

The Impact of Anthropomorphism on Purchase Intention of Smartphones : A Study of Young Indian Consumers

* *Ritu Gupta*

** *Kokil Jain*

Abstract

The purpose of this study was to explore the role of anthropomorphism in influencing the consumers' purchase intentions in the case of smartphones. The study employed between the group experimental design to check the proposed hypotheses on young smartphone users between the age group of 18 - 25 years. A hypothetical brand "USEN" was created. Two versions of the ad - anthropomorphic and non - anthropomorphic were developed for the hypothetical brand. Multivariate analysis of variance (MANOVA) technique using SPSS Version 23 was used to test the results. The results established a significant positive differential effect of the anthropomorphic ad over the non - anthropomorphized version of the advertisement on consumers' feelings, attitude towards the ad, attitude towards the brand, and purchase intention. The research holds valuable contribution for companies to effectively utilize the concept of anthropomorphism to develop a favourable attitude towards their brands.

Keywords : anthropomorphism, attitude towards advertisement, attitude towards brand, purchase intentions

Paper Submission Date : July 25, 2018 ; Paper sent back for Revision : March 12, 2019 ; Paper Acceptance Date : April 20, 2019

Anthropomorphism has been stated as the tendency of the individual to perceive non-human objects as human entities (Guthrie, 1993). The word "anthropomorphism" was derived from the Greek words "*anthropos*" meaning human and "*morphe*" meaning form. The concept of anthropomorphism evolved 40,000 years ago when ancient sculptures of animals with human faces were crafted. Archaeologists played a significant role in linking anthropomorphism with systematic hunting practices (Mithen, 1998). It was proposed that anthropomorphism enhanced the power of hunters to predict the movement of animals.

Previous research has explicitly suggested that an individual's tendency to anthropomorphize a product results in a positive evaluation of the product. Anthropomorphism is even prevalent in our today's life and there are countless ways in which marketers often encourage consumers to see their products and brands as humans by imbuing brands with human-like personalities and imagery (Aaker, 1997). There are numerous examples where anthropomorphized brands like Uncle Chips, Tiger biscuit, etc. are used by the marketers to make their brands more endearing. Laksmidewi, Susianto, and Afiff (2017) proposed that the products having physical appearance and behavior like humans can be successfully anthropomorphized by the consumers and also have a significant effect on purchase intentions. Does this tendency of anthropomorphism create an impact on purchase intentions in case of smartphones ?

* *Assistant Professor*, Department of Commerce, P.G.D.A.V College, Nehru Nagar, University of Delhi, New Delhi - 110 065. E-mail : ritugupta1009@gmail.com

** *Associate Professor*, Head of Marketing, Department of Marketing, Amity International Business School, Noida - 201 313, Uttar Pradesh. E-mail : kjain@amity.edu

The present study explicitly intends to see the impact of anthropomorphism, if any, on purchase intentions of smartphones in case of the young Indian population. Smartphones as a product category was mainly chosen considering the high involvement of the sample population with the product. India is regarded as the fastest-growing market in the last decade or so in the world of smartphones. India accounted for 27.5 million devices sold in the second quarter of 2016, which was up by 17% of the previous quarter (IDC Report, 2017) and with a total shipment of 124 million units in 2017, it is supposedly the fastest-growing market (IDC Report, 2018). According to Ericsson's mobility report (2016), mobile subscriptions are expected to hit 1.4 billion by 2021. Also, as per anthropomorphism.org, anthropomorphism has been a significant approach to human - computer interaction. Previous research has established smartphones as inherently portable computers, highly personified, and acting as social actors (Wang, 2017). Landwehr, McGill, and Herrmann (2011) advocated the anthropomorphizing tendency of cell phones and its underlying positive experience in establishing likings and pleasures towards the product.

The study is perhaps one of its kind to explore anthropomorphic tendencies of Indian consumers. The deep-rooted Indian cultural practices strengthened the rationale for this. In Indian mythology, people anthropomorphized supernatural entities. For example, the idol of Goddess Kali has big eyes, dark complexion, and long hair similar to the people of Bengal. People in hilly areas of the North anthropomorphized "Paharowalimaa" as fair, with short height, and with small eyes identical to them. People anthropomorphized Lord Jagannath, not only as a God, but also as a king (Government of Odisha, n.d.). Previously, researchers too established that non-human supernatural entities were being anthropomorphized (Epley, Waytz, & Cacioppo, 2007). Ghuman, Huang, Madden, and Roth (2015) established that the tendency of anthropomorphism has been found to be stronger in consumers living closely together and with better access to human knowledge, that is, in people living in a collectivist culture (e.g. India, China) knowing this, Indian consumers may have the propensity to anthropomorphize smartphones.

Theoretical Background and Hypotheses

(1) Anthropomorphism : The tendency or phenomenon to anthropomorphize varies with the individual and even children appear to anthropomorphize more in comparison to adults. Hart, Jones, and Roynes (2013) established that the anthropomorphism effect depended on the product being anthropomorphized. Previous research has explicated that people anthropomorphized not only objects, pets (Chartrand, Fitzsimons, & Fitzsimons, 2008), but also non-human supernatural entities (Epley et al., 2007) and built the connect, which in turn affected their behavior (Zhang & Aggarwal, 2015). An object tends to be more likely to be anthropomorphized if it has traits similar to humans. As suggested by researchers, images that seem to have human actions enhance anthropomorphism (Puzakova, Kwak, & Rocero, 2013). Therefore, anthropomorphism as a concept can be identified as the humanization of non - human objects.

Many researchers in a social context studied the phenomenon of anthropomorphism. Aggarwal and McGill (2007) established anthropomorphism as a useful tool to influence people to behave pro-socially and contribute to a social cause. Researchers proposed that anthropomorphizing a social cause is a practical and inexpensive tool for increasing compliance with it as this initiated the anticipatory guilt of not complying with the cause which, in turn, influenced individuals to behave pro-socially (Ahn, Kim, & Aggarwal, 2014). Hart et al. (2013) proved personification to be an expression of anthropomorphism. Researchers advocated the relationship of consumers' personal value and product complexity, and they suggested that the effect of consumer anthropomorphism depended upon the product being anthropomorphized (Hart et al., 2013). The phenomenon of anthropomorphism has already been proved in different products like social campaigns (Ahn et al., 2013), cars, computers (Nass, Steuer, & Tauber, 1994), and cookies (Sääksjärvi & Hellén, 2013).

