BRAND ANTHROPOMORPHIZATION: THE ROLES OF ADVERTISING, BRAND, AND CONSUMER

by

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ABSTRACT

Marketers often present brands with humanlike characteristics (brand personification) to encourage consumers thinking about brands in human terms (anthropomorphism). Building on the literature in brand personification, consumer-brand relationships, and theory of anthropomorphism, the present research aims to examine the process of anthropomorphism, the antecedents influencing anthropomorphism, and the anthropomorphism effects on consumers' consequential responses to the advertisements as well as the advertised brands. To delve into the anthropomorphism's overall impact on consumer responses, this research investigates the primary and combinatory effects of brand personification in advertising and individual differences in terms of need for cognition, need for belonging, attachment style, and parasocial interaction. This research further examines whether anthropomorphism works similarly or differently for known and unknown brands.

A 2 (brand personality: congruent versus incongruent) × 2 (brand name: known versus unknown) between-subjects experimental design was implemented via Amazon Mechanical Turk. A total number of 338 responses were collected. The results validate a conceptual model and provide empirical evidence that consumers elicit knowledge related to human agents, which

results in anthropomorphism, to process brand personification in advertising. Conceived as an in-process output, anthropomorphism not only leads to positive advertising outcomes, such as ad engagement and attitude toward the ad, but also positive brand outcomes, such as attitude toward the brand and purchase intention. Individual differences in need for cognition, need for belonging, and parasocial interaction are significant predictors of consumers' tendency to anthropomorphize a brand. Anthropomorphism and its interactions with need for cognition, attachment style, and parasocial interaction influence consumers' responses to the ad.

Findings of this research shed light on the process of anthropomorphism, antecedents of exhibiting anthropomorphism, and anthropomorphism effects on consumer responses in a brand personification context. The findings contribute to the theory of anthropomorphism in consumer-psychology literature, and the theoretical frameworks regarding brand personification as well as consumer-brand relationships in marketing and advertising literature. The research illuminates marketers' branding strategies that target consumers with different dispositions in making anthropomorphic inferences across situations. An empirical investigation of the universal mechanism, anthropomorphism, offers managerial suggestions for utilizing brand personification strategically to establish and maintain consumer-brand relationships.

INDEX WORDS: Brand personification, Anthropomorphism, Brand Personality, Need for Cognition, Need for Belonging, Attachment Style, Parasocial Interaction

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DEDICATION

This dissertation is dedicated to two truly decent persons: my grandfather and aunt.

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CHAPTER 1

INTRODUCTION

In marketing communications, marketers often present brands with humanlike characteristics to encourage consumers thinking about brands in human terms. This communication strategy is concerned with a particular form of metaphor named personification. Brand personification is defined that a rhetorical figure of an inanimate brand is characterized by human attributes and presented in ways similar to a living human (Brown, 2011; Cohen, 2014; Delbaere, McQuarrie, & Phillips, 2011; Lakoff & Johnson, 1980; Ricoeur, 1977). The endowed humanlike characteristics for brand personification could be any aspect that constitutes human beings, ranging from physicality to personality (Aaker, 1997; Aggarwal & McGill, 2007; Plummer, 1985; Landwehr, McGill, & Herrmann, 2011). For instance, Absolut Vodka's bottle is dressed differently to fit in with various occasions in advertisements. The design of many cars' (e.g., Audi A4's) front grille and headlights resembles a human face. Allstate insurance uses the advertising headline, "Nobody protects you from mayhem like Allstate," in which the verb implies a human behavior. Because of the cutting-edge innovations and upper-class products, Apple's brand image is associated with the personality of sophistication.

Delbaere et al. (2011) note that "personification is a message characteristic—an option that can be added to a message, while anthropomorphism is an inherent audience characteristic—one that allows this particular message option to be effective" (p. 121). Epley, Waytz, and Cacioppo (2007) define that the socio-psychological mechanism for consumers to make sense of the metaphorical brand personification is anthropomorphism. It refers to an individual's tendency

to “imbue the real or imagined behavior of nonhuman agents with humanlike characteristics, motivations, intentions, or emotions” (p. 864). More specifically, anthropomorphism of nonhuman agents is “not only a product of the other agent’s actual or imagined behavior but also a product of knowledge representations accessible to the perceiver at the time of judgment and subsequently applied to a given target” (Epley et al., 2007, p. 868). Epley et al. (2007) propose that such knowledge representations for making anthropomorphic inferences is agent knowledge. Therefore, “agent knowledge” is defined as the knowledge concerning human agency, including knowledge about the self or other human agents at large. Individuals acquire agent knowledge inherently because they have multitudinous experiences of being humans and ample observations of others in daily life. Thus, agent knowledge is readily accessible and richly detailed in memories. When agent knowledge is elicited, individuals are likely to anthropomorphize nonhuman agents.

Previous research has shown that brand personification could stimulate anthropomorphism which exerts influences on consumers’ attitude formation (Aggarwal & McGill, 2007; Landwehr et al., 2011; Delbaere et al., 2011), product replacement intention (Chandler & Schwarz, 2010), automatic behavior (Aggarwal & McGill, 2012), and perceived risk (Kim & McGill, 2011). Conceptually, anthropomorphism further legitimizes the perception of brand personality (Aaker, 1997), consumer-brand relationships (Fournier, 1998), and brand as intentional agent (Fournier & Alvarez, 2012). However, the process through which consumers exhibit anthropomorphism and draw anthropomorphic inferences about brand personification in advertising has not yet been fully studied. The overarching questions are how the process of anthropomorphism leads to consumer responses and what antecedents can influence consumers’ tendency of anthropomorphizing a brand.

Therefore, the present research aims to thoroughly study the process of anthropomorphism and its influences on consumer responses in a brand personification context. The process of anthropomorphism is examined through testing a proposed conceptual model. Furthermore, this research delves into the extent to which anthropomorphism and its interactions with various antecedents affect consumer responses. These antecedents include the presentations of brand personality in advertising (Aaker, 1997), and the consumer nuances in terms of need for cognition (Cacioppo, Petty, & Kao, 1984), need for belonging (Baumeister & Leary, 1995), attachment style (Hazan & Shaver, 1987), and parasocial interaction (Rubin & McHugh, 1987).

Specifically, the rhetorical figure in brand personification is defined as an artful deviation that can be presented with pictures (McQuarrie & Mick, 1999) and words (McQuarrie & Mick, 1996). McQuarrie and Phillips (2005) suggest that metaphorical messages (i.e., brand personification) presented in ads would elicit more elaboration and stored knowledge than straightforward messages because they are receptive to multiple interpretations. In light of that, the presence of personification messages in advertising may influence the elicitation of agent knowledge that results in consumers' anthropomorphism of the brand (Epley et al., 2007). Additionally, when consumers elaborate the personification messages, they may not only elicit agent knowledge but also alternative (i.e., non-human-agent-related) knowledge for interpretations. Trope and Gaunt (2000) suggest alternative knowledge is the situational information acquired from the given stimuli (e.g., the utilitarian functions of the brand or the value of the brand). Because alternative knowledge is an integral part for attributional inferences, the elicited agent knowledge might be integrated with the elicited alternative knowledge and both affect anthropomorphism. Epley et al. (2007) note that the adjustment or integration processes are insufficient to correct the judgmental bias (i.e., anthropomorphism) because agent

knowledge is the most readily accessible information when processing personification messages. Thus, consumers' final judgments are still affected in the direction of anthropomorphism.

Brand personality is a set of humanlike characteristics that marketers consistently impose on a brand for enhancing consumers' perception of the brand and making consumers identify the brand among competitors (Aaker, 1997). Because individuals often draw inferences about others based on personality traits, brand personality may serve as references for consumers to draw anthropomorphic reasoning about brands akin to interpersonal communication (Gilbert, 1998). The portrayed brand personality in ads may affect consumers' retrieve of stored knowledge about the brand. Correspondingly, it may affect how consumers anthropomorphize and make judgments about the brand. That is, when the portrayed brand personality is congruent with stored knowledge, consumers would be likely to make anthropomorphic inferences due to the handily accessible agent knowledge and its relevance to the perceived brand personality (Aaker, 1997; Fournier, 1998). If the portrayed brand personality is incongruent with stored knowledge, consumers would need to elaborate the messages to resolve the inconsistency in that they can comprehend the given messages. The elaboration process might activate alternative knowledge, which would be integrated with elicited agent knowledge, and affect the making of anthropomorphic inferences.

Also, Epley et al. (2007) suggest that individual differences in need for cognition is the primary factor predicting anthropomorphism. Bargh, Gollwitzer, Lee-Chai, Barndollar, and Trotschel (2001) state that the influences of cognitive factor on anthropomorphism should be relatively immediate and localized at the time of exposing to stimuli (e.g., brand personification in advertising). To illustrate, when brand personifications is presented, consumers high in need for cognition, who tend to enjoy effortful processing, would not only rely on easily accessible

agent knowledge but also engage in activating other alternative knowledge about the given stimuli. They are likely to adjust or integrate the elicited agent knowledge with coactivated alternative knowledge. As a result, consumers high in need for cognition should show weak evidence of anthropomorphism. On the contrary, consumers low in need for cognition, who lack for motivation of effortful processing, would be likely to elicit and simply apply agent knowledge that come to mind and, in turn, make anthropomorphic inferences.

In addition to the cognitive factor, Epley, Waytz, Akalis, and Cacioppo (2008) propose that the inherent demands for social relationships also determine the variability in anthropomorphizing nonhuman agents. Socially-motivated factors of anthropomorphism typically serve as long-lasting driving force with wide range of effects till these motivational desires are fully satisfied. Firstly, need for belonging is the innately prepared desire for individuals to have social contact with others so that relationships can be established and maintained (Baumeister & Leary, 1995). Although it is a universal tendency for individuals to seek for social contact, they may differ in the degree of satisfying this imperative need for belonging. Individuals high in need for belonging would be likely to actively search for potential social connections in that they would be sensitive to social cues in environments (Pickett, Gardner, & Knowles, 2004). Along this logic, in order to fulfill the need for belonging, consumers high in need for belonging would be likely to elicit more agent knowledge than alternative knowledge to anthropomorphize the brand as a social agent when processing brand personification in advertising. Consumers high in need for belonging would have stronger evidence of anthropomorphism than consumers low in need for belonging.

Similarly, attachment style is the preoccupied disposition to form and maintain affectional bonds (i.e., close relationships) with others, which is carried over in individuals' life

span (Hazan & Shaver, 1987). Based on the attentiveness individuals experienced from their caregivers in infancy, the development of attachment style can be generally classified as secure and insecure, including both anxious-ambivalent and avoidant, attachment style. Individuals with secure attachment style would be comfortable of being along and not worried about being rejected by others. By contrast, individuals with anxious-ambivalent attachment style would long for intimate relationships. While individuals with avoidant attachment style may avoid social contact with people, their basic need for social connections may motivate them to seek for relationships with humanlike surrogates (e.g., gods) to satisfy such need (Epley et al., 2007). Taken together and applied to anthropomorphism, consumers with insecure attachment style may appraise the humanlike cues in personification messages intensively. Consequentially, they would elicit more agent knowledge than alternative knowledge in processing brand personification in advertising, which results in the making of anthropomorphic inferences. Consumers with insecure attachment style should show higher level of anthropomorphism than consumers with secure attachment style.

Moreover, when there is a lack of opportunities for bridging social relationships, individuals may look for alternative sources of interpersonal connections. Derived from media studies, Rubin and McHugh (1987) define parasocial interaction as the one-side quasi-interaction that individuals have with media characters (e.g., television newscasters or cartoon characters). Due to the unsatisfied need for companionship, individuals may project the mindset of interpersonal relationships onto the media characters they identify with. They would perform imagined interactions with these media characters. In the long run, parasocial relationship could be established. Regarding processing brand personification in advertising, consumers who are high in exhibiting parasocial interaction may have higher likelihood to activate and depend on

agent knowledge to make anthropomorphic inferences, compared to consumers low in parasocial interaction. Consumers high in parasocial interaction might show stronger evidence of anthropomorphism than consumers low in parasocial interaction.

Building on the literature in brand personification, consumer-brand relationships, and theory of anthropomorphism, the purposes of the present research therefore are to (1) examine the process of anthropomorphism, (2) explore the antecedents that influence anthropomorphism, and (3) investigate the anthropomorphism effects on consumers' consequential responses to the ad as well as the advertised brand. As a results, findings of this research refine the theoretical constructs of anthropomorphism, contribute to the relevant theories in marketing and advertising contexts, and advance the understanding of consumers' differences in making anthropomorphic inferences about brand personification. Especially, the findings contribute to the theory of anthropomorphism in consumer psychology literature, and the theoretical frameworks regarding brand personification as well as consumer-brand relationships in marketing and advertising literature. The research also sheds light on marketers' branding strategies that target consumers with different dispositions in exhibiting anthropomorphism across situations. With a broad scope, an empirical investigation of the universal mechanism, anthropomorphism, offers managerial suggestions for utilizing brand personification strategically to establish and maintain consumer-brand relationships.

CHAPTER 2

THEORETICAL FRAMEWORKS

Brand personification is a particular form of metaphor in that marketers attempt to convey persuasive messages in a figurative way and make consumers think about the brands as humanlike social agents (Cohen, 2014; Delbaere et al., 2011; Ricoeur, 1977). The numerous examples of personification in marketing communications build upon the assumption that brand personification is often regarded as promising for enhancing perceived brand personality and fostering long-term consumer-brand relationships (Aaker, 1997; Fournier, 1998). Though the judgmental bias of anthropomorphism is readily available when processing personification messages in advertising, the ease of applying anthropomorphic thoughts to personified brands is determined by dispositional (i.e., enduring individual differences) and situational (i.e., how advertising is presented) factors (Epley et al., 2007). Following theories in consumer psychology, marketing, and advertising, the study investigates consumers' tendency of anthropomorphism in processing an ad with brand personification, and the anthropomorphism effects on consumer responses to the given ad as well as the advertised brand.

Theory of Anthropomorphism

Anthropomorphism permeates in judgment making because it satisfies individuals' basic need for social relationships, aids the efficiency of learning unfamiliar objects, and helps make sense of the world (Guthrie, 1993). For example, individuals sculpture spiritual gods with human contour, identify faces in clouds, and interact with their pets as family members. In a marketing

context, consumers nickname their own car, blame on their mobile phone for breakdowns, and even have relationships with brands. Guthrie (1993) explains two reasons of the universal tendency for individuals to anthropomorphize nonhuman agents. Firstly, familiarity explanation refers to the use of knowledge about the self as the basic criterion for understanding nonhuman agents or the world at large. This is due to the reason that individuals have good knowledge about the self and can easily make inferences based on such knowledge. Secondarily, Guthrie (1993) suggest that individuals are "mistrustful of what is nonhuman but reassured by what is human" and thus the emotional motives drive individuals to seek comfort and have companionship through anthropomorphism (p. 54). That is, anthropomorphism can not only reduce the uncertainty about unfamiliar nonhuman agents, but also provide alternative sources of social relationships.

In this light, Epley et al.'s (2007) theory of anthropomorphism proposes three psychological determinants that influence individuals' likelihood of anthropomorphizing nonhuman agents. First of all, the primary cognitive determinant of anthropomorphism is elicited agent knowledge. Agent knowledge is the knowledge of human experiences, including knowledge about the self or humans in general, that individuals accumulatively acquire while developing self-concept and interacting with other people. Namely, agent knowledge is directly derived from the phenomenological experience of being humans and the close observation of other people's behavior in social circles. When making inferences about nonhuman agents, the elicitation of agent knowledge can work independently of motivational determinants to serve as the fundamental means for inducing anthropomorphic thoughts (Epley et al., 2007). Next, two motivational determinants are sociality and effectance. Sociality refers to the basic human desire for establishing relationships with other social agents, and effectance refers to the need for

interacting with surroundings effectively (Epley, Akalis, Waytz, & Cacioppo, 2008; White, 1959). On the one hand, if there is a lack of social relationships, individuals tend to anthropomorphize nonhuman agents. By doing so, individuals can bridge relationships with the anthropomorphized agents for satisfying the desire driven by sociality. On the other hand, effectance motivates individuals to anthropomorphize nonhuman agents because anthropomorphism reduces the perceived uncertainty of nonhuman agents in environments. With anthropomorphism, it is easy for individuals to make predictions of nonhuman agents' behavior and, therefore, interact with the anthropomorphized nonhuman agents effectively (Epley et al., 2008).

To delve into the cognitive process, anthropomorphism resembles other cognitive operations which start from knowledge activation to stimulus-responses (Epley et al., 2007). The process involves the availability, accessibility, and applicability of agent knowledge. According to Higgins' (1996) definition, availability is conceived as the existence of agent knowledge in memories and accessibility is the activation potential of such knowledge. Since agent knowledge is richly detailed and inherently stored in memories, accessibility determines whether agent knowledge will be brought to mind for application. Taylor and Fiske's (1978) review of knowledge accessibility suggests that both properties of stimulus information (e.g., feature similarity) and properties of perceivers (e.g., psychological traits) determine the accessibility of agent knowledge at the time of judgments. Epley et al. (2007) further argue that when agent knowledge is accessed, individuals evaluate the knowledge applicability, which is defined as the overlap between agent knowledge and the attempted features by a stimulus (e.g., brand personification). Evaluation of knowledge applicability is the final step for inference making. It concludes whether the elicited agent knowledge needs to be adjusted or integrated with more

applicable alternative knowledge. The greater the applicability, the higher the likelihood of applying elicited agent knowledge to make anthropomorphic inferences (Higgins, 1996).

Considering that agent knowledge is readily accessible, it has the potential to be elicited and applied to make anthropomorphic inferences about nonhuman brands when ads with personification messages are presented. However, alternative knowledge, the knowledge other than human experiences in general, may be coactivated when processing brand personification in advertising. Epley et al. (2007) suggest that if individuals find alternative knowledge applicable to the given stimulus, they are likely to integrate elicited alternative knowledge with elicited agent knowledge to adjust anthropomorphic inferences. In other words, elicited alternative knowledge might moderate the application of elicited agent knowledge and also have bearing on anthropomorphism. Nevertheless, the adjustment based on elicited alternative knowledge is insufficient to completely override the influence of elicited agent knowledge such that the final judgment still leans toward anthropomorphism.

Building on the literature, elicited alternative knowledge would compete with elicited agent knowledge when consumers make anthropomorphic inferences about brand personification. The elicitation of agent knowledge and alternative knowledge together determines the extent to which consumers anthropomorphize a brand. As such, it is reasonable to define "elicited net agent knowledge," which excludes the influence of elicited alternative knowledge from elicited agent knowledge, as the antecedent that affects anthropomorphism. Specifically, consumers' agent knowledge would be elicited by brand personification in advertising and positively contribute to anthropomorphism. While alternative knowledge may be elicited at the meanwhile and be integrated with elicited agent knowledge to lessen the anthropomorphic inferences. Elicited alternative knowledge should be subtracted from elicited

agent knowledge to acquire elicited net agent knowledge as a precise predictor of anthropomorphism. Because elicited agent knowledge would have more weight than elicited alternative knowledge in processing brand personification, elicited net agent knowledge should positively influence anthropomorphism. Therefore, the following hypothesis is posited.

H1: *When brand personification is presented, elicited net agent knowledge will have a positive influence on anthropomorphism.*

Furthermore, research has shown variations in the induction of anthropomorphism and how anthropomorphism exerts influences on consequential outcomes in relation to consumer behavior. The following sections discuss how anthropomorphism affects consumers' responses to the ad as well as the advertised brand.

Anthropomorphism and Ad Engagement

Given the impact of anthropomorphism on consumer behavior discovered in previous research (Aggarwal & McGill, 2012; Chandler & Schwarz, 2010; Kim & McGill, 2011), anthropomorphism is a probable antecedent that may also affect consumer responses when processing advertising messages, especially ads with brand personification. Due to the prevalence of interactive and sociable media environment, ad engagement has recently emerged as a distinct construct that exerts influences on consumers' information processing (e.g., Kim, Ahn, & Kwon, 2014; Calder, Malthouse, & Schaedel, 2009). The marketing literature has suggested the multidimensional nature of ad engagement that includes cognitive, affective, and behavioral dimensions (Brodie, Hollebeek, Juric, Ilic, 2011 ; Mollen & Wilson, 2010). More

specifically, from an industrial perspective, ad engagement is defined as "a spectrum of consumer advertising activities and experiences – cognitive, emotional, and physical – that will have a positive impact on a brand" (p. 6, Interactive Advertising Bureau, 2014). Form an academic perspective, on the other hand, Wang (2006) defines ad engagement as "the contextual relevance in which a brand's messages are framed and presented based on its surrounding context," which includes utility, involvement, and emotional bonding in processing advertising messages (p. 355).

Based on these theoretical contention, Kim et al. (2014) further identify the two major dimensions, adportation and captivation, of ad engagement to depict the state of the mind while consumers engage with advertising messages. The adportation dimension, which is the coinage of advertising and transportation, refers to the specific advertising context in which a consumer experiences a sense of presence in the ad as if he or she was the character. Adportation is closely related to the notion of presence that consumers have subjective perception with respect to their existence within the ad (Biocca, 1997). For instance, when consumers engage with an ad, they would feel that they are connected to the ad, that the ad is real, and that they are right there in the ad. Given the experiential existence of being in the media stimuli (e.g., brand personification in advertising), consumers would be transported by the ad narrative to a state where they perceive themselves acting as the character in the story line and temporarily deviate themselves from the real world (Escalas, 2004; Green & Brock, 2000).

Moreover, Kim et al. (2014) propose the captivation dimension which refers to the extent to which an ad grabs and maintains consumers' attention during the process of ad exposure. Similar to the notion of involvement and immersion in advertising literature, captivation is concerned with the stimulation of cognitive resources that lead consumers to be actively

involved in comprehending given advertising messages (Greenwald & Leavitt, 1984). In order to capture consumers' attention, research (Hanssens & Weitz, 1980; Neilsen, Shapiro, & Mason, 2010) has suggested the employment of vivid cues to enhance consumers' sensory responses or narrative story lines to trigger consumers' emotional resonance. As such, the intensive involvement in processing advertising messages would engage consumers with the given ads. Consequentially, Cacioppo and Petty (1984) suggest that consumers who perform deliberate elaboration in evaluating the ad (e.g., ad engagement) would form sustainable attitude or have prominent attitude change.

Related to the present research, because anthropomorphism is conceived as an antecedent which has impact on consumer behavior (Chandler & Schwarz, 2010; Delbaere et al., 2011; Kim & McGill, 2011), it is likely that anthropomorphism affects how consumers engage in processing advertising messages with brand personification. Consumers would perceive the humanlike cues in an ad as pertinent to themselves and relate the cues to the predominant agent knowledge in memories, which helps consumers reason about humans and humanlike agents. Drawing on the elicited agent knowledge along with coactivated alternative knowledge, as a result, consumers make anthropomorphic inferences based on the personification messages in the ad. Put it another way, the contextual relevance resulted from anthropomorphism would make consumers feel the authenticity of the ad and keep their attention to the ad for the entire trajectory of information processing. Consumers would immediately follow the narrative story line or the design of the ad. They could relate themselves to the personified brand, as if they were present or played a role in the ad. According to the conceptualization, consumers are likely to engage with an ad with personification messages through anthropomorphism. In other words, consumers'

anthropomorphism would lead them to have high ad engagement. Thus, the following hypothesis is postulated.

