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Non-Speciesist Language Conveys Moral Commitments to Animals and Evokes Do-Gooder Derogation

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Psychology of Human-Animal Intergroup Relations, 2023, Vol. 2, Article e9869, https://doi.org/10.5964/phair.9869

Received: 2022-07-08 • **Accepted:** 2023-01-12 • **Published (VoR):** 2023-06-21

Handling Editor: João Graça, University of Groningen, Groningen, The Netherlands

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Supplementary Materials: Data, Materials, Preregistration [see Index of Supplementary Materials]

Abstract

The use of non-speciesist language, such as referring to non-human animals as 'someone' instead of 'something', is a simple way for individuals to recognize animals' moral standing. However, little is known about how this language is perceived and whether it may lead to do-gooder derogation. We conducted three studies involving adults in the United Kingdom (n = 1409) and found that omnivores, semi-vegetarians, and lacto-/ovo-vegetarians were less likely to want to get to know someone who used non-speciesist language. Omnivores were especially apprehensive and also saw them as less compassionate. Strict vegetarians and vegans were more positive, viewing someone who used non-speciesist language as more compassionate. Vegans were particularly so, being the only group to report greater interest in getting to know someone who used non-speciesist language. All groups, irrespective of their diet, thought that non-speciesist language communicated arrogance, an avoidance of meat, and rejection of the idea that humans take moral precedence over other animals. These effects were strongest for language that avoided euphemizing the suffering of animals and weakest for language that did not objectify them. Our findings highlight the social implications of using non-speciesist language and demonstrate how it can be a pathway through which do-gooder derogation may occur in everyday life. By doing so, they contribute to understanding how people perceive those with moral commitments to animals and the challenges facing those who want to reduce animal product consumption and improve animal welfare.

Keywords

do-gooder derogation, speciesism, language, vegans, vegetarians

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Non-Technical Summary

Background

It is common to refer to farmed animals as objects and to euphemize their suffering. This can be avoided by adopting non-speciesist language, for instance, by referring to them as someone instead of 'something' and by acknowledging that they are killed instead of 'processed'. Scholars and activists argue that we ought to adopt such language because it appropriately recognizes non-human animals' moral standing. People might, however, have mixed feelings about this type of language. On the one hand, it may be socially aversive and perceived as preachy to take a moral stance on animal welfare through language. On the other hand, it may also be seen as a more compassionate way of relating to animals. This may also depend on the perceivers' personal beliefs and behaviours, such as whether they eat meat or not.

Why was this study done?

We studied impressions of non-speciesist language because how people view such language has implications for those who consider it a practical way to recognize non-human animals' moral standing, reduce their exploitation, and improve their welfare.

What did the researchers do and find?

We conducted three studies asking just over 1400 people from the United Kingdom what they thought about short exchanges with people who referred to animals using either non-speciesist or conventional language. People who consume animal products (omnivores, semi-vegetarians, and lacto-/ovo-vegetarians) were less interested in getting to know someone who used non-speciesist language. Omnivores had especially negative impressions and were the only group to also perceive them as less compassionate. In contrast, people who do not consume animal products (strict vegetarians and vegans) thought someone who used non-speciesist language was more compassionate. Vegans had a particularly positive view on non-speciesist language, being the only group who were more interested in getting to know someone who used it. All groups thought that someone who used non-speciesist language was arrogant, likely to be vegetarian or vegan, and to believe that humans and other animals are of equal moral value. We also found that people had the strongest opinions about language which avoided euphemizing the suffering of animals compared to language which did not objectify them.

What do these findings mean?

The findings show that people who consume animal products tend to view non-speciesist language as negative, while those who do not tend to have mixed feelings about it. This has implications for those who use non-speciesist language and for its capacity to influence those who eat meat. However, the findings also show that non-speciesist language effectively communicates a clear perspective on the treatment of non-human animals, which may help to establish new moral norms surrounding our interactions with them.

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Factory farming prompts profound existential and ethical debates about climate change and non-human animal welfare. Scholars and activists have suggested that we often tacitly reinforce the legitimacy of our relationships with other animals through the use of language which denigrates and discounts non-human animals, so-called 'speciesist' language (Dunayer, 2004; Singer, 1975). This includes, for example, referring to them as objects and euphemizing their suffering (Plous, 2003; Rothgerber, 2020). Using non-speciesist language is therefore considered a way to acknowledge other animals' moral standing and push back against the presumed legitimacy of exploiting them (Dunayer, 2004). However, moderating one's language in this way may bring about undesirable social consequences for those who choose to do so. Some people are inclined to look harshly on those who tacitly communicate their moral values, especially if they feel that their own behaviour is perceived as morally unacceptable. This has been referred to as 'do-gooder derogation' (Minson & Monin, 2012). We tested this idea by examining the inferences meat-eaters, vegetarians, and vegans make about the diet, moral values, and personality traits of those who adopt non-speciesist language and whether they would prefer to avoid them.

Speciesism and Language

Dunayer (2004) provides a comprehensive analysis of how language denigrates and conceals the nature of our relationships with non-human animals. It is thought to do so in multiple ways. The phrase 'humans and animals' perpetuates a false dichotomy between humans and non-human animals (henceforth referred to as 'animals'). Vilifying others by likening them to animals is thought to betray contempt for animals (Hodson et al., 2020; Plous, 2003). Referring to the killing of animals as 'culling' fails to fully appreciate the gravity of their suffering and deaths. Objectifying animals by referring to them as 'it' reduces them to inanimate objects and disregards their moral standing (Dunayer, 2004). Language which objectifies animals is sometimes encouraged in scientific research and can be observed in, for example, how wild-life presenters talk about animals (Sealey & Oakley, 2013). A recent large-scale quantitative analysis of conversation, film, books, and the internet corroborates this perspective by revealing that words denoting concern were more closely associated with words denoting humans compared to many other animals (Leach et al., 2023).

Scholars and activists have called language that fails to acknowledge the moral standing of animals 'speciesist' because it arguably conceals the true nature of our relationships with them and perpetuates their mistreatment (Dunayer, 2004; Singer, 1975). This is consistent with an understanding of speciesism as the assignment of moral standing based on species membership (Caviola et al., 2019; Dhont et al., 2020). Adopting non-speciesist language is therefore considered a tractable way to realise moral progress by acknowledging animals' moral standing and pushing back against the presumed legitimacy of our relationship with them (Dunayer, 2004). This includes, for example,

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denoting them as 'non-human animals', referring to them as 'who' or 'someone', and labelling meat as 'flesh' and leather as 'skin'. We argue that language of this sort may do more than represent animals in particular ways. It may serve as a reliable social signal that conveys information about people's moral commitments to animals and may therefore evoke social reproach (i.e., do-gooder derogation; Minson & Monin, 2012). If true, this would present a pathway through which do-gooder derogation may come about in everyday life, with implications for understanding the social consequences of adopting non-speciesist language.

