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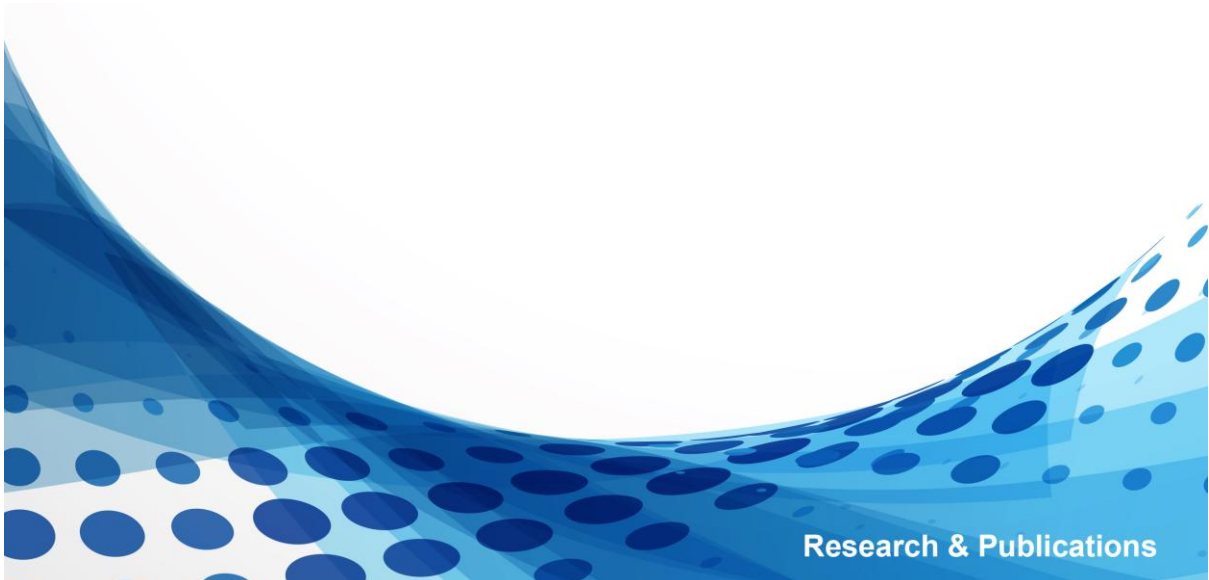
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Research & Publications

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Do Cruelty-Free Practices Matter? The Role of Consumer Speciesism in Differential Preference for Cruelty-Free Products

ABSTRACT

Cruelty-free practices involve avoidance of animal harm during production. While adopting cruelty-free practices by firms is important for sustainability, overcoming consumer indifference towards cruelty-free products is challenging. Through six studies including one secondary dataset analysis and five experiments, this study shows that consumer speciesism (the ideology of human devaluation of other species) moderates the effect of cruelty-free practices on product evaluation. Cruelty-free practices increase purchase intention among low speciesism consumers but not among high speciesism consumers, mediated by perceived brand moral agency. The study further examines how cruelty-free brands can create a win-win strategy that benefits the firm and the environment. The study demonstrates that using anthropomorphized animals in brand communications can attenuate the unfavorable effect of speciesism. This study has theoretical and practical implications on sustainable marketing.

Keywords: cruelty-free, sustainable consumption, brand morality, ethical treatment of animals

“The more helpless the creature, the more that it is entitled to protection by man from the cruelty of man.” – Mahatma Gandhi

With more than 110 million animals being killed every year in laboratories (PETA 2023), awareness about cruelty practices are emerging in recent times—leading to a growing ideological debate about cruelty-free practices among consumers. Cruelty-free practices incorporate not

testing products on animals, as well as not using animal-derived ingredients like beeswax, honey, carmine in the products (PETA, n.d.). Consumers in the USA are divided in their opinion towards cruelty-free practices. While 52% of the USA public opposes the use of animals in scientific research, the rest are indifferent (Pew Research Centre, 2020). Despite rising awareness among consumers, the USA alone used 20 million animals in research and testing in 2020 (Statista, 2021). Even among top beauty brands, there are many like *The Body Shop*, *Lakme*, *Dove*, and *Elf Cosmetics* which are cruelty-free, while others like *MAC Cosmetics*, *Maybelline*, *Estee Lauder*, and *Bobbi Brown* which are not cruelty-free (PETA, n.d.). There is ambiguity among top firms when it comes to adopting cruelty-free practices.

Animal welfare is defined as “the physical and mental state of an animal, in relation to the conditions in which it lives and dies” (Grappe, Lombart, Louis and Durif, 2021). Ensuring animal welfare through cruelty-free practices such as not testing products on animals aligns with the United Nations sustainable development goal of responsible consumption and production (SDG 12; Cruelty Free International, 2019). Given the alignment of cruelty-free practices with sustainability goals of the industry, it is surprising to see that several global firms continue to engage in unethical treatment of animals. Many firms manufacturing beauty, fashion, pharmaceutical, food and household cleaning products not only test their products on animals, but also use animal-derived ingredients which are often sourced by harming animals (PETA). The issue of unethical treatment of animals is applicable not only to product manufacturing industries but also to the entertainment industry that makes captive animals perform, and the education sector that uses animals for scientific research. The animals are kept isolated in cages, and most experimental procedures harm them permanently, some even causing death (PETA, 2023).

Despite indifference among a large section of consumers, there is growing consumer attention towards the moral imperatives of firms (Khan and Kalra, 2022). Backlash against the popular beauty brand, *NARS Cosmetics*, which stopped their cruelty-free practices while entering the Chinese market, shows that some consumers are increasingly becoming conscious of the issues related to ethical treatment of animals (Dube, 2017). However, marketing literature has largely remained silent on consumer response to cruelty-free practices by firms. The current study aims to address this important gap and delve into understanding and overcoming psychological barriers to consumer adoption of cruelty-free products.

In order to understand consumer responses to cruelty-free products in the real market context, we examined the relationship between cruelty-free practices and brand preference using *Amazon* ranks for beauty and personal care categories in the USA.

PILOT STUDY: DO CRUELTY-FREE PRODUCTS RANK HIGHER ON AMAZON?

The purpose of the pilot study was to examine if there is any significant relationship between cruelty-free practices adoption by brands and their rank on Amazon.

Data: The data for top 100 beauty and personal care brands from *Amazon* US were collected for this pilot study. The ranks of the brands were listed, along with their products and price in US Dollars. The type of product, i.e., utilitarian vs. hedonic, was used as a control variable. The seasonality of the product was also used as a control variable. For instance, since the data was collected during winter season, products that are necessary in the beauty and personal care category during winter were coded as seasonal and those which are not necessary

for winter season were coded as non seasonal. The price was also used as a control, along with brand age and brand size, calculated using the log of employees. Cruelty-free was operationalized in two ways. First, we checked PETA's data on companies that test on animals and do not test on animals and coded the brands certified by PETA as cruelty-free (1) and those that are not certified as non-cruelty-free (0). We also checked Leaping Bunny certification and those brands that do not have PETA certification (i.e., are not listed in PETA's database) but have Leaping Bunny certification were coded as cruelty-free (1). Second, we used a cruelty-free score by a third party rating agency which follows the guidelines of One Planet Network, that is allied with the United Nations Environment Programme (UNEP) and is implementing the 10 Year Framework of Programmes on Sustainable Consumption and Production (UN SDG 12) (One Planet Network, n.d.). This third party rating agency gives a score on a scale of 1-5 to beauty and personal care brands on different sustainability initiatives, including cruelty-free practices. The score for cruelty-free practices is based on whether the brand tests products on animals and whether they are vegan, i.e., not use animal-derived ingredients in their products.

Results: The figures in the appendix section show the model free evidence from the *Amazon* data and the tables show the regression results. The model free evidence indicates that there is no distinct pattern in rank for cruelty-free and non cruelty-free brands. The regression results show that there is no significant effect of cruelty-free practices on rank for both cruelty-free certification ($p=.263$) and cruelty-free score ($p=.454$). Further analysis showed that there is an interesting pattern for incumbent versus new brands. Using brand age as moderator, we find that the effect of cruelty-free practices on rank is significant ($p=.028$) and positive for new brands but not for incumbent brands.

As reported in the pilot study, we found that while cruelty-free practices led to better ranks for relatively new brands, it does not make any significant difference to the rank for incumbent brands. This further implies that not all companies see immediate financial benefits from adopting cruelty-free practices. If the ambiguity towards cruelty-free practices expressed by consumers in surveys like the one conducted by Pew Research Center is also evident in their purchase behavior in the marketplace, then it becomes important for us to understand what makes consumers develop favorability towards cruelty-free products. If firms can generate higher revenues and consumer loyalty through adoption of cruelty-free practices, it would create a win-win situation for both the firm and the environment (Chandy et. al., 2021). Investigating this phenomenon thus becomes important as consumer support for cruelty-free practices is not unequivocal.

Who are the consumers who value cruelty-free practices by firms and are willing to purchase from such firms? How do these consumers differ from others who are indifferent? Taking a consumer behavior perspective, we identify “speciesism” as a consumer-level psychological trait which, we propose, is a root cause of indifference towards cruelty-free products. Speciesism refers to “the assignment of different inherent moral status based solely on an individual’s species membership” (Caviola et al, 2019). Speciesism leads individuals to devalue members of other species, to not think of them as moral agents and to not feel their sufferings (Bastian et al., 2012; Kozak, Marsh and Wegner, 2006). The current study aims to examine the moderating effect of speciesism on the effect of cruelty-free practices on purchase intention and uses the theoretical lens of moral reasoning to explain this mechanism. We argue that for consumers with low speciesism, cruelty-free practices will influence perception of the brand as a moral agent and subsequently influence purchase intention, but for consumers with

high speciesism, cruelty-free practices will not enhance moral perceptions of the brand, and thus, will not impact purchase intention. Hence, the current study hypothesizes that cruelty-free brands will be perceived by consumers as having moral agency—but only when speciesism is low.

The study also aims to understand how firms adopting cruelty-free practices can gain benefits from this sustainability initiative, i.e., how can they strategize the win-win situation (Chandy et. al., 2021) that creates good for the world as well as the firm? We hypothesize that firms can attenuate the unfavorable effect of speciesism by using animal anthropomorphism. When animals are anthropomorphized, consumers feel moral concerns about the harm that animals are inflicted to (Kim and Yoon, 2021). We hypothesize that if cruelty-free brands depict animals as anthropomorphized entities in their brand communications, it will help overcome the indifference of high-speciesism consumers and subsequently influence their purchase intentions.

The current study has several contributions to the literature on sustainability, moral consumption, ethical treatment of animals as well as anthropomorphism. The study examines an important phenomenon, cruelty-free practices and shows that there exists consumer heterogeneity in terms of valuing cruelty-free practices which stems from consumer speciesism. The study shows that the perception of brand moral agency is the driving mechanism for this phenomenon and based on their speciesism, some consumers (low speciesism) value cruelty-free brands as moral agents whereas others (high speciesism) do not. The study further shows how cruelty-free brands can use animal anthropomorphism to mitigate the dampening effect of speciesism. In the following sections, we shall briefly review the literature on cruelty-free practices and ethical treatment of animals, speciesism, perception of the firm as a moral agent, and anthropomorphism and develop our hypotheses.

CRUELTY-FREE PRACTICES AND THE ROLE OF SPECIESISM

Cruelty-free practices involve not testing products on animals and not using animal-derived ingredients like beeswax, honey, carmine in products (PETA, n.d.). Brands that are not cruelty-free test their products on animals and for their product testing purposes, animals suffer in laboratories and eventually die. Such brands also often unethically procure animal derived ingredients for their products. Brands that do not conduct animal testing are certified by PETA (People for the Ethical Treatment of Animals) and Leaping Bunny, which look into whether the brands do animal testing in any of the countries they are operating in. PETA and Leaping Bunny further certify brands for being vegan, i.e., not using any animal derived ingredient in their products. Brands need to request the certification providers for evaluating them, post which PETA and Leaping Bunny give them certifications and certified brands use their logos on their product package and brand communications to indicate to consumers that they are cruelty-free. There is a growing buzz around cruelty-free practices on social media. In the year 2024, on popular social media platforms, there were 473.88k mentions of cruelty-free practices and the reach was 363.04 million worldwide (Sprinklr, 2025), with 95% of the conversation having a positive sentiment and a majority of the conversation coming from the US and UK. Most of the conversation around cruelty-free practices on social media platforms centered around beauty, skincare, followed by vegan food. Cruelty-free practices of brands address animal welfare issues with respect to ethical treatment of animals, and also address SDG 12, i.e., Responsible Consumption and Production (Cruelty Free INTERNATIONAL, 2019). Given the growing focus on sustainability in marketing literature, it thus becomes an interesting phenomenon to examine. Given the buzz around the phenomenon and the evidence from consumer backlash against

brands like NARS Cosmetics (Dube, 2017) for giving up their cruelty free practices, it seems likely that cruelty-free practices should have a positive influence on firm performance and all top firms should be adopting this sustainable initiative, which is not the case. The secondary data analysis in the current study, done in a broader context involving top 100 beauty and personal care brands on Amazon, shows a different picture, which leads us to ponder, do all consumers unanimously care about cruelty-free practices? To understand consumer heterogeneity in terms of valuing cruelty-free practices, we delved deeper into the literature on human-animal relationships.