H2: *Anthropomorphism resulted from brand personification in an ad will have a positive influence on ad engagement.*

Anthropomorphism and Consumer Responses

In addition to the effect on processing brand personification in advertising, anthropomorphism could influence how consumers make attitudinal judgments. Aggarwal and McGill (2007) propose that schema congruity is a theoretical basis for predicting consumers' evaluation of anthropomorphized brands. A schema is the organization of stored knowledge categorizing relevant information about past reactions or experiences toward a particular stimulus (Fiske & Linville, 1980). In the context of processing brand-related information, Meyers-Levy and Tybout (1989) suggest that schema congruity is the extent to which a category schema matches the presentation of brand features. To that end, brand-related information with high schema congruity would be easy to process and lead to the formation of positive attitude. In an experiment, Aggarwal and McGill (2007) used a first-person narrative in a promotional cover letter to prime participants with a human schema before showing the advertising stimulus. For example, the advertised car talked about his face-lift and wanted participants to give some evaluation. When participants were primed with such human schema, they showed evidence of anthropomorphism. Further, participants had more positive attitude if the ad was presented with humanlike features (i.e., a smile on a car's front grille and headlights) congruent with the primed human schema (i.e., a face-lift), compared to the incongruent condition (i.e., a frown on a car's

front grille and headlights). The findings indicate that consumers can easily anthropomorphize brands primed with a human schema and that anthropomorphism results in positive attitude.

Additionally, Landwehr et al. (2011) examined how consumers anthropomorphize cars based on emotional facial expressions (i.e., friendliness and aggressiveness) in car designs. Because individuals often recognize and rely on emotional expressions to predict behavioral tendencies of other people (Frijda, 1986), this phenomenon is relevant to anthropomorphism in that consumers attribute humanlike emotions along with behavior intentions to nonhuman brands (Epley et al., 2007). In a series of experiments, Landwehr et al., (2011) used upturned (i.e., friendly) and slanted (i.e., aggressive) design in cars' grille and headlight to denote humanlike faces with emotions. When participants anthropomorphized the cars, they perceived emotions from the humanlike design in ways similar to their perception of emotions from other people's faces. Interestingly, Landwehr et al. (2011) found that participants' liking of anthropomorphized cars was not strictly affected by the valence of emotional expression in design (i.e., friendliness or aggressiveness). Rather, participants showed higher liking of the anthropomorphized cars with a mix of aggressive eyes and a friendly mouth (i.e., cars with slanted headlights and an upturned grille). The research suggests that consumers are sensitive to detect humanlike cues in product designs whereby they are likely to anthropomorphize products with humanlike faces. Overall, consumers have positive emotional responses (i.e., liking) to the anthropomorphized brands.

The review of research illustrates that when processing advertising messages with brand personification in particular, anthropomorphism not only facilities the processing of the ad but also has impact on consumers' responses to the ad and the advertised brand. Indeed, when consumers are exposed to any stimulus that provides brand-related information, such as an ad with brand personification, they will instantly generate message-related responses (Batra and

Stephens, 1994; Kempf, 1999). Such responses involve affective and cognitive responses that constitute consumer attitude (Kim, Baek, & Choi, 2012). MacKenzie, Lutz, and Belch (1986) suggest that consumers' affective and cognitive responses to a particular advertising stimulus result in attitude toward the ad. To be specific, attitude toward the ad is defined as the "predisposition to respond in a favorable or unfavorable manner to a particular advertising stimulus during a particular exposure occasion" (p. 130). Applied to the present research, anthropomorphism would increase ad engagement which pertains to consumers' perceived presence, absorption, involvement, and attention in processing brand personification in advertising. When consumers engage with a given ad, as follows, they are likely to generate responses to form attitude toward the ad. McQuarrie and Phillips (2005) suggest that consumers will be rewarded with pleasure if they involve in processing adverting messages and figure out the metaphorical expression (e.g., brand personification) in the ad. Along this logic, ad engagement resulted from anthropomorphism would precede and positively contribute to consumers' attitude toward the ad. The following hypothesis is suggested.

H3: *Ad engagement will have a positive influence on attitude toward the ad.*

Similarly, consumers would form attitude toward the brand, which is defined as the subjective responses in a favorable or unfavorable manner to a given brand (MacKenzie et al., 1986), after processing and comprehending the personification messages in the ad. Because consumers are familiar with using knowledge about humans (i.e., agent knowledge) to account for nonhuman agents (i.e., brands), they would experience favorable feelings from the ease in information processing drawn on anthropomorphism (Aggarwal & McGill, 2007; Delbaere et al.,

2011; Epley et al., 2007). Also, anthropomorphism satisfies consumers' motives for social relationships and generates positive perceptions regarding the anthropomorphized brand (Epley et al., 2008; Wang et al., 2007). Taken together, when consumers engage with brand personification in advertising, their ad engagement would lead to the formation of strong attitude toward the target brand (Cacioppo & Petty, 1984; Kim et al., 2014). Namely, ad engagement resulted from anthropomorphism would also contribute to attitude toward the brand in a positive way. Hence, the hypothesis is proposed.

H4: *Ad engagement will have a positive influence on attitude toward the brand.*

Building on the literature, consumers' making of anthropomorphic inferences would affect their attitudinal judgments about the ad with personification messages and the personified brand in the ad. Using empirical evidence, furthermore, MacKenzie et al.'s (1986) study identified four models to demonstrate that consumers' affective and cognitive responses are crucial determinants of attitude toward the ad and are consequently transferred to attitude toward the brand as overall brand evaluation. By extension, research (Brown and Stayman, 1992) has suggested that attitude toward the ad precedes attitude toward the brand and mediates the relationships between the elaboration constructs (e.g., anthropomorphism and ad engagement) and the ultimate brand outcomes (e.g., attitude toward the brand and purchase intention). Thus, it is believed that consumers' positive attitude toward the ad resulted from anthropomorphism could be transferred to their attitude toward the brand appropriately. Finally, Dodds, Monroe, and Grewal (1991) suggest that consumers' positive perceptions about the brand would increase their willingness to buy the brand. In other words, consumers' positive attitude toward the brand

would positively influence their purchase intention. Therefore, the hypotheses suggest the relationships between the consequential consumer responses arose from anthropomorphism.

H5: *Attitude toward the ad will have a positive influence on attitude toward the brand.*

H6: *Attitude toward the brand will have a positive influence on purchase intention.*

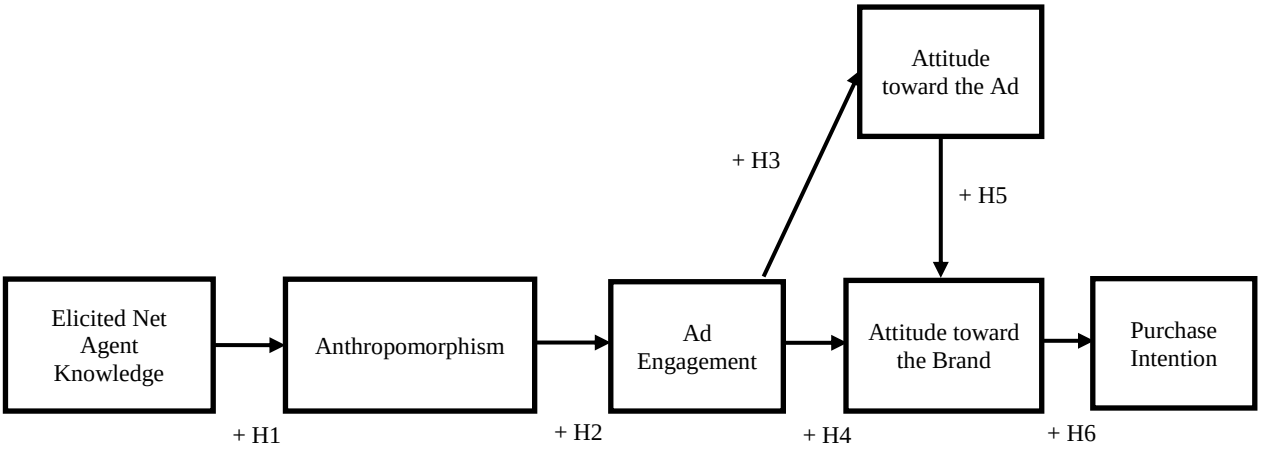
Overall Relationships of the Constructs

On the basis of previous review in relevant literature, the process of anthropomorphism may not only exert influences on consumers' processing of an ad with personification messages, but also affect consumers' evaluation of the ad as well as the advertised brand. This section summarizes the overall relationships between the anthropomorphism constructs and consequential consumer responses. First of all, if consumers are exposed to an ad with brand personification, the humanlike cues in the advertising messages would elicit both consumers' agent knowledge and alternative knowledge. Such knowledge serve as the in-process outputs for making anthropomorphic inferences. Consumers' elicited agent knowledge would exert stronger influence than elicited alternative knowledge, due to its predominant availability, accessibility, and applicability to process brand personification in advertising. As a result, subtracting elicited alternative knowledge from elicited agent knowledge would lead to elicited net agent knowledge that helps reason about the brand in anthropomorphic terms (H1).

For the response outcomes, consumers would feel connected to the ad and perceive their presence in the ad when they anthropomorphize the brand. That is, anthropomorphism induced by brand personification in advertising would positively lead to consumers' ad engagement (H2).

While ad engagement is concerned with the extent to which consumers process advertising messages, consumer attitude is concerned with their post-hoc evaluation of the ad or the advertised brand. Consumers are likely to show strong and positive attitude when they engage with the ad with brand personification. In turn, ad engagement could influence consumers' attitude toward the ad positively (H3). In the meanwhile, ad engagement is likely to have a positive influence on consumers' attitude toward the brand as well (H4). Because attitude toward the ad is the immediate response generated after processing the given advertising messages, consumers' attitude toward the ad would precede and positively influence their attitude toward the brand (H5). In consequence, consumers' attitude toward the brand would increase their purchase intention of the brand shown in the ad positively (H6). Figure 1 demonstrates the overall relationships between constructs that explicate the process of anthropomorphism.

Figure 1. Proposed Conceptual Model



Although the thriving attention on anthropomorphism in marketing and advertising research, researchers soften the account of antecedents that may affect consumers' making of anthropomorphic inferences and follow-up evaluation. Because brand personification is a special form of advertising metaphor, the following section first explicates the effects of personification modality with references to congruity in brand personality on consumers' anthropomorphism. Next, consumers' individual differences, including need for cognition, need for belonging, attachment style, and parasocial interaction, are addressed in relation to anthropomorphism.

Brand Personality in Anthropomorphism

Research has suggested that brand personification in advertising would trigger anthropomorphism along with more attributions of brand personality (Ang & Lim, 2006; Delbaere et al., 2011). Through anthropomorphism, consumers make attributional inferences to imbue brands with humanlike characteristics (e.g., feelings, intentions, and personality) such that brands are perceived as social agents delivering these characteristics (Aaker, 1997; Fournier & Alvarez, 2012; Epley et al., 2007). In particular, Aaker (1997) defines brand personality as "the set of human characteristics associated with a brand" that can be clearly identified by consumers (p. 347). Parallel to the Big Five dimensions of human personality, Aaker (1997) propose five brand personality dimensions based on consumers' perceived personality traits associated with brands in general. The five brand personality includes sincerity, excitement, competence, sophistication, and ruggedness. Plummer (1985) suggests that the perceptions of brand personality are derived from any direct or indirect contact consumers have with a brand. On the one hand, consumers can directly identify brand personality with the imagery personality trait of typical users, CEO, or celebrity endorser. One the other hand, brand personality can be indirectly

transferred through product-related attribute, category, symbol, advertising style, etc. Given that, brand personality is concerned with both marketers' strategies of endowing a brand with humanlike traits and consumers' association of these traits with the brand drawing on anthropomorphism (Aaker, 1997; Fournier & Alvarez, 2012).

Park, Jaworksi, and MacInnis (1986) state that human personality traits are inferences or attributions an individual makes about other people based on their physical characteristics, behaviors, attitude, beliefs, and demographics. In light of that, it would be possible for consumers to make inferences about brands based on the portrayed brand personality in advertising because consumers often perceive brands in many ways similar to human beings (Kervyn, Fiske, & Malone, 2012). Scholars (Keller, 2013; Smith, 1991) suggest that inferences made about brands according to messages presented in ads will be stored in consumers' memories as product beliefs, or knowledge. Such knowledge regarding a brand's attributes and the relation among these attributes are stored in a knowledge structure called schema, which is an organization of past experiences regarding reactions to particular stimuli (Fiske & Linville, 1980). Considering that anthropomorphism legitimizes the perception of brand personality (Aaker, 1997), consumers' agent knowledge for anthropomorphic inferences may be stored in the same schema that defines a known brand's attributes (i.e., perceived brand personality). For example, consumers' knowledge about Red Bull would be stored in the schema comprising the energy drink category. This stored schema would also relate to agent knowledge and exciting brand personality because advertising of Red Bull often associates the brand to extreme games, such as car racing, skydiving, and so forth (Van Gelder, 2003).

Fiske (1982) proposes the schema-based model of information processing that individuals comprehend a stimulus by matching it to a previously defined schema and then use the affect

linked to the schema as a guide for evaluation. Research further suggests that the level of schema congruity influences the nature of information processing and consequential evaluation (Fiske, 1982; Mandler, 1982; Meyers-Levy & Tybout, 1989). During the evaluation process, Meyers-Levy and Tybout (1989) define that "congruity is represented by a match between the attributes of an object/product and a relevant schema, whereas incongruity involves some form of mismatch" (p. 41). Information processing with high schema congruity would be relatively quick without much cognitive effort while information processing with low schema congruity would require relatively considerable cognitive effort.

Taken together and related to the abovementioned example, an ad of Red Bull could be easy to process if Red Bull is associated with congruent brand personality (e.g., car racing for exciting brand personality). Consumers would activate the schema that matches characteristics of Red Bull alongside agent knowledge to anthropomorphize the brand. If the brand is associated with incongruent brand personality (e.g., working in a production line), the mismatch requires consumers to activate not only the schema that includes humanlike characteristics of Red Bull, but also relevant schemas (i.e., alternative knowledge) for comprehending the association (i.e., Red Bull is an energy drink and energy drinks help people stay awake at work). The elicitation of alternative knowledge might adjust anthropomorphic inferences and results in low anthropomorphism. As such, brand personification with congruent brand personality in advertising could result in higher level of anthropomorphism than brand personification with incongruent brand personality in advertising. Although the induction of anthropomorphism would positively influence consumer responses to the ad and the advertised brand, such as ad engagement, attitude toward the ad, attitude toward the brand, and purchase intention, it remains unclear whether anthropomorphism interact with congruity in brand personality and results in

different effects on consumer responses. Therefore, the hypothesis and research question are proposed.

H7: *When brand personification is presented, an ad with congruent brand personality will lead to higher anthropomorphism than an ad with incongruent brand personality.*

RQ1: *Are there significant interactions between anthropomorphism and congruity in brand personality in their influence on consumers' (a) ad engagement, (b) attitude toward the ad, (c) attitude toward the brand, and (d) purchase intention?*

Need for Cognition in Anthropomorphism

Waytz, Cacioppo, and Epley (2010) suggest that individual differences are stable in determining the tendency to anthropomorphize nonhuman agents, such as brands. Based on Epley et al.'s (2007) theory of anthropomorphism, need for cognition is the dispositional variable that influences the elicitation of agent knowledge as well as alternative knowledge and sequential application for anthropomorphism. Defined by Cacioppo and Petty (1982), need for cognition is an individual's chronic tendency to engage in effortful cognitive processing. Depending on the continuum (from low to high) in need for cognition, individuals vary in deriving meaning from given information. In accordance with need for cognition, individuals show steady manifestation of disaffection or enjoyment in information processing. Individuals high in need for cognition are more likely to "seek, acquire, think about, and reflect back on information to make sense of stimuli, relationships, and events in their world" whereas individuals low in need for cognition are more likely to make judgments based on knowledge of others, heuristic cues, or comparative

processing (p. 198, Cacioppo, Petty, Feinstein, & Jarvis, 1996). Cacioppo et al.'s (1996) review states that individuals high in need for cognition possess high inherent motivation to devote cognitive effort in processing information and enjoy engaging in mental activities. On the contrary, individuals low in need for cognition possess low inherent motivation of engaging in effortful thinking and assign less endeavors to process information. Individuals high in need for cognition are regarded as "chronic cognizers," while individuals low in need for cognition are regarded as "chronic cognitive misers" (p. 247).

Gilbert, Pelham, and Krull (1988) suggest that making attributional judgments, such as anthropomorphism, is a two-step process. An individual first makes dispositional inferences (i.e., anthropomorphic inferences) based on the handily accessible knowledge (i.e., agent knowledge) and then adjusting the inferences according to other coactivated knowledge (i.e., alternative knowledge) relevant to the given stimulus. The latter step of adjusting the default inferences can be achieved only if individuals devote high cognitive effort in information processing. Nevertheless, the adjustment is not sufficient to correct the judgmental bias resulted from anthropomorphism since agent knowledge is promptly accessible and highly applicable for reasoning about nonhuman agents with humanlike characteristics (Epley et al., 2007).

Applied to anthropomorphism, consumers high in need for cognition are likely to undergo a process of information adjustment and make judgments based on the thoughts they further evaluate (D'Agostino & Fincher-Kiefer, 1992). To be specific, when exposing to brand personification in advertising, consumers high in need for cognition should activate both knowledge relevant to human characteristics as well as the brand in general. Due to their tendency for high cognitive processing, consumers high in need for cognition would find other applicable alternative knowledge, such as the functionality or symbolic meaning of the brand.

They would tend to integrate the anthropomorphic thoughts with coactivated alternatives to make adjusted inferences. This would led to weak evidence of anthropomorphism. By contrast, consumers low in need for cognition would simply apply elicited agent knowledge to make anthropomorphic inferences without deliberate processing. Namely, consumers low in need for cognition would rely on the accessible agent knowledge at hand and compare it to a given personification stimulus. They should show strong evidence of anthropomorphism.

Case in point, the ads for Rolex's wristwatch often set the time to 10:10 which represents a humanlike smile. While consumers process these ads, the personification metaphor may elicit their agent knowledge that leads them to think of the wristwatch in anthropomorphic terms. Consumers low in need for cognition would be prone to easily apply elicited agent knowledge and anthropomorphize the wristwatch as a smiling human face. However, consumers high in need for cognition may spend more cognitive effort considering the features (e.g., mechanical chronograph and bracelet material) and meaning (e.g., elegance and prestige) of the wristwatch at the same time when agent knowledge is elicited. Such elicited alternative knowledge could be integrated with the default anthropomorphic thinking and decrease the level of anthropomorphism. Still, the discussion based on relevant literature is not enough to provide conclusive prediction regarding the interactions between anthropomorphism and need for cognition and their effects on consumer responses, including ad engagement, attitude toward the ad, attitude toward the brand, and purchase intention. Considering that, the hypothesis and research question are suggested.

H8: *Consumers' need for cognition will have a negative influence on anthropomorphism.*

RQ2: *Are there significant interactions between anthropomorphism and need for cognition in their influence on consumers' (a) ad engagement, (b) attitude toward the ad, (c) attitude toward the brand, and (d) purchase intention?*

Need for Belonging in Anthropomorphism

Early literature in social and personality psychology had suggested that individuals have a pervasive need for interpersonal contact (Freud, 1930), love and belongingness (Maslow, 1968), and close attachment (Bowlby, 1973). Drawing on these theoretical frameworks, Baumeister and Leary (1995) postulate the "belongingness hypothesis" that identifies need for belonging as a fundamental motivation for human beings and as a significant factor influencing interpersonal behaviors. More specifically, need for belonging is defined as the need to "form and maintain at least a minimum quantity of lasting, positive, and significant interpersonal relationships" (p. 497). Although Freud's (1930) and Bowlby's (1973) work suggest that the desire for social relationships can be attributed to sexuality with one's partner or the intimate contact with one's mother, need for belonging is distinct from these views. Baumeiser and Leary (1995) indicate that need for belonging does not target at a particular relationship with a specific relationship agent because need for belonging can be "directed toward any other human being, and the loss of relationship with one person can to some extent be replaced by any other" (p. 500). In other words, need for belonging is the common and overarching need that drives goal-oriented activities. Such need propels individuals to seek out general social contact and cultivate relationships until the minimum level of need is satisfied (Baumeiser & Leary, 1995).

Two main features characterized the cognitive and affective aspects of need for belonging. First, need for belonging is a cognitive activity that reflects a prevalent concern for

constant social contact (Sedikides, Olsen, & Reis, 1993). Second, based on the social contact, there should be foreseeable continuation of relationships, which is stable and affective-laden, in that satisfaction of need for belonging can be provided (Shaver & Buhrmester, 1983). By satisfying need for belonging, as a result, positive affect, such as pleasure, would follow.

Further, Baumeister and Leary (1995) suggest that need for belonging is innately prepared and should be nearly universal in all individuals across cultures, while there would be expected individual differences in expressing strength of the need, as well as how the need is satisfied. With this regard, Kelly (2001) points out that some individuals are high in need for belonging and show avid desire for being accepted by others. These individuals are likely to worry about being isolated, and thus, seek for a large number of relationships and make every effort to maintain the relationships. On the contrary, some individuals are low in need for belonging and are content with only a few relationships. They do not actively seek for social relationships and do not care about how they are viewed by others outside the existing relationship network.

Establishing and maintaining a sense of belonging through social relationships with others are the central premises of need for belonging (Baumeister & Leary, 1995). Due to individuals' need for belonging, the social monitoring system would constantly detect potential opportunity for establishing social relationships (Leary, 1990). In particular, individuals high in need for belonging would imagine social relationships and pay extensive attention on social cues in environment spontaneously (Pickett et al., 2004). Pickett et al. (2004) have found that individuals high in need for belonging are more cautious about social cues and, indeed, can identify vocal tone and facial emotion more accurately across situations than individuals low in need for belonging. The findings imply that individuals high in need for belonging have

enhanced social perception skills that help them recognize the opportunities for social interactions.

According to Epley et al. (2008), sociality is the fundamental motive for bridging relationships with other social agents. Also, it is one of the driving force to make anthropomorphic inferences if there is a lack of relationship opportunities with other people. That is, individuals would anthropomorphize nonhuman agents to compensate the need for belonging since anthropomorphism enables perceived social relationships with nonhuman agents. Therefore, the presence of humanlike characteristics in ads (i.e., brand personification) would be considered as social cues that increase the elicitation and application of agent knowledge for anthropomorphism. Because of the pressing motivation to have social relationships for consumers high in need for belonging especially, they would likely anthropomorphize brands and regard the anthropomorphized brands as a source of relationships. That is to say, they would project the relationship mindset onto the anthropomorphized brands for satisfying need for belonging. In contrast, consumers low in need for belonging would not have such imperative motive to bridge social relationships via anthropomorphism. Thus, they would show weak evidence of anthropomorphism. Again, it is not clear if anthropomorphism interact with need for belonging and whether the interactions affect following consumer responses, including ad engagement, attitude toward the ad, attitude toward the brand, and purchase intention. As such, the hypothesis and research question are posited.