Inferences From Non-Speciesist Language

Non-speciesist language likely conveys information about people's moral commitments to animals because language encodes personal traits and values (Pennebaker et al., 2003). People are highly sensitive to this. They pick up on both what people say and how they say it, and make a wealth of inferences about speakers' characteristics including their age, gender, social standing, ethnicity, and personality. These inferences feed into intrapersonal processes, defining group boundaries and predicting impressions of others (Kinzler, 2021). Given the capacity for language to convey information about others, it stands to reason that non-speciesist language may signal people's moral commitments to animals.

If non-speciesist language conveys moral commitments to animals, it may be threatening to others. This is because it is counter-normative and is likely to be perceived as morally self-righteous by many. Indeed, stepping outside of what is normative is generally viewed unfavourably (Fehr & Fischbacher, 2004) and doing so with a perceived air of moral superiority can make people feel looked down upon (Minson & Monin, 2012). It may also threaten others by highlighting their moral hypocrisy. For example, vegetarians can threaten meat-eaters by unintentionally reminding them that they simultaneously care about animals and harm them (De Groeve & Rosenfeld, 2022; Rothgerber, 2014). There is therefore good reason to think that non-speciesist language may be perceived as morally threatening by some.

Because moral threats can undermine the self, they can evoke compensatory psychological mechanisms (Alicke, 2000). One such mechanism is to defensively put down and derogate those who threaten our moral identity (Minson & Monin, 2012). For this reason, non-speciesist language may evoke social apprehension and uncharitable attributions in those who eat meat. This line of reasoning is supported by work showing that those who convey moral commitments to animals through their diets can be perceived as threatening (Dhont & Hodson, 2014; Rothgerber, 2014), evaluated more harshly than many other social groups (MacInnis & Hodson, 2017), and spontaneously associated with words like *arrogant* and *preachy* (De Groeve et al., 2021; Minson & Monin, 2012).

However, non-speciesist language also has the potential to produce positive social consequences given that those who adopt such language might be seen as more compas-

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sionate. This is because those who abstain from eating meat tend to be perceived as more moral (De Groeve et al., 2021) and are spontaneously associated with traits such as *caring* and *kindness* (De Groeve et al., 2021; Minson & Monin, 2012). The positive consequences of non-speciesist language are likely to be most pronounced in those who reject the exploitation of animals, such as those following a vegetarian or vegan diet. Although a substantial proportion of them, especially among vegetarians, abstain from meat consumption for reasons other than animal ethics (i.e., health or environmental reasons; Hopwood et al., 2020), it can be generally expected that vegetarians, and even more so vegans, are more likely to be keen to interact with those who adopt non-speciesist language and be more charitable in their social attributions. This is because such language may convey that they share similar feelings of compassion for the suffering of animals and objections to their exploitation.

This leads us to expect that non-speciesist language will convey information about one's diet and moral commitments to animals. Because of this, we also expect it to shape omnivores', vegetarians', and vegans' willingness to interact with those who use such language, as well as their perceptions of compassion and arrogance.

Present Work

We conducted three studies (two pre-registered) to test the social consequences of using non-speciesist language. Pre-registrations, raw data, and analysis files are available in the Supplementary Materials. Drawing on previous work on the role of language in shaping our relationships with animals, we argued that using non-speciesist language can be expected to serve as a reliable indication of a person's moral commitment to animals and would therefore be perceived differently by omnivores, vegetarians, and vegans.

Study 1 examined if non-speciesist language conveyed information about people's diets and if they reject the belief that humans hold superior moral standing to other animals by virtue of their species membership (Caviola et al., 2019; Dhont et al., 2020; Singer, 1975). We hypothesised that non-speciesist language would convey a greater likelihood of abstaining from eating meat and rejecting speciesism compared to speciesist language.

Study 2 examined if different forms of language were equally likely to convey the same social information. It did so by comparing euphemisms (e.g., denoting flesh as 'meat'), dichotomized and essentialized categories (e.g., describing animals as 'food animals'), and objectification (e.g., referring to animals as 'it'; Dunayer, 2004). Study 2 also tested the social consequences of adopting non-speciesist language by exploring how people perceive the prospect of interacting with someone who uses such language. We hypothesised that avoiding (vs. using) euphemisms would strongly indicate that someone was vegetarian or vegan, and lead to greater social avoidance. Moreover, we expected these effects to be more pronounced than for avoiding (vs. using) objectification. We made no predictions about dichotomized and essentialized categories.

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Study 3 extended the work by examining the broader social consequences of adopting non-speciesist language and how these might differ in meat-eaters, vegetarians, and vegans. Off the back of prior work showing do-gooder derogation directed towards those who abstain from meat eating (MacInnis & Hodson, 2017; Minson & Monin, 2012; Rothgerber, 2014), we expected meat-eaters to be less charitable in many respects. Specifically, we hypothesised they would be more apprehensive about interacting with someone who adopts non-speciesist language compared to someone who does not, and that they would make greater attributions of arrogance. At the same time, we thought non-speciesist language might evoke attributions of compassion (De Groeve et al., 2021; De Groeve & Rosenfeld, 2022) and that vegetarians, and especially vegans, might instead be more keen to interact with those who adopt such language. Following this line of reasoning, we hypothesised that perceptions of arrogance and compassion would statistically mediate the effect of non-speciesist (vs. speciesist) language on social apprehension in meat-eaters, vegetarians, and vegans.

Study 1

We began with an initial investigation into how non-speciesist language is perceived and what it conveys about people's diets and moral commitments to animals.

Method

Sampling and Design

We set our sample target (N = 250) on the basis of an a priori power analysis (see Supplementary Materials section). Two-hundred and fifty adults (123 male, 123 female, 1 no gender, 1 non-binary, 2 undisclosed; M_{age} = 37.54, SD_{age} = 12.59) from the United Kingdom participated online via Prolific in exchange for compensation of £6.00 or more per hour. A full break-down of participants' demographics is presented in Table 1.

Participants were randomly allocated to one of two conditions in a between-participant design (non-speciesist vs. speciesist language). The survey took about three minutes to complete.

Procedure and Materials

Participants were presented with one of two mock, but allegedly real, social-media exchanges as one might see on, for example, *Facebook*. These exchanges were highly similar, documenting a short dialog between John and an unknown interlocutor, talking about a local farm rearing animals for food. The content of each dialog was manipulated such that John either adopted speciesist or non-speciesist language. Following prior work (Dunayer, 2004; Plous, 2003; Singer, 1975), we operationalized speciesist and non-speciesist language as: dichotomized and essentialized categories ('food animals' vs.