Human relationship with animals has been defined as “speciesist.” This term, which originated in the 1970s, signifies unjustified discrimination which is also seen in other behaviors like racism and sexism (Horta, 2010; Caviola, Everett and Faber, 2019). Speciesism is assigning different moral status to individuals of different species (Caviola et al, 2019). Speciesism originates from the belief that the intrinsic value of humans is more than other species and they can differentially treat individuals of other species based on comparable emotional and mental capabilities and also morally justify the same. For instance, dogs are treated with special moral status while pigs are slaughtered. There are three arguments that are used to explain speciesism:

a) Based on cognitive abilities, animals are devalued by humans. However, there is a differential devaluation here

b) Humans do not think of animals as moral agents and hence devalue them

c) Despite being scientifically proven otherwise, sentience is also debated upon, that is some people argue animals do not feel the suffering

Caviola et al (2019) argue that speciesism is a form of prejudice, i.e., antipathy or negative attitude and behavior towards members of a certain group. According to the Social

Dominance Human-Animals Relation Model (SD-HARM), proposed by Dhont, Hodson, and Leite (2016), the hierarchy of humans over animals stems from the same socio-ideological beliefs that leads to legitimization of hierarchies among human groups. This suggests that speciesism is essentially similar to inter-group conflict. Literature also suggests that speciesism is linked to dehumanization, i.e., “the psychological process by which other people are seen as less human and therefore not worthy of full moral concern” (Haslam, 2006). Dehumanization stems from the concept of out-group and is often manifested in de-mentalizing (reducing attribution of mental state) to out-groups like animals. According to Costello and Hodson’s (2014) Interspecies Model of Prejudice, there is a moral gulf between humans and animals, which leads to dehumanization of animals. The de-mentalizing is apparent when there is denial of capability to suffer in animals and thus, there is lesser moral concern for animals. The de-mentalization is more common with animals which are considered food, a concept called meat paradox (Loughnan, Bastian and Haslam, 2014).

Given that speciesism can lead to dehumanizing animals and reducing moral concern for animals (Bastian, Costello, Loughnan and Hodson, 2012; Kozak, Marsh and Wegner, 2006), the current study proposes that consumers with high speciesism will be indifferent to cruelty-free practices and thus, it will not influence their purchase intention. Cruelty-free practices will only influence the purchase intention of consumers who are low in speciesism. Thus, we hypothesize:

H1: Cruelty-free practices by firms will increase purchase intention.

H2: The positive effect of cruelty-free practices on purchase intention is moderated by consumer speciesism, such that, the effect attenuates among high speciesism consumers.

Perception of Brand's Moral Agency

Marketplace morality reflects “consumer perceptions of, and responses to, issues of right and wrong as they relate to different aspects of a market exchange” (Campbell and Winterich, 2018). Marketplace morality is essentially a tradeoff that attempts to balance acceptable levels of firms’ self-interest with acceptable levels of social good (Grayson, 2014). Consumer consciousness about moral consumption is increasing and they are becoming more attentive towards the moral imperatives of firms (Khan and Kalra, 2022). In the past, there have been instances of consumer backlash against companies which have harmed animal life, for instance the British Petroleum Oil Spill in 2009, which killed marine life (Humphreys and Thompsom, 2014) and Nars Cosmetics, which stopped their cruelty-free practices to enter the Chinese market (Dube, 2017). Firms are thus motivated to differentiate themselves on a moral basis to cater to the rising consumer expectations of moral behavior (Khan and Kalra, 2022). For instance, Apple invested USD 100 million to bring technology to 114 schools between 2014-2020.

Moral behavior should incorporate minimizing harm to the society (Graham, Haidt, Koleba, Motyl, Iyer, Wojcik and Ditto, 2013). Haidt (2008) defines moral systems as “interlocking sets of values, virtues and norms, practices, identities, institutions, technologies and evolved psychological mechanisms that work together to suppress or regulate self-interest and make co-operative societies possible”. Haidt and Joseph (2004) highlighted concern for the welfare/suffering of others and concern about fairness and justice as the two fundamental values that ensure greater societal benefits. Based on the theoretical arguments on morality, we argue that cruelty-free practice is a moral initiative, which upholds the essence of moral systems as

highlighted by Haidt (2008) and the two fundamental values of concern for the welfare/suffering of others and fairness, as highlighted by Haidt and Joseph (2004).

Literature states that the motivation of firms to engage in socially responsible behavior is driven by their moral undertone (Chernev & Blair, 2015). Socially responsible actions by firms evoke a moral judgment in consumers that permeates all aspects of their decision making as moral identity is a central guiding aspect of individuals' cognitive and affective processes (Aquino & Reed, 2002; Chernev & Blair, 2015). The moral undertone influences both the image of a brand and the perception of their product quality. Chernev and Blair (2021) highlight that sustainable actions have a halo effect of morality, and brands adopting sustainability are considered moral agents. This is driven by the fact that sustainable actions highlight the prosocial orientation of the brand, compared to its self-interest serving orientation and thus, consumers view such firms as moral agents that aim to benefit the society. We argue that consumers' perception of cruelty-free brands will have a moral connotation as cruelty-free practice is also a sustainable initiative aiming to ensure ethical treatment towards animals and abiding the moral foundations of concern for welfare of others and concern for fairness and justice. The current study hypothesizes that cruelty-free practices by beauty brands will be perceived by consumers as moral actions, which would lead to their perception of the brand as a moral agent and subsequently influence their purchase intention. However, this perception of the brand's moral agency will differ across consumers. For low speciesism consumers, cruelty-free practices will influence a perception of the brand's moral agency, but high speciesism consumers will remain indifferent to it as they do not consider animals as having equal moral status as humans and thus, any initiative taken towards avoiding harm to animals is not valuable to them. Thus, we hypothesize:

H3: The positive effect of cruelty-free practices on purchase intention is mediated by perceived moral agency.

H4: The mediation effect via perceived moral agency will be moderated by consumer speciesism, such that the effect attenuates among high speciesism consumers.

Anthropomorphism as a Mechanism to Attenuate Speciesism

Anthropomorphism is defined as “attributing mind, intentions, effortful thinking, emotional states, and behavioral features to nonhuman objects” (Puzakova, Kwak and Rocereto, 2013; p. 82; Aggarwal and McGill 2007; Epley, Waytz, and Cacioppo 2007).

Anthropomorphizing or humanizing a brand influences favorable attitudes among consumers, which in turn influences enhanced brand performance (Puzakova, Kwak and Rocereto, 2013).

Anthropomorphism leads to “increased product likeability, enhanced positive emotions and more favorable attributions of brand personality” (Delbaere, McQuarrie and Phillips, 2011).

Anthropomorphism leads to change or shift in attitudes and beliefs of consumers due to three reasons (Puzakova et. al., 2013). First, anthropomorphism attributes mindfulness to non-human entities and that leads to consumers perceiving them as autonomous agents with their own conscious thoughts and goals (Epley & Waytz, 2009). Second, mindfulness attributed to non-human entities makes people perceive them as capable of experiencing emotions and also grants moral value to them (Gray, Gray & Wagner, 2010). A desire develops to protect such anthropomorphized entities and make them happy. Third, anthropomorphized entities are perceived as capable of having impressions and capable of evaluating others.

Advertisements of many popular brands have used anthropomorphized animals, for instance, Kellogg’s Coco the Monkey (for Chocos), Aflack duck for Aflac Insurance, the gecko

for Geico Insurance, Chester Cheetah for Cheetos and many others. Kim and Yoon (2021) have argued that when animals are anthropomorphized, consumers feel moral concerns about the harm that animals are inflicted to. Animal anthropomorphism can lead to increased guilt among consumers. Based on Gray et. al's (2010) argument, mindfulness attributed to animals when they are anthropomorphized will lead to moral value being granted to them. Thus, if animals are anthropomorphized, they will be perceived as having similar moral status as humans and will help people understand their sufferings when they go through testing procedures for different products. If cruelty-free brands use anthropomorphized animals in their brand communications, this will enable high speciesism consumers to feel the sufferings of animals. Since speciesism is about devaluing members of other species, anthropomorphizing animals will reduce this dehumanizing or devaluing that is exhibited by high speciesism individuals and enable high speciesism consumers to view the animals as moral agents. Thus, using anthropomorphized animals in their brand communications, cruelty-free brands will be able to attract even high speciesism consumers to have higher purchase intention for their products. Thus, we hypothesize:

H5: The use of anthropomorphized (vs. non-anthropomorphized) animals in cruelty-free (vs. non cruelty-free) brand communications will attenuate the effect of high speciesism on purchase intention.

The conceptual model for the study is shown in figure 1 in the appendix section. Table 1 shows our study's contributions to the marketing literature.

STUDY	KEY CONTRIBUTIONS/ INSIGHTS	CORE/PE RIPHER AL	MANAGERIA L/ POLICY IMPLICATIO N	METHODOL OGY
Pelozo & White	Consumers' self- accountability-> preference for ethical products due to anticipated guilt	Core	No	Controlled condition and Field experiments
Luchs et. al. (2010)	Sustainability-liability-> preference for sustainable alternatives being less for strength-related attributes than gentleness-related attributes	Core	No	Controlled condition and Field experiments, Implicit Association Test
Chernev & Blair (2021)	Sustainability has a halo effect of morality-> consumers' perception of the company as a moral agent	Peripheral	No	Controlled condition experiments

Gonzalez-Arcos et. al. (2021)	Consumer resistance to sustainability stems from how their behavior is embedded in social dynamics	Peripheral	Yes	Archival data, Ethnographic data
White & Simpson (2013)	Normative appeals-> sustainable behavior	Peripheral	Yes	Field study and Controlled condition experiments
Brough et. al. (2016)	Green-feminine stereotype -> motivates men to avoid green behavior	Peripheral	No	Implicit Association Test, Controlled condition experiments
Sokolova, Krishna & Doring (2023)	Perceived Environmental Friendliness bias-> consumer preference for plastic and paper packaging	Peripheral	Yes	Controlled condition experiments, Conjoint study

Khan & Kalra (2022)	Greater diversity (racial, gender, national) in corporate team-> higher perception of firm morality-> favorable attitudes and behaviors	Core	No	Controlled condition experiments
Tezer, Philip & Suri (2024)	Greenguard effect-> less negative reaction to green product failure	Core & Peripheral	No	Controlled condition experiments
Current Study	Speciesism-> differential preference for cruelty-free products Anthropomorphism attenuates speciesism Introduces speciesism to marketing literature and empirically tests its effects	Core	Yes (anthropomorphized animals in brand communications)	Secondary data analysis, Controlled condition experiments, Conjoint study

EMPIRICAL OVERVIEW

In order to test the hypotheses, we report four pre-registered experiments. We used fictitious brands spanning different categories that typically offer cruelty-free products (e.g. beauty, fashion). Study 1 shows that cruelty-free practices have a significant positive impact on

purchase intention, with consumer speciesism acting as a moderator, such that for low speciesism consumers, the effect attenuates for high-speciesism consumers. Study 2 replicates the findings of study 1 and further shows mediation via perceived brand moral agency, moderated mediation. This study also examines an alternative dependent variable- self-brand connect, as well as tests and rules out other potential mediators. Study 3 examines the role of animal anthropomorphism in attenuating the dampening effect of speciesism on preference for cruelty-free products. Study 4 adds to the robustness by using a behavioral measure of speciesism. The details of the studies are shown in table 2.

