ABSTRACT

Studies of observer responses to human-to-human abuse have found that both an observer’s mood and the similarity of the victim to the observer affect the observer’s desire to help the victim and punish the offender. The present study examined the extent to which similarity and mood also shape observer responses to human-to-animal abuse. We first manipulated participants’ mood by giving non-contingent feedback on a hidden word task (positive, negative, or no feedback). Participants then read a scenario describing an instance of animal abuse (using four different specific kinds of animals and six general species categories). Results showed that participants in a better mood recommended harsher punishment for the offender. They also recommended harsher punishment for the abuse of animals more similar to humans. Similarity and mood interacted on fine recommendations—better mood accentuated the similarity effect. Empathy for an animal positively correlated with punishment recommendations for the offender. The study discusses directions for future research and theory development.

The abuse of animals other than human is a pervasive problem in today’s society. In Australia, the Royal Society for the Prevention of Cruelty to Animals carried out nearly 48,000 cruelty investigations.
between 1999 and 2000. However, animal abuse takes different forms, and there are inconsistencies in what is recognized and prosecutable as animal abuse. Moreover, when prosecutions are brought, there are discrepancies in the punishment given to the offender. In this context, it is vital to understand better what the public considers just punishment for animal abuse and the social psychological processes underpinning such judgments.

Research of observer responses to human-to-human abuse has found that a host of factors affect observers: (a) victim characteristics such as similarity to observer, attractiveness, and family relatedness; (b) observer characteristics such as mood, age, sex, competence, and personality; and (c) situational characteristics such as ambiguity and number of observers (Davis, 1998; Dienstbier et al., 1998; Vitaglione, 1999). We suggest that the same factors likely underpin observer responses to human-to-animal abuse. As a starting point in this area, we explore the extent to which human-to-animal similarity and the observer’s mood affect punishment recommendations for animal abuse.

The Similarity Effect

Early psychological research revealed that observers of human-to-human abuse recommend harsher sentences for an offender when the victim is similar to the observer (Amato, 1979; Field, 1979; Klein & Creech, 1982; LaFree, 1980). In mock jury studies, white jurors advocated harsher punishments for an offender when the victim was white, particularly when the offender was black (Field, 1979; Klein & Creech, 1982). Klein and Creech suggest that these mock jurors evaluate neutral evidence in favor of the victim when the victim is similar racially to the juror. In the actual legal environment, white judges and juries post higher conviction rates and recommend harsher sentences when the victim is white and the perpetrator is black (LaFree).

In addition to assigning harsher punishments to offenders, research has revealed that observers are more likely to help a victim when the victim is similar to the observer in race, culture, religion, or political affiliation (Karabenick, Lerner, & Beecher, 1973; Katz, Cohen, & Glass, 1975). Moreover, Krebs (1975) found that observers show greater signs of physiological arousal and distress when the victim is similar to the observer. Similarity also affects empathy for a victim (Batson, 1991; Davis, 1996; Oswald, 1996), interpersonal
attraction (Neimeyer & Mitchell, 1988), and intergroup attraction (Osbeck, Moghaddam, & Perreault, 1997).

Evidence of the similarity effect in people’s evaluation of animals also has emerged. The level of human-to-animal similarity is linked to an individual’s judgment about the capacity for an animal to feel pain (Plous, 1993). Moreover, Kellert (1980) found that participants’ aspiration to save a species from extinction was strongly correlated with the species’ similarity to humans. In terms of animal abuse, Plous suggests that the more similar an animal is to humans the greater the cognitive dissonance that arises from the animal’s maltreatment. In support of the suggestion, Cameron, Johnstone and Plous (Plous) found that participants’ were more distressed, as measured by physiological arousal, when watching the abuse of animals more similar to humans than when watching the abuse of animals less similar to humans. However, although Cameron, Johnstone and Plous’ (Plous) study showed that people were physiologically more distressed by the abuse of animals who were more similar to humans, the study did not assess the role of punishment recommendations for the abuser.

