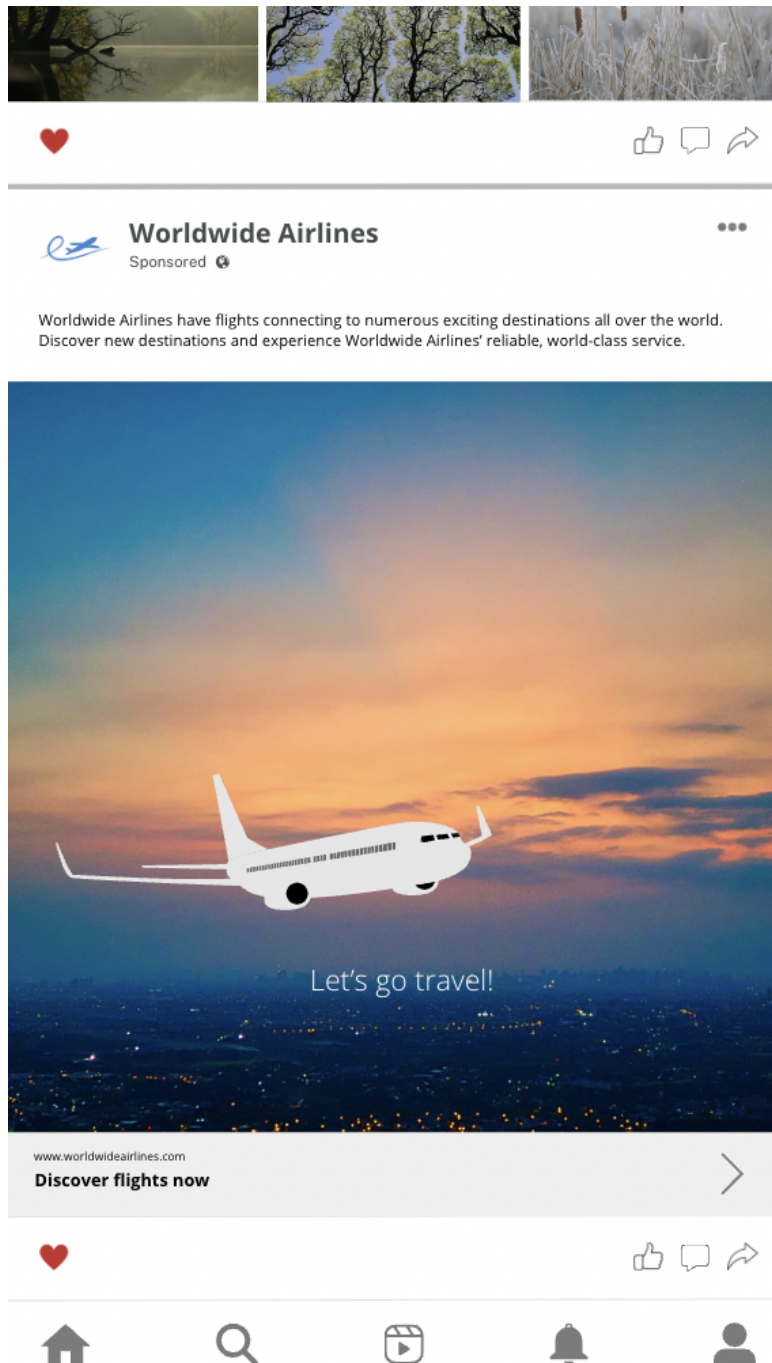
We are going to ask you a couple of questions regarding this ad. Therefore, you must observe it and read the text carefully. You will only see the ad once.



Stimulus 4: Non-anthropomorphized and non-personalized ad

Imagine you are scrolling through social media, and the following ad is displayed in your feed.

We are going to ask you a couple of questions regarding this ad. Therefore, you must observe it and read the text carefully. You will only see the ad once.



Appendix 2 - Survey Questionnaire

Before we start the survey, we would like to ask you to quickly assess your current emotional state. How are you feeling today?

Sad	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Happy
Stressed	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Calm

Stimuli

Have you observed the ad and read the text carefully?

- ☐ No
☐ Yes

Please describe your overall opinion on the ad

Bad	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Good
Dislikeable	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Likeable
Irritating	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Not irritating
Uninteresting	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Interesting

Please describe your overall opinion on the brand

Unappealing	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Appealing
Bad	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Good
Unpleasant	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Pleasant
Unfavorable	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Favorable
Unlikeable	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Likeable

Please answer the following statements about trust

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
I trust Worldwide Airlines	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I rely on Worldwide Airlines	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Worldwide Airlines is an honest brand	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Worldwide Airlines is a safe brand	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please answer the following question about relevance

I think the ad is not relevant for me

☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

I think the ad is relevant for me

Here is an attention task to ensure you read the questions carefully. Please select the number five.

- ☐ 1
- ☐ 2
- ☐ 3
- ☐ 4
- ☐ 5
- ☐ 6
- ☐ 7

Please rate the extent to which you agree to the following statements:

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
It bothers me that Worldwide Airlines can track information about me	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am concerned that Worldwide Airlines has too much information about me	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It bothers me that Worldwide Airlines can access information about me	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please answer the following question about advertising:

	Dislike a great deal	Dislike a moderate amount	Dislike a little	Neither like nor dislike	Like a little	Like a moderate amount	Like a great deal
※ What is your general opinion on advertising?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

What gender do you identify as?

- ☐ Male
- ☐ Female
- ☐ Non-binary / third gender
- ☐ Prefer not to say

How old are you? (please write your age in numbers, e.g., 31)

- Open question

Here is an attention task to ensure you have read the questions carefully. What have you been asked about in this survey?

- ☐ An advertisement for an airline company
- ☐ An advertisement for a hotel
- ☐ An advertisement for a restaurant

Appendix 3 - Regression Analysis

Correlation (p-value)

Ad attitude	1.0								
Brand anthropomorphism	-.069 (.165)	1.0							
Personalization	-.002 (.490)	-.044 (.265)	1.0						
Brand attitude	.826 (.000)	-.038 (.295)	-.095 (.089)	1.0					
General attitude toward advertising	.313 (.000)	.137 (.026)	-.057 (.208)	.313 (.000)	1.0				
Ad relevance	.187 (.004)	.019 (.395)	.111 (.057)	.164 (.010)	.239 (.000)	1.0			
Mood	.283 (.000)	.029 (.340)	-.072 (.155)	.178 (.005)	.157 (.013)	.030 (.334)	1.0		
Privacy concerns	-.107 (.065)	-.124 (.039)	.169 (.008)	-.186 (.004)	-.090 (.101)	-.188 (.004)	.027 (.353)	1.0	
Brand trust	.614 (.000)	-.028 (.343)	-.152 (.015)	.678 (.000)	.231 (.000)	.176 (.006)	.146 (.019)	-.167 (.008)	1.0
Ad attitude	Brand anthropomorphism	Personalization	Brand attitude	General attitude toward advertising	Ad relevance	Mood	Privacy concerns	Brand trust	

Correlation analysis

Coefficients		
	Beta	p-value
Brand anthropomorphism	-.056	.140
Personalization	.088	.022
Brand attitude	.733	<.001
General attitude toward advertising	.157	<.001
Ad relevance	.009	.815
Brand trust	.079	.125
Privacy concerns	.034	.384
Mood	.122	.001

Coefficients analysis