Table 2: Summary of Studies

STUDY	DESIGN	SCENARIO	MAIN FINDINGS
1	2(Cruelty-free: Yes vs. Control) * 2 Speciesism (High vs. Low) between subjects design	Scenario of a fictitious beauty brand. CF-certified cruelty-free for no animal testing; control- no information	Significant difference in PI (H1 supported) Significant moderation effect of speciesism -> at low values the effect is significant and positive , but at high values it becomes non-significant (H2 supported)
2	3(Cruelty-free practices: Yes vs. No) * 2(Speciesism: High vs. Low) between-subjects design 315 participants	Scenario of a fictitious fashion brand. CF- vegan leather, NCF- Deer skin leather, control- no mention of leather source	Significant difference in PI and self-brand connect Significant mediation using perception of brand's moral agency Alternative mediators ruled out Significant moderation and moderated mediation

<p>3</p>	<p>2(Cruelty-free practices: Yes vs. NCF)*2(Speciesism: High vs. Low)*2(Anthropomorphized animal in ad: Yes vs. No) between-subjects design 440 participants</p>	<p>Scenario of a fictitious fashion brand Anthropomorphized vs. Non anthropomorphized deer is used Visual stimuli used</p>	<p>Significant difference in PI between Significant moderation effect of speciesism Significant 3-way interaction effect between cruelty-free, speciesism and anthropomorphism The interaction effect of anthropomorphism and speciesism is significant and negative -> anthropomorphism mitigates speciesism and attenuates its effect on the impact of cruelty-free practices on PI</p>
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4	2(Cruelty-free practices: Yes vs. No) * 2(Speciesism: High vs. Low) between subjects design 250 participants	Scenario of a fictitious beauty brand used Speciesism was measured using a donation scenario where participants were asked to allocate money between a human and an animal charity	The results were replicated. There was a significant direct effect of cruelty-free practices on purchase intention, significant moderation effect of speciesism and significant mediation and moderated mediation effects through perceived brand moral agency
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STUDY 1: CRUELTY-FREE AND SPECIESISM

In order to test whether cruelty-free practices have an impact on purchase intention (H1) and whether this relationship is moderated by speciesism (H3), we ran a pre-registered experiment (<https://aspredicted.org/p523-z9c2.pdf>) using the scenario of a fictitious beauty brand.

Method

Two-hundred and twenty U.S. participants ($M_{\text{age}} = 32.89$; male = 48.2%, female = 49.1%, non-binary = 2.7%) were recruited from Prolific to participate in a 2 cruelty-free (control vs. cruelty-free) x speciesism (continuous factor) between-subjects experiment. While cruelty-free was a manipulated factor, speciesism was a measured factor. Cruelty-free was manipulated by randomly assigning participants to one of two alternate descriptions of a fictitious beauty brand called Amore Skincare (see Appendix A for stimuli). While the control condition did not mention anything about animal testing, the cruelty-free condition additionally mentioned that the brand does not test its products on animals and is certified cruelty-free. After reading the brand description, participants rated the brand on purchase intention using the 3-item scale (“I can imagine buying beauty products of this brand,” “The next time I buy beauty products, I will take this brand into consideration” “I am very interested in buying beauty products of this brand”; 1 = strongly disagree, 7 = strongly agree; Holzwarth, Janiszewski and Neumann 2006; $\alpha = .88$). Participants next answered the speciesism scale developed by Caviola, Everett and Faber (2019). The scale had 6 items measuring the participants’ (dis)agreement with beliefs pertaining to the superiority of human species over other animals (e.g., “Morally animals always count for less than humans,” “Humans have the right to use animals however they want to,” “It is morally acceptable to trade animals like possessions”; 1 = strongly disagree, 7 = strongly agree; $\alpha = .85$). Prior research suggests that sustainable products are generally costlier and are often used as a means of status signaling (Berger 2019). Since cruelty-free products are a type of sustainable product, brand price and quality judgments were included as potential mediators that could explain the impact of cruelty-free practices on purchase intention (“How expensive do you perceive the brand Amore Skincare to be?” 1 = not at all expensive, 7 = highly expensive; “How do you perceive the brand Amore Skincare's quality?” 1=very bad quality, 7= very good quality).

As a manipulation check of cruelty-free, participants rated the brand on perception of being cruelty-free (“Amore Skincare seems to be a cruelty-free beauty brand”; 1 = strongly disagree, 7 = strongly agree).

For robustness checks, we also included demographic and attitudinal covariates to control for their impact. Since speciesism is specifically about moral beliefs about human-animal relationships, we needed to control for the participants’ general morality so that the effect could be attributed to speciesism in particular and not to fairness concerns in general. To control for moral consciousness, participants responded to the moral identity scale (“Being someone who is fair is an important part of who I am,” “It would make me feel good to be a fair person,” “I am actively involved in activities that communicate to others that I am fair,” “The types of things I do in my spare time (e.g., hobbies) clearly identify me as a fair person”; 1 = strongly disagree, 7 = strongly agree; Reed, Aquino and Levy 2007; $\alpha = .82$). Participants’ empathy and general attitude towards animals was also measured, along with their prior knowledge of cruelty-free practices. Attitude towards animals was measured using two items (“I sometimes get upset when I see animals in cages in zoo”, “The use of animals such as rabbits for testing the safety of cosmetics and household products is unnecessary and should be stopped”; 1 = strongly disagree, 7 = strongly agree; Herzog, Betchart & Pittman, 1991; $\alpha = .82$). Participants finally indicated their age and gender and were debriefed about the fictitious nature of the brand.

Results

Preliminary analysis. Analysis of variance (ANOVA) with the cruelty-free manipulation check measure as dependent variable (DV) and the cruelty-free condition as the independent

variable (IV) revealed a significant effect ($M_{\text{control}} = 4.61$, $SD = .89$; $M_{\text{cruelty-free}} = 5.81$, $SD = 1.02$; $F(1, 218) = 85.87$, $p < .001$; $\eta_p^2 = .28$), showing that the manipulation was successful.

Purchase Intention. ANOVA with purchase intention as DV and cruelty-free condition as IV revealed a marginally significant increase in purchase intention in the presence of cruelty-free practices ($M_{\text{control}} = 4.64$, $SD = 1.04$; $M_{\text{cruelty-free}} = 4.92$, $SD = 1.20$; $F(1, 218) = 3.59$, $p = .06$; $\eta_p^2 = .02$). This provides initial support for H1. As a robustness check to control for demographic and attitudinal covariates, we ran analysis of covariance (ANCOVA) with purchase intention as DV, cruelty-free condition as IV, and moral identity, age and gender dummies as covariates. Results revealed a significant effect of cruelty-free practices ($M_{\text{control}} = 4.64$, $SD = 1.04$; $M_{\text{cruelty-free}} = 4.92$, $SD = 1.20$; $F(1, 218) = 3.61$, $p = .06$; $\eta_p^2 = .02$), a non-significant effect of moral identity ($F(1, 218) = 2.34$, $p = .13$; $\eta_p^2 = .01$), a non-significant effect of empathy ($F(1, 218) = .064$, $p = .80$, $\eta_p^2 = .00$), a significant effect of knowledge of cruelty-free products ($F(1, 218) = 13.72$, $p = .000$, $\eta_p^2 = .06$), a non-significant of attitude towards animals ($F(1, 218) = 1.31$, $p = .25$, $\eta_p^2 = .01$), a non-significant effect of age ($F(1, 218) = 2.64$, $p = .11$; $\eta_p^2 = .02$) and a non-significant effect of gender ($F(1, 218) = .002$, $p = .96$, $\eta_p^2 = .00$). Therefore, the results support H1 even after controlling for covariates.

In order to test whether perceived brand price and quality mediate the positive effect of cruelty-free practices on purchase intention, we ran PROCESS Model 4 (Hayes 2013) with cruelty-free condition as IV, purchase intention as DV and brand price and quality judgements as parallel mediators. Results revealed non-significant indirect effects (IE_{price} : $B = -.004$, $SE = .02$, $95\% \text{ CI} = -.0431, .0234$; IE_{quality} : $B = .003$, $SE = .07$, $95\% \text{ CI} = -.1356, .1383$), thereby casting

doubt on price and quality judgments as mediators. The results remain the same even after including the same covariates as above.

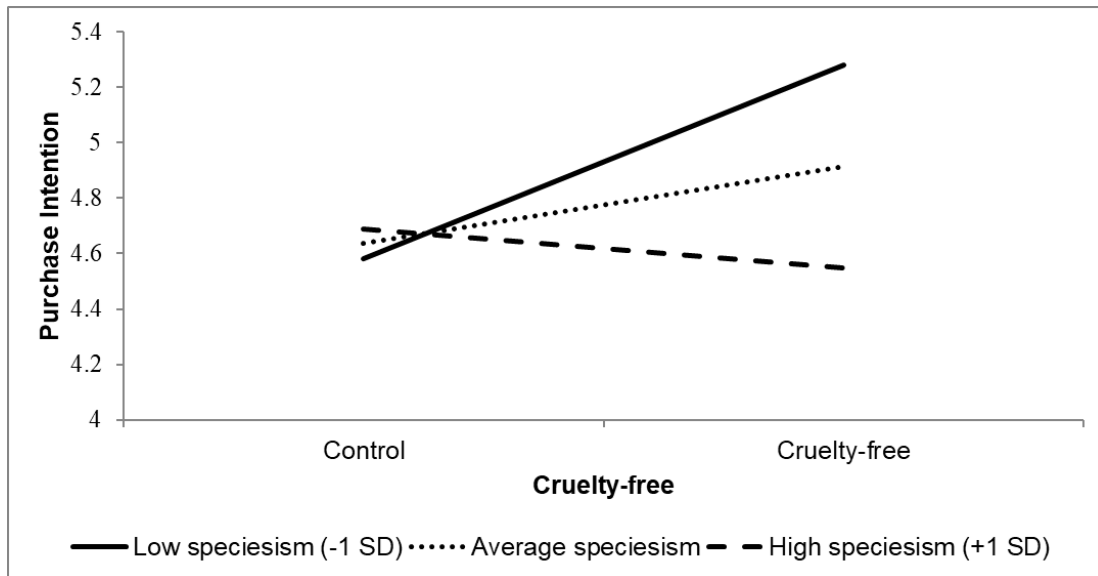
Moderation by speciesism. To test for the moderation effect of speciesism, we ran PROCESS Model 1 with cruelty-free practices as IV, purchase intention as DV and speciesism as moderator. The results revealed a significant effect of cruelty-free practices ($B = 1.22, p = .001$), a non-significant effect of speciesism ($B = .05, p = .60$), and, more importantly, a significant interaction effect of cruelty free and speciesism ($B = -.37, p = .005$) on purchase intention. Spotlight analysis at ± 1 SD from the mean of speciesism shows that cruelty-free practices increase purchase intention among participants low on speciesism ($B = .70, p = .001$) and not among participants high on speciesism ($B = -.14, p = .51$). Figure 2 represents the interaction graphically. On running Johnson Neyman analysis with 95% confidence interval, we found that cruelty-free practices significantly increase (decrease) purchase intention for participants below the speciesism score of 2.51 (above the speciesism score of 5.56) on a 7-point score (detailed results of Johnson Neyman are provided in the web appendix, which hint at a reversal of the effect among extremely high levels of speciesism). These results support H2. As a robustness check, we ran the same PROCESS Model 1 by including age, gender, empathy, quality, expensiveness, attitude towards animals and moral identity as covariates. The pattern of the results remains the same and have been reported in the web appendix.

As the speciesism data is right skewed, we re-ran the analysis using log speciesism. There was a significant moderation effect of log speciesism ($p = .009$). The results revealed a significant effect of cruelty-free practices ($B = 2.84, p = .004$), a non-significant effect of log speciesism ($B =$

.34, $p = .49$) and a significant interaction effect of cruelty-free and log speciesism ($B = -1.93$, $p = .009$). Spotlight analysis at ± 1 SD from the mean of speciesism shows that cruelty-free practices increase purchase intention among participants low on speciesism ($B = .68$, $p = .0015$) and not among participants high on speciesism ($B = -.11$, $p = .61$). On running Johnson Neyman analysis with 95% confidence interval, we found that cruelty-free practices significantly increase (decrease) purchase intention for participants below the log speciesism score of 1.35 (detailed results of Johnson Neyman are provided in the web appendix, which hint at a reversal of the effect among extremely high levels of speciesism). These results support H2. As a robustness check, we ran the same PROCESS Model 1 by including age, gender, empathy, quality, expensiveness, attitude towards animals and moral identity as covariates. The pattern of the results remains the same and have been reported in the web appendix.

FIGURE 2

STUDY 1: IMPACT OF CRUELTY-FREE PRACTICES ON PURCHASE INTENTION CONDITIONAL ON SPECIESISM



Discussion

Using a fictitious beauty product, this study showed that cruelty-free practices have a favorable effect on purchase intention (H1) and cast doubt on price- and quality perceptions as potential mechanisms to explain the effect. By measuring speciesism as a trait, this study showed that the positive effect of cruelty-free practices on purchase intention gets attenuated among consumers who are high on speciesism (H3). Interestingly, the effect gets reversed at extremely high levels of speciesism where cruelty-free practices are seen as unfavorable. This study also isolates the effect of speciesism from morality in general and shows that the findings hold even after controlling for moral identity. The next study aims to replicate these findings in another product category and test for mediation by perceived brand moral agency. Since study 1 has compared cruelty-free practices to a control condition, it can be argued that the control condition may not necessarily suggest the presence of animal testing. To overcome this limitation, the next

study also included a non-cruelty-free condition that explicitly mentioned the usage of animals in the manufacturing process.

