

Consumer Brand Advocacy among Generation Z: The Roles of Brand Anthropomorphism, Consumer Brand Engagement, and Social Self-Efficacy

Afsana Akhtar (Corresponding Author), Noor Azman Ali, Risidaxshinni Kumarusamy Universiti Putra Malaysia, Putra Business School, Malaysia

Received: July 18, 2025 Accepted: August 20, 2025 Published: August 22, 2025

doi:10.5296/bms.v16i2.23026 URL: https://doi.org/10.5296/bms.v16i2.23026

Abstract

This conceptual paper examines the significance of consumer brand advocacy and how it relates to brand anthropomorphism, consumer brand engagement, and social self-efficacy. Advocacy encompasses defending, recommending, or appealing for a specific individual or cause. Advocacy is important in marketing since it influences consumers' brand loyalty, purchase intentions, and willingness to pay a price premium. This article proposes a framework to investigate the impacts of brand anthropomorphism on consumer brand advocacy in the electronics industry. Brand warmth, competence, and mind perception have been identified to represent anthropomorphism through a literature review. The proposed model examines the consumer brand engagement as the mediator and social self-efficacy as the moderator in the relationships between anthropomorphism and brand advocacy. The framework integrates theories and concepts from marketing and psychology, including the Stereotype Content Model, the Brands as Intentional Agents Framework, the Mind Perception Theory, and the Stimulus-Organism-Response Model. The knowledge obtained from the empirical study will assist brand managers effectively target adults and educated Generation Z interested in the consumer electronics brand in Bangladesh.

Keywords: consumer brand advocacy, brand anthropomorphism, consumer brand engagement, social self-efficacy, and generation Z

1. Introduction

1.1 Introduction

Brand advocacy is considered a critical success factor in marketing (Wilk et al., 2021) since



the former influences purchase intentions (Choi et al., 2021) and brand loyalty (Quaye et al., 2022) of consumers. Advocacy involves defending, recommending, and appealing for an individual or cause (Jillapalli & Wilcox, 2010). Brand advocacy includes positive word-of-mouth (PWOM), positive referrals, favorable recommendations, defending the brand against criticism, and forgiving service failures (Leal, 2021). Despite the importance of brand advocacy, there is limited conceptual and empirical research on the topic (Sweeney et al., 2020; Wilk et al., 2021). Research on advocacy has mainly focused on PWOM; however, PWOM does not fully capture the nuances of advocacy (Wilder, 2015). Therefore, this research investigates the process through which anthropomorphism leads to brand advocacy.

Brand anthropomorphism is the consumers' belief that brands have human attributes, such as thoughtful behavior, emotions, and feelings. Brand anthropomorphism can significantly influence consumer-brand relationships (Fournier & Alvarez, 2012; Golossenko et al., 2020; Yang et al., 2020). Despite the inherent appeal of this concept for marketers, more research is necessary to comprehend how anthropomorphism affects human behavior (Chen et al., 2023; Li & Suh, 2022; Yang et al., 2020), its fundamental mechanisms, and its psychological impacts on individuals (Li & Sung, 2021; Liu et al., 2022). Researchers have found the processes of anthropomorphism to be "contextually complicated" and influenced by situational factors (Lee & Oh, 2021, p. 455). Sharma and Rahman (2022) opined that brand anthropomorphism can be explained by integrating theories on the mental capabilities of brands, e.g., Mind Perception Theory, the Stereotype Content Model (SCM), and Brands as Intentional Agents Framework (BIAF). According to Liu et al. (2022), two major types of brand anthropomorphism are warmth and competence. Additionally, ascribing a humanlike mind and spirit to a brand, known as mind perception, is a crucial and sophisticated form of anthropomorphism (Sharma & Rahman, 2022; Waytz, Cacioppo, & Epley, 2010).

Research indicates that brand anthropomorphism positively influences brand advocacy (Ferreira, 2020; Nguyen & Trinh, 2023) and encourages positive word-of-mouth (Sheehan, 2018; Chen et al., 2023; Konya-Baumbach et al., 2023). These studies suggest that anthropomorphism improves consumer attitudes toward a brand and enhances brand performance; however, inconsistent results have been noted regarding the usefulness of brand anthropomorphism in marketing. Anthropomorphism might lead to adverse outcomes under conditions when consumers have strong distinctiveness motives (Puzakova & Aggarwal, 2018) or when a brand is facing unfavorable publicity for its wrong activities (Puzakova et al., 2013). Anthropomorphism in artificial intelligence assistants (AIA) can potentially threaten users' identities and reduce authority and control (Uysal et al., 2022). Extensive research in cognitive science, psychology, philosophy, and animal behavior has also shown that anthropomorphism has more negative than positive impacts (Williams et al., 2020). Therefore, the effect of attributing human traits to brands for positive consequences remains inconclusive.

Consumer brand engagement (CBE) is proposed to mediate the relationship between brand anthropomorphism and consumer brand advocacy. CBE represents a process through which



consumers develop their associations with brands and become brand advocates. Marketing practitioners and researchers are interested in exploring this topic further due to its economic and social benefits (Obilo et al., 2021). Existing literature shows a positive relationship between brand anthropomorphism (BA) and CBE (Festerling & Siraj, 2022; Moriuchi, 2021; Tuškej & Podnar, 2018a). Research has also revealed that consumer brand engagement can lead to brand advocacy (Bousba & Arya, 2022; Sharma et al., 2022).

There is a concern among researchers whether the hypothesized relationships apply equally to all respondents. The effects may vary for individuals with specific characteristics (Malär et al., 2011). The Stimulus-Organism-Response (S-O-R) model is the underpinning theory for the current research. It shows how personal traits significantly impact the psychological process from stimulus to response; it also demonstrates how a stimulus influences an organism's development (Mehrabian & Russell, 1974). Earlier research has shown that adults and adolescents possessing high self-efficacy are more prone to exhibit prosocial behaviors (Wentzel, 2014; Salado et al., 2024). Social self-efficacy has been examined as a moderator in the proposed model to identify individual differences engaged in advocacy behaviors.

This study examines the brand advocacy behavior of Generation Z (Gen Z) consumers. The Pew Research Center has defined Generation Z as individuals who were born between 1997 and 2012. This cohort comprises approximately 30% of the world population. They have the potential to significantly influence global consumer sales (Djafarova & Bowes, 2021; Wolf, 2020). They hold unique beliefs and interests compared to their predecessors (Rana et al., 2024; Thangavel et al., 2022). The present research focuses on the consumer electronics industry in Bangladesh. A significant segment of the population in the country comprises young, tech-savvy individuals. A quantitative research method has been applied to test the hypotheses developed for this research. The data was collected from Generation Z students studying in leading public and private universities in Dhaka, Bangladesh, through a cross-sectional survey.

In this research, purposive sampling, a type of non-probability sampling technique, has been applied to select samples from each university. In purposive sampling, respondents are deliberately selected based on specific criteria that have the most relevance to the study's purpose and objectives (Memon et al., 2024). Respondents conform to two main criteria. First, they must be between 18 and 27 to represent Gen Z consumers. Second, they must have used local consumer electronics brand(s) in the previous year. Consumers in a collectivist society (e.g., Bangladesh) anthropomorphize brands as they have more access to human knowledge (Epley et al., 2007; Ghuman et al., 2015). Therefore, it is a highly relevant and timely research agenda to explore the key factors that impact the behaviors of Gen Z consumers in the electronics industry in Bangladesh.

1.2 Research Objectives

To address the problems and research gap identified, this research has focused on the following research objectives:



RO1: To determine if brand anthropomorphism (brand warmth, brand competence, brand mind perception) significantly affects consumer brand advocacy among Gen Z in Bangladesh.

RO2: To determine if brand anthropomorphism (brand warmth, brand competence, brand mind perception) significantly affects consumer brand engagement among Gen Z in Bangladesh.

RO3: To examine if consumer brand engagement mediates the relationship between brand anthropomorphism (brand warmth, brand competence, brand mind perception) and consumer brand advocacy.

RO4: To examine if social self-efficacy moderates the relationship between brand anthropomorphism (brand warmth, brand competence, brand mind perception) and consumer brand advocacy.

