"It's a Dog's Life": Culture, Empathy, Gender, and Domestic Violence Predict Animal Abuse in Adolescents—Implications for Societal Health

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Abstract

Whereas the majority of previous research conducted on animal abuse has been in environments where animal abuse is rarely evidenced, the current study investigated the ramifications of animal abuse in an environment wherein the national culture creates an ethos of the "social acceptability" of animal abuse in society. Two survey studies were conducted with adolescent participants, to investigate the role played by several factors in the prediction of animal abuse in this age group. In Study 1, with samples from two different national cultures (101 from Germany and 169 from Romania; 143 boys/135 girls; age 13 to 17), animal abuse was negatively associated with affective empathy and national culture; more frequent animal abuse was found in Romania. Affective empathy fully mediated the association between gender and animal abuse. Specifically, girls were found to be higher in affective empathy; in turn, participants who were higher in affective empathy

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committed less animal abuse. Witnessing animal abuse was also predictive of engaging in animal abuse, but not independent of national culture. In Study 2, 15-year-old males ($n = 21$) and females ($n = 39$) took part, 29 from rural and 31 from urban locations in Romania. Rural adolescents were more likely to abuse animals and had higher exposure to domestic violence, which (in turn) was associated with more animal abuse. The implications of these findings in a society where animal abuse is encouraged and enacted on a national scale are discussed.

A universal definition of animal abuse is difficult to achieve due to diverse social and cultural factors and attitudes (Petersen & Farrington, 2009). The treatment of domesticated animals, for example, in Far Eastern societies would challenge and outrage those in Western cultures (e.g., Podberscek, 2009).[1] However, some homogeneity can be claimed in North American and European societies. This article addresses practices within these cultures and only explores abuse of companion animals. Ascione (2009) defined animal abuse as "socially unacceptable behavior that intentionally causes unnecessary pain, suffering or distress to and/or death of a non-human animal" (p. 107). Such a definition suffices for the majority of societies and allows a connection to be established between those who abuse animals, and those who commit abuse and aggression within the human domain. This link has been researched extensively, but always within a society where animal abuse, primarily of companion animals, is "socially unacceptable" (e.g., North America). It has helped identify "at-risk" individuals and families that contrast with the normative features of their society. The present study explores abuse in a culture where abuse toward companion animals is "socially acceptable." This suggests a magnitude hitherto unexplored, with implications, not of "at-risk" individuals or families, but an "at-risk" national culture.

Background

Because of decades of mismanagement of stray animal control programs, Romania has an excess of dogs living on the streets. According to the Romanian Animal Welfare Federation (FNPA), there is an estimated dog population of 6.1 million, consisting of homeless and "owned" dogs, many of whom are allowed to roam freely (Animal Welfare Intergroup, 2015). Instead

of a national neutering program, an "eradication" law was introduced where dogs were captured and contained in rude shelters before being often inhumanely killed. This dog-catching and disposal process serves as a lucrative business and, hence, inhibits the implementation of a permanent solution so as to continue the ongoing supply of animals. Reports of abuse in public places have included poisoning, beating to death, or deliberately killing dogs with motor vehicles. Status diminishment of the animals ensured them being regarded as vermin and inviting such attacks in public places. A total of 86.3% of children in the Making the Link Study had witnessed animal abuse in public (Gullone & Plant, 2014). Romania has a history of abandonment, whether it be orphans, the elderly, or infirm; similarly, newly born puppies are abandoned, thereby ensuring a continued supply of stray animals. Adolescents who have experienced domestic violence enact displaced aggression (Gullone, 2012b) against the readily available animals, sometimes with extremes of violence. Witnesses of this unchallenged aggression adopt this as a societal norm, which creates a duopoly of abusers: those displaying aggression expiation and others enacting what they believe is normative social behavior.

Domestic environments in Romania contrast with Western societies, where companion animals are regarded as family members. In Romanian rural society, dogs often function only as guard dogs and live outdoors throughout the year, often tethered on short chains and fed sparingly. Whereas Western studies have shown that spousal intimidation occurs by threatening or abusing an animal (Ascione, 2009), generally, in Romania, this would be unlikely to have any impact, because the animal generally has little emotional proximity to the abused spouse. With domestic violence prevalent throughout the country, aggression unleashed on legally and socially status-diminished animals may serve as a displaced aggression enactment facility. Aggression is not only practiced against people and property but is likely learned through modeling (Bandura, 1978) by the abusers' children, thus, continuing the cycle of violence across generations. Such attitudes to companion animals can be seen to be on a continuum, which has extremes, with cats and dogs being regarded as family members in some cultures but as food in others, such as Vietnam, China, and Laos (O'Callaghan, 2016). In conclusion, whereas the literature essentially assumes the homogeneity of results in North American and Western European societies, these are not necessarily applicable in other cultures.

Development of Hypotheses

Following a review of relevant literature related to animal abuse, it was determined that relationships among the variables being examined in the current

studies have not previously been examined in countries such as Romania, where attitudes toward, and the treatment of, companion animals are quite different from those in most Western societies. We derived the study hypotheses from the following relevant research.

Empathy and Gender

For the purpose of this research, we adopt Cohen and Strayer's (1996) definition of empathy (as cited in Jolliffe & Farrington, 2006) "as the understanding and sharing in another's emotional state or context" (p. 592). Research evidence (Lennon & Eisenberg, 1987) has consistently shown that females across the life-span score higher on measures of empathy than males (Jolliffe & Farrington, 2006).

> **Hypothesis 1 (H1):** Females possess a higher level of empathy than males.

Moreover, research has distinguished different types of empathy. Cognitive empathy is one's understanding of another person's feelings, whereas affective empathy occurs when one's feelings mirror that of another person. According to Jolliffe and Farrington (2006), men and women differ to a larger degree on affective empathy than on cognitive empathy. Thus,

> **Hypothesis 2 (H2):** The difference between males and females is greater for affective empathy than for cognitive empathy.