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Table 1

Sample Demographics in Study 1

Diet	*n*	M_{Age} (SD_{Age})
Omnivore		
I eat meat and other animals products, like dairy and/or eggs	177	37.10 (14.40)
Semi-Vegetarian		
I eat meat, but only on rare occasions or only certain types of meat	38	34.00 (11.40)
Pescatarian		
I eat fish and/or seafood, as well as dairy products and eggs, but no other meat	5	46.80 (14.70)
Lacto- or Ovo-Vegetarian		
I eat dairy products and/or eggs, but no meat or fish	16	37.06 (14.40)
Strict Vegetarian		
I eat no animal products, including dairy and eggs, but would not consider myself full vegan	5	32.60 (9.07)
Vegan		
I eat no animal products, including dairy, eggs, etc., and avoid all non-food animal products	9	34.11 (15.25)

'non-human animals reared for food'), euphemisms ('go through' and 'meat' vs. 'murder' and 'flesh'), and objectification ('it' and 'something' vs. 'she' and 'someone'). The full exchange can be found in Figure 1.

After reading the exchange, participants were asked about their perceptions of John. They indicated the likelihood that John was a vegetarian or vegan and the likelihood he holds speciesist beliefs, from 1 (not at all likely) to 7 (very likely). To tap the former, participants completed a 6-item scale (α = .97, M = 5.22, SD = 1.70) asking about the likelihood that John does not eat meat ("John does not eat meat"), is a vegetarian or vegan ("John is a vegetarian or vegan"), and identifies as a non-meat-eater and vegetarian or vegan ("Not eating meat is an important part of John's identity", "John is glad he does not eat meat", "John feels solidarity with others vegetarians and vegans", "John is committed to being a vegetarian or vegan"; Cameron, 2004). To tap the latter, participants completed an adapted version of the six-item speciesism scale focused on John's beliefs (α = .85, M = 2.52, SD = 1.18; e.g., "John thinks that, morally, animals always count for less than humans", and "John believes that it is morally acceptable to perform medical experiments on animals that we would not perform on any human"; Caviola et al., 2019).

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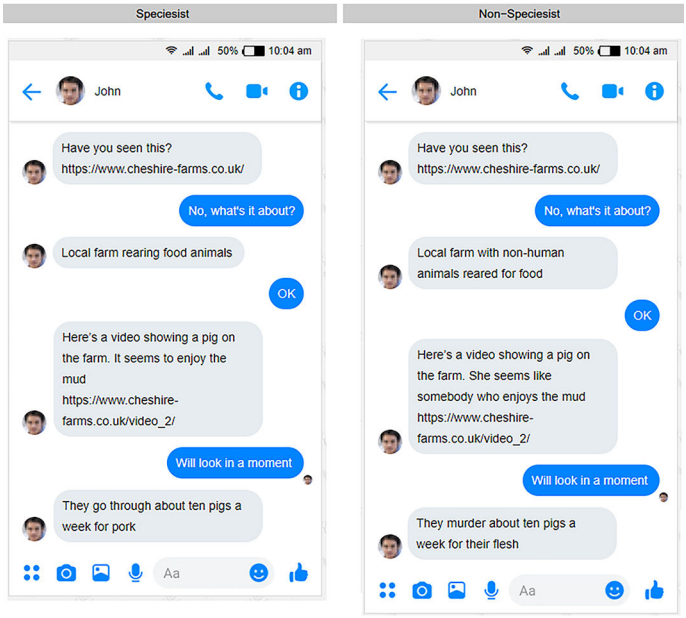
Figure 1

Speciesist and Non-Speciesist Exchanges Used in Study 1



Results and Discussion

We examined mean differences in the perceived diets of those who adopted non-speciesist compared to speciesist language. Participants were more likely to believe that someone was vegetarian or vegan if they used non-speciesist language (M = 5.94, SD = 1.38) compared to if they did not (M = 4.50, SD = 1.68), $t(248) = 7.41$, $p < .001$, $d = 0.94$, 95% CI [0.68, 1.20]. In addition, they were less likely to think that someone held speciesist beliefs if they adopted non-speciesist language (M = 2.19, SD = 1.11) compared to if they did not (M = 2.85, SD = 1.16), $t(248) = -4.65$, $p < .001$, $d = -0.59$, 95% CI [-0.84, -0.33]. These results confirm the predictions and suggest that non-speciesist language does indeed convey a reliable social signal about people's moral commitments to animals. Additional analyses on the moderating effects of dietary group, age, and gender are provided in the Supplementary Materials.

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Study 2

Speciesist language can take many forms, including dichotomized and essentialized categories, objectifying pronouns, and euphemisms. Study 1 showed that avoiding all of these in favour of non-speciesist language reliably conveys dietary identity and moral commitments to animals. However, the approach of examining many different forms of non-speciesist language all together cannot tell us if some forms, such as referring to animals' meat as 'flesh', send a clearer social signal than others, such as referring to animals as 'it'. Thus, Study 2 extended the work by isolating the effects of different types of non-speciesist language. In addition, Study 2 took a first step towards understanding the broader social consequences of adopting non-speciesist language by examining how meat-eaters view the prospect of interacting with someone who uses such language.

Method

Sampling and Design

We set our sample target (N = 350) on the basis of an a priori power analysis (see Supplementary Materials). Three-hundred and fifty adults (173 male, 175 female, 2 undisclosed; M_{age} = 42.06, SD_{age} = 14.79) from the United Kingdom participated online via Prolific in exchange for compensation of £6.00 or more per hour. We applied Prolific's internal filters to obtain a gender-balanced sample of participants who eat meat, as also verified via self-report. Data of self-identified pescatarians (n = 2), lacto- or ovo-vegetarians (n = 2), strict vegetarians (n = 1), and vegans (n = 2) were excluded from further analyses. A full break-down of participants' demographics is presented in Table 2.

The study followed a 2-between (language: non-speciesist vs. speciesist) x 3-within (type: dichotomized and essentialized categories vs. euphemisms vs. objectification) design. The survey took about four minutes to complete.

Procedure and Materials

The paradigm was similar to that of Study 1. Participants were presented with three mock, but allegedly real, social-media exchanges. These exchanges documented three short dialogues between Alex, Ashley, and Jamie and an unknown interlocutor. The content of each dialog was manipulated such that it either reflected the use of speciesist or non-speciesist language. Moreover, each exchange used one of three specific types of speciesist and non-speciesist language, either: euphemisms ('go through' and 'meat' vs. 'murder' and 'flesh'), dichotomized and essentialized categories ('food animals' vs. 'non-human animals reared for food'), or objectification ('it' and 'something' vs. 'she' and 'someone'). These categories derive from prior work (Dunayer, 2004; Plous, 2003; Singer, 1975). Each exchange was randomly allocated one of the target names and the presentation order was randomised. The exchanges can be found in the Supplementary Materials.

