

RESEARCH ARTICLE

# Anthropomorphic Green Advertising: How to Enhance Consumers' Environmental Concern

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Anthropomorphism is the tendency to attribute human-like characteristics to non-human objects. We propose that anthropomorphizing nature object in green ad could trigger individual concern toward nature. This research, which consists of two studies using the experimental method, aims to examine the effect of anthropomorphic green ad on advertising attitude, brand attitude, green behavior, and intention to donate in green cause-related marketing program. The results of Study 1 showed that green advertising, which delivered anthropomorphism is able to create more positive attitudes toward brands and attitudes toward green cause-related marketing. Anthropomorphic green ad in the form of text or images, designed using human appearance and characteristics generate more positive response than the ad with no human element. Furthermore, the result of Study 2 indicates that anthropomorphic green ad also has a positive effect on the consumers' green behavior.

**Keywords:** *anthropomorphism, green advertising, brand attitude.*

**JEL classification:** *M31, M37, C91.*

Environmental sustainability issue has become a public concern in this world in the past decade. The consumption behavior of the consumers has contributed to this environmental problem (Haron, Paim & Yahaya, 2005). The lack of environmental awareness makes most of consumers do not represent green behavior. A green movement is necessary, which

involves companies and consumers in environmental preservation. As a social concern, the company's decision related to the natural environment issues is included in corporate social responsibility (CSR) or corporate sustainability goals. Variety of CSR activities are conducted including donations, charities, employment support, and sponsorships. For altruistic

purposes, companies set aside part of its profits to social cause (Kim, Kim & Han, 2005).

The extent of reporting on environmental degradation issues is followed by the indications that consumers began to concern about the issue of preservation of the natural environment. Consumers have increased interest in the variety of products that are more environmentally friendly, using natural elements, not harmful chemicals or recycled products, and are willing to pay for green products at a premium price (Laroche et al., 2001). Consumers were exposed to the green messages of advertising, such as recyclable, environmentally friendly, ozone safe, biodegradable (D'Souza & Taghian, 2005). Great works of the researchers examine how effectively a green message influencing consumer behavior.

Nature conservation themed advertising (green ad) is a way to engage consumers' green lifestyle: support reforestation, reduce plastic waste, consume green product, or donate to environmental problems. Green ad contains environmental benefits of a product, or aims to create environmental image of the company (Banerjee, Gulas & Iyer, 1995). Past research on green advertising: analyzing the effectiveness of the content of green advertising to encourage consumers to buy green products (Schuhwerk & Lefkoff-Hagius, 1995), the selection of green advertising appeal type (Green & Peloza, 2014), and assessing its effect on attitudes (D'Souza & Taghian, 2005). These studies examine the effects of green messages to the evaluation of the advertised product. We propose a study that examined the effect of green advertising not only on the brand, but also the further effect on the green consumer behavior. Specifically, we take advantage of the positive effects of anthropomorphism, into a green advertising appeal.

Anthropomorphism is defined as the tendency of people to attribute the characteristics, motivations, intentions and emotions as humans to nonhuman objects (Epley, Waytz, & Cacioppo, 2007). In some countries, volcanic ash from the mount eruption, is seen "human face" by the local community. Another example, an ocean that immerses human victims was considered being angry. Research shows that people have a tendency to anthropomorphize natural objects such as mountains, sea, and trees (Norenzayan, Hansen, & Cady, 2008, Laksmidewi & Soelasih, 2016a). People give human psychological qualities, such as consciousness, and social emotions on natural objects (Norenzayan et al., 2008), and this anthropomorphism

of nature is correlated with consumer attitude toward company's green program (Laksmidewi & Soelasih, 2016b). Anthropomorphism tendency exists within every person (Guthrie, 1995), and can be triggered by objects deliberately created by marketers, which are objects that resemble a physical or human nature (Aggarwal & McGill, 2007; Delbaere et al., 2011). We combine the positive effects of anthropomorphism and the positive effects of green advertising, to produce an effective anthropomorphic green advertising.

This study aims to examine whether the environmental conservation ad that illustrated anthropomorphic nature will affect consumer attitudes towards brands. Further, this study aims to demonstrate that these attitudes toward the brand enhance the consumers' willingness to donate in activities aimed the conservation of nature. For social purposes, this study also wants to examine whether these anthropomorphic green advertisings can enhance the consumer green behavior.

## THEORETICAL BACKGROUND

### *Anthropomorphism*

Humans have a tendency to see objects that are not human like humans. Epley, Waytz, and Cacioppo (2007) defined anthropomorphism as "imbuing the imagined or real behavior of nonhuman agents with humanlike characteristics, motivations, intentions, and emotions" (p.865). In this sense, the non-human agents include animals, nature, religious agents, technology equipment or mechanical tools. Past research shows that anthropomorphism occurs in the relationship between humans and animals (Epley, Waytz, Akalis & Cacioppo, 2008a, 2008b), computers, and a supernatural agent (Epley et al, 2008b); also in the relationship between humans and technology equipment (Waytz et al., 2010).