Empathy and Animal Abuse

While low levels of empathy constitute a risk factor for antisocial and aggressive behavior (Gullone, 2012b; McPhedran, 2009), higher levels of empathy can be a protective factor against the development of these behaviors. Empathic and prosocial youths are more inclined to treat their companion animals humanely (Gullone, 2012b; Poresky, 1990; Vidovic, Stetic, & Bratko, 1999). It has been demonstrated that empathy is important for interpersonal relationships and behaviors, including those with animals. For example, Poresky's (1990) study assessed the relationship between bonds with companion animals and empathy level among 38 children ranging in age from 3 to 6 years. As expected, children who had a strong bond with their companion animal scored higher on empathy than children who did not have companion animals. Therefore,

Hypothesis 3 (H3): The more empathy a person possesses, the less likely they are to abuse animals (Thompson & Gullone, 2006).

Gender and Animal Abuse

The broader antisocial-behavior literature has shown that there are marked gender differences with the males outnumbering females on aggressive tendencies by a ratio of around 10 to 1 (Loeber & Hay, 1997). Accordingly, research has shown that males are more likely to be cruel to animals. This is true for childhood (e.g., Baldry, 2005), adolescence (Thompson & Gullone, 2006), and adulthood (Gullone & Clarke, 2008). Of note, Flynn (1999a, 1999b) found that not only were males more likely to commit animal cruelty, they were also more likely to witness it. Thus,

Hypothesis 4 (H4): Males are more likely to commit animal abuse than females (Arluke & Luke, 1997; Coston & Protz, 1998).

Culture and Animal Abuse

Environmental factors have also been shown to be important for the development of animal abuse. These factors include micro-environments (proximal environments) such as the child's family and parenting experiences (e.g., Gullone, 2012b; Kellert & Felthous, 1985; Rigdon & Tapia, 1977; Tapia, 1971). However, more distal, macro-environments, such as cultural attitudes and norms, are also considered to be important (Flynn, 1999a, 2012; Gullone, 2012b).

According to Flynn (1999a, 2012), much of what we know about humans who abuse animals comes from clinical samples of children and adolescents (Rigdon & Tapia, 1977; Tapia, 1971) and from retrospective self-reports of incarcerated criminals (Felthous & Kellert, 1986; Kellert & Felthous, 1985; Ressler, Burgess, Hartman, Douglas, & McCormack, 1986). These studies typically analyze animal abuse at the individual level. With few exceptions, social and cultural factors have received little attention. However, important individual factors such as empathy may operate on a national scale. Consequently, some cultures may have attitudes toward animals that encourage their mistreatment among members of the society. Similarly, in cultures with norms approving of violence generally, individuals may be more likely to use violence against others, including animals. As a result, abuse may be inherent in national culture and endemic publicly across a nation.

One theory that might predict higher levels of violence in Romania than in, for example, Germany is cultural spillover theory (Straus, 1991, 1994).

This theory argues that living in a culture or subculture with high levels of socially acceptable violence may lead to a spillover effect, whereby those cultures also have higher levels of unacceptable violence. In a U.S. study with states serving as the cultural variable, Baron and Straus (1988) found that states with a higher level of legitimate violence as measured by such variables as number of hunting licenses sold, execution rates, laws permitting corporal punishment in schools, and circulation rates for magazines with violent content—also had higher murder rates. Thus, being part of a culture where the mistreatment of animals is a routine part of everyday life would be expected to increase adolescents' likelihood of engaging in animal abuse and other aggressive behaviors.

Relatedly, in the first study documenting a link between institutionalized animal abuse and increased crime, Fitzgerald, Kalof, and Dietz (2009) investigated the link between socially accepted institutionalized animal abuse and human crime. Specifically, they examined whether the "violent work" that takes place in slaughterhouses increases a community's crime rate. To answer this question, slaughterhouses were compared with other sectors and controlled for other relevant factors including the demographic characteristics of workers, unemployment rates, and social disorganization in the community. As expected, slaughterhouse employment was significantly related to higher crime rates as well as report rates. Compared with other sectors, slaughterhouse employment was linked to significantly higher total arrest rates for violent crimes, rape, and other sex offenses. These findings lend support to the notion that institutionalized, socially acceptable violence can spill over into unacceptable or illegal acts of violence.

These studies of the impact of socially legitimized and institutionalized violence on the rate of illegal violence in certain subcultures provide support for the proposition that adolescents in Romania who are routinely exposed to the mistreatment of other animals could commit rates of animal abuse that are higher than adolescents in other countries do. Thus,

> **Hypothesis 5 (H5):** In a society that accepts animal abuse as normative, more people commit animal abuse (Flynn, 1999a, 2012).

Witnessing of Violence and Animal Cruelty

Research has consistently demonstrated the importance of witnessing aggression for the development of aggressive behavior (e.g., Cummings, 1987; Davies, Myers, Cummings, & Heindel, 1999; Margolin & Gordis, 2000; Maughan & Cicchetti, 2002). A number of studies investigating the relationship between animal cruelty and family violence have also examined

children's witnessing of animal cruelty and children's engagement in animal cruelty (Gullone, 2012a; Gullone & Robertson, 2008; Thompson & Gullone, 2006; Volant, Johnson, Gullone, & Coleman, 2008). These studies have shown that between 29% and 75% of children in violent families have witnessed the animal cruelty, and between 10% and 57% have engaged in animal cruelty. Parental reports of animal cruelty in normative samples of children (children who do not come from violent homes) are typically around 10% or lower (Ascione et al., 2007). Therefore,

> **Hypothesis 6 (H6):** The more domestic violence a person has been exposed to, the more likely they are to abuse animals (Ascione & Arkow, 1999; Gullone, 2012a, 2012b).

