

Moral Emotions and Social Activism: The Case of Animal Rights

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Why do some people and not others become involved in social movements? We examined the relationships between a moral emotion—disgust—and animal activism, attitudes toward animal welfare, and consumption of meat. Participants were recruited through two social networking websites and included animal activists, promoters of animal use, and participants not involved in animal-related causes. They took an online survey which included measures of sensitivity to visceral disgust, attitudes toward animal welfare, and frequency of meat eating. Animal activists were more sensitive to visceral disgust than were promoters of animal use or nonaligned participants. Disgust sensitivity was positively correlated with attitudes toward animal welfare but not with meat consumption. The relationship between animal activism and vegetarianism was complex; nearly half of animal activists ate meat, and half of the vegetarians did not consider themselves to be animal activists. We argue that conflicts over the moral status of animals reflect fundamental differences in moral intuitions.

I have the feeling that I have to find an intellectual rationalization for my emotional reactions

Lucy, animal rights activist (in Herzog, 1993).

Why do some people change their food, their clothing, and even their friends out of concern for the well-being of members of other species? Are they persuaded by the technical arguments of ethicists such as Peter Singer (1975) and Tom Regan (1983)? Or is involvement in animal activism primarily motivated by emotion? For centuries, philosophers have debated the relative importance of reason and emotion in matters of morality. In the 1970s and 1980s, psychologists, following the lead of Lawrence Kohlberg (1976), tended to view moral decision-making as a largely rational enterprise. Certainly logic does play some role in ethical decisions about the use of other species. For example, Galvin and Herzog (1992)

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found that students claimed that they used cost/benefit analysis when judging a series of hypothetical animal research proposals. And, in a more recent study, Knight, Vrij, Bard, and Brandon (2009) found that individual difference in beliefs about a species' capacity for sentience affect support for its use in biomedical experimentation.

In recent years, however, moral psychologists have questioned the idea that human moral decisions are the result of careful deliberation (Haidt, 2001; Pizarro, 2000). As a result, research on the role of emotion in moral judgment has skyrocketed in the last 15 years (Haidt, 2006 supplemental materials). The social intuitionist model exemplifies this "new synthesis" approach to the moral judgment process (Haidt, 2008; Haidt & Bjorklund, 2007). Social intuitionists argue that moral decisions involve two distinct components.¹ The first and most important is intuition—a process which is unconscious, instantaneous, and emotional. This is followed by a logical cognitive process, which is conscious, slow, and rational. Social intuitionists believe that the logical component of moral judgments serves largely to provide post hoc justifications for our initial gut-level decisions as to whether an action is right or wrong. In other words, our moral thinking usually consists of rationalization more than reason. At times, however, these justifications fail. For instance, when asked to judge hypothetical acts that are offensive yet harmless such as consensual sex between adult siblings when there is no possibility of pregnancy, people often become "morally dumbfounded." That is, they instantly decide that the act is wrong but are unable to come up with reasons to support their decisions (Haidt, 2001).

Several recent studies have demonstrated that intuition and logic play a role in matters of morality. For example, Cushman, Young, and Hauser (2006) found that individuals use conscious reasoning to solve some types of moral problems but rely on intuition when confronting other types of problems. Similarly, Greene et al. (2008) suggested that nonutilitarian moral judgments are more influenced by emotion whereas utilitarian approaches to moral decisions are more influenced by processes that are more conscious and controlled.

Judgments about the treatment of other species are affected by some of the same psychological factors that mediate ethical behaviors directed toward our fellow humans, including disassociation, similarity, and language (Plous, 2003). And, like our response to human-focused moral dilemmas, our views about the treatment of animals also reflect conflicts between intuition and reason. Take moral dumbfounding. When people are asked if it would be okay for a man to cook and eat his pet dog that had died of natural causes, they often say "no" even though they are subsequently unable to logically justify their decision (Haidt, Koller, & Dias, 1993).

¹The legal scholar Cass Sunstein (2005) has developed a similar two-process theory of ethical judgment based on the concept of heuristics.

To date, research on the intuitive/affective components of attitudes toward animals has focused on a positive emotion—empathy (e.g., Hills, 1993; Signal & Taylor, 2007). However, studies using human-focused moral dilemmas have shown that a negative emotion, disgust, has a powerful influence on moral judgments (see review by Jones, 2007). In the research reported here, we examined how individual differences in sensitivity to visceral disgust affect animal activism and in attitudes toward animal welfare in the context of two hypotheses.