Humans give attribution of human qualities to the nature (Norenzayan, Hansen, & Cady, 2008). Trees, mountains, rivers, and animals are respected and conceptualized as agents of anthropomorphism, not because of their physical benefits (Guthrie, 1995). People have a tendency to attribute not only physical, but also psychological qualities to non-human objects. Previous research suggests that children assume that the tree has a physical and moral as humans (Gebhard, Nevers, Billmann-Mahecha, 2004). The leaves of the tree are interpreted to be like a human hair, that the

sap likes human blood, if the branches of the trees are felled, the tree will be hurt. Children interpret the tree as if it occurred on their own body (Gebhard et al., 2004).

Individual's anthropomorphism is related to how individual act and behaves towards non-human objects (Waytz et al. 2010). Individual's anthropomorphism will improve moral behavior toward non-human objects, including moral behavior towards nature (Waytz et al. 2010). A study by Tam, Lee and Chao (2013) showed that when an object is created to have human characteristics, it will foster a feeling of being connected with the objects of non-humans. Furthermore, Tam et al. (2013) show that anthropomorphic message of environmental problems make participants concerned with environmental issues. Showing pictures of trees with human traits or the trash that is crying can cause positive pro-social response, and even encourage consumers to donate (Ahn, Kim & Aggarwal, 2014).

Anthropomorphism is utilized in the field of marketing because it is believed can be a positive effect on consumer purchasing behavior. By marketers, anthropomorphism within the consumer can be triggered by creating objects that have human-like characteristics. Particularly on advertising, the object created has human characteristics, such as products that have characteristics of the human anatomy, the characters created ad shape, speak, and behave like a human, or using human scheme as the theme of the ad. When consumers see it, they think that the object is similar to humans (anthropomorphism). Featuring object such as human encourages a more positive evaluation of the product (Aggarwal and McGill, 2007), lowers the intention of consumers to replace their products (Chandler & Schwarz, 2010), lowers the risk perception of the product (Kim & McGill, 2011), increases preference for brands (Delbaere et al., 2011), and produces a higher level of sales (Landwehr, McGill, & Herrmann, 2011). In our studies we propose that anthropomorphism does not only have a positive effect on the product, but also enables consumers' concern about the natural environment.

One of the advantages of using anthropomorphic objects in ads is no necessity of using the real human as a brand endorser. Using the endorser in advertising advertiser requires foresight in choosing a suitable endorser with product or brand (Smith & Yang, 2008; Mishra, 2015). Consumers will respond to ads more positively, if the celebrity endorser used congruent

with the brand (Mishra, 2015). In order to eliminate the effects of celebrity's image, advertisers often choose to use a fictional character. In our study, we created a fictional character in the form of anthropomorphic natural objects: anthropomorphic mangrove tree (Study 1), and anthropomorphic green product: anthropomorphic shopping bag (Study 2).

### ***Anthropomorphic Green Advertising***

Banerjee, Gulas, and Iyer (1995) define green advertising as ads that meet the criteria, one of which is to promote a green lifestyle with or without the product / services highlight. The aim of which is to be conveyed are to promote green products, promote green image of the company, and affect the green behavior of consumers like reduce, reuse, and recycle (Banerjee et al., 1995). Green messages in green advertising are verbally and visually illustrated in such a way that aims to give persuasion on the consumer to behave green or buying green products (Kronrod, Grinstein & Wathieu, 2012). According to Schuhwerk and Lefkoff-Hagius (1995), green advertising effects on consumers differ according to their involvement with the environment. The effects of green advertising and non-green advertising on attitudes toward advertising and purchase intention do not significantly differ for consumers with high environmental involvement. In contrast to the consumers with high environmental involvement, green ads are more persuasive to low involvement consumers, compared to non-green ads. Also differs from the statement by D'Souza and Taghian (2005), consumers with low environmental involvement tend to ignore more green advertising.

Previous research has shown that the way the message conveyed in ad affects consumer evaluation of the product (McQuarrie & Phillips, 2013) and consumer attitude toward the brand (Labroo, Dhar, & Schwarz, 2008; Arias-Bolzmann, Chakraborty, & Mowen, 2000). Consumers will respond positively to advertising messages conveyed indirectly. When compared to the text message, the message in the form of images will be responded more positively (McQuarrie & Phillips, 2013). Familiar feeling and the wealth of experience and knowledge about human help consumers understand what they see on ads more easily (Delbaere, McQuarrie, & Phillips, 2011). Although the visual images are not directly related to the product, the ease of message processing can improve product preferences (Labroo et al. 2008).

The ease of processing these stimuli is experienced as a positive experience, more interesting and fun for consumers thus increasing consumer preference for products (Labroo et al., 2008; Kim & Labroo, 2011).