2. Literature Review

2.1 Consumer Brand Advocacy

The word "advocacy" originates from the Latin verb *advocare*, meaning to justify, avow, or vouch; it denotes persuasive communication that can influence others (Sweeney et al., 2020). Word-of-mouth (WOM) frequently serves as a proxy for brand advocacy (Ranaweera & Prabhu, 2003; Wragg, 2004). However, consumer behavior researchers have opined that brand advocacy has its foundation in consumer-brand relationships, while positive WOM does not adequately capture the evangelistic brand communications customary of brand advocates (Fournier et al., 2012; Wilder, 2015). For many years, firms have utilized customer satisfaction and loyalty as "key indicators of performance and effective customer management" (Lowenstein, 2010, p. 9). However, Lowenstein (2010) opined that customer satisfaction was not dependable as it was transient and did not represent any lasting relationship; although brand loyalty indicates a long-term relationship between consumers and firms, it does not incorporate the strength of WOM communication. In contrast, brand advocacy considers not only a unique purchase relationship but also an emotional brand-based kinship and positive WOM on behalf of a supplier (Lowenstein, 2010).

Scholars have defined brand advocacy in many ways. Professor Johan Arndt of Columbia University demonstrated that positive word-of-mouth had increased the likelihood of purchase, while negative exposure decreased it (Arndt, 1967). According to Park and MacInnis (2006), advocacy occupies the highest level of the consumer behavioral hierarchy as it signifies consumers' commitment of time, money, and credibility in the brand. Chell et al. (2024) define brand advocacy as favorable feedback or enthusiastic brand recommendations, a willingness to forgive a brand, and proactive brand defense. Researchers have distinguished between customer advocacy, which is initiated by organizations, and consumer advocacy, which is initiated by customers (Jayasimha & Billore, 2016; Quaye et al., 2022). Many



researchers prefer the definition of consumer advocacy due to its organic nature.

2.2 Brand Anthropomorphism

The word anthropomorphism is derived from the Greek terms "anthropos" (meaning human) and "morphe" (meaning shape or form) (Li, 2021). Xenophanes first used the term anthropomorphism in the 6th Century BC to explain the link between religious entities and their believers (Li & Sung, 2021). In social psychology, anthropomorphism refers to attributing humanlike qualities, motivations, intents, or emotions to the imagined or actual behavior of non-human agents (Epley et al., 2007). This definition serves as the basis for our understanding of anthropomorphism in marketing, highlighting the psychological mechanism of brand anthropomorphism (Sharma & Rahman, 2022). This propensity to anthropomorphize non-human objects provides a sense of camaraderie, enhances people's understanding of their surroundings, and functions as a perceptual and cognitive strategy that is likely to yield greater success than failure (Aggarwal & McGill, 2007; Guthrie, 1993, 2014).

Consumers follow social norms when they interact with anthropomorphized brands, and this interaction resembles their engagement with humans (Li & Sung, 2021). Brand anthropomorphism (BA) is characterized as a "psychological and perceptual phenomenon" (Golossenko et al., 2020, p. 740). The concept has attracted significant interest from marketing professionals for product design, commercial production, and the study of consumer behavior (Sohail et al., 2022). Consumer research has shown that if brands are humanized, they actively contribute to the consumption experience; these brands are perceived and treated differently from those regarded as objects only (Yang et al., 2020).

2.2.1 Brand Warmth and Brand Competence

The Stereotype Content Model (SCM) includes two dimensions: warmth and competence (Fiske et al., 2002). Warmth represents the perceptions of kindness, thoughtfulness, trustworthiness, and honesty (Aaker et al., 2012; Fiske et al., 2007; Zhou et al., 2022). Competence indicates the extent to which individuals are capable of carrying out their intentions and are characterized by traits like intelligence, creativity, skill, and efficacy (Fiske et al., 2007; Zhou et al., 2022). Kervyn et al. (2012) subsequently proposed the Brands as Intentional Agents Framework (BIAF) to evaluate brand perceptions. According to their framework, customers assess brands on two dimensions: intentions and ability. Brand researchers termed these dimensions as "brand warmth" and "brand competence" (Astvansh et al., 2024).

Based on a review of prior research, Güntürkün et al. (2020) posed an important question: which dimension is more important—warmth or competence? Some research indicates that competence is more significant (e.g., Aaker et al., 2012), while Andrei et al. (2017) have found mixed evidence suggesting that warmth may be more dominant. These inconclusive results hinder our theoretical understanding of warmth and competence in brand-consumer



relationships. Kolbl et al. (2019) have found that brand warmth is the key factor to drive consumer-brand identification (CBI), and CBI, in turn, influences brand ownership and purchase intentions; however, brand competence does not have a significant influence on consumer-brand identification. Their findings suggest that not all aspects of the stereotype content model have relevance to the consumer-brand relationship.

2.2.2 Brand Mind Perception

Morewedge et al. (2007) have defined mind perception as "a psychological process that occurs with the attribution of mental states such as desire, thought, emotion, planning, reasoning, or consciousness to target objects" (p. 1). The most impressive capability of human brains is perhaps to understand the minds of others; the fundamental mechanisms governing the activation and use of mind perception provide an understanding of the related phenomena of anthropomorphism and dehumanization, forecast systematic accuracy and error in judgments of others, and additionally reveal both ineffective and successful approaches to understanding others better (Epley & Kardas, 2021).

Anthropomorphism does not necessarily lead to positive outcomes only (Puzakova & Aggarwal, 2018; Uysal et al., 2022; Williams et al., 2020). Sehgal et al. (2023) presented a novel perspective on unfavorable consumer behavior concerning the repeat purchase of green brands. Consumers do not consider the human characteristics of a green brand only to accept it. Resemblance to humans can elicit emotions of discomfort or detachment. Despite its detrimental effects in certain contexts, scholars have opined that brands adopting human-like traits are more likely to succeed (Portal et al., 2018).

2.3 Consumer Brand Engagement (CBE)

Consumer brand engagement (CBE) is an essential aspect of consumer-brand relationships (Hollebeek et al., 2019; Kaur et al., 2020), addressing the extent of a customer's cognitive, emotional, and behavioral commitment to specific brand interactions (Hollebeek, 2011). CBE is defined as "a consumer's positively valenced brand-related cognitive, emotional and behavioral activity during or related to focal consumer/brand interactions" (Hollebeek et al., 2014, p. 154). Their research identified three components of CBE: cognitive processing, affection, and activation. These dimensions are related to cognitive, emotional, and behavioral aspects, respectively. Currently, CBE is an essential research topic in marketing and consumer behavior (Kumar & Kaushik, 2022; Razmus, 2021). Brodie et al. (2011) defined engagement as "a psychological state," Bowden (2009) as a "psychological process," Gambetti et al. (2012) as "a dynamic and multi-phase process," and Calder et al. (2013) as a "motivational state." Engagement is a concept that extends beyond purchase, and hence, many scholars prefer the term 'consumer engagement' over 'customer engagement,' since purchasing behavior is not a prerequisite for engagement to occur (Rissanen & Luoma Aho, 2016).

Scholars have recently reflected on consumer engagement's positive and negative sides. Consumers dissatisfied with a brand due to its poor service quality or unethical conduct can



express dissatisfaction through negative WOM online and offline. According to Islam and Rahman (2016), customer engagement is a customer's willingness to actively participate and interact with a brand, which can be either positive or negative. Although negative interactions and engagement are more important when making decisions, positive consumer engagement has received more attention in the academic research (Do et al., 2020; Yadav et al., 2023).

2.4 Social Self-efficacy

Social self-efficacy (SSE) is an individual's view of his or her own competence, efficacy, and causal agency in a social context; therefore, it assists in engaging others in meaningful dialogue, feeling happy while interacting with others, and establishing and sustaining interpersonal relationships (Gecas, 1989; Smith & Betz, 2000; Zamudio et al., 2020). Muris (2001) relates social self-efficacy to perceived assertiveness and capacity for bonding with peers. According to theory, social self-efficacy beliefs should impact social approach versus avoidance behavior, performance in social settings, and persistence in those settings (Anderson & Betz, 2001). However, past research on self-efficacy concentrated on general self-efficacy while disregarding the social element of self-efficacy. Due to its linkage with the social domain and social interaction, SSE is now recognized as essential for psychological adjustments and effective social behavior (Hossain et al., 2024).

2.5 Stimulus-Organism-Response (S-O-R) Model

The Stimulus-Organism-Response (S-O-R) model has been utilized in this research for constructing the conceptual framework and comprehending the relationships among the variables. The S-O-R model explains the influence of perceived brand anthropomorphism on consumer brand advocacy by emphasizing the roles of the mediator and the moderator. The model is rooted in Thorndike's (1898) Law of Effect or Stimulus-Response theory, which suggests that behaviors leading to favorable outcomes are more likely to be repeated when exposed to similar stimuli (S) (Sultan et al., 2021). Later, Woodworth (1918) extended the S-R model of behavior and introduced an active organism that intervened between stimulus and response (Sultan et al., 2021). The main idea of Woodworth's model is that several internal transformation processes within the organism mediate how stimuli affect behavior (Baron & Kenny, 1986).