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Table 2

Sample Demographics in Study 2

Diet	*n*	M_{Age} (SD_{Age})
Omnivore		
I eat meat and other animals products, like dairy and/or eggs	299	42.47 (14.48)
Semi-Vegetarian		
I eat meat, but only on rare occasions or only certain types of meat	44	39.47 (13.91)
Pescatarian		
I eat fish and/or seafood, as well as dairy products and eggs, but no other meat	2	49.00 (2.19)
Lacto- or Ovo-Vegetarian		
I eat dairy products and/or eggs, but no meat or fish	2	42.00 (10.95)
Strict Vegetarian		
I eat no animal products, including dairy and eggs, but would not consider myself full vegan	1	35.00 (0.00)
Vegan		
I eat no animal products, including dairy, eggs, etc., and avoid all non-food animal products	2	33.00 (8.76)

After reading each exchange, participants were asked about their perceptions of the speaker. They indicated the likelihood that they were vegetarian or vegan via the same six-item scale used in Study 1 (α = .98, M = 4.22, SD = 1.52). Finally, participants reported their willingness to interact with them by indicating their agreement with four items (α = .94, M = 3.67, SD = 1.13; "I would like to be friends with [name]", "I would enjoy having a meal with [name]", "I would want to work with [name]", "I would enjoy meeting [name] at a party"), from 1 (strongly disagree) to 7 (strongly agree).

Results and Discussion

We first examined differences in the perceived diets of those who adopted non-speciesist compared to speciesist language. Replicating the results of Study 1, meat-eaters were more likely to believe that someone was vegetarian or vegan if they adopted non-speciesist language (M = 4.45, SD = 1.60) compared to if they did not (M = 3.98, SD = 1.38), $F(1, 341) = 21.99$, $p < .001$, $\eta_p^2 = .06$. Importantly though, and as can be seen in Figure 2, the inferences meat-eaters made about someone's diet were not the same for all types of non-speciesist language, $F(1.95, 663.67) = 42.58$, $p < .001$, $\eta_p^2 = .11$. Avoiding language which euphemises the exploitation of animals, for example referring to their meat as flesh, clearly conveyed that one was vegetarian or vegan, $t(341) = 8.66$, $p < .001$, $d = 0.93$, 95% CI [0.71, 1.16]. As did avoiding dichotomized and essentialized categories, $t(341) =$

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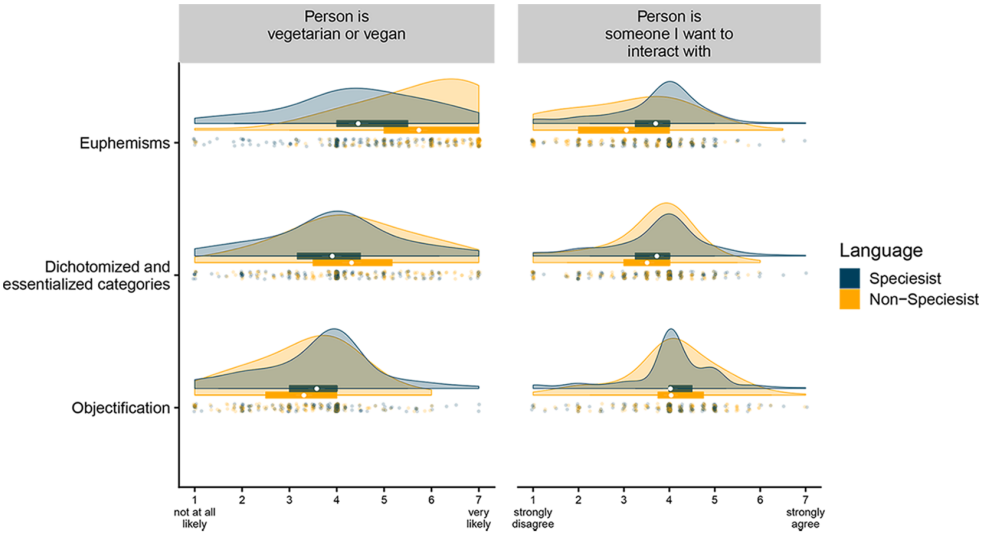
Figure 2

Social Judgements About Those Who Adopt Speciesist and Non-Speciesist Language



Note. Figure depicts individual jittered data points (colored points), smoothed density distributions (shaded segments), box plots (boxes), means (white points), and 95% confidence intervals (whiskers).

2.77, p = .006, d = 0.30, 95% CI [0.09, 0.51]. On the other hand, referring to animals as subjects, compared to objects, did not indicate that one was likely to be vegetarian or vegan. If anything, there was some weak evidence of the opposite, $t(341)$ = -2.20, p = .029, d = -0.24, 95% CI [-0.45, -0.02].

Moving on, we considered how meat-eaters view the prospect of interacting with others who adopt different forms of non-speciesist language. As can be seen in Figure 2, they preferred to interact with someone who used conventional speciesist language (M = 3.82, SD = 1.04) compared to someone who used non-speciesist language (M = 3.53, SD = 1.19), $F(1, 341)$ = 8.72, p = .003, η_p^2 = .02. As expected though, these preferences depended on the specific form of non-speciesist language used, $F(1.95, 664.35)$ = 16.87, p < .001, η_p^2 = .05. Meat-eaters strongly preferred to avoid interacting with someone who avoided euphemizing the exploitation of animals compared to someone who did not, $t(341)$ = -5.17, p < .001, d = -0.56, 95% CI [-0.77, -0.34]. There was also some weak evidence to suggest that meat-eaters preferred to steer clear of those who did not use dichotomized and essentialized categories when referring to animals compared to someone who did, $t(341)$ = -1.89, p = .060, d = -0.20, 95% CI [-0.42, 0.01], although this effect did not reach conventional levels of statistical significance. Finally, meat-eaters had no preference one way

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or the other about the prospect of interacting with someone who personified animals compared to someone who objectified them, $t(341) = 0.13$, $p = .896$, $d = 0.01$, 95% CI [-0.20, 0.23]. These findings mirror the inferences meat-eaters made about diet and suggest that they are wary of interacting with those who are perceived to abstain from animal product consumption (MacInnis & Hodson, 2017; Minson & Monin, 2012; Rothgerber, 2014). The findings largely confirm the predictions and highlight how different forms of that non-speciesist language convey information about people's dietary identities and may shape subsequent social perceptions, particularly when using non-speciesist language refers explicitly to ethically problematic behaviours towards animals. Further analyses of dietary group, age, and gender are provided in the Supplementary Materials.