The Mood Effect

No previous study has assessed if an observer’s mood influences his or her response to human-to-animal abuse. Moreover, no study has investigated how mood affects observers’ punishment recommendations for human-to-human abuse. Instead, most research and theorizing are concerned with how observers’ moods affect their desire to help a victim of human-to-human abuse or similar person in need. In general, most studies have found that observers in a positive mood are more likely to help a victim and exhibit greater empathy and altruism (Isen, Clark & Schwartz, 1976; Weyant, 1978). Salovey, Mayer, and Rosenhan (1991) term helping behavior induced by good mood, “the glow of good will.” They suggest that positive mood enhances helping behavior and empathy because positive moods affect attentional focus and thoughts about the self, improve perceptions of situations and of others, and create a motivation to maintain the positive mood. Thus, this “glow of good will” suggests to us that observers in a good mood would recommend harsh punishment for the offenders of human-to-human abuse and, by extension, for the offenders of human-to-animal abuse.
Unlike the generally consistent effect of positive mood, the influence of negative mood on human-to-human empathy and helping has been variable. Manipulations intended to induce negative mood states have sometimes increased, sometimes decreased, and sometimes had no significant effect on helping behavior. Isen, Horn and Rosenhan (1972) found that negative mood increased helping under conditions favorable to image repair. Moore, Underwood and Rosenhan (1973), however, found that children who were instructed to think sad thoughts contributed significantly less money than children in the control group. Cialdini et al. (1987) suggest that the effect of negative mood state on human-to-human helping and other prosocial behaviors depends on the costs and benefits of engaging in the behavior, which may vary by experimental paradigm (Weyant, 1978).

**Summary and Aims**

Thus far, no study has examined how mood affects observers’ reactions to animal abuse. Studies have explored the role of human-to-animal similarity on the physiological response of the observers of animal abuse but not observers’ punishment recommendations for the offender.

Accordingly, the central question for the present study is whether the theories that were developed to explain observer responses to human-to-human abuse are applicable to observers of human-to-animal abuse. If the social psychological processes that underlie observers’ reactions to human-to-human abuse are the same as those that motivate observers of human-to-animal abuse, then we would expect that observers of animal abuse would recommend harsher sentences when the animal is more similar to humans and when the observers are in a good mood. Negative moods should produce variable results. The interaction between similarity and mood on punishment recommendations also will be examined, though no predictions are made.

**Method**

*Design*

The study manipulated human-to-animal similarity (first independent variable) and participants’ mood (second independent variable) and gauged the
effect on the punishment that participants recommended for the animal abuser (dependent variable). The design also explored the extent to which punishment recommendations were associated with empathy for the animal. To manipulate mood, participants were assigned randomly to a positive, negative, or no feedback condition on a mental task (Beggan, 1991). A manipulation check assessed if participants receiving positive feedback on the task had a more favorable mood than those receiving negative feedback.

Human-to-animal similarity was manipulated in two ways. First, in a Specific Animal-to-Human Similarity mode, participants read about the abuse of a monkey, possum, goose, or goanna (a large lizard) and reported how much punishment the offender should receive. In keeping with the suggestion of Plous (1993), the four animals were selected according to four criteria: perceived reliable difference to humans, representing a wide range of fauna (primate, non-primate mammal, bird and reptile), being of approximate equal size, and not having a privileged status. However, the four specific animals (monkey, possum, goose and goanna) may not be equally representative of their general species categories and, hence, in their similarity to humans. Thus, animal similarity also was indexed in a General Animal-to-Human Similarity mode; participants indicated how much punishment they would recommend if the animal abused was a “fish,” “bird,” “reptile,” “insect,” “nonhuman primate,” or “non primate mammal.”

Participants

One hundred and twenty students from a mid-size university in Australia participated: 78 female and 42 male. The mean age was 23.5. Participants were recruited from undergraduate psychology courses, and most were psychology majors.

Materials

Materials consisted of three Hidden Words Tests (Ekstrom, French, & Harmon, 1976), graphs containing false averages for the Hidden Words Test, an animal abuse scenario loosely based on the Cameron, Johnstone and Plous study reported in Plous (1993), and a questionnaire. The questionnaire was divided into five segments. First, for a mood manipulation check, participants indicated how they felt now on a 1 “Negative” to 7 “Positive” scale.
In the second section of the questionnaire, participants reported how much punishment (amount of fine and/or jail time) the animal abuser described in the scenario should receive. Fine and jail time (days) recommendation questions were open-ended—participants were free to choose any fine or jail time. In the third section, participants indicated how much empathy they felt for the animal (1 “Strongly Disagree” to 7 “Strongly Agree” to the question “I felt a great deal of empathy for the animal”). Segment four required that participants indicate how much punishment (fine and jail time) they would recommend if the animal described in the scenario was a “non-human primate,” “non-primate mammal,” “bird,” “fish,” “reptile,” or “insect.” The animal categories were presented in a random order to avoid participants’ perceiving them to be on a scale of similarity to humans or any other hierarchical sense. The fifth section of the questionnaire contained the Social Desirability Scale (Crowne & Marlow, 1960).

