



Who Feels Sympathy for Roosters Used in Cockfighting? Examining the Influence of Feelings, Belief in Animal Mind, Personality, and Empathy-Related Traits

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Abstract

Since the 2007 Vick dog-fighting case, much attention has been focused on cruelty against dogs. Cockfighting roosters, on the other hand, have been virtually ignored by scientists and laypeople alike. Accordingly, very little is known about our emotional reactions to roosters used for cockfighting. The present study attempts to fill this void in the scientific literature by examining the relationship between individual differences variables and sympathetic reactions to roosters used for cockfighting depicted in a video newscast. The results were robust, with individual differences variables explaining 51% of the variability in sympathetic reactions to cockfighting roosters. Specifically, feelings toward roosters, extraversion, conscientiousness, and trait sympathy for animal suffering emerged as significant predictors, while belief in animal mind did not. The implications and limitations of these results are discussed.

Keywords

belief in animal mind, cockfighting, empathy, personality, sympathy

Fairly recently, public outcry regarding the use of dogs for dog fighting was initiated by the media attention surrounding the Michael Vick case (Kumar, 2008). This awareness has led to a number of legal initiatives designed to curb this particular act of animal cruelty. Less attention has been paid, however, to roosters used for cockfighting. This is understandable, given that roosters are generally not as well liked as dogs (e.g., Purkis & Lipp, 2009), and no recent celebrity case has been associated with cockfighting. But cockfighting continues to be practiced worldwide and has a long and celebrated history.

Roosters have been used for cockfighting since 3000 BCE (McCaghy & Neal, 1974). Although it is considered an unlawful practice in the United States today, it has “entertained” such historical figures as the Caesars in

Rome and American presidents Washington and Lincoln, to name a few (McCaghy & Neal, 1974). Despite its history, it is an activity that involves cruelty and death (Forsyth, 1996). Although most people claim to be strongly against animal cruelty (Hills, 1993), how people actually feel about animals is influenced by a variety of factors such as the characteristics of the individual who is experiencing emotions toward animals and the kind of animal species that is being considered (see Plous, 1993). Interestingly, how people feel about roosters used for cockfighting and its relationship to individual differences has not been the focus of empirical examination. Thus, the purpose of this study was to fill a void in the literature by investigating people's sympathetic reactions to roosters used for cockfighting after viewing a video newscast on cockfighting. Based on previous research, we hypothesized that specific individual differences factors would predict feelings of sympathy for cockfighting roosters.

Some animal species are more liked than others. Dogs, for instance, are one of the most highly regarded companion animals and tend to be evaluated more positively than other types of animals (Moore, 2001; Bonas, McNicholas, & Collis, 2000). Animals such as snakes and spiders tend to be perceived relatively poorly, as they are often associated with phobic responses (Purkis & Lipp, 2009; Bennett-Levy & Marteau, 1984). Birds appear to be more highly regarded than snakes and spiders but are less liked than dogs (Purkis & Lipp, 2009). According to disposition theory, people feel empathic emotions toward those whom they like (Zillman, Taylor, & Lewis, 1998). Based on the empirical research supporting this theory (Raney, 2004; Vorderer, Knobloch, & Schramm, 2001; King, 2000; Zillman et al., 1998) and the assumption that this theory would also apply to our emotions toward animals, we expected sympathy for roosters to be predicted by the general feelings people hold toward that animal species.

Belief in animal mind refers to one's certainty that most nonhuman animals are self-aware, thinking, and feeling beings (Hills, 1995). An ever-increasing body of literature suggests that people generally believe animals have minds and that this belief underlies a variety of attitudes people have toward animals (Knight, Vrij, Bard, & Brandon, 2009; Knight, Vrij, Cherryman, & Nunkoosing, 2004; Davis & Cheeke, 1998; Hills, 1995; Rasmussen, Rajacki, & Craft, 1993). For instance, Hills (1995) found a moderate positive correlation between belief in animal mind and empathy toward animals. Similarly, Knight et al. (2004) found strong negative correlations between belief in animal mind and support for animal use across six different domains. It stands to reason that belief in animal mind would also be a predictor of sympathetic reactions toward roosters used in cockfighting.