Adopted from environmental psychology, Mehrabian and Russell (1974) proposed the S-O-R framework (Figure 2.1). It has received wide acceptance among scholars to investigate links between inputs (stimulus), processes (organism), and outputs (response) (Kim et al., 2020).



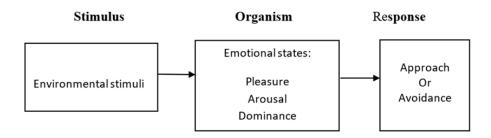


Figure 2.1. Stimulus-Organism-Response Framework (Mehrabian & Russell, 1974)

According to the Mehrabian-Russell model, environmental stimuli shape an individual's cognitive and affective reactions, thereby affecting their responses. A person's response can have two distinct aspects: an approach response, in which the person is prone to act positively toward the environment, e.g., a willingness to stay, explore, desire to communicate with others and affiliate with the environment; and an avoidance response, in which the person is likely to act negatively, e.g., a desire to leave the environment, reluctance to explore, or affiliate (Mehrabian & Russell, 1974; Donovan & Rossiter, 1982). These behaviors result from the emotional states that customers experience while in the environment. According to the model, approach-avoidance behaviors in environmental circumstances are mediated by three core emotional states: pleasure, arousal, and dominance.

3. Conceptual Framework

Within the framework of the present research, the brand's perceived mental states and humanlike warmth and competence are considered as stimuli. Mind perception theory and SCM/BIAF can help explain the fundamental mechanisms of brand anthropomorphism (Sharma & Rahman, 2022). Piligrimiene et al. (2020) have opined that engagement is a consumer's internal state (organism) that can be aroused through external as well as internal stimuli. Aljuhmani et al. (2023) have incorporated the cognitive and affective dimensions to measure CBE, excluding the behavioral component, since previous researchers defined the organism as the consumers' cognitive and affective states of mind (Teangsompong & Sawangproh, 2024). Besides, Li and Nan (2023) have stated that brand perception can be viewed as stimulus according to the logic of the S-O-R paradigm, dividing brand perceptions into brand warmth and brand competence. This research investigates consumer brand advocacy as the consequence of brand anthropomorphism and consumer brand engagement (Figure 3.2). Previous studies used personality traits, self-efficacy, and health self-efficacy as moderators. The current research incorporates social self-efficacy as a moderating variable to broaden the scope of the S-O-R model (Figure 3.1).



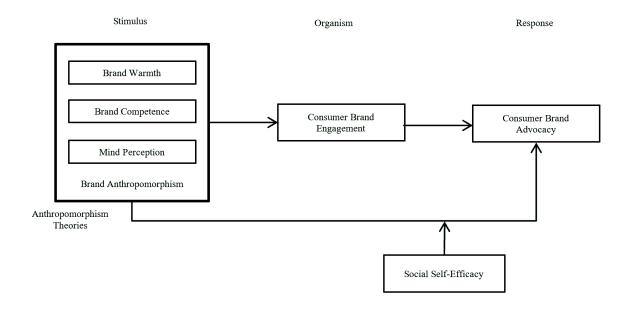


Figure 3.1. Theoretical Model

Based on the above theoretical model, the following conceptual framework (Figure 3.2) has been developed.

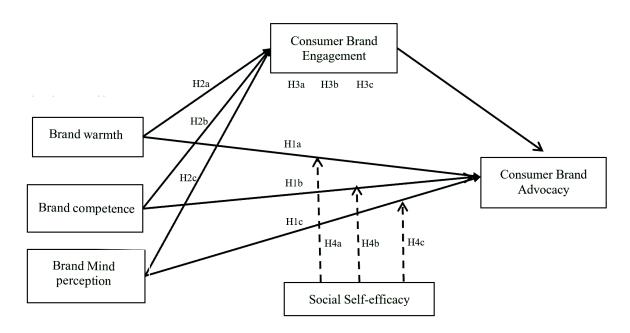


Figure 3.2 Conceptual Framework

4. Hypotheses Development

Drawing upon the literature review and the theoretical framework, several hypotheses have been developed for this study.



4.1 Brand Anthropomorphism and Consumer Brand Advocacy

The first set of hypotheses investigates the relationship between perceived brand anthropomorphism and consumer brand advocacy. Consumers express more favorable opinions about anthropomorphized brands, as these enhance their interpersonal impression (Chen et al., 2023). The humanization of brands influences consumers' emotional and cognitive behaviors (Chen et al., 2021; Fournier & Alvarez, 2012; Liu et al., 2022). Research has highlighted several benefits of brand anthropomorphism, such as customer loyalty (Brakus et al., 2009), consumer brand identification (Tuškej & Podnar, 2018b), consumer engagement (Tuškej & Podnar, 2018a), and positive word of mouth (MacInnis & Folkes, 2017).

Brand anthropomorphism is known as a tool for developing meaningful brand relationships with consumers. It results in brand identification, advocacy, and engagement (Ferreira, 2020). Huang and Ha (2020) showed that warmth-oriented service recovery messages were more effective than competence-oriented messages in improving observers' perceptions of service in the online environment. This positive perception leads to satisfaction with service recovery efforts and favorable word-of-mouth intentions. Hamdy et al. (2024) have found that destination brand gender, stereotypes, destination identification, and advocacy are interrelated.

Brand defense is a more authoritative form of brand advocacy than word-of-mouth (WOM) and extends beyond referrals and recommendations (Alnawas et al., 2023; Javed et al., 2015; Wilk et al., 2020). Previous studies indicate a link between corporate social responsibility (CSR) and brand warmth (Kervyn et al., 2021). The relationship between perceived CSR and brand advocacy has been proven in prior research (e.g., Alnawas et al., 2023; Castro-Gonzalez et al., 2019; Limbu et al., 2020). Ali et al. (2021) have examined the impact of brand anthropomorphism (brand mind perception) on brand love and brand defense in the hospitality industry. The authors found that brand anthropomorphism has a significant and positive influence on brand defense.

The present research proposes the following hypotheses relating brand warmth, competence, and mind perception with brand advocacy:

H1: Brand anthropomorphism significantly affects Consumer Brand Advocacy among Gen Z in Bangladesh.

- H1a: Brand warmth significantly affects Consumer Brand Advocacy among Gen Z in Bangladesh.
- H1b: Brand competence significantly affects Consumer Brand Advocacy among Gen Z in Bangladesh.
- H1c: Brand mind perception significantly affects Consumer Brand Advocacy among Gen Z in Bangladesh.



4.2 Brand Anthropomorphism and Consumer Brand Engagement

It is critical to develop meaningful relationships between consumers and brands (Aaker, 1997; Ferreira, 2020; Fournier, 1998). Consumers tend to form stronger bonds with warm brands more easily than with competent ones (Kervyn et al., 2021). Reimann et al. (2012) measured peripheral and central nervous system responses, providing scientific evidence that attachment to favorite brands and loved ones produces similar activity patterns. Drawing from the study, Barraza et al. (2021) highlighted that humans are social, and it is the role of the neuromodulator oxytocin that facilitates attachment to other humans, animals, and possibly objects. Anthropomorphism has become widespread in the modern marketplace. Product designers and brand managers often encourage consumers to perceive their products and brands as having human qualities, which leads to improved performance (Crolic et al., 2022). Anthropomorphism is identified as one of the three "relationship warmers" that our brains use to transform our cold interactions with objects into warmer, more humanlike relationships (Ahuvia, 2022, p.455). Ding et al. (2022) showed that anthropomorphism could be a powerful branding and destination marketing technique for engaging consumers and tourists. A study by Chen et al. (2018) revealed the favorable impact of anthropomorphism on consumers' psychological well-being by fostering vitality and self-control. Uysal et al. (2022) showed that consumers could form a relationship with artificial intelligence assistants if they perceive a mind in them. Therefore, the next set of hypotheses to be tested is:

H2: Brand anthropomorphism significantly affects consumer brand engagement among Gen Z in Bangladesh.

- H2a: Brand warmth significantly affects consumer brand engagement among Gen Z in Bangladesh.
- H2b: Brand competence significantly affects consumer brand engagement among Gen Z in Bangladesh.
- H2c: Brand mind perception significantly affects consumer brand engagement among Gen Z in Bangladesh.