Procedure

Participants were informed that the researchers were conducting two separate experiments. The first experiment was validating an instrument for measuring mental skills, and the second was examining the legal issues of animal abuse. The first task was the Hidden Words Test (Ekstrom, French, & Harmon, 1976), given three times consecutively. After each test, the participant was given positive, negative, or no feedback (Beggan, 1991). The feedback, which was false and not contingent on performance, involved showing participants a graph containing false averages on the tests scores and telling them they were either above average (positive feedback) or below average (negative feedback).

The control group received no feedback. Participants were assigned randomly to a feedback condition, such that they received the same positive, negative, or no feedback on each of the three tests. Next, participants were given randomly one of four different versions (monkey, goose, possum, or goanna) of a scenario describing an instance of animal abuse (see Appendix). After reading the abuse scenario, participants completed the questionnaire of their current mood and punishment recommendations. The University ethics committee required that participants be informed that the scenario is a hypothetical example of a typical instance of animal abuse.
Results

A one-way ANOVA comparing the current mood of participants as a function of Mood Manipulation (positive, negative, or no feedback on the mental task) resulted in a significant main effect \( (F(2, 117) = 8.7, p < .001) \). Participants receiving positive feedback on the task were in a better mood (mean = 1.7) than those receiving negative feedback (mean = 1.3). Those receiving no feedback (the controls) were in the best mood (mean = 2.3). All three groups, however, were in a relatively poor mood (i.e., below the midpoint of the 7-point scale).

A mixed ANOVA compared fine recommendation ($) as a function of Mood Manipulation (positive, negative, or no feedback on mental task) and General Animal-to-Human Similarity (fish, bird, reptile, insect, nonhuman primate, or nonprimate mammal). The ANOVA resulted in a significant main effect for the Mood Manipulation \( (F(2, 112) = 3.8, p < .05) \), such that those in the positive and no feedback groups advocated higher fines than suggested by the negative feedback group (see Figure 1). The ANOVA also yielded a significant main effect for General Animal-to-Human Similarity \( (F(5, 108) = 11.8, p < .001) \), and a polynomial contrast (1) test found that the trend was linear \( (linear\ F(1, 112) = 24.5, p < .001) \). As shown in Figure 2, there is a linear relationship between the amount of fine recommended for animal abuse and the similarity of the animal to humans. Finally, the ANOVA achieved a significant interaction between Mood Manipulation and General Animal-to-Human Similarity \( (F(10, 218) = 2.0, p < .05) \) (see Figure 3). Linear tests found that the positive feedback condition was the most likely to recommend harsher fines as a function of similarity \( (linear\ F(1, 38) = 44.1, p < .001) \). The negative and no feedback conditions also were significantly linear but to a lesser degree than the positive feedback group (negative condition linear \( F(1, 38) = 7.8, p < .01 \)) (control condition linear \( F(1, 36) = 5.6, p < .05 \)).

A mixed ANOVA was calculated on jail time recommendation (days) by Mood Manipulation (positive, negative, or no task feedback) and General Animal-to-Human Similarity (fish, bird, reptile, insect, nonhuman primate, or nonprimate mammal). The ANOVA resulted in a significant main effect for Mood Manipulation \( (F(2, 112) = 4.1, p < .05) \), which was the same pattern of means found with fine recommendations (positive feedback mean of 144 days; no task feedback mean of 174; negative feedback mean of 42). The ANOVA also
achieved a significant main effect for General Animal-to-Human Similarity ($F(5,108) = 7.1$, $p < .001$). As shown in Figure 4, more jail time is recommended for the abuse of animals more similar to humans ($\text{linear } F(1,112) = 32.6, p < .001$). The interaction between Mood Manipulation and General Animal-to-Human Similarity was not significant ($F(10,218) = 1.4, p = .21$).

Table 1 reports the correlations for human-to-animal similarity, punishment recommendations, and empathy in the Specific Animal-to-Human Similarity mode. Greater human-to-animal similarity was associated with greater fines and jail sentence recommendations (as indicated by the negative correlations). Moreover, empathy for the animal described in the scenario was correlated significantly with the fine and jail recommendations, and greater empathy was associated with a worse mood. Fine recommendation was positively correlated with jail sentence recommendation.

Figure 1. Main Effect Of Mood Manipulation (Positive, Negative, or No Feedback on Mental Task) on Fine ($) Punishment Recommendations. Vertical Bars Show $+/−1$ Standard Error.
Finally, the ANOVAs on punishment recommendations were recalculated, controlling for participants’ levels of social desirability bias as measured by their score on Crowne and Marlow (1960) the Social Desirability Scale. The pattern of significant main effects and interactions remained essentially unchanged.