Anthropomorphism was used to build awareness for brands and thus has been proved to give rise to the concept

of brand anthropomorphism. This concept is explained as the extent to which a particular brand is psychologically being perceived as human by consumers. Anthropomorphized advertising plays a role in perceiving the brand as human. Nan, Anghelcev, Myers, Sar, and Faber (2006) concluded that the presence of anthropomorphism on a commercial product website influenced the consumers and had a positive effect towards the website, but had a little impact on the product. Anthropomorphic advertising has a significant impact on recalling the brand and created a positive result on the attitude towards the advertisement (Gelbrich, Gathe, & Westjohn, 2012). Thus, visual anthropomorphic advertisements were used in the present study.

(2) Feelings and Their Hypothesized Association with Anthropomorphism : Feelings are referred to as the moods of a person in response to the perceived situation. Feeling like concern for the object was expressed by the consumers in a more dominant form when they were exposed to the anthropomorphic version versus the non-anthropomorphic version (Tam, Lee, & Chao, 2013). When feelings are intense and pervasive, they lead to attention-getting and are directed towards that particular behavior (Gardner, 1985 ; Petty, DeSteno, & Rucker, 2001; Schwarz & Clore, 1996). Huber, Meyer, and Schmid (2015) argued that the inner self, that is, feelings had a stronger effect on passionate brand love than social-self. Feelings like pride and empathy motivated attitude and intentions (Hooff, Schouten, & Simonovski, 2012).

The rationale which is the logic or the reason behind the decision has its role in developing feelings towards a situation. Rauschnabel and Ahuvia (2014) suggested that anthropomorphism dramatically outperformed perceived quality in bringing out positive feelings. Perceived quality can be a logic behind the decision. In the model of this study, feelings are the moods of people after coming in contact with the anthropomorphized version or non - anthropomorphized version of the advertisement of smartphones which further acted as antecedents for other variables like attitude and purchase intentions.

Guthrie (1993) defined anthropomorphism as the tendency to perceive objects as human entities. Rauschnabel and Ahuvia (2014) proposed that anthropomorphism was a better antecedent than perceived quality in expressing positive feelings. The tendency of anthropomorphism influenced people to behave positively towards an object (Ahn et al., 2014). However, positive behavior was associated with the willingness and was created by feelings or moods of the people (Hooff et al., 2012). Therefore, it is proposed that :

☞ **H1a :** Positive feelings will be significantly higher for anthropomorphized versions of the ad in comparison to the non - anthropomorphized version of the ad.

☞ **H1b :** Anthropomorphized version of the advertisement for smartphones will lead to less negative feelings in comparison to the non - anthropomorphized version of the advertisement.

(3) Attitude and its Hypothesized Association with Feelings Generated via Anthropomorphism : Attitude is an acquired mental state towards an object or situation with the degree of positivity or negativity, which is perceived from any stimuli. Attitude is characterized as a measure of an individual's internal evaluation of the object or situation (Mitchell & Olson, 1981). As suggested by Fernando, Bharadhwaj, and Suganthi (2016), feelings like fear and response efficacy enhanced the involvement and further acted as a significant predictor of attitude. Also, communication strategies using emotions led to most favourable responses and additionally resulted in a positive attitude (Schaffner, Demarmels, & Juettner, 2015). Aggarwal and McGill (2012) indicated that anthropomorphism led to positive behavior. The present study focuses on the role of anthropomorphism as the stimuli in developing an attitude towards an advertisement and attitude towards a brand.

Attributes are considered to be related to the attitude towards intentions (Göransson, Näswall, & Sverke, 2009). The way in which the product attributes are communicated to the consumer affect the attitude of the consumer (Pizzutti, Basso, & Albornoz, 2016). Moreover, brand characters stimulate the human schema and further enhance the perception as human - like (Wan & Aggarwal, 2015). When consumers believe that the

attributes or personality characters of the brand have come to life (Aggarwal & McGill, 2012 ; Chandler & Schwarz, 2010 ; Kim & Kramer, 2015), they anthropomorphize more and would further develop feelings. Feeling of warmth is linked with attitude and intentions. People tend to judge a brand more favourably when it has a positive feeling of warmth. Feeling of warmth proved to be an evaluative parameter for the consumer, and that influenced their favourability towards the brand (Kervyn, Fiske, & Malone, 2012 ; Malone & Fiske, 2013). Intense feelings led to attitude towards that particular behavior (Petty et al., 2001). The interest which involved personal feelings was one of the factors that defined the likelihood of favorable attitude (Hosein, 2012). Also, Triantos, Plakoyiannaki, Outra, and Petridis (2016) suggested that there was an association between anthropomorphism and product - related attributes. Therefore, it is proposed that :

☞ **H2** : Attitude towards the advertisement will be significantly higher for anthropomorphized version of the ad than for the non - anthropomorphized version of the ad.

The tendency to anthropomorphize a brand led the consumer to feel greater congruity between the self and the brand and had a stronger attachment with the brand. Those brands which consumers can humanize are most likely to form positive attitudes towards the brands (MacInnis & Folkes, 2017). Higher favorable attitude towards the anthropomorphized advertisement will lead to a more positive attitude towards a brand.

☞ **H3** : Attitude towards a brand will be significantly higher for the anthropomorphized version of the brand than for the non - anthropomorphized version of the brand.