Considering cultures where animal abuse is unacceptable and companion animals have "emotional proximity" to their owners, one of the most consistently replicated findings in the animal-cruelty literature is a significant co-occurrence between domestic violence and animal cruelty. Indeed, studies examining the associations between animal cruelty and domestic violence have been conducted across several countries, including the United States, Canada, and Australia (e.g., Ascione, 1998; Ascione et al., 2007; Daniell, 2001; Faver & Cavazos, 2007; Flynn, 2000; Quinlisk, 1999; Volant, Johnson, Coleman, & Gullone, 2008). Studies conducted in women's refuge shelters have found that partners' threats of animal abuse or killing of an animal inhibit women from leaving a violent partner (Ascione, 1998). Moreover, children copied the observed behavior (Quinlisk, 1999). Thus, when animal cruelty occurs within the family home, this can be a symptom of a deeply dysfunctional family (Lockwood & Hodge, 1986). Ascione et al. (2007) found that children exposed to both domestic violence and animal abuse exhibited contrasting behaviors, with 13.2% admitting to hurting companion animals while more than 50% had sought to protect the animal. However, in cultures where domestic animals are not regarded with emotional proximity and may typically spend their lives outside in severe temperatures with limited care, threats or abuse of animals may not be intimidating to spouses even if associated domestic violence takes place.

The link to animal abuse has extended beyond domestic violence to other aggressive and/or criminal behaviors. For example, Febres and colleagues (2014) found that male individuals who perpetrated animal abuse had several characteristics in common with those who perpetrated interpersonal violence, including antisocial-personality disorder traits, problems of impulsivity, low empathy, and involvement in other illegal behaviors. The authors concluded

that male perpetrators also perpetrate a substantial amount of general aggression, including aggression toward children.

The Current Research

Existing research has examined animal abuse primarily toward companion animals in societies where it is socially unacceptable. The aim of the current research was to examine animal abuse in relation to a number of variables (e.g., empathy, aggression) and test the hypotheses specified earlier, in macro-environments that differed in their acceptance of animal abuse. Two survey studies were conducted. In the first, samples from two cultures that differ in their practices and attitudes regarding animal abuse were compared. In the second, two samples from the same culture but from two different locations, one rural and the other urban, were compared.

Study 1

Method

Design. A cross-sectional survey design was used, with animal abuse as the main dependent variable. The main predictor variables were affective and cognitive empathy (only for animal abuse), national culture (Romanian and German), and gender.

Participants. Information leaflets were distributed to adolescents, including a form giving them an option not to participate. Consent was obtained from the local Education Authority, and letters were sent to parents asking for signed consent. Participants were school-aged adolescents ($N = 280$, 143 boys/135 girls/2 missing). In Bistrita (Romania), the gender split was 79 boys/88 girls/2 missing ($n = 169$), and in Berlin (Germany), it was 64 girls/47 boys ($n = 101$). The distribution of age was 0.5% (13 years old), 39% (14), 42% (15), 18% (16), and 0.5% (17) overall; 0.5% (13), 47% (14), 49% (15), 4% (16) for Bistrita; and 26% (14), 31% (15), 42% (16), and 2% (17) for Berlin.

Assessment instruments and procedure. Psychometric measures were presented during allocated classroom sessions in three schools in Bistrita and one in Berlin. Initial explanations were provided by a teacher and an educational psychologist in both locations. A classroom debrief was provided by teachers in both locations. Two self-assessment instruments, the Basic Empathy Scale (BES; Jolliffe & Farrington, 2006) and Youth Self-Report Form (YSR) of the Achenbach System of Empirically Based Assessment (ASEBA;

Achenbach & Rescorla, 2001), were presented in German and Romanian and administered in this study.

The BES is a 20-item measure of affective and cognitive empathy with responses provided on a Likert-type scale. Example items are "Other people's feelings don't bother me at all" and "My friends' unhappiness doesn't make me feel anything." The BES was translated and "reverse"-translated by two independent bilingual speakers to ensure accuracy. The YSR is a 112-item measure that assesses various "aspects of adaptive and maladaptive functioning" (e.g., depression and aggressive behavior; Achenbach & Rescorla, 2001, p. iv). ASEBA forms were presented in pre-existing German- and Romanian-language versions. Two items were added at the end of the YSR ("I am cruel to animals" and "I have seen people be cruel to animals") to assess animal abuse and witnessing animal abuse.

In each location, data were collected in 1 week. Data were collected by local researchers, retained on hard copy, and conveyed to the first author for data input into Statistical Package for the Social Sciences (SPSS) and subsequent analysis.

Results

Psychometrics. Principal components analysis (PCA), with varimax rotation, of the BES was conducted on the combined samples.[2] Items 1 and 8 (both measuring affective empathy) were removed because of cross-loadings. There were two factors (Table 1): affective empathy (Factor 1) and cognitive empathy (Factor 2). The solution explained 35% of variance (19% by Component 1 and 16% by Component 2). Internal-consistency reliability was good for affective empathy, Cronbach's $\alpha = .79$, and acceptable for cognitive empathy, $\alpha = .69$. Arithmetic-average scores were calculated per subscale and used in further analysis.[3] This replication of psychometric properties of the BES is important, as it shows that the instrument adequately measures the two types of empathy (affective and cognitive) in different national cultures (Germany and Romania). Arithmetic-average scores were calculated per subscale and used in further analysis.[4]

Gender and empathy. Overall, analysis of descriptives (Table 2) indicated that (a) girls reported a higher level of empathy than boys (in favor of H1), and (b) the difference was larger for affective empathy than for cognitive empathy (in favor of H2). To test H1 and H2, ANOVA was conducted, with empathy as the dependent variable. The repeated-measures factor was empathy type (affective and cognitive). Gender was an independent-measures factor. Providing evidence for H2, the interaction effect between affect type (affective or

Table 1. Factor Analysis of Basic Empathy Scale: Factor Loadings.