Contemporary researchers propose that five broad traits, known as the Big Five, constitute the major dimensions of personality (see John, 1990). Of the Big Five, agreeableness appears to be the most theoretically relevant to sympathy because sympathy is one of a number of interpersonal facets, such as helpfulness and trust, that make up the agreeableness trait (McCrae & John, 1992). Researchers have found that agreeableness and concerns about animal welfare are positively associated (Austin, Deary, Edwards-Jones, & Arey, 2005; Furnham, McManus, & Scott, 2003). In one study where participants viewed a film about dog fighting, agreeableness was a robust predictor of sympathetic feelings for a bait dog depicted in the film (Lee, Gibbons, & Short, 2010). Thus, agreeableness was also expected to predict sympathy for the roosters.

General trait sympathy, which is a more specific disposition than agreeableness, describes a generalized tendency to feel compassion and concern for other people (Davis, 1980). Individuals higher on general trait sympathy tend to be better communicators (Davis & Oathout, 1987), are less aggressive (Lauterbach & Hosser, 2007), and are perceived as being more sympathetic by others (Lee, 2009), than individuals lower on general trait sympathy. A defining characteristic of general trait sympathy is a willingness to help others (Unger & Thumulari, 1997; Oswald, 1996; Eisenberg & Miller, 1987). Individuals scoring higher on this trait are also known for being more concerned about the welfare of animals than individuals who are less inclined to feel compassion for others (Henry, 2006; Taylor & Signal, 2005; Furnham et al., 2003). When you couple these findings with research showing that individuals scoring higher on general trait sympathy tend to have stronger emotional reactions to sad films than individuals with lower levels of general trait sympathy (Lee et al., 2010; Lee, 2009; Davis, Hull, Young, & Warren, 1987), it follows that general trait sympathy would also predict sympathy for roosters.

An even narrower disposition than agreeableness and general trait sympathy is trait sympathy for animal suffering. Trait sympathy for animal suffering is a generalized tendency to experience negative feelings of sorrow or concern when encountering animal suffering (Lee, 2009). This trait is related to, but distinct from, other empathic dispositions such as general trait sympathy, fantasy empathy, perspective taking, and personal distress (Lee, 2009). In a series of studies using films that depicted animal suffering, trait sympathy for animal suffering consistently emerged as a strong predictor of participants' sympathetic reactions to the animals in the films (Lee et al., 2010; Lee, 2009). These findings were stable across different samples and across different targets of sympathy such as dogs and horses. Based on these findings, we not only expected this trait to predict feelings of sympathy for roosters, we also expected it to be the most robust predictor in our study.

Method

Participants

A convenience sample of sixty-five undergraduate college students participated in the current study for partial course credit. The participants consisted of 56 women and 9 men with a combined mean age of 19.69 years ($SD = 1.17$). The participants identified their race as White/Caucasian ($n = 49$, 75.40%), African-American ($n = 12$, 18.50%), or Other ($n = 4$, 6.20%). The majority of the participants (95.10%) claimed to have kept a companion animal sometime in their lives (Dog = 75.38%; Cat = 50.77%; Bird = 16.92%; Other = 63.08%).

Procedure

The experimental process involved three phases. In the first phase, participants were led into a classroom and instructed to find a seat and take out a pen. The participants were asked not to talk during the experiment. Participants were then given an informed consent form. After these forms were completed, the experimenter gathered them and gave participants a series of prefilm questionnaires that consisted of a demographic survey and measures of social desirability, feelings toward specific animals, belief in animal mind, Big Five personality, empathy-related traits, and trait sympathy for animal suffering. This process took approximately 15 minutes.

