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Mangy mutt or furry friend? Anthropomorphism promotes animal welfare

Max E. Butterfield *, Sarah E. Hill, Charles G. Lord

Texas Christian University, Department of Psychology, Fort Worth, TX 76129, United States

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ABSTRACT

Recent research has demonstrated that people have an affinity for non-human entities that appear to have human qualities. The current studies build on this research, examining whether anthropomorphism can be used to promote animal welfare. In Study 1 (n = 42), participants read scenarios about dogs and reported more willingness to help the ones described with anthropomorphic language relative to those described with non-anthropomorphic language. In Study 2 (n = 57), participants rated dogs on either human or canine characteristics (e.g., good listener vs. good at listing to commands). Relative to the non-anthropomorphism condition, participants in the anthropomorphism condition reported more willingness to adopt dogs from a shelter, and more support for animal rights, animal welfare, and vegetarian and vegan attitudes. Moreover, these pro-animal attitudes fully mediated the effect of the anthropomorphism manipulation on willingness to adopt the dogs.

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Introduction

In recent years, a number of grassroots organizations such as *In Defense of Animals* (IDA) have lobbied municipal governments across the United States to mandate that pet owners be referenced as "pet guardians" on official documents. Some in the popular press have dismissed the movement as misguided (e.g., Katz, 2004), but a variety of municipalities have adopted these measures, including large cities (e.g., San Francisco) and the entire state of Rhode Island (American Veterinary Medical Association, 2003). These groups reason that changing the language used to describe the human-animal relationship will improve the way animals are treated, but whether these moves will be effective remains an open question. The present research was designed to examine whether linguistic cues similar to those proposed by IDA could be used to improve animal welfare. Specifically, the present set of studies examined whether using anthropomorphism to emphasize the human qualities of dogs would increase positive outcomes for them.

There is little doubt that descriptive language is powerful. History is replete with examples in which dehumanizing language and animal-themed caricatures (e.g., referring to Jewish people as rats or African Americans as apes, etc.) have been used to justify genocide, subjugation, and other atrocities (see O'Brien, 2003). In empirical studies, referring to (or thinking about) out-group members in animalistic terms (e.g., making a human-ape association) has led to diminished support for social policies aimed at helping out-groups, increased justification of police brutality targeted toward them, and less favorable attitudes toward members of these groups in general (see e.g., Esses, Veenvliet, Hodson, & Mihic, 2008; Goff, Eberhardt, Williams, & Jackson, 2008; Hodson & Costello, 2007; Zebel, Zimmermann, Viki, & Doosje, 2008).

Given that *dehumanizing* language is often associated with the mistreatment of fellow human beings, we hypothesized that the reverse might also be true, that anthropomorphic, *humanizing* language might encourage beneficent action toward non-humans. Previous studies have shown that individuals who attribute human characteristics to animals are less willing to eat them (Bastian, Loughnan, Haslam, & Radke, 2011). Similarly, the degree to which individuals perceive minds in other entities predicts the moral concern afforded to them (Gray, Gray, & Wegner, 2007). The current set of studies was designed to extend this research by examining whether using anthropomorphism to emphasize the human qualities of dogs would result in more beneficent treatment of them. We predicted that reading descriptions of anthropomorphized dogs would result in a greater willingness to help them in a time of need relative to a non-anthropomorphized control (Study 1). We also predicted that inducing participants to think about dogs anthropomorphically would lead to stronger pro-animal attitudes and stronger intentions to adopt dogs from an animal shelter relative to a non-anthropomorphism control (Study 2).

Study 1

Method

Participants

Forty-two undergraduate psychology majors (31 women) participated in groups of 8–10 in exchange for course credit. 83% were current or past dog owners.

Design and procedure

The experiment used a 2 (Language: anthropomorphism vs. non-anthropomorphism) × 2 (Target: dog vs. human) within-subjects design. Participants came to a university computer lab and read 12 scenarios and expressed their willingness to help dogs and children in need of help. The design yielded four possible target/language combinations. Each participant read three scenarios that described dogs with anthropomorphic language, three that described dogs with non-anthropomorphic language (control), three that described humans with anthropomorphic language (control), and three that described humans with non-anthropomorphic language (control). After reading each one, participants rated their willingness to offer help in each situation on a seven-point rating scale (anchors: 1 = very unwilling, 7 = very willing).