4.3 Consumer Brand Engagement as Mediator

With time, satisfied customers eventually become brand evangelists. They feel intense loyalty to the brand and retain, repurchase, and recommend it to others. Previous research has established that consumer brand engagement drives the advocacy behaviors of consumers (Bilro et al., 2018; Bousba & Arya, 2022; Sharma et al., 2022). Bousba and Arya (2022) have found that affective brand engagement (ABEM) significantly and positively influences the anticipated brand advocacy in the Metaverse. Similarly, Sharma et al. (2022) revealed a positive association between intention to engage and brand advocacy among Millennials and Gen Z consumers on Online Luxury-Brand Self-Narratives (OLBSNs).



In recent years, brand engagement and love have outweighed loyalty and satisfaction as key performance indicators. Verma (2021) examined the impact of love and engagement on purchase intent and brand equity in the context of mobile phone brands. Previous research has explored the mediating roles of brand engagement and love in the relationship between brand gender and consumer-based brand equity (Machado et al., 2019), between value co-creation and brand evangelism (Harrigan et al., 2021), and between brand coolness and consumer well-being and delight (Attiq et al., 2022). Khashan et al. (2024) used the stimulus-organism-response model to study the impact of customers' perception of restaurant innovativeness (CPRI) on brand evangelism. The authors have found that CPRI (stimulus) positively influences customer engagement (organism) and brand evangelism (response); engagement acts as a mediator between CPRI and evangelism. Hoo et al. (2023) reported that customer engagement served as a mediator in the relationship between brand image and purchase intention in the context of premium hotels in China. Research by Kautish et al. (2022) revealed that consumers' terminal and instrumental values impacted their engagement, which subsequently affected their behavioral intention to purchase fashion apparel online. This study examined the mediating role of consumer brand engagement in the relationship between perceived brand anthropomorphism and brand advocacy.

H3: Consumer brand engagement mediates the relationship between brand anthropomorphism and consumer brand advocacy.

- H3a: Consumer brand engagement mediates the relationship between brand warmth and consumer brand advocacy.
- H3b: Consumer brand engagement mediates the relationship between brand competence and Consumer Brand Advocacy.
- H3c: Consumer brand engagement mediates the relationship between brand mind perception and consumer brand advocacy.

4.4 Social Self-Efficacy as Moderator

The conceptual model examines social self-efficacy (SSE) as a moderator. Although the beliefs or perceptions about one's ability to perform a task differ from the actual ability to do that task, efficacy beliefs can strongly influence performance and adaptive psychosocial functioning (Maciejewski et al., 2000, as cited in Grieve et al., 2014). A literature search reveals that social self-efficacy has been studied extensively among young generations across different disciplines. Previous studies have shown the linkage of SSE with emotional well-being (Yang et al., 2016). SSE was examined to assess its impact as a moderator in the relationship between social support and the academic performance of university students (Carmeli et al., 2021). A study by Oh et al. (2023) about the social benefits of Metaverse found that the number of supportive interactions in the Metaverse was positively associated with young users' (Millennials and Gen Z) perceptions of their social self-efficacy. According to previous research, college students with sufficient PSSE are more likely to succeed socially and



intellectually (Gnatowski, 2022; Friswold-Atwood, 2018). Following the above argument, the present study hypothesizes that the perceived social self-efficacy of consumers would influence consumer brand advocacy, provided the brands are designed (anthropomorphized) to enhance consumers' social interactions. Thus, the following hypotheses are proposed.

H4: Social self-efficacy moderates the relationship between brand anthropomorphism and consumer brand advocacy.

- H4a: Social self-efficacy moderates the relationship between brand warmth and consumer brand advocacy
- H4b: Social self-efficacy moderates the relationship between brand competence and consumer brand advocacy
- H4c: Social self-efficacy moderates the relationship between brand mind perception and consumer brand advocacy

5. Theoretical and Managerial Significance

This interdisciplinary study applies the knowledge of marketing, social psychology, and environmental psychology to primarily address the concern of scholars of how "a knowledge of different disciplines be applied to improve our understanding of how branding might evolve in the future?" (Golob et al., 2020, p. 127). Research focusing anthropomorphism has grown in the recent years to better understand human-AI interactions (Alabed et al., 2022; Cheng et al., 2022). The current research extends the phenomenon of anthropomorphism into the realm of human-brand interaction. This research aims to be one of the pioneering efforts to examine the potential role of consumer brand engagement in mediating the relationship between the perceived human qualities of a brand and consumer brand advocacy, offering novel and intriguing insights. The present study also expands the framework's scope by introducing social self-efficacy as a new moderator.

The propositions of this paper not only advance theories but also assist brand managers in focusing on brand components for crafting winning strategies. Understanding brand warmth, competence, and mind perception driving engagement and advocacy will aid managers in creating more relatable brand personas for young and educated consumers, i.e., Gen Z.

6. Conclusion

The research focuses on the brand advocacy behaviors of Gen Z in the context of consumer electronics. This paper proposes three brand anthropomorphism constructs, namely brand warmth, competence, and mind perception, influencing consumer advocacy. Additionally, it highlights the mediating role of consumer brand engagement and the moderating role of social self-efficacy in the relationship dynamics of this research. The study has developed a framework relating the variables to provide deeper insights into advocacy in the marketing domain.



Acknowledgments

This paper is a part of Afsana Akhtar's PhD work at Putra Business School. She greatly appreciates the support she has received from the management of Putra Business School throughout her PhD journey.

Authors contributions

Afsana Akhtar is a PhD candidate of Putra Business School, Malaysia. This article is a part of her PhD thesis. She has worked under the supervision of Professor Dr. Noor Azman Ali, the late Professor Dr. Hishamuddin Md. Som, and Dr. Risidaxshinni Kumarusamy of Putra Business School.

Funding

This work was not supported by any foundation.

Competing interests

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Informed consent

Obtained.

Ethics approval

The Publication Ethics Committee of the Macrothink Institute.

The journal's policies adhere to the Core Practices established by the Committee on Publication Ethics (COPE).

Provenance and peer review

Not commissioned; externally double-blind peer reviewed.

Data availability statement

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

Data sharing statement

No additional data are available.

Open access

This is an open-access article distributed under the terms and conditions of the Creative Commons Attribution license (http://creativecommons.org/licenses/by/4.0/).



Copyrights

Copyright for this article is retained by the author(s), with first publication rights granted to the journal.

References

Aaker, J. L. (1997). Dimensions of brand personality. *Journal of Marketing Research*, 34(3), 347-356. https://doi.org/10.2307/3151897

Aaker, J. L., Garbinsky, E. N., & Vohs, K. D. (2012). Cultivating admiration in brands: Warmth, competence, and landing in the "golden quadrant". *Journal of Consumer Psychology*, 22(2), 191-194. https://doi.org/10.1016/j.jcps.2011.11.012

Aggarwal, P., & McGill, A. L. (2007). Is that car smiling at me? Schema congruity as a basis for evaluating anthropomorphized products. *The Journal of Consumer Research*, 34(4), 468-479. https://doi.org/10.1086/518544

Ahuvia, A. (2022). The things we love: How our passions connect us and make us who we are. Little Brown Spark.

