

Original Article

The Effect of Social Category on Third Party Punishment

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Abstract: Motivations to punish should depend on a number of factors including the nature of the interaction (e.g., collective action versus dyadic exchange) and the social category of the interactants. Here we focus on social category and investigate whether the relationship to a perpetrator and, separately, a victim of a moral transgression affects the magnitude of third party punishment, moral judgment, attribution, and emotional response. Participants read scenarios describing a moral violation in which the perpetrator (Experiment 1) or victim (Experiment 2) of an offense was described as kin, a schoolmate, or a foreigner. Penalties and attributions of remorse varied according to the social category of the perpetrator as well as the victim. However, moral judgments did not. In a third experiment, which also varied the relationship to the victim of a moral transgression, participants reported their willingness to expend time and energy to bring a perpetrator to justice as well as their emotional responses to the crime. As predicted, participants reported a greater willingness to sacrifice their weekends and a day's pay to search for a perpetrator victimizing kin followed by a schoolmate and then foreign visitor. These and other results including emotional reactions are discussed in the context of motivations to punish third party violators of a social norm.

Keywords: third party punishment, social category, kinship

Introduction

For humans, as for other species, the behavior of others can have a significant impact on one's reproductive success, either directly or indirectly through one's kin, social exchange partners, friends, mates, or coalitional allies. For example, one can be cheated in a social exchange, a family member can be the target of physical violence, a mate can commit adultery, or a group member can defect during a collective action. All else equal, design features that cost-effectively motivated the expenditure of energy to deter behaviors imposing a cost on oneself or on members of one's social network would have out-

competed design features that were insensitive to others' actions and associated fitness consequences (e.g., see Levine and Kurzban, 2006). For this reason, natural selection is hypothesized to have engineered psychological adaptations that (i) assess the costs of others' behaviors on oneself as well as members of one's social network and (ii) use this information to regulate desires and motivations to punish, that is, desires and motivations to impose a cost on another individual. Indeed, evidence from studies in humans (e.g., Bernhard, Fischbacher, and Fehr, 2006; Carpenter and Matthews, 2005; Fehr and Gächter, 2002; Houser and Kurzban, 2002; Shinada, Yamagishi, and Ohmura, 2004) and non-human species (e.g., Clutton-Brock, Price, and MacColl, 1992; de Waal, 1982; Hauser, 1992; Manson, 1994; Nadler and Miller, 1982; Smuts and Smuts, 1983) indicate that individuals engage in punitive behavior in response to a range of behaviors (e.g., the withholding of resources and sexual avoidance).

The costs associated with a particular behavior will likely vary on a number of factors including the social identity of the persons involved in the interaction and whether the behavior takes place, for example, in a group context or not. Thus, motivations to punish should be sensitive to (at least) these two factors. With respect to the persons involved in the social interaction, motivations to punish should differ depending on whether the individual incurring the cost of a particular behavior (e.g., a norm violation) is oneself or not. That is, it should matter whether one is a second versus third party. Indeed, researchers investigating the effects of punishment on cooperation have found that while individuals are willing to incur a cost to punish a free-rider or norm violator, (e.g., Fehr and Gächter, 2000, 2002; O'Gorman, Wilson, and Miller, 2005; Ostrom, Walker and Gardner, 1992), greater magnitudes of punishment are levied against individuals violating a norm targeting oneself or one's group compared to other individuals/groups (e.g., Carpenter and Matthews, 2005; Fehr and Fischbacher, 2004). Nevertheless, individuals do punish third party norm violators and recent research has started to uncover the conditions under which this occurs (e.g., see Bernhard, Fischbacher, and Fehr, 2006; Carpenter and Matthews, 2005; Fehr and Fischbacher, 2004; Kurzban, DeScioli, and O'Brien, 2007). However, one dimension that has yet to be fully explored is the *third* party punisher's relationship to the individuals involved in a norm violation (but see Bernhard et al., 2006).

Social categories and decisions to punish

To the extent that the social category of interactants influences the costs (or benefits) transferred to members of one's social network, it should also influence desires and motivations to punish. That is, different categories of social agents might impose different magnitudes of costs for a given action (e.g., cheating in a social exchange) leading to varied emotional reactions and motivations to punish. Two social categories hypothesized to influence the magnitude of assessed costs and thus desires to punish are kinship (Clutton-Brock and Parker, 1995) and group membership (Pratto, Sidanius, Stallworth, and Malle, 1994; Sidanius, Pratto, and Mitchell, 1994). Each dimension is discussed in turn.