H9: *Consumers' need for belonging will have a positive influence on anthropomorphism.*

RQ3: *Are there significant interactions between anthropomorphism and need for belonging in their influence on consumers' (a) ad engagement, (b) attitude toward the ad, (c) attitude toward the brand, and (d) purchase intention?*

Attachment Style in Anthropomorphism

Similar to need for belonging, Bowlby's (1973) attachment theory proposes the formation and maintenance of social relationships as a basic human need. The attachment theory was first posited to explain the affectional bond between infants and their caregivers. Bowlby (1973) observed that infants have adaptive attachment behaviors (e.g., crying, clinging, and searching) to prevent separation from their primary caregivers (e.g., parents) or to regain proximity to these caregivers. As such, Bowlby (1973) suggests a motivational system, the attachment behavioral system, which governs the exhibition of infants' attachment behaviors according the attentiveness they experience from their attachment figures.

Following the logic, Ainsworth, Blehar, Waters, and Wall's (1978) conducted an experiment to delineate infants' attachment style after reuniting with their separated parents. The distinct reactions were classified into secure or insecure attachment style. Specifically, there are three categories of attachment style, including secure, anxious-ambivalent, and avoidant attachment style. Secure attachment style refers to infants who frequently exhibit active seeking and are easily comforted after reuniting with parents. By contrast, anxious-ambivalent and avoidant attachment style are insecure attachment style. Infants with anxious-ambivalent attachment style frequently exhibit protest behaviors (e.g., crying and resistance to soothing), while infants with avoidant attachment style frequently exhibit detachment behaviors (e.g., actively avoid contact with parents).

Although the attachment theory primarily stresses on the explanation of infant-caregiver relationships, scholars (e.g., Hazan & Shaver, 1994; Brennan, Clark, & Shaver, 1998) believe that the attachment behavioral system can be carried over into adulthood and shape adults' relationship functioning, especially for close relationships. The developmental influences of relationship quality in infancy would reflect on the perception of social relationships throughout one's life (Hazan & Shaver, 1990). Later on, Hazan and Shaver (1987) extended the attachment theory into adults' romantic relationships with loved ones. They developed a questionnaire to examine individual differences in attachment style and found that the distribution of the three attachment styles is similar in adulthood as in infancy. Hazan and Shaver (1994) suggest that the secure, anxious-ambivalent, and avoidant style of developing emotional bonds in infancy were translated appropriately into adults' close relationships because the dynamics and functions of the attachment behavioral system are presumably the same across individuals' life span.

While attachment style is concerned with the particular close relationship with one's relationship partner, Fraley and Shaver (2000) have suggested that attachment style would influence the ways an individual think, feel, and behave. In this light, attachment style may not only determine an individual's tendency to seek for information about social relationships but also be related to the tendency of making anthropomorphic inferences. Specific to processing brand personification in advertising, consumers with anxious-ambivalent attachment style may attempt to actively seek for relationship cues (Fraley & Shaver, 2000). They may appraise the humanlike cues in ads and anthropomorphize the brand to atone for their anxious-ambivalent disposition since anthropomorphized brands may provide them with perceived secure and stable social relationships (Epley et al., 2007).

While individuals with avoidant attachment style might be apprehensive about having social contact with others, Kirkpatrick and Shaver (1990) have showed that those with avoidant attachment style would have strong relationships with religious gods. It is suggested that anthropomorphized nonhuman agents serve as surrogates to satisfy the basic need for social relationships, and, meanwhile, avoid social contact with real human beings. Along the logic, when brand personification is presented, consumers with avoidant attachment style might anthropomorphize the brand as a replacement source to obtain social relationships. This is similar to the function they have religious beliefs in anthropomorphized gods. By contrast, individuals with secure attachment style would be content with their status quo of social relationships. They may not have strong sociality desire and perform anthropomorphism of nonhuman agents. In sum, consumers with either anxious-ambivalent or avoidant attachment style (i.e., insecure attachment style) would be more likely to anthropomorphize personified brands than consumers with secure attachment style. Moreover, in order to thoroughly examine whether there are significant interaction effects between anthropomorphism and attachment style on consumer responses, including ad engagement, attitude toward the ad, attitude toward the brand, and purchase intention, the following hypothesis and research question are suggested.

H10: *When brand personification is presented, consumers with insecure (anxious-ambivalent and avoidant) attachment style will have higher anthropomorphism than consumers with secure attachment style.*

RQ4: *Are there significant interactions between anthropomorphism and attachment style in their influence on consumers' (a) ad engagement, (b) attitude toward the ad, (c) attitude toward the brand, and (d) purchase intention?*

Parasocial Interaction in Anthropomorphism

The notion of parasocial interaction appeared in Horton and Wohl's (1956) early research in the field of psychiatry. With the diffusion of televisions in households in the 1950s, the phenomenon of audiences' parasocial interaction with media characters, including television newscasters, television performers, soap opera and sitcom characters, shopping hosts, etc., had received attention from media and communication researchers. Horton and Wohl's (1956) originally define parasocial interaction as seeming face-to-face and one-side quasi-interactions between a media viewer and a media character. Media viewers "know such a persona in somewhat the same way they know their chosen friends: through direct observation and interpretation of his appearance, his gestures and voice, his conversation and conduct in a variety of situations" (p. 216). To be more specific, parasocial interaction is conceived as the imagined interaction between media viewers and human characters appeared in the media, which leads to the formation of parasocial relationships (Rubin & Perse, 1987).

According to Nordlund (1978), if individuals whose primary needs for companionship or interpersonal interactions are unfulfilled to a reasonable extent in their social life, they would be likely to fulfill these needs through alternative ways (e.g., parasocial interaction). The performance of parasocial interaction is legitimized by the assumption that individuals would employ the same cognitive processes to evaluate media characters as they do to other people in everyday life (Rubin & Perse, 1987). McQuail, Blumler, and Brown (1972) suggest that a media

viewer first identifies the personality of media characters and then regards them as an alternative source of social relationships. With this regard, the motive of exhibiting parasocial interaction and establishing parasocial relationships is to compensate loneliness in social life along with the dependency on media usage (Rosengren & Windahl, 1972). From a media uses and gratifications perspective, furthermore, parasocial interaction allows individuals to have some form of social connections with "people in the mass media world" (p. 153).

Rubin and McHugh (1987) provide three theoretical ground to support the exhibition of parasocial interaction, including the uncertainty reduction theory, the personal construct theory, and the social exchange theory. Firstly, the uncertainty reduction theory (Berger & Calabrese, 1975) states that media viewers' uncertainty about media characters decreases over time through a process of learning and imagery interactions with media characters. Media viewers' learned ability to predict behaviors of media characters would increase their perceived intimacy and liking towards the media characters. Next, the personal construct theory (Delia, O'Keefe, & O'Keefe, 1982) suggests that media viewers apply their interpersonal construct systems that they use to make sense of the world to know about media characters. By applying the interpersonal construct systems, media viewers achieve a sense of acquaintance of media characters and further develop parasocial relationships. Third, the social exchange theory (Homans, 1961) analogizes the process of parasocial interaction to a cost-and-reward assessment in terms of pleasure seeking and pain avoidance via media usage. Costs are concerned with anxiety and high cognitive effort, while rewards are concerned with anything that is enjoyable for individuals (e.g., entertainment). As such, parasocial interaction with media characters is pleasurable with high rewards because it requires low exchange costs. Plus, the establishment of long-term parasocial relationships satisfies the need for social connections.

Giles (2002) suggests that television viewers would have parasocial interaction and become attached to media characters, regardless of the media characters are real humans or humanlike figures (e.g., cartoon characters) in television programs. To this end, parasocial interaction with nonhuman media characters would be related to process brand personification in advertising. The inherent motivation of performing parasocial interaction to establish social relationships from alternative sources would lead consumers to elicit agent knowledge and anthropomorphize the brand. Still, consumers' differences in exhibiting parasocial interaction and establishing consequential parasocial relationships might alter the extent to which they make anthropomorphic inferences. Namely, consumers who are inclined to exhibit parasocial interaction might be more likely to anthropomorphize the brand, whereas consumers who are not inclined to exhibit parasocial interaction might be less likely to anthropomorphize the brand. Last but not lease, it remains uncertain whether anthropomorphism interact with parasocial interaction and the interactions significantly influence consumer responses, including ad engagement, attitude toward the ad, attitude toward the brand, and purchase intention. The hypothesis and research question are thus suggested.

H11: *Consumers' parasocial interaction will have a positive influence on anthropomorphism.*

RQ5: *Are there significant interactions between anthropomorphism and parasocial interaction in their influence on consumers' (a) ad engagement, (b) attitude toward the ad, (c) attitude toward the brand, and (d) purchase intention?*

CHAPTER 3

METHODS

Study Designs

In order to address the proposed conceptual model, hypotheses, and research questions, an experiment was implemented. Energy drink brands were identified as the target brands for the experiment because energy drink brands are usually associated with a distinct exciting brand personality by means of their advertising messages (Van Gelder, 2003). Also, research has suggested that individuals are more likely to make attributional inferences, such as anthropomorphism, about familiar stimuli than unfamiliar ones (Cortes, Demoulin, Rodriguez, Rodriguez, & Leyens, 2005). In light of that, the nuances in familiarity of brands might affect how consumers anthropomorphize the brands. Therefore, a known brand and a fictitious brand were included in the current research to test whether anthropomorphism was a universal mechanism to process brand personification in advertising. The inclusion of both known and unknown brands could not only increase the robustness of the experimental design, but also consolidate the research results across situations.

For the purpose of manipulating participants' familiarity of the brands, Red Bull was selected as the known energy drink brand, while Dynamo was created as the unknown energy drink brand. The manipulation in brand names was checked by a pretest using a sample of 29 college students. To ensure that there was a difference in familiarity between the two brand names, they were asked to rate two questions, "Are you familiar with Red Bull as a name of an energy drink brand?" and "Are you familiar with Dynamo as a name of an energy drink brand?"

The questions were measured on a seven-point Likert scale, anchored by "Extremely unfamiliar/Extremely familiar." The pretest results showed that participants were more familiar with Red Bull ($M_{\text{Red Bull}} = 6.60$, $SD_{\text{Red Bull}} = .72$) than Dynamo ($M_{\text{Dynamo}} = 1.20$, $SD_{\text{Dynamo}} = .66$) and the difference was significant ($t(28) = 24.81$, $p < .001$).

For the main study, hence, a 2 (brand personality: congruent versus incongruent) × 2 (brand name: known versus unknown) between-subjects experimental design was conducted. The experiment was administrated online. Participants were recruited from a crowdsourcing system, Amazon Mechanical Turk (MTurk). MTurk allows requesters to distribute Human Intelligence Tasks (HITs) to a large number of online workers with compensation. Prior research has suggested that MTurk provides more demographically diverse samples than standard Internet samples (Buhrmester, Kwang, & Gosling, 2011). MTurk subjects are more representative of the U.S. population than convenience samples, such as student samples, often used in experimental research (Berinsky, Huber, & Lenz, 2012). Based on existing empirical evaluations, MTurk is considered a viable alternative for conducting online experiments (Paolacci, Chandler, & Ipeirotis, 2010) and employed for the current research.

Development of Stimuli

In order to prepare for the advertising stimuli for the experiment, four color ads were constructed. The branded products were depicted with humanlike features in a metaphorical way. Specifically, the ads showed three bottles of the energy drink brand. The three bottles were identical in size, but each had different designs that indicated them dressing in costumes resembling humanlike agents (i.e., superheroes). The bottles were placed in the middle of the ad surrounded with the ad headline, "[Brand name] energy drink helps your performance." Both the

humanlike product designs and the verb in the ad headline delivered messages for brand personification. Additionally, the association of brand personality was presented alongside the branded product following Swaminathan, Stilley, and Ahluwalia's (2009) procedure. For the condition with congruent brand personality, pictures featuring extreme games, such as skydiving, motorcycling, skateboarding, and car racing, were placed at the bottom of the ad. For the condition with incongruent brand personality, pictures featuring activities, such as working in a production line, working in a construction site, and farming were placed at the bottom of the ad. The ads created for the experiment conditions are shown in Appendix A.

The manipulation regarding congruity in brand personality was checked by using the excitement dimension of Aaker's (1997) Brand Personality Scale. While the scale measures the extent to which consumers associate brands with particular brand personality based on given advertising stimuli, research (Kum, Bergkvist, Lee, & Leong, 2012) has demonstrated that consumers can also ascribe brand personality to brands based on product categories. On the basis of this logic, consumers would easily associate exciting product category personality to energy drink brands, according to its functionality of providing refreshments to maintain one's vigor (Van Gelder, 2003). It was thus considered that the excitement dimension of Brand Personality Scale could reflect the extent to which consumers perceive congruity in exciting brand personality for energy drink brands. That is, high score on the excitement dimension of Brand Personality Scale denoted that consumers regarded the energy drink brands as having brand personality congruent with excitement (its common product category personality), and low score on the scale denoted that consumers regarded the energy drink brands as having brand personality incongruent with excitement.

After developing the advertising stimuli, another pretest with a sample of 111 participants were conducted via MTurk to test the effectiveness of manipulations in the stimuli. Each participant received $.30 as a compensation for their participation. The pretest ensured the manipulations of known versus unknown brand name and congruent versus incongruent brand personality. For the manipulation of brand names, the pretest results showed that participants perceived the brand name of Red Bull as higher in familiarity ($M_{\text{Red Bull}} = 5.78$, $SD_{\text{Red Bull}} = 1.13$ vs. $M_{\text{Dynamo}} = 4.21$, $SD_{\text{Dynamo}} = 1.76$; $F(1, 109) = 31.89$, $p < .001$), higher in implying product quality ($M_{\text{Red Bull}} = 5.64$, $SD_{\text{Red Bull}} = 1.10$ vs. $M_{\text{Dynamo}} = 5.15$, $SD_{\text{Dynamo}} = 1.25$; $F(1, 109) = 4.77$, $p < .05$), and higher in liking ($M_{\text{Red Bull}} = 5.84$, $SD_{\text{Red Bull}} = 1.18$ vs. $M_{\text{Dynamo}} = 5.15$, $SD_{\text{Dynamo}} = 1.17$; $F(1, 109) = 9.66$, $p < .01$) than the brand name of Dynamo. For the manipulation of congruity in brand personality, the pretest results showed that participants perceived higher exciting brand personality in the congruent brand personality condition ($M_{\text{congruent brand personality}} = 6.03$, $SD_{\text{congruent brand personality}} = .42$) than in the incongruent brand personality condition ($M_{\text{incongruent brand personality}} = 4.62$, $SD_{\text{incongruent brand personality}} = .70$). The difference was significant ($F(1, 109) = 167.20$, $p < .001$).

Procedures of Data Collection

Following the development and pretests of the advertising stimuli, an online experiment was constructed using the Qualtrics system to include both the stimuli and the research measures. Participant were first asked to answer questions regarding the independent measures of need for cognition, need for belonging, attachment style, and parasocial interaction. Participants were then randomly assigned to one of the four experiment conditions to view one of the advertising stimuli. After exposing to the assigned advertising stimulus, participants were reminded that

every brand builds up a distinct personality by means of its ads and were asked to rate the exciting dimension of brand personality based on the ad they saw. Participants were asked to complete questions regarding the measures of ad engagement, attitude toward the ad, attitude toward the brand, purchase intention, agent/alternative knowledge, and anthropomorphism. In the last section, participants were asked to provide their demographic information regarding gender, age, ethnicity, education, marital status, and annual household income. Upon completion, participants were debriefed and thanked. The HIT of the online experiment for the main study was posted on MTurk with $.50 as an incentive for each participation.

Measures

Several measures were adopted from previous research to assess both the independent and dependent variables, as well as the effectiveness of manipulations included in the current research. The adopted scales are specified as follows.

Independent Measures

Need for Cognition. Cacioppo, Petty, and Kao's (1984) short form of the Need for Cognition Scale was used. There were 18 items for the scale. Participants were asked to rate such items about their thinking style on a seven-point Likert scale, anchored by "Strongly disagree/Strongly agree." The items included: "I would prefer complex to simple problems," "I like to have the responsibility of handling a situation that requires a lot of thinking," "Thinking is not my idea of fun (reverse scored)," "I would rather do something that requires little thought than something that is sure to challenge my thinking abilities (reverse scored)," "I try to anticipate and avoid situations where there is a likely chance I will have to think in-depth about

something (reverse scored),” “I find satisfaction in deliberating hard and for long hours,” “I only think as hard as I have to (reverse scored),” “I prefer to think about small, daily projects to long-term ones (reverse scored),” “I like tasks that require little thought once I've learned them (reverse scored),” “The idea of relying on thought to make my way to the top appeals to me,” “I really enjoy a task that involves coming up with new solutions to problems,” “Learning new ways to think doesn't excite me very much (reverse scored),” “I prefer my life to be filled with puzzles that I must solve,” “The notion of thinking abstractly is appealing to me,” “I would prefer a task that is intellectual, difficult, and important to one that is somewhat important but does not require much thought,” “I feel relief rather than satisfaction after completing a task that required a lot of mental effort (reverse scored),” “It's enough for me that something gets the job done; I don't care how or why it works (reverse scored),” and “I usually end up deliberating about issues even when they do not affect me personally.” A single index was formed by averaging the items (α = .95).

Need for Belonging. Leary, Kelly, Cottrell, and Schreindorfer’s (2013) Need to Belong Scale was used. There were ten items for the scale. Participants were asked to rate such items about their social relationship style on a seven-point Likert scale, anchored by “Strongly disagree/Strongly agree.” The items included: “If other people don’t seem to accept me, I don’t let it bother me (reverse scored),” “I try hard not to do things that will make other people avoid or reject me,” “I seldom worry about whether other people care about me (reversed scored),” “I need to feel that there are people I can turn to in times of need,” “I want other people to accept me,” “I do not like being alone,” “Being apart from my friends for long periods of time does not bother me (reversed scored),” “I have a strong need to belong,” “It bothers me a great deal when

I am not included in other people's plans," and "My feelings are easily hurt when I feel that others do not accept me." A single index was formed by averaging the items (α = .87).

Attachment Style. The revised Hazan and Shaver's (1990) three-category measure of attachment style was used. Participants was asked to choose from one of the three description items that best characterized their experiences in close relationships. The description items indicated the type of attachment style, which included: "I am somewhat uncomfortable being close to others; I find it difficult to trust them completely, difficult to allow myself to depend on them; I am nervous when anyone gets too close, and often, others want me to be more intimate than I feel comfortable being," for avoidant attachment style, "I find it relatively easy to get close to others and am comfortable depending on them and having them depend on me; I don't worry about being abandoned or about someone getting too close to me," for secure attachment style, and "I find that others are reluctant to get as close as I would like; I often worry that my partner doesn't really love me or won't want to stay with me; I want to get very close to my partner, and this sometimes scares people away" for anxious-ambivalent attachment style. Participants who selected avoidant attachment style or anxious-ambivalent attachment style were classified as insecure attachment style.

Parasocial Interaction. Cole and Leets' (1999) Parasocial Interaction Scale was adopted and modified to fit in the research context. Participants were asked to type in the name of their favorite TV character and then rate 20 items regarding how they feel about their favorite TV character. The items were measured on a seven-point Likert scale, anchored by "Strongly disagree/Strongly agree." The items included: "The program my favorite TV personality is on shows me what the person is like," "When my favorite TV personality jokes around with other people it makes the program they are on easier to watch," "When my favorite TV personality

shows me how he or she feels about some issue, it helps me make up my own mind about the issue," "I feel sorry for my favorite TV personality when he or she makes a mistake," "When I'm watching the program my favorite TV personality is on, I feel as if I am part of the group," "I like to compare my ideas with what my favorite TV personality says," "My favorite TV personality makes me feel comfortable, as if I am with friends," "I see my favorite TV personality as a natural, down-to-earth person," "I like hearing the voice of my favorite TV personality in my home," "My favorite TV personality keeps me company when his or her program is on television," "I look forward to watching my favorite TV personality's show," "If my favorite TV personality appeared on another television program, I would watch that program," "My favorite TV personality seems to understand the things I know," "I sometimes make remarks to my favorite TV personality during their program," "If there were a story about my favorite TV personality in a newspaper or magazine, I would read it," "I miss seeing my favorite TV personality when his or her program is not on," "I would like to meet my favorite TV personality in person," "I think my favorite TV personality is like an old friend," "I find my favorite TV personality to be attractive," and "I am not as satisfied when other characters replace or overshadow my favorite TV personality." A single index was formed by averaging the items (α = .89). Table 1 shows all items of the independent measures.