STUDY 2: CRUELTY-FREE VS. ANIMAL PRODUCTS

To directly compare responses to cruelty-free products with animal products, we ran a second pre-registered experiment (<https://aspredicted.org/v5j9-xs35.pdf>) using the scenario of a fictitious fashion brand.

Method

Three-hundred and seventeen U.S. participants ($M_{age} = 35.65$; male = 47.9%, female = 47.6%, non-binary = 4.1%) were recruited from Prolific to participate in a 3 cruelty-free (control vs. cruelty-free product vs. animal product) x speciesism (continuous factor) between-subjects experiment. While cruelty-free was a manipulated factor, speciesism was a measured factor. Cruelty-free was manipulated by randomly assigning participants to one of three alternate descriptions of leather jackets of a fictitious brand called Elite Moda (see Appendix B for stimuli). The control condition did not mention anything about the type of leather used to make the jackets. The cruelty-free condition mentioned that the jackets were made from vegan leather. The animal product condition mentioned that the jackets were made from buckskin or deer skin. To avoid confusion regarding the price of the jacket (due to perceptions of vegan fashion products being more costly), the price was mentioned as \$200 across all three conditions. After reading the brand description, participants rated the brand on purchase intention (“I can imagine

buying apparels of this brand,” “The next time I buy a leather jacket, I will take this brand into consideration,” “I am very interested in buying a leather jacket of this brand”; 1 = strongly disagree, 7 = strongly agree; $\alpha = .92$). Participants then answered the perceived brand moral agency scale by rating the brand on 4-items (1= strongly unethical/ immoral/dishonest/not trustworthy, 7 = strongly ethical/ moral/ honest/ trustworthy; $\alpha = .89$; Samper, Yang and Daniels 2018). This was followed by the same speciesism scale and manipulation check of cruelty-free as used in study 1. Participants finally indicated their age and gender and were debriefed about the fictitious nature of the brand.

Results

Preliminary analysis. Analysis of variance (ANOVA) with the cruelty-free manipulation check measure as dependent variable (DV) and the cruelty-free conditions as the independent variable (IV) revealed a significant effect ($M_{\text{control}} = 3.59$, $SD = 1.48$; $M_{\text{cruelty-free}} = 5.79$, $SD = 1.26$; $M_{\text{animal product}} = 3.00$, $SD = 1.57$; $F(2, 314) = 111.69$, $p < .001$; $\eta_p^2 = .42$), showing that the manipulation was successful. Pair-wise comparisons revealed that all three pairs were significantly different from each other (control vs. cruelty-free: $p < .001$; control vs. animal-product: $p = .004$; cruelty-free vs. animal product: $p < .001$).

Purchase Intention. ANOVA with purchase intention as DV and cruelty-free conditions as IV revealed a significant effect ($M_{\text{control}} = 3.93$, $SD = 1.42$; $M_{\text{cruelty-free}} = 4.51$, $SD = 1.53$; $M_{\text{animal product}} = 3.63$, $SD = 1.62$; $F(2, 314) = 9.30$, $p < .001$; $\eta_p^2 = .06$). Pair-wise comparisons showed that the cruelty-free condition significantly increased the purchase intention compared to

the control ($p = .006$) and animal-product ($p < .001$) conditions. There was no significant difference between the control and the animal-product condition on purchase intention ($p = .15$). This result supports H1. After adding the control variables, the results showed significant effect of cruelty-free ($M_{\text{control}} = 3.97$, $SD = .15$; $M_{\text{cruelty-free}} = 4.47$, $SD = .15$; $M_{\text{animal product}} = 3.63$, $SD = .15$; $F(2, 307) = 6.32$, $p = .002$; $\eta_p^2 = .04$), a significant effect of quality ($F(1, 307) = 58.59$, $p = .00$, $\eta_p^2 = .16$), a non-significant effect of moral identity ($F(1, 307) = .04$, $p = .85$, $\eta_p^2 = .00$), a non-significant effect of attitude towards animals ($F(1, 307) = .26$, $p = .61$, $\eta_p^2 = .00$), a non-significant effect of empathy ($F(1, 307) = .006$, $p = .94$, $\eta_p^2 = .00$), a significant effect of knowledge of cruelty-free products ($F(1, 307) = 4.96$, $p = .03$, $\eta_p^2 = .02$), a marginally significant effect of age ($F(1, 307) = 3.49$, $p = .07$, $\eta_p^2 = .01$), and a marginally significant effect of gender ($F(1, 307) = 2.47$, $p = .07$, $\eta_p^2 = .01$). Pair-wise comparisons showed that the cruelty-free condition significantly increased the self-brand connect compared to the control ($p = .001$) and animal-product ($p = .022$) conditions.

Self-brand connect. ANOVA with self-brand connect as DV and cruelty-free conditions as IV revealed a significant effect ($M_{\text{control}} = 2.9$, $SD = 1.63$; $M_{\text{cruelty-free}} = 4.01$, $SD = 1.59$; $M_{\text{animal product}} = 2.90$, $SD = 1.63$; $F(2, 314) = 15.07$, $p < .001$; $\eta_p^2 = .09$). Pair-wise comparisons showed that the cruelty-free condition significantly increased the self-brand connect compared to the control ($p = .000$) and animal-product ($p = .000$) conditions. This result supports H1. After adding the control variables, the results showed significant effect of cruelty-free ($M_{\text{control}} = 3.19$, $SD = .14$; $M_{\text{cruelty-free}} = 3.89$, $SD = .14$; $M_{\text{animal product}} = 2.99$, $SD = .14$; $F(2, 307) = 11.65$, $p = .00$; $\eta_p^2 = .07$), a significant effect of moral identity ($F(1, 307) = 4.39$, $p = .04$, $\eta_p^2 = .014$), a non-significant effect of attitude towards animals ($F(1, 307) = .328$, $p = .57$, $\eta_p^2 = .001$), a non-

significant effect of empathy ($F(1, 307) = .75, p = .39, \eta_p^2 = .002$), a significant effect of knowledge of cruelty-free products ($F(1, 307) = 6.73, p = .01, \eta_p^2 = .02$), a non-significant effect of age ($F(1, 307) = 1.05, p = .30, \eta_p^2 = .003$), and a non-significant effect of gender ($F(1, 307) = 1.51, p = .22, \eta_p^2 = .01$). Pair-wise comparisons showed that the cruelty-free condition significantly increased the self-brand connect compared to the control ($p = .000$) and animal-product ($p = .000$) conditions.

Mediation by perceived brand moral agency. To test for mediation by perceived brand moral agency (henceforth, PBMA), we ran two separate runs of PROCESS Model 4. In the first run, we included the cruelty-free versus control contrast as IV, purchase intention as DV and PBMA as mediator. Results revealed a significant indirect effect via PBMA (IE: $B = .84, SE = .15, 95\% = .5803, 1.1447$). Cruelty-free products increase purchase intention by increasing perceived moral agency of the brand. Same results were obtained on the second run of PROCESS Model 4 by including the cruelty-free versus animal-product contrast as IV (IE: $B = .65, SE = .09, 95\% = .4842, .8158$). This provides support for H3. After adding the control variables, the results still remained significant. There was a significant indirect effect via PBMA (IE: $B = .70, SE = .15, 95\% = .4296, 1.0162$) for cruelty-free versus control contrast as IV, as well as for cruelty-free vs. animal-product contrast as IV (IE: $B = .44, SE = .08, 95\% = .2819, .6107$). The same mediation analysis was conducted with self-brand connect as the DV. Results are shown in the web appendix.

Moderation by speciesism. We tested for moderation by speciesism using two separate runs of PROCESS Model 1. In the first run, we included the cruelty-free versus control contrast

as IV, purchase intention as DV and speciesism as moderator. The results revealed a significant effect of cruelty-free product ($B = 2.08, p = .001$), a significant effect of speciesism ($B = .67, p = .01$), and a significant interaction effect of cruelty free and speciesism ($B = -.51, p = .003$) on purchase intention. Spotlight analysis at ± 1 SD from the mean of speciesism shows that cruelty-free practices increase purchase intention among participants low on speciesism ($B = 1.19, p = .000$) and not among participants high on speciesism ($B = -.02, p = .94$). On running Johnson Neyman analysis with 95% confidence interval, we found that cruelty-free products significantly increase purchase intention for participants below the speciesism score of 3.5 on a 7-point score (detailed results of Johnson Neyman are provided in the web appendix). In the second run, we included the cruelty-free versus animal-product contrast as IV, purchase intention as DV and speciesism as moderator. The results revealed a significant effect of cruelty-free product ($B = 1.84, p = .000$), a significant effect of speciesism ($B = .63, p = .00$), and a significant interaction effect of cruelty free and speciesism ($B = -.49, p = .000$) on purchase intention. Spotlight analysis at ± 1 SD from the mean of speciesism shows that cruelty-free practices increase purchase intention among participants low on speciesism ($B = 1.14, p = .000$) and not among participants high on speciesism ($B = -.16, p = .27$). On running Johnson Neyman analysis with 95% confidence interval, we found that cruelty-free products significantly increase purchase intention for participants below the speciesism score of 3.45 on a 7-point score. These results support H3. After adding control variables, the results still remained significant. In the first run, we included the cruelty-free versus control contrast as IV and the results revealed a significant effect of cruelty-free product ($B = 1.48, p = .005$), a significant effect of speciesism ($B = .52, p = .05$), and a significant interaction effect of cruelty-free and speciesism ($B = -.34, p = .04$). Spotlight analysis at ± 1 SD from the mean of speciesism shows that cruelty-free practices

increase purchase intention among participants low on speciesism ($B = .89, p = .0012$) and not among participants high on speciesism ($B = .09, p = .74$). On running Johnson Neyman analysis with 95% confidence interval, we found that cruelty-free products significantly increase purchase intention for participants below the speciesism score of 3.5 on a 7-point score. In the second run, with included the cruelty-free versus animal-product contrast as IV and the results revealed a significant effect of cruelty-free product ($B = 1.23, p = .00$), a significant effect of speciesism ($B = .46, p = .003$), and a significant interaction effect of cruelty-free and speciesism ($B = -.31, p = .001$). Spotlight analysis at ± 1 SD from the mean of speciesism shows that cruelty-free practices increase purchase intention among participants low on speciesism ($B = .71, p = .00$) and not among participants high on speciesism ($B = -.05, p = .73$). Figure 3 represents the interaction graphically. On running Johnson Neyman analysis with 95% confidence interval, we found that cruelty-free products significantly increase purchase intention for participants below the speciesism score of 3.46 on a 7-point score. We re-ran the same analysis with self-brand connect as the DV. The results are shown in the web appendix.

Since the speciesism data is right-skewed, we re-ran the analysis with log speciesism as the moderator. In the first run, we included the cruelty-free versus control contrast as IV and the results revealed a significant effect of cruelty-free product ($B = 4.71, p = .001$), a significant effect of log speciesism ($B = 4.05, p = .013$), and a significant interaction effect of cruelty-free and speciesism ($B = -2.98, p = .004$). Spotlight analysis at ± 1 SD from the mean of speciesism shows that cruelty-free practices increase purchase intention among participants low on speciesism ($B = 1.16, p = .001$) and not among participants high on speciesism ($B = .001, p = .99$). On running Johnson Neyman analysis with 95% confidence interval, we found that cruelty-free products significantly increase purchase intention for participants below the log speciesism

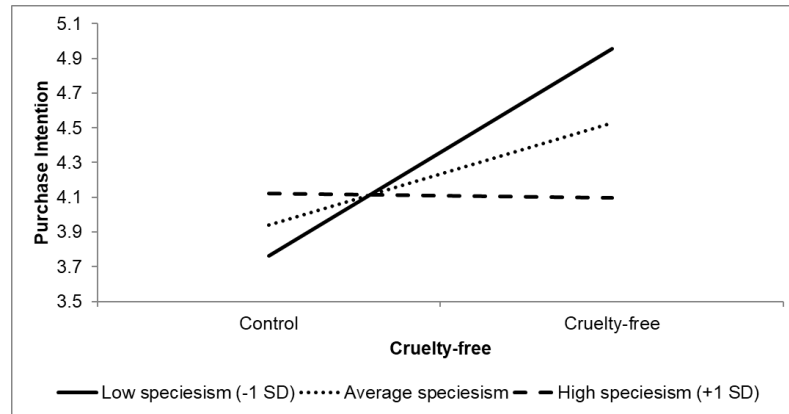
score of 1.45. After adding control variables, the results show a significant effect of cruelty-free product ($B = 3.13, p = .03$), a significant effect of log speciesism ($B = 3.39, p = .04$), and a significant interaction effect of cruelty-free and speciesism ($B = -1.89, p = .06$). In the second run, we included cruelty-free versus animal-product contrast as IV and the results revealed a significant effect of cruelty-free product ($B = 4.14, p = .00$), a significant effect of log speciesism ($B = 3.49, p = .00$), and a significant interaction effect of cruelty-free and speciesism ($B = -2.70, p = .00$). Spotlight analysis at ± 1 SD from the mean of speciesism shows that cruelty-free practices increase purchase intention among participants low on speciesism ($B = .98, p = .00$) and not among participants high on speciesism ($B = -.12, p = .42$). On running Johnson Neyman analysis with 95% confidence interval, we found that cruelty-free products significantly increase purchase intention for participants below the log speciesism score of 1.47. After adding control variables, the results show a significant effect of cruelty-free product ($B = 2.58, p = .0001$), a significant effect of log speciesism ($B = 2.75, p = .0002$) and a significant interaction effect of cruelty-free and speciesism ($B = -1.64, p = .0007$). Spotlight analysis at ± 1 SD from the mean of speciesism shows that cruelty-free practices increase purchase intention among participants low on speciesism ($B = .66, p = .00$) and not among participants high on speciesism ($B = -.0003, p = .99$). On running Johnson Neyman analysis with 95% confidence interval, we found that cruelty-free products significantly increase purchase intention for participants below the log speciesism score of 1.48.