We used a variety of situations that ranged from feeding a hungry target to saving a target from a rushing river. In order to control for any confounding, inherent differences between the scenarios themselves (e.g., saving a target from a fire presents different challenges than feeding a starving target), we created a version of each scenario that used each of the four possible target/language combinations. This resulted in a total of 48 scenarios. Each participant read three randomly selected scenarios from each of the four target/language combinations (12 total). After reading each scenario and reporting their willingness to help, participants stated their history of pet ownership, their sex, relationship status, and age, and they were debriefed, thanked, and awarded their credit.

Results

Participants' ratings within each target/language combination were averaged to create four composite variables (αs ≥ .72). These scores were then entered into a 2 (Language: humanizing vs. control) × 2 (Target: human vs. dog) repeated measures ANOVA. See Table 1 for descriptive statistics. The analysis revealed that participants were more willing to help humans than dogs overall, $F(1, 41) = 31.61$, $p < .001$, $d = 1.02$. Participants also were more willing to help targets described with anthropomorphic language than they were to help targets described with non-anthropomorphic language, $F(1, 41) = 5.76$, $p = .021$, $d = .32$. Moreover, these main effects were qualified by a significant Target × Language interaction, $F(1, 41) = 6.69$, $p = .013$. As predicted, simple main effects' tests showed that participants were significantly more willing to help dogs described with anthropomorphic language than they were to help dogs described with non-anthropomorphic language, $F(1, 41) = 9.47$, $p = .004$, $d = .38$. No such differences were found for human targets ($p = .605$).

Discussion

Overall, participants were more willing to help humans than dogs, but they were significantly more willing to help dogs when they were described with anthropomorphic language compared with non-anthropomorphic language. These results provide evidence that subtle changes to language may improve the treatment of animals.

These results may be of somewhat limited utility, however, because the scenarios from Study 1 described uncommon events (e.g., saving a dog from a rushing river). It remains an open question whether anthropomorphism increases beneficent action toward

dogs in the everyday situations that characterize most typical human-animal interactions. Study 1 was further limited because it did not offer evidence of a mechanism by which anthropomorphic language might lead to such action. These two limitations were addressed in Study 2.

Study 2

In Study 2, we addressed the limitations of Study 1 by providing participants with a more realistic scenario: a dog in need of a home. In addition, Study 2 was designed to extend Study 1 by using an additional type of manipulation. Whereas participants in Study 1 read anthropomorphic descriptive language that had been written by someone else, participants in Study 2 either were or were not induced to think anthropomorphically about dogs. In order to help determine how this type of anthropomorphic thinking might encourage beneficent action toward dogs, we also examined the degree to which participants' pro-animal attitudes mediated their intentions to act. We hypothesized that participants in the anthropomorphism condition would have increased pro-animal attitudes, which in turn would increase participants' willingness to facilitate dog adoption.

Method

Participants

The participants were 57 undergraduates (46 female) who participated in exchange for course credit. 90% were current or past dog owners.

Design and procedure

The experiment used a one-way, two-level, between-subjects design. The independent variable was thinking about dogs anthropomorphically (vs. non-anthropomorphically). The dependent variables were willingness to adopt dogs from an animal shelter and pro-animal attitudes.

Participants came to a university computer lab and saw photos of three dogs presented one at a time. Participants rated their degree of agreement with five statements about each dog using 7-point Likert-type scales (1 = strongly disagree; 7 = strongly agree). To manipulate the degree to which participants thought about dogs anthropomorphically, half of the participants were randomly assigned to rate the dogs on anthropomorphic traits (e.g., this dog has a good sense of humor, is a good listener, gets along with others). The other half were assigned to rate them on non-anthropomorphic traits (e.g., this dog has a good sense of smell, listens to commands, is good with other dogs).

After completing the rating task, all participants saw pictures of the same three dogs and rated the degree to which they would be willing to adopt the dog from an animal shelter, donate money to help the dog get adopted, and donate time to help the dog get adopted. The participants then rated their agreement with four pro-animal attitudes: I support animal rights, I support animal welfare, it is morally wrong to use products made from the bodies of animals (e.g., leather), and it is morally wrong to eat the meat of animals. All ratings used the same 7-point Likert-type scales described above. The participants were then debriefed, thanked, and dismissed.