Alabed, A., Javornik, A., & Gregory-Smith, D. (2022). Al anthropomorphism and its effect on users' self-congruence and self-Al integration: A theoretical framework and research agenda. *Technological Forecasting and Social Change, 182,* 121786. https://doi.org/10.1016/j.techfore.2022.121786

Ali, F., Dogan, S., Amin, M., Hussain, K., & Ryu, K. (2021). Brand anthropomorphism, love and defense: does attitude towards social distancing matter? *The Service Industries Journal*, 41(1-2), 58-83. https://doi.org/10.1080/02642069.2020.1867542

Aljuhmani, H. Y., Elrehail, H., Bayram, P., & Samarah, T. (2023). Linking social media marketing efforts with customer brand engagement in driving brand loyalty. *Asia Pacific Journal of Marketing and Logistics*, 35(7), 1719-1738. https://doi.org/10.1108/APJML-08-2021-0627

Alnawas, I., Ghantous, N., & Hemsley-Brown, J. (2023). Can CSR foster brand defense? A moderated-mediation model of the role of brand passion. *Journal of Brand Management*, 30(3), 190-206. https://doi.org/10.1057/s41262-022-00296-4

Anderson, S. L., & Betz, N. E. (2001). Sources of social self-efficacy expectations: Their measurement and relation to career development. *Journal of Vocational Behavior*, 58(1), 98-117. https://doi.org/10.1006/jvbe.2000.1753

Andrei, A. G., Zait, A., Vătămănescu, E. M., & Pînzaru, F. (2017). Word-of-mouth generation and brand communication strategy: Findings from an experimental study explored with PLS-SEM. *Industrial Management & Data Systems*, 117(3), 478-495. https://doi.org/10.1108/IMDS-11-2015-0487



- Arndt, J. (1967). Role of product-related conversations in the diffusion of a new product. *Journal of Marketing Research*, 4(3), 291-295. https://doi.org/10.1177/002224376700400308
- Astvansh, V., Suri, A., & Damavandi, H. (2024). Brand warmth elicits feedback, not complaints. *Journal of the Academy of Marketing Science*, 52, 1107-1129. https://doi.org/10.1007/s11747-024-01009-w
- Attiq, S., Abdul Hamid, A. B., Khokhar, M. N., Shah, H. J., & Shahzad, A. (2022). "Wow! It's Cool": How brand coolness affects the customer psychological well-being through brand love and brand engagement. *Frontiers in Psychology*, 13, 923870. https://doi.org/10.3389/fpsyg.2022.923870
- Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology, 51*(6), 1173-1182. https://doi.org/10.1037/0022-3514.51.6.1173
- Barraza, J. A., Hu, X., Terris, E. T., Wang, C., & Zak, P. J. (2021). Oxytocin increases perceived competence and social-emotional engagement with brands. *PLOS ONE*, *16*(11), e0260589. https://doi.org/10.1371/journal.pone.0260589
- Bilro, R. G., Loureiro, S. M. C., & Ali, F. (2018). The role of website stimuli of experience on engagement and brand advocacy. *Journal of Hospitality and Tourism Technology*, 9(2), 204-222. https://doi.org/10.1108/JHTT-12-2017-0136
- Bousba, Y., & Arya, V. (2022). Let's connect in metaverse. Brand's new destination to increase consumers' affective brand engagement & their satisfaction and advocacy. *Journal of Content, Community & Communication, 15*(8), 276-293. https://doi.org/10.31620/JCCC.06.22/19
- Bowden, J. L. (2009). The process of customer engagement: A conceptual framework, *Journal of Marketing Theory and Practice*, *17*(1), 63-74. https://doi.org/10.2753/MTP1069-6679170105
- Brakus, J. J., Schmitt, B. H., & Zarantonello, L. (2009). Brand experience: what is it? How is it measured? Does it affect loyalty? *Journal of Marketing*, 73(3), 52-68. https://doi.org/10.1509/jmkg.73.3.052
- Brodie, R. J., Hollebeek, L. D., Juric, B., & Ilic, A. (2011). Customer engagement: Conceptual, fundamental propositions & implications for research in service marketing. *Journal of Service Research*, *14* (3), 252-71. https://doi.org/10.1177/1094670511411703
- Calder, B. J., Isaac, M. S., & Malthouse, E. C. (2013). Taking the customer's point-of-view: Engagement or satisfaction. *Marketing Science Institute Working Paper Series*, 13-102.



Carmeli, A., Peng, A. C., Schaubroeck, J. M., & Amir, I. (2021). Social support as a source of vitality among college students: The moderating role of social self-efficacy. *Psychology in the Schools*, 58(2), 351-363. https://doi.org/10.1002/pits.22450

Castro-González, S., Bande, B., Fernández-Ferrín, P., & Kimura, T. (2019). Corporate social responsibility and consumer advocacy behaviors: The importance of emotions and moral virtues. *Journal of Cleaner Production*, 231, 846-855. https://doi.org/10.1016/j.jclepro.2019.05.238

Chell, K., Mortimer, G., Dang, T., & Russell-Bennett, R. (2024). Understanding contextual determinants of likely online advocacy by millennial donors. *Nonprofit and Voluntary Sector Quarterly*, 53(2), 321-347. https://doi.org/10.1177/08997640231165913

Chen, F., Sengupta, J., & Adaval, R. (2018). Does endowing a product with life make one feel more alive? The effect of product anthropomorphism on consumer vitality. *Journal of the Association for Consumer Research*, 3(4), 503-513. http://dx.doi.org/10.1086/698493

Chen, F., Sengupta, J., & Zheng, J. (2023). When products come alive: Interpersonal communication norms induce positive word of mouth for anthropomorphized products. *Journal of Consumer Research*, 49(6), 1032-1052. https://doi.org/10.1093/jcr/ucac027

Chen, T., Razzaq, A., Qing, P., & Cao, B. (2021). Do you bear to reject them? The effect of anthropomorphism on empathy and consumer preference for unattractive produce. *Journal of Retailing and Consumer Services*, 61, 102556. https://doi.org/10.1016/j.jretconser.2021.102556

Cheng, X., Zhang, X., Cohen, J., & Mou, J. (2022). Human vs. AI: Understanding the impact of anthropomorphism on consumer response to chatbots from the perspective of trust and relationship norms. *Information Processing & Management*, 59(3), 102940. https://doi.org/10.1016/j.ipm.2022.102940

Choi, Y., Kroff, M. W., & Kim, J. (2021). Developing brand advocacy through brand activities on Facebook. *Journal of Consumer Marketing*, 38(3), 328-338. https://doi.org/10.1108/JCM-10-2019-3460

Crolic, C., Thomaz, F., Hadi, R., & Stephen, A. T. (2022). Blame the bot: anthropomorphism and anger in customer–chatbot interactions. *Journal of Marketing*, 86(1), 132-148. https://doi.org/10.1177/00222429211045687

Ding, A., Lee, R. H., Legendre, T. S., & Madera, J. (2022). Anthropomorphism in hospitality and tourism: A systematic review and agenda for future research. *Journal of Hospitality and Tourism Management*, *52*, 404-415. https://doi.org/10.1016/j.jhtm.2022.07.018

Djafarova, E., & Bowes, T. (2021). 'Instagram made Me buy it': Generation Z impulse purchases in fashion industry. *Journal of Retailing and Consumer Services*, *59*, 102345. https://doi.org/10.1016/j.jretconser.2020.102345



- Do, D. K. X., Rahman, K., & Robinson, L. J. (2020). Determinants of negative customer engagement behaviours. *Journal of Services Marketing*, 34(2), 117-135. https://doi.org/10.1108/JSM-02-2019-0050
- Donovan, R. J., & Rossiter, J. R. (1982). Store atmosphere: An environmental psychology approach. *Journal of Retailing*, 58(1), 34-57.
- Epley, N., & Kardas, M. (2021). Understanding the minds of others: Activation, application, and accuracy of mind perception. In P. A. M. Van Lange, E. T. Higgins, & A. W. Kruglanski (Eds.), *Social psychology: Handbook of basic principles* (3rd ed., pp. 163-180). The Guilford Press.
- Epley, N., Akalis, S., Waytz, A., & Cacioppo, J. T. (2008). Creating social connection through inferential reproduction: Loneliness and perceived agency in gadgets, gods, and greyhounds. *Psychological Science*, 19(2), 114-120. https://www.jstor.org/stable/40064681
- Epley, N., Waytz, A., & Cacioppo, J. T. (2007). On seeing human: A threefactor theory of anthropomorphism. *Psychological Review, 114*(4), 864-886. https://doi.org/10.1037/0033-295X.114.4.864
- Ferreira, J. C. (2020). Brand anthropomorphism and its impact on consumer brand identification, brand advocacy and consumer brand engagement on social media [Master's thesis]. Escola de Administração de Empresas de São Paulo of Fundação Getulio Vargas.
- Festerling, J., & Siraj, I. (2022). Anthropomorphizing technology: a conceptual review of anthropomorphism research and how it relates to children's engagements with digital voice assistants. *Integrative Psychological and Behavioral Science*, *56*(3), 709-738. https://doi.org/10.1007/s12124-021-09668-y
- Fiske, S. T., Cuddy, A. J. C., Glick, P., & Xu, J. (2002). A model of (often mixed) stereotype content: Competence and warmth respectively follow from the perceived status and competition. *Journal of Personality and Social Psychology*, 82, 878-902. https://doi.org/10.1037/0022-3514.82.6.878
- Fiske, S. T., Cuddy, A. J., & Glick, P. (2007). Universal dimensions of social cognition: Warmth and competence. *Trends in Cognitive Sciences*, 11(2), 77-83. https://doi.org/10.1016/j.tics.2006.11.005
- Fournier, S. (1998). Consumers and their brands: Developing relationship theory in consumer research. *Journal of Consumer Research*, 24(4), 343-373. https://doi.org/10.1086/209515
- Fournier, S., & Alvarez, C. (2012). Brands as relationship partners: Warmth, competence, and in-between. *Journal of Consumer Psychology*, 22(2), 177-185. https://doi.org/10.1016/j.jcps.2011.10.003



Fournier, S., Breazeale, M., & Fetscherin, M. (Eds.). (2012). *Consumer-brand relationships: Theory and practice*. Routledge.