Same analysis was run with log speciesism as the moderator and self-brand connect as the DV.

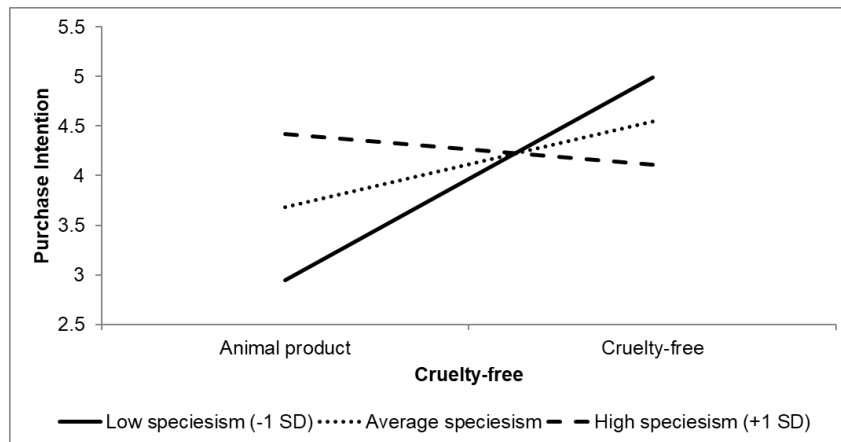
Results are shown in the web appendix.

FIGURE 3

STUDY 2: IMPACT OF CRUELTY-FREE (VS. CONTROL) ON PURCHASE INTENTION CONDITIONAL ON SPECIESISM



STUDY 2: IMPACT OF CRUELTY-FREE (VS. ANIMAL PRODUCT) ON PURCHASE INTENTION CONDITIONAL ON SPECIESISM



Moderated mediation. To test our moderated-mediation hypothesis (H4), we conducted two separate runs of PROCESS Model 7. In the first run, we included the cruelty-free versus control condition as the IV, purchase intention as DV, PBMA as mediator, and speciesism as moderator between the IV and mediator. Results revealed a significant index of moderated

mediation ($B = -.46$, $SE = .10$, $95\% = -.6757, -.2729$). Conditional effects at ± 1 SD from the mean of speciesism reveals that the indirect effect of cruelty-free products on purchase intention is significant and positive among participants low on speciesism (IE: $B = 1.38$, $SE = .22$, $95\% = .9904, 1.8479$) and this indirect effect becomes much lowered among participants high on speciesism (IE: $B = .29$, $SE = .15$, $95\% = .0127, .6143$). After adding the control variables, the results showed a significant index of moderated mediation ($B = -.25$, $SE = .08$, $95\% = -.4224, -.1095$). Conditional effects at ± 1 SD from the mean of speciesism reveals that the indirect effect of cruelty-free products on purchase intention is significant and positive among participants low on speciesism (IE: $B = 1.005$, $SE = .22$, $95\% = .6048, 1.4594$) and this indirect effect becomes much lowered among participants high on speciesism (IE: $B = .41$, $SE = .13$, $95\% = .1785, .6823$). The same results replicate in the second run of PROCESS Model 7 which contrasted cruelty-free with animal products. The results again revealed a significant index of moderated mediation ($B = -.42$, $SE = .06$, $95\% = -.5471, -.3094$). Conditional effects at ± 1 SD from the mean of speciesism reveals that the indirect effect of cruelty-free products on purchase intention is significant among participants low on speciesism (IE: $B = 1.15$, $SE = .12$, $95\% = .9068, 1.3959$) and the magnitude of this indirect effect reduces manifold among participants high on speciesism (IE: $B = .14$, $SE = .09$, $95\% = -.0352, .3053$). After adding the control variables, the results revealed a significant index of moderated mediation ($B = -.22$, $SE = .05$, $95\% = -.3184, -.1325$). Conditional effects at ± 1 SD from the mean of speciesism reveals that the indirect effect of cruelty-free products on purchase intention is significant among participants low on speciesism (IE: $B = .71$, $SE = .13$, $95\% = .4657, .9671$) and the magnitude of this indirect effect reduces manifold among participants high on speciesism (IE: $B = .18$, $SE = .06$, $95\% =$

.0677, .3062). We re-ran the Hayes PROCESS Model 7 with self-brand connect as the DV. Results are shown in the web appendix.

The same analysis was re-run with log speciesism as the moderator and purchase intention as the DV. In the first run, we included the cruelty-free versus control contrast as the IV. Results revealed a significant index of moderated mediation ($B = -2.86$, $SE = .59$, 95% = -4.0918, -1.7793). Conditional effects at +/- 1 SD from the mean of log speciesism reveals that the indirect effect of cruelty-free products on purchase intention is significant and positive among participants low on speciesism (IE: $B = 1.39$, $SE = .22$, 95% = .9897, 1.8604) and this indirect effect becomes much lowered among participants high on speciesism (IE: $B = .28$, $SE = .14$, 95% = .0151, .5682). After adding the control variables, the results showed a significant index of moderated mediation ($B = -1.59$, $SE = .46$, 95% = -2.5916, -.7731). Conditional effects at +/- 1 SD from the mean of log speciesism reveals that the indirect effect of cruelty-free products on purchase intention is significant and positive among participants low on speciesism (IE: $B = 1.02$, $SE = .22$, 95% = .6230, 1.4507) and this indirect effect becomes much lowered among participants high on speciesism (IE: $B = .39$, $SE = .13$, 95% = .1751, .6622). In the second run, we included the cruelty-free versus animal-product contrast as the IV. Results revealed a significant index of moderated mediation (IE: $B = -2.54$, $SE = .34$, 95% = -3.2555, -1.8868). Conditional effects at +/- 1 SD from the mean of log speciesism reveals that the indirect effect of cruelty-free products on purchase intention is significant and positive among participants low on speciesism (IE: $B = 1.16$, $SE = .12$, 95% = .9273, 1.4178) and this indirect effect becomes much lowered among participants high on speciesism (IE: $B = .13$, $SE = .08$, 95% = -.0385, .2927). After adding the control variables, the results revealed a significant index of moderated mediation (IE: $B = -1.37$, $SE = .28$, 95% = -1.9541, -.8424). Conditional effects at

+/- 1 SD from the mean of log speciesism reveals that the indirect effect of cruelty-free products on purchase intention is significant and positive among participants low on speciesism (IE: $B = .72$, $SE = .13$, 95% = .4675, .9994) and this indirect effect becomes much lowered among participants high on speciesism (IE: $B = .17$, $SE = .06$, 95% = .0644, .3002). We re-ran the analysis with log speciesism as the moderator and self-brand connect as the DV. The results are shown in the web appendix.

Alternative Mediators

We tested some alternate mediators which can explain the phenomenon- warmth, competence, perception of the brand being traditional or modern, perception of the brand being old or new, and brand coolness. We ran a parallel mediation analysis using Hayes PROCESS Model 4. In the first run, we included cruelty-free versus control contrast as the IV, purchase intention as the DV and the proposed mediator, along with the alternative mediators and the control variables. The indirect effect of PBMA remained significant (IE: $B = .55$, $SE = .16$, 95% = .2333, .8987). Among the alternative mediators, only warmth (IE: $B = .27$, $SE = .12$, 95% = .0529, .5083) and perceived brand age remained significant (IE: $B = -.18$, $SE = .08$, 95% = -.3406, -.0288), whereas the others remained non-significant (coolness (IE: $B = .03$, $SE = .03$, 95% = -.0191, .0944), competence (IE: $B = -.07$, $SE = .07$, 95% = -.2122, .0557), and perception of brand being modern/traditional (IE: $B = -.07$, $SE = .09$, 95% = -.2554, .1287). We ran a series of follow-up analyses with the alternative mediators in separate mediation models. Only warmth (IE: $B = .41$, $SE = .10$, 95% = .2253, .6216) and competence (IE: $B = .13$, $SE = .06$, 95% = .0229, .2559) remained significant whereas the rest whereas non-significant (coolness (IE: $B = .06$, $SE = .05$, 95% = -.0349, .1585), perception of brand being modern or traditional (IE: $B = .05$,

SE=.11, 95%= -.1600, .2631) and perceived brand age (IE: $B = -.03$, SE= .09, 95%= -.2065, .1311)). After controlling for warmth, competence and perceived brand age, the indirect effect through PBMA still remained significant (IE: $B = .31$, SE=.11, 95%= .1263, .5307).

In the second run, we included cruelty-free versus animal-product contrast as the IV, purchase intention as the DV and the proposed mediator, along with the alternative mediators and the control variables. The indirect effect of PBMA remained significant (IE: $B = .35$, SE = .10, 95% = .1566, .5588). Among the alternative mediators, only warmth remained significant (IE: $B = .05$, SE= .08, 95%= -.0985, .2034), whereas the rest of the mediators were non-significant (competence ((IE: $B = .02$, SE= .03, 95%= -.0447, .0935), coolness (IE: $B = .04$, SE= .03, 95%= -.0026, .0948), perceived brand age (IE: $B = -.05$, SE= .05, 95%= -.1497, .0367) and perception of brand being modern or traditional (IE: $B = -.04$, SE= .06, 95%= -.1640, .0704). We ran a series of follow-up analyses with the alternative mediators in separate mediation models. Warmth (IE: $B = .26$, SE= .06, 95%= .1565, .3760), competence (IE: $B = .10$, SE= .04, 95%= .0406, .1865) and coolness (IE: $B = .07$, SE= .03, 95%= .0173, .1439) had significant indirect effects whereas the indirect effects via perceived brand age (IE: $B = -.02$, SE= .04, 95%= -.1097, .0676) and perception of brand being modern or traditional (IE: $B = .02$, SE= .06, 95%= -.0852, .1331) were non-significant. After controlling for warmth, competence and coolness, the indirect effect through PBMA still remained significant (IE: $B = .18$, SE= .06, 95%= .0729, .3100).

Discussion

Using a fictitious leather product, this study showed that cruelty-free products (e.g. vegan leather) lead to favorable purchase intentions as compared to animal products (H1) because

cruelty-free practices increase perceived brand moral agency (H2). However, this positive effect of cruelty-free practices on purchase intention is attenuated among consumers who are high on speciesism (H3) because it dilutes the translation of these practices into brand's perceived moral agency (H4). The findings of this study are replicated with an alternative DV, self-brand connect. This study also tests potential alternative mediators and rules them out. The next study aims to replicate these findings in a high-risk product category.

STUDY 3: ANTHROPOMORPHISED ANIMALS IN BRAND COMMUNICATIONS: HOW IT CAN MITIGATE SPECIESISM

We ran a pre-registered experiment (<https://aspredicted.org/nnmp-djxy.pdf>) to test H5, i.e., the use of anthropomorphized animals in brand communications to mitigate the negative effect of consumer speciesism, using the scenario of a fictitious laptop bag brand.