Results

Willingness to facilitate adoption

The willingness ratings showed very high reliability ($\alpha = .91$), so these items were averaged to create a composite willingness to facilitate adoption score. These data were analyzed with a one-way,

Table 1
The relationship between anthropomorphism, target species, and helping.

	Humans	Dogs	Total
	Mean (SD)	Mean (SD)	Mean (SD)
Anthropomorphism	6.22 (.58)	5.54 (1.04)	5.88 (.66)
Non-anthropomorphism	6.17 (.77)	5.11 (1.22)	5.64 (.84)
Total	6.19 (.59)	5.33 (1.04)	5.76 (.68)

between-subjects univariate analysis of variance (ANOVA). The between-subjects variable was the type of rating scale (anthropomorphic vs. non-anthropomorphic). Participants who rated dogs on anthropomorphic qualities reported more willingness to help the dogs get adopted ($M = 6.08$, $SD = .82$) compared to participants who rated dogs on non-anthropomorphic qualities ($M = 5.51$, $SD = 1.02$), $F(1, 55) = 5.30$, $p = .025$, $d = .62$.

Pro-animal attitudes

The pro-animal statements showed acceptable reliability ($\alpha = .65$), so these items were averaged to create a composite pro-animal attitudes score. These data were analyzed with a one-way, between-subjects univariate ANOVA. The between-subjects variable was the type of rating scale (anthropomorphic vs. non-anthropomorphic). Participants who rated dogs on anthropomorphic qualities reported more agreement with pro-animal attitudes ($M = 4.45$, $SD = 1.03$) than did participants who rated dogs on non-anthropomorphic qualities ($M = 3.89$, $SD = .97$), $F(1, 55) = 4.45$, $p = .04$, $d = .56$.

Mediation analysis

We hypothesized that anthropomorphism would achieve its effects by increasing the strength of participants' pro-animal attitudes. We used the Preacher and Hayes (2008) bootstrapping method and SPSS macro to test for this possibility. Fig. 1 is a graphical depiction of the mediation model. As can be seen from the figure, the anthropomorphism manipulation increased both pro-animal attitudes and willingness to facilitate dog adoption. However, the effect of the anthropomorphism manipulation on dog adoption was reduced to non-significance (direct effect: $B = .32$, $p = .160$) when the mediating role of attitudes was included in the model.

Discussion

Study 2 replicated and extended Study 1 by using a different manipulation to show that anthropomorphism increased participants' beneficent intentions toward dogs in need of a home. More importantly, Study 2 also showed that the effect of anthropomorphism on intentions was fully mediated by the effect of anthropomorphism on pro-animal attitudes.

General discussion

In two studies, we demonstrated that anthropomorphism increased intentions to behave beneficently toward dogs in a variety of situations that ranged from mundane (e.g., dog adoption) to sensational (e.g., saving a dog from a rushing river). We also demonstrated that anthropomorphism's effects persisted whether anthropomorphism was induced by

reading descriptive accounts about dogs or by rating dogs with an anthropomorphic frame of reference. Perhaps most important, Study 2 showed that the increases in beneficent intentions toward anthropomorphized dogs were attributed to anthropomorphism's power to encourage pro-animal attitudes regarding animal rights/welfare and vegan/vegetarian behavior.

There are, however, a number of limitations to be addressed in future research. The present sample had a high proportion of female dog owners. Although the present studies found no significant interactions involving participant sex or dog ownership, future studies will need to examine whether samples with more males and non-dog owners respond to anthropomorphism in a way similar to the participants in the two studies presented here. In addition, the nature of the manipulations may have led participants to believe that the researchers had positive esteem for those dogs that were described with positive human characteristics. Future research should work to ensure the experimenters do not inadvertently encourage socially desirable responding. Finally, researchers have long noted that behavioral intentions often correlate with actual behavior (Ajzen & Fishbein, 1980), but they have also noted that intentions do not perfectly predict behavior (see e.g., LaPiere, 1934). Future studies that use anthropomorphism as a tool for social influence should incorporate measures of actual behavior.