Table 1. Measures of Independent Variables

Variables	Items	Sources
Need for Cognition (α = .95)	• Please tell us about your thinking style. *1 = "strongly disagree" and 7 = "strongly agree"* 1. I would prefer complex to simple problems. 2. I like to have the responsibility of handling a situation that requires a lot of thinking. 3. Thinking is not my idea of fun. a	Cacioppo, Petty, and Kao (1984)

	4. I would rather do something that requires little thought than something that is sure to challenge my thinking abilities. a 5. I try to anticipate and avoid situations where there is a likely chance I will have to think in-depth about something. a 6. I find satisfaction in deliberating hard and for long hours. 7. I only think as hard as I have to. a 8. I prefer to think about small, daily projects to long-term ones. a 9. I like tasks that require little thought once I've learned them. a 10. The idea of relying on thought to make my way to the top appeals to me. 11. I really enjoy a task that involves coming up with new solutions to problems. 12. Learning new ways to think doesn't excite me very much. a 13. I prefer my life to be filled with puzzles that I must solve. 14. The notion of thinking abstractly is appealing to me. 15. I would prefer a task that is intellectual, difficult, and important to one that is somewhat important but does not require much thought. 16. I feel relief rather than satisfaction after completing a task that required a lot of mental effort. a 17. It's enough for me that something gets the job done; I don't care how or why it works. a 18. I usually end up deliberating about issues even when they do not affect me personally. (a = Reverse scored)	
Need for Belonging (α = .87)	• Please tell us about your social relationship style. *1 = "strongly disagree" and 7 = "strongly agree"* 1. If other people don't seem to accept me, I don't let it bother me. a 2. I try hard not to do things that will make other people avoid or reject me. 3. I seldom worry about whether other people care about me. a 4. I need to feel that there are people I can turn to in times of need. 5. I want other people to accept me. 6. I do not like being alone. 7. Being apart from my friends for long periods of time does not bother me. a 8. I have a strong need to belong. 9. It bothers me a great deal when I am not included in other people's plans. 10. My feelings are easily hurt when I feel that others do not accept me. (a = Reverse scored)	Leary, Kelly, Cottrell, and Schreindorfer (2013)
Attachment Style	• These questions are concerned with your experiences in close relationships. Take a moment to think about these experiences and answer the following questions with them in mind. Read each of the three self-descriptions below (1, 2, and 3) and then place a checkmark next to the single alternative that best describes how you feel in close relationships or is nearest to the way you feel. (Note: The terms "close" and "intimate" refer to psychological or emotional	Hazan and Shaver (1987)

	closeness, not necessarily to sexual intimacy.) *Avoidant attachment style* 1. I am somewhat uncomfortable being close to others; I find it difficult to trust them completely, difficult to allow myself to depend on them. I am nervous when anyone gets too close, and often, others want me to be more intimate than I feel comfortable being. *Secure attachment style* 2. I find it relatively easy to get close to others and am comfortable depending on them and having them depend on me. I don't worry about being abandoned or about someone getting too close to me. *Anxious-ambivalent attachment style* 3. I find that others are reluctant to get as close as I would like. I often worry that my partner doesn't really love me or won't want to stay with me. I want to get very close to my partner, and this sometimes scares people away.	
Parasocial Interaction (α = .89)	• Please type in your favorite TV character: _____ and tell us how you feel about your favorite TV character. *1 = "strongly disagree" and 7 = "strongly agree"* 1. The program my favorite TV personality is on shows me what the person is like. 2. When my favorite TV personality jokes around with other people it makes the program they are on easier to watch. 3. When my favorite TV personality shows me how he or she feels about some issue, it helps me make up my own mind about the issue. 4. I feel sorry for my favorite TV personality when he or she makes a mistake. 5. When I'm watching the program my favorite TV personality is on, I feel as if I am part of the group. 6. I like to compare my ideas with what my favorite TV personality says. 7. My favorite TV personality makes me feel comfortable, as if I am with friends. 8. I see my favorite TV personality as a natural, down-to-earth person. 9. I like hearing the voice of my favorite TV personality in my home. 10. My favorite TV personality keeps me company when his or her program is on television. 11. I look forward to watching my favorite TV personality's show. 12. If my favorite TV personality appeared on another television program, I would watch that program. 13. My favorite TV personality seems to understand the things I know. 14. I sometimes make remarks to my favorite TV personality during their program. 15. If there were a story about my favorite TV personality in a newspaper or magazine, I would read it. 16. I miss seeing my favorite TV personality when his or her program	Cole and Leets (1999)

	is not on. 17. I would like to meet my favorite TV personality in person. 18. I think my favorite TV personality is like an old friend. 19. I find my favorite TV personality to be attractive. 20. I am not as satisfied when other characters replace or overshadow my favorite TV personality.

The Effectiveness of Manipulation

Brand Name. Kim, Yoon, and Lee's (2010) instruments were adopted and modified to measure the effectiveness of manipulation in brand name. Participants were reminded that "[Brand name] is a functional beverage providing refreshments for mind and body" and asked to indicate their opinion on [Brand name] as a name of an energy drink brand. The items were measured on a seven-point Likert scale, anchored by "Strongly disagree/Strongly agree." Three items included: "I am familiar with the brand name," "The name implies high quality," and "I like the brand name."

Congruity in Brand Personality. Given the notion that consumers can ascribe brand personality based on product categories (Kum et al., 2010), the excitement dimension of Aaker's (1997) Brand Personality Scale was adopted to assess the manipulation of congruity in exciting brand personality. Participants were reminded that "Every brand builds up a distinct personality by means of its ads—a set of subtle associations. And different brands have different personalities." They were then asked to rate on each of the eleven adjectives that described exciting brand personality based on the ad they viewed. The items were measured on a seven-point Likert scale, anchored by "Extremely undescriptive/Extremely descriptive." Items included: "daring," "trendy," "exciting," "spirited," "cool," "young," "imaginative," "unique," "up-to-date," "independent," and "contemporary." A single index was formed by averaging the items (α = .91). Table 2 shows all items measuring the effectiveness of manipulations.

Table 2. Measures of Manipulation Check

Manipulations	Items	Sources
Brand Name	• [Brand name] is a functional beverage providing refreshments for mind and body. What's your opinion on [Brand name] as a name of an energy drink brand? *1 = "strongly disagree" and 7 = "strongly agree"* 1. I am familiar with the brand name. 2. The name implies high quality. 3. I like the brand name.	Kim, Yoon, and Lee (2010)
Congruity in Brand Personality (α = .91)	• Every brand builds up a distinct personality by means of its ads—a set of subtle associations. And different brands have different personalities. Please indicate the extent to which the following adjectives describe the brand personality of [Brand name] based on this ad. *1 = "extremely undescriptive" and 7 = "extremely descriptive"* 1. Daring 2. Trendy 3. Exciting 4. Spirited 5. Cool 6. Young 7. Imaginative 8. Unique 9. Up-to-date 10. Independent 11. Contemporary	Aaker (1997)

Dependent Measures

Agent/Alternative Knowledge. Jeong's (2008) items measuring cognitive elaboration were adopted and modified to measure agent knowledge and alternative knowledge, respectively. Participants were asked to indicate their opinion on the ad they viewed. The items were measured on a seven-point Likert scale, anchored by "Strongly disagree/Strongly agree." Agent knowledge was measured by two items, including "I had many thoughts related to humans when I saw the ad" and "The ad I saw elicited lots of thoughts related to humans." A single index was formed by averaging the two items for agent knowledge (α = .92). Alternative knowledge was

measured by two items, including "I had many thoughts unrelated to humans when I saw the ad" and "The ad I saw elicited lots of thoughts unrelated to humans." A single index was formed by averaging the two items for alternative knowledge (α = .92). The index of net agent knowledge was obtained by subtracting the index of alternative knowledge from the index of agent knowledge.

Anthropomorphism. Aggarwal and McGill's (2007) and Puzakova, Kwak, and Rocereto's (2013) items were adopted and modified to measure anthropomorphism. Participants were asked to indicate their opinion on the ad they viewed. The items were measured on a seven-point Likert scale, anchored by "Strongly disagree/Strongly agree." The items included: "The brand had a mind of its own and its own beliefs and desires," "The brand had come alive," "The brand is like a person," "It's as if the product was alive," and "It suggests the product is like a person." A single index was formed by averaging the items (α = .92).

Ad Engagement. Kim et al.'s (2014) Ad Engagement Scale was adopted and modified to measure ad engagement. Participants were asked to rate their experience with the given ad on a seven-point Likert scale, anchored by "Strongly disagree/Strongly agree." Eight items included: "I felt as though I was right there in the ad," "While experiencing the ad, I felt as if I was part of the action," "I experienced the ad as if it were real," "After I experienced the ad, I still felt as if I was experiencing the ad," "The ad made me feel connected to the product," "I was interested in the design of the ad," "The ad was so vivid that it held my attention as a good painting or photograph does," and "Some elements of the ad drew my attention." A single index was formed by averaging the items (α = .91).

Attitude toward the Ad. MacKenzie et al.'s (1986) items were adopted and modified to measure attitude toward the ad. Participants were asked to rate how they feel about the given ad.

Four items were measured on a seven-point bipolar scale, anchored by "Negative/Positive," "Unfavorable/Favorable," "Good/Bad," and "Don't like it at all/Like it a lot." A single index was formed by averaging the items (α = .97).

Attitude toward the Brand. MacKenzie et al.'s (1986) items were adopted and modified to measure attitude toward the brand. Participants were asked to rate how they feel about the advertised brand in the given ad. Four items were measured on a seven-point bipolar scale, anchored by "Negative/Positive," "Unfavorable/Favorable," "Good/Bad," and "Don't like it at all/Like it a lot." A single index was formed by averaging the items (α = .97).

Purchase Intention. Dodds et al.'s (1991) items were adopted and modified to measure purchase intention. Participants were asked to rate their intention of purchasing the advertised brand on a seven-point Likert scale, anchored by "Extremely low/Extremely high." Three items included "The likelihood of purchasing the product of this brand is," "The probability that I would consider buying the product of this brand is," and "My willingness to buy the product of this brand is." A single index was formed by averaging the items (α = .98). Table 3 shows all items of the dependent measures.

Table 3. Measures of Dependent Variables

Variables	Items	Sources
Agent/Alternative Knowledge	• What's your opinion on the brand in the ad you just saw?*1 = "strongly disagree" and 7 = "strongly agree"* *Agent knowledge* (α = .92) 1. I had many thoughts related to humans when I saw the ad. 2. The ad I saw elicited lots of thoughts related to humans. *Alternative knowledge* (α = .92) 1. I had many thoughts unrelated to humans when I saw the ad. 2. The ad I saw elicited lots of thoughts unrelated to humans.	Jeong's cognitive elaboration scale (2008)

	Index of agent knowledge – Index of alternative knowledge = Elicited Net Agent Knowledge	
Anthropomorphism (α = .92)	• What's your opinion on the brand in the ad you just saw?*1 = "strongly disagree" and 7 = "strongly agree"* 1. The brand had a mind of its own and its own beliefs and desires. 2. The brand had come alive. 3. The brand is like a person. 4. It's as if the product was alive. 5. It suggests the product is like a person.	Aggarwal and McGill (2007) Puzakova, Kwak, and Rocereto (2013)
Ad Engagement (α = .91)	• Please indicate your experience with the ad you just saw. *1 = "strongly disagree" and 7 = "strongly agree"* 1. I felt as though I was right there in the ad. 2. While experiencing the ad, I felt as if I was part of the action. 3. I experienced the ad as if it were real. 4. After I experienced the ad, I still felt as if I was experiencing the ad. 5. The ad made me feel connected to the product. 6. I was interested in the design of the ad. 7. The ad was so vivid that it held my attention as a good painting or photograph does. 8. Some elements of the ad drew my attention.	Kim, Ahn, and Kwon (2014)
Attitude toward the Ad (α = .97)	• How do you feel about the ad you just saw? 1. Negative *(1)* --- Positive *(7)* 2. Unfavorable *(1)* --- Favorable *(7)* 3. Good *(1)* --- Bad *(7)* 4. Don't like it at all *(1)* --- Like it a lot *(7)*	MacKenzie, Lutz, and Belch (1986)
Attitude toward the Brand (α = .97)	• How do you feel about the advertised brand you just saw? 1. Negative *(1)* --- Positive *(7)* 2. Unfavorable *(1)* --- Favorable *(7)* 3. Good *(1)* --- Bad *(7)* 4. Don't like it at all *(1)* --- Like it a lot *(7)*	MacKenzie, Lutz, and Belch (1986)
Purchase Intention (α = .98)	• What's your intention of purchasing the brand shown in the ad you just saw? *1 = "extremely low" and 7 = "extremely high"* 1. The likelihood of purchasing the product of this brand is: 2. The probability that I would consider buying the product of this brand is: 3. My willingness to buy the product of this brand is:	Dodds, Monroe, and Grewal (1991)

CHAPTER 4

RESULTS

Sample Characteristics

Out of 352 voluntary participants, the final sample of 338 participants was used for data analysis after eliminating incomplete responses and respondents who failed to answer the two filter questions (i.e., "Please select 'Agree' to continue beyond this page" and "Please select 'Somewhat disagree' to continue beyond this page) correctly. In order to ensure that the sample size was large enough for further statistical analysis, a power analysis was conducted using the G*Power statistical program (Faul, Erdfelder, Buchner, & Lang, 2009). The results suggested that the minimum sample size for a between-subjects experimental design with four conditions, such as 2 (brand personality: congruent versus incongruent) × 2 (brand name: known versus unknown), should have at least 128 participants. This indicated that the actual power, which is the probability of rejecting the null hypothesis when the alternative hypothesis is true, achieved the critical value (> .80). Thus, the final sample size of the present research was appropriate and the performance of further statistical analysis was viable.

Regarding the specific sample characteristics, the final sample was comprised of 43.8% males and 56.2% females. Participants ranged in age from 18 to 79 with a mean age of 37.44 (*SD* = 13.58). The ethnicity composition of the sample was 76.9% Caucasian, 8.6% African-American, 6.2% Hispanic, 4.7% Asian, and 3.6% indicated they were either multiracial or chose "other." The education composition of the sample was 55.0% college degree, 31.7% high school degree, 9.2% masters' degree, 1.5% doctoral degree, 1.8% professional degree, and .9%

indicated they had less than high school degree. Other sample characteristics are shown in Table 4.

Table 4. Sample Demographic Information

Demographic Variables	Frequency (N)	Percentage (%)
Gender		
Male	148	43.8
Female	190	56.2
Age		
18-30	145	42.9
31-40	77	22.8
41-50	43	12.8
51-60	53	15.6
Over 60	20	5.9
Ethnicity		
Caucasian	260	76.9
African-American	29	8.6
Hispanic	21	6.2
Asian	16	4.7
Multiracial	8	2.4
Other	4	1.2
Education		
Less than high school	3	.9
High school degree	107	31.7
College degree	186	55.0
Masters' degree	31	9.2
Doctoral degree	5	1.5
Professional degree	6	1.8
Marital Status		
Single	140	41.4
Married	114	33.7
Divorced	26	7.7
Living with someone	46	13.6
Separated	3	.9
Widowed	5	1.5
Other	4	1.2
Annual Household Income		
Under $10,000	29	8.6
$10,000 - $19,999	43	12.7
$20,000 - $29,999	61	18.0
$30,000 - $39,999	36	10.7
$40,000 - $49,999	45	13.3
$50,000 - $59,999	39	11.5
$60,000 - $69,999	27	8.0
Over $70,000	58	17.2
Total	338	100

Manipulation Checks

To verify the manipulations of brand name and congruity in brand personality, scores of the measures were computed and compared according to the experiment conditions. Analysis of variance (ANOVA) tests were conducted to check the effectiveness of manipulations. As expected, the results (Table 5) showed that participants regarded Red Bull as a name of energy drink brand with higher familiarity ($M_{\text{Red Bull}} = 6.43$, $SD_{\text{Red Bull}} = .70$ vs. $M_{\text{Dynamo}} = 1.55$, $SD_{\text{Dynamo}} = .99$; $F(1, 336) = 2708.83$, $p < .001$), higher implication of product quality ($M_{\text{Red Bull}} = 4.62$, $SD_{\text{Red Bull}} = 1.65$ vs. $M_{\text{Dynamo}} = 3.64$, $SD_{\text{Dynamo}} = 1.45$; $F(1, 336) = 33.60$, $p < .001$), and higher liking ($M_{\text{Red Bull}} = 5.05$, $SD_{\text{Red Bull}} = 1.60$ vs. $M_{\text{Dynamo}} = 4.07$, $SD_{\text{Dynamo}} = 1.67$; $F(1, 336) = 29.93$, $p < .001$), compared to Dynamo as a name of energy drink brand. The differences were all significant. Hence, the manipulation of known brand versus unknown brand was successful.

For the manipulation of congruity in brand personality, the averaged index of exciting brand personality for the congruent brand personality condition and the one for the incongruent brand personality condition were compared. An ANOVA test was conducted. The results showed that participants perceived higher exciting brand personality in the congruent brand personality condition ($M_{\text{congruent brand personality}} = 5.13$, $SD_{\text{congruent brand personality}} = .83$) than the incongruent brand personality condition ($M_{\text{incongruent brand personality}} = 4.59$, $SD_{\text{incongruent brand personality}} = 1.30$). The difference was significant ($F(1, 336) = 20.94$, $p < .001$). Thus, the manipulation of congruent brand personality versus incongruent brand personality was successful.

Table 5. The Effectiveness of Manipulation

	Known Brand Red Bull (N = 170)		**Unknown Brand Dynamo** (N = 168)			
	M	***SD***	***M***	***SD***	***F***	***p*-value**
Familiarity	6.43	.70	1.55	.99	2708.83	< .001
Product Quality	4.62	1.65	3.64	1.45	33.60	< .001
Liking	5.05	1.60	4.07	1.67	29.93	< .001
	Congruent Brand Personality (N = 171)		**Incongruent Brand Personality** (N = 167)			
	M	***SD***	***M***	***SD***	***F***	***p*-value**
Exciting Brand Personality	5.13	.83	4.59	1.30	20.94	< .001

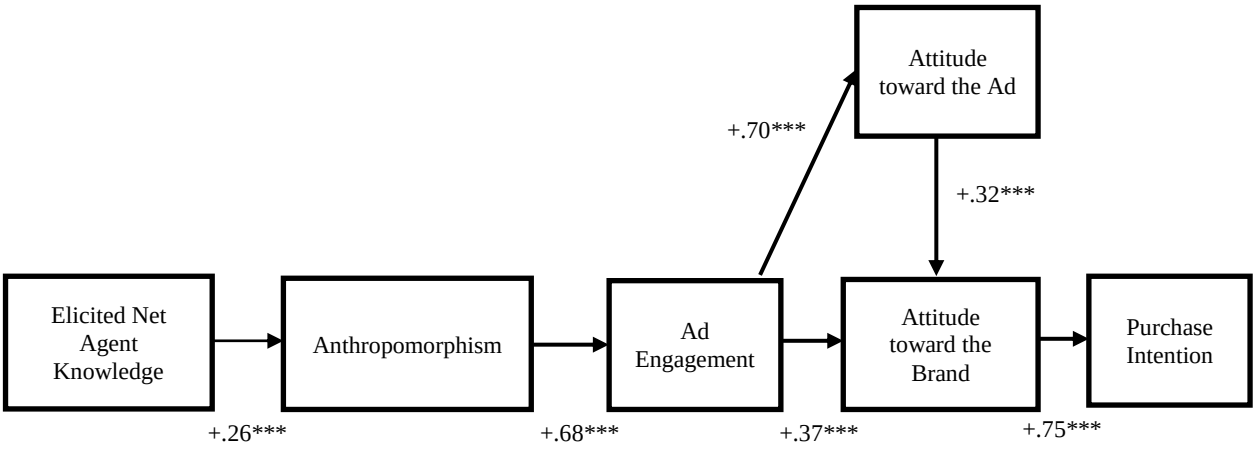
Structural Equation Modeling for Testing the Conceptual Model

First of all, a path analysis with combined data from all experiment conditions (N = 338) was conducted to test the overall relationships (H1 – H6) between constructs in the proposed conceptual model. The results (χ^2 = 28.69, *df* = 9, *p* = .001, NFI = .97, GFI = .97, CFI = .97, RMSEA = .08, SRMR = .03) showed excellent goodness-of-fit indices. While the χ^2 value was significant, which means the model should be rejected, the literature suggests that the $\chi 2$ statistic tends to improperly reject correct models if sample sizes exceed 200 (Hair, Black, Babin, and Anderson, 2009). Therefore, the results indicated that the conceptual model proposed in the present research is valid and stable.

Specific to the relationships between constructs in the process of anthropomorphism, the results pointed out that elicited net agent knowledge, which was derived from agent knowledge minus alternative knowledge, positively influenced anthropomorphism (β = .26). The path coefficient was significant (p < .001) and supported H1. Next, anthropomorphism positively influenced ad engagement (β = .68). The path coefficient was significant (p < .001) and

supported H2. As follows, the results showed that ad engagement positively influenced attitude toward the ad (β = .70). The path coefficient was significant (p < .001) and thus H3 was supported. Ad engagement also positively influenced attitude toward the brand (β = .37). The path coefficient was significant (p < .001). H4 was supported. Moreover, the results showed that attitude toward the ad positively influenced attitude toward the brand (β = .32). The path coefficient was significant (p < .001). H5 was supported. At last, attitude toward the brand positively influenced purchase intention (β = .75) and the path coefficient was significant (p < .001). H6 was supported. Figure 2 shows the goodness-of-fit indices and the path coefficients of the conceptual model.

Figure 2. Path Coefficients of the Proposed Conceptual Model



*** p < .001, N = 338

(χ^2 = 28.69, df = 9, p = .001, NFI = .97, GFI = .97, CFI = .97, RMSEA = .08, SRMR = .03)

In summary, when consumers are exposed to brand personification in advertising, their agent knowledge and alternative knowledge are elicited simultaneously as the immediate outputs for information processing. The subtraction of elicited alternative knowledge from elicited agent knowledge results in elicited net agent knowledge. The results indicate that elicited net agent knowledge induces and positively contributes to consumers' anthropomorphism. Once consumers anthropomorphize the brand shown in the given advertising messages, they are likely to increase their ad engagement positively. As such, ad engagement exerts positive influences on consumers' attitude toward the ad as well as attitude toward the brand. Consumers' attitude toward the ad also positively influences their attitude toward the brand. Ultimately, consumers' attitude toward the brand positively influences the final brand outcome, purchase intention. The results together explain the underlying mechanism of anthropomorphism and how consumers process brand personification in advertising.

Following the validation of the proposed conceptual model, statistical analysis for individual hypotheses and research questions was conducted using analysis of covariance (ANCOVA) and multiple regression analysis. Lastly, post-hoc analysis based on the validated conceptual model with chi-square difference test was performed to evaluate the anthropomorphism effects on consumer responses, including ad engagement, attitude toward the ad, attitude toward the brand, and purchase intention across conditions.

Statistical Analysis for the Hypotheses and Research Questions

Congruity in Brand Personality and Anthropomorphism

Hypothesis 7. H7 suggests that when brand personification is presented, an ad with congruent brand personality will lead to higher anthropomorphism than an ad with incongruent

brand personality. To test the hypothesis, a one-way ANCOVA was conducted. The independent variable, congruity in brand personality, included congruent brand personality condition and incongruent brand personality condition. The dependent variable was anthropomorphism. Because the inclusion of a known brand and an unknown brand in the experiment, the perceived differences in terms of familiarity, product quality, and liking of the brand names were entered as covariates for statistical control. According to previous literature, the covariates, or nuisance variables, are believed to have bearing on the dependent variable, but are of no interest for the research (Huntema, 2011). Thus, ANCOVA should be employed to control for the potential confounding effects from the covariates when conducting statistical analysis (Wright, 2000). A preliminary Levene's test evaluating the homogeneity-of-slopes assumption indicated that there was no violation of the assumption for ANCOVA.

The results (Table 6) show the mean of anthropomorphism in the congruent brand personality condition ($M_{\text{congruent brand personality}} = 3.45$, $SD_{\text{congruent brand personality}} = 1.49$) and in the incongruent brand personality condition ($M_{\text{incongruent brand personality}} = 3.23$, $SD_{\text{incongruent brand personality}} = 1.57$). However, the ANCOVA (Table 7) did not find a significant main effect of congruity in brand personality on anthropomorphism ($F(1, 333) = 1.93$, $p = .16$), holding constant the perceived differences in terms of familiarity, product quality, and liking of the brand names. Therefore, H7 was not supported.