Method

Four hundred and forty US participants (M age = 32.89; male = 48.2%, female = 49.1%, non-binary = 2.7%) were recruited from Prolific to participate in a 2 (Cruelty-free: Yes vs. Non cruelty-free) * 2 (Speciesism: continuous factor) * 2 (Animal in brand communication: Anthropomorphized vs. Non anthropomorphized) between-subjects experiment. Cruelty-free and anthropomorphism were manipulated factors whereas speciesism was a measured factor. Cruelty-free was manipulated by assigning participants randomly to one of the two descriptions of laptop bags of a fictitious brand, Elite Moda (see Appendix C for stimuli). The cruelty-free condition mentioned that the jackets were made from vegan leather. The non cruelty-free

condition mentioned that the jackets were made from buckskin. Anthropomorphism was manipulated using an anthropomorphized deer in the visual stimulus (vs. a non anthropomorphized deer). After reading the brand description, participants rated their purchase intention (“I can imagine buying apparels of this brand,” “The next time I buy a leather jacket, I will take this brand into consideration,” “I am very interested in buying a leather jacket of this brand”; 1 = strongly disagree, 7 = strongly agree; $\alpha = .92$). Participants then answered the perceived brand moral agency scale by rating the brand on 4-items (1= strongly unethical/ immoral/dishonest/not trustworthy, 7 = strongly ethical/ moral/ honest/ trustworthy; $\alpha = .89$; Samper, Yang and Daniels 2018). This was followed by the same speciesism scale and manipulation check of cruelty-free as used in the earlier studies. Participants were asked to indicate whether they perceived the animal in the advertisement to be cute and the perceived ad appeal. Demographic details like age, gender were asked, followed by the other control variables measured in previous studies. Participants were then debriefed about the fictitious nature of the brand.

Results

Preliminary analysis. Analysis of variance (ANOVA) with the cruelty-free manipulation check measure as dependent variable (DV) and the cruelty-free condition as the independent variable (IV) revealed a significant effect (M control = 3.25, SD = 1.63; M cruelty-free = 5.52, SD = 1.18; $F(1, 437) = 280.27, p = .000; \eta^2 = .39$), showing that the manipulation was successful. Analysis of variance (ANOVA) with the anthropomorphism manipulation

check measure as dependent variable (DV) and the cruelty-free condition as the independent variable (IV) revealed a significant effect (M non-anthropomorphized = 3.16, SD = .89; M anthropomorphized = 3.59, SD = 1.02; $F(1, 218) = 85.87$, $p = .009$; $\eta^2 = .02$), showing that the anthropomorphism manipulation was also successful.

Purchase Intention. ANOVA with purchase intention as DV and cruelty-free condition as IV revealed a marginally significant increase in purchase intention in the presence of cruelty-free practices (M control = 3.45, SD = 1.68; M cruelty-free = 3.91, SD = 1.69; $F(1, 437) = 8.36$, $p = .004$; $\eta^2 = .19$). This provides initial support for H1. As a robustness check to control for demographic and attitudinal covariates, we ran analysis of covariance (ANCOVA) with purchase intention as DV, cruelty-free condition as IV, and moral identity, knowledge of cruelty-free products, empathy, attitude towards animals, age and gender dummies as covariates. Results revealed a marginally significant effect of cruelty-free practices (M control = 3.45, SD = 1.68; M cruelty-free = 3.91, SD = 1.69; $F(1, 428) = 2.90$, $p = .09$; $\eta^2 = .01$), a significant effect of moral identity ($F(1, 21) = 10.41$, $p = .001$; $\eta^2 = .02$), a significant effect of perceived cuteness ($F(1, 28) = 13.99$, $p = .000$, $\eta^2 = .03$), a marginally significant effect of attitude towards animals ($F(1, 7) = 3.59$, $p = .059$, $\eta^2 = .01$), a non-significant effect of empathy ($F(1, 0) = .003$, $p = .954$, $\eta^2 = .00$), a significant effect of knowledge of cruelty-free products ($F(1, 13) = 6.83$, $p = .009$, $\eta^2 = .02$), a significant effect of quality ($F(1, 190) = 95.92$, $p = .000$, $\eta^2 = .18$), a significant effect of expensiveness ($F(1, 61) = 30.67$, $p = .000$, $\eta^2 = .07$), a non-significant effect of age ($F(1, 14) = .07$, $p = .794$; $\eta^2 = .00$) and a non-significant effect of gender ($F(1, 4) = 2.30$, $p = .13$, $\eta^2 = .01$). Therefore, the results support H1 even after controlling for covariates.

Mediation by perceived brand moral agency. To test for mediation by perceived brand moral agency (henceforth, PBMA), we ran Hayes PROCESS Model 4 with cruelty-free versus control contrast as IV, purchase intention as DV and PBMA as mediator. Results revealed a significant indirect effect via PBMA (IE: $B = .91$, $SE = .11$, $95\% = .7007, 1.1436$). Cruelty-free products increase purchase intention by increasing perceived moral agency of the brand. The results support H3. After adding the control variables (also adding advertisement appeal as a control), the indirect effect via PBMA remains significant (IE: $B = .43$, $SE = .09$, $95\% = .2657, .6136$).

Moderation by speciesism. We tested for moderation by speciesism using Hayes PROCESS Model 1 with cruelty-free versus control contrast as IV, purchase intention as DV and speciesism as moderator. The moderation effect of speciesism was significant ($p = .0003$). The results revealed a significant effect of cruelty-free product ($B = 1.79$, $p = .00$), a significant effect of speciesism ($B = .37$, $p = .00$), and a significant interaction effect of cruelty-free and speciesism ($B = -.46$, $p = .0003$) on purchase intention. Spotlight analysis at ± 1 SD from the mean of speciesism shows that cruelty-free practices increase purchase intention among participants low on speciesism ($B = 1.03$, $p = .00$) and not among participants high on speciesism ($B = -.13$, $p = .56$). On running Johnson Neyman analysis with 95% confidence interval, we found that cruelty-free products significantly increase purchase intention for participants below the speciesism score of 3.19 on a 7-point score (detailed results of Johnson Neyman are provided in the web appendix). After adding the control variables (along with advertisement appeal), the moderation effect remains significant ($p = .0032$). The results revealed a significant effect of

cruelty-free product ($B = 1.12, p = .0009$), a significant effect of speciesism ($B = .30, p = .0016$), and a significant interaction effect of cruelty-free and speciesism ($B = -.31, p = .0032$). Spotlight analysis at ± 1 SD from the mean of speciesism shows that cruelty-free practices increase purchase intention among participants low on speciesism ($B = .60, p = .0015$) and not among participants high on speciesism ($B = -.18, p = .33$). On running Johnson Neyman analysis with 95% confidence interval, we found that cruelty-free products significantly increase purchase intention for participants below the speciesism score of 2.89 on a 7-point score (detailed results of Johnson Neyman are provided in the web appendix). These results support H2.

As the speciesism data is right skewed, we re-ran the analysis using log speciesism as the moderator. The moderation effect of speciesism was significant ($p = .0007$). The results revealed a significant effect of cruelty-free product ($B = 4.08, p = .0002$), a significant effect of log speciesism ($B = 2.35, p = .0000$), and a significant interaction effect of cruelty-free and log speciesism ($B = -2.63, p = .0007$) on purchase intention. Spotlight analysis at ± 1 SD from the mean of speciesism shows that cruelty-free practices increase purchase intention among participants low on speciesism ($B = .98, p = .00$) and not among participants high on speciesism ($B = -.09, p = .67$). On running Johnson Neyman analysis with 95% confidence interval, we found that cruelty-free products significantly increase purchase intention for participants below the log speciesism score of 1.44 (detailed results of Johnson Neyman are provided in the web appendix). After adding the control variables (along with advertisement appeal), the moderation effect remains significant ($p = .0044$). The results revealed a significant effect of cruelty-free product ($B = 2.74, p = .002$), a significant effect of log speciesism ($B = 2.29, p = .00$), and a significant interaction effect of cruelty-free and log speciesism ($B = -1.83, p = .004$). Spotlight

analysis at +/- 1 SD from the mean of log speciesism shows that cruelty-free practices increase purchase intention among participants low on speciesism ($B = .59, p = .002$) and not among participants high on speciesism ($B = -.17, p = .37$). On running Johnson Neyman analysis with 95% confidence interval, we found that cruelty-free products significantly increase purchase intention for participants below the log speciesism score of 1.38 (detailed results of Johnson Neyman are provided in the web appendix).

Moderated mediation. To test our moderated-mediation hypothesis (H4), we ran Hayes PROCESS Model 7, with cruelty-free versus control condition as the IV, purchase intention as DV, PBMA as mediator, and speciesism as moderator between the IV and mediator. Results revealed a significant index of moderated mediation ($B = -.28, SE = .08, 95\% = -.4325, = -.1383$). Conditional effects at +/- 1 SD from the mean of speciesism reveals that the indirect effect of cruelty-free products on purchase intention is significant and positive among participants low on speciesism (IE: $B = 1.25, SE = .17, 95\% = .9357, 1.6057$) and this indirect effect becomes significant but lowered among participants high on speciesism (IE: $B = .55, SE = .12, 95\% = .3222, .8005$). After adding control variables (including advertisement appeal), the results revealed a significant index of moderated mediation ($B = -.11, SE = .04, 95\% = -.2020, = -.0355$). Conditional effects at +/- 1 SD from the mean of speciesism reveals that the indirect effect of cruelty-free products on purchase intention is significant and positive among participants low on speciesism (IE: $B = .57, SE = .13, 95\% = .3432, .8457$) and this indirect effect becomes significant but lowered among participants high on speciesism (IE: $B = .30, SE = .07, 95\% = .1714, .4534$). Thus, H4 is supported.

We re-ran the analysis using log speciesism as the moderator. The results revealed a significant index of moderated mediation ($B = -1.59$, $SE = .46$, 95% = -2.5451 , $-.7220$). Conditional effects at ± 1 SD from the mean of speciesism reveals that the indirect effect of cruelty-free products on purchase intention is significant and positive among participants low on speciesism (IE: $B = 1.23$, $SE = .17$, 95% = $.9135$, 1.5757) and this indirect effect becomes significant but lowered among participants high on speciesism (IE: $B = .57$, $SE = .12$, 95% = $.3439$, $.8144$). After adding the control variables, the results revealed a significant index of moderated mediation ($B = -.63$, $SE = .25$, 95% = -1.1892 , $-.1912$). Conditional effects at ± 1 SD from the mean of speciesism reveals that the indirect effect of cruelty-free products on purchase intention is significant and positive among participants low on speciesism (IE: $B = .57$, $SE = .13$, 95% = $.3342$, $.8264$) and this indirect effect becomes significant but lowered among participants high on speciesism (IE: $B = .31$, $SE = .07$, 95% = $.1801$, $.4507$).

Anthropomorphism in mitigating speciesism. A 3-way interaction analysis was conducted using HAYES Process Model 3 with cruelty-free versus control condition as the IV, purchase intention as DV, speciesism and anthropomorphism as the moderators. The results show a marginally significant three-way interaction ($p = .08$). The conditional effects of the interaction of cruelty-free and speciesism on purchase intention in the non-anthropomorphism condition is significant and negative ($B = -.67$, $p = .0001$) whereas in the anthropomorphism condition, the interaction of cruelty-free and speciesism on purchase intention becomes non-significant ($B = .23$, $p = .22$). The interaction effect of speciesism and anthropomorphism is also significant and negative ($B = -.35$, $p = .05$), which shows that anthropomorphism mitigates

speciesism and attenuates its effect on the impact of cruelty-free practices on purchase intention. After adding the relevant control variables, the three-way effect remained significant ($p=.26$).

When we re-ran the analysis with log speciesism as the moderator, the results show a significant three-way interaction ($p= .04$). The conditional effects of the interaction of cruelty-free and log speciesism on purchase intention in the non-anthropomorphism condition is significant and negative ($B= -4.14, p=.0001$) whereas in the anthropomorphism condition, the interaction of cruelty-free and log speciesism on purchase intention becomes non-significant ($B= -1.00, p=.37$). The interaction effect of log speciesism and anthropomorphism is also significant and negative ($B= -2.26, p= .04$), which shows that anthropomorphism mitigates speciesism and attenuates its effect on the impact of cruelty-free practices on purchase intention. After adding the relevant control variables, the three-way effect remained marginally significant ($p=.08$). The conditional effects of the interaction of cruelty-free and log speciesism on purchase intention in the non-anthropomorphism condition is significant and negative ($B= -.29, p=.0003$) whereas in the anthropomorphism condition, the interaction of cruelty-free and log speciesism on purchase intention becomes non-significant ($B= -.65, p=.49$). The interaction effect of log speciesism and anthropomorphism is also marginally significant and negative ($B= -1.66, p= .07$), which shows that anthropomorphism mitigates speciesism and attenuates its effect on the impact of cruelty-free practices on purchase intention.

Discussion

Using the scenario of a fictitious laptop bag brand, this study replicated the findings from the earlier studies and showed that anthropomorphism mitigates the negative effect of consumer

speciesism on purchase intention towards cruelty-free products (H4). While speciesism's effect remains significant in the non-anthropomorphism condition, it becomes non-significant in the anthropomorphism condition. The study provides an actionable insight for brand managers of cruelty-free firms.

STUDY 5: ALTERNATIVE MEASURE OF SPECIESISM

To avoid mono-method bias and add to the robustness of the study, we conducted another pre-registered experiment (<https://aspredicted.org/b2v6-3w3s.pdf>) where speciesism was measured using participants' allocation of donation money for animal vs. human charity.