		Factor Loading	
Item		Factor 1	Factor 2
7	I don't become sad when I see other people crying (R)	0.65	0.12
17	I often get swept up in my friend's feelings	0.63	0.25
15	I tend to feel scared when I am with friends who are afraid	0.62	−0.09
11	I often become sad when watching sad things on TV or in films	0.62	0.08
5	I get caught up in other people's feelings easily	0.60	0.24
4	I get frightened when I watch characters in a good scary movie	0.59	−0.05
18	My friend's unhappiness doesn't make me feel anything (R)	0.58	0.31
2	After being with a friend who is sad about something, I usually feel sad	0.56	0.27
13	Seeing a person who has been angered has no effect on my feelings (R)	0.49	−0.14
19	I am not usually aware of my friend's feelings (R)	−0.01	0.60
9	When someone is feeling "down" I can usually understand how they feel	0.26	0.59
20	I have trouble figuring out when my friends are happy (R)	0.14	0.58
16	I can usually realize quickly when a friend is angry	0.19	0.58
14	I can usually work out when people are cheerful	0.08	0.58
10	I can usually work out when my friends are scared	−0.23	0.53
12	I can often understand how people are feeling even before they tell me	0.32	0.49
6	I find it hard to know when my friends are frightened (R)	−0.09	0.38
3	I can understand my friend's happiness when she or he does well at something.	0.24	0.35

Note. Varimax rotation. R = reversed.

cognitive) and gender was significant for Bistrita, $F(1, 165) = 17.89$, $p < .001$, $\varepsilon^2 = .03$, and Berlin, $F(1, 109) = 21.29$, $p < .001$, $\varepsilon^2 = .03$. Providing further evidence, follow-up simple effect tests by national culture and affect type showed that the effect of gender was significant for Bistrita on both affective

Table 2. Affective and Cognitive Empathy as a Function of Gender and National Culture.

	Bistrita	Berlin
Girls		
Affective empathy	*3.50*	*3.19*
	0.56	0.58
Cognitive empathy	*3.54*	*3.73*
	0.45	0.39
Boys		
Affective empathy	*2.85*	*2.52*
	0.47	0.65
Cognitive empathy	*3.26*	*3.57*
	0.48	0.56

Note. Figures in italics are mean values. Plain figures are standard deviations.

empathy, $t(165) = 8.12$, $p < .001$, $d = 1.25$, and cognitive empathy, $t(165) = 3.89$, $p < .001$, $d = 0.60$. For Berlin, the effect was significant on affective empathy, $t(109) = 5.81$, $p < .001$, $d = 1.11$, but not on cognitive empathy, $t(109) = 1.49$, $p > .05$, $d = 0.28$. For both locations, the effect size of gender for affective empathy was at least twice as large as that for cognitive empathy. Moreover, in the combined sample, the effect of gender on affective empathy was also significant, $t(278) = 4.53$, $p < 0.001$, $d = 0.55$ (in support of H1, with females having higher empathy than males).

Providing evidence for H1, further ANOVA showed that the effect of gender on affective empathy was significant, $F(1, 274) = 94.16$, $p < .001$, $\varepsilon^2 = .24$, as was the effect of national culture, $F(1, 27) = 218.73$, $p < .001$, $\varepsilon^2 = .04$, but not the interaction effect. Furthermore, the effect of gender on cognitive empathy was significant, $F(1, 274) = 12.85$, $p < .001$, $\varepsilon^2 = .04$, as was the effect of national culture, $F(1, 274) = 18.14$, $p < .001$, $\varepsilon^2 = .06$, but not the interaction effect. Overall then, these results provide evidence for H1 (girls possess a higher level of empathy than boys) and H2 (the difference is larger for affective empathy than for cognitive empathy).

Animal abuse. The self-reported level of animal abuse was low, 8% overall, with 9% in Bistrita and 5% in Berlin. As a preliminary analysis, the association of national culture with witnessing of animal abuse was examined and found to be significant, odds ratio (OR) = 9.31, $p < .001$. Therefore, the odds of witnessing animal abuse were 9.31 higher for respondents in Bistrita than for those in Berlin. This result indicates that national culture is associated with witnessing animal abuse. However, several other variables that were not

Table 3. Tests or Logistic-Regression Model.

Panel A: Basic Main-Effects Mode.

	b	SE(b)	p	OR
National culture	−1.68	0.65	*	0.19
Gender	−0.30	0.59		0.74
BES-affective	1.68	0.48	***	0.19
BES-cognitive	0.32	0.51		1.37

Note. Dependent variable: Cruelty against animals. R_L^2 = .15, $\chi^2(4)$ = 21.51, p < .001.
OR = odds ratio; BES = Basic Empathy Scale.
*p < .05. ***p < .001.

Panel B: Basic Main-Effects Model With Additional YSR Predictors.

	b	SE(b)	p	OR
National culture	−1.98	0.75	**	0.14
Gender	0.12	0.68		1.12
BES-affective	−1.66	0.60	**	0.19
BES-cognitive	0.07	0.62		1.07
Self-harm	2.66	0.61	***	14.32
Property destruction	1.46	0.63	**	4.30

Note. Dependent variable: Cruelty against animals. R_L^2 = .36, $\chi^2(6)$ = 51.06, p < .001.
OR = odds ratio; BES = Basic Empathy Scale; YSR = Youth Self-Report Form.
**p < .01. ***p < .001.

examined in this first study, such as witnessing the results of animal abuse (e.g., dead animals in the street) and a lack of concern in society for the welfare of animals, are likely also to be associated with national culture. Therefore, in the following analysis, national culture rather than witness of animal abuse was used as a predictor of animal abuse.