Anthropomorphism has a positive effect on product evaluation. Featuring products such as humans produce more positive evaluation of products (Aggarwal and McGill, 2007; Smith, 2008). Anthropomorphic ad image produces higher consumer attitudes toward the brand than the ad with the other concept of metaphor (Delbaere et al., 2011). Product design with the look of a human face lowers consumers' perception of risk, and increases willingness to use the product (Kim & McGill, 2011). Hence, incorporating the anthropomorphic elements into green advertising would have positive impact on brand evaluations.

## HYPOTHESES OF THE STUDY

This study consisted of two studies aimed at answering the research question: Is the delivery of anthropomorphic environmental messages able to encourage consumers to have a positive brand attitude and care for the environment?

**Hypothesis 1:** Brand attitude will be higher, if the green ad message is conveyed in anthropomorphic image compared to non-anthropomorphic image.

Advertising effectiveness is determined not only because of the message, but is also determined by how well the message is delivered. Past studies indicate that advertising creativity affects on consumer response to the advertising messages in various stages of the hierarchy of responses include responses of cognitive, affective, and behavioral (Smith, Chen & Yang, 2008). Smith et al. (2008) also showed that the creativity of advertising affects attitude toward the brand, product evaluation, purchase intention, emotional reactions, and motivation. Anthropomorphic green ad becomes a tactical creativity on how to convey a green message in a way that is familiar to humans.

Execution ads affect consumer perceptions of advertising (MacKenzie & Lutz, 1989). Perception of advertising is defined as multidimensional perception of the stimulus ads, including the execution factor, but excluding the perception of the advertised brand (MacKenzie & Lutz, 1989). The aspects of advertising

beside the message or product information are critical to shape consumers' attitudes toward advertising, which ultimately affect consumers' purchase intention (Lutz et al, 1983). When receiving the exposure of an ad, the consumer will construct attitudes toward the ad ( $A_{ad}$ ), and then those ad attitudes affect his attitude toward the brand and purchase intention. Consumer response toward green ad has positive effect on attitude toward green ad, and then affects purchase intention significantly (Zhu, 2013). Giving human characteristics on an object in environmental themed posters may affect people to act pro-socially (Ahn et al., 2014).

**Hypothesis 2:** Anthropomorphic green ad affects the attitude toward green cause-related marketing through the mediation of ad attitude and brand attitude.

Consumers are faced with a variety of consumption choices, either the green or non-green. A consumer can choose the product that can be recycled, biodegradable, or contain environmentally friendly materials. Previous research shows that buying eco product gives positive emotions for consumers (Gutierrez & Seva, 2016). Their study provides the inspiration that emotional attachment is important in the eco product marketing (Gutierrez & Seva, 2016). In practice emotional attachment is done through green efforts such as green cause related marketing program. A consumer can choose to support the company's initiative to plant trees, saving water, or reduce plastic waste. The company can encourage consumers to behave such green, through the theme of the ad, linking the green lifestyle to the product (Banerjee et al., 1995). Previous research shows that for the consumers who have less involved with the environment, the green ad is more persuasive than non-green ad (Schuhwerk & Lefkoff-Hagius, 1995). Green and Peloza (2014) showed that the ad appeal type affects environmentally-friendly consumption and consumers are more responsive to the ad that highlights the environmental benefits when consumers experience public accountability. These previous research indicated that green ad appeal is important to encourage environmentally-friendly consumption behavior. Therefore, we propose an anthropomorphic element into green advertising appeal to affect green behavior.

Anthropomorphism can be operationalized as mental state attribution to non-human objects.



The presence of human characteristics on a non-human object make individuals do self-reflection, perceives an object to have a humanlike mind, and create moral connection with the object (Waytz et al., 2010). Anthropomorphizing nature would be followed by treating nature morally (Gebhard et al., 2004). Individuals may feel the experience of higher emotion of nature object, such as sadness (Gebhard et al., 2004). Anthropomorphism toward the object can generate social connection with the object, and then evoke conservation behavior (Tam et al., 2013). We hypothesized that the green ad which contains anthropomorphic element would affect the consumer green behavior. Considering the effect of advertising (Lutz et al, 1983), brand attitude and the attitude of advertising may have the role of mediation.

**Hypothesis 3:** Anthropomorphic green ad affects green behavior through the mediation of ad attitude and brand attitude.

The limitation of this study is that our study participants were young, their purchase consumption was limited, and so the products in our stimulus were adjusted to them. In addition, results may be different if applied to consumers in communities that have different cultures with different levels of anthropomorphism.

## DATA AND METHODS

### *A Preliminary Study*

In the main study we wanted to examine how consumer responses to anthropomorphic natural object (Study 1) and anthropomorphic green product (Study 2). We conducted a preliminary study aimed to assess the level of consumer anthropomorphism of nature (Laksmidewi & Soelasih, 2016a). We suspect that Indonesian consumers anthropomorphize nature. These are evident from some natural events such as volcanic eruptions, tsunamis, or in everyday life, often a story about people who see objects that resemble a human nature. For example, when Mount Merapi erupted, local communities saw the volcanic ash rose into the sky shaped the human face. There are also thoughts that the mountain was “angry”. Epley et al. (2007) in The Three Factor Theory of Anthropomorphism revealed that anthropomorphism tendency exists within every human, but in different levels, influenced by cultural factor. Therefore, we think it is necessary to examine

the level of Indonesian consumers’ anthropomorphism, especially towards nature. In the main study that we did use an experimental method, we must be sure that the setting artificial (anthropomorphic object manipulation) matches the participants, in order to achieve internal validity (Largoza, 2006), so that a preliminary study of the anthropomorphism of nature is required.