Friswold-Atwood, S. (2018). Living-Learning Communities Effect on Students' Self-Efficacy of their Successful Social and Academic Transition to College. [Doctoral dissertation, University of Florida]. UNF Digital Commons. https://digitalcommons.unf.edu/etd/845.

Gambetti, R. C., Graffigna, G., & Biraghi, S. (2012). The grounded theory approach to consumer–brand engagement: The practitioner's standpoint. *International Journal of Market Research*, *54* (5), 659-687. https://doi.org/10.2501/IJMR-54-5-659-687

Gecas, V. (1989). The social psychology of self-efficacy. *Annual Review of Sociology, 15*(1), 291-316. https://doi.org/10.1146/annurev.so.15.080189.001451

Ghuman, M. K., Huang, L., Madden, T. J., & Roth, M. S. (2015). Anthropomorphization and consumer-brand relationships: A cross-cultural analysis. In S. Fournier, M. Breazeale, & J. Avery (Eds.), *Strong Brands, Strong Relationships* (pp. 135-148). Routledge.

Gnatowski, K. L. (2022). Exploring factors influencing first generation undergraduate college students' perceived social-self efficacy (PSSE) and ability to socially integrate with academic advisors (Publication No. 30572872) [Doctoral Dissertation, University of New England]. ProQuest Dissertations & Theses.

Golob, U., Davies, M. A., Kernstock, J., & Powell, S. M. (2020). Trending topics plus future challenges and opportunities in brand management. *Journal of Brand Management*, 27(2), 123-129. https://doi.org/10.1057/s41262-019-00184-4

Golossenko, A., Pillai, K. G., & Aroean, L. (2020). Seeing brands as humans: Development and validation of a brand anthropomorphism scale. *International Journal of Research in Marketing*, *37*(4), 737-755. https://doi.org/10.1016/j.ijresmar.2020.02.007

Grieve, R., Witteveen, K., Tolan, G. A., & Jacobson, B. (2014). Development and validation of a measure of cognitive and behavioural social self-efficacy. *Personality and Individual Differences*, *59*, 71-76. https://doi.org/10.1016/j.paid.2013.11.008

Güntürkün, P., Haumann, T., & Mikolon, S. (2020). Disentangling the differential roles of warmth and competence judgments in customer-service provider relationships. *Journal of Service Research*, 23(4), 476-503. https://doi.org/10.1177/1094670520920354

Guthrie, S. E. (1993). Faces in the clouds: A new theory of religion. Oxford University Press.

Guthrie, S. E. (2014). Religion as anthropomorphism at Çatalhöyük. In I. Hodder (Ed.), *Religion at work in a Neolithic society: Vital works* (pp. 86-108). Cambridge University Press.

Hamdy, A., Zhang, J., Eid, R., & Agag, G. (2024). Is warmth more critical than competence? Understanding how destination gender affects destination identification and destination



advocacy. *Journal of Product & Brand Management*, *33*(5), 489-501. https://doi.org/10.1108/JPBM-05-2023-4481

Harrigan, P., Roy, S. K., & Chen, T. (2021). Do value co-creation and engagement drive brand evangelism? *Marketing Intelligence & Planning*, 39(3), 345-360. https://doi.org/10.1108/MIP-10-2019-0492

Hollebeek, L. D., Glynn, M. S., & Brodie, R. J. (2014). Consumer brand engagement in social media: conceptualisation, scale development and validation. *Journal of Interactive Marketing*, 28(2), 149-165. https://doi.org/10.1016/j.intmar.2013.12.002

Hollebeek, L. D., Srivastava, R. K., & Chen, T. (2019). SD logic–informed customer engagement: integrative framework, revised fundamental propositions, and application to CRM. *Journal of the Academy of Marketing Science*, 47, 161-185. https://doi.org/10.1007/s11747-016-0494-5

Hollebeek, L.D. (2011). Demystifying customer brand engagement: exploring the loyalty nexus. *Journal of Marketing Management*, 27(7-8), 785-807. https://doi.org/10.1080/0267257X2010.500132

Hoo, W. C., Xiaoyan, L., Ziyae, B., Ramli, S., & Moosa, V. (2023). In China, customer engagement mediates between brand image and purchase intention of premium hotels. *International Journal of Management and Sustainability*, 12(3), 463-473. https://doi.org/10.18488/11.v12i3.3523

Hossain, M. U., Arefin, M. S., & Yukongdi, V. (2024). Personality traits, social self-efficacy, social support, and social entrepreneurial intention: The moderating role of gender. *Journal of Social Entrepreneurship*, 15(1), 119-139. https://doi.org/10.1080/19420676.2021.1936614

Huang, R., & Ha, S. (2020). The effects of warmth-oriented and competence-oriented service recovery messages on observers on online platforms. *Journal of Business Research*, *121*, 616-627. https://doi.org/10.1016/j.jbusres.2020.04.034

Islam, J. U., & Rahman, Z. (2016). The transpiring journey of customer engagement research in marketing: A systematic review of the past decade. *Management Decision*, 54(8), 2008-2034. https://doi.org/10.1108/MD-01-2016-0028

Islam, J. U., Shahid, S., Rasool, A., Rahman, Z., Khan, I., & Rather, R. A. (2020). Impact of website attributes on customer engagement in banking: A solicitation of stimulus-organism-response theory. *International Journal of Bank Marketing*, 38(6), 1279-1303. https://doi.org/10.1108/IJBM-12-2019-0460

Javed, M., Roy, S., & Mansoor, B. (2015). Will you defend your loved brand? In *Consumer brand relationships: Meaning, measuring, managing* (pp. 31-54). Palgrave Macmillan.



Jayasimha, K. R., & Billore, A. (2016). I complain for your good? Re-examining consumer advocacy. *Journal of Strategic Marketing*, 24(5), 360-376. https://doi.org/10.1080/0965254X.2015.1011204

Jillapalli, R. K., & Wilcox, J. B. (2010). Professor brand advocacy: Do brand relationships matter? *Journal of Marketing Education*, *32*(3), 328–340. https://doi.org/10.1177/0273475310380880

Kaur, H., Paruthi, M., Islam, J., & Hollebeek, L. D. (2020). The role of brand community identification and reward on consumer brand engagement and brand loyalty in virtual brand communities. *Telematics and Informatics*, 46, 101321. https://doi.org/10.1016/j.tele.2019.101321

Kautish, P., Hollebeek, L. D., Khare, A., & Rather, R. A. (2022). The effect of consumer values on engagement and behavioral intent: Moderating role of age. In Rajagopal & R. Behl (Eds.), *Managing disruptions in business* (pp. 259–278). Palgrave Macmillan. https://doi.org/10.1007/978-3-030-79709-6 14

Kervyn, N., Fiske, S. T., & Malone, C. (2012). Brands as intentional agents framework: How perceived intentions and ability can map brand perception. *Journal of Consumer Psychology*, 22(2), 166-176. https://doi.org/10.1016/j.jcps.2011.09.006

Kervyn, N., Fiske, S. T., & Malone, C. (2021). Social perception of brands: Warmth and competence define images of both brands and social groups. *Consumer Psychology Review*, 5(1), 51-68. https://doi.org/10.1002/arcp.1074

Khashan, M. A., Elsotouhy, M. M., Ashraf Aziz, M., Alasker, T. H., & Ghonim, M. A. (2024). Mediating customer engagement in the relationship between fast-food restaurants' innovativeness and brand evangelism during COVID-19: Evidence from emergent markets. *International Journal of Contemporary Hospitality Management*, 36(4), 1353-1374. https://doi.org/10.1108/IJCHM-07-2022-0888

Kim, M. J., Lee, C. K., & Jung, T. (2020). Exploring consumer behavior in virtual reality tourism using an extended stimulus-organism-response model. *Journal of Travel Research*, 59(1), 69-89. https://doi.org/10.1177/0047287518818915