Table 6. Means and Standard Deviation of Anthropomorphism (Congruity in Brand Personality)

	Congruent Brand Personality (N = 171)		**Incongruent Brand Personality** (N = 167)	
	M	***SD***	***M***	***SD***
Anthropomorphism	3.45	1.49	3.23	1.57

Table 7. ANCOVA Results of H7 (DV = Anthropomorphism)

Source	Sum of Squares	*Df*	Mean Square	*F*	Sig.	Partial η^2
Corrected Model	121.01[a]	4	30.25	14.98	< .001	.15
Intercept	135.02	1	135.02	66.89	< .001	.16
Familiarity	3.14	1	3.14	1.55	.21	.005
Product Quality	75.81	1	75.81	37.56	< .001	.10
Liking	.03	1	.03	.01	.90	< .001
Congruity in Brand Personality	3.90	1	3.90	1.93	.16	.006
Error	672.20	333	2.01			
Total	4577.72	338				
Corrected Total	793.22	337				

R^2 = .15

Research Question 1. RQ1 asks whether there are significant interactions between anthropomorphism and congruity in brand personality in their influence on consumers' (a) ad engagement, (b) attitude toward the ad, (c) attitude toward the brand, and (d) purchase intention. To evaluate the research question, multiple regressions were conducted. Congruity in brand personality and anthropomorphism were treated as the independent variables. The dependent variables, ad engagement, attitude toward the ad, attitude toward the brand, and purchase intention were regressed on these two independent variables, respectively. Again, the perceived differences in terms of familiarity, product quality, and liking of the brand names were entered as covariates for statistical control in the regression analysis.

Prior to conducting the multiple regression, a dummy coding for the independent variable, congruity in brand personality, was performed (coded 0 for incongruent brand personality and 1 for congruent brand personality). Following Keith's (2006) procedure, a centered version of the independent variable, anthropomorphism, was created by subtracting each response of anthropomorphism by its mean score ($M_{\text{anthropomorphism}}$ = 3.34, $SD_{\text{anthropomorphism}}$

= 1.53). A cross-product term (i.e., interaction term) was created by multiplying the two independent variables, congruity in brand personality and anthropomorphism, for testing the interaction of interest. A centered version of the covariates, including familiarity ($M_{\text{familiarity}}$ = 4.01, $SD_{\text{familiarity}}$ = 2.58), product quality ($M_{\text{product quality}}$ = 4.14, $SD_{\text{product quality}}$ = 1.62), and liking (M_{liking} = 4.56, SD_{liking} = 1.70), was also created. Then, each dependent variable was regressed on congruity in brand personality, anthropomorphism, an interaction term between congruity in brand personality and anthropomorphism, along with the covariates. In the regression models, the covariates were entered in the first block to control for the confounding effects of these covariates (Pedhazur, 1997). The two independent variables and the interaction term were entered in the second block. Multicollinearity was diagnosed in the regression models and there were no violations of the assumptions for regression analysis.

Overall, the regression model for ad engagement (Table 8) was statistically significant (R^2 = .54, $F(6, 331) = 65.14$, $p < .001$). There was a significant main effect of anthropomorphism (β = .64, $t(331) = 11.83$, $p < .001$), indicating that ad engagement increased as anthropomorphism increased. There was a significant main effect of congruity in brand personality (β = .07, $t(331) = 2.07$, $p < .05$), indicating that congruent brand personality led to an increase in ad engagement. Still, the interaction between congruity in brand personality and anthropomorphism was not significant (β = -.06, $t(331) = -1.32$, $p = .18$). No evidence of interaction was found for RQ1a.

Table 8. Multiple Regression Results of RQ1a (DV = Ad Engagement)

	Model 1			Model 2		
Variable	*B*	*SE B*	*β*	*B*	*SE B*	*β*
Familiarity	-.09	.02	-.19***	-.07	.02	-.15***
Product Quality	.28	.05	.35***	.09	.04	.11*
Liking	.16	.04	.21**	.16	.03	.21***
Anthropomorphism				.54	.04	.64***
Congruity in Brand Personality				.20	.09	.07*
Anthropomorphism × Congruity in Brand Personality				-.08	.06	-.06
R^2		.22			.54	
F		32.82***			65.14***	

* $p < .05$, ** $p < .01$, *** $p < .001$

The regression model for attitude toward the ad (Table 9) was statistically significant ($R^2 = .35$, $F(6, 331) = 30.15$, $p < .001$). There was a significant main effect of anthropomorphism ($\beta = .46$, $t(331) = 7.21$, $p < .001$), indicating that attitude toward the ad increased as anthropomorphism increased. There was no significant main effect of congruity in brand personality ($\beta = .03$, $t(331) = .85$, $p = .39$). The interaction between congruity in brand personality and anthropomorphism was not significant ($\beta = -.07$, $t(331) = -1.18$, $p = .23$). No evidence of interaction was found for RQ1b.

Table 9. Multiple Regression Results of RQ1b (DV = Attitude toward the Ad)

	Model 1			Model 2		
Variable	*B*	*SE B*	*β*	*B*	*SE B*	*β*
Familiarity	-.09	.03	-.17***	-.08	.02	-.14***
Product Quality	.20	.05	.22***	.05	.05	.06**
Liking	.26	.05	.30***	.26	.05	.30
Anthropomorphism				.45	.06	.46***
Congruity in Brand Personality				.11	.13	.03
Anthropomorphism × Congruity in Brand Personality				-.10	.08	-.07
R^2		.20			.35	
F		28.16***			30.15***	

* $p < .05$, ** $p < .01$, *** $p < .001$

The regression model for attitude toward the brand (Table 10) was statistically significant ($R^2 = .44$, $F(6, 331) = 44.06$, $p < .001$). There was a significant main effect of anthropomorphism ($\beta = .26$, $t(331) = 4.45$, $p < .001$), indicating that attitude toward the brand increased as anthropomorphism increased. There was no significant main effect of congruity in brand personality ($\beta = -.001$, $t(331) = -.02$, $p = .98$). The interaction between congruity in brand personality and anthropomorphism was not significant ($\beta = -.10$, $t(331) = -1.74$, $p = .08$). No evidence of interaction was found for RQ1c.

Table 10. Multiple Regression Results of RQ1c (DV = Attitude toward the Brand)

	Model 1			Model 2		
Variable	*B*	*SE B*	*β*	*B*	*SE B*	*β*
Familiarity	-.10	.03	-.15**	-.09	.03	-.13**
Product Quality	.35	.05	.33***	.27	.06	.25***
Liking	.42	.05	.41***	.41	.05	.40***
Anthropomorphism				.29	.06	.26***
Congruity in Brand Personality				-.001	.14	-.001
Anthropomorphism × Congruity in Brand Personality				-.16	.09	-.10
R^2		.40			.44	
F		76.17***			44.06***	

* $p < .05$, ** $p < .01$, *** $p < .001$

The regression model for purchase intention (Table 11) was statistically significant (R^2 = .27, $F(6, 331) = 20.84$, $p < .001$). There was a significant main effect of anthropomorphism (β = .22, $t(331) = 3.32$, $p < .001$), indicating that purchase intention increased as anthropomorphism increased. There was no significant main effect of congruity in brand personality (β = .02, $t(331)$ = .45, p = .64). The interaction between congruity in brand personality and anthropomorphism was not significant (β = .02, $t(331)$ = .34, p = .73). No evidence of interaction was found for RQ1d.

Table 11. Multiple Regression Results of RQ1d (DV = Purchase Intention)

	Model 1			Model 2		
Variable	*B*	*SE B*	*β*	*B*	*SE B*	*β*
Familiarity	.02	.03	-.03	-.01	.03	-.01
Product Quality	.28	.07	.23***	.16	.07	.13*
Liking	.34	.07	.29***	.34	.07	.30***
Anthropomorphism				.28	.08	.22***
Congruity in Brand Personality				.08	.18	.02
Anthropomorphism × Congruity in Brand Personality				.04	.12	.02
R^2		.22			.27	
F		31.96***			20.84***	

* $p < .05$, ** $p < .01$, *** $p < .001$

Need for Cognition and Anthropomorphism

Hypothesis 8. H8 proposes that consumers' need for cognition will have a negative influence on anthropomorphism. To test the hypothesis, a multiple regression was conducted. Need for cognition was treated as the independent variable and anthropomorphism was treated as the dependent variable. Anthropomorphism was regressed on a centered version of need for cognition ($M_{\text{need for cognition}} = 4.71$, $SD_{\text{need for cognition}} = 1.20$). The perceived differences in terms of familiarity (centered), product quality (centered), and liking (centered) of the brand names were entered as covariates for statistical control in the regression analysis. Multicollinearity was diagnosed in the regression model and there were no violations of the assumptions for regression analysis.

The regression model for anthropomorphism (Table 12) was statistically significant ($R^2 = .16$, $F(4, 333) = 16.09$, $p < .001$). The relationship of need for cognition predicting

anthropomorphism was significant (β = -.12, t(333) = -2.39, p < .05). Moreover, the standardized coefficient indicated that the relationship between need for cognition and anthropomorphism was negative. That is, need for cognition had a negative influence on anthropomorphism. Thus, H8 was supported.

Table12. Multiple Regression Results of H8 (DV = Anthropomorphism)

	Model 1			Model 2		
Variable	*B*	*SE B*	*β*	*B*	*SE B*	*β*
Familiarity	-.03	.03	-.06	-.04	.03	-.07
Product Quality	.38	.06	.40***	.39	.06	.42***
Liking	-.009	.06	-.01	-.01	.06	-.01
Need for Cognition				-.15	.06	-.12*
$\boldsymbol{R^2}$		.14			.16	
F		19.28***			16.09***	

* p < .05, ** p < .01, *** p < .001

Research Question 2. RQ2 asks whether there are significant interactions between anthropomorphism and need for cognition in their influence on consumers' (a) ad engagement, (b) attitude toward the ad, (c) attitude toward the brand, and (d) purchase intention. To evaluate the research question, multiple regressions were conducted. Need for cognition and anthropomorphism were treated as the independent variables. The dependent variables, ad engagement, attitude toward the ad, attitude toward the brand, and purchase intention were regressed on these two independent variables, respectively. Again, the perceived differences in terms of familiarity, product quality, and liking of the brand names were entered as covariates for statistical control in the regression analysis.

The centered version of the independent variables, need for cognition and anthropomorphism, was used. An interaction term was created by multiplying the two independent variables for testing the interaction of interest. The centered version of the covariates was also used. Then, each dependent variable was regressed on need for cognition, anthropomorphism, an interaction term between need for cognition and anthropomorphism, along with the covariates. For the multiple regression analysis, the covariates were entered in the first block to control for the confounding effects of these covariates. The two independent variables and the interaction term were entered in the second block. Multicollinearity was diagnosed in each regression model and there were no violations of the assumptions for regression analysis.

The regression model for ad engagement (Table 13) was statistically significant (R^2 = .53, $F(6, 331) = 63.27$, $p < .001$). There was a significant main effect of anthropomorphism (β = .59, $t(331) = 14.48$, $p < .001$), indicating that ad engagement increased as anthropomorphism increased. There was no significant main effect of need for cognition (β = .008, $t(331) = .21$, p = .82). The interaction between need for cognition and anthropomorphism was not significant (β = .03, $t(331) = .88$, p = .37). No evidence of interaction was found for RQ2a.

Table 13. Multiple Regression Results of RQ2a (DV = Ad Engagement)

	Model 1			Model 2		
Variable	*B*	*SE B*	*β*	*B*	*SE B*	*β*
Familiarity	-.09	.02	-.19***	-.08	.02	-.15***
Product Quality	.28	.05	.35***	.08	.04	.10*
Liking	.16	.04	.21**	.16	.03	.22***
Anthropomorphism				.51	.03	.59***
Need for Cognition				.009	.04	.008
Anthropomorphism × Need for Cognition				.02	.02	.03
R^2		.22			.53	
F		32.82***			63.27***	

* $p < .05$, ** $p < .01$, *** $p < .001$

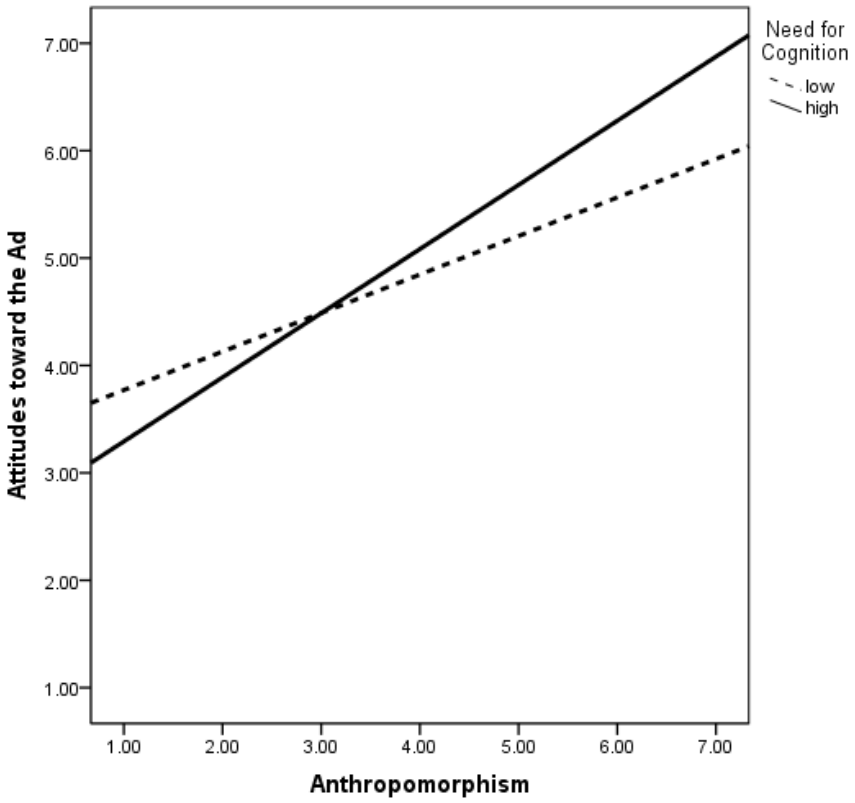
The regression model for attitude toward the ad (Table 14) was statistically significant ($R^2 = .37$, $F(6, 331) = 33.54$, $p < .001$). There was a significant main effect of anthropomorphism ($\beta = .39$, $t(331) = 8.26$, $p < .001$), indicating that attitude toward the ad increased as anthropomorphism increased. There was no significant main effect of need for cognition ($\beta = -.03$, $t(331) = -.69$, $p = .49$). Nevertheless, the interaction between need for cognition and anthropomorphism was significant ($\beta = .16$, $t(331) = 3.81$, $p < .001$). The results (Figure 3) indicated that consumers high in need for cognition had more positive attitude toward the ad when they showed strong evidence of anthropomorphism, compared to consumers low in need for cognition. By contrast, when the anthropomorphism was weak, consumers low in need for cognition had more positive attitude toward the ad, compared to consumers high in need for cognition. There was a significant interaction for RQ2b.

Table 14. Multiple Regression Results of RQ2b (DV = Attitude toward the Ad)

	Model 1			Model 2		
Variable	*B*	*SE B*	*β*	*B*	*SE B*	*β*
Familiarity	-.09	.03	-.17**	-.08	.02	-.15**
Product Quality	.20	.05	.22***	.06	.05	.06
Liking	.26	.05	.30***	.28	.05	.32***
Anthropomorphism				.38	.04	.39***
Need for Cognition				-.03	.05	-.03
Anthropomorphism × Need for Cognition				.13	.03	.16***
R^2		.20			.37	
F		28.16***			33.54***	

* $p < .05$, ** $p < .01$, *** $p < .001$

Figure 3 Attitude toward the Ad as a Function of Anthropomorphism and Need for Cognition



The regression model for attitude toward the brand (Table 15) was statistically significant (R^2 = .44, F(6, 331) = 43.31, p < .001). There was a significant main effect of anthropomorphism (β = .19, t(331) = 4.26, p < .001), indicating that attitude toward the brand increased as anthropomorphism increased. There was no significant main effect of need for cognition (β = -.001, t(331) = -.01, p = .99). The interaction between need for cognition and anthropomorphism was not significant (β = .03, t(331) = .71, p = .47). No evidence of interaction was found for RQ2c.

Table 15. Multiple Regression Results of RQ2c (DV = Attitude toward the Brand)

	Model 1			Model 2		
Variable	*B*	*SE B*	*β*	*B*	*SE B*	*β*
Familiarity	-.10	.03	-.15**	-.09	.03	-.14**
Product Quality	.35	.05	.33***	.26	.06	.25***
Liking	.42	.05	.41***	.42	.05	.42***
Anthropomorphism				.21	.05	.19***
Need for Cognition				-.001	.06	-.001
Anthropomorphism × Need for Cognition				.02	.03	.03
R^2		.40			.44	
F		76.17***			43.31***	

* p < .05, ** p < .01, *** p < .001

The regression model for purchase intention (Table 16) was statistically significant (R^2 = .27, F(6, 331) = 20.86, p < .001). There was a significant main effect of anthropomorphism (β = .24, t(331) = 4.72, p < .001), indicating that purchase intention increased as anthropomorphism increased. There was no significant main effect of need for cognition (β = -.02, t(331) = -.47, p =

.63). The interaction between need for cognition and anthropomorphism was not significant (β = -.02, $t(331) = -.47$, $p = .63$). No evidence of interaction was found for RQ2d.

Table 16. Multiple Regression Results of RQ2d (DV = Purchase Intention)

	Model 1			Model 2		
Variable	*B*	*SE B*	*β*	*B*	*SE B*	*β*
Familiarity	-.02	.03	-.03	-.01	.03	-.01
Product Quality	.28	.07	.23***	.16	.07	.14*
Liking	.34	.07	.29***	.33	.07	.29***
Anthropomorphism				.30	.06	.24***
Need for Cognition				-.03	.07	-.02
Anthropomorphism × Need for Cognition				-.02	.04	-.02
R^2		.22			.27	
F		31.96***			20.86***	

* $p < .05$, ** $p < .01$, *** $p < .001$

Need for Belonging and Anthropomorphism

Hypothesis 9. H9 postulates that consumers' need for belonging will have a positive influence on anthropomorphism. To test the hypothesis, a multiple regression was conducted. Need for belonging was treated as the independent variable and anthropomorphism was treated as the dependent variable. Anthropomorphism was regressed on a centered version of need for belonging ($M_{\text{need for belonging}} = 3.87$, $SD_{\text{need for belonging}} = 1.08$). The perceived differences in terms of familiarity (centered), product quality (centered), and liking (centered) of the brand names were entered as covariates for statistical control in the regression analysis. Multicollinearity was

diagnosed in the regression model and there were no violations of the assumptions for regression analysis.

The regression model for anthropomorphism (Table 17) was statistically significant (R^2 = .17, $F(4, 333) = 18.01$, $p < .001$). The relationship of need for belonging predicting anthropomorphism was significant ($\beta = .17$, $t(333) = 3.50$, $p < .001$). Moreover, the standardized coefficient indicated that the relationship between need for belonging and anthropomorphism was positive. That is, need for belonging had a positive influence on anthropomorphism. Thus, H9 was supported.

Table17. Multiple Regression Results of H9 (DV = Anthropomorphism)

	Model 1			Model 2		
Variable	*B*	*SE B*	*β*	*B*	*SE B*	*β*
Familiarity	-.03	.03	-.06	-.03	.03	-.05
Product Quality	.38	.06	.40***	.38	.06	.40***
Liking	-.009	.06	-.01	-.02	.05	-.03
Need for Belonging				.24	.07	.17***
R^2		.14			.17	
F		19.28***			18.01***	

* $p < .05$, ** $p < .01$, *** $p < .001$

Research Question 3. RQ3 asks whether there are significant interactions between anthropomorphism and need for belonging in their influence on consumers' (a) ad engagement, (b) attitude toward the ad, (c) attitude toward the brand, and (d) purchase intention. To evaluate the research question, multiple regressions were conducted. Need for belonging and anthropomorphism were treated as the independent variables. The dependent variables, ad engagement, attitude toward the ad, attitude toward the brand, and purchase intention were

regressed on these two independent variables, respectively. The perceived differences in terms of familiarity, product quality, and liking of the brand names were entered as covariates for statistical control in the regression analysis.

A centered version of the independent variables, need for belonging and anthropomorphism, was used. An interaction term was created by multiplying the two independent variables for testing the interaction of interest. The centered version of the covariates was also used. Then, each dependent variable was regressed on need for belonging, anthropomorphism, an interaction term between need for belonging and anthropomorphism, along with the covariates. For the multiple regression analysis, the covariates were entered in the first block to control for the confounding effects of these covariates. The two independent variables and the interaction term were entered in the second block. Multicollinearity was diagnosed in each regression model and there were no violations of the assumptions for regression analysis.

The regression model for ad engagement (Table 18) was statistically significant (R^2 = .53, $F(6, 331) = 63.70$, $p < .001$). There was a significant main effect of anthropomorphism (β = .58, $t(331) = 14.23$, $p < .001$), indicating that ad engagement increased as anthropomorphism increased. There was no significant main effect of need for belonging (β = .05, $t(331) = 1.30$, p = .19). The interaction between need for belonging and anthropomorphism was not significant (β = -.01, $t(331) = -.34$, p = .73). No evidence of interaction was found for RQ3a.

Table 18. Multiple Regression Results of RQ3a (DV = Ad Engagement)

	Model 1			Model 2		
Variable	*B*	*SE B*	*β*	*B*	*SE B*	*β*
Familiarity	-.09	.02	-.19***	-.07	.02	-.15***
Product Quality	.28	.05	.35***	.09	.04	.11*
Liking	.16	.04	.21**	.16	.03	.21***
Anthropomorphism				.50	.03	.58***
Need for Belonging				.06	.04	.05
Anthropomorphism × Need for Belonging				-.01	.02	-.01
R^2		.22			.53	
F		32.82***			63.70***	

* $p < .05$, ** $p < .01$, *** $p < .001$

The regression model for attitude toward the ad (Table 19) was statistically significant ($R^2 = .35$, $F(6, 331) = 29.82$, $p < .001$). There was a significant main effect of anthropomorphism ($\beta = .42$, $t(331) = 8.67$, $p < .001$), indicating that attitude toward the ad increased as anthropomorphism increased. However, there was no significant main effect of need for belonging ($\beta = -.04$, $t(331) = -.90$, $p = .36$). The interaction between need for belonging and anthropomorphism was not significant ($\beta < .001$, $t(331) = .002$, $p = .99$). No evidence of interaction was found for RQ3b.

Table 19. Multiple Regression Results of RQ3b (DV = Attitude toward the Ad)

	Model 1			Model 2		
Variable	*B*	*SE B*	*β*	*B*	*SE B*	*β*
Familiarity	-.09	.03	-.17**	-.08	.02	-.14**
Product Quality	.20	.05	.22***	.05	.05	.05
Liking	.26	.05	.30***	.27	.05	.31***
Anthropomorphism				.41	.04	.42***
Need for Belonging				-.05	.06	-.04
Anthropomorphism × Need for Belonging				< .001	.03	< .001
R^2		.20			.35	
F		28.16***			29.82***	

* $p < .05$, ** $p < .01$, *** $p < .001$

The regression model for attitude toward the brand (Table 20) was statistically significant ($R^2 = .43$, $F(6, 331) = 43.23$, $p < .001$). There was a significant main effect of anthropomorphism ($\beta = .19$, $t(331) = 4.37$, $p < .001$), indicating that attitude toward the brand increased as anthropomorphism increased. Still, there was no significant main effect of need for belonging ($\beta = -.01$, $t(331) = -.37$, $p = .71$). The interaction between need for belonging and anthropomorphism was not significant ($\beta = .01$, $t(331) = .28$, $p = .77$). No evidence of interaction was found for RQ3c.