We conducted a survey to a sample of 185 consumers. Anthropomorphism instrument was adapted from a scale of Individual Differences in Anthropomorphism Questionnaire (IDAQ) developed by Waytz, Cacioppo & Epley (2010). In accordance with the aim to determine the anthropomorphism of nature, we only used natural objects stimulus. 13 items of nature anthropomorphism ( $\alpha = 0.872$ ) include natural objects: volcanoes, clouds, trees, oceans, rivers, wind, and forests. Natural anthropomorphism indicators measured include emotion, intention, consciousness, will, and mind. All items used the scale of 1 (not at all noticeable) to 6 (very real). The result showed that respondents’ anthropomorphism of nature was not high, but was at moderate levels, and different significantly with a value of 3 ( $t = 7.732$   $p = 0.000$   $M = 3.5291$   $SD = 0.87906$ ) (Laksmidewi & Soelasih, 2016a).

Previous research has shown that anthropomorphism may be triggered by stimuli of marketing, such as advertising, which in turn positively affects the evaluation of the product and consumer behavior (Aggarwal & McGill, 2007, Delbaere et al., 2011). Thus, in the Study 1, we do anthropomorphic manipulation on the natural objects in green advertising. Study 1 aimed to test whether anthropomorphic natural object image in advertising will make consumers willing to participate by donating money in a green cause-related marketing (CRM).

## STUDY 1

Previous research has shown that anthropomorphism may be triggered by stimuli of marketing, such as advertising, which in turn positively affects the evaluation of the product and consumer behavior (Aggarwal & McGill, 2007, Delbaere et al., 2011). Thus, in the Study 1, we do anthropomorphic manipulation on the natural objects in green advertising. Study 1 aimed to test whether anthropomorphic natural object image in advertising will make consumers willing to

participate by donating money in a green cause-related marketing (CRM).

*Design and Participant.* We designed an experimental study to identify the effect of anthropomorphic green advertising toward green cause-related marketing, with the mediating role of brand attitude. The experiment had four treatment conditions (anthropomorphism: anthropomorphic vs. non-anthropomorphic) x (ad form: visual vs. verbal) between participants design. Anthropomorphic green ads are manipulated in the form of four kinds of print advertising, each for one group of conditions. Two hundred and fifteen undergraduate students (88 male and 127 female) from Universitas Katolik Indonesia Atma Jaya (UAJ) Jakarta, Indonesia, participated in an exchange for partial fulfillment of a course requirement. The use of student in the experimental studies used to do, because the student can understand the instructions given the experimenter, and they deserve to represent real people (Largoza, 2006). Participants were randomly assigned to one of the four conditions.

*Stimulus.* Four different versions of print ads were created. Based on a pilot study we did before among 40 undergraduate students at UAJ, Jakarta, we chose the mangrove trees as a character in all ads. The reason was respondents (from the same population with the main study participants) know the problems of the destruction of mangrove forests in Indonesia's coastal. Advertising 1: the text-anthropomorphic version, we made a story about Uncle Mangrove. The sample paragraph: Uncle Mangrove was tall and burly. He was friendly with small birds, insects, mammals and reptiles. He protects humans from abrasion and tsunami. Nowadays, 40% of his families were killed by humans. Advertising 2: the text-non-anthropomorphic version, we made a similar story; the difference was Mangrove described as an object, not a human. There was no mention "uncle" or "he". Advertising 3: In the image-anthropomorphic version, assisted by an artist, we created a character Uncle Mangrove in the form of a tree, with leaves as hair, branches as hands, and roots as legs. He had the eyes, mouth, and he was crying, asking for help. And advertising 4: non-anthropomorphic version, the picture of mangrove looks like the real tree (object). Adjusting with participants, we selected healthy snack as the advertised product. To control the effects of prior attitudes toward a brand, a fictitious brand name was used for the product. All four ads

had the same product, brand, and narration, offered that buying a nature wafer meant donating Rp.1000 for mangrove planting.

*Procedure and Measures.* Participants participated in the experiment in groups of eight to ten. Participants were told that the purpose of the study was to obtain their evaluation of a green product advertisement, and then they signed informed consent. Participants had advertising exposure; and then participants completed dependent measures, finally responded to the anthropomorphism scale, attention to the ad, and standard demographic questions. As dependent variable, attitudes toward green CRM program were measured using 4 items ( $\alpha = 0.892$ ) adapted from Grau and Folse (2007), including: I will participate in the mangrove reforestation program, I will donate to the program mangrove reforestation by buying "Nature Wafer". Attitude toward the brand ( $\alpha = 0.878$ ) as mediating variable was adapted from Garretson & Niedrich, 2004, including statements of whether the participant likes / dislikes; happy / not happy; good / bad; positive / negative towards the advertised brand.