H3, H4, and H5 were tested by regressing the predictors empathy, gender, and national culture onto animal abuse and including all two-way and higher order interactions. The basic main-effects logistic-regression model (without interaction effects) as a whole was significant, as well as the predictors of affective empathy (supporting H3) and national culture (supporting H5), but not gender (H4), or cognitive empathy (H3; Table 3). With other predictors held constant, the odds for animal abuse decreased by 5.36 with 1 unit increase in affective empathy, and the odds were 5.37 times higher for Bistrita than for Berlin. When tested in blocks by order, none of the higher order interactions were significant.[5]

To increase the model's explanatory power, we next expanded the basic main-effects model with any YSR items with a correlation phi > .3 with animal abuse (and, therefore, explaining at least 10% variance). There were two such variables: YSR18 ("I deliberately try to hurt or kill myself") and YSR21 ("I destroy things belonging to others"). In the expanded model, national culture and affective empathy remained significant predictors, but self-harm and property destruction were also significant (Table 3). With other predictors held constant, the odds for animal abuse was 14.32 times higher for those engaging in self-harm and 4.30 times higher for those destroying others' property. Again, when interaction effects were included in the model, these were not significant.[6]

Although gender was not a significant predictor of animal abuse in the basic main-effects model, when affective and cognitive empathy were removed from the model, gender became a significant predictor, OR = 3.28, *p* < .05. Therefore, the odds of boys abusing animals were 3.28 times larger than those of girls. Together, the following results indicate that the effect of gender on animal abuse can be explained through affective empathy as a full mediator: (a) the significant effect of gender (independent variable) in the model with empathy removed on animal abuse (dependent variable), (b) the significant effect of gender (independent variable) on affective empathy (mediator), and (c) the significant effect of affective empathy (mediator) on animal abuse (dependent variable), with gender losing significance, in the basic main-effects model.

Conclusions and Limitations (Study 1)

The BES was established as a psychometrically sound measurement instrument in two non-English samples. According to our results, this is a promising instrument for measuring affective and cognitive empathy in samples from different non-English populations. Animal abuse was found to be associated with affective empathy and national culture. Affective empathy fully mediated the association of gender with animal abuse. Specifically, girls were higher in affective empathy; in turn, those who were higher in affective empathy committed less animal abuse. Witnessing animal abuse was also predictive of animal abuse, but not with national culture held constant.

The BES instrument was developed for an English population (Jolliffe & Farrington, 2006). Therefore, although our PCA provided evidence for a two-factor solution, two items had to be removed to achieve this. The factor solution worked well for the sample from Berlin, but there were three cross-loadings in the sample from Bistrita. However, reliability was good or

acceptable in the two samples. Moreover, the BES was sensitive to differences predicted by H1 and H2. Therefore, future psychometric work in non-English samples may refine the BES to achieve a better psychometric quality in measuring affective and cognitive empathy in their corresponding populations.

A highly skewed distribution of variables (a split of 10%/90% or more extreme) makes it more difficult to establish the effect of predictors on outcome variables (Tabachnick & Fidell, 2013). Because our dependent variable suffered from such an extreme split (less than 10% reporting having been cruel to animals vs. more than 90% not), the true relationship between animal abuse and its predictors was likely underestimated.

Study 2

Method

Design. A cross-sectional survey design was used, with animal abuse as the main dependent variable, and with affective and cognitive empathy as further dependent variables. The main predictor variables were affective and cognitive empathy (only for animal abuse), geographic location (rural Romania or urban Romania), gender, and exposure to domestic violence.

Participants. As in Study 1, information leaflets were given to adolescents, including a form giving them the option not to participate. Permission was obtained from the local education authorities, and written consent was obtained from parents. Participants were school-aged children ($N = 60$, 21 boys/39 girls, all aged 15) in two locations (rural and urban Romania). In the rural location ($n = 29$), the gender split was 12 boys/17 girls, and in the urban location ($n = 31$), it was 9 boys/22 girls.

Assessment instruments and procedure. Psychometric measures were presented during allocated classroom sessions to all participants within the age range in two schools in the rural area of Valcea and the urban city of Bistrita. Initial explanations were provided by a teacher and an educational psychologist. A classroom debrief was provided. Three self-assessment instruments, the BES (Jolliffe & Farrington, 2006), the YSR of the ASEBA (Achenbach & Rescorla, 2001; pre-existing Romanian translation), and the Children's Exposure to Domestic Violence scale (CEDV), were translated into Romanian and administered in this study. The CEDV was designed to assess children's exposure to domestic violence (Edleson, Johnson Armendariz, & Shin, 2007). Two items were added at the end of the YSR ("I am cruel to animals" and "I

Table 4. Affective and Cognitive Empathy as Function of Gender.

	Girls	Boys
Affective empathy	*3.37*	*2.85*
	0.47	0.45
Cognitive empathy	*3.48*	*3.31*
	0.57	0.43

Note. Figures in italics are mean values. Plain figures as standard deviations.

have seen people be cruel to animals") to assess animal abuse and witnessing animal abuse. The BES and the CEDV were translated and independently "reverse"-translated to ensure accuracy.

   Presentation took place in the two schools over 3 days. A psychologist was present throughout the presentation. Data were gathered by local researchers, retained on hard copy, and conveyed to the first author for input into SPSS and subsequent data analysis.

Results

Psychometrics. Internal-consistency reliability was acceptable for affective empathy (Cronbach's α = .60), and for cognitive empathy (α = .55).[7] Internal consistency was good or acceptable for the CEDV subscales: Violence (α = .89), Involvement (α = .80), Risk Factors (α = .69), Community Exposure (α = .80), and Other Victimization (α = .70). Arithmetic-average scores were calculated per subscale and used in further analysis.