Study 3

Study 1 and Study 2 demonstrated that participants make inferences about the diet and moral values of those who adopt non-speciesist language, and that meat-eaters are inclined to socially avoid them, especially when non-speciesist language makes the exploitation of animals salient (e.g., referring to 'murder' and 'flesh'). We extended the work by examining if non-speciesist language evokes ambivalent social impressions (De Groeve et al., 2021; De Groeve & Rosenfeld, 2022) and if this leads to do-gooder derogation (Minson & Monin, 2012). An initial investigation found that meat-eaters ($n = 296$) perceived those who use non-speciesist language to be less warm and more judgemental compared to those who did not. Further details can be found in the Supplementary Materials (Study S1). Building on this work, Study 3 sought to confirm that non-speciesist language evokes social inferences about compassion and arrogance (De Groeve et al., 2021; De Groeve & Rosenfeld, 2022), if these lead to do-gooder derogation in the form of social avoidance (Minson & Monin, 2012), and if these effects differ in meat-eaters, vegetarians, and vegans. Although Study 2 indicated that the strength of people's reactions to the use of non-speciesist language differ depending on the type of non-speciesist language (as tested in isolation), combining different types non-speciesist language (i.e., avoidance of euphemisms, dichotomized and essentialized categories, as well as objectification) in a brief passage likely elicits the strongest reaction given the greater number of cues to make social inferences. Therefore, to test the set of hypotheses of Study 3, different types of language were manipulated simultaneously to compare participants' reactions to the use of non-speciesist language.

Method

Sample and Design

We set our sample target ($N_{Total} = 800$; $n_{Meat\text{-}eaters} = 400$, $n_{Veg^*ns} = 400$) on the basis of an a priori power analysis (see Supplementary Materials). Eight-hundred and nine adults

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Table 3

Sample Demographics in Study 3

Diet	*n*	M_{Age} (SD_{Age})
Omnivore		
I eat meat and other animals products, like dairy and/or eggs	398	40.15 (14.14)
Semi-Vegetarian		
I eat meat, but only on rare occasions or only certain types of meat	87	37.87 (13.40)
Pescatarian		
I eat fish and/or seafood, as well as dairy products and eggs, but no other meat	24	38.29 (11.31)
Lacto- or Ovo-Vegetarian		
I eat dairy products and/or eggs, but no meat or fish	106	39.63 (13.13)
Strict Vegetarian		
I eat no animal products, including dairy and eggs, but would not consider myself full vegan	46	38.59 (13.21)
Vegan		
I eat no animal products, including dairy, eggs, etc., and avoid all non-food animal products	148	36.99 (11.11)

(456 male, 341 female, 5 non-binary, 7 undisclosed; M_{age} = 39.12, SD_{age} = 13.33) from the United Kingdom participated online via Prolific in exchange for £6.00/hr. We applied Prolific's internal filters to obtain a gender-balanced sample of participants with the desired diets. Participants' diet was confirmed via self-report. The final sample consisted of 485 meat-eaters (omnivores and semi-vegetarians) and 300 veg*ns (lacto- or ovo-vegetarians, strict vegetarians, and vegans). Data of self-identified pescatarians (n = 24) were excluded from further analyses. A breakdown of participants' demographics can be found below in Table 3.

Participants were randomly allocated to one of two conditions in a between-participant design (non-speciesist vs. speciesist language). The survey took about four minutes to complete.

Procedure and Materials

Participants were introduced to a study on perceptions of others they may encounter online. They were told that they would be paired with another participant in the study and before meeting them, they would have a chance to introduce themselves to one another by writing a short paragraph about themselves and what they did last weekend. Participants were then presented with one of two short texts allegedly written by another participant. These were highly similar, introducing John as a university student in the

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south of the United Kingdom who had taken a day trip last weekend to a local farm rearing animals for food. Similar to Study 1, John either referred to his experience of going to the farm using speciesist or non-speciesist language: euphemisms ('go through' and 'meat' vs. 'murder' and 'flesh'), dichotomized and essentialized categories ('food animals' vs. 'non-human animals reared for food'), and objectification ('it' and 'something' vs. 'she' and 'someone'). The full text can be found in the Supplementary Materials.

After reading the text, participants were asked about their perceptions of John. They indicated the likelihood that John was a vegetarian or vegan via the six-item same scale used in Study 1 (α = .99, M = 3.66, SD = 2.13). They then reported how compassionate and arrogant John appeared to them ("How ____ does John appear to you?"), from 1 (strongly disagree) to 7 (strongly agree). Perceptions of compassion were measured via five items (α = .96, M = 4.35, SD = 1.47; compassionate, empathetic, caring, kind, ethical). Perceptions of arrogance were measured via five items (α = .96, M = 2.93, SD = 1.79; arrogant, judgemental, preachy, self-righteous, conceited). We selected these items on the basis of prior work on attributions of arrogance and morality to vegetarians and vegans (De Groeve et al., 2021; Minson & Monin, 2012). Finally, participants reported their willingness to interact with John' via the same 4-item scale used in Study 2 (α = .96, M = 3.62, SD = 1.45; De Groeve et al., 2021).

Results and Discussion

Confirmatory Analyses

Our confirmatory tests concern social inferences within and between those who eat meat and those who do not. As such, we initially focus on aggregate trends within and between meat-eaters (omnivores and semi-vegetarians) and veg*ns (lacto- or ovo-vegetarians, strict vegetarians, vegans). We explore the results within and between all dietary groups in a later section. Additional analyses are available in the Supplementary Materials.

First, we focused on participants' willingness to interact with those who use non-speciesist language compared to those who do not. Meat-eaters and veg*ns saw the prospect of interacting with someone who used non-speciesist language compared to someone who did not differently, indicated by the significant interaction between dietary group and language, $F(781) = 48.18$, $p < .001$, $\eta_p^2 = .06$. We broke this down by examining differences within each dietary group. As can be seen in Figure 3, meat-eaters were significantly less keen to interact with someone who adopted non-speciesist language (M = 3.05, SD = 1.32) compared to someone who did not (M = 4.28, SD = 1.21), $t(483) = -10.65$, $p < .001$, $d = -0.97$, 95% CI [-1.16, -0.78], whereas veg*ns had no strong feelings one way (M = 3.66, SD = 1.80) or the other (M = 3.48, SD = 1.80), $t(298) = 1.03$, $p = .304$, d = 0.12, 95% CI [-0.11, 0.35]. As expected, meat-eaters were more likely to want to socialise with those who used conventional speciesist language compared to veg*ns, $t(388) = 6.23$, $p < .001$, $d = 0.64$, 95% CI [0.44, 0.85], but less likely to want to socialise with those who