## STUDY 2

The preliminary study results showed that Indonesian consumers anthropomorphize nature at moderate levels, indicating that consumers pay moral attention to the nature. According to Waytz et al. (2010) consumer's anthropomorphism towards the object would lead to the tendency of behaving morally toward the object. Anthropomorphic natural object in Study 1 raises moral behavior toward the object, by making a donation through the product purchase. In Study 2 we tried to design the anthropomorphic green product associated with the preservation of nature. We hope anthropomorphism constructed will encourage consumers to use the green products, which means supporting the conservation of nature. Study 2 aimed to test whether anthropomorphic illustration of green products in the ad will make consumers are willing to perform green behavior.

*Design and participant.* Study 2 had two treatment conditions (green product: anthropomorphic vs. non-anthropomorphic) between participants design. One hundred and twenty undergraduate students (67 male and 53 female) from Atma Jaya Catholic University of Indonesia participated in this study and were randomly

assigned to one of the two conditions. The procedure was similar to study 1.

*Stimulus, Procedure and Measures.* To reduce plastic waste, the Indonesian government is currently being intensified the public to bring their own shopping bags when shopping. So we chose a shopping bag as object in stimulus. We created two versions of print cause-related marketing advertising with fictitious brand. In anthropomorphic condition, we design a picture of bag with human traits: eyes, mouth, hands and feet. The bag invites consumers to take him shopping. In non-anthropomorphic condition, the shopping bag portrayed as an object, like a real bag. The experimental procedure is the same as Study 1. Participants had advertising exposure; and then participants completed dependent measures, finally responded to the anthropomorphism scale, attention to the ad, and standard demographic questions. In contrast to Study 1, in Study 2 the dependent variable was green behavior, with sample of items: I will care for the earth, I will not damage the earth.

## RESULTS

### Result of Study 1

*Manipulation Checks.* To assess whether the anthropomorphic green ad had triggered higher anthropomorphism, the participants indicated whether the ad had human traits. Anthropomorphism was measured by five statements ( $\alpha = .876$ ) including: In

the ad, the mangrove had characteristics like humans; looked as if alive, looking sad, seemed to be suffering, asked for help. ANOVA result showed there were significant differences among the four ads ( $F = 38.850$   $p = 0.000$ ). Text-non-anthropomorphic ad yielded the lowest anthropomorphism ( $M = 4.0906$ ), and the image-anthropomorphic ad was the highest ( $M = 5.0667$ ), suggesting the manipulation was successful.

*Brand attitude.* Hypothesis 1 was tested using one-way ANOVA, with four green ad conditions, and the attitude toward the brand as the dependent variable. The results showed that the four ads generate significant different brand attitudes ( $F = 6,480$   $p = 0.000$ ). Post-hoc tests showed that the non-anthrop-text ads with image-anthrop ads differ significantly ( $p = 0.000$ ), similar to non-anthrop image ads with anthrop-image ads ( $p = 0.019$ ). This means using image ads is more effective than ads with just the text. Furthermore, anthropomorphic image ad had more positive effect on brand attitudes than non-anthropomorphic image ad. Hypothesis 1 was supported.

*Mediation Analysis.* We performed the mediation analysis with attitude toward green CRM as the dependent variable, anthropomorphic green ad as the predictor, ad attitude and the brand attitude as the mediating variable (Figure 1), using the OLS regression PROCESS SPSS macro model 6 and bootstrap analysis (Hayes, 2013). Anthropomorphic green ad had two categories: image-anthropomorphic ad and image-non anthropomorphic ad as the control category.