Gender and empathy. Overall, analysis of descriptives (Table 4) indicated that (a) girls reported a higher level of empathy than boys (in favor of H1), and (b) the difference was larger for affective empathy than for cognitive empathy (in favor of H2). To test H1 and H2, (2) × 2 × 2 mixed ANOVA was conducted, with empathy as the dependent variable. The repeated-measures factor was empathy type (affective and cognitive). Gender and location were independent-measures factors. Providing support for H2, the two-way interaction effect between gender and empathy type was significant, $F(1, 55) = 12.34$, $p < .001$, $\varepsilon^2 = .06$. Specifically, girls exceeded boys in affective empathy more than in cognitive empathy. Therefore, the interpretation of main effects was precluded. Providing evidence for H1, follow-up simple-effect tests by empathy type showed that the effect of gender was significant for affective empathy, with a higher level of empathy for girls than boys, $F(1, 55) = 16.04$, $p < .001$, $\varepsilon^2 = .20$; however, the effect was not

significant for cognitive empathy, $F(1, 55) = 1.12$, $p > .05$.[8] Furthermore, the effect of empathy was significant for males, with a higher level of cognitive empathy than affective empathy, $F(1, 19) = 8.72$, $\varepsilon^2 = .19$, $p < .01$, but not for females, $F(1, 36) = 1.39$, $p > .05$.

Animal abuse. Compared with Study 1 (wherein fewer than 10% of respondents reported having been cruel to animals), animal abuse was more frequent in Study 2 (overall, 30% reported being cruel to an animal to at least some degree). Animal abuse was notably higher in the rural setting (55%) than in the urban setting (6%). As a preliminary analysis, the association of location with witnessing of animal abuse was examined and found to be non-significant, OR = 0.39, $\chi^2(1) = 1.97$, $p > .05$. Therefore, any differences in animal abuse between the locations could not be attributed to this association.

H3, H4, and H7 were tested by regressing the predictors of empathy, gender, and location onto animal abuse and including all two-way and higher order interactions. The basic main-effects logistic-regression model (without interaction effects) as a whole was significant as well as the predictor location (supporting H5), but not affective empathy, cognitive empathy (both H3), gender (H4), or exposure to domestic violence (H6; Table 5). With other predictors held constant, the odds for animal abuse were 22 times higher for the rural location (55%) than for the urban location (6%).[9]

Further exploratory analysis examined the predictors of cruelty against animals per location. In the rural location, exposure to domestic violence (community exposure) was a significant predictor, OR = 28.63, $p < .05$ (supporting H6). With the other predictors held constant, the odds for animal abuse increased by 29 with 1 unit increase in measured domestic violence.

Conclusions and Limitations (Study 2)

The CEDV was previously established as a psychometrically sound measurement instrument in an English population. According to our results, the reliability of this instrument in a sample from a non-English (Romanian) population is good. Animal abuse was associated with location. In particular, children in a rural environment were more likely to abuse animals. Moreover, in the rural environment (but not in the urban environment), reported exposure to domestic violence in the community was a predictor of animal abuse by children. Sample size was relatively small in the second study, with concomitant reduced statistical power. Therefore, the effect of some important predictors on animal abuse may have gone undetected.

Table 5. Tests or Logistic-Regression Model.

Panel A: Basic Main-Effects Model.

	b	SE(b)	p	OR
Location	3.09	0.94	**	21.88
Gender	−0.80	0.83		0.45
Community exposure	1.59	0.84		4.92
BES-affective	−0.57	0.75		0.57
BES-cognitive	−0.27	0.92		0.76

Note. Dependent variable: Cruelty against animals. R_L^2 = .33, $\chi^2(5)$ = 23.98, p < .001.
OR = odds ratio; BES = Basic Empathy Scale.
**p < .01.

Panel B: Basic Main-Effects Model With Additional YSR Predictors.

	b	SE(b)	p	OR
Location	3.06	1.06	**	21.34
Gender	−0.51	0.92		0.60
Community exposure	1.32	0.83		3.73
BES-affective	−0.76	0.90		0.47
BES-cognitive	−0.13	1.02		0.87
Self-harm	−0.13	1.66		0.88
Property destruction	1.63	1.06		5.11

Note. Dependent variable: Cruelty against animals. R_L^2 = .37, $\chi^2(7)$ = 26.59, p < .001.
OR = odds ratio; BES = Basic Empathy Scale; YSR = Youth Self-Report Form.
**p < .01.

Discussion

We first discuss our results regarding our hypotheses in relation to previous research. We then explore the link between animal abuse and other forms of aggression in a society where animal abuse is "socially acceptable." It is important to note that the results from previous research that support our hypotheses (except H5, the role of macro-environment/national culture, which were not tested in previous work) were obtained in environments that were not supportive of animal abuse. A unique contribution of the current research is that we found evidence for the remaining hypotheses even with the influence of culture (H5) held constant. So, for example, despite the role played by national culture, affective empathy remained a significant predictor of animal abuse.

Consistent with previous research, we found support for H1 (women possess a higher level of empathy than men), in particular for affective empathy;

being male has been a consistently demonstrated risk factor for animal abuse, across the developmental spectrum (Arluke & Luke, 1997; Coston & Protz, 1998; Gullone & Clarke, 2008). We also found support for H2 (the difference between men and women is greater for affective empathy than for cognitive empathy), thereby supporting previous research showing differences in affective empathy between males and females (Klein & Hodges, 2001; Lennon & Eisenberg, 1987). Furthermore, our results corroborate H3 (empathy reduces animal abuse), consistent with previous work (McPhedran, 2009; Poresky, 1990; Vidovic et al., 1999). In support of H4 (men are more likely to abuse than women), we found that affective empathy fully mediated the association between gender and animal abuse. In other words, girls are higher in affective empathy; in turn, those who are higher in affective empathy commit less animal abuse. In sum, our results support previous work demonstrating gender as influential in animal abuse (Baldry, 2005; Flynn, 1999a, 1999b; Gullone & Clarke, 2008; Thompson & Gullone, 2006).

In support of H5 (in a society with cultural attitudes and norms that promote animal abuse, more people commit animal abuse), we found national culture to be significant in predicting animal abuse, thereby supporting the role of the macro-environment (Flynn, 1999a, 2012). Abuse legitimization and status devaluation of homeless animals serves to provide encouragement, which can be compounded because of a culture that historically has developed a social acceptance of domestic violence and abandonment. While in societies where such abuse is non-acceptable, abuse is relatively rare and localized, by comparison, in cultures where abuse is extensive and encouraged, a difference is identified in that mirroring abuse has been identified as more likely if the perpetrator has "emotional proximity" to the observer. Because of the scale of abuse in such societies, it could be reasoned that in such environments, societal acceptance is the primary factor. We would reason that "emotional proximity" to domestic abuse propels a national culture of acceptance of animal abuse through "displaced aggression." This provides a basis for H6 (exposure to domestic violence increases animal abuse).