Discussion

The mood manipulation check ANOVA showed that the feedback on the hidden words test did affect the mood of the participants and these differences in mood were associated with discrepancies for punishment recommended to the animal abuser. Participants receiving positive feedback on the task were in a better mood (than those receiving negative feedback), and the positive
feedback group recommended harsher punishment for the animal abuser (than the negative feedback group). Thus, consistent with previous research on human-to-human empathy and helping behavior (Isen, Clark & Schwartz, 1976; Weyant, 1978), positive mood is associated with greater levels of punishment recommended for the offenders of animal abuse. The worst mood (i.e., the negative task feedback condition) was allied with more lenient punishment recommendations than the better moods of the control and positive feedback conditions.

However, there is some ambiguity regarding how to evaluate the control group. Compared to the negative feedback group, the control group was in a better mood and recommended harsher punishment. This is consistent with the previous conclusion that better mood encourages greater punishment recommendations for animal abuse. Compared to the positive feedback group,
on the other hand, the control group was in a better mood but gave the same amount of punishment. One explanation may be the differing effects that reading the animal abuse scenario had on the feedback groups. All three task feedback groups were in a poor mood (below the midpoint of the mood scale), which on the surface implies that reading the scenario of animal abuse put participants in a poor mood. However, participants receiving positive task feedback might have been in a good mood after the task, but reading the abuse scenario might have considerably decreased their mood. Batson and Coke (1981) suggest that people in positive mood become more upset when witnessing another person’s distress and more inclined to help than people in a worse mood. Thus, in the present study, the participants who received positive task feedback may have been more predisposed toward
Table 1: Correlations Among Human-to-Animal Similarity, Punishment Recommendations, and Empathy (Specific Animal-to-Human Similarity Mode).

<table>
<thead>
<tr>
<th></th>
<th>Human-to-Animal Similarity</th>
<th>Fine</th>
<th>Jail</th>
<th>Empathy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fine</td>
<td>-0.22**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jail</td>
<td>-0.24**</td>
<td>0.33***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Empathy</td>
<td>-0.09</td>
<td>0.17*</td>
<td>0.15*</td>
<td></td>
</tr>
<tr>
<td>Mood</td>
<td>0.08</td>
<td>0.01</td>
<td>0.03</td>
<td>-0.17*</td>
</tr>
</tbody>
</table>

Notes:

*** p < .001  ** p < .01  * p < .05

One-tailed significance

Degrees of freedom were 1,112

Lower scores on Human-Animal Similarity indicate greater similarity (monkey = 1, possum = 2, goose = 3, goanna = 4).

Empathy rated on a 1 “Strongly Disagree” to 7 “Strongly Agree” scale.

Mood rated on a scale of 1 “Negative” to 7 “Positive”.

concern about others, including animals; reading about the animal abuse may have made them distressed and put into a poorer mood. The controls, who received no task feedback, likely were only moderately inclined to be concerned about others and so maintained their mood and recommended harsh sentences. In contrast, the negative feedback group was in the worst mood and did not recommend harsh punishment, implying that negatives were upset because of the negative feedback on their task performance and not from reading the description of animal abuse.

Regarding the similarity effect, the General Animal-to-Human Similarity ANOVAs found a linear trend between the amount of fine and jail time recommended for the abuser of an animal and the animal’s similarity to humans. The correlations of Specific Animal-to-Human Similarity with fine and jail time recommendations revealed the same pattern. The study also found that mood and human-to-animal similarity interacted on fine but not jail recommendations. The significant fine interactions seem to imply that individuals
in the positive feedback group were more influenced by the similarity principle because the positive feedback group had the strongest linear association between fine recommendation and human-to-animal similarity. The no feedback/control group was also linear but to a lesser degree. The negative feedback condition was mainly flat (i.e., low punishment recommendations for the abuse of all animals with the exception of primates). Stated differently, there was a consensus among the three feedback groups that the abuse of animals least similar to humans (insects, fish) should receive little punishment, but the three feedback groups diverged as the animals became more similar to humans. This variability can be seen in the General Animal-to-Human Similarity main effect figures, in which primates have larger standard errors, mammals and birds have smaller standard errors, and fish and insects have the smallest standard errors.