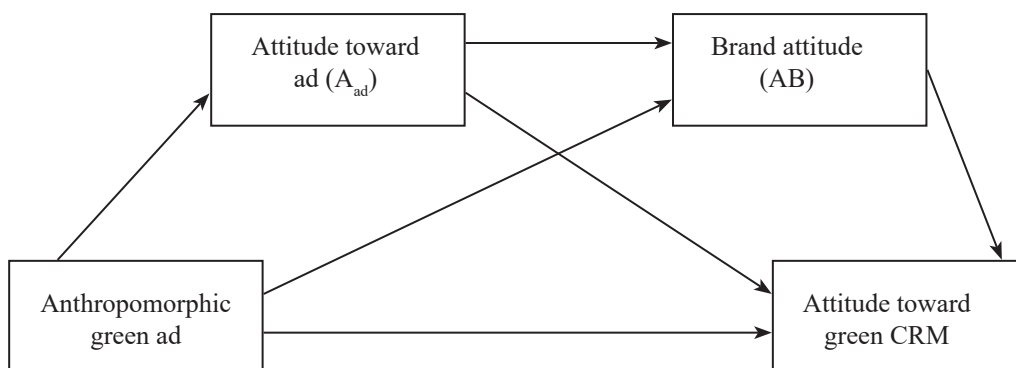


Figure 1. Model of Hypothesis 2

The results (Table 1) showed that the direct effect of the anthropomorphic green ad on green CRM was not significant ( $t = -0.5459$   $p = 0.5863$ ). The effect of anthropomorphic green ad on  $A_{ad}$  was significant ( $t = 2.5616$   $p = 0.0118$ ), as well as the effect of  $A_{ad}$  on AB ( $t = 5.7648$   $p = 0.0000$ ), and AB on attitude toward green CRM ( $t = 4.5079$   $p = 0.0000$ ). The indirect effect of green ad anthropomorphic on green CRM through attitudes toward the ad ( $A_{ad}$ ) ( $axb = 0.0889$  95% CI 0.0143; 0.2227) and the indirect effect of anthropomorphic green ad on attitude toward green CRM through brand attitude (AB) ( $axb = 0.1361$  95% CI 0.0492; 0.2799) were both significant. More importantly, the indirect effect of anthropomorphic green ad on attitude toward green CRM through  $A_{ad}$  and AB (path: anthropomorphic green ad  $\rightarrow$   $A_{ad}$   $\rightarrow$  AB  $\rightarrow$  attitude toward green CRM) was significant ( $axb = 0.0731$  95% CI 0.0172; 0.1936). These result showed that the effect of anthropomorphic green ad on attitude toward green CRM was mediated by ad attitude and brand attitude. Thus, Hypothesis 2 was supported.

**Result of Study 2**

*Manipulation Checks.* We averaged four items to measure anthropomorphism ( $\alpha = 0.887$ ). The ANOVA revealed that participants in anthropomorphic condition indicated that the shopping bag “daun hijau” was more humanlike, alive, happier and more excited compared with non-anthropomorphic condition ( $M_{anthrop} = 4.5297$ ,  $M_{non-anthrop} = 3.2049$ ,  $F(1,119) = 50.260$ ,  $p =$

.000), suggesting the manipulation processes had been successful.

*Brand attitude.* A one-way ANOVA was performed using the average of the four questions on brand attitude as the dependent variable. The result showed that the anthropomorphic condition and the non-anthropomorphic condition did not differ significantly ( $M_{anthrop} = 4.8915$ ,  $M_{non-anthrop} = 4.6721$ ,  $F(1,119) = 2.797$ ,  $p = .097$ ). However, the ANOVA result showed that the anthropomorphic condition expressed a higher brand attitude than in the non-anthropomorphic condition ( $M_{anthrop} = 4.8249$ ,  $M_{non-anthrop} = 4.3989$ ,  $F(1,119) = 9.856$ ,  $p = .002$ ). These results indicated that in cases of green products, consumers had other considerations to assess a brand; therefore advertising did not directly affected brand attitude.

*Mediation Analysis.* To get a better understanding of the indirect effect of advertising attitude, and brand attitude, we conducted again the mediation analysis. The mediation model is similar to Study 1, except for the dependent variable. We performed the mediation analysis with green behavior as the dependent variable, anthropomorphic green ad as the predictor, and the advertising attitude ( $A_{ad}$ ) and brand attitude (AB) as the mediating variable, using the OLS regression PROCESS SPSS macro model 6 and bootstrap analysis (Hayes, 2013).

The effect of green ad on attitude toward ad ( $t = 2.9135$ ,  $p = 0.0043$ ) was significant (Table 2). Ad with

**Table 1:** The mediation results ( $n = 109$ )

Predictors	Model 1 $A_{ad}$ $\beta$ (SE)	Model 2 Brand $\beta$ (SE)	Model 3 CRM $\beta$ (SE) <sup>b</sup>
Independent Variables			
Condition <sup>a</sup>	.3353 (.1309)*	.2819 (.1092)*	-.0678(.1242)
$A_{ad}$		.4513 (.0783)**	.2653(.0990)**
Brand			.4829(.1071)**
R <sup>2</sup>	.2404	.5659	.5881
<b>Bootstrap indirect effects<sup>c</sup></b>	<b><math>\beta</math> (SE)</b>	<b>LL 95% CI</b>	<b>UL 95% CI</b>
Condition $\rightarrow$ Aad $\rightarrow$ CRM	.0889 (.0514)	.0143	.2227
Condition $\rightarrow$ Aad $\rightarrow$ Brand $\rightarrow$ CRM	.0731(.0429)	.0172	.1936
Condition $\rightarrow$ Brand $\rightarrow$ CRM	.1361(.0572)	.0492	.2799

Note: LL = Lower limit; UL = Upper Limit; CI = Confidence Interval. Unstandardized regression coefficients are reported with standard error in parentheses.

<sup>a</sup>Non-anthropomorphic condition as the reference category. <sup>b</sup>Direct and total effect. <sup>c</sup>Bootstrap sample size = 1000.