(4) Purchase Intentions and its Hypothesized Association with Anthropomorphism : Purchase intentions were defined as the individual tendency to take positive action to buy the product (Bagozzi & Burnkrant, 1979). Researchers have advocated purchase intentions as behavioral intentions expressed by a person after subjective evaluation and are influenced by attitude (Fishbein & Ajzen, 1975). Purchase intentions are characterized as favorable judgments, which are linked with the communication strategies that create awareness (Schaffner et al., 2015). Since anthropomorphism is considered as a useful tool for influencing people to behave positively (Aggarwal & McGill, 2007), anthropomorphism in the advertisement of smartphones can also be viewed as a threshold to purchase intentions.

Purchase intentions are considered to be one's plan towards making an effort to purchase. This motivational plan requires a sense of pull to initiate an effort to purchase, and attitude towards the brand acts as a motivational sense which leads to purchasing intentions (Eagly & Chaiken, 1993). Therefore, it is proposed that :

☞ **H4** : Purchase intention will be significantly higher for the anthropomorphized version of the brand than for the non - anthropomorphized version of the brand.

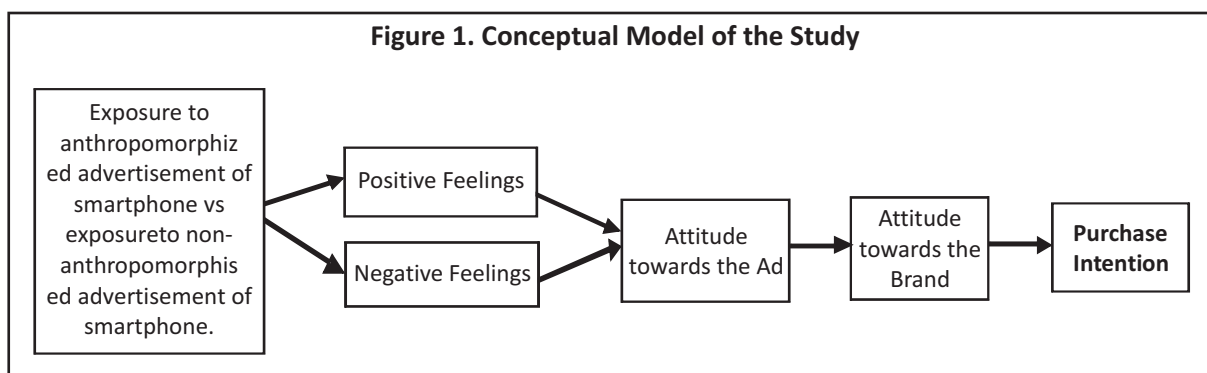
(5) Attitude Towards the Advertisement, Brand, and Purchase Intention Model : Attitude towards advertising has been defined as "a learned predisposition to respond in a consistently favourable or unfavourable manner to advertising in general" (Lutz, 1985, p. 53). Some studies suggested that once the advertisement was executed, the responses of the consumers to the advertisement message was not restricted towards only liking, but also evoked the feelings in a particular way, and these moods or feelings were not necessarily towards the advertisement (Batra, 1986 ; Holbrook, 1986). Johnson and Thomas (2018) established that attitude towards a brand and attitude towards an advertisement along with celebrity brand fit mediated the relationship between celebrity attractiveness and purchase intention. Mashwama, Chiliya, and Chikandiwa (2017) concluded through their research that attitude towards the adverts was affected by spokes - character attractiveness and expertise, and spokes - character trust determined attitude towards the brand. Other researchers like Jain, Trivedi, Joshi, and Daswani (2015)

suggested that comparative advertisement gained a favourable response towards the advertisement but not towards the brand and purchase intentions ; so, providing additional information, emotions, and feelings can be the tool to get a favourable response towards the brand and purchase intentions.

Rauschnabel and Ahuvia (2014) talked about anthropomorphism as a successful trigger to bring out positive feelings among consumers. Considering the above suggestions, we adopted the model given in the Figures 1 and 2, which is based on various previous research studies on advertisement (Burke & Edell, 1989 ; Edell & Burke, 1987 ; MacKenzie & Lutz, 1989 ; MacKenzie, Lutz, & Belch, 1986) and in addition, anthropomorphism was used in the advertisement as the stimulator to evoke feelings.

Feelings arose after exposure to the advertisement acted as an independent variable to all other variables in the model such as attitude towards the ad, attitude towards the brand, and purchase intentions. Feelings are responses of people after being exposed to anthropomorphic and non - anthropomorphic advertisements. This two-dimensional independent variable acted as an antecedent to dependent variables, which were also bi-dimensional and directed towards behavior.

Various studies of consumer behavior have talked about the inconsistency between attitude and purchase intentions (Anderson, Knight, Pookulangara, & Josiam, 2014 ; Celebi, 2015) but several others found attitude and purchase intentions to be highly correlated (Saleem, Wasaya, & Zahra, 2017 ; Srivastava & Mahendar, 2018). So, in the absence of concrete evidence, the research model was conceptualized where the attitude towards the brand and purchase intentions were measured on different scales as distinct constructs. The above discussion leads to the following conceptual model (Figure 1).



Methodology

This study was done to test the role of anthropomorphism in effectively influencing purchase intention of the sample population towards smartphones. The product category was specially chosen based on the growing potential of smartphone usage in India (Ericsson, 2016) and the tendency of individuals to anthropomorphize smartphones (Landwehr et al., 2011). The study was experimental using between - subject research design.

Students of an undergraduate marketing course of a university based in the National Capital Region of Delhi, India were recruited to participate in the study in return for extra credit. The students were between the age group of 18 to 25 years. This age group was most suited for the study because of their usage of smartphones for extended periods, and the consumption mostly focused on entertainment and social interactions (Markowitz & Montag, 2016). All the selected students were users of smartphones.

A total of 104 students participated in the study; 62% of the respondents were male, and the remaining 48% were females. Around 14 questionnaires were considered invalid because of incomplete responses and, therefore, were dropped while conducting the final analysis. An equal number of cases (45 from each experimental condition) were then taken for further analysis. The time period of the study was from March - July 2018.