In Study 2, we found evidence in favor of H6 in the rural sample, with domestic violence (community exposure) being significantly associated with animal abuse, supporting previous work (Ascione et al., 2007). Previous research has been conducted in environments where animal abuse was "socially unacceptable." Our research findings are consistent with previous research on abusers exhibiting antisocial aggression patterns against persons and property. For example, in Bistrita, 86.3% of children had seen animal abuse in public places (Making the Link Study, 2014). We found that abuse was 11 times more prevalent in a rural Romanian environment than an urban German society, supporting previous research that has consistently

demonstrated the importance of witnessing aggression in the development of aggressive behavior (e.g., Cummings, 1987; Davies et al., 1999; Margolin & Gordis, 2000; Maughan & Cicchetti, 2002). In 2013, to address the problem of the 3 million homeless animals claimed by the Romanian Government, Law 258/2013 was introduced and legalized the "eradication" of these animals. Media propaganda supported this strategy. Animals would be captured, held in shelters, and "euthanized" after 14 days. Defining the animals as "eradicable" diminished their status. Media support for the "undesirability" of homeless animals contributed to the development of attitudes that aggressive and violent behaviors are acceptable. Whereas it has been found that "emotional proximity" to the abuser increases the learning and replication of the observed behavior (Hensley & Tallichet, 2005; Thompson & Gullone, 2006), it is suggested that because of social acceptance of the abuse, witnessing abuse as a norm in society results in an increased practice of abuse by witnesses (Anderson et al., 2010; Baldry, 2005; Becker, Stuewig, Herrera, & McCloskey, 2004; Currie, 2006; Greeson & Williams, 1986; Gullone & Robertson, 2008; Hansen & Hansen, 1990; Margolin & Gordis, 2000). These findings also provide support for the notion that the socially accepted mistreatment of animals at a societal level can spill over into the increased abuse of animals by individuals (Baron & Straus, 1988; Flynn, 2012).

Allied with such high levels of encouraged aggression against animals in Study 2 were domestic violence (24.9%), being a victim of violence at school (60.1%), and sexual abuse (15%). Domestic violence and sexual abuse have been identified as predictive factors of animal abuse (Baldry, 2003, 2005; Flynn, 2000, 2011; Gullone, 2012b; Hensley & Tallichet, 2005). Zero scores on all items in the CEDV Likert-type scale by some of the participants suggested a reluctance to reveal details of domestic violence. This was corroborated by later discussions with the class teacher who confirmed that some of the children were reluctant to declare being subjected to domestic violence or sexual abuse and, therefore, returned a "nil" response to all items. It follows that instances of abuse were, in reality, likely to be substantially higher. United Nations Children's Emergency Fund (UNICEF) has identified similar levels of abuse and aggression in schools. Many parents in Romania employ corporal punishment. Violence in schools, by both teachers and other children, is high by world standards, and schools are also the scene of sexual abuse and drugs (UNICEF, 2014).

In the Eurobarometer (European Commission, 2010) poll on violence against women, 39% of Romanian respondents said that they thought domestic violence in their country was *very common*, 45% *fairly common*, 8% *not very common*, 0% *not at all common*, and 8% *did not know*/did not answer. Victim-blaming attitudes are common in Romania. In a 2013 Romanian

survey, 30.9% of respondents agreed with the assertion that "women are sometimes beaten due to their own fault" (INSCOP, 2013). In the 2010 Eurobarometer survey, 58% of Romanians agreed that the "provocative behavior of women" was a cause of violence against women. It was found that in Bistrita, 86.3% of the children had witnessed animal abuse in public (Gullone & Plant, 2014). Such abuse has been identified as poisoning, trapping, mutilating, and killing homeless animals. This provides a direct contrast to Western societies, where a poll found that 92% of dog owners considered their pets to be "members of the family" (Harris Poll, 2011). A survey of psychologists who practice as therapists in the United States indicated that the overwhelming majority (87%) considered animal abuse to be a mental-health issue (Schaefer, Hays, & Steiner, 2007), and this abuse is included as a diagnostic criterion of Conduct Disorder and Antisocial Personality Disorder.

The link between animal abuse and other forms of aggression would invite recognition that a distinction between "social acceptability" and "non-acceptability" has serious implications for society. Longitudinal studies would allow insight into the development of associated antisocial patterns alongside domestic violence and government-determined aggression encouragement as animal management strategies.

Cultural change is being proposed by a number of bodies calling for a "top-down" solution. Consequently, they have invited the European Commission to enact EU Laws to invite intervention. But to achieve cultural change, a "bottom-up" solution is also invited by introducing education programs, which—along with animal awareness programs (e.g., neutering as opposed to abandonment, registration as opposed to anonymity)—would also include programs to enhance affective empathy. The neutering program is currently being explored, and measured results will be presented.

Conclusion

Processes involved in the development of aggressive behaviors, most particularly the development of cognitive structures such as normative beliefs and aggressive scripts (Huesmann & Guerra, 1997), through exposure to antisocial behaviors, also need be addressed at a broader, community, and societal level. Pivotal roles for aggression learning are played by witnessing cruelty, exposure to aggressive models, and media violence. On the basis of the current research, it is reasonable to conclude that legalized aggression has an influence on young people's development of relevant cognitive structures, and consequent aggressive behaviors. This would particularly be the case for individuals with a vulnerable disposition (e.g., a temperament characterized

by callous-unemotional traits) toward the development of such behaviors, or those within a vulnerable environment, "risky" family, or culture that accepts cruelty against animals as normative.