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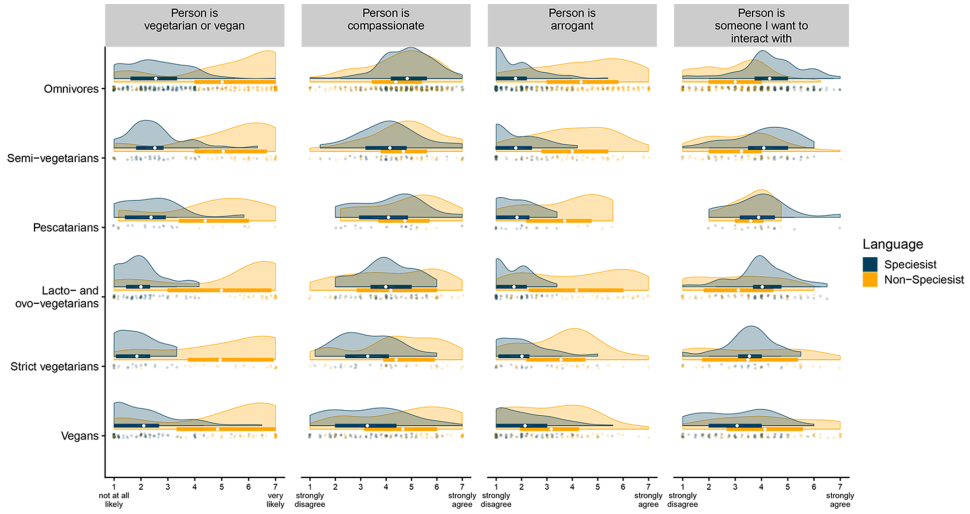
Figure 3

Social Judgements About Those Who Adopt Speciesist and Non-Speciesist Language



adopted non-speciesist language compared to veg*ns, $t(393) = -3.88$, $p < .001$, $d = -0.41$, 95% CI [-0.61, -0.20].

Next, we tested for differences in perceptions of arrogance and compassion. Both meat-eaters and veg*ns saw those who use non-speciesist language as more arrogant than those who did not, $F(1, 781) = 393.02$, $p < .001$, $\eta_p^2 = .33$, although a significant interaction suggested that this tendency was more pronounced in meat-eaters, $F(1, 781) = 18.39$, $p < .001$, $\eta_p^2 = .02$. This meant that meat-eaters viewed those who adopted non-speciesist language as more arrogant ($M = 4.28$, $SD = 1.76$) than did veg*ns ($M = 3.59$, $SD = 1.76$), $t(393) = 3.78$, $p < .001$, $d = 0.39$, 95% CI [0.19, 0.60], but viewed those who adopted conventional speciesist language as less arrogant ($M = 1.77$, $SD = 0.93$) than did veg*ns ($M = 1.97$, $SD = 0.99$), $t(388) = -2.02$, $p = .044$, $d = -0.21$, 95% CI [-0.41, -0.01].

We also found a significant interaction between dietary group and language on attribution of compassion, $F(1, 781) = 33.59$, $p < .001$, $\eta_p^2 = .04$. Unexpectedly, meat-eaters saw those who used non-speciesist language as less compassionate ($M = 4.45$, $SD = 1.45$) than those who did not ($M = 4.73$, $SD = 1.08$), $t(483) = -2.38$, $p = .018$, $d = -0.22$, 95% CI [-0.39, -0.04]. Veg*ns, on the other hand, saw those who used non-speciesist language as more compassionate ($M = 4.45$, $SD = 1.80$) than those who did not ($M = 3.53$, $SD = 1.36$), $t(298) = 5.03$, $p < .001$, $d = 0.58$, 95% CI [0.35, 0.81]. This effect seemed to primarily be driven by veg*ns seeing those who used conventional speciesist language as less compassionate than did meat-eaters, $t(388) = 9.61$, $p < .001$, $d = 0.99$, 95% CI [0.78,

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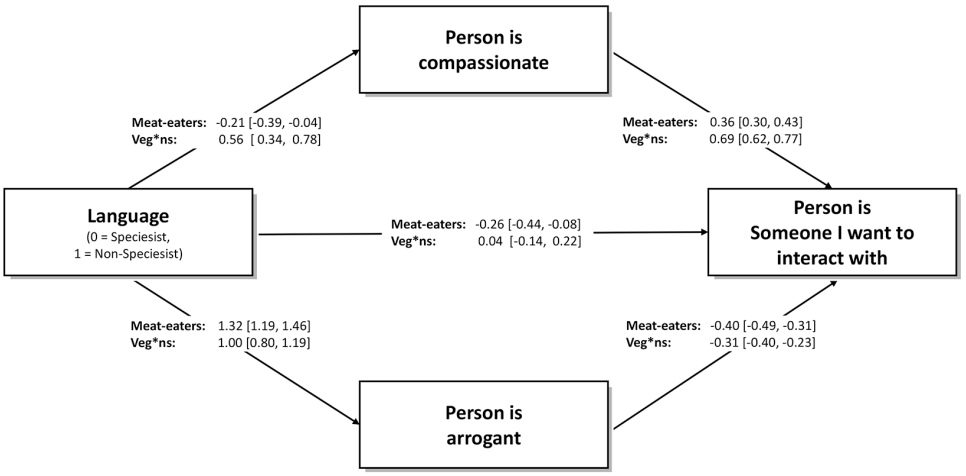
1.21], while meat-eaters and veg*ns viewed those who used non-speciesist language as similarly compassionate, $t(393) = -0.03$, $p = .972$, $d = -0.00$, 95% CI [-0.21, 0.20].

Inferences about compassion and arrogance were related to social interaction preferences in the expected way. Participants were more interested in getting to know someone if they perceived them as compassionate, rs > .42, ps < .001, and less interested if they perceived them as arrogant, rs < -.27, ps < .001. To test the idea that differences in social apprehension about those who use different types of language are underlain by inferences about arrogance and compassion, we fit a parallel mediation model predicting social interaction preferences from language (speciesist vs. non-speciesist) through inferences of compassion and arrogance. We fit two models, one for meat-eaters and one for veg*ns, and examined the confidence intervals of the indirect-path estimates, derived from 10,000 bootstrap samples. Inferences about compassion and arrogance played a role for both meat-eaters and veg*ns, although the pattern of results was qualitatively different (Figure 4). For meat-eaters, both pathways were negative, *indirect* = -0.08, 95% CI [-0.15, -0.02], *indirect* = -0.53, 95% CI [-0.68, -0.38]. For veg*ns, on the other hand, the indirect path through compassion was positive, *indirect* = 0.39, 95% CI [0.26, 0.55], whereas the path through arrogance was negative, *indirect* = -0.31, 95% CI [-0.43, -0.20].