The present findings also offer only a proximate-level of explanation for why anthropomorphism promotes animal welfare (i.e., by increasing pro-animal attitudes). They do not address ultimate causes of this promotion. It may be the case that anthropomorphism simply increases the liking of non-human targets with apparent human qualities because those targets appear more similar to humans. Previous research has pointed to this possibility by showing that mind attribution is linked to liking (Kozak, Marsh, & Wegner, 2006), and indeed, perceived similarity has been shown to increase prosocial behavior toward other humans (Burger, Messian, Patel, del Prado, & Anderson, 2004; DeBruine, 2002; Emswiller, Deaux, & Willits, 1971; Gray, Russell, & Blockley, 1991; Salmon, 1998) and toward animals (Plous, 2003).

It may also be the case that anthropomorphism leads to subtle inferences about group membership that inform the process of categorizing targets as ingroup or outgroup members and shape subsequent behavior (see Gaertner & Dovidio, 2000). Group membership has been an important determinant of prosocial behavior for most of human history (Burnstein, Crandall, & Kitayama, 1994; Dawkins, 1976; Korchmaros & Kenny, 2001; Krebs, 1998; Wilson & Wilson, 2008), and present-day individuals may tend to help others who exhibit cues that would have been reliable indicators of group membership for most of evolutionary history. Similarity is hypothesized to be one such cue, and so is familiarity (see e.g., Hamilton, 1964; McAndrew, 2002). Indeed, signs of familiarity, such as physical touch, increase prosocial behavior (Morhenn, Park, Piper, & Zak, 2008).

If we tend to help other humans because of these indicators of group membership, it seems plausible that we might also help non-humans who display these same indicators. After all, anthropomorphism implies a degree of membership in the human species by its very definition. Although individuals are unlikely to truly believe that anthropomorphized animals are actually human, anthropomorphism may trigger innate tendencies to treat them as if they were. This possibility is consistent with a growing body of literature that suggests that anthropomorphism alters the ways in which people perceive, interact with, and respond to non-human entities (e.g., Aggarwall & McGill, 2007; Chandler & Schwarz, 2010; Delbaere, McQuarrie, & Phillips, 2011; Epley, Akalis, Waytz, & Cacioppo, 2008; Epley, Waytz, Akalis, & Cacioppo, 2008; Epley, Waytz, & Cacioppo, 2007; Kim & McGill, 2011; Landwehr, McGill, & Herrmann, 2011; Mitchell, Heatherton, & Macrae, 2002; Waytz, Cacioppo, & Epley, 2010; Yoon, Gutchess, Feinberg, & Polk, 2006).
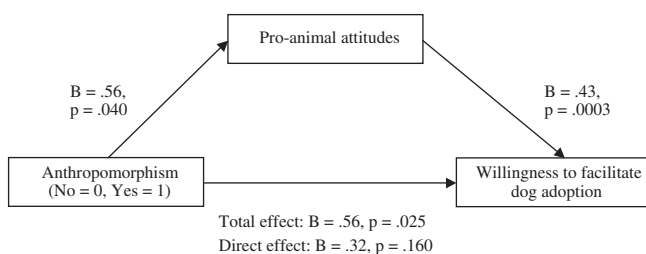

Fig. 1. Mediation model for Study 2. Note: All path coefficients are unstandardized regression weights. The total effect coefficient represents the effect of anthropomorphism on willingness to facilitate adoption scores before controlling for pro-animal attitudes. The direct effect coefficient represents the effect of anthropomorphism on willingness to facilitate adoption scores after controlling for the mediating effect of pro-animal attitudes. Total adjusted $R2$ for the model $= .29$, $F(2, 54) = 10.74$, $p = .0001$.

Regardless whether an ultimate cause will be revealed, the present studies advance the current understanding of anthropomorphism in terms of scope and applicability to real-world problems by demonstrating that anthropomorphism has the power to encourage beneficent treatment of dogs. They also indicate that the encouragement of widespread adoption of anthropomorphic language may bring society one step closer to eradicating animal cruelty, and they suggest that the unorthodox re-branding of pet owners as pet guardians may not be completely unwarranted.

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