(1) The Stimulus : Two advertisements were designed to test the conceptual model. A hypothetical smartphone brand "Usen" was conceptualized (refer to Figure 2 and Figure 3) to control any effect of brand familiarity on the individuals' responses. A pre-test was done to measure the familiarity of the brand name on a scale of 1 to 5 with "1" being most familiar and "5" being most unfamiliar. The brand name scored high on unfamiliarity. A thorough investigation was done to study the features offered by leading smartphone brands. The final selected features were the ones present in all the prominent smartphone brands, thus not indicating any association with a particular brand. This led to the elimination of any brand-related biases. The final selected features were Internet access - 3G/wi-fi, memory, camera (front and rear), bluetooth, Android, facility to download (Play Store), and display. Two versions of the ad were created - anthropomorphized and non-anthropomorphized. In the anthropomorphized version, the smartphone was given a human representation by adding human features to the smartphone image. In the non - anthropomorphized version, a basic image of the smartphone was used. It was ensured that in both the ads, the image of the smartphone did not indicate closeness to any existing smartphone brand.

Figure 2. Non - Anthropomorphised Ad

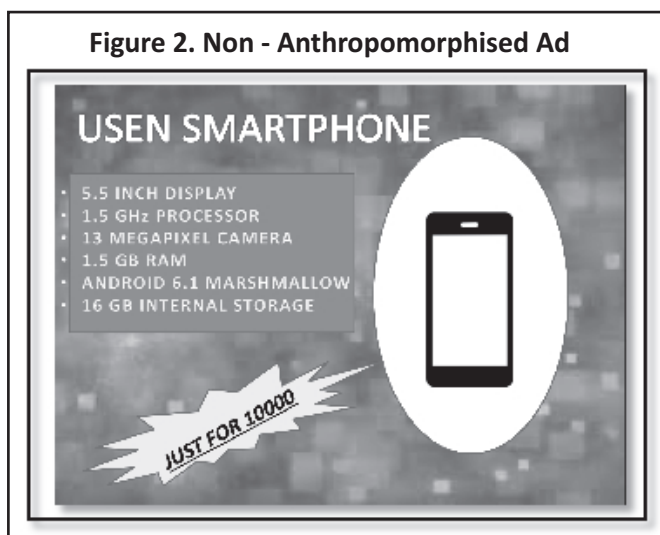
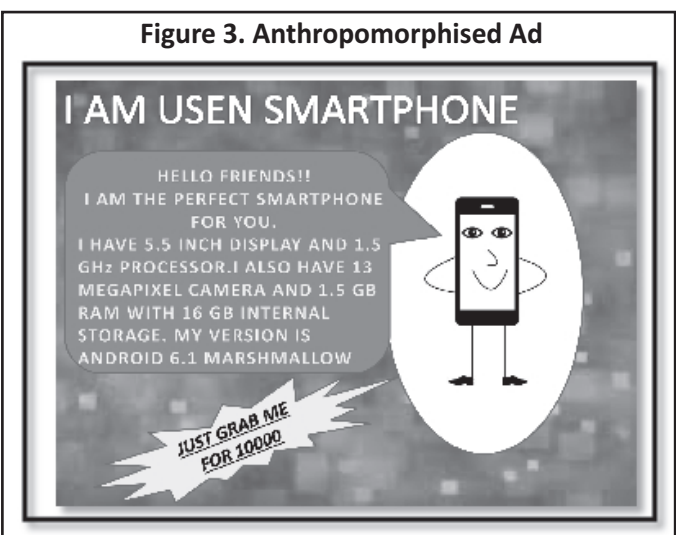


Figure 3. Anthropomorphised Ad



(2) Procedure : The study was conducted with two different groups. Both groups were subjected to the same questionnaire. The first part of the questionnaire asked the respondents to fill the necessary details related to their demographics. The next part of the survey asked them about their smartphone usage habits. They were then exposed to the test advertisement using a projector. Group one having 53 students was exposed to an anthropomorphized version of the advertisement and Group two having 51 students was exposed to a non-anthropomorphized version of the advertisement. Both the groups were then asked to fill their responses related to feelings generated by the ad, their attitude towards the ad, their attitude towards the advertised brand, and finally, their purchase intention to purchase the advertised smartphone brand.

(3) Measurement Instruments : Feelings were measured with an eight item scale adapted from Madden, Allen, and Twible's (1988) scale. This particular scale had five positive and three negative adjectives and subjects were asked to respond on a 7-point scale ranging from + 3 to - 3. Attitude towards the ad was measured using a scale developed by Madden et al. (1988), which consisted of six statements having two extremes each and subjects were asked to respond on a 7-point scale ranging from + 3 to - 3. To measure attitude towards the brand, the scale developed by Spears and Singh (2004) was used. The scale consisted of 28 statements and was responded on a 7-point semantic scale ranging between + 3 to - 3. Purchase intention was measured using the scale developed by

Table 1. Measurement Items and Scale Reliability

Items	Reference
Positive Feelings ($\alpha = 0.81$, CR = 0.812)	
Good ; Cheerful ; Pleased; Soothed	Madden, Allen, & Twibble (1988)
Negative Feelings ($\alpha = 0.732$, CR = 0.737)	
Insulted ; Irritated ; Repulsed	Madden, Allen, & Twibble (1988)
Attitude Towards the Ad ($\alpha = 0.864$, CR = 0.864)	
Pleasant/Unpleasant ; Liable/Unliable ; Interesting/Boring; Tasteful/Tasteless ; Artful/Artless ; Good/Bad	Madden, Allen, & Twibble (1988)
Attitude Towards the Brand ($\alpha = 0.903$, CR = 0.906)	
Unappealing/Appealing ; Bad/Good ; Unfavorable/ Favorable ; Undesirable/Desirable ; Low Quality/High Quality ; Unlikable/Likable ; Uninteresting/Interesting ; Useless/Useful ; Expensive/Inexpensive (R) ; Important/Unimportant (R) ; Dull/Exciting ; Unsophisticated/Sophisticated ; Inferior/Superior ; Negative/Positive ; Unenjoyable/Enjoyable ; Satisfactory/Not Satisfactory (R) ; Disagreeable/Agreeable ; Not Nice/Nice ; Worthless/Best ; Not Fond of / Fond of ; Unattractive/Attractive ; Lacks important benefits /Offers important benefits ; Cold/Warm ; Unfriendly/Friendly ; Not advisable to Choose/Advisable to Choose; Cheap/Expensive	Spears & Singh (2004)
Purchase Intention ($\alpha = 0.897$, CR = 0.822)	
Unlikely/Likely ; Impossible/Possible ; Never/Definitely ; Extremely Favorable/Extremely Unfavorable (R) ; Very Low Purchase Interest/Very High Purchase Interest ; Definitely Do Not Intend to Buy/Definitely Intend to Buy ; Definitely Buy It/Definitely Not Buy It (R) ; Probably Not Buy It/Probably Buy It ; Might Buy It/Might Not Buy It (R) ; Probability of Choosing; Certain/Chance	Spears & Singh (2004)