Method

Two hundred and fifty U.S. participants (M age = 33.01; male = 49.2%, female = 50%, non-binary = 0.8%) were recruited from Prolific to participate in a 2 (Cruelty-free: Yes vs. Control) x Speciesism (continuous factor) between-subjects experiment. Cruelty-free was manipulated by randomly assigning participants to one of two alternate descriptions of beauty products of a fictitious beauty brand, Amore Skincare (similar manipulation as in Study 1). The cruelty-free condition mentioned that the brand was certified cruelty-free for not testing their products on animals. The control condition did not mention any additional information on the brand's product testing. After reading the brand description, participants rated the brand on purchase intention ("I can imagine buying apparels of this brand," "The next time I buy a leather jacket, I will take this brand into consideration," "I am very interested in buying a

leather jacket of this brand”; 1 = strongly disagree, 7 = strongly agree; $\alpha = .92$). Participants then answered the perceived brand moral agency scale by rating the brand on 4-items (1= strongly unethical/ immoral/dishonest/not trustworthy, 7 = strongly ethical/ moral/ honest/ trustworthy; $\alpha = .89$; Samper, Yang and Daniels 2018). After this, participants were told they are taking part in a different task. Participants were given the scenario of two different fictitious charitable organizations- Animal Allies, that aims at providing food and shelter for stray animals and Care for the Poor, that aims at providing food and shelter to poor people. Participants were told they have to allocate \$100000 between these two charities in any ratio they want (such that the total amount of donation sums up to \$100000). The order in which the information of the two charities were presented to participants was counterbalanced. The percentage of donation amount allocated to the charitable organization for animals was used as the measure of speciesism. Thus, the lower the score, the higher the speciesism. Participants finally indicated their age, gender, prior knowledge of cruelty-free products and the other control variables used in prior studies. The holistic thinking scale, adapted from Choi et. al. (2003) was administered. There were six items measuring participants’ holistic thinking (eg. “Everything in the universe is somehow related to each other”, “It is not possible to understand the pieces without considering the whole picture”, “Even a small change in any element in the universe can lead to substantial alterations in others”; 1 = strongly disagree, 7 = strongly agree; $\alpha = .78$). Participants were then debriefed about the fictitious nature of the brand.

Results

Preliminary analysis. Analysis of variance (ANOVA) with the cruelty-free manipulation

check measure as dependent variable (DV) and the cruelty-free conditions as the independent variable (IV) revealed a significant effect (M control = 3.66, SD = 2.09; M cruelty-free = 5.89, SD = 1.15; $F(1, 313) = 109.59, p = .001; \eta^2 = .30$), showing that the manipulation was successful.

Purchase Intention. ANOVA with purchase intention as DV and cruelty-free condition as IV revealed a marginally significant increase in purchase intention in the presence of cruelty-free practices (M control = 3.99, SD = 1.80; M cruelty-free = 5.17, SD = 1.07; $F(1, 250) = 39.88, p = .00; \eta^2 = .14$). This provides initial support for H1. As a robustness check to control for demographic and attitudinal covariates, we ran analysis of covariance (ANCOVA) with purchase intention as DV, cruelty-free condition as IV, and moral identity, empathy, knowledge of cruelty-free products, attitude towards animals, holistic thinking, age and gender dummies as covariates. Results revealed a significant effect of cruelty-free practices (M control = 3.99, SD = 1.80; M cruelty-free = 5.17, SD = 1.07; $F(1, 242) = 39.41, p = .00; \eta^2 = .14$), a significant effect of moral identity ($F(1, 7) = 3.77, p = .053; \eta^2 = .015$), a significant effect of age ($F(1, 23.99) = , p = .000; \eta^2 = .051$), a significant effect of gender ($F(1, 2) = .236, p = .006, \eta^2 = .01$), a non-significant effect of holistic thinking ($F(1, 0) = .03, p = .874, \eta^2 = .00$), a significant effect of prior knowledge of cruelty-free products ($F(1, 40) = 21.82, p = .00, \eta^2 = .08$), a significant effect of attitude towards animals ($F(1, 18) = 9.71, p = .00, \eta^2 = .039$) and a non-significant effect of empathy ($F(1, 0) = .103, p = .75, \eta^2 = .00$). Therefore, the results support H1 even after controlling for covariates.

Mediation by perceived brand moral agency. To test for mediation by perceived brand moral agency (henceforth, PBMA), we ran Hayes PROCESS Model 4 with cruelty-free versus control contrast as IV, purchase intention as DV and PBMA as mediator. Results revealed a significant indirect effect via PBMA (IE: $B = 1.15$, $SE = .15$, 95% = .8456, 1.4502). Cruelty-free products increase purchase intention by increasing perceived moral agency of the brand. The results support H3. After adding the covariates, the indirect effect via PBMA remains significant (IE: $B = 1.06$, $SE = .14$, 95% = .7951, 1.3544).

Moderation by speciesism. We tested for moderation by speciesism using Hayes PROCESS Model 1 with cruelty-free versus control contrast as IV, purchase intention as DV and speciesism as moderator. The results revealed a non-significant effect of cruelty-free product ($B = .42$, $p = .25$), a significant effect of speciesism ($B = -.01$, $p = .01$), and a significant interaction effect of cruelty free and speciesism ($B = .02$, $p = .02$) on purchase intention. Spotlight analysis at +/- 1 SD from the mean of speciesism shows that cruelty-free practices increase purchase intention among participants low on speciesism ($B = 1.62$, $p = .00$) but not so much among participants high on speciesism ($B = .74$, $p = .00$). On running Johnson Neyman analysis with 95% confidence interval, we found that cruelty-free products significantly increase purchase intention for participants above the speciesism score of 10.16 on a 100-point score (detailed results of Johnson Neyman are provided in the web appendix). These results support H2. Even after adding the control variables used in this study, the moderation effect of speciesism remains significant ($p = .01$). The results revealed a non-significant effect of cruelty-free product ($B = .33$, $p = .34$), a significant effect of speciesism ($B = -.01$, $p = .03$), and a significant interaction effect

of cruelty free and speciesism ($B = .02, p = .01$) on purchase intention after adding the control variables.

Moderated mediation. To test our moderated-mediation hypothesis (H4), we ran Hayes PROCESS Model 8, with cruelty-free versus control condition as the IV, purchase intention as DV, PBMA as mediator, and speciesism as moderator between the IV and mediator. Results revealed a significant index of moderated mediation ($B = .01, SE = .06, 95\% = -.5054, .2855$). Conditional effects at ± 1 SD from the mean of speciesism reveals that the indirect effect of cruelty-free products on purchase intention is significant and positive among participants low on speciesism (IE: $B = 1.49, SE = .21, 95\% = 1.0615, 1.9095$) and this indirect effect becomes lower among participants high on speciesism (IE: $B = .81, SE = .23, 95\% = .3745, 1.2602$). After adding the control variables, the moderated mediation effect remains significant ($B = .0133, SE = .0056, 95\% = .0028, .0242$). Conditional effects at ± 1 SD from the mean of speciesism reveals that the indirect effect of cruelty-free products on purchase intention is significant and positive among participants low on speciesism (IE: $B = 1.38, SE = .21, 95\% = 1.0094, 1.8106$) and this indirect effect becomes lower among participants high on speciesism (IE: $B = .73, SE = .19, 95\% = .3673, 1.1192$).

Discussion

Using the scenario of a fictitious beauty brand and using an actual behavior in the context of a donation scenario as the measure of speciesism, this experiment adds to the robustness of the study. This study develops a different measure of speciesism, apart from the scale established in

literature and replicates the findings from the previous studies. The study also shows an actual behavioral measure of speciesism and how it manifests in consumers' decision making.

GENERAL DISCUSSIONS

A set of five controlled condition experiments and a large-scale panel data analysis shows that contrary to the buzz around cruelty-free practices, there is consumer heterogeneity in terms of valuing cruelty-free practices and there is no unambiguous support for cruelty-free brands. This heterogeneity is due to consumer speciesism, which leads some consumers (high speciesism) to think of animals as not having equal moral status as humans and ignoring the pain and suffering they encounter due to animal testing. The study argues and shows that consumers with low speciesism value cruelty-free practices and perceive cruelty-free brands as moral agents, which drives their purchase intentions towards such products. However, consumers with high speciesism are indifferent to cruelty-free practices as they do not perceive animals to be of equal moral status as humans, and thus they do not consider cruelty-free brands as moral agents, which in turn does not have any significant impact on their purchase intention. Thus, we address the gap between the buzz observed around cruelty-free practices and the evidence of no significant relationship between cruelty-free practices and firm performance using speciesism. The findings from our studies show that while cruelty-free practices do have a positive impact on consumers' purchase intention, it is attenuated by speciesism, which makes high speciesism consumers indifferent to cruelty-free brands and low speciesism consumers having a higher purchase intention. The studies also show that the mechanism driving this phenomenon is perception of the brand's moral agency. While the initial findings helps brands understand their consumer heterogeneity in terms of speciesism, study 3 shows how brands can mitigate the

negative impact of high speciesism using anthropomorphized animals in their brand communication. Study 4 tests a boundary condition and shows that even when products involve perceived physical risk, the preference towards cruelty-free brands persists among low speciesism consumers. Study 5 uses a scenario to measure speciesism and adds to the robustness of our findings.

Theoretical Contributions

The current study contributes to the literature on sustainable consumption, brand morality, ethical treatment of animals and anthropomorphism. To the best of our knowledge, the current study is the first attempt to examine cruelty-free practices using the lens of morality and showing that the results of the adoption of cruelty-free practices by firms is not unequivocally positive as it may seem, based on popular survey results of US consumers or the buzz around cruelty-free practices on social media, which is a counterintuitive finding. Cruelty-free practice is an environmental sustainability issue (Sen & Bhattacharya, 2001) as it addresses animal testing or unethical treatment of animals. Despite growing focus on sustainability in marketing literature, evident from the MSI research priorities 2024, call for focus on better marketing for a better world (Chandy et. al., 2021) and addressing global challenges (UN SDGs) using a marketing lens (Grewal et. al, 2024), marketing literature has not delved into this issue. We address this gap by proposing and empirically testing speciesism as the source of consumer heterogeneity in terms of valuing cruelty-free brands. We show that consumer speciesism attenuates the positive impact of cruelty-free practices on purchase intention. We also show how perception of the brand's moral agency is the mechanism driving this phenomenon and also how

this moral perception only happens for low speciesism consumers while high speciesism ones remain indifferent.

What makes cruelty-free practices and the consumer heterogeneity towards preference for cruelty-free brands interesting to study is that it involves consumer prejudice. There's some literature in marketing that attempts to address similar issues, like Khan and Kalra (2022) where the effect of diversity in corporate teams on consumer attitude towards the firm was examined. Just like racial or gender bias, speciesism is also a prejudiced behavior and our study addresses this issue and contributes to the literature. Also, unlike racial, gender, ethnic diversities which are social issues, our study addresses prejudiced behavior in the context of environmental sustainability, and literature in the domain of environmental sustainability has not examined any issue stemming from consumers' prejudice. The current study also addresses a core sustainability issue, compared to most studies in marketing literature that delve into peripheral issues. The study thus adds to literature examining core sustainability issues, like that of Pelozo & White (2013). The study also introduces the construct of speciesism to consumer behavior and marketing literature and empirically examines its effect.

We further examine how cruelty-free brands can address this issue and attract high speciesism consumers. We propose and empirically demonstrate that cruelty-free brands can use anthropomorphized animals in their brand communications to mitigate the negative effect of speciesism and create a win-win strategy. When animals are anthropomorphized, they seem human-like and thus, even consumers with high speciesism will be able to perceive them as similar to humans in moral status and feel their sufferings. While literature has looked at guilt induced through animal anthropomorphism, our findings add a significant contribution to

anthropomorphism literature by showing the positive effects of anthropomorphism in mitigating speciesism, which is a strong prejudice.

Managerial Implications

The study provides significant managerial implications as well. First, the study highlights how cruelty-free brands need to address two different segments of consumers based on speciesism. Second, the findings from the study show how using anthropomorphized animals in brand communications can help mitigate the negative effects of high speciesism and influence even the high speciesism consumers to purchase from cruelty-free brands, which can lead to a significant influence on firm performance. Third, the study also shows that the mechanism driving this phenomenon is perception of a brand's moral agency. Brand managers can focus on priming morality information in their brand communications, thus further influencing consumers.

The current study has policy implications as well. First, the study addresses a significantly important sustainability issue, ethical treatment of animals, which can be categorized under the UN SDG 12, i.e., responsible consumption and production as well as SDG 15, i.e., life on land, and thus addresses the broader goals of sustainability towards the planet (Grewal et. al., 2024). Second, if policy makers mandate the use of anthropomorphized animals on the packages of cruelty-free brands, it will help mitigate consumer speciesism over the long run.