Hypothesis 1. Animal activists are more prone to visceral disgust than nonactivists.

Some people are motivated to take action when confronted with animal suffering, whereas others are not. We hypothesized that individuals who are sensitive to visceral disgust would be more likely to be upset by the specter of animal suffering, and thus are more apt to become involved in the animal protection movement. Rozin and his colleagues have shown that the tendency to experience the emotion of disgust in response to stimuli such as bodily products, rotten food, and foul smells can be thought of as a personality trait in which it is characterized by large individual differences that are stable over time (Rozin, Haidt, & McCauley, 2000). Hence, we hypothesized that animal activists would report being more upset in nonanimal-related disgust situations than individuals not involved in animal protection activities.

Hypothesis 2. Attitudes toward animal welfare are correlated with disgust sensitivity.

Moral emotions such as disgust are related to political philosophy. Haidt and Graham (2007), for example, reported that when asked about their basic moral values, conservatives are more concerned than liberals with purity. As a result, individuals who hold antiabortion attitudes and antigay attitudes are more disgust prone than people who have more tolerant attitudes on these issues (Inbar, Pizarro, & Bloom, 2009). Similarly, using the Implicit Attitudes Test, Inbar, Pizarro, Knobe, and Bloom (in press) found that disgust-sensitive individuals had more negative automatic associations with homosexuality. Disgust sensitivity is also associated with elevated levels of ethnocentrism, prejudice, and right-wing authoritarianism (Hudson & Costello, 2007; Navarrete & Fessler, 2006). Because animal protectionists tend to be politically liberal (Jamison & Lunch, 1992), we were able to test the hypothesis that visceral disgust can cut both ways when it comes to influencing attitudes; that is, disgust sensitivity can in some contexts (e.g., concern for animal welfare) be associated with liberal political values.

Other Analyses

In addition to testing these formal hypotheses, we also explored aspects of the relationships between animal activism, attitudes toward animal welfare, and meat consumption. The relationship between meat consumption and animal activism is particularly complicated. Roughly 500 times as many animals are killed each year in the United States for their flesh than are used in biomedical and psychological research. And, while the care and use of research animals falls under federal regulations such as the Animal Welfare Act and the Public Health Service Policy on Humane Care and Use of Laboratory Animals, the treatment of animals raised for meat production is largely unregulated. Animal rights philosophers such as Engel (2000) argue that moral consistency demands that animal activists maintain a vegetarian diet. However, not all animal activists are vegetarians (Herzog, 1993), and many vegetarians are not animal activists. Rozin, Markwith, and Stoess (1997) found that vegetarians who avoided meat for moral reasons were more disgusted by animal flesh than were nonmoral vegetarians. Fessler, Arguello, Mekdara, and Macias (2003), however, obtained the opposite results. They found that disgust sensitivity was correlated with increased meat consumption, though the relationship was weak ($r = .103$). Because of these differences in the literature, we also explored the relationship between disgust proneness and meat consumption among our participants.

In addition, we examined sex differences in all variables and used the study to assess the reliability and validity of the Animal Attitudes Scale, a commonly used measure of attitudes toward animal welfare issues.

Social Networking Web Sites as a Source of Participants in Research on Social Activism

Ideally, studies of social/political attitudes and of moral decision making should be based on randomly selected broad-based samples. In reality, researchers often turn to readily available groups of participants, usually college students. As an alternative to student subject pools, the Internet offers researchers the ability to target groups of potential research participants who have specific interests and behaviors. Web-based studies have now been used in a wide range of psychological research and have generally been found to produce data which are reliable and valid (Birnbaum, 2004; Gosling, Vazire, Srivastava, & John, 2004; Kraut et al., 2004). Social networking sites such as MySpace and Facebook offer a potentially valuable source of participants for studies of social activism. Hence, the final objective of this study was to evaluate the feasibility of using participants recruited from social networking websites as a source of information on social activists and on group differences in moral intuitions.