Kolbl, Ž., Arslanagic-Kalajdzic, M., & Diamantopoulos, A. (2019). Stereotyping global brands: is warmth more important than competence? *Journal of Business Research*, 104, 614-621. https://doi.org/10.1016/j.jbusres.2018.12.060

Konya-Baumbach, E., Biller, M., & von Janda, S. (2023). Someone out there? A study on the social presence of anthropomorphized chatbots. *Computers in Human Behavior*, *139*, 107513. https://doi.org/10.1016/j.chb.2022.107513



- Kumar, V., & Kaushik, A. K. (2022). Engaging customers through brand authenticity perceptions: The moderating role of self-congruence. *Journal of Business Research*, *138*, 26-37. https://doi.org/10.1016/j.jbusres.2021.08.065
- Leal, S. F. P. (2021). Do athletes deserve to have consumers advocating for them?: The effect of athlete brand personality, brand image attributes and brand loyalty on athlete brand advocacy: The mediating effect of deservedness [Doctoral dissertation, ISCTE–Instituto Universitário de Lisboa].
- Lee, H., Xu, Y., & Porterfield, A. (2022). Antecedents and moderators of consumer adoption toward AR-enhanced virtual try-on technology: A stimulus-organism-response approach. *International Journal of Consumer Studies*, 46(4), 1319-1338. https://doi.org/10.1111/ijcs.12760
- Lee, S. A., & Oh, H. (2021). Anthropomorphism and its implications for advertising hotel brands. *Journal of Business Research*, *129*, 455-464. https://doi.org/10.1016/j.jbusres.2019.09.053
- Li, B., & Nan, Y. (2023). Warmth or competence: Understanding the effect of brand perception on purchase intention via online reviews. *Journal of Contemporary Marketing Science*, 6(3), 210-227. https://doi.org/10.1108/JCMARS-06-2023-0018
- Li, M., & Suh, A. (2022). Anthropomorphism in AI-enabled technology: A literature review. *Electronic Markets*, *32*, 2245-2275. https://doi.org/10.1007/s12525-022-00591-7
- Li, X., & Sung, Y. (2021). Anthropomorphism brings us closer: The mediating role of psychological distance in User–AI assistant interactions. *Computers in Human Behavior*, 118, 106680. https://doi.org/10.1016/j.chb.2021.106680
- Limbu, Y. B., Pham, L., & Mann, M. (2020). Corporate social responsibility and hospital brand advocacy: Mediating role of trust and patient-hospital identification and moderating role of hospital type. *International Journal of Pharmaceutical and Healthcare Marketing*, *14*(1), 159-174. https://doi.org/10.1108/IJPHM-04-2019-0029
- Liu, F., Wei, H., Zhu, Z., & Chen, H. A. (2022). Warmth or competence: Brand anthropomorphism, social exclusion, and advertisement effectiveness. *Journal of Retailing and Consumer Services*, 67, 103025. https://doi.org/10.1016/j.jretconser.2022.103025
- Lowenstein, M. W. (2010). The customer advocate and the customer saboteur. Quality Press.
- Machado, J. C., Vacas-de-Carvalho, L., Azar, S. L., André, A. R., & Dos Santos, B. P. (2019). Brand gender and consumer-based brand equity on Facebook: The mediating role of consumer-brand engagement and brand love. *Journal of Business Research*, *96*, 376-385. https://doi.org/10.1016/j.jbusres.2018.07.016



MacInnis, D. J., & Folkes, V. S. (2017). Humanizing brands: When brands seem to be like me, part of me, and in a relationship with me. *Journal of Consumer Psychology*, 27(3), 355-374. https://doi.org/10.1016/j.jcps.2016.12.003

Malär, L., Krohmer, H., Hoyer, W. D., & Nyffenegger, B. (2011). Emotional brand attachment and brand personality: The relative importance of the actual and the ideal self. *Journal of Marketing*, 75(4), 35-52. https://doi.org/10.1509/jmkg.75.4.35

Mehrabian, A., & Russell, J. A. (1974). *An approach to environmental psychology*. Cambridge, MA: MIT Press

Memon, M. A., Thurasamy, R., Ting, H., & Cheah, J. H. (2024). Purposive sampling: A review and guidelines for quantitative research. *Journal of Applied Structural Equation Modeling*, 9(1), 1-23. https://doi.org/10.47263/JASEM.9(1)01

Morewedge, C. K., Preston, J. J., & Wegner, D. M. (2007). Timescale bias in the attribution of mind. *Journal of Personality and Social Psychology*, *93*(1), 1-11. https://doi.org/10.1037/0022-3514.93.1.1

Moriuchi, E. (2021). An empirical study on anthropomorphism and engagement with disembodied AIs and consumers' re-use behavior. *Psychology & Marketing*, 38(1), 21-42. https://doi.org/10.1002/mar.21407

Muris, P. (2001). A brief questionnaire for measuring self-efficacy in youths. *Journal of Psychopathology and Behavioral Assessment*, 23, 145-149.

Nguyen, N.D.T & Trinh, T. A. (2023). The relationship between brand anthropomorphism, brand love, and brand advocacy. Moderate Role of Self-brand Connection in Brand Distribution. *Journal of Distribution Science*, 21(3), 37-46. https://doi.org/10.15722/jds.21.03.202303.37

Nielsen. (2012, April). *Global trust in advertising and brand messages*. https://www.nielsen.com/insights/2012/global-trust-in-advertising-and-brand-messages-2/

Obilo, O. O., Chefor, E., & Saleh, A. (2021). Revisiting the consumer brand engagement concept. *Journal of Business Research*, 126, 634-643. https://doi.org/10.1016/j.jbusres.2019.12.023

Oh, H. J., Kim, J., Chang, J. J., Park, N., & Lee, S. (2023). Social benefits of living in the metaverse: The relationships among social presence, supportive interaction, social self-efficacy, and feelings of loneliness. *Computers in Human Behavior*, 139, 107498. https://doi.org/10.1016/j.chb.2022.107498

Park, C. W., & MacInnis, D. J. (2006). What's in and what's out: Questions on the boundaries of the attitude construct. *Journal of Consumer Research*, 33(1), 16-18. https://doi.org/10.1086/504122



Pew Research Center. (2019, January 17). Defining generations: Where Millennials end and Generation Z begins. *Pew Research Center*. https://www.pewresearch.org/short-reads/2019/01/17/where-millennials-end-and-generation-z-begins/

Piligrimienė, Ž., Žukauskaitė, A., Korzilius, H., Banytė, J., & Dovalienė, A. (2020). Internal and external determinants of consumer engagement in sustainable consumption. *Sustainability*, 12(4), 1349. https://doi.org/10.3390/su12041349

Portal, S., Abratt, R., & Bendixen, M. (2018). Building a human brand: Brand anthropomorphism unravelled. *Business Horizons*, 61(3), 367-374. https://doi.org/10.1016/j.bushor.2018.01.003

Puzakova, M. & Kwak, H. (2017) Should anthropomorphized brands engage customers? The impact of social crowding on brand preferences. *Journal of Marketing*, 81(6), 99-115. https://doi.org/10.1509/jm.16.0211

Puzakova, M., & Aggarwal, P. (2018). Brands as rivals: Consumer pursuit of distinctiveness and the role of brand anthropomorphism. *Journal of Consumer Research*, 45(4), 869-888. https://doi.org/10.1093/jcr/ucy035

Puzakova, M., Kwak, H., & Rocereto, J. F. (2013). When humanizing brands goes wrong: The detrimental effect of brand anthropomorphization amid product wrongdoings. *Journal of marketing*, 77(3), 81-100. https://doi.org/10.1509/jm.11.0510

Quaye, E. S., Taoana, C., Abratt, R., & Anabila, P. (2022). Customer advocacy and brand loyalty: The mediating roles of brand relationship quality and trust. *Journal of Brand Management*, 29(4), 363-382. https://doi.org/10.1057/s41262-022-00276-8

Rana, S. M. S., Azim, S. M. F., Arif, A. R. K., Sohel, M. S. I., & Priya, F. N. (2024). Investigating online shopping behavior of generation Z: An application of theory of consumption values. *Journal of Contemporary Marketing Science*, 7(1), 17-37. https://doi.org/10.1108/JCMARS-03-2023-0005

Ranaweera, C., & Prabhu, J. (2003). On the relative importance of customer satisfaction and trust as determinants of customer retention and positive word of mouth. *Journal of Targeting, Measurement and Analysis for Marketing, 12*(1), 82-90. https://doi.org/10.1057/palgrave.jt.5740100