Table 2. KMO and Bartlett's Test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.785
Bartlett's Test of Sphericity	Approx. Chi-Square	4371.980
	df	1378
	Sig.	.000

Spears and Singh (2004). This scale had 11 items and was responded on a 7-point semantic scale again ranging from +3 to -3. The validity for all the scales was tested using Cronbach's alpha, and composite reliability for all the measures and the values were well within the acceptable value of 0.70 (Table 1). Kaiser - Meyer - Olkin (KMO) test was done to measure the sample adequacy of data. The calculated value came out to be 0.785, which was well above the recommended value of 0.60 (Tabachnick & Fidell, 2007). Bartlett's test of sphericity was also significant at $p < 0.05$ ($\chi^2 = 4371.980$), indicating that the data was suitable for further statistical analysis (Table 2).

Analysis and Results

To adjudge the impact of anthropomorphized smartphone advertisement vs non-anthropomorphized smartphone advertisement on positive feelings, negative feelings, attitude towards the ad, attitude towards the brand, and

Table 3. Multivariate Tests

Effect	Value	<i>F</i>	Hypothesis <i>df</i>	Error <i>df</i>	Sig.
Pillai's Trace	.611	26.339	5.000	84.000	.000
Wilks' Lambda	.389	26.339	5.000	84.000	.000
Hotelling's Trace	1.594	27.101	5.000	85.000	.000

purchase intention, multivariate analysis of variance (MANOVA) was applied. The assumptions of MANOVA were checked. To check the homogeneity of variance, Levene's test was performed, which measures equality of variance of the dependent variable for all the categories of the independent variable. For all the dependent variables, the significant value is more than 0.05, confirming the homogeneity of variance for all the dependent variables in the study.

The MANOVA results show significant multivariate test statistics (Wilk's lambda = .389, Pillai's trace = .611, Hotelling's trace = .156, significant at $p < .01$). Hotelling's trace is greater than Pillai's trace, thus indicating that the differential effects contribute to the model (Table 3).

H1a postulates that anthropomorphized version of advertisement of smartphones would lead to greater positive feelings. The results indicate that there is a significant difference between positive feelings generated after exposure to the two different versions of advertisements ($p < .05$, $F_{1,1} = 47.856$). The pattern of means shows that respondents had higher positive feelings when they were exposed to the anthropomorphized version of the advertisement ($M = 1.440$) in comparison to the non - anthropomorphized version of the advertisement ($M = .418$).

The results also indicate support for hypothesis H1b. There is a significant difference between negative

Table 4. Tests of Between - Subjects Effects

Dependent Variable	Sum of Squares	<i>df</i>	Mean Square	<i>F</i>	Sig.	Hypothesis Accepted/Rejected
Positive Feelings	23.511	1	23.511	47.856	.000	H1a Accepted
Negative Feelings	32.801	1	32.801	33.858	.000	H1b Accepted
Attitude Towards Ad	72.600	1	72.600	101.408	.000	H2 Accepted
Attitude Towards Brand	14.803	1	14.803	11.513	.001	H3 Accepted
Purchase Intention	3.075	1	3.075	16.264	.000	H4 Accepted

Table 5. Estimated Marginal Means

Dependent Variable	CASE	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
Negative Feelings	0	.215	.147	-.077	.506
	1	-.993	.147	-1.284	-.701
Positive Feelings	0	.418	.104	.210	.625
	1	1.440	.104	1.232	1.648
Attitude Towards the Ad	0	-.344	.126	-.595	-.094
	1	1.452	.126	1.201	1.703
Attitude Towards the Brand	0	.000	.169	-.336	.336
	1	.811	.169	.475	1.147
Purchase Intention	0	-.149	.065	-.278	-.021
	1	.220	.065	.091	.349

Note. 1: Anthropomorphised Ad ; 0 : Non- Anthropomorphised Ad

feelings across the two versions of the ad ($p < .05$, $F_{1,1} = 33.858$) with non-anthropomorphized version experiencing more negative feelings ($M = .215$) in comparison to the anthropomorphized version ($M = -.993$), thus leading to acceptance of H1b.

Results from MANOVA also present significant difference in attitude towards the ad ($p < .05$, $F_{1,1} = 101.408$), attitude towards the brand ($p < .05$, $F_{1,1} = 11.513$), and purchase intention ($p < .05$, $F_{1,1} = 16.264$) between the two exposed versions of the smartphone ad. The results clearly indicate a higher mean for attitude towards the ad ($M = 1.452$), attitude towards the brand ($M = .811$), and purchase intention ($M = .220$) for the anthropomorphized version in comparison to mean for attitude towards the ad ($M = -.344$), attitude towards the brand ($M = .000$), and purchase intention for the non - anthropomorphized version ($M = -.149$), thus leading to the acceptance of H2, H3, and H4, respectively (refer to Table 4 and Table 5).