Methods

Announcements of the study were posted on specialty group bulletin boards on two social networking websites, MySpace and Facebook. These included groups devoted to animal protection (e.g., animal rights, antimeat, antianimal research groups), groups that promoted the use of animals (e.g., hunting, animal research defense groups), and groups that did not involve animals at all (e.g., cars, small business groups). Potential participants were informed that they would include questions related to attitudes toward the use of animals, basic demography, and questions about situations that some people find disgusting.

Because differences between men and women been reported on both attitudes toward the use of animals (see review by Herzog, 2007) and disgust sensitivity (Haidt et al., 1994), sex was included as a covariate in the statistical analyses.

Web Questionnaire

The questionnaire was developed using Ultimate Survey, a commercial survey design program. When participants accessed the website, they were given information about the purpose of the research and a consent form. The survey contained five parts:

- (a) demographic questions
- (b) questions related to the participant's involvement in animal-related activities, including membership in organizations that promote animal protection or animal use. They were also asked a series of questions pertaining to their diet, including the types of animal products they ate (meat, dairy, eggs), reasons for vegetarianism (if they were vegetarians), and whether they were an "ex-vegetarian." Participants were also asked about frequency that they ate each of seven types of meat (beef, pork, chicken, turkey, fish, veal, and lamb) on a 4-point scale (*never*, *rarely*, *occasionally*, and *often*). These responses were used to calculate a meat consumption index which could range from 0 to 28 (actual range = 0–19).
- (c) The Animal Attitude Scale (AAS). The AAS is a 20-item Likert-type measure of general attitudes towards treatment of animals (Herzog, Betchart, & Pittman, 1991).² It includes items such as "Much of the scientific research done on animals is unnecessary and cruel" and "I think it is perfectly acceptable for cattle and hogs to be raised for human consumption." The reliability for the AAS in this study was high ($\alpha = .95$).

²A copy of the Animal Attitudes Scale is available at <http://wcuvax1.wcu.edu/~herzog/research.html>.

- (d) The Disgust Scale-Revised (D-Scale R). The D-Scale R (Haidt, McCauley, & Rozin, 1994, modified by Olatunji et al., 2007) is a 25-item index of individual differences in susceptibility to visceral disgust. Individual differences in D-Scale R scores are stable, and they predict disgust-related avoidance behaviors (Rozin, Haidt, & McCauley, 1999). The scale includes items such as “It bothers me to hear someone clear a throat full of mucus” and “I never let any part of my body touch the toilet seat in public restrooms.” Nine items refer to animals or animal products such as meat and spoiled milk. For animal activists, these items could reflect an ideological commitment to other species rather than a generalized tendency toward visceral revulsion. Thus, the results shown here are based on a 16-item subset of the D-Scale R which did not include the animal-related questions. The correlation between the full D-Scale R and the no-animal version was high ($r = .95$), and the pattern of results was identical for both versions of the scale. In this administration, the reliability of both the full D-Scale R ($\alpha = .78$) and the no-animal subset were acceptable ($\alpha = .76$).

A brief five-factor personality scale derived from the International Personality Item Pool was included between the AAS and the D-Scale R (Goldberg et al., 2006). This scale was intended as a filler, and the results are not reported here.

Participants

Of the 424 eligible individuals³ who completed the survey, 145 (119 women and 26 men) were self-described animal activists, 48 (8 women and 40 men) were members of organizations that promoted the use of animals (e.g., Americans for Medical Progress), and 230 (159 women and 71 men) were neither activists nor members of animal-related organizations (“nonaligned”). The average age of the participants was 27.9 years. Forty-nine percent of the participants were college or university students (36% undergraduates, 13% graduate students.) The racial breakdown was as follows: African/African American (1.0%), Asian/Asian American (3.0%), Hispanic/Latino (1.9%), Middle Eastern (0.1%), Native American (0.7%), White/Caucasian (non-Hispanic) (84.9%), Multiracial (5.1%), and other (3.1%). Thirty-six percent of the participants indicated that they were vegetarian, 17% indicated that they consumed no animal products (i.e., maintained a vegan diet).

³Individuals younger than age 18 were excluded from the analysis. Two individuals indicated that they were members of animal protection and animal use organization and were excluded from statistical analyses involving group membership. Four subjects did not indicate their sex and were not included in statistical analyses of gender effects.

Results

Hypothesis 1. Animal Activism and Proneness to Visceral Disgust.