In the second phase, participants were shown a segment of a video newscast from New Mexico's news station KRQE of an illegal cockfighting ring facility that was infiltrated by police officers (McCarthy, 2009). The video showed police officers discussing the crime scene; indicated the amount of money that cockfighting rings can net; and graphically demonstrated the violent nature of cockfighting. The cockfighting facility housed anywhere between 50 to 100 roosters. The police officers discovered trash cans filled with dead roosters and some roosters who were so badly injured they had to be euthanized. This film clip met Rottenberg, Ray, and Gross's (2007) recommendations for video usage in emotion research by being homogenous in content (specific focus of the video clip was on the roosters used for cockfighting), free of carryover effects (no other video clips were shown), and short enough to avoid the effects of habituation, sensitization, and fatigue (the video was 35 seconds long). In the final phase, the experimenter provided the participants with a post-film questionnaire that consisted of 24 scale items regarding their thoughts and feelings about the roosters, which took approximately five minutes to complete.

To facilitate the accurate completion of all the instruments, some response formats were modified from their original scales. For instance, a 9-point scale was applied to measures of belief in animal mind, empathy-related traits, and trait sympathy for animal suffering, because these instruments conveniently fit onto one page. Caution should be used when comparing descriptive statistics reported in this study to other studies that have utilized different formats.

Measures

Demographics. Participants were asked to report their age, gender, race, and how many companion animals they had lived with in their lifetime.

Social desirability. The 13-item Form C Social Desirability Scale (SDS) (Reynolds, 1982) measures a person's tendency to present him/herself in a socially desirable manner. Participants were asked to rate each scale item on a forced-choice format (*true* or *false*). An example of an item from this measure is "I'm always willing to admit it when I make a mistake." The scale yielded a modest level of reliability ($\alpha = .67$).

Feelings toward roosters. (FTR) Participants were asked to rate how they felt about roosters and 11 other types of animals on a 7-point scale ranging from 1 (*extremely negative*) to 7 (*extremely positive*). Feelings toward roosters and other animals were consistent with previous research (e.g., Purkis & Lipp, 2009). Specifically, participants generally had neutral feelings toward roosters ($M = 4.09$; $SD = 1.20$), while they had positive feelings toward dogs ($M = 6.38$; $SD = 1.25$) and negative feelings toward snakes ($M = 2.72$; $SD = 1.86$) and spiders ($M = 2.28$; $SD = 1.54$).

Belief in animal mind. (BAM) The 4-item Belief in Animal Mind scale (Hills, 1995) measures the extent to which an individual believes that animals experience consciousness and awareness. Participants were asked to rate each scale item on a 9-point scale ranging from 1 (*very strongly disagree*) to 9 (*very strongly agree*). An example of an item from this measure is "Most animals are unaware of what is happening to them." The measure yielded a modest level of reliability ($\alpha = .65$).

Big Five personality. The 40-item Mini-Markers scale (Saucier, 1994) measures the Big Five personality traits. The Extraversion scale (EXT) assesses the extent to which one is characterized as being "shy," at one end of the spectrum, or "bold," at the other end of the trait continuum. The Conscientiousness scale (CON) assesses the extent to which one is characterized as being "sloppy," at one end of the spectrum, or "systematic," at the other end of the trait continuum. The Agreeableness scale (AGR) assesses the extent to which one is characterized as being "harsh," at one end of the spectrum, or

“cooperative,” at the other end of the trait continuum. The Openness scale (OPN) assesses the extent to which one is characterized as being “uncreative,” at one end of the spectrum, or “complex,” at the other end of the trait continuum. The Emotional Stability scale (EMS) assesses the extent to which one is characterized as being “moody,” at one end of the spectrum, to “relaxed,” at the other end of the trait continuum. Participants were asked to rate each self-descriptive adjective on a 9-point scale ranging from 1 (*extremely inaccurate*) to 9 (*extremely accurate*). The instrument yielded satisfactory levels of reliability: EXT ($\alpha = .89$), CON ($\alpha = .80$), AGR ($\alpha = .88$), OPN ($\alpha = .74$), and EMS ($\alpha = .68$).