Discussion

The results of this experimental study authenticate the role and impact of anthropomorphism in developing attitude and purchase intentions for smartphones amongst the participants. The empirical results of the experimental study support the hypotheses H1a and H1b which proposed that the anthropomorphized version of advertisement of smartphones will lead to greater positive feelings and less negative feelings and the non - anthropomorphized version of the advertisement of smartphones will lead to less positive feelings and greater negative feelings. This re-establishes the results of Rauschnabel and Ahuvia (2014), who proposed that the effect of anthropomorphism in bringing out the positive feelings was significant. Also, the results of this study prove that visual personification, that is, advertisements could trigger anthropomorphism and induced more positive emotions as discussed by Delbaere, McQuarrie, and Phillips (2011).

The findings of the current study demonstrate the impact of anthropomorphism on attitude towards the advertisement and attitude towards the brand by evoking positive feelings among consumers. This leads us to accept the hypotheses H2 and H3, which proposed a more favorable attitude towards the ad for an anthropomorphized version of the advertisement and also a more favorable attitude towards the brand in the anthropomorphized ad. As suggested by previous researchers, communication strategies using emotions lead to most favorable responses resulting in positive attitude (Schaffner et al., 2015) and anthropomorphic visual appearance also leads towards positive behavior and attitude (Perez - Vega, Taheri, Farrington & O' Gorman, 2018). This research further extends and suggests that anthropomorphism can be used as a tool to get favorable responses by evoking emotions in the form of positive feelings and attitude. Also, the inferences of the results indicate that the Indian population does anthropomorphize smartphones and as a theoretical implication, smartphones can be used as anthropomorphized products in studies related to the Indian population in future research studies.

Managerial Implications

The results of the study can be effectively employed by brands to design effective marketing strategies utilizing the phenomenon of anthropomorphism. The research has categorically proven the tendency of the young Indian population to anthropomorphize smartphones. This insight can help smartphone brands to use appropriate design elements to strengthen the attitude of consumers towards their brands. Businesses are always interested in knowing behavioral intentions of consumers, that is, purchase intentions. The results of this study established the final impact of anthropomorphism in raising purchase intentions significantly, leading us to accept the hypothesis H4. This tendency of anthropomorphism can be effective in increasing worth of businesses, which was also endorsed by Laksmidewi et al. (2017) who argued that the products with physical appearance and behavior like humans have higher tendency to be anthropomorphized and had a significant effect on purchase intentions of consumers.

Limitations of the Study and Scope for Further Research

The study has its limitations in the form of a limited audience chosen. Future studies can study the concept of anthropomorphized products within multiple age-groups, and the results can be compared to see the impact of anthropomorphized brands/ads on purchase intention. The research is also restricted to one type of product. Future studies can employ multiple product categories to study the differential effect of anthropomorphism. Previous researchers established that people from different cultures have a different perception of anthropomorphism (Epley et al., 2007). This study is limited to one regional culture, and further research should be done in multiple or cross - cultural/regional contexts.

References

- Aaker, J. L. (1997). Dimensions of brand personality. *Journal of Marketing Research*, 34 (3), 347 - 356. doi:10.2307/3151897
- Aggarwal, P., & McGill, A.L. (2007). Is that car smiling at me ? Schema congruity as a basis for evaluating anthropomorphized products. *Journal of Consumer Research*, 34 (4), 468 - 479.
- Aggarwal, P., & McGill, A.L. (2012). When brands seem human, do humans act like brands ? Automatic behavioral priming effects of brand anthropomorphism. *Journal of Consumer Research*, 39 (2), 307 - 323.
- Ahn, H. - K., Kim, H. J., & Aggarwal, P. (2014). Helping fellow beings: Anthropomorphized social causes and the role of anticipatory guilt. *Psychological Science*, 25 (1), 224 - 229. doi: 10.1177/0956797613496823
- Anderson, K.C., Knight, D. K., Pookulangara, S., & Josiam, B. (2014). Influence of hedonic and utilitarian motivations on retailer loyalty and purchase intentions : A Facebook perspective. *Journal of Retailing and Consumer Services*, 21(5), 773 - 779.
- Bagozzi, R. P., & Burnkrant, R.E. (1979). Attitude organization and the attitude-behavior relationship. *Journal of Personality and Social Psychology*, 37 (6), 913 - 929.
- Batra, R. (1986). Affective advertising: Role, processes, and measurement. In R. A. Peterson, W. D. Hoyer, & W R. Wilson (eds.), *The role of affect in consumer behaviour* (pp. 53 - 85). Lexington, MA : D. C. Heath and Company.
- Burke, M. C., & Edell J. A. (1989). The impact of feelings on ad-based affect and cognition. *Journal of Marketing Research*, 26 (1), 69 - 83.
- Celebi, S. I. (2015). How do motives affect attitudes and behaviours towards internet advertising and Facebook advertising ? *Computers in Human Behaviour*, 51, 312 - 324.
- Chandler, J., & Schwarz, N. (2010). Use does not wear ragged the fabric of friendship: Thinking of objects as alive makes people less willing to replace them. *Journal of Consumer Psychology*, 20 (2), 138 - 145.
- Chartrand, T. L., Fitzsimons, G.M., & Fitzsimons, G. J. (2008). Automatic effects of anthropomorphized objects on behaviour. *Social Cognition*, 26 (2), 198 - 209.
- Delbaere, M., McQuarrie, E. F., & Phillips, B.J. (2011). Personification in advertising : Using a visual metaphor to trigger anthropomorphism. *Journal of Advertising*, 40 (1), 121 - 130. DOI: 10.2753/JOA0091-3367400108