\* $p < .05$ ; \*\* $p < .01$



anthropomorphic natural object generated more positive attitude toward the ad than non-anthropomorphic. However the effect of anthropomorphic green ad on brand attitude ( $t = -0.3451$ ,  $p = 0.7306$ ) was not significant. Attitude toward the ad has a significant effect on brand attitude ( $t = 9.6546$ ,  $p = 0.0000$ ). And then, brand attitude has a significant effect on green behavior ( $t = 2.6493$ ,  $p = 0.0092$ ).

Indirect effect of anthropomorphic green ad on green behavior through attitude toward the ad was significant (Table 2) (path GreenAd  $\rightarrow$  Aad  $\rightarrow$  GreenB:  $ab = 0.0989$  95% CI 0.0210; 0.2445). But indirect effect of anthropomorphic green ad on green behavior through brand attitude was not significant (path GreenAd  $\rightarrow$  AB  $\rightarrow$  GreenB:  $ab = -.0104$  95% CI -0.0775; 0.0468). More importantly, path GreenAd  $\rightarrow$  Aad  $\rightarrow$  AB  $\rightarrow$  GreenB was significant, Indirect effect of anthropomorphic green ad on green behavior through attitude toward the ad and brand attitude was significant ( $ab = 0.0756$  95% CI 0.0199; 0.1843). Green ad cannot affect attitude toward the brand directly, but can affect attitude toward advertising in advance. So the effect of green ad on green behavior was not only mediated by the attitude toward the brand.

## DISCUSSIONS

### Discussion of Study 1

Anthropomorphism can be triggered by human-like physical appearance (eg. face, hand), and a human-

like mental condition (eg. intention, consciousness) (Waytz, Cacioppo, & Epley, 2010). Human mind or mental states are considered as characteristics that distinguish humans from other objects (Waytz et al., 2010). If an object has the appearance and seemed to move like a human, then the object is considered to have a mental condition such as a human (Waytz et al., 2010). Objects that are shaped like humans, make consumers have a positive attitude towards advertising and have the intention to buy the product (Laksmidewi, Susianto & Affif, 2017). In the stimulus of Study 1, natural object (mangrove tree) was illustrated into human-like figure. Mangrove illustrated as having hands, feet, eyes, nose and mouth. He was also illustrated as having human-like emotions: crying and asking for help. Results indicate that this green ad conveyed in anthropomorphic mangrove image generated the greatest anthropomorphism, compared to non-anthropomorphic image condition and also text conditions.

Participants felt the suffering experience of the mangrove, which made them understand the advertising message better, and then respond positively to brand. Enriching previous studies that displaying products with human traits will create a more positive evaluation of the product (Aggarwal and McGill, 2007; Landwehr et al., 2011). Study 1 showed that participants anthropomorphize natural object when the object is displayed as a human with human-like appearance and behavior, then it leads to a positive

**Table 2:** The mediation results ( $n = 120$ )

Predictors	Model 1 A <sub>ad</sub> $\beta$ (SE)	Model 2 Brand $\beta$ (SE)	Model 3 Behavior $\beta$ (SE) <sup>b</sup>
Independent Variables			
Condition <sup>a</sup>	.4053 (.1391)**	-.0351 (.1018)	.2619 (.1235)*
A <sub>ad</sub>		.6280 (.0651)**	.2440 (.1058)*
Brand			.2971 (.1121)**
R <sup>2</sup>	.2590	.6755	.5471
<b>Bootstrap indirect effects<sup>c</sup></b>	<b><math>\beta</math> (SE)</b>	<b>LL 95% CI</b>	<b>UL 95% CI</b>
Condition $\rightarrow$ Aad $\rightarrow$ Behavior	.0989 (.0548)	.0210	.2445
Condition $\rightarrow$ Aad $\rightarrow$ Brand $\rightarrow$ Behavior	.0756 (.0397)	.0199	.1843
Condition $\rightarrow$ Brand $\rightarrow$ Behavior	-.0104 (.0318)	-.0775	.0468

Note: LL = Lower limit; UL = Upper Limit; CI = Confidence Interval. Unstandardized regression coefficients are reported with standard error in parentheses.

<sup>a</sup>Non-anthropomorphic condition as the reference category. <sup>b</sup>Direct and total effect. <sup>c</sup>Bootstrap sample size = 1000.

\* $p < .05$ ; \*\* $p < .01$

evaluation toward brand. Consumers' inclination to purchase a brand in the market place depends upon the prior attitude toward the brand (Fishbein & Ajzen, 1975). Our study shows that the brand attitude affects positively on willingness of participants to contribute to the cause-related marketing by purchasing product.

As stated by Ahn et al. (2014), showing pictures of mangrove trees with human traits can cause positive pro-social response and even enable consumers to donate. More than like the brand, participants were willing to support the efforts to preserve the natural environment, through their support of the green cause-related marketing. Participants were willing to give a donation for the planting of mangrove by purchasing product. Although we do not explicitly measure the feeling of being connected to the object in the ad such as the study of Tam et al. (2013), the ad with anthropomorphic of mangrove generates the intention of donation more positively than non-anthropomorphic mangrove.