Empathy-related traits. The 28-item Interpersonal Reactivity Index (Davis, 1980) measures four different types of dispositional empathy. The Perspective Taking scale (PTS) assesses the extent to which a person tries to see different perspectives on issues. An example of an item from this measure is “I try to look at everybody’s side of a disagreement before I make a decision.” The Fantasy scale (FSS) assesses one’s habit of becoming emotionally engrossed in the lives of characters in books, movies, and plays. An example of an item from this measure is “After seeing a play or movie, I have felt as though I were one of the characters.” The Personal Distress (PDS) scale assesses one’s tendency to lose emotional control during stressful situations. An example of an item from this measure is “In emergency situations, I feel apprehensive and ill at ease.” The Empathic Concern (ECS) scale assesses one’s tendency to feel compassion and sympathy for others and is thus referred to as general trait sympathy. An example of an item from this measure is “I would describe myself as a pretty soft-hearted person.” Participants were asked to rate each scale item on a 9-point scale ranging from 1 (*very strongly disagree*) to 9 (*very strongly agree*). This instrument demonstrated solid levels of internal consistency: PT ($\alpha = .79$), FS ($\alpha = .83$), PD ($\alpha = .85$), and EC ($\alpha = .81$).

Trait sympathy for animal suffering. (SAS) The 6-item Sympathy for Animals scale (Lee, 2009) measures a person’s tendency to feel sorrow or concern for animal suffering. An example of an item from this measure is “I often feel bad for animals when I know that they are in pain.” Participants were asked to rate each scale item on a 9-point scale ranging from 1 (*very strongly disagree*) to 9 (*very strongly agree*). The SAS demonstrated strong internal consistency ($\alpha = .90$).

Sympathy for the roosters (Criterion Measure). (SCR) A 6-item measure of state sympathy (Lee, 2009) was used to measure the extent to which participants felt sympathy for the cockfighting roosters they watched in the video newscast. An example of an item from this measure is “While watching the film, I felt sorry for the roosters.” Participants were asked to rate each item on a 9-point

scale ranging from 1 (*extremely inaccurate*) to 9 (*extremely accurate*). In general, participants felt a moderate level of sympathy for the roosters ($M = 7.09$; $SD = 1.72$). The SCR demonstrated strong internal consistency ($\alpha = .92$).

Results

Zero-Order Correlation Analysis

There were a number of correlations found among the variables (see Table 1). Of particular interest are the positive correlations found between sympathy for the cockfighting roosters in the video newscast and general feelings toward roosters, belief in animal mind, conscientiousness, and trait sympathy for animal suffering. Interestingly, sympathy for the cockfighting roosters in the video newscast was negatively correlated with extraversion. Gender and race were not correlated with any of the other variables.

Standard Multiple Regression Analysis

We screened the data for statistical appropriateness prior to running the multiple regression analysis (Tabachnick & Fidell, 2001). No univariate (studentized deleted residuals < 2.00 ; McClelland, 2000) or multivariate (Mahalanobis distance χ^2 value < 20.52 ; Tabachnick & Fidell, 2001) outlier cases were found. Collinearity diagnostics revealed no presence of singularity or multicollinearity. Examination of partial regression plots also revealed no problems associated with normality, linearity, and homoscedasticity of residuals. No suppressor variables were found. In addition, partial correlation analysis revealed that although social desirability had a significant influence on extraversion's correlation with sympathy for the cockfighting roosters, the magnitude of the effect was small (i.e., .05 correlation coefficient points).

Because the ratio of cases to predictor variables was below the recommended number for detecting medium-size relationships in multiple regression analysis (see Tabachnick & Fidell, 2001), a post-hoc power analysis was conducted. Taking into account the sample size ($N = 64$), number of predictors (5), observed R^2 (.51), and p value ($p < .05$), a power score of .9999 was found and was well above the .80 criterion for adequacy described by Cohen (1987). Thus, the data were deemed suitable for the multiple regression analysis.