FUTURE RESEARCH DIRECTIONS

While we demonstrate one mechanism of mitigating the negative effect of speciesism using anthropomorphism, future research can delve into other mitigating mechanisms that can help cruelty-free brands gain financial benefits from their sustainability initiative.

Future research may also delve into other such sustainability issues which are of critical importance in the current times and which are creating buzz, similar to cruelty practices. It is important to examine how firms can benefit from their sustainability initiatives that address the sustainable development goals and how they can persuade consumers to value their sustainability initiatives. Studies can also focus on examining other sustainability issues that involve consumer prejudice and highlight actionable insights for managers to mitigate the same. Research can also look at other downsides of speciesism and how these negative effects can be mitigated.

DATA COLLECTION INFORMATION

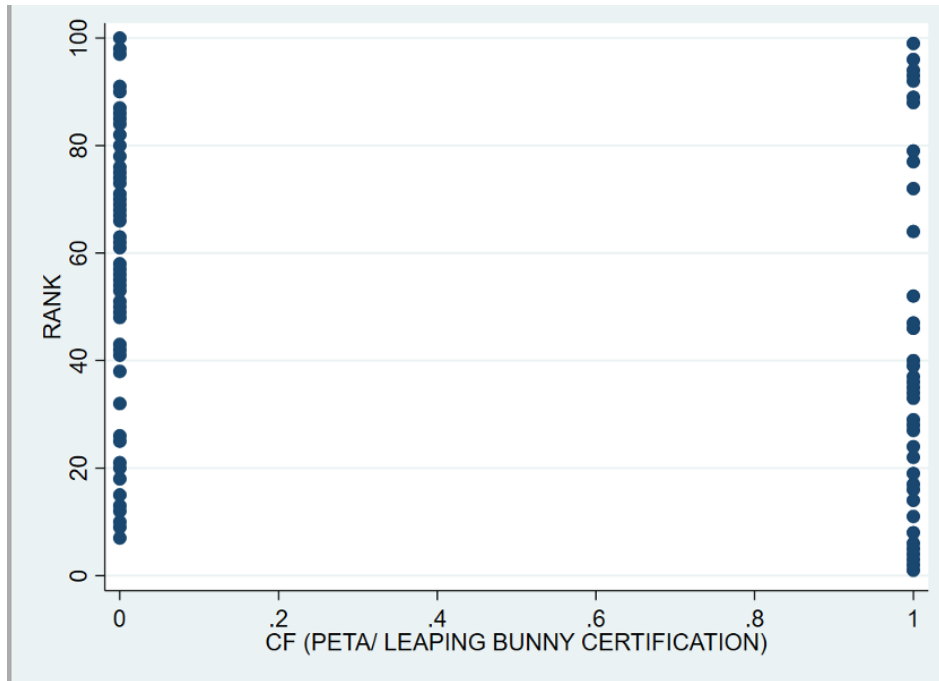
The first author was responsible for collecting secondary data and the first three authors were responsible for analyzing the data for the initial secondary data evidence. The first and the fourth author were involved in designing the experiments, along with inputs from the second and third author. The first author collected data for all the experiments from Prolific using US participants. The experiment data analysis was primarily conducted by the first author and double-checked by the fourth author. All the data collected and stored for the purpose of the study are anonymous (IIMA IRB 2023-49, IIMA IRB 2024-01). All the studies were pre-registered. Study 1 was conducted in January 2024, study 2 in February 2024, studies 3 and 4 in March 2024 and study 5 in January 2025. The datasets along with the Qualtrics survey-generating files are available. The current article is based on the dissertation of the first author.

APPENDIX

Conceptual Model

Model Free Evidence from Amazon's Top 100 US Beauty and Personal Care Brands

Using Certification



Regression Results

DV: Rank	Coefficient	P Value	Std. Error
Cruelty-Free (Certification)	-7.6608	.263	6.7887
Price (in USD)	.0428	.788	.1588
Brand Age	.3099	.002	.0961
Brand Size	-3.9995	.205	3.1244
Seasonality	2.9183	.700	7.5497
Type of Product	-8.9992	.190	6.8028
Constant	55.8750	.000	12.7975

Moderation Results using Cruelty-Free Certification as IV and Brand Age as Moderator

Model : 1

Y : RANK

X : CF_CERT

W : BRD_AGE

Sample

Size: 86

OUTCOME VARIABLE:

RANK

Model Summary

R	R-sq	MSE	F	df1	df2	p
.4382	.1920	756.0401	6.4962	3.0000	82.0000	.0005

Model

	Coefficient	SE	t	p	LLCI	ULCI
constant	50.1806	6.2250	8.0612	.0000	37.7971	62.5640
Cruelty-Free	-24.6304	8.9001	-2.7674	.0070	-42.3356	-6.9253
Brand Age	.1135	.0970	1.1700	.2454	-.0794	.3063
Interaction	.3797	.1703	2.2298	.0285	.0410	.7185

Product terms key:

Int_1 : Cruelty Free x Brand Age

Test(s) of highest order unconditional interaction(s):

R2-chng	F	df1	df2	p	
X*W	.0490	4.9721	1.0000	82.0000	.0285

Focal predict: Cruelty Free (X)

Mod var: Brand Age (W)

Conditional effects of the focal predictor at values of the moderator(s):

Brand Age	Effect	se	t	p	LLCI	ULCI
9.0000	-21.2129	7.8589	-2.6992	.0084	-36.8469	-5.5790
23.0000	-15.8968	6.6301	-2.3977	.0188	-29.0863	-2.7074
98.0800	12.6126	11.9343	1.0568	.2937	-11.1286	36.3538

Level of confidence for all confidence intervals in output: 95.0000

W values in conditional tables are the 16th, 50th, and 84th percentiles.

SCALES USED IN THE EXPERIMENTS

Purchase Intention Scale (7-point Likert scale) (Holzwarth et al, 2006)

1. I can imagine buying beauty products of this brand
2. The next time I buy beauty products, I will take this brand into consideration
3. I am very interested in buying beauty products of this brand

Speciesism Scale (7-point Likert scale) (Caviola et al, 2019)

1. Morally animals always count for less than humans
2. Humans have the right to use animals however they want to
3. It is morally acceptable to keep animals in circuses for human entertainment

4. It is morally acceptable to trade animals like possessions
5. Chimpanzees should have basic legal rights such as a right to life or a prohibition of torture (reverse coded)
6. It is morally acceptable to perform medical experiments on animals that we would not perform on humans

Moral Disengagement Scale (7-point Likert scale) (Wang et al, 2019)

1. It is okay to buy products from a beauty brand that tests on animals
2. It is okay to buy products from a beauty brand that tests on animals when cruelty-free beauty brands charge a comparatively higher price
3. It is okay to buy products from a beauty brand that tests on animals as long as one also buys products from cruelty-free brands

Brand Coolness Scale (7-point Likert scale) (Warren et. al., 2019)

1. Amore Skincare seems to be an energetic brand
2. Amore Skincare seems to be a chic brand
3. Amore Skincare seems to be in style
4. Amore Skincare seems to be a brand that can make people who are using it stand apart from the crowd

Warmth Scale and Competence Scale (7-point Likert scale) (developed by Fiske, Cuddy and Glick (2007) and used by Li and Nan (2023))

Warmth

1. Amore Skincare seems to be a sincere brand
2. Amore Skincare seems to be a warm brand
3. Amore Skincare seems to be a good-natured brand

4. Amore Skincare seems to be a tolerant brand

Competence

1. Amore Skincare seems to be a competent brand
2. Amore Skincare seems to be a capable brand

Attitude towards animal scale (7-point Likert scale) (adapted from Herzog, Betchart & Pittman, 1991)

1. I sometimes get upset when I see animals in cages in zoo
2. The use of animals such as rabbits for testing the safety of cosmetics and household products is unnecessary and should be stopped

Moral Identity Scale (7-point Likert scale) (Reed, Aquino and Levy, 2007)

1. Being someone who is fair is an important part of who I am
2. It would make me feel good to be a fair person
3. I am actively involved in activities that communicate to others that I am fair
4. The types of things I do in my spare time (e.g., hobbies) clearly identify me as a fair person

Knowledge on cruelty-free practices (7-point Likert scale)

Please indicate your level of prior knowledge on cruelty-free beauty brands on this scale

(1=almost no knowledge, 7=very high level of knowledge)

Self-Brand Connection (as alternate DV) (7-point Likert scale) (adapted from Ferraro, Kirmani and Matherly, 2013)

1. The brand Amore Skincare reflects who I am
2. I can identify with the brand Amore Skincare

Perceived expensiveness and perceived quality (7-point Likert scale):

How expensive do you perceive the brand Amore Skincare to be (1=not at all expensive, 7=highly expensive)

How do you perceive the brand Amore Skincare's quality (1=Very bad quality, 7= very good quality)

Anthropomorphism Manipulation Check (adapted from Puzakova et al., 2013)

1. The deer in the social media post of Elite Moda appears to have a mind of its own (1=not at all appears to have a mind of its own, 7=definitely appears to have a mind of its own)
2. The deer in the social media post of Elite Moda appears to have its own beliefs and desires (1=not at all appears to have its own beliefs and desires, 7=definitely appears to have its own beliefs and desires)

STIMULI FOR STUDY 1

Cruelty-Free: A beauty brand, Amore Skincare is all set to launch a new range of personal care products. Their products range across face, body and hair care essentials like face-wash, moisturizer, shower gels, shampoos etc. Amore Skincare has invested strongly in their R&D to make the products suitable for their target customers. They are also certified cruelty-free for their policy to not test their products on animals.

Control: A beauty brand, Amore Skincare is all set to launch a new range of personal care products. Their products range across face, body and hair care essentials like face-wash, moisturizer, shower gels, shampoos etc. Amore Skincare has invested strongly in their R&D to make the products suitable for their target customers.

STIMULI FOR STUDY 2

Cruelty-Free: An apparel brand, Elite Moda, is launching a new collection of vegan leather jackets. Their jackets have the same elegant and classy look-and-feel as any regular leather jacket. The brand has taken extra steps and invested a lot in R&D to ensure that their vegan leather jackets are not made from animal skin but from cork, yet maintain the same quality level. The brand has been certified cruelty-free. The price of the new collection of jackets is \$200.

Non Cruelty-Free: An apparel brand, Elite Moda, is launching a new collection of leather jackets. Their jackets have an elegant and classy look. Their jackets are made from buckskin (deer skin). The brand has invested a lot in R&D to ensure that their leather jackets have a good quality. The price of the new collection of jackets is \$200.

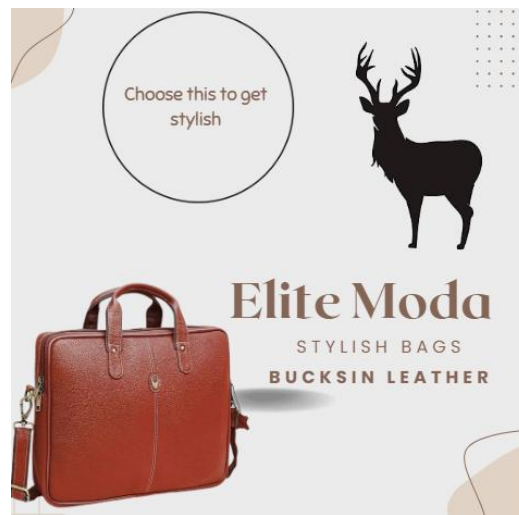
Control: An apparel brand, Elite Moda, is launching a new collection of leather jackets. Their jackets have an elegant and classy look. The brand has invested a lot in R&D to ensure that their leather jackets have a good quality. The price of the new collection of jackets is \$200.

STIMULI FOR STUDY 3

Cruelty-Free Anthropomorphized Condition and Non Anthropomorphized Conditions



Non-Cruelty-Free Anthropomorphized Condition and Non Anthropomorphized Condition



STIMULI FOR STUDY 4

Cruelty-Free Manipulation: Same as study 1

Speciesism Measurement Scenario:

A charitable organization, Care for the Poor, is raising funds for the poor people, to feed them and also take care of their medical necessities. Please indicate how likely you are to donate some money for the charity (1=Strongly Disagree, 7= Strongly Agree)

A charitable organization, Animal Allies, is raising funds for the stray animals to feed them and also take care of their medical necessities. Please indicate how likely you are to donate some money for the charity (1=Strongly Disagree, 7= Strongly Agree)

Imagine you are given the charge of decision for a donation amount of \$100,000. The two charities, Animal Allies and Care for the Poor, have approached you for donations. Please indicate how much you would donate to each. You can choose any combination- donate all the money to either one of the charities or donate some money to Care for the Poor and some money to Animal Allies. Please note that you have to use the \$100,000 for donation to either one of the charities or both together. The amount chosen has to sum up to \$100,000.