Figure 4

Social Judgements About Those Who Adopt Speciesist and Non-Speciesist Language



Note. Figure depicts individual jittered data points (coloured points), smoothed density distributions (shaded segments), box plots (boxes), means (white points), and 95% confidence intervals (whiskers).

Exploratory Analyses

Although we pre-registered comparisons within and between meat-eaters and veg*ns, our data afford a more fine-grained analysis of dietary self-identification. Recent work

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suggests that those who identify as vegetarian may differ in important ways compared to those that identify as vegan. For example, although both groups tend to share similar ethical motives to abstain from meat consumption, only vegans apply these ethical values consistently to other consumption and lifestyle choices, which can be understood within the context of their stronger anti-speciesist ideology and politicised identity (rather than being a dietary identity; Dhont & Ioannidou, 2021; Vestergren & Uysal, 2022). Given this, it seemed fruitful to explore differences between specific dietary subgroups that make up those who eat meat (omnivores vs. semi-vegetarians) and those who do not (lacto- and ovo-vegetarians vs. strict vegetarians vs. vegans).

We did not find many significant differences between omnivores and semi-vegetarians. They viewed the prospect of interacting with someone who used non-speciesist (vs. speciesist) language in largely the same ways, $F(1, 481) = 2.31$, $p = .129$, $\eta_p^2 = .01$. They also made similar attributions of arrogance, $F(1, 481) = 1.14$, $p = .286$, $\eta_p^2 < .01$. However, they made different attributions of compassion to those who used non-speciesist (vs. speciesist) language, $F(1, 481) = 10.50$, $p = .001$, $\eta_p^2 = .02$. Only omnivores thought someone who used non-speciesist language was less compassionate ($M = 4.39$, $SD = 1.45$) than someone who did not ($M = 4.84$, $SD = 1.01$), $t(396) = -3.58$, $p < .001$, $d = -0.36$, 95% CI [-0.56, -0.16]. There was no evidence to suggest that semi-vegetarians felt strongly one way ($M = 4.69$, $SD = 1.48$) or the other ($M = 4.15$, $SD = 1.25$) in terms of compassion, $t(85) = 1.79$, $p = .077$, $d = 0.39$, 95% CI [-0.04, 0.81].

More importantly, there were marked differences between lacto-/ovo-vegetarians, strict vegetarians, and vegans. They differed in how they viewed the prospect of interacting with someone who used non-speciesist (vs. speciesist) language, $F(2, 294) = 13.52$, $p < .001$, $\eta_p^2 = .08$, and also in their perceptions of compassion, $F(2, 294) = 4.59$, $p = .011$, $\eta_p^2 = .03$, and arrogance, $F(2, 294) = 8.28$, $p < .001$, $\eta_p^2 = .05$. Vegans were the only dietary group that were more willing to interact with someone who expressed non-speciesist language ($M = 4.13$, $SD = 1.83$) compared to someone who did not ($M = 3.08$, $SD = 1.33$), $t(146) = 4.07$, $p < .001$, $d = 0.67$, 95% CI [0.34, 1.00]. Strict vegetarians made no strong distinctions between those who expressed non-speciesist language ($M = 3.48$, $SD = 1.92$) and those who did not ($M = 3.54$, $SD = 1.02$), $t(44) = -0.12$, $p = .905$, $d = -0.04$, 95% CI [-0.62, 0.55], whilst lacto-/ovo-vegetarians preferred to avoid those who use non-speciesist language ($M = 3.12$, $SD = 1.53$) versus those who did not ($M = 4.03$, $SD = 1.09$), $t(104) = -3.57$, $p < .001$, $d = -0.69$, 95% CI [-1.09, -0.30]. Vegans attributed greater compassion to someone who expressed non-speciesist language ($M = 4.67$, $SD = 1.83$) compared to someone who did not ($M = 3.27$, $SD = 1.50$), $t(146) = 5.11$, $p < .001$, $d = 0.84$, 95% CI [0.50, 1.18], as did strict vegetarians ($M = 3.28$, $SD = 1.17$; $M = 4.40$, $SD = 1.75$), $t(44) = 2.42$, $p = .020$, $d = 0.72$, 95% CI [0.11, 1.33]. However, lacto- and ovo- vegetarians did not differentiate between those who used non-speciesist language ($M = 4.19$, $SD = 1.77$) and those who did not ($M = 3.99$, $SD = 1.08$), $t(104) = 0.71$, $p = .480$, $d = 0.14$, 95% CI [-0.24, 0.52].

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This meant that lacto- and ovo- vegetarians were more similar to those who eat meat (omnivores and semi-vegetarians) than they were to those who do not consume any animal products (strict vegetarians and vegans). Lacto- and ovo- vegetarians were indistinguishable from meat-eaters with regards to their willingness to interact with someone who used non-speciesist (vs. language), $F(1, 587) = 1.32$, $p = .251$, $\eta_p^2 < .01$, and in how they viewed their compassion, $F(1, 587) = 2.85$, $p = .092$, $\eta_p^2 < .01$, and arrogance, $F(1, 587) = 0.03$, $p = .867$, $\eta_p^2 < .01$. Thus, non-speciesist language was perceived quite differently by those who only abstain from eating meat compared to those who abstain from all animal products.

General Discussion

By using non-speciesist language some people express their appreciation of animals' moral standing and disapproval of systems of animal exploitation (Dunayer, 2004). We investigated the inferences meat-eaters, vegetarians, and vegans make about those who use such language.

Main Findings

Using non-speciesist language indicated to others that a person was vegetarian or vegan and opposed speciesism. This finding adds to a body of work documenting how language conveys beliefs (Kinzler, 2021) and helps understand how people infer moral commitments to animals in others. However, certain non-speciesist phrases, such as referring to animal slaughter as murder, were more effective at communicating these commitments than others, such as referring to animals as someone. This suggests that the observed effects are mostly driven by non-euphemistic language which may, in turn, be because it more effectively highlights the harms being caused (Schein & Gray, 2016). It is also possible that the impact of different non-speciesist phrases is cumulative, with the strongest impressions being formed when multiple non-speciesist phrases are used (as observed in Study 1 and Study 3).

Non-speciesist language had different social consequences depending on the perceiver's diet. Meat-eaters attributed greater arrogance and lower compassion to those who adopted non-speciesist language, which was further associated with a greater preference to avoid them. In other words, we did not find evidence that omnivores felt ambivalent about those using non-speciesist language (i.e., mixed-valence perceptions, De Groeve & Rosenfeld, 2022). Indeed, do-gooder derogation was clearest amongst omnivores and reflected across multiple measures. This finding is consistent with the idea that vegetarians and vegans can be perceived as threatening to meat-eaters (Dhont & Hodson, 2014; Rothgerber, 2014) and that viewing them in a negative light is a way of distancing oneself from such threats (Alicke, 2000). The present findings add to a body of work showing

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how conveying moral commitments to animals can evoke motivated defensiveness and social derogation by those that may not hold similar commitments (De Groeve et al., 2021; Minson & Monin, 2012).