To clarify the predictive relation between the correlates of sympathy for the cockfighting roosters shown in a news report, a standard multiple regression analysis was performed (see Table 2).

Table 1. Zero-Order Correlations of Variables

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.
1. Gender	—														
2. Race	-.02	—													
3. SDS	.24	-.11	—												
4. FTR	-.23	.08	.09	—											
5. BAM	-.13	.21	.03	.12	—										
6. EXT	.04	-.18	.28*	-.14	.03	—									
7. EMS	-.02	.00	.46***	.05	-.06	.15	—								
8. AGR	.03	.07	.33**	.07	.05	.08	.35**	—							
9. CON	.21	.06	.03	.00	.08	.03	.00	.26*	—						
10. OPN	-.09	-.16	.32**	.14	.09	.43***	.07	.20	.03	—					
11. ECS	.14	.11	.29*	-.06	.19	.23	.04	.47***	.18	.38**	—				
12. FSS	.00	.12	.05	.20	.18	.01	-.21	.22	.16	.29*	.41**	—			
13. PTS	-.05	.11	.25*	.11	.30*	.07	-.02	.11	.00	.25*	.48***	.27*	—		
14. PDS	.16	-.11	-.14	-.13	-.08	-.15	-.30*	.05	-.06	-.25*	.00	.01	-.13	—	
15. SAS	.02	.23	.04	.06	.50***	-.12	-.20	.21	.08	.05	.53***	.35**	.16	.24	—
16. SCR	.04	.23	.11	.29*	.32*	-.33**	-.15	.11	.29*	-.19	.14	.22	.11	.22	.56***

Note. Gender (0 = Male; 1 = Female); Race (0 = Nonwhite; 1 = White); SDS = Social Desirability; FTR = Feelings toward Roosters; BAM = Belief in Animal Mind; EXT = Extraversion; EMS = Emotional Stability; AGR = Agreeableness; OPN = Openness; ECS = Empathic Concern; FSS = Fantasy; PTS = Perspective Taking; PDS = Personal Distress; SAS = Trait Sympathy for Animal Suffering; SCR = Sympathy for the Cockfighting Roosters from the Video Newscast.

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

Table 2. Standard Multiple Regression Predicting Sympathy for the Roosters Used in Cockfighting (SCR)

Predictor Variables	B	SE B	β
Feelings toward Roosters (FTR)	1.76	.81	.20*
Extraversion (EXT)	-2.6	.09	-.29**
Conscientiousness (CON)	.31	.11	.26**
Belief in Animal Mind (BAM)	.08	.20	.05
Trait Sympathy for Animal Suffering (SAS)	.60	.14	.47***

Note. $R^2 = .51$

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

Feelings toward roosters ($\beta = .20, p = .035$), extraversion ($\beta = -.29, p = .004$), conscientiousness ($\beta = .26, p = .007$), and trait sympathy for animal suffering ($\beta = .47, p = .000$) emerged as significant predictors. However, belief in animal mind ($\beta = .05, p = .67, ns$) was not a significant predictor. Altogether, 51% of the variability in sympathy for the roosters was predicted by knowing individual difference levels in affection toward roosters, extraversion, conscientiousness, belief in animal mind, and trait sympathy for animal suffering.

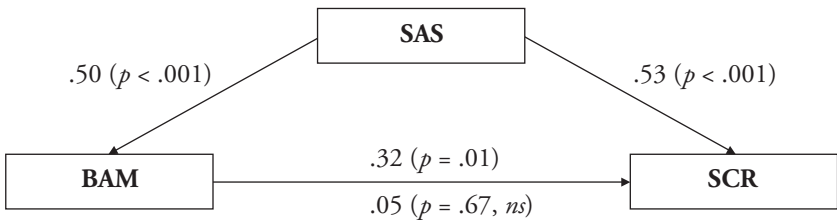
Confounder Analysis

Results of the multiple regression analysis revealed the possibility of a confounding effect. Because third variable effects are calculated in the same manner as mediation analyses (Mackinnon, Krull, & Lockwood, 2000), a formal test of mediation following Baron and Kenny's (1986) conditions and Shrout and Bolger's (2002) bias-corrected bootstrap procedure using 2,000 resamples were conducted (see Figure 1).