Table 20. Multiple Regression Results of RQ3c (DV = Attitude toward the Brand)

	Model 1			Model 2		
Variable	*B*	*SE B*	*β*	*B*	*SE B*	*β*
Familiarity	-.10	.03	-.15**	-.09	.03	-.14**
Product Quality	.35	.05	.33***	.26	.06	.25***
Liking	.42	.05	.41***	.42	.05	.42***
Anthropomorphism				.22	.05	.19***
Need for Belonging				-.02	.06	-.01
Anthropomorphism × Need for Belonging				.01	.04	.01
R^2		.40			.43	
F		76.17***			43.23***	

* $p < .05$, ** $p < .01$, *** $p < .001$

The regression model for purchase intention (Table 21) was statistically significant (R^2 = .27, $F(6, 331) = 20.86$, $p < .001$). There was a significant main effect of anthropomorphism (β = .23, $t(331) = 4.60$, $p < .001$), indicating that purchase intention increased as anthropomorphism increased. There was no significant main effect of need for belonging (β = .02, $t(331) = .57$, p = .56). The interaction between need for cognition and anthropomorphism was not significant (β = -.009, $t(331) = -.18$, p = .85). No evidence of interaction was found for RQ3d.

Table 21. Multiple Regression Results of RQ3d (DV = Purchase Intention)

	Model 1			Model 2		
Variable	*B*	*SE B*	*β*	*B*	*SE B*	*β*
Familiarity	-.02	.03	-.03	-.01	.03	-.01
Product Quality	.28	.07	.23***	.16	.07	.13*
Liking	.34	.07	.29***	.33	.07	.29***
Anthropomorphism				.30	.06	.23***
Need for Belonging				.05	.08	.02
Anthropomorphism × Need for Belonging				-.01	.05	-.009
R^2		.22			.27	
F		31.96***			20.86***	

* $p < .05$, ** $p < .01$, *** $p < .001$

Attachment Style and Anthropomorphism

Hypothesis 10. H10 suggests that when brand personification is presented, consumers with insecure (anxious-ambivalent and avoidant) attachment style will have higher anthropomorphism than consumers with secure attachment style. To test the hypothesis, a one-way ANCOVA was conducted. The independent variable, attachment style, included two conditions: insecure attachment style and secure attachment style. The dependent variable was anthropomorphism. The perceived differences in terms of familiarity, product quality, and liking of the brand names were entered as covariates for statistical control. A preliminary Levene's test evaluating the homogeneity-of-slopes assumption indicated that there was no violation of the assumption for ANCOVA.

Contrary to the prediction, the results (Table 22) showed the means of anthropomorphism for participants with secure attachment style ($M_{\text{secure attachment style}} = 3.41$, $SD_{\text{secure attachment style}} =$

1.61) and participants with insecure attachment style ($M_{\text{insecure attachment style}}$ = 3.25, $SD_{\text{insecure attachment style}}$ = 1.41). The ANCOVA (Table 23) did not find a significant main effect of attachment style on anthropomorphism ($F(1, 333) = .61$, $p = .43$), holding constant the perceived differences in terms of familiarity, product quality, and liking of the brand names. Hence, H10 was not supported.

Table 22. Means and Standard Deviation of Anthropomorphism (Attachment Style)

	Secure Attachment Style (N = 195)		**Insecure Attachment Style** (N = 143)	
	M	***SD***	***M***	***SD***
Anthropomorphism	3.41	1.61	3.25	1.41

Table 23. ANCOVA Results of H10 (DV = Anthropomorphism)

Source	**Sum of Squares**	***df***	**Mean Square**	***F***	**Sig.**	**Partial η^2**
Corrected Model	118.34[a]	4	29.58	14.59	< .001	.14
Intercept	134.04	1	134.04	66.14	< .001	.16
Familiarity	2.67	1	2.67	1.31	.25	.00
Product Quality	75.89	1	75.89	37.45	< .001	.10
Liking	.06	1	.06	.03	.86	< .001
Attachment Style	1.24	1	1.24	.61	.43	.002
Error	674.87	333	2.02			
Total	4577.72	338				
Corrected Total	793.22	337				

R^2 = .14

Research Question 4. RQ4 asks whether there are significant interactions between anthropomorphism and attachment style in their influence on consumers' (a) ad engagement, (b) attitude toward the ad, (c) attitude toward the brand, and (d) purchase intention. To evaluate the research question, multiple regressions were conducted. Attachment style and anthropomorphism were treated as the independent variables. The dependent variables, ad engagement, attitude

toward the ad, attitude toward the brand, and purchase intention were regressed on these two independent variables, respectively. The perceived differences in terms of familiarity, product quality, and liking of the brand names were entered as covariates for statistical control in the regression analysis.

A dummy coding for the independent variable, attachment style, was performed (coded 0 for insecure attachment style and 1 for secure attachment style). The centered version of the independent variable, anthropomorphism, was used. An interaction term was created by multiplying the two independent variables for testing the interaction of interest. The centered version of the covariates was also used. Next, each dependent variable was regressed on attachment style, anthropomorphism, an interaction term between need for belonging and anthropomorphism, along with the covariates. For the multiple regression analysis, the covariates were entered in the first block to control for the confounding effects of these covariates. The two independent variables and the interaction term were entered in the second block. Multicollinearity was diagnosed in each regression model and there were no violations of the assumptions for regression analysis.

The regression model for ad engagement (Table 24) was statistically significant (R^2 = .54, $F(6, 331) = 64.79$, $p < .001$). There was a significant main effect of anthropomorphism (β = .64, $t(331) = 10.12$, $p < .001$), indicating that ad engagement increased as anthropomorphism increased. There was a marginally significant main effect of attachment style (β = .07, $t(331) = 1.95$, $p = .05$), indicating that participants with secure attachment style had higher ad engagement than participants with insecure attachment style. However, the interaction between attachment style and anthropomorphism was not significant (β = -.06, $t(331) = -1.07$, $p = .28$). No evidence of interaction was found for RQ4a.

Table 24. Multiple Regression Results of RQ4a (DV = Ad Engagement)

	Model 1			Model 2		
Variable	*B*	*SE B*	*β*	*B*	*SE B*	*β*
Familiarity	-.09	.02	-.19***	-.07	.02	-.14***
Product Quality	.28	.05	.35***	.08	.04	.10*
Liking	.16	.04	.21**	.16	.03	.21***
Anthropomorphism				.55	.05	.64***
Attachment Style				.19	.10	.07
Anthropomorphism × Attachment Style				-.07	.06	-.06
R^2		.22			.54	
F		32.82***			64.79***	

* $p < .05$, ** $p < .01$, *** $p < .001$

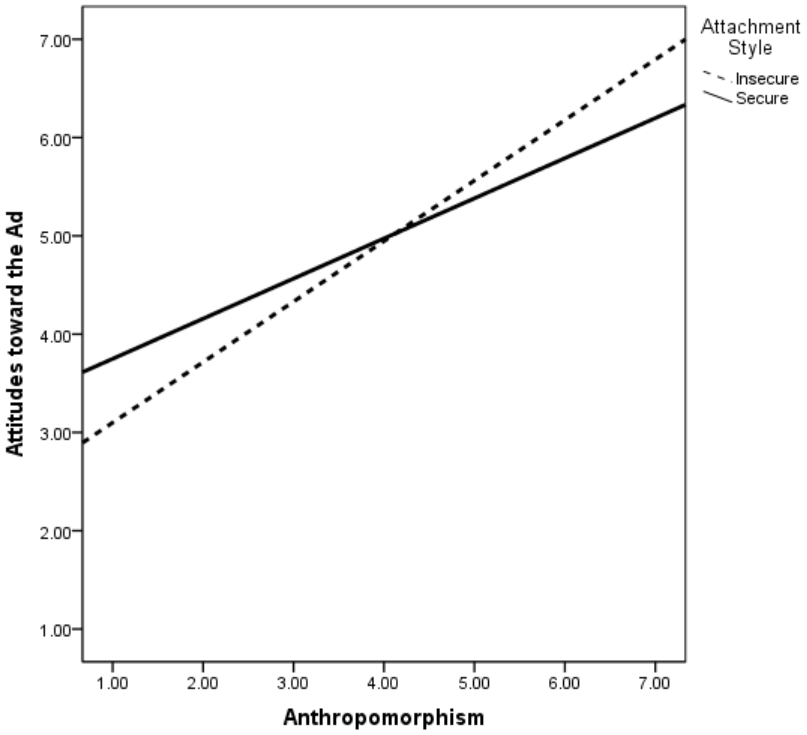
The regression model for attitude toward the ad (Table 25) was statistically significant ($R^2 = .36$, $F(6, 331) = 31.20$, $p < .001$). There was a significant main effect of anthropomorphism ($\beta = .55$, $t(331) = 7.29$, $p < .001$), indicating that attitude toward the ad increased as anthropomorphism increased. Still, there was no significant main effect of attachment style ($\beta = .03$, $t(331) = .82$, $p = .40$). Most importantly, the interaction between attachment style and anthropomorphism was significant ($\beta = -.17$, $t(331) = -2.33$, $p < .05$). The results (Figure 4) indicated that consumers with secure attachment style had more positive attitude toward the ad when they showed strong evidence of anthropomorphism, compared to consumers with insecure attachment style. By contrast, when the anthropomorphism was weak, consumers with insecure attachment style had more positive attitude toward the ad, compared to consumers with secure attachment style. There was a significant interaction for RQ4b.

Table 25. Multiple Regression Results of RQ4b (DV = Attitude toward the Ad)

	Model 1			Model 2		
Variable	*B*	*SE B*	*β*	*B*	*SE B*	*β*
Familiarity	-.09	.03	-.17**	-.08	.02	-.13**
Product Quality	.20	.05	.22***	.05	.05	.05
Liking	.26	.05	.30***	.26	.05	.30***
Anthropomorphism				.53	.07	.55***
Attachment Style				.11	.13	.03
Anthropomorphism × Attachment Style				-.20	.08	-.17*
R^2		.20			.36	
F		28.16***			31.20***	

* $p < .05$, ** $p < .01$, *** $p < .001$

Figure 4. Attitude toward the Ad as a Function of Anthropomorphism and Attachment Style



The regression model for attitude toward the brand (Table 26) was statistically significant (R^2 = .44, F(6, 331) = 43.77, p < .001). There was a significant main effect of anthropomorphism (β = .16, t(331) = 2.33, p < .05), indicating that attitude toward the brand increased as anthropomorphism increased. There was no significant main effect of attachment style (β = .05, t(331) = 1.35, p = .17). The interaction between attachment style and anthropomorphism was not significant (β = .03, t(331) = .52, p = .59). No evidence of interaction was found for RQ4c.

Table 26. Multiple Regression Results of RQ4c (DV = Attitude toward the Brand)

	Model 1			Model 2		
Variable	*B*	*SE B*	*β*	*B*	*SE B*	*β*
Familiarity	-.10	.03	-.15**	-.09	.03	-.14**
Product Quality	.35	.05	.33***	.26	.06	.25***
Liking	.42	.05	.41***	.42	.05	.41***
Anthropomorphism				.18	.07	.16*
Attachment Style				.19	.14	.05
Anthropomorphism × Attachment Style				.05	.09	.03
R^2		.40			.44	
F		76.17***			43.77***	

* p < .05, ** p < .01, *** p < .001

The regression model for purchase intention (Table 27) was statistically significant (R^2 = .28, F(6, 331) = 21.75, p < .001). However, there was no significant main effect of anthropomorphism (β = .13, t(331) = 1.69, p = .09). There was no significant main effect of attachment style (β = .05, t(331) = 1.23, p = .21). The interaction between attachment style and

anthropomorphism was not significant (β = .13, $t(331)$ = 1.69, p = .09). No evidence of interaction was found for RQ4d.

Table 27. Multiple Regression Results of RQ4d (DV = Purchase Intention)

	Model 1			Model 2		
Variable	*B*	*SE B*	*β*	*B*	*SE B*	*β*
Familiarity	-.02	.03	-.03	-.00	.03	-.009
Product Quality	.28	.07	.23***	.16	.07	.13*
Liking	.34	.07	.29***	.33	.07	.29***
Anthropomorphism				.17	.10	.13
Attachment Style				.22	.18	.05
Anthropomorphism × Attachment Style				.20	.12	.13
$\boldsymbol{R^2}$		.22			.28	
F		31.96***			21.75***	

* $p < .05$, ** $p < .01$, *** $p < .001$

Parasocial Interaction and Anthropomorphism

Hypothesis 11. H11 postulates that consumers' parasocial interaction will have a positive influence on anthropomorphism. To test the hypothesis, a multiple regression was conducted. Parasocial interaction was treated as the independent variable and anthropomorphism was treated as the dependent variable. Anthropomorphism was regressed on a centered version of parasocial interaction ($M_{\text{parasocial interaction}}$ = 4.55, $SD_{\text{parasocial interaction}}$ = .92). The perceived differences in terms of familiarity (centered), product quality (centered), and liking (centered) of the brand names were entered as covariates for statistical control in the regression analysis.

Multicollinearity was diagnosed in the regression model and there were no violations of the assumptions for regression analysis.

The regression model for anthropomorphism (Table 28) was statistically significant (R^2 = .22, $F(4, 333) = 24.58$, $p < .001$). The relationship of parasocial interaction predicting anthropomorphism was significant ($\beta = .29$, $t(333) = 5.88$, $p < .001$). Additionally, the standardized coefficient indicated that the relationship between parasocial interaction and anthropomorphism was positive. Namely, parasocial interaction had a positive influence on anthropomorphism. Therefore, H11 was supported.

Table 28. Multiple Regression Results of H11 (DV = Anthropomorphism)

	Model 1			Model 2		
Variable	*B*	*SE B*	*β*	*B*	*SE B*	*β*
Familiarity	-.03	.03	-.06	-.02	.03	-.04
Product Quality	.38	.06	.40***	.30	.06	.32***
Liking	-.009	.06	-.01	-.01	.05	-.01
Parasocial Interaction				.48	.08	.29***
$\boldsymbol{R^2}$		.14			.22	
F		19.28***			24.58***	

* $p < .05$, ** $p < .01$, *** $p < .001$

Research Question 5. RQ5 asks whether there are significant interactions between anthropomorphism and parasocial interaction in their influence on consumers' (a) ad engagement, (b) attitude toward the ad, (c) attitude toward the brand, and (d) purchase intention. To evaluate the research question, multiple regressions were conducted. Parasocial interaction and anthropomorphism were treated as the independent variables. The dependent variables, ad engagement, attitude toward the ad, attitude toward the brand, and purchase intention were

regressed on these two independent variables, respectively. The perceived differences in terms of familiarity, product quality, and liking of the brand names were entered as covariates for statistical control in the regression analysis.

A centered version of the independent variables, parasocial interaction and anthropomorphism, was used. An interaction term was created by multiplying the two independent variables for testing the interaction of interest. The centered version of the covariates was also used. Each dependent variable was regressed on parasocial interaction, anthropomorphism, an interaction term between parasocial interaction and anthropomorphism, along with the covariates. For the multiple regression analysis, the covariates were entered in the first block to control for the confounding effects of these covariates. The two independent variables and the interaction term were entered in the second block. Multicollinearity was diagnosed in each regression model and there were no violations of the assumptions for regression analysis.

The regression model for ad engagement (Table 29) was statistically significant (R^2 = .54, $F(6, 331) = 65.35$, $p < .001$). There was a significant main effect of anthropomorphism (β = .57, $t(331) = 13.42$, $p < .001$), indicating that ad engagement increased as anthropomorphism increased. There was no significant main effect of parasocial interaction (β = .07, $t(331) = 1.85$, p = .06). Most importantly, the interaction between parasocial interaction and anthropomorphism was significant (β = .07, $t(331) = 2.03$, $p < .05$). The results (Figure 5) indicated that consumers high in parasocial interaction had higher ad engagement when they showed strong evidence of anthropomorphism, compared to consumers low in parasocial interaction. By contrast, when the anthropomorphism was weak, consumers low in parasocial interaction had higher ad

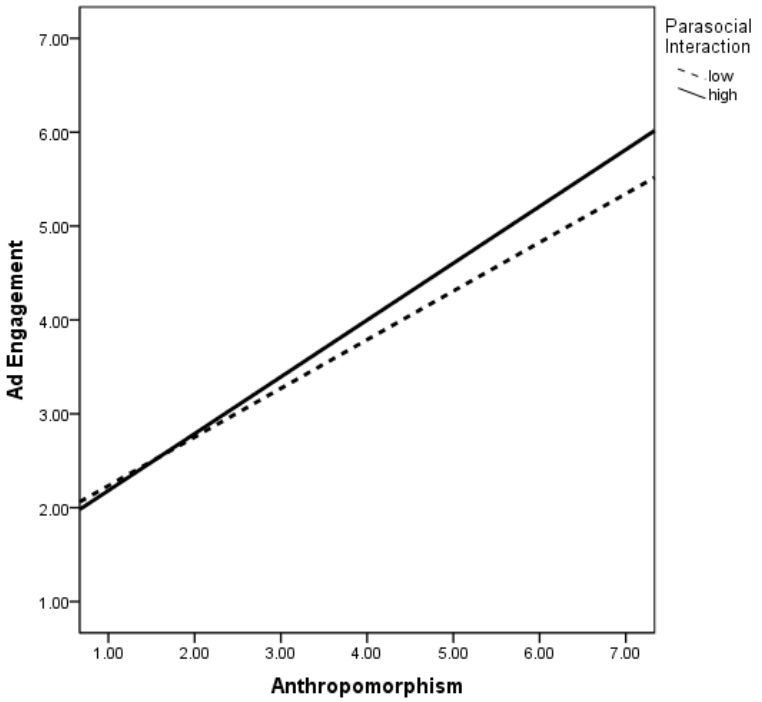
engagement, compared to consumers high in parasocial interaction. There was a significant interaction for RQ5a.

Table 29. Multiple Regression Results of RQ5a (DV = Ad Engagement)

	Model 1			Model 2		
Variable	*B*	*SE B*	*β*	*B*	*SE B*	*B*
Familiarity	-.09	.02	-.19***	-.07	.02	-.14***
Product Quality	.28	.05	.35***	.07	.04	.08
Liking	.16	.04	.21**	.16	.03	.21***
Anthropomorphism				.48	.03	.57***
Parasocial Interaction				.10	.05	.07
Anthropomorphism × Parasocial Interaction				.06	.03	.07*
R^2		.22			.54	
F		32.82***			65.35***	

* $p < .05$, ** $p < .01$, *** $p < .001$

Figure 5. Ad Engagement as a Function of Anthropomorphism and Parasocial Interaction



The regression model for attitude toward the ad (Table 30) was statistically significant (R^2 = .35, F(6, 331) = 30.69, p < .001). There was a significant main effect of anthropomorphism (β = .43, t(331) = 8.70, p < .001), indicating that attitude toward the ad increased as anthropomorphism increased. However, there was no significant main effect of parasocial interaction (β = -.07, t(331) = -1.60, p = .11). The interaction between parasocial interaction and anthropomorphism was not significant (β = .04, t(331) = 1.06, p = .29). No evidence of interaction was found for RQ5b.

Table 30. Multiple Regression Results of RQ5b (DV = Attitude toward the Ad)

	Model 1			Model 2		
Variable	*B*	*SE B*	*β*	*B*	*SE B*	*B*
Familiarity	-.09	.03	-.17**	-.08	.02	-.14**
Product Quality	.20	.05	.22***	.05	.05	.06
Liking	.26	.05	.30***	.27	.05	.31***
Anthropomorphism				.42	.04	.43***
Parasocial Interaction				-.12	.07	-.07
Anthropomorphism × Parasocial Interaction				.04	.04	.04
$\boldsymbol{R^2}$		.20			.35	
F		28.16***			30.69***	

* $p < .05$, ** $p < .01$, *** $p < .001$

The regression model for attitude toward the brand (Table 31) was statistically significant ($R^2 = .43$, $F(6, 331) = 43.19$, $p < .001$). There was a significant main effect of anthropomorphism ($\beta = .19$, $t(331) = 4.19$, $p < .001$), indicating that attitude toward the brand increased as anthropomorphism increased. There was no significant main effect of parasocial interaction ($\beta = -.006$, $t(331) = -.13$, $p = .89$). The interaction between parasocial interaction and anthropomorphism was not significant ($\beta = .01$, $t(331) = .30$, $p = .76$). No evidence of interaction was found for RQ5c.

Table 31. Multiple Regression Results of RQ5c (DV = Attitude toward the Brand)

	Model 1			Model 2		
Variable	*B*	*SE B*	*β*	*B*	*SE B*	*B*
Familiarity	-.10	.03	-.15**	-.09	.03	-.14**
Product Quality	.35	.05	.33***	.26	.06	.25***
Liking	.42	.05	.41***	.42	.05	.42***
Anthropomorphism				.22	.05	.19***
Parasocial Interaction				-.01	.08	-.006
Anthropomorphism × Parasocial Interaction				.01	.04	.01
R^2		.40			.43	
F		76.17***			43.19***	

* $p < .05$, ** $p < .01$, *** $p < .001$

Finally, the regression model for purchase intention (Table 32) was statistically significant ($R^2 = .27$, $F(6, 331) = 20.85$, $p < .001$). There was a significant main effect of anthropomorphism ($\beta = .23$, $t(331) = 4.36$, $p < .001$), indication that purchase intention increased as anthropomorphism increased. There was no significant main effect of parasocial interaction ($\beta = .02$, $t(331) = .55$, $p = .58$). The interaction between parasocial interaction and anthropomorphism was not significant ($\beta = .01$, $t(331) = .29$, $p = .77$). No evidence of interaction was found for RQ5d.

Table 32. Multiple Regression Results of RQ5d (DV = Purchase Intention)

	Model 1			Model 2		
Variable	*B*	*SE B*	*β*	*B*	*SE B*	*B*
Familiarity	-.02	.03	-.03	-.008	.03	-.01
Product Quality	.28	.07	.23***	.15	.07	.13*
Liking	.34	.07	.29***	.34	.07	.30***
Anthropomorphism				.29	.06	.23***
Parasocial Interaction				.06	.10	.02
Anthropomorphism × Parasocial Interaction				.01	.05	.01
R^2		.22			.27	
F		31.96***			20.85***	

* $p < .05$, ** $p < .01$, *** $p < .001$

Post-Hoc Analysis for Anthropomorphism Effects across Conditions

In order to delve into the examination of anthropomorphism effects on the outcome variables, including ad engagement, attitude toward the ad, attitude toward the brand, and purchase intention, chi-square difference tests based on the validated conceptual model were conducted (Kline, 1998). Specifically, the chi-square difference tests assessed direct effect of anthropomorphism on ad engagement, indirect effect of anthropomorphism on attitude toward the ad, total effect of anthropomorphism on attitude toward the brand, and total effect of anthropomorphism on purchase intention across conditions.