Veg*ns (i.e., self-identified lacto- or ovo-vegetarians, strict vegetarians, and vegans), on the other hand, viewed non-speciesist language more charitably. They attributed someone who used non-speciesist language greater compassion compared to someone who did not. That said, veg*ns also saw someone who adopted non-specialist language as more arrogant, just as meat-eaters did. They were neither more, nor less, keen to get to know someone who adopted non-speciesist language, and this effect was statistically mediated by their ambivalent perceptions of compassion and arrogance. These findings are consistent with work showing that those who abstain from meat can be perceived in ambivalent terms, both as arrogant and preachy but also caring and kind (De Groeve et al., 2021; Minson & Monin, 2012). Moreover, it is interesting to note that veg*ns also differed from meat-eaters in how they viewed conventional speciesist language. Veg*ns had a more negative impression of those who used such language, likely because they recognise that such language implicitly communicates the legitimation of animal exploitation. Future research could further investigate people's reactions to and attributions of omnivores using different types of speciesist language, varying in the extent to which it condones or justifies (explicitly or implicitly) harming and killing animals for human consumption.

Interestingly, we found marked differences between lacto- and ovo-vegetarians, strict vegetarians, and vegans. Vegans saw someone who used non-speciesist language as more compassionate than someone who used conventional language, and were more interested in building social relationships with them. Lacto- and ovo-vegetarians, on the other hand, were more apprehensive of those who used non-speciesist language and saw them as being no more compassionate. This meant that lacto- and ovo- vegetarians were actually more similar to those who eat meat than they were to those who do not consume any animal products. This suggests that, at least when it comes to communicating moral commitments to animals, it makes little sense to lump together those who only abstain from meat and those who abstain from all animal products. This finding adds to an emerging body of work highlighting meaningful differences between vegetarians and vegans in terms of their moral and social reasoning surrounding animal product consumption and animal exploitation (Dhont & Ioannidou, 2021; Vestergren & Uysal, 2022).

That non-speciesist language conveyed such a clear and unambiguous signal about one's moral commitments (d > 1.50 in some cases) bodes well for its capacity to establish new norms surrounding our relationships with animals (Dunayer, 2004). However, that it also evoked harsh social judgments in many cases might pose a potential problem for those who see it as a way to acknowledge animals' moral standing and push back against the presumed legitimacy of exploiting them. Even in arguably the most charitable

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case, when perceived by vegans, someone who expressed non-speciesist language was perceived as relatively arrogant. Overall, the findings contribute to understanding how people perceive those who communicate moral commitments to animals (De Groeve et al., 2021) and highlight the challenges facing those interested in decreasing or eliminating animal product consumption and pushing back against animal exploitation (De Groeve & Rosenfeld, 2022; Hodson et al., 2020; MacInnis & Hodson, 2017).

Limitations and Future Directions

It is important to acknowledge constraints on the generalizability of our findings. We examined non-speciesist language by gathering impressions of white, mostly male, targets. Although we would expect similar differences to arise in response to other targets, this would require further work to confirm, and it is important to note that people tend to associate vegetarianism with whiteness and femininity (Rosenfeld et al., 2022; Rothgerber, 2013; Salmen & Dhont, 2023). In addition, we focused on how people from the United Kingdom perceived language about animals reared for food, meaning our findings are likely to generalise to populations with similar cultural orientations to the animals they eat. However, this also means that they may not capture how similar language might be perceived in other contexts. For example, non-speciesist language may be perceived in a more favourable light when directed towards animals that hold a special status, such as beloved companions or sacred animals.

Our mediation approach implies that people think of those who use non-speciesist language as more or less arrogant and compassionate and that this affects how much they want to interact with them. This seems psychologically plausible, however, it is important to note that it does not rule out alternative explanations in which attributions of arrogance and compassion are not causally related to social interaction preferences. This points to the value of future research by highlighting how little we know about how moral commitments to animals are signalled to others. Work could expand the scope by examining if the justifications meat-eaters give for their choices contain information about their moral commitments. For example, stating that eating meat is 'normal' may signal a lack of concern for animal welfare (Piazza et al., 2015; Rothgerber, 2020). More broadly, physical appearance and personal spaces are also likely to contain information about people's moral and ideological beliefs (Gosling et al., 2002). Having a copy of Peter Singer (1975) 's *Animal Liberation* on the mantelpiece probably sends a pretty clear message.

It is important to note that psychological science has yet to amass a body of evidence in support of, or against, the effectiveness of moderating language on perceptions of animals or support for their welfare. It could be fruitful to examine if language can directly alter perceptions of animals and concern for their welfare. This is likely to be true in one way or another, because of the capacity for language to disseminate information that can, at least in principle, expand our moral circles (Leach et al., 2023).

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Conclusions

We found that non-speciesist language reliably communicated moral commitments to animals and evoked distinct patterns of social attributions. Omnivores were more reluctant to get to know someone if they adopted non-speciesist language and perceived them as less compassionate and more arrogant. Vegetarians and vegans, on the other hand, were more charitable, with vegans in particular preferring to get to know someone who adopts non-speciesist language and seeing them as more compassionate, but also more arrogant. The findings identify language as a pathway through which do-gooder derogation may come about in everyday life and highlight the challenges facing those interested in curtailing meat consumption and improving animal welfare and rights.

Funding: The authors have no funding to report.

Acknowledgments: The authors have no additional (i.e., non-financial) support to report.

Competing Interests: Kristof Dhont is an Associate Editor of the journal but played no editorial role in this particular article nor intervened in any form in the peer review process.

Data Availability: Data is freely available at Supplementary Materials.

Supplementary Materials

The supplementary materials provided are the pre-registration, raw data, and analysis files in Leach & Dhont (2022), and the supplemental study notes, additional analyses, ancillary figures and tables Leach & Dhont (2023). They can be accessed in the Index of Supplementary Materials below.

Index of Supplementary Materials

Leach, S., & Dhont, K. (2022). *Non-speciesist language conveys moral commitments to animals and evokes do-gooder derogation* [OSF project page with pre-registrations, raw data, analysis scripts]. OSF. https://osf.io/xr3w8/

Leach, S., & Dhont, K. (2023). *Supplementary materials to "Non-speciesist language conveys moral commitments to animals and evokes do-gooder derogation"* [Supplemental study notes, additional analyses, ancillary figures and tables]. PsychOpen GOLD. https://doi.org/10.23668/psycharchives.12904

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