As indicated by their scores on the no-animal items of the D-Scale R, self-identified animal activists were more disgust sensitive ($M = 46.5$) than participants who were either nonaligned ($M = 43.8$) or members of animal use organizations ($M = 37.9$). This difference was statistically significant ($F(2, 417) = 4.48; P = .012$). Post hoc comparisons (Bonferroni) indicated that all three groups differed significantly from each other in nonanimal visceral disgust. The effect size of disgust sensitivity between animal activists and animal use organization members was large (Cohen's $d = .852$).

As expected, the three groups differed in attitudes toward animal protection as measured by the Animal Attitudes Scale (M animal activists = 87.9, M nonaligned participants = 68.5, M animal use organization members = 48.3). This difference was statistically significant, $F(2, 417) = 92.28; p < .001$. As in the case of D-Scale R scores, post hoc comparisons (Bonferroni) revealed that all three groups differed significantly from each other in the mean AAS scores.

Hypothesis 2. Disgust and Attitudes toward Animal Welfare

Among all participants, there was a positive relationship between individual differences in proanimal welfare attitudes and visceral disgust; the correlation between AAS scores and no-animal D-Scale R scores was statistically significant ($r = .253, p < .001$); there were significant correlations between the no-animal D-Scale R scores and 19 of the 20 AAS items. It is possible that the correlation between attitudes toward animals and visceral disgust was exaggerated by the inclusion of animal activists and members of animal-use groups in the sample. However, the results were unchanged when we calculated the correlation between AAS scores and no-animal D-Scale R scores using only the nonaligned participants ($r = .269, p < .001$).

Disgust and Eating Meat

While animal activism and attitudes toward the treatment of other species were related to disgust sensitivity, diet was not. Scores on the no-animal items of the D-Scale R of the vegetarians in the study ($M = 44.8$) and the nonvegetarians ($M = 43.7$) were not significantly different, $t(421) = 1.035, p = .30$. Nor did disgust sensitivity predict frequency of eating meat, $r = -.096, p = .052$. Frequency of meat eating was, however, negatively correlated with AAS scores, $r = -.748, p < .001$.

Table 1 shows the correlations between reasons for avoiding meat among vegetarian participants and no-animal items of the D-Scale R and the AAS

Table 1. Correlations between reasons for vegetarianism, disgust scores, and attitudes toward animals

Reasons for Vegetarianism	D-Scale Scores	AAS Scores
Health	.019	-.123
Ecological/environmental	-.142	.033
Taste	.089	-.112
Moral	.159	.712**

** $p < .01$.

scores. Disgust scores were not related to any of the four reasons for becoming a vegetarian. AAS scores, however, predicted the importance of moral reasons for vegetarianism but not the importance of health or ecological/environmental reasons.

For most of the part, the eating habits reported by the 152 vegetarians in the study were consistent with their identification as people who do not consume animals. While 18 of the self-identified vegetarians reported that they occasionally ate fish, none ate veal or lamb, one ate beef and (rarely) pork, and only four ate poultry. Animal activism and vegetarianism, however, were not necessarily congruent. Forty-two percent of activists did not think of themselves as vegetarian. Similarly, 48% of the vegetarians did not claim to be animal activists.

As expected, participants in the three animal-related groups differed in the frequency with which they ate meat as indicated by the meat consumption index (M animal activists = 3.65, M nonaligned participants = 7.74, M animal use organization members = 12.02). This difference was statistically significant, $F(2, 403) = 54.51, p < .001$. Post hoc comparisons indicated that all three groups differed significantly from each other in frequency of meat consumption. Of the animal activists, 37% sometimes ate beef, 30% ate pork, 42% ate chicken, 41% ate turkey, 37% ate fish, 8% ate veal, and 10% ate lamb. Note that the average meat consumption index was near zero for the vegetarians ($M = 0.33$) but not for the self-identified animal activists ($M = 3.65$).

Sex Differences

Women made up 82% of the animal activists, 69% of the nonaligned subjects, and 17% of the members of animal use advocacy groups, a difference in sex ratios that was statistically significant, $\chi^2(2, N = 418) = 67.045, P < .001$. Compared to males, females were more disgust sensitive, more concerned about animal welfare, and less inclined to eat meat. These findings were true of the participants as a whole and also among the subjects who were neither animal activists nor members of organizations that promoted animal use (see Table 2).