- Eagly, A. H., & Chaiken, S. (1993). *The psychology of attitudes*. Orlando, FL, US: Harcourt Brace Jovanovich College Publishers.
- Edell, J. A., & Burke, M. C. (1987). The power of feelings in understanding advertising effects. *Journal of Consumer Research*, 14 (3), 421 - 433.
- Epley, N., Waytz, A., & Cacioppo, J. T. (2007). On seeing human : A three-factor theory of anthropomorphism. *Psychological Review*, 114 (4), 864 - 886.
- Ericsson. (2016). *Mobility report, 2016*. Retrieved from www.ericsson.com/res/docs/2016/mobility-report/emr-rina-june-2016.pdf
- Fernando, A. G., Bharadhwaj, S., & Suganthi, L. (2016). Message involvement and attitude towards green advertisements. *Marketing Intelligence & Planning*, 34 (6), 863 - 882. doi: 10.1108/MIP-11-2015-0216
- Fishbein, M., & Ajzen, I. (1975). *Belief, attitude, intention and behavior : An introduction to theory and research*. Reading, MA: Addison - Wesley.
- Gardner, M. P. (1985). Does attitude toward the ad effect brand attitude under a brand evaluation set ? *Journal of Marketing Research*, 22 (May), 192 - 198.
- Gelbrich, K., Gathe, D., & Westjohn, S. A. (2012). Effectiveness of absurdity in advertising across cultures. *Journal of Promotion Management*, 18 (4), 393 - 413. doi: 10.1080/10496491.2012.693058
- Ghuman, M. K., Huang, L., Madden, T. J., & Roth, M. S. (2015). Anthropomorphization and consumer-brand relationships: A cross-cultural analysis. In S. Fournier, M. Breazeale, & J. Avery (Eds.), *Strong brands, strong relationships* (pp. 135 - 148). New York, NY : Routledge.
- Göransson, S., Näswall, K., & Sverke, M. (2009). Work - related health attributions : Their impact on work attitudes. *International Journal of Workplace Health Management*, 2(1), 6 - 21. doi: 10.1108/17538350910945974
- Government of Odisha. (n.d.). *Srimandir*. Retrieved from <http://odisha.gov.in/e-magazine/Srimandir/srimandirenglish/Epdf/Ech9.pdf>
- Guthrie, S.E. (1993). *Faces in the clouds: A new theory of religion*. New York : Oxford University Press.
- Hart, P. M., Jones, S. R., & Roynes, M.B. (2013). The human lens: How anthropomorphic reasoning varies by product complexity and enhances personal value. *Journal of Marketing Management*, 29 (1 - 2), 105 - 121. DOI: 10.1080/0267257X.2012.759993
- Holbrook, M. B. (1986). Emotion in the consumption experience: Toward a new model of the human consumer, In R. A. Peterson, W. D. Hoyer, & W. R. Wilson, (eds.), *The role of affect in consumer behaviour* (pp. 17 - 52). Lexington, MA : D. C. Heath and Company.
- Hooff, B. V., Schouten, A. P., & Simonovski, S. (2012). What one feels and what one knows: The influence of emotions on attitudes and intentions towards knowledge sharing. *Journal of Knowledge Management*, 16 (1), 148 - 158. doi: 10.1108/13673271211198990
- Hosein, N. Z. (2012). Measuring the purchase intention of visitors to the auto show. *Journal of Management and Marketing Research*. Retrieved from <https://www.aabri.com/manuscripts/111001.pdf>

- Huber, F., Meyer, F., & Schmid, D. A. (2015). Brand love in progress - The interdependence of brand love antecedents in consideration of relationship duration. *Journal of Product & Brand Management*, 24 (6), 567 - 579. doi: 10.1108/JPBM-08-2014-0682
- International Data Corporation. (2017). *IDC Report 2017*. Retrieved from <https://www.idc.com/getdoc.jsp?containerId=prAP4356951>
- International Data Corporation. (2018). *IDC Report 2018*. Retrieved from www.idc.com/getdoc.jsp?containerId=prAP41685916
- Jain, V., Trivedi, R.H., Joshi, V., & Daswani, A. (2015). Does explicit comparative advertising affect Indian consumers' attitudes towards low and high-involvement product? *International Journal of Emerging Markets*, 10(1), 122 - 140. doi:10.1108/IJOEM-09-2011-0089
- Johnson, J., & Thomas, T. (2018). What is beautiful is good: An evaluation of effectiveness of attractiveness in celebrity endorsements. *Indian Journal of Marketing*, 48(8), 24 - 36. doi:10.17010/ijom/2018/v48/i8/130538
- Kervyn, N., Fiske, S. T., & Malone, C. (2012). Brands as intentional agents framework : How perceived intentions and ability can map brand perception. *Journal of Consumer Psychology*, 22 (2), 166 - 176.
- Kim, H. C., & Kramer, T. (2015). Do materialists prefer the "brand - as - servant" ? The interactive effect of anthropomorphized brand roles and materialism on consumer responses. *Journal of Consumer Research*, 42 (2), 284 - 299.
- Laksmidewi, D., Susianto, H., & Afiff, A. Z. (2017). Anthropomorphism in advertising: The effect of anthropomorphic product demonstration on consumer purchase intention. *Asian Academy of Management Journal*, 22 (1), 1 - 25. DOI : <https://doi.org/10.21315/aamj2017.22.1>
- Landwehr, J.R., McGill, A.L., & Herrmann A. (2011). It's got the look: The effect of friendly and aggressive "facial" expressions on product liking and sales. *Journal of Marketing*, 75 (3), 132 - 146.
- Lutz, R. J. (1985). Affective and cognitive antecedents of attitude towards the ad: A conceptual framework. In L. Alford & A. Mitchell (eds.), *Psychological processes and advertising, effects : Theory, research, and applications*. NJ : Hillsdale.
- MacInnis, D.J., & Folkes, V.S. (2017). Humanizing brands: When brands seem to be like me, part of me, and in a relationship with me. *Journal of Consumer Psychology* 27(3), 355 - 374. doi:10.1016/j.jcps.2016.12.003
- MacKenzie, S. B., & Lutz, R. J. (1989). An empirical examination of the structural antecedents of attitude toward the ad in an advertising pretesting context. *Journal of Marketing*, 53 (2), 48 - 65.
- MacKenzie, S. B., Lutz, R.J., & Belch G.E. (1986). The role of ad as a mediator of advertising effectiveness : A test of competing explanations. *Journal of Marketing Research*, 23 (2), 130 - 143.
- Madden, T. J., Allen, C. T., & Twible, J. L. (1988). Attitude toward the ad: An assessment of diverse measurement indices under different processing "sets". *Journal of Marketing Research*, 25 (3), 242 - 252.
- Malone C., & Fiske, S. T. (2013). *The human brand : How we relate to people, products and companies*. New York, NY : Jossey - Bass.