Anthropomorphism Effect and Congruity in Brand Personality

Regarding the direct effect of anthropomorphism on ad engagement (Table 33), to begin with, one model set the path coefficient from anthropomorphism to ad engagement as the same

for both the congruent brand personality condition (N = 171) and the incongruent brand personality condition (N = 167), while the other model freed the path coefficient. The chi-square value for the constrained model was compared to the one for the unconstrained model. A significant chi-square difference (over 3.84 difference for one degree of freedom at the .05 level) between these two models would indicate that there was a significant path coefficient difference. Comparing the constrained model against the unconstrained model, as a result, did not yielded a significant chi-square difference ($\Delta\chi^2 = 2.96$, $df = 1$, $p = .08$). The results indicated that there was no difference in direct effect of anthropomorphism on ad engagement between congruent brand personality and incongruent brand personality.

Table 33. Direct Effect, Indirect Effect and Total Effect Estimates
(Congruity in Brand Personality)

	Direct Effect on Ad Engagement		
	Congruent Brand Personality (N = 171)		**Incongruent Brand Personality** (N = 167)
Anthropomorphism	$\beta = .61$** ($SE = .05$)	=	$\beta = .73$** ($SE = .04$) $\Delta\chi^2 = 2.96$, $df = 1$, $p = .08$
	Indirect Effect on Attitude toward the Ad		
	Congruent Brand Personality		**Incongruent Brand Personality**
Anthropomorphism	$\beta = .39$** ($SE = .05$)	=	$\beta = .55$** ($SE = .04$) $\Delta\chi^2 = 4.71$, $df = 2$, $p = .09$
	Total Effect on Attitude toward the Brand		
	Congruent Brand Personality		**Incongruent Brand Personality**
Anthropomorphism	$\beta = .35$** ($SE = .04$)	=	$\beta = .44$** ($SE = .05$) $\Delta\chi^2 = 6.46$, $df = 4$, $p = .16$
	Total Effect on Purchase Intention		
	Congruent Brand Personality		**Incongruent Brand Personality**
Anthropomorphism	$\beta = .25$** ($SE = .03$)	=	$\beta = .34$** ($SE = .04$) $\Delta\chi^2 = 6.57$, $df = 5$, $p = .25$

* $p < .05$, ** $p < .01$, *** $p < .001$

Regarding the indirect effect of anthropomorphism on attitude toward the ad, one model set the path coefficient from anthropomorphism to ad engagement and the path coefficient from ad engagement to attitude toward the ad as the same for both the congruent brand personality condition and the incongruent brand personality condition. The other model freed the path coefficients. The chi-square value for the constrained model was compared to the one for the unconstrained model. A significant chi-square difference (over 5.99 difference for two degree of freedom at the .05 level) between these two models would indicate that there was a significant path coefficient difference. Comparing the constrained model against the unconstrained model did not yielded a significant chi-square difference ($\Delta\chi^2 = 4.71$, $df = 2$, $p = .09$). The results indicated that there was no difference in indirect effect of anthropomorphism on attitude toward the ad between congruent brand personality and incongruent brand personality.

Regarding the total effect of anthropomorphism on attitude toward the brand, one model set the path coefficients from anthropomorphism to ad engagement, from ad engagement to attitude toward the ad, from ad engagement to attitude toward the brand, and attitude toward the ad to attitude toward the brand as the same for both the congruent brand personality condition and the incongruent brand personality condition. The other model freed the path coefficients. The chi-square value for the constrained model was compared to the one for the unconstrained model. A significant chi-square difference (over 9.49 difference for four degree of freedom at the .05 level) between these two models would indicate that there was a significant path coefficient difference. Comparing the constrained model against the unconstrained model did not yielded a significant chi-square difference ($\Delta\chi^2 = 6.46$, $df = 4$, $p = .16$). The results indicated that there was no difference in total effect of anthropomorphism on attitude toward the brand between congruent brand personality and incongruent brand personality.

Regarding the total effect of anthropomorphism on purchase intention, one model set the path coefficients from anthropomorphism to ad engagement, from ad engagement to attitude toward the ad, from ad engagement to attitude toward the brand, attitude toward the ad to attitude toward the brand, and attitude toward the brand to purchase intention as the same for both the congruent brand personality condition and the incongruent brand personality condition. The other model freed the path coefficients. The chi-square value for the constrained model was compared to the one for the unconstrained model. A significant chi-square difference (over 11.07 difference for five degree of freedom at the .05 level) between these two models would indicate that there was a significant path coefficient difference. Comparing the constrained model against the unconstrained model did not yielded a significant chi-square difference ($\Delta\chi^2 = 6.57$, $df = 5$, $p = .25$). The results indicated that there was no difference in total effect of anthropomorphism on purchase intention between congruent brand personality and incongruent brand personality.

Anthropomorphism Effect and Need for Cognition

The same chi-square difference test was employed to compare the anthropomorphism effect between participants with different need for cognition. The data was divided into two groups based on the mean of need for cognition. Participants who scored beyond the mean were classified as high need for cognition group (N = 192), while participants who scored below the mean were classified as low need for cognition group (N = 146). Regarding the direct effect of anthropomorphism on ad engagement (Table 34), one model set the path coefficient from anthropomorphism to ad engagement as the same for both the high need for cognition group and the low need for cognition group, while the other model freed the path coefficient. The chi-square value for the constrained model was compared to the one for the unconstrained model.

Comparing the constrained model against the unconstrained model did not yielded a significant chi-square difference ($\Delta\chi^2 = .01$, $df = 1$, $p = .90$). The results indicated that there was no difference in direct effect of anthropomorphism on ad engagement between high need for cognition and low need for cognition.

Table 34. Direct Effect, Indirect Effect, and Total Effect Estimates (Need for Cognition)

	Direct Effect on Ad Engagement		
	High Need for Cognition (N = 192)		**Low Need for Cognition** (N = 146)
Anthropomorphism	$\beta = .68$** ($SE = .04$)	=	$\beta = .66$** ($SE = .05$) $\Delta\chi^2 = .01$, $df = 1$, $p = .90$
	Indirect Effect on Attitude toward the Ad		
	High Need for Cognition		**Low Need for Cognition**
Anthropomorphism	$\beta = .50$** ($SE = .04$)	=	$\beta = .44$** ($SE = .05$) $\Delta\chi^2 = 2.86$, $df = 2$, $p = .23$
	Total Effect on Attitude toward the Brand		
	High Need for Cognition		**Low Need for Cognition**
Anthropomorphism	$\beta = .40$** ($SE = .05$)	=	$\beta = .39$** ($SE = .05$) $\Delta\chi^2 = 3.80$, $df = 4$, $p = .43$
	Total Effect on Purchase Intention		
	High Need for Cognition		**Low Need for Cognition**
Anthropomorphism	$\beta = .30$** ($SE = .04$)	=	$\beta = .29$*** ($SE = .04$) $\Delta\chi^2 = 3.98$, $df = 5$, $p = .55$

* $p < .05$, ** $p < .01$, *** $p < .001$

Regarding the indirect effect of anthropomorphism on attitude toward the ad, one model set the path coefficient from anthropomorphism to ad engagement and the path coefficient from ad engagement to attitude toward the ad as the same for both groups. The other model freed the path coefficients. Comparing the constrained model against the unconstrained model did not yielded a significant chi-square difference ($\Delta\chi^2 = 2.86$, $df = 2$, $p = .23$). The results indicated that

there was no difference in indirect effect of anthropomorphism on attitude toward the ad between high need for cognition and low need for cognition.

Regarding the total effect of anthropomorphism on attitude toward the brand, one model set the path coefficients from anthropomorphism to ad engagement, from ad engagement to attitude toward the ad, from ad engagement to attitude toward the brand, and attitude toward the ad to attitude toward the brand as the same for both groups. The other model freed the path coefficients. Comparing the constrained model against the unconstrained model did not yielded a significant chi-square difference ($\Delta\chi^2 = 3.80$, $df = 4$, $p = .43$). The results indicated that there was no difference in total effect of anthropomorphism on attitude toward the brand between high need for cognition and low need for cognition.

Regarding the total effect of anthropomorphism on purchase intention, one model set the path coefficients from anthropomorphism to ad engagement, from ad engagement to attitude toward the ad, from ad engagement to attitude toward the brand, attitude toward the ad to attitude toward the brand, and attitude toward the brand to purchase intention as the same for both groups. The other model freed the path coefficients. Comparing the constrained model against the unconstrained model did not yielded a significant chi-square difference ($\Delta\chi^2 = 3.98$, $df = 5$, $p = .55$). The results indicated that there was no difference in total effect of anthropomorphism on purchase intention between high need for cognition and low need for cognition.

Anthropomorphism Effect and Need for Belonging

The same chi-square difference test was employed to compare the anthropomorphism effect between participants with different need for belonging. The data was divided into two groups based on the mean of need for belonging. Participants who scored beyond the mean were

classified as high need for belonging group (N = 179), while participants who scored below the mean were classified as low need for belonging group (N = 159). Regarding the direct effect of anthropomorphism on ad engagement (Table 35), one model set the path coefficient from anthropomorphism to ad engagement as the same for both the high need for belonging group and the low need for belonging group, while the other model freed the path coefficient. The chi-square value for the constrained model was compared to the one for the unconstrained model. Comparing the constrained model against the unconstrained model did not yielded a significant chi-square difference ($\Delta\chi^2 = .14$, $df = 1$, $p = .70$). The results indicated that there was no difference in direct effect of anthropomorphism on ad engagement between high need for belonging and low need for belonging.

Table 35. Direct Effect, Indirect Effect, and Total Effect Estimates
(Need for Belonging)

	Direct Effect on Ad Engagement		
	High Need for Belonging (N = 179)		**Low Need for Belonging** (N = 159)
Anthropomorphism	$\beta = .69$** ($SE = .04$)	=	$\beta = .64$** ($SE = .05$) $\Delta\chi^2 = .14$, $df = 1$, $p = .70$
	Indirect Effect on Attitude toward the Ad		
	High Need for Belonging		**Low Need for Belonging**
Anthropomorphism	$\beta = .51$** ($SE = .04$)	=	$\beta = .43$** ($SE = .05$) $\Delta\chi^2 = .28$, $df = 2$, $p = .86$
	Total Effect on Attitude toward the Brand		
	High Need for Belonging		**Low Need for Belonging**
Anthropomorphism	$\beta = .41$** ($SE = .04$)	=	$\beta = .36$** ($SE = .05$) $\Delta\chi^2 = 7.52$, $df = 4$, $p = .11$
	Total Effect on Purchase Intention		
	High Need for Belonging		**Low Need for Belonging**
Anthropomorphism	$\beta = .31$** ($SE = .04$)	=	$\beta = .27$*** ($SE = .04$) $\Delta\chi^2 = 8.47$, $df = 5$, $p = .13$

* $p < .05$, ** $p < .01$, *** $p < .001$

Regarding the indirect effect of anthropomorphism on attitude toward the ad, one model set the path coefficient from anthropomorphism to ad engagement and the path coefficient from ad engagement to attitude toward the ad as the same for both groups. The other model freed the path coefficients. Comparing the constrained model against the unconstrained model did not yielded a significant chi-square difference ($\Delta\chi^2 = .28$, $df = 2$, $p = .86$). The results indicated that there was no difference in indirect effect of anthropomorphism on attitude toward the ad between high need for belonging and low need for belonging.

Regarding the total effect of anthropomorphism on attitude toward the brand, one model set the path coefficients from anthropomorphism to ad engagement, from ad engagement to attitude toward the ad, from ad engagement to attitude toward the brand, and attitude toward the ad to attitude toward the brand as the same for both groups. The other model freed the path coefficients. Comparing the constrained model against the unconstrained model did not yielded a significant chi-square difference ($\Delta\chi^2 = 7.52$, $df = 4$, $p = .11$). The results indicated that there was no difference in total effect of anthropomorphism on attitude toward the brand between high need for belonging and low need for belonging.

Regarding the total effect of anthropomorphism on purchase intention, one model set the path coefficients from anthropomorphism to ad engagement, from ad engagement to attitude toward the ad, from ad engagement to attitude toward the brand, attitude toward the ad to attitude toward the brand, and attitude toward the brand to purchase intention as the same for both groups. The other model freed the path coefficients. Comparing the constrained model against the unconstrained model did not yielded a significant chi-square difference ($\Delta\chi^2 = 8.47$, $df = 5$, $p = .13$). The results indicated that there was no difference in total effect of anthropomorphism on purchase intention between high need for belonging and low need for belonging.

Anthropomorphism Effect and Attachment Style

The same chi-square difference test was employed to compare the anthropomorphism effect between participants with secure attachment style (N = 195) and insecure attachment style group (N = 159). Regarding the direct effect of anthropomorphism on ad engagement (Table 36), one model set the path coefficient from anthropomorphism to ad engagement as the same for both the secure attachment style group and the insecure attachment style group, while the other model freed the path coefficient. The chi-square value for the constrained model was compared to the one for the unconstrained model. Comparing the constrained model against the unconstrained model did not yielded a significant chi-square difference ($\Delta\chi^2 = 1.03$, $df = 1$, $p = .30$). The results indicated that there was no difference in direct effect of anthropomorphism on ad engagement between secure attachment style and insecure attachment style.

Table 36. Direct Effect, Indirect Effect, and Total Effect Estimates (Attachment Style)

	Direct Effect on Ad Engagement		
	Secure Attachment Style (N = 195)		**Insecure Attachment Style** (N = 143)
Anthropomorphism	$\beta = .68$** ($SE = .04$)	=	$\beta = .67$** ($SE = .04$) $\Delta\chi^2 = 1.03$, $df = 1$, $p = .30$
	Indirect Effect on Attitude toward the Ad		
	Secure Attachment Style		**Insecure Attachment Style**
Anthropomorphism	$\beta = .46$** ($SE = .04$)	=	$\beta = .49$** ($SE = .04$) $\Delta\chi^2 = 6.25$, $df = 2$, $p < .05$
	Total Effect on Attitude toward the Brand		
	Secure Attachment Style		**Insecure Attachment Style**
Anthropomorphism	$\beta = .42$** ($SE = .04$)	=	$\beta = .35$** ($SE = .05$) $\Delta\chi^2 = 8.16$, $df = 4$, $p = .08$
	Total Effect on Purchase Intention		
	Secure Attachment Style		**Insecure Attachment Style**
Anthropomorphism	$\beta = .33$** ($SE = .04$)	=	$\beta = .25$** ($SE = .03$) $\Delta\chi^2 = 11.70$, $df = 5$, $p < .05$

* $p < .05$, ** $p < .01$, *** $p < .001$

Regarding the indirect effect of anthropomorphism on attitude toward the ad, one model set the path coefficient from anthropomorphism to ad engagement and the path coefficient from ad engagement to attitude toward the ad as the same for both groups. The other model freed the path coefficients. Comparing the constrained model against the unconstrained model yielded a significant chi-square difference ($\Delta\chi^2 = 6.25$, $df = 2$, $p < .05$). However, the difference in path coefficients were very small ($\beta_{\text{secure Attachment Style}} = .46$, $p < .01$ vs. $\beta_{\text{insecure Attachment Style}} = .49$, $p < .01$). The results indicated that there was no significant difference in indirect effect of anthropomorphism on attitude toward the ad between secure attachment style and insecure attachment style.

Regarding the total effect of anthropomorphism on attitude toward the brand, one model set the path coefficients from anthropomorphism to ad engagement, from ad engagement to attitude toward the ad, from ad engagement to attitude toward the brand, and attitude toward the ad to attitude toward the brand as the same for both groups. The other model freed the path coefficients. Comparing the constrained model against the unconstrained model did not yielded a significant chi-square difference ($\Delta\chi^2 = 8.16$, $df = 4$, $p = .08$). The results indicated that there was no difference in total effect of anthropomorphism on attitude toward the brand between secure attachment style and insecure attachment style.

Regarding the total effect of anthropomorphism on purchase intention, one model set the path coefficients from anthropomorphism to ad engagement, from ad engagement to attitude toward the ad, from ad engagement to attitude toward the brand, attitude toward the ad to attitude toward the brand, and attitude toward the brand to purchase intention as the same for both groups. The other model freed the path coefficients. Comparing the constrained model against the unconstrained model yielded a significant chi-square difference ($\Delta\chi^2 = 11.70$, $df = 5$, $p < .05$).

However, the difference in path coefficients were very small ($\beta_{\text{secure Attachment Style}} = .33$, $p < .01$ vs. $\beta_{\text{insecure Attachment Style}} = .25$, $p < .01$). The results indicated that there was no significant difference in total effect of anthropomorphism on purchase intention between high need for belonging and low need for belonging.

Anthropomorphism Effect and Parasocial Interaction

The same chi-square difference test was employed to compare the anthropomorphism effect between participants with different parasocial interaction. The data was split into two groups based on the mean of parasocial interaction. Participants who scored beyond the mean were classified as high parasocial interaction group (N = 186), while participants who scored below the mean were classified as low parasocial interaction group (N = 152). Regarding the direct effect of anthropomorphism on ad engagement (Table 37), one model set the path coefficient from anthropomorphism to ad engagement as the same for both the high parasocial interaction group and the low parasocial interaction group, while the other model freed the path coefficient. The chi-square value for the constrained model was compared to the one for the unconstrained model. Comparing the constrained model against the unconstrained model did not yielded a significant chi-square difference ($\Delta\chi^2 = .53$, $df = 1$, $p = .46$). The results indicated that there was no difference in direct effect of anthropomorphism on ad engagement between high parasocial interaction and low parasocial interaction.

Table 37. Direct Effect, Indirect Effect, and Total Effect Estimates
(Parasocial Interaction)

	Direct Effect on Ad Engagement		
	High Parasocial Interaction (N = 186)		**Low Parasocial Interaction** (N = 152)
Anthropomorphism	β = .68** (SE = .04)	=	β = .60** (SE = .05) $\Delta\chi^2$ = .53, df = 1, p = .46
	Indirect Effect on Attitude toward the Ad		
	High Parasocial Interaction		**Low Parasocial Interaction**
Anthropomorphism	β = .50** (SE = .05)	=	β = .39** (SE = .04) $\Delta\chi^2$ = 1.50, df = 2, p = .47
	Total Effect on Attitude toward the Brand		
	High Parasocial Interaction		**Low Parasocial Interaction**
Anthropomorphism	β = .45*** (SE = .05)	=	β = .28** (SE = .05) $\Delta\chi^2$ = 7.97, df = 4, p = .09
	Total Effect on Purchase Intention		
	High Parasocial Interaction		**Low Parasocial Interaction**
Anthropomorphism	β = .34** (SE = .04)	=	β = .20** (SE = .03) $\Delta\chi^2$ = 8.88, df = 5, p = .11

* p < .05, ** p < .01, *** p < .001

Regarding the indirect effect of anthropomorphism on attitude toward the ad, one model set the path coefficient from anthropomorphism to ad engagement and the path coefficient from ad engagement to attitude toward the ad as the same for both groups. The other model freed the path coefficients. Comparing the constrained model against the unconstrained model did not yielded a significant chi-square difference ($\Delta\chi^2$ = 1.50, df = 2, p = .47). The results indicated that there was no difference in indirect effect of anthropomorphism on attitude toward the ad between high parasocial interaction and low parasocial interaction.

Regarding the total effect of anthropomorphism on attitude toward the brand, one model set the path coefficients from anthropomorphism to ad engagement, from ad engagement to attitude toward the ad, from ad engagement to attitude toward the brand, and attitude toward the ad to attitude toward the brand as the same for both groups. The other model freed the path

coefficients. Comparing the constrained model against the unconstrained model did not yielded a significant chi-square difference ($\Delta\chi^2 = 7.97$, $df = 4$, $p = .09$). The results indicated that there was no difference in total effect of anthropomorphism on attitude toward the brand between high parasocial interaction and low parasocial interaction.

Regarding the total effect of anthropomorphism on purchase intention, one model set the path coefficients from anthropomorphism to ad engagement, from ad engagement to attitude toward the ad, from ad engagement to attitude toward the brand, attitude toward the ad to attitude toward the brand, and attitude toward the brand to purchase intention as the same for both groups. The other model freed the path coefficients. Comparing the constrained model against the unconstrained model did not yielded a significant chi-square difference ($\Delta\chi^2 = 8.88$, $df = 5$, $p = .11$). The results indicated that there was no difference in total effect of anthropomorphism on purchase intention between high parasocial interaction and low parasocial interaction.

Table 38 summarizes the results of the hypotheses and research questions, and Table 39 summarizes the results of the main effects and interaction effects.