What psychological forces may cause individuals in better moods to recommend higher fines for animal abuse as a function of human-to-animal similarity? One explanation could be that a better mood makes one more aware and responsive to the needs of similar others. As mentioned, Salovey et al. (1991) suggest that positive moods affect attentional focus, thoughts about the self, and perceptions of situations and of others. Moreover, theorists suggest that similarity leads one to empathize with a victim or person in need (Batson, 1991; Davis, 1996; Oswald, 1996). The term empathy literally means “feeling with” (Coke, Batson & McDavis, 1978). To empathize with someone is to feel as that person feels, to experience what the other person is experiencing from that person’s point of view without losing your own identity. Thus, in the present study, people in a better mood may use similarity to form the basis of their empathic response to animal abuse. This is consistent with the result that the controls were in a better mood and had significant linear associations between similarity and fine punishment. Moreover, empathy was positively correlated with fine and jail recommendations. What is unclear is the mediating or moderating relations among empathy, similarity, mood, and punishment recommendations. This would make a good avenue for future research.

A second explanation for why mood and similarity interacted is that mood may affect one’s scope of justice. According to Opotow (1993), people have an imaginary circle around themselves. Those individuals, groups, and animals
who fall within the circle are given justice considerations, and those who fall outside the boundary are not. Opotow suggests that people differ in the size of their circles and boundaries. In the present study, it appears that the negative feedback group drew firm boundaries at the human or primate level, such that all other animals were treated minimally and equally. In contrast, the positive feedback condition seems to have a scope of justice that includes more animals (as indicated by higher means) but also has fuzzier boundaries between animals. Plous (1982) reported that animal rights supporters perceived greater similarity between animals and humans than did non-supporters; Allen, Wilson, Ng & Dunne (2000) found that individuals who value dominance in human-to-human relations enacted greater human-to-animal dominance (Adams, 1994; Allen & Baines, 2002; Allen & Ng, in press). Thus, besides an ideological and value-basis to the scope of justice, the results of the present study imply that a person’s mood also affects his or her scope of justice, though future research is needed on this question.

Future research also is needed on why mood and similarity significantly interacted for fine but not jail recommendations. Possibly, jail is considered more serious and punitive than a fine, and the positive feedback group was less likely to expand its scope of justice at the expense of putting more people in jail. Finally, human-to-animal similarity needs further clarification. While it is clear that participants were using a similarity principle to assign punishments, less obvious is the kind of similarity they were considering (appearance, phylogenetic, behavioral). Thus, future research should delineate the similarity principle used by participants and the motivational or cognitive process that leads to such use. This raises the caution that perceptions of similarity may occur after attitudes are formed, rather than being the basis of it as assumed in the present study.

In sum, consistent with previous research on punishment recommendations and empathy for human-to-human abuse, the present study found that punishment for an offender positively correlated with empathy for the animal. Moreover, as with previous research on human-to-human abuse, the punishment recommendations for human-to-animal abuse were affected by victim similarity and observer mood. Thus, mood and similarity play a role both in human-to-human and human-to-animal empathy and punishment responses, suggesting they may be universal principles. Nevertheless, more research is
needed on other factors that contribute to observer responses to animal abuse and practical ways of using such factors to combat abuse. We had mentioned that research on observer responses to human-to-human abuse has found that a host of factors affect observers: victim characteristics (attractiveness, family relatedness), observer characteristics (age, sex, competence, and personality), and situational characteristics (ambiguity, number of observers). Thus, these other factors would be worthwhile avenues for future research on animal abuse. The results of the present study also suggest that public education and the prosecution of animal abusers may have more success if the similarity of the animal to humans is emphasized and prosecutors elicit a positive mood in jurors just before providing them with an explicit account of the abuse. Indeed, participants in the present study recommended harsher sentences for animal abuse than currently mandated by law, suggesting that the general public also may support harsher penalties for the offenders of animal abuse.

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References


APPENDIX

Abuse Scenario

I was inside filling out some reports when I heard what sounded like a lot of loud voices over on the edge of the property. I went over to make sure the disturbance did not involve any of our animals. When I got close enough to see, however, I noticed that it was a group of people who had broken in and had cornered a monkey/possum/goose/goanna who had recently been brought in and was being cared for while we found the animal a new home. I could clearly see that they were intent on harming the animal but I was too scared to try to stop them as there were at least six of them. I quickly ran back to the centre, called the police, and grabbed the centres’ video recorder so I could at least have evidence against the people.

By the time I got back, the people had caught the animal and were doing things like trying to grab him/her by the legs and kicking the animal like a football. The monkey/possum/goose/goanna was bleeding and clearly in a lot of distress. The abuse continued until the animal was no longer moving, indicating to me that the monkey/possum/goose/goanna was either unconscious or dead. At this point, the people decided to leave and went back where they had broken in through the fence. When I was certain they had gone, I rushed over to the monkey/possum/goose/goanna and immediately took the animal back to the centre for the appropriate care. When I reached the centre the police were just arriving.