- Markowetz, A., & Montag, C. (2016). *How age & gender affect smart phones usage*. UBI Comp/ ISWC'16 Adguinct, September 12 - 16, 2016. Heidelberg, Germany. doi: 10.1145/2968219,2971457
- Mashwama, V., Chiliya, N., & Chikandiwa, C. T. (2017). The effect of spokes-character credibility on consumers' attitude and buying intention : A South African focus. *Indian Journal of Marketing*, 47 (1), 11 - 25. doi:10.17010/ijom/2017/v47/i1/108806
- Mitchell, A., & Olson, J.C. (1981). Are product beliefs the only mediator of advertising effect on brand attitude ? *Journal of Marketing Research*, 18 (3), 318 - 332.
- Mithen, S. (ed.). (1998). *Creativity in human evolution and prehistory*. London : Routledge.
- Nan, X., Anghelcev, G., Myers, J. R., Sar, S., & Faber, R. (2006). What if a web site can talk? Exploring the persuasive effects of web-based anthropomorphic agents. *Journalism and Mass Communication Quarterly*, 83 (3), 615 - 631. doi: 10.1177/107769900608300309
- Nass, C., Steuer, J., & Tauber, E. R. (1994). Computers are social actors. *Proceeding CHI '94 Proceedings of the SIGCHI Conference on Human Factors in Computing Systems* (pp. 72 - 78). doi>10.1145/191666.191703
- Perez - Vega, R., Taheri, B., Farrington, T., & O' Gorman, K. (2018). On being attractive, social and visually appealing in social media : The effects of anthropomorphic tourism brands on Facebook fan pages. *Tourism Management*, 66, 339 - 347.
- Petty, R.E., DeSteno, D., & Rucker D. D. (2001). The role of affect in attitude change. In J. P. Forgas (ed.), *Handbook of affect and social cognition* (pp. 213 - 233) Hillsdale, NJ : Lawrence Erlbaum Associates.
- Pizzutti, C., Basso, K., & Alborno, M. (2016). The effect of the discounted attribute importance in two-sided messages. *European Journal of Marketing*, 50 (9/10), 1703 - 1725. doi: 10.1108/EJM-05-2015-0304
- Puzakova, M., Kwak, H., & Rocereto, J. F. (2013). When humanizing brands goes wrong: The detrimental effect of brand anthropomorphization amid product wrongdoings. *Journal of Marketing*, 77 (3), 81 - 100.
- Rauschnabel, P.A., & Ahuvia, A.C. (2014). You're so lovable: Anthropomorphism and brand love. *Journal of Brand Management*, 21 (5), 372 - 395.
- Sääksjärvi, M., & Hellén, K. (2013). How designers and marketers can work together to support consumers' happiness ? *International Journal of Design*, 7 (3), 33 - 44.
- Saleem, M. A., Wasaya, A., & Zahra, S. (2017). Determinants of frozen food purchase intentions: Insights from a developing country. *Indian Journal of Marketing*, 47 (7), 47 - 59. doi:10.17010/ijom/2017/v47/i7/116476
- Schaffner, D., Demarmels, S., & Juettner, U. (2015). Promoting biodiversity: Do consumers prefer feelings, facts, advice or appeals ? *Journal of Consumer Marketing*, 32 (4), 266 - 277. doi: 10.1108/JCM-11-2014-1220
- Schwarz, N., & Clore, G.L. (1996). Feelings and phenomenal experiences. In E. T. Higgins & A. W. Kruglanski (eds.), *Social psychology: Handbook of basic principles* (pp. 433 - 465). New York : Guilford Press.
- Spears, N., & Singh, S.N. (2004). Measuring attitude towards the brand and purchase intentions. *Journal of Current Issues and Research in Advertising*, 26 (2), 53 - 66.

- Srivastava, C., & Mahendar, G. (2018). Intention to adopt sustainable energy: Applying the theory of planned behaviour framework. *Indian Journal of Marketing*, 49(10), 20 - 33. doi:10.17010/ijom/2018/v48/i10/132325
- Tabachnick, B.G., & Fidell, L. S. (2007). *Using multivariate statistics*. Boston, MA : Allyn & Bacon/Pearson Education.
- Tam, K., Lee, S., & Chao, M. M. (2013). Saving Mr. Nature: Anthropomorphism enhances connectedness to and protectiveness toward nature. *Journal of Experimental Social Psychology*, 49(3), 514 - 521.
- Triantos, A., Plakoyiannaki, E., Outra, E., & Petridis, N. (2016). Anthropomorphic packaging: Is there life on “Mars”? *European Journal of Marketing*, 50(1/2), 260 - 725. doi: 10.1108/EJM-12-2012-0692
- Wan, J., & Aggarwal, P. (2015). Befriending Mr. Clean: The role of anthropomorphism in consumer-brand relationships. In S. Fournier, M. Breazeale, & J. Avery (Eds.), *Strong brands, strong relationships* (pp. 119 - 134). New York, NY : Routledge.
- Wang, W. (2017). Smart phones as social actors ? Social dispositional factors in assessing anthropomorphism. *Computers in Human Behavior*, 68, 334 - 344.
- Zhang, M., & Aggarwal, P. (2015). Looking ahead or looking back: Current evaluations and the effect of psychological connectedness to a temporal self. *Journal of Consumer Psychology*, 25(3), 512 - 518.

About the Authors

Ritu Gupta is a Post Graduate in Management with corporate and teaching experience of more than 15 years. She is NET qualified and is working in the capacity of Assistant Professor in the Department of Commerce, PGDAV College, University of Delhi, New Delhi. She has various national research publications to her credit.

Dr. Kokil Jain is a Post Graduate in Management with over 15 years of experience in the area of teaching and research. She is presently working as an Associate Professor in the area of Marketing at Amity International Business School, Amity University, Noida. She has various national and international research publications to her credit.