Table 38. Summary of the Hypotheses, Research Questions, and Results

	Hypotheses and Research Question	Operationalization	Results
H1	When brand personification is presented, elicited net agent knowledge will have a positive influence on anthropomorphism.	$\beta_{\text{elicited net agent knowledge} \rightarrow \text{anthropomorphism}} > 0$	Supported
H2	Anthropomorphism resulted from brand personification in an ad will have a positive influence on ad engagement.	$\beta_{\text{anthropomorphism} \rightarrow \text{ad engagement}} > 0$	Supported
H3	Ad engagement will have a positive influence on attitude toward the ad.	$\beta_{\text{ad engagement} \rightarrow \text{attitude toward the ad}} > 0$	Supported
H4	Ad engagement will have a positive influence on attitude toward the brand.	$\beta_{\text{ad engagement} \rightarrow \text{attitude toward the brand}} > 0$	Supported
H5	Attitude toward the ad will have a positive influence on attitude toward the brand.	$\beta_{\text{attitude toward the ad} \rightarrow \text{attitude toward the brand}} > 0$	Supported
H6	Attitude toward the brand will have a positive influence on purchase intention.	$\beta_{\text{attitude toward the brand} \rightarrow \text{purchase intention}} > 0$	Supported
H7	When brand personification is presented, an ad with congruent brand personality will lead to higher anthropomorphism than an ad with incongruent brand personality.	$M_{\text{congruent brand personality}} > M_{\text{incongruent brand personality}}$	Not Supported
RQ1	Are there significant interactions between anthropomorphism and congruity in brand personality in their influence on consumers' (a) ad engagement, (b) attitude toward the ad, (c) attitude toward the brand, and (d) purchase intention?	$\beta_{\text{anthropomorphism} \times \text{congruity in brand personality}} \neq 0$	No
H8	Consumers' need for cognition will have a negative influence on anthropomorphism.	$\beta_{\text{need for cognition}} < 0$	Supported
RQ2	Are there significant interactions between anthropomorphism and need for cognition in their influence on consumers' (a) ad engagement, (b) attitude toward the ad, (c) attitude toward the brand, and (d) purchase intention?	$\beta_{\text{anthropomorphism} \times \text{need for cognition}} \neq 0$	Attitude toward the ad
H9	Consumers' need for belonging will have a positive influence on anthropomorphism.	$\beta_{\text{need for belonging}} > 0$	Supported
RQ3	Are there significant interactions between anthropomorphism and need for belonging in their influence on consumers' (a) ad engagement, (b) attitude toward the ad, (c) attitude toward the brand, and (d) purchase intention?	$\beta_{\text{anthropomorphism} \times \text{need for belonging}} \neq 0$	No
H10	When brand personification is presented, consumers with insecure (anxious-ambivalent and avoidant) attachment style will have	$M_{\text{insecure attachment style}} > M_{\text{secure attachment style}}$	Not Supported

	higher anthropomorphism than consumers with secure attachment style.		
RQ4	Are there significant interactions between anthropomorphism and attachment style in their influence on consumers' (a) ad engagement, (b) attitude toward the ad, (c) attitude toward the brand, and (d) purchase intention?	$\beta_{\text{anthropomorphism} \times \text{attachment style}} \neq 0$	Attitude toward the ad
H11	Consumers' parasocial interaction will have a positive influence on anthropomorphism.	$\beta_{\text{parasocial interaction}} > 0$	Supported
RQ5	Are there significant interactions between anthropomorphism and parasocial interaction in their influence on consumers' (a) ad engagement, (b) attitude toward the ad, (c) attitude toward the brand, and (d) purchase intention?	$\beta_{\text{anthropomorphism} \times \text{parasocial interaction}} \neq 0$	Ad Engagement

Table 39. Summary Results of the Main Effects and Interaction Effects

DV / IV	Anthropomorphism	Ad Engagement	Attitude toward the Ad	Attitude toward the Brand	Purchase Intention
Anthropomorphism	_____	Significant	Significant	Significant	Significant
Congruity in Brand Personality	Not significant	_____	_____	_____	_____
Need for Cognition	Significant	_____	_____	_____	_____
Need for Belonging	Significant	_____	_____	_____	_____
Attachment Style	Not significant	_____	_____	_____	_____
Parasocial Interaction	Significant	_____	_____	_____	_____
Anthropomorphism × Congruity in Brand Personality	_____	Not significant	Not significant	Not significant	Not significant
Anthropomorphism × Need for Cognition	_____	Not significant	Significant	Not significant	Not significant
Anthropomorphism × Need for Belonging	_____	Not significant	Not significant	Not significant	Not significant
Anthropomorphism × Attachment Style	_____	Not significant	Significant	Not significant	Not significant
Anthropomorphism × Parasocial Interaction	_____	Significant	Not significant	Not significant	Not significant

CHAPTER 5

DISCUSSION AND CONCLUSION

Summary of the Findings

With the employment of brand personification in advertising, the present research aims to thoroughly examine the process of anthropomorphism, explore the antecedents influencing anthropomorphism, and investigate the anthropomorphism effects on consumers' consequential responses to the ad as well as the advertised brand. The results together provide empirical evidence that consumers elicit agent knowledge and alternative knowledge to process brand personification in advertising. By excluding the influence of elicited alternative knowledge, elicited net agent knowledge primarily and positively contributes to the extent to which consumers anthropomorphize the personified brand shown in the ad. Conceived as an in-process output, as a result, anthropomorphism not only leads to positive advertising outcomes, such as ad engagement and attitude toward the ad, but also positive brand outcomes, such as attitude toward the brand and purchase intention.

This research further delves into the individual differences that affect consumers' tendency to exhibit anthropomorphism when processing brand personification in advertising. The results provide evidence that need for cognition, need for belonging, and parasocial interaction significantly influence consumers' exhibition of anthropomorphism. Most importantly, the research discovers anthropomorphism and its interactions with need for cognition, attachment style, and parasocial interaction on advertising outcomes, such as ad engagement and attitude toward the ad. Nevertheless, the research results indicate no support of

the predictions that congruity in brand personality and attachment style influence the degree to which consumers anthropomorphize a personified brand. The results of post-hoc analysis further point out that anthropomorphism is a strong and stable predictor of consumer responses, regardless of conditions. Overall, consumers' anthropomorphism can positively increase ad engagement, attitude toward the ad, attitude toward the brand, and purchase intention across situations. Given that, the following sections specifically discuss the implications of the findings.

The Process of Anthropomorphism

Knowledge Structures Inducing Anthropomorphism

With the validation of the conceptual model, consumers' processing of brand personification in advertising is primarily determined by the elicitation of agent knowledge, which covers consumers' exhaustive experience about the self or other human agents. Additionally, alternative knowledge, thoughts unrelated to humans, can be coactivated alongside agent knowledge. While consumers might elicit both agent knowledge and alternative knowledge simultaneously in the process, the final judgment still leans toward anthropomorphism. This could be explained that although agent knowledge and alternative knowledge are comparable when consumers detect humanlike cues in advertising messages, both knowledge structures have different weights in contributing to anthropomorphism.

Put it another way, agent knowledge is readily available in consumers' memories and can be effortlessly accessed when consumers are exposed to humanlike cues (e.g., facial expression, human contour, and personality) in given stimuli. The readily available and accessible agent knowledge may come to mind more easily and more quickly than alternative knowledge. Agent knowledge is also more applicable than alternative knowledge due to the overlap between human

experiences and the attempted humanlike features in brand personification. Taken together, the influence of elicited agent knowledge will outweigh the influence of elicited alternative knowledge. As such, there remains elicited net agent knowledge that induces anthropomorphism to process brand personification in advertising, and thus, consumers' consequential judgment is colored by anthropomorphic thoughts.

Anthropomorphism Effects on Consumer Responses

Given the exhibition of anthropomorphism in processing brand personification in advertising, the research findings delineate the anthropomorphism effects on consumers' responses to the given ad and the advertised brand. Regarding the responses to the ad, anthropomorphism positively lead to consumers' engagement with the ad. Because making anthropomorphic inferences includes the utilization of personal experiences about the self (i.e., agent knowledge) to predict a brand inductively, it is reasonable that anthropomorphism drives consumers to relate themselves to the ad with personification messages. Consumers thus elaborate their processing of the personification messages and feel actively involved in the ad. Similarly, making anthropomorphic inferences based on personal experiences could transport what consumers think about themselves to the advertising context. Since consumers have a good knowledge and great concern about themselves, anthropomorphism would provide immersed experiences that grasp consumers' attention at the moment of advertising exposure. Drawing on anthropomorphism, consumers would perceive the contextual relevance with the ad and show ad engagement in consequence.

As follows, anthropomorphism would possibly increase a sense of familiarity that leads to favorable attitude toward the ad. One explanation could be the perceptual fluency in judgment

making (Winkielman & Cacioppo, 2001; Winkielman, Schwarz, Fazendeiro, & Reber, 2003). Simply put, familiarity in information processing gives rise to perceptual fluency in which positive feelings are generated for attitudinal judgments. Consumers would feel familiar with the humanlike characteristics of the personified brand and make anthropomorphic inferences about the brand easily. When consumers perceive that the advertising messages are easy to process, they would generate favorable perceptions of the ad and form positive attitude toward the ad. Another explanation could be that brand personification is a particular form of metaphor which allows multiple interpretations. Consumers' self-generated inferences (i.e., anthropomorphism) could bring pleasure to them if they figure out the metaphorical expression (i.e., brand personification) and make sense of the advertising messages (McQuarrie & Mick, 2003; McQuarrie & Phillips, 2005). In all, anthropomorphism brings about positive attitude toward the ad.

Regarding the responses to the advertised brand, both ad engagement and attitude toward the ad, which result from anthropomorphism, positively influence consumers' attitude toward the brand. One possible reason may be that ad engagement increases consumers' elaboration of information processing. As consumers engage with the ad and enjoy applying anthropomorphic thoughts to interpret brand personification in advertising, they are likely to form stable attitude toward the advertised brand (Cacioppo & Petty, 1984). Moreover, the research findings are in accordance with MacKenzie et al.'s (1986) structural models that specify the mediating role of attitude toward the ad in brand evaluation. The favorable attitude toward the ad would be transferred appropriately to consumers' overall evaluation of the advertised brand (i.e., attitude toward the brand). Ultimately, positive attitude toward the brand increases consumers'

willingness to consider the personified brand when they make purchase decisions. That is, attitude toward the brand positively contributes to the final brand outcome, purchase intention.

Antecedents of Anthropomorphism

Need for Cognition

This research thoroughly examines the antecedents, individual differences in particular, that may influence the extent to which consumers anthropomorphize a brand in the context of brand personification. Firstly, the findings delineate that need for cognition is the critical disposition that affects consumers' anthropomorphism. Consumers low in need for cognition are more likely to exhibit anthropomorphism than consumers high in need for cognition. One possible explanation could be that the making of attributional inferences, such as anthropomorphism, might go through an adjustment process if high cognitive effort is devoted (Gilbert et al., 1988). Because consumers high in need for cognition are prone to process given messages with high cognitive effort and enjoy making multiple interpretations, they are likely to find other sensible details in the messages, which could moderate their anthropomorphic thinking. On the contrary, consumers low in need for cognition tend to be miserly at spending cognitive effort in information processing. They may skip the adjustment process and draw intuitive anthropomorphic inferences (D'Agostino & Fincher-Kiefer, 1992). It is also important to note that although consumers high in need for cognition would adjust the predisposed anthropomorphism with extra cognitive effort, the final judgment would still be colored by anthropomorphic thinking. This is due to the highly available, accessible, and applicable agent knowledge that predominantly guides the information processing for brand personification in advertising.

Furthermore, the research discovers that there is an interaction effect between anthropomorphism and need for cognition on consumers' attitude toward the ad. According to the results, consumers low in need for cognition generate more positive attitude toward the ad than consumers high in need for cognition when the level of anthropomorphism is low. By contrast, consumers high in need for cognition generate more positive attitude toward the ad than consumers low in need for cognition when the level of anthropomorphism is high. One explanation for the findings could be that anthropomorphism may be considered as a form of cognitive elaboration (Cacioppo et al., 1984; Epley et al., 2007). Increased anthropomorphism would fit with the disposition of enjoying effortful processing for consumers high in need for cognition. That is, the elaborative manner of information processing would result in more positive attitude toward the ad for consumers high in need for cognition than consumers low in need for cognition, when strong anthropomorphism is presented.

Need for Belonging

Consumers' need for belonging is another predictor that determines the extent to which consumers anthropomorphize a brand. Consumers high in need for belonging are more likely to feel the dearth of social relationships and strive to obtain relationships through anthropomorphism than consumers low in need for belonging. The findings suggest that the motivation to maintain a minimum number of social relationships in daily life could be contented by relational interactions with anthropomorphized nonhuman agents. Consumers may consider the anthropomorphized brand as a surrogate for social contact because they indeed perceive the brand with a relationship mindset, which is akin to the one in interpersonal communication (Fournier, 1998).

The results also suggest that consumers high in need for belonging could be more sensitive to humanlike cues in ads with personification messages, compared to consumers low in need for belonging. This could be explained that consumers high in need for belonging would have strong desire to seize any opportunity for social relationships and thus they might actively elicit agent knowledge to gauge the personification messages in given ads. By contrast, consumers low in need for belonging might identify those humanlike cues in the personification messages, but they would not possess a particular intention to process information only with elicited agent knowledge. Without the imperative need for acquiring social relationships, consumers low in need for belonging would consider other attributes of the brand shown in the ad, such as its design, quality, and utility.

Parasocial Interaction

The findings indicate that consumers high in parasocial interaction are more likely to anthropomorphize a brand than consumers low in parasocial interaction. The findings are consistent with Rubin and Perse's (1987) theoretical framework in media studies which suggests individuals' tendency to perform parasocial interaction and form parasocial relationships with media characters. Especially, the target media characters for parasocial interaction can be real humans, such as news anchors or drama actors, or artificial characters, such as animated cartoon figures (Horton & Wohl, 1956). Accordingly, the inclination to perform parasocial interaction can be applied to consumers' anthropomorphism of a personified brand in the ad. This implies that the personified brand would be regarded as a humanlike social agent that provides an alternative relationship opportunity. Driven by the pressing need for companionship, consumers

high in parasocial interaction are more likely to exhibit one-side imagined parasocial interaction with the anthropomorphized brand, compared to consumers low in parasocial interaction.

Further, this research finds that there is an interaction effect between anthropomorphism and parasocial interaction on consumers' ad engagement. When the level of anthropomorphism is low, consumers high in parasocial interaction and consumers low in parasocial interaction do not have a distinct difference in terms of their ad engagement. When they both show high level of anthropomorphism, anthropomorphism significantly enhances ad engagement for consumers high in parasocial interaction, rather than consumers low in parasocial interaction. This could be explained by the personal construct theory under the tenet of parasocial interaction (Delia, O'Keefe, & O'Keefe, 1982). Specifically, the application of personal construct, knowledge about the self, to know about media characters is similar to the application of agent knowledge to make anthropomorphic predictions about personified brands. Because of the strong desire for consumers high in parasocial interaction to be acquainted with humanlike brands in advertising, they would actively project their personal construct to the brands via anthropomorphism. As such, they would feel more relevant to the personified brands and show higher ad engagement than consumers low in parasocial interaction.

Attachment Style

Despite the fact that attachment style is concerned with the formation and maintenance of social relationships, consumers with different attachment style show no difference in the tendency of anthropomorphizing a brand. This could be explained that attachment style emphasizes on the extent to which individuals perform attachment behaviors in close relationships with loved ones (Hazan & Shaver, 1987), rather than general social relationships. In

the current research context, consumers would anthropomorphize a brand presented with personification messages, but they might consider the anthropomorphized brand as a humanlike social agent like a friend instead of a partner in a close relationship. Considering that, anthropomorphizing a brand might not satisfy consumers' chronic motivation for close relationships driven by attachment style. Namely, consumers with insecure attachment style (i.e., anxious-ambivalent and avoidant attachment style) would not possess particular proclivity to make anthropomorphic inferences when they encounter brand personification in advertising.

Still, the results show that anthropomorphism interacts with attachment style and exerts a significant influence on consumers' attitude toward the ad. Consumers with secure attachment style generate more positive attitude toward the ad than consumers with insecure attachment style when the level of anthropomorphism is low. By contrast, consumers with insecure attachment style generate more positive attitude toward the ad than consumers with secure attachment style when the level of anthropomorphism is high. The interaction could be explained that consumers with insecure attachment style are more cautious about dealing with social relationships than consumers with secure attachment style (Hazan & Shaver, 1990; 1994). It thus suggests that consumers with insecure attachment style would consider the anthropomorphized brand as a relationship partner and feel comfortable with the anthropomorphized brand only when they have strong evidence of anthropomorphism. Such positive feelings resulted from companionship with a highly anthropomorphized brand would lead them to generate more positive attitude toward the ad than consumers with secure attachment style.

Congruity in Brand Personality

Although anthropomorphism is concerned with how consumers imbue brands with humanlike characteristics, such as brand personality, the research results show that the perceived congruity in brand personality does not have significant impact on how consumers anthropomorphize a brand. In contrast to the research prediction, consumers show similar evidence of anthropomorphism when they are exposed to brand personification in advertising, either in the congruent brand personality condition or the incongruent brand personality condition. The possible explanation could be that the knowledge structure regarding the perception of brand personality is closely related to agent knowledge, and both store in consumers' memories adjacently. The perception of brand personality would also bring about agent knowledge to make anthropomorphic inferences. This process might work for the condition in which the brand is portrayed with congruent or incongruent brand personality. That is, even though consumers would detect the disparities in terms of congruity in brand personality, the simultaneous retrieval of agent knowledge could exert a dominant influence on their exhibition of anthropomorphism.

Implications and Contributions

Taken the research findings together, this research contributes to the literature in advertising, marketing, and consumer psychology. Specifically, the findings have several theoretical implications on brand personification, consumer-brand relationships, and theory of anthropomorphism. First of all, brand personification has been receiving attention from scholars in advertising and marketing fields (e.g., Ricoeur, 1977; Brown, 2011; Cohen, 2014), while the findings indicate the importance of anthropomorphism as a necessary notion that determines the

extent to which consumers lean upon such universal mechanism to make inductive inferences, especially when they deal with a particular form of metaphor (i.e., brand personification) in marketing and advertising contexts.

This research has implications on the widely adopted consumer-brand relationships framework (Fournier, 1998). Based on the findings of present research, it is believed that anthropomorphism is the underlying reason which legitimizes consumers' projection of relationship mindset onto brands and perception of brands as relationship partners. This conceptualization is further supported by the findings that consumers with an imperative need for social relationships, such as high in need for belonging and high in parasocial interaction, show high likelihood of anthropomorphizing brands. Considering that, this research shows insight into the body of literature in consumer-brand relationships by delving into the constitution of anthropomorphism and antecedents influencing anthropomorphism. Drawing on anthropomorphism, consumers apply similar knowledge structure that deals with interpersonal relationships to their imagery relationships with anthropomorphized brands.

In addition, the findings contribute to the theory of anthropomorphism (Epley et al., 2007; Epley et al., 2008; Waytz et al., 2010) by explicating a list of antecedents that have significant bearing on consumers' anthropomorphism. These antecedents include the cognitive determinant (i.e., need for cognition) and motivational determinants (i.e., need for belonging) that are postulated by the theory of anthropomorphism. This research further includes and demonstrates that individual differences in parasocial interaction is crucial for determining the extent to which consumers anthropomorphize brands. Most importantly, anthropomorphism interact with such individual differences and significantly contribute to advertising outcomes.

Managerially, the findings of this research together suggest that anthropomorphism should be considered as important as other attitudinal outcomes (e.g., attitude toward the ad and attitude toward the brand) in consumers' information processing, given the prevalent employment of brand personification in advertising and marketing communications. The elicitation of consumers' anthropomorphism is critical for marketers that want to establish a long-term consumer-brand relationships with consumers. Messages for relationship marketing could include brand personification either explicitly or implicitly to trigger consumers' anthropomorphism in that consumers can apply the relationship mindset to the target brand. With the retrieve of anthropomorphism, consumers would be willing to engage with the brand and bridge consumer-brand relationships. Ultimately, long-term consumer-brand relationships could be achieved.

Furthermore, the findings point out that the induction of anthropomorphism in processing brand personification in advertising eventually leads to positive evaluation of the ad as well as the advertised brand. Because anthropomorphism is the universal mechanism that consumers intrinsically possess, consumers might consider the personification messages less intrusive if they perceive the humanlike characteristics in the ad. Also, the probable relational interaction with the anthropomorphized brand could make consumers seek information to know and show great concern about brand. As a consequence, the anthropomorphized brand would be prominent in consumers' memories. Applied to making purchase decisions, for example, consumers may feel attached to the brand they anthropomorphize and would be more likely to consider such brand.

Marketers may consider the individual differences with respect to consumers' tendency of anthropomorphizing a brand when they employ brand personification in advertising. By

noting the nuances in consumers' making of anthropomorphic inferences, marketers could design the messages for brand personification strategically to target diverse consumer groups. For instance, marketers could target consumers who have high tendency of making anthropomorphic inferences by explicitly present the brands with characteristics resembling human beings in advertising. By contrast, marketers should leverage the amount of personification messages in advertising if they want to target consumers who have low tendency of making anthropomorphic inferences. While anthropomorphism can generally lead to positive brand outcomes, the design of brand personification in advertising should be tailored depending on consumers' dispositions to maximize the anthropomorphism effects.

In particular, the inclusion of a known brand and an unknown brand in the research implies that consumers can be primed to anthropomorphize various types of brands, regardless of their prior knowledge about the brand. Overall, the predominant influence of anthropomorphism may make consumers resonate with the brand and connect themselves to the brand. Therefore, top marketers and small business alike could take advantage of the positive effects of anthropomorphism to direct consumer responses. For top marketers, brand personification could be used to trigger consumers' anthropomorphism that maintains foreseeable positive consumer-brand relationships. For small business, the messages that suggest consumers to anthropomorphize a brand could lead to enhanced experience with the brand and favorable evaluation about the brand.

Limitations and Future Research

Although this research provides empirical evidence that supports relevant theoretical frameworks and suggests promising managerial implications, the research results indeed cannot

be interpreted without some limitations. First, while the experiment research method demonstrates the positive anthropomorphism effects on consequential advertising and brand outcomes, the experiment was conducted at the researcher's convenience which copes with the research objective. However, the artificiality of the experimental designs might not resemble consumers' exposure to brand personification in advertising in daily life situations. The performance of consumers' anthropomorphism might be affected if there are distractions in the environment when consumers process personification messages, which is the usual cases that consumers encounter advertising messages in the media-rich environment. Future research could consider adopting difference research methods, such as survey research or field studies, to examine the extent to which consumers regard a brand as a humanlike social agent in situations where they make decisions with natural settings.

Secondarily, in the present research, the brands were selected from only one product category (i.e., energy drink category). Also, the selected energy drink category has a strong association with exciting brand personality. This selection of brands limits the generalizability of the research findings to this specific product category along with a particular exciting brand personality. It means that the research results could not be applied to the employment of personification messages for brands beyond the selected energy drink category or brands with brand personality other than excitement. Thus, further research should be conducted to increase the selection of brands across product categories, including both utilitarian and hedonic product brands. At the meanwhile, the inclusion of brands that cover Aaker's (1997) five dimensions of brand personality (i.e., sincerity, excitement, competence, sophistication, and ruggedness) should be considered. Future research with the selection of diverse brands and various brand personality is encouraged.

In addition, the advertising stimuli were created in the format of print advertising and thus the conclusions drawn from the research findings should be noted with this limitation. Although the developed advertising stimuli might be shown to consumers through media channels that allow visual presentations, more research should be conducted to evaluate whether there are media effects interacting with anthropomorphism and influence consumer responses. Case in point, with the emergence of digital media along with social media platforms, marketers' strategies for brand personification could be presented in a relatively interactive way. The interactive essence of social media would possibly enrich the employment of brand personification in advertising. Therefore, a cross-media investigation with respect to marketers' presentation of personification messages and consumers' responsive anthropomorphic behavior is welcome.

Finally, while this research examined various antecedents that affect the extent to which consumers anthropomorphize a brand, there might be some decisive factors in individual differences being ignored. Suggested by Waytz et al. (2010), individual differences are to predict the application of elicited agent knowledge and elicited alternative knowledge to anthropomorphism. With these regards, demographic variables, such as age, gender, and education level, might be interesting variables for future research. Furthermore, consumers with different cultural backgrounds might show different level of anthropomorphism and evaluate the anthropomorphized brand differently. However, this research falls short of accounting the tendency of making anthropomorphic inferences for consumers with diverse cultures. This research only drew a sample from the United States with which cross-cultural comparison could not be made. Hence, future research could be conducted to increase the sample size across countries in order to address these concerns. More research should be conducted to thoroughly

investigate how disparities in demographics as well as culture affect anthropomorphism in marketing and advertising contexts.

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APPENDIX A

ADVERTISING STIMULI

a. Known Brand with Congruent Brand Personality

Known Brand with Incongruent Brand Personality

b. Unknown Brand with Congruent Brand Personality

c. Unknown Brand with Incongruent Brand Personality