Razmus, W. (2021). Consumer brand engagement beyond the "likes". *Frontiers in Psychology*, 12, 692000. https://doi.org/10.3389/fpsyg.2021.692000

Reimann, M., Castaño, R., Zaichkowsky, J., & Bechara, A. (2012). How we relate to brands: Psychological and neurophysiological insights into consumer—brand relationships. *Journal of Consumer Psychology*, 22(1), 128-142. https://doi.org/10.1016/j.jcps.2011.11.003



Rissanen, H., & Luoma-Aho, V. (2016). (Un)willing to engage? First look at the engagement types of millennials. *Corporate Communications: An International Journal*, 21(4), 500-515.https://doi.org/10.1108/CCIJ-06-2015-0038

Salado, V., Gaspar, T., Moreno-Maldonado, C., Gaspar de Matos, M., & Rivera, F. (2024). The Social Self-Efficacy Scale for Spanish and Portuguese (13–18-Year-Olds) Adolescents: Psychometric Properties and Measurement Invariance. *Journal of Psychoeducational Assessment*, 42(5) 570-587. https://doi.org/10.1177/07342829241241923

Sehgal, N., Jham, V., & Malhotra, G. (2023). Does green brand anthropomorphism influence repurchase intention? Understanding the impact of brand warmth, psychological ownership, and self-brand congruity. *Journal of Retailing and Consumer Services*, 75, 103546. https://doi.org/10.1016/j.jretconser.2023.103546

Sharma, M., & Rahman, Z. (2022). Anthropomorphic brand management: An integrated review and research agenda. *Journal of Business Research*, 149, 463-475. https://doi.org/10.1016/j.jbusres.2022.05.039

Sharma, Y., Silal, P., Kumar, J., & Singh, R. (2022). From pandemic to Prada: examining online luxury-brand self-narratives. *Marketing Intelligence & Planning*, 40(4), 527-541. https://doi.org/10.1108/MIP-05-2021-0153

Sheehan, B. T. (2018). Customer service chatbots: Anthropomorphism, adoption and word of mouth [Doctoral dissertation, Queensland University of Technology].

Smith, H. M., & Betz, N. E. (2000). Development and validation of a scale of perceived social self-efficacy. *Journal of career assessment*, 8(3), 283-301. https://doi.org/10.1177/106907270000800306

Sohail, S., Sajjad, A., & Zafar, S. (2022). An examination of dispositional social needs, agent knowledge, and two dimensions of product anthropomorphism: A serial mediation model. *Frontiers in Psychology*, *13*. https://doi.org/10.3389/fpsyg.2022.913978

Sultan, P., Wong, H. Y., & Azam, M. S. (2021). How perceived communication source and food value stimulate purchase intention of organic food: An examination of the stimulus-organism-response (SOR) model. *Journal of Cleaner Production*, *312*, 127807. https://doi.org/10.1016/j.jclepro.2021.127807

Sweeney, J., Payne, A., Frow, P., & Liu, D. (2020). Customer advocacy: A distinctive form of word of mouth. *Journal of Service Research*, 23(2), 139-155. https://doi.org/10.1177/1094670519900541

Teangsompong, T., & Sawangproh, W. (2024). Understanding online purchase intention of plant-based foods: Exploring causal factors and moderating role of self-efficacy within the SOR theory. *Heliyon*, *10*(10), e30785. https://doi.org/10.1016/j.heliyon.2024.e30785



Thangavel, P., Pathak, P., & Chandra, B. (2022). Consumer decision-making style of Gen Z: A generational cohort analysis. *Global Business Review*, 23(3), 710-728. https://doi.org/10.1177/0972150919880128

Tuškej, U., & Podnar, K. (2018a). Consumers' identification with corporate brands: Brand prestige, anthropomorphism and engagement in social media. *Journal of Product & Brand Management*, 27(1), 3-17. https://doi.org/10.1108/JPBM-05-2016-1199

Tuškej, U., & Podnar, K. (2018b). Exploring selected antecedents of consumer-brand identification: The nature of consumer's interactions with product brands. *Baltic Journal of Management*, 13(4), 451-470. https://doi.org/10.1108/BJM-08-2017-0268

Uysal, E., Alavi, S., & Bezençon, V. (2022). Trojan horse or useful helper? A relationship perspective on artificial intelligence assistants with humanlike features. *Journal of the Academy of Marketing Science*, 50(6), 1153-1175. https://doi.org/10.1007/s11747-022-00856-9

Verma, P. (2021). The effect of brand engagement and brand love upon overall brand equity and purchase intention: A moderated–mediated model. *Journal of Promotion Management*, 27(1), 103-132. https://doi.org/10.1080/10496491.2020.1809591

Waytz, A., Cacioppo, J., & Epley, N. (2010). Who sees human? The stability and importance of individual differences in anthropomorphism. *Perspectives on Psychological Science*, *5*(3), 219-232. https://doi.org/10.1177/1745691610369336

Waytz, A., Gray, K., Epley, N., & Wegner, D. M. (2010). Causes and consequences of mind perception. *Trends in Cognitive Sciences*, 14(8), 383-388. https://doi.org/10.1016/j.tics.2010.05.006

Wentzel, K. R. (2014). Prosocial behavior and peer relations in adolescence. In L. Padilla-Walker & G. Carlo (Eds.), *Prosocial development: A multidimensional approach* (pp. 178-200). Oxford University Press.

Wilder, K. M. (2015). *Brand advocacy: Conceptualization and measurement*. [Doctoral dissertation, Mississippi State University]. ProQuest Dissertations & Theses Global.

Wilk, V., Soutar, G. N., & Harrigan, P. (2020). Online brand advocacy (OBA): the development of a multiple item scale. *Journal of Product & Brand Management*. 29(4), 415-429. https://doi.org/10.1108/JPBM-10-2018-2090

Wilk, V., Soutar, G. N., & Harrigan, P. (2021). Online brand advocacy and brand loyalty: a reciprocal relationship?. *Asia Pacific Journal of Marketing and Logistics*. *33*(10), 1977-1993. https://doi.org/10.1108/APJML-05-2020-0303



Williams, L. A., Brosnan, S. F., & Clay, Z. (2020). Anthropomorphism in comparative affective science: Advocating a mindful approach. *Neuroscience & Biobehavioral Reviews*, 115, 299-307. https://doi.org/10.1016/j.neubiorev.2020.05.014

Wolf, A. (2020). Gen Z & social media influencers: The generation wanting a real experience (Honors Senior Capstone Projects, No. 51). Merrimack College. https://scholarworks.merrimack.edu/honors capstones/51

Wood, C., Tramontano, C., & Hemsley, S. (2022). Self-efficacy in the classroom: The roles of motivation, positivity and resilience. In M. S. Khine & T. Nielsen (Eds.), *Academic self-efficacy in education: Nature, assessment, and research* (pp. 149–160). Springer Nature Singapore Pte Ltd.. https://doi.org/10.1007/978-981-16-8240-7_9

Woodworth, R. S. (1918). *Columbia University lectures: Dynamic psychology*. Columbia University Press. https://doi.org/10.1037/10015-000

Wragg, T. (2004). Nurturing brand advocates. Brand Strategy, 187(1), 36-37.

Yadav, R., Sangroya, D., & Pereira, V. (2023). Why consumers turn negative about the brand: antecedents and consequences of negative consumer engagement in virtual communities. *Information Systems and e-Business Management, 23*, 147-167. https://doi.org/10.1007/s10257-023-00632-4

Yang, L. W., Aggarwal, P., & McGill, A. L. (2020). The 3 C's of anthropomorphism: Connection, comprehension, and competition. *Consumer Psychology Review*, *3*(1), 3-19. https://doi.org/10.1002/arcp.1054

Yang, S., Wang, B., & Lu, Y. (2016). Exploring the dual outcomes of mobile social networking service enjoyment: The roles of social self-efficacy and habit. *Computers in Human Behavior*, 64, 486-496. https://doi.org/10.1016/j.chb.2016.07.010

Zamudio, G., Wang, C. D., & Jin, L. (2020). Adult attachment, social self-efficacy, familismo, and psychological wellbeing: A cross-cultural comparison. *The Counseling Psychologist*, 48(7), 922-952. https://doi.org/10.1177/0011000020930637

Zhou, L., Du, K. M., & Cutright, K. M. (2022). Befriending the enemy: The effects of observing brand-to-brand praise on consumer evaluations and choices. *Journal of Marketing*, 86(4), 57-72. https://doi.org/10.1177/00222429211053002