We chose a bootstrap resampling method because its calculation of confidence intervals is not biased by sample size, effect size, or level of statistical significance (Mallinckrodt, Abraham, Wei, & Russell, 2006). The analysis revealed that trait sympathy for animal suffering (confounder) fully accounted for the relation between belief in animal mind and sympathetic feelings for the roosters (95% CI = $-.13$ to $.26, p < .001$).

Discussion

The purpose of the current study was to identify individual-difference variables that predict sympathetic feelings toward roosters used for cockfighting. This



Note. Above values reflect standardized regression coefficients (i.e., β s). The initial path between BAM and SCR is indicated by the coefficient above the line connecting these variables, whereas the coefficient after SAS is included as the confounder is indicated by the coefficient directly below the path.

Figure 1. Confounding effect of trait Sympathy for Animal Suffering (SAS) on the relation between Belief in Animal Mind (BAM) and Sympathy for the Roosters used in Cockfighting (SCR)

study extends previous work on sympathy for animal suffering by using a video newscast to examine individuals' feelings toward an animal whom people tend neither to like nor to dislike. In support of our hypotheses, feelings toward roosters and trait sympathy for animal suffering emerged as unique predictors of sympathetic feelings toward roosters. Surprisingly, we found no support for our expectation that agreeableness, general trait sympathy, and belief in animal mind would be predictors. Furthermore, we did not anticipate the moderate associations we found between sympathy for the roosters used for cockfighting and the Big Five traits of conscientiousness and extraversion. Collectively, the predictor variables were not only robust in accounting for 51% of variability in sympathy for roosters, but demographic (no effect) and social desirability (small effect on extraversion) did not substantially bias the results.

Not surprisingly, people's tendency to feel sorrow and concern when encountering animal suffering was the strongest predictor of how sympathetic they felt toward the cockfighting roosters viewed in the news report. This finding is consistent with other studies that have shown a strong relation between this type of disposition and sympathetic reactions to animal suffering (Lee et al., 2010; Lee, 2009; Wagstaff, 1991). Moreover, by replicating this pattern with the rooster, who is an animal held in neutral regard by most people, this finding pushes the boundaries of what is considered sympathy-worthy for animal sympathizers.

Another expected finding was that people who tend to hold stronger positive feelings toward roosters also felt greater levels of sympathy for the roosters used for cockfighting. This finding not only made intuitive sense, it was also consistent with disposition theory, which identifies likability as a precursor to

empathic responses (Zillman et al., 1998). Future research would benefit by examining sympathy for animals toward whom people tend to have negative emotions, such as snakes and spiders, because they are considered fear-relevant "objects" in evolutionary terms (Purkis & Lipp, 2009). Such work would not only test the limits of trait sympathy for animal suffering, but also disposition theory, since previous sympathy work has focused primarily on animal species that people are generally fond of, such as piglets, horses, and dogs (e.g., Lee et al., 2010; Lee, 2009; Wagstaff, 1991).

We found a link between belief in animal mind and sympathy for the roosters, but not in the way we expected. The present results suggest a more elaborate explanation for the finding that greater levels of sympathy for the roosters in the film were associated with stronger beliefs in the capacity of nonhuman animals to experience higher-order mental processes. Although belief in animal mind was positively correlated with sympathy for the roosters, the confounder analysis demonstrated that this relationship was accounted for by a tendency to feel sorry for animal suffering in general. Thus, this finding suggests that belief in animal mind is not an adequate explanation for sympathetic feelings for roosters. More research is needed to investigate whether this phenomenon is specific to roosters or applies to other animal species as well.