Table 2. Sex differences in disgust sensitivity, attitudes toward animal welfare, and frequency of meat eating among nonaligned participants

Scale	Male <i>M</i>	<i>SD</i>	Female <i>M</i>	<i>SD</i>	<i>t</i> *	Cohen's <i>d</i>
Disgust Scale	40.5	8.9	44.5	9.3	3.823	.439
Animal Attitudes Scale	58.3	19.3	73.1	16.1	6.010	.817
Meat Consumption Index	10.0	6.1	6.7	5.3	4.357	.578

* $p < .001$ in all cases.

Women scored higher than men on both the D-Scale R and the AAS. Thus, it is possible that the positive correlation between core disgust and attitudes toward animal welfare was an artifact of sex differences. However, multiple regression analysis indicated that sensitivity to visceral disgust remained a significant predictor of attitudes toward animal welfare after sex was entered into the regression equation ($\beta = .141, t = 2.993, p = .003$).

Discussion

We found that animal activists were more prone to visceral disgust than members of groups that advocate the use of animals and individuals not aligned with animal-related causes. We also found that disgust sensitivity was positively correlated with proanimal welfare attitudes. In matters of morals, political conservatives are more concerned with purity than are liberals (Haidt & Graham, 2007). Consistent with this view, conservatives also tend to be disgust prone (Inbar, Pizarro, & Bloom, 2009). However, we found that animal activists—who as a group tend to be liberal—are also sensitive to disgust. In short, disgust is a moral emotion that can be associated with liberal as well as conservative causes.

It is possible that disgust motivates people to become involved in moral crusades such as animal protectionism. However, as Fiery Cushman (personal communication) pointed out to us, the correlation we observed between disgust sensitivity and animal protectionism could be driven by the opposite causal path—that is, over time, exposure to animal activists and animal rights promotional materials could increase disgust proneness. Clearly, additional research is needed on the relationship between gut-level emotional reactions and moral sensibilities.

The sex differences found in this study were in the expected directions. The animal activists and the vegetarians in the study were disproportionately female, and women were more concerned with animal welfare issues than men as measured by the AAS. Female participants were more disgust sensitive than men, a finding that is also consistent with previous research (e.g., Fessler et al., 2003; Haidt et al., 1994).

Most of the philosophical arguments for animal rights would seem to preclude eating them. Over 40% of self-identified activists in the present study,

however, indicated that they sometimes ate meat. Plous (1991) found similar rates of meat consumption among animal rights demonstrators attending the 1990 March for Animals. The fact that some animal activists eat meat is not surprising. When it comes to morals and meat, many people are inconsistent. According to a 2000 national telephone survey (Public Opinion Online, April 2000, Question ID: USGALLUP. 00APR, R10G), 29% of Americans say they “strongly agree” and another 43% “agree” with the goals of the animal rights movement—a moral crusade whose goal is the elimination of meat. Yet, at the same time, according to a national poll conducted by Harris Interactive for the Vegetarian Resource Group, over 97% of Americans indicate that their diet includes animal flesh (Stahler, 2006). Further, between 1975 and 2006, the annual per capita meat consumption in the United States increased from 183 pounds to 223 pounds, and the number of animals eaten by Americans tripled from three billion a year to nine billion.

Of special interest are the roughly 10% of participants in the present study who said they had returned to meat consumption after having once been vegetarian. This pattern may be more common than is generally acknowledged. In a 2005 survey of 936 randomly selected adults conducted by CBS News, only 2% of respondents reported being vegetarian, but 6% indicated that they were ex-vegetarians (Public Opinion Online, November 2005, Question ID: USGALLUP. 00APR, R10G). While ex-vegetarians were not the focus of the present study, we believe that further study of people who return to meat after prolonged vegetarianism will provide important insights into personal moral decision making.

Reliability and Validity of the Animal Attitudes Scale

The AAS has been widely used to assess attitudes toward animal welfare. As in previous administrations, the reliability of the scale in this study was high. The present research allowed us to assess the validity of the scale. Among all subjects, the AAS strongly predicted meat consumption, and among vegetarians, it predicted the importance of morality in their decision not to eat meat. As expected, animal activists had higher AAS scores than members of animal use advocacy organization and non-aligned participants. These results indicate that the AAS is a valid index of individual differences in attitudes toward other species and that it predicts behaviors related to the treatment of animals.