The current study has demonstrated substantially more diversity in animal abuse than previous research has been able to study. We found that national culture is a major factor responsible for this diversity. Specifically, the current findings support the proposal that whereas in cultures where animal abuse is relatively rare, a focus upon the "at-risk" family is justified, in cultures where animal abuse is passively legitimized and witnessing of such is common, normative beliefs are formed accordingly. This introduces two considerations in that the domain of abuse has re-dimensionalized from a domestic to a social environment. The impact of "emotional proximity" or the influence of abuse by family members on attitudes to abuse is perhaps minimized when abuse is witnessed significantly throughout society—as a societal norm. Similarly, abuse by negligence is not perceived as such by a society whose norms have been accepting of such conditions. This includes, for example, animals left outside in extreme temperature conditions on 1-m chains. It follows that if such cultures embrace a culture of compassion toward our non-human citizens, current and future generations will benefit through reduced antisocial and violent behavior toward all sentient beings.

Evidence suggests that social practices are primarily controlled by sociopolitical factions. Communism brought a "reward" system through a work ethos and, as is evident in Romania, those who could not contribute were "abandoned." The elderly have institutions, those with mental and physical infirmities are called "varsa" weeds and are institutionalized. Similarly, unwanted children are abandoned from the home. As political transition occurs, government policies supported by a government-biased media determine popular culture. Significant profiteering occurs. A law that categorizes homeless animals as eradicable creates a socially diminished subgroup and provides an "aggression enhancement" facility.

Our findings support the proposal that in societies where animal abuse is significantly more evident than in Western societies, a re-dimensioned appraisal of "at risk" may be at work. Whereas previous findings have identified "at-risk" individuals and families, the prevalence of domestic violence, sexual abuse, and endemic animal abuse is suggestive of an "at-risk" society. Significant abuse has been identified within the home. Learned and acquired aggression is enacted against the socially stigmatized and devalued stray animal population. Witnessing of uncontrolled gratuitous violence promotes social acceptability, even desirability. Aggression is also enacted against persons and property and carries a high likelihood to be enacted domestically when the individual later has their own family. A societal cycle of abuse is

evident. Within this cycle, domestic violence is the less transparent link and, therefore, more challenging to address. A humane animal control program would progressively remove the availability of the animals as an aggression practice facility and change normative beliefs.

In conclusion, what is most apparent from the current article and previous research is that the risk factors, not surprisingly, for animal cruelty are not different from those for other aggressive and antisocial behaviors. What is also clear is that the co-occurrence of animal cruelty with other antisocial and aggressive behaviors is a cause for significant concern in a number of regards. When a child or adolescent is found to have abused an animal, one need to ask oneself, not only what other aggressive behaviors might this individual be engaged in, but also what is happening in this individual's life? Are they a victim of child abuse, are they living in circumstances of domestic violence, and/or what is the aggression or violence that they may have witnessed?

Animal cruelty has also been identified as one of the earliest indicators of what are referred to as externalizing disorders, including conduct disorder, and a predictor of the development of aggression along a more severe trajectory (Frick et al., 1993; Luk, Staiger, Wong, & Mathai, 1999). Therefore, striving for its early identification should be of significant priority, and as such would provide a potentially most effective opportunity for engaging preventive strategies.

Moreover, it must be acknowledged that in a society that has historically been accepting of abusive and cruel practices, addressing them requires cultural change. Such strategies to effect this are readily identified as removing the "aggression enhancement" facility by humanely removing the animals from the streets in adopting a national neuter-and-return program as advocated by the World Health Organization (1990) and the World Organisation for Animal Health (OIE; 2015), of which Romania is a member. Education programs providing factual animal management strategies would include "empathy enhancement" elements to address the identified reduced levels in affective empathy. Unless addressed, the potential implications are significant, of a *scale* and *effect* hitherto unseen, permeating a whole society and, indeed, a whole nation. In the chains of abuse, there are many links; remove one, and the chain is broken. By humanely removing the more visible "link" of legally endorsed aggressive catching and disposal processes, availability of the aggression enhancement facility is progressively removed, thereby breaking the cycle.

Declaration of Conflicting Interests

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Notes

1. We use the term "national culture" in Hofstede's sense of a set of stable common values that guide human behavior that is manifest in society at present.
2. In the analysis, the two samples were combined, because each of the samples separately was deemed to have insufficient sample size.
3. Although the sample size was considerably smaller for the two samples (Berlin and Bistrita), separate analyses were conducted to verify the factor solution per sample. The pattern of factor loadings reproduced well for Berlin and had good reliability (with α = .81/.78 for affective/cognitive empathy), but for Bistrita, there were some cross-loadings (for Items 5, 17, and 18) on affective empathy (with good/acceptable reliability: α = .74/.66 for affective/cognitive empathy).
4. Principal components analysis (PCA) of the Youth Self-Report Form (YSR) did not reproduce any known factor solution. However, individual YSR items were subsequently analyzed for their correlation with animal abuse.
5. In logistic-regression analysis with national culture replaced by witness of animal abuse as a predictor, the latter was significant. When both predictors were entered, neither was significant. These results provide further support for our decision to analyze national culture, instead of witness of animal abuse, as a more comprehensive indicator of social environment in relation to the promotion of animal abuse.
6. Subsequent logistic-regression analysis was conducted to demonstrate the specificity of the predictors. For this purpose, animal abuse was replaced with witness of animal abuse. In this analysis, none of the predictors of national culture, sex, age, affective empathy, and cognitive empathy were significant. Together with the results for animal abuse, these results for witnessing animal abuse demonstrate the specificity of the predictors.
7. With Item BES1 removed.
8. The effect of location and the interaction effects were not significant.
9. When tested in blocks by order, none of the higher order interactions were significant. The correlation between perpetrating cruelty against animals and witnessing cruelty against animals was not significant, phi $= -.01$, $p \gg .05$.

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