As mentioned previously, the finding that the Big Five traits of conscientiousness and extraversion predicted sympathy for the roosters was unexpected. To the best of our knowledge, there is no consistent research base or theory linking these personality traits to feelings about animal welfare. For instance, past studies that have examined conscientiousness and various attitudes toward animals revealed no significant links between the variables (Swami, Furnham, & Christopher, 2008; Furnham et al., 2003). The research with extraversion, however, is mixed. In some studies, lower levels of extraversion were related to greater concerns for animal welfare (e.g., Golden & Herzog, 2008; Broida, Tingley, Kimball, & Miele, 1993) while another study showed the opposite effect (Lee, 2009). To complicate matters, other studies found no distinction between those personality traits and their relation to animal welfare variables (e.g., Lee et al., 2010; Swami, et al., 2008). It is possible to speculate that sympathy for the roosters might have been initiated by the concerns that are associated with each of the traits.

For individuals lower on the extraversion dimension, for example, sympathy for the roosters may have come from their shared experiences of being harassed by powerful others within a social context. Because both cockfighting and bullying occur in an environment where onlookers actively encourage the harassment, individuals lower on the extraversion trait may have felt more strongly for the roosters' plight because they too tend to be victims of bullying

(Coyne, Seigne, & Randall, 2000; Mynard & Joseph, 1997). The sympathy that the conscientious individuals felt toward the roosters, on the other hand, may have been driven by the criminal nature of cockfighting itself. Because conscientiousness is positively associated with stronger commitments to social order (de Bruin & Rudnick, 2007; Lodi-Smith & Roberts, 2007; Wiebe, 2004) and aversion toward those who break the rules (Robbers, 2006; Kokkinos, Panayiotou, & Davazoglou, 2005; Sotelo & Sangrador, 1999), individuals scoring higher on conscientiousness may have felt more sympathy for the roosters because they were casualties of an illegal activity that was perpetuated by criminals. Although these explanations do not clarify why similar results were not found in other studies, it is conceivable that our neutral regard for roosters allows other, less emotional, aspects of our personalities to influence our emotional reactions. Future research would benefit from first establishing the reliability of these findings and then examining the validity of these explanations.

Discovering that individual differences factors account for more than half of the variability in the sympathetic feelings people express for roosters used in cockfighting has important implications for humane education and animal welfare advocacy programs. For instance, programs that are designed to evoke sympathetic feelings for roosters used for cockfighting should show the painful and cruel aspects of this activity because of its power to move those more inclined to feel sympathy for animal suffering. Programs should also emphasize the criminal nature of cockfighting because this aspect would appeal to the conscientious aspect of people's personalities. Similarly, the practice of cockfighting could be presented from a power perspective where the roosters are identified as victims of powerful but malevolent individuals. This bullying framework should appeal to more introverted people who may relate to this kind of experience. A final suggestion would be to highlight the attractive aspects of the rooster because people tend to hold somewhat ambivalent feelings toward this species. Making the rooster more likable to people should influence their sympathy for the animal's plight.

There are two limitations that affect the interpretation of these results. First, we are uncertain whether or not the group format that we utilized biased this study's findings. Researchers have discovered that the presence of others during film research does influence participants' emotional responses (Rottenberg et al., 2007). Second, because this study was based on an American college-student population, the results may not apply to other groups. Researchers like Hills (1995) have found that attitudes toward animals differ significantly across different populations such as farmers, college students, and animal rights activists. Similarly, Americans tend to show less opposition toward the

use of animals in research than other groups, such as the British (Swami et al., 2008; Pifer, Shimizu, & Pifer, 1994). Although these limitations are important to consider, they should not detract from the strengths of this study and the crucial finding that individual differences account for a significant amount of the sympathy that people feel for roosters used for cockfighting.

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