Social Networking Websites as Sources of Information on Social Activists

This study confirms the feasibility of using social networking website to study social activism. The response to the web survey was enthusiastic. Within a week after we posted notices of the study to MySpace and Facebook sites, we had obtained several hundred completed surveys; within a month nearly 600

individuals had completed the questionnaire. The last item in the survey was an open-ended question in which the participants were invited to comment on the survey and/or give their general thoughts for the treatment of animals. With a few exceptions, most subjects indicated that they enjoyed participating in the research. Typical comments included statements such as “Thank you for spending the time and energy through this study to give attention to such a vital area,” and “Keep up the good work. I hope to see more studies on the use of animals in the future.” The few commentators who accused us of bias (“I think the people that made this survey are active in animal rights.”) were outnumbered by participants who wrote that we had made a good faith effort at objectivity (“Far less abject bias than I have seen in other surveys”).

Problems with the Study

The World Wide Web offers social scientists’ access to groups such as social activists that are difficult to survey using conventional research methodology. Internet research, however, is not without problems. While we found it easy to recruit animal activists and nonaligned participants, we were less successful in obtaining subjects who were involved in organizations that promoted animal use. As a result, our sample of animal-use advocates was smaller than the other two groups. The reasons for this are unclear. One possibility is that fewer animal-use advocates are members of social networking groups. Another is that they might have suspected that the researchers had a hidden animal rights agenda.

Another disadvantage of Internet studies is that researchers have limited information about the participants. The subjects in this study were self-selected and presumably took the survey because they were interested in issues related to animals. This is a potential source of bias. For example, it is possible that our “non-aligned” group was more “proanimal” than the typical Internet user. Interestingly, the mean AAS scores of the subjects in our activist and nonaligned groups were nearly identical to those obtained by Signal and Taylor (2007) in a study using the AAS with samples of animal activists and community members in Australia. Research comparing data from web-based studies and traditional college samples suggests that the results of Internet research are surprisingly consistent with data gathered by traditional means (Gosling et al., 2004).

Finally, Internet surveys are biased by the demographics of computer technology. Our participants were younger, more educated, and less racially diverse than the population as a whole. However, the problem of subject pool diversity is not limited to Internet studies. Our sample, which was 15% non-White, was more racially diverse than many studies of attitudes toward the treatment of other species based on samples of college students.

Moral Intuitions, Values and the Animal Rights Debate

The relationship between “Yuck” emotions such as disgust at the sight of feces and sociomoral emotions such as disgust at racism is unclear (Simpson, Carter, Anthony, & Overton, 2006). Hudson and Costello (2007) reported that high levels of core disgust sensitivity are associated with dehumanization and prejudice against human outgroups. Our results suggest that among animal activists, core disgust has the opposite effect—that may it facilitate psychological processes that lead to the inclusion of other animals into ethical systems that have historically been restricted to our species. These findings support the view of Pizarro, Detweiler-Bedell, and Bloom (2006) who argued that core disgust can expand as well as contract one’s circle of moral concern.

The theologian C.S. Lewis (1988) wrote, “It is the rarest thing in world to hear a rational discussion of vivisection” (p. 160). Haidt and Graham (2007) trace the inability of political conservatives and liberals to communicate to differences in the importance they place on five basic foundations underlying morality values: harm/care, fairness/reciprocity, in-group/loyalty, authority/respect, and purity/sanctity. Animal activists and animal researchers have similar problems understanding each other’s perspectives. In part, this is because they place different values on the costs in suffering and the benefits in lives saved of animal experimentation (Knight et. al., under review). We suggest that difficulties in communication may also reflect different levels of importance that animal interest groups place on fundamental values such as care, fairness, and in-group loyalty.

Our results do not imply that animal activists are motivated solely by emotion. Nor do these findings suggest that the case for animal rights rests on sentimentality. Indeed, the philosophical arguments for affording moral status to animals are grounded in utilitarian and deontological approaches to ethics, not mere appeals to emotion (Regan, 1983; Singer, 1975). However, our results, particularly the large difference in propensity for core disgust between animal activists and members of animal use organizations, suggest that differences in moral intuition are one reason that common ground in the debate over animal rights is so elusive.

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