### ***Discussion of Study 2***

In Study 2 we tried to examine the effect of anthropomorphic green product in advertising, in contrast to Study 1 which illustrated anthropomorphic nature object. Based on Indonesian consumers' tendency to anthropomorphize nature, we suspected that the anthropomorphism which was created through an anthropomorphic green product will also trigger the pro-social behavior towards natural objects. Study 2 result shows that anthropomorphic shopping bag image was more capable to induce participants to carry the shopping bags from home when shopping, than if the shopping bag was illustrated as an object. Messages and images of bag with human traits, which appealed participants to invite "him" (Take me when shopping) responded more positively than the shopping bag as an object (Bring your own shopping bags).

Previous research has shown that individual's anthropomorphism has a positive correlation with green behavior (Waytz, et al., 2010). The tendency of anthropomorphism was influenced by social motivations that are indirectly influenced by the culture (Epley et al., 2007). In certain cultures, people anthropomorphize animals more, while in the other cultures, people anthropomorphize nature (Norenzayan, Hansen, & Cady, 2008). The nature of anthropomorphism of nature in Indonesian society

was taken from the stories of ancestors and became a phenomenon. Our preliminary study results show that Indonesian consumers anthropomorphize nature at a moderate level (Laksmidewi & Soelasih, 2016a). Both of our study showed that any anthropomorphic object in an ad with a green message, would lead a feeling of being connected with nature, which then motivated consumers to donate to natural problems (replanting of mangrove forests), and motivated consumer to do green behavior (reducing plastic waste).

According to Guthrie (1995), thinking about something that has resemblances to ourselves will create a feeling of familiarity; this makes us easier to understand it. Images of natural objects or green products that were created to have similarities with ourselves (having human characteristics) create a feeling of familiarity, so that makes it easier to understand. In our Study 1, participants were easier to understand the issue of Uncle Mangrove in the form of text and pictures, compared with Mangrove in the form of an object. Similarly in Study 2, participants were more persuaded by the shopping bag character who exclaimed to invite "him" shopping, compared to the shopping bag as an object.

## **CONCLUSIONS AND FUTURE RESEARCH**

Green earth is free from pollution and waste, it is a dream place to stay for us and our future generations. It is time for the consumers to take part of improving the natural environment. Green advertising which promotes green lifestyles (Banerjee, Gulas, and Iyer, 1995) can be chosen to be the theme of the ads that encourage consumers to behave protecting the earth, as well as to promote the product. This study contributes about the effectiveness of delivering a green message in green advertising.

Previous research in the field of marketing has proven that anthropomorphism provides a positive effect on the evaluation of the product (Aggarwal and McGill, 2007; Delbaere et al., 2011, Landrwerf et al., 2011) and is positively correlated with the moral behavior (Waytz et al., 2010). Our research was confounding elements of anthropomorphism in green advertising. The result indicates that by using elements of anthropomorphism, green advertising is more effective than without the element of anthropomorphism.

In Study 1, the natural object that was illustrated to have human characteristics (anthropomorphic) positively affects ad attitude and brand attitude, which in turn has positive effect on consumers' desire to participate in the green cause-related marketing (donating to environmental problems through the purchase of products). In Study 2, a green product that was illustrated to have human characteristics (anthropomorphic) positively affects attitude toward the ad, and brand attitude, which in turn has positive effect on consumer's green behavior intention. This study adds the generalization of research on the relationship between anthropomorphism and pro-social behavior. Our study was conducted in Indonesia where people have a tendency of anthropomorphizing the nature, as indicated in our preliminary studies. Research by Tam et al. (2013) and Ahn et al. (2014) that was conducted on people of other cultures (Singapore and North America) showed similar results.

One important contribution that distinguishes our study with the previous research is that we incorporate advertising attitude and brand attitude variables, based on the theory of advertising effects on consumers (Lutz et al., 1983). We assume that the green ad that was built by private companies (in addition to the government) uses green ad as a tool to promote the brand and build company image (Cox, 2008), so the brand variable becomes important. Variable of brand attitude and advertising attitude that was proved to be a significant mediator in the anthropomorphic green ad influence on green behavior indicates that incorporating anthropomorphic elements into green advertising messages could encourage a positive brand attitude. This means green anthropomorphic ad is not only positive for the green consumer behavior, but also positive for the company's image. We hope this research can be an inspiration for the company or advertiser in delivering effective green advertising messages.

The element of motion is important in anthropomorphism. Objects moving at a speed of similar to humans (Morewedge et al., 2007) make people anthropomorphize these objects, especially if the object looks like humans (Connell et al., 2013). This study did not include elements of movement, using the print ads which do not allow consumers to see the movement. Future research needs to do replication on TV ads. Some variables such as individual differences: the level of anthropomorphism and environmental

knowledge can be added as a moderating variable in the model in future research.

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