Kinship. According to kin selection theory (Hamilton, 1963, 1964), genetic relatedness regulates patterns of altruistic and competitive effort. The categorization of another as kin increases motivations to act altruistically (Burnstein, Crandall, and Kitayama, 1994; Korchmaros and Kenny, 2001; Kruger, 2003; Lieberman, Tooby and Cosmides, 2007; Peters, Ünür, Clark, and Schulze, 2004) and decreases motivations to

inflict costs (Daly and Wilson, 1988; Petrinovich, O'Neill, and Jorgensen, 1993). Given that kinship tempers motivations to impose costs, it should affect decisions to punish. For example, when one's kin have committed a moral violation either in an interaction with oneself or a third party, desires and motivations to punish (or to have them punished; see Robinson and Kurzban [2006] for a discussion of the distinction between desires that people be punished and motivations to punish) will be muted compared to when the violation is committed by non-kin. Similarly, when a kin member is the victim of a moral violation, the perceived costs inflicted by the offender will be greater than if the victim is non-kin, leading to greater desires and motivations to punish the offender.

In a recent paper, O'Gorman, Wilson, and Miller (2005) found that individuals assigned equivalent levels of punishment to a cousin, friend, and stranger who stole from a group account. However, they did find that altruistic motivations differed depending on whether the target of assistance was a cousin or stranger with greater levels of sympathy and willingness to help reported for cousins compared to strangers. Though individuals punished kin to a similar extent as other social categories, this might be particular to the context of a public goods scenario which might activate a different psychology compared to non-collective interactions. Furthermore, in the O'Gorman et al. study, participants engaged in second party punishment since they themselves were victimized by cheaters. Thus, it is an open question as to whether third party punishers would punish kin differently than non-kin.

Group membership. Group/coalition membership is another social dimension that should affect the size of the cost imposed on oneself or one's social network thus influencing the desire to punishment. Humans possess cognitive adaptations to categorize individuals in the social world according to coalition or group membership (Kurzban, Tooby, and Cosmides, 2001) and such categorization has been found to occur with minimal prompting (Rabbie and Horwitz, 1969; Tajfel, Billig, Bundy, and Flament, 1971). Social identity theory (Tajfel and Turner, 1986) and social dominance theory (Pratto et al., 1994) predict that individuals will favor in-group members over out-group members (e.g., Brewer, 1979; Schopler and Insko, 1992; Sidanius, Pratto, and Mitchell, 1994). This is consistent with evolutionary analyses which suggest that, all else equal, the welfare of an out-group member will be less valued than the welfare of an in-group member (e.g., Alexander, 1987). Under ancestral conditions, in-group members represented opportunities for exchange, friendship, mating, and coalitional alliance, affordances out-group members were less likely to share (Kurzban and Leary, 2001). For these reasons, individuals might be more sensitive to the costs imposed on in-group members compared to out-group members and, as a result, be more likely to assign greater magnitudes of punishment to perpetrators when they are not a member of one's group (Pratto et al., 1994; Sommers and Ellsworth, 2001). Likewise, given that costs suffered by an in-group member can affect the strength of one's social network, a perpetrator victimizing an in-group member is hypothesized to incite greater punishment compared to when the victim is an out-group member (e.g., see Bernhard et al., 2006).

Current investigation: experimental design and predictions

Our goal in this paper is to initiate a line of research to investigate the effects of social category on third party punishment, attributions, and emotional reactions. We report data from three studies that considered a particular kind of social transgression, stealing, to

see whether our hypotheses were supported. This research adds to the existing literature showing that social category (e.g., kinship and group membership) plays a role in motivations to punish third party norm violators (e.g., Bernhard et al., 2006).

To investigate whether social category influences the magnitude of punishment deemed appropriate for an offense we developed fictional scenarios, a technique employed by others to investigate the effects of social category on punishment (O’Gorman, Wilson, and Miller, 2005). Experiment 1 investigates the magnitude of punishment and attributions assigned to offenders of different social categories while Experiment 2 investigates the magnitude of punishment and attributions assigned to the offender as a function of victim social category. The social categories used were kin and schoolmates (in-group members), and foreign visitors (out-group members). In Experiments 1 and 2, participants assigned levels of punishment without being asked to consider how much they were willing to give up to do so. For this reason, Experiment 3 was designed to investigate whether the social category of the victim influenced motivations to expend time and energy to bring the offender to justice. Experiment 3 also reports the emotional responses of participants according to the social category of the victim and how emotional responses relate to punishment magnitude. Specifically, we made the following predictions:

- P1: Punishment magnitude assigned to the perpetrator of an offense (a) will be lowest when the *perpetrator of the offense* is described as kin followed by a schoolmate and then a foreigner (Experiment 1) and (b) will be greatest when the *victim of the offense* is one’s kin followed by a schoolmate, and then a foreigner (Experiment 2).
- P2: In addition to punishment magnitude, we investigated whether attributions of remorse differed according to perpetrator and victim social category. Given that individuals are biased to direct more favorable attributions toward members of their in-group (Brewer and Brown, 1998; Pettigrew, 1979; Sommers and Ellsworth, 2001), we predicted individuals would attribute the lowest level of remorse to a perpetrator described as an out-group member followed by a schoolmate and then kin (Experiment 1). Similarly, we predicted individuals would attribute the lowest level of remorse to a perpetrator who victimized kin followed by a schoolmate and then foreigner (Experiment 2).
- P3: In addition to desires that perpetrators receive different levels of punishment according to victim social category, we predicted that participants would be more willing to expend time and energy to punish a perpetrator when the victim is described as kin followed by a schoolmate and then a foreign visitor (Experiment 3).
- P4: Last, we investigated whether the intensity of moral emotions varied according to victim social category. Anger is a moral emotion associated with (a non-self perpetrated) injustice (Baumeister, Stillwell, and Wotman, 1990; Haidt, 2003; Rozin, Lowery, Imada, and Haidt, 1999) and with enhanced levels of punishment (Averill, 1983; Lerner, Goldberg, and Tetlock, 1998). If the category of social interactants affects one’s perception of injustice and motivations to punish, then the magnitude of anger and other related emotions should track social category. Thus, greater levels of anger should result when kin are victimized compared to non-kin and when in-group members are victimized compared to out-group members. Furthermore, levels of anger should be correlated with motivations to bring the perpetrator to justice (Experiment 3).

Experiment 1: Punishment and judgments according to perpetrator social category

Materials and Methods

Participants were 268 undergraduate students (174 females; 94 males; age range: 18-59; $M \pm SD$: 21.16 ± 4.04) at the University of Hawaii who participated in this research for class credit. Participants were asked to read a scenario involving the theft of \$1500. The social category of the offender was varied across participants such that each participant read a scenario in which the offender was the participant's family member, a schoolmate, or a foreign visitor. The scenario read as follows:

“One evening, while at dinner at an expensive local restaurant, a family member [a schoolmate, a foreign visitor] watches as a large party of about 20 people leaves cash on their table for the check and then exits the restaurant. Before the server goes to the table to collect the money, your family member [your schoolmate, the foreigner] walks past the table, secretly takes the \$1500 left for the bill, and leaves through the front door without anyone witnessing what they have done. Your family member [Your schoolmate, The foreign visitor] is now \$1500 richer and no one saw a thing.”

After reading the scenario, participants were asked to complete a short survey which included questions about appropriate punishments that best fit the offense (e.g., fines and jail times; see below), the moral wrongness of the offense on a 7 point Likert scale (0: not morally wrong at all; 6: extremely morally wrong), and how remorseful the offender would feel after committing the act on a 7-point Likert scale (0: no remorse at all; 6: very remorseful). Two dependent variables, fine and jail time, were created based on responses to the questions regarding punishment:

Fine: “Let’s say your family member’s [your schoolmate’s, the foreign visitor’s] punishment is to pay back the money they took (\$1500) and pay an additional fine. What additional fine best fits this act?” Participants were asked to choose from eight categories of fines ranging from \$50 to \$3000 (\$50, \$100, \$500, \$1000, \$1500, \$2000, \$2500, \$3000; descriptive statistics: categorical fine: range 1-8, $M \pm SD$: 3.17 ± 1.89 ; absolute fine: range: \$50-\$3000, $M \pm SD$: $\$736.18 \pm \794.65).

Jail time: “Let’s say your family member’s [your schoolmate’s, the foreign visitor’s] punishment is to pay back the money and serve some jail time. How much jail time should they have to serve?” Participants were asked to choose from eight categories of jail sentences ranging from one month to ten years (1mth, 6 months, 1yr, 2yrs, 4yrs, 6yrs, 8yrs, or 10yrs). Across all conditions, only nine participants (1.8%) chose 4yrs or longer. Thus, a new variable was created yielding four categories for data analyses (1mth, 6 months, 1yr, and 2yrs or more; descriptive statistics: categorical jail time: range 1-4, $M \pm SD$: $1.35 \pm .76$; absolute fine: range: 1-48 months, $M \pm SD$: $2.93 \text{ months} \pm 4.95 \text{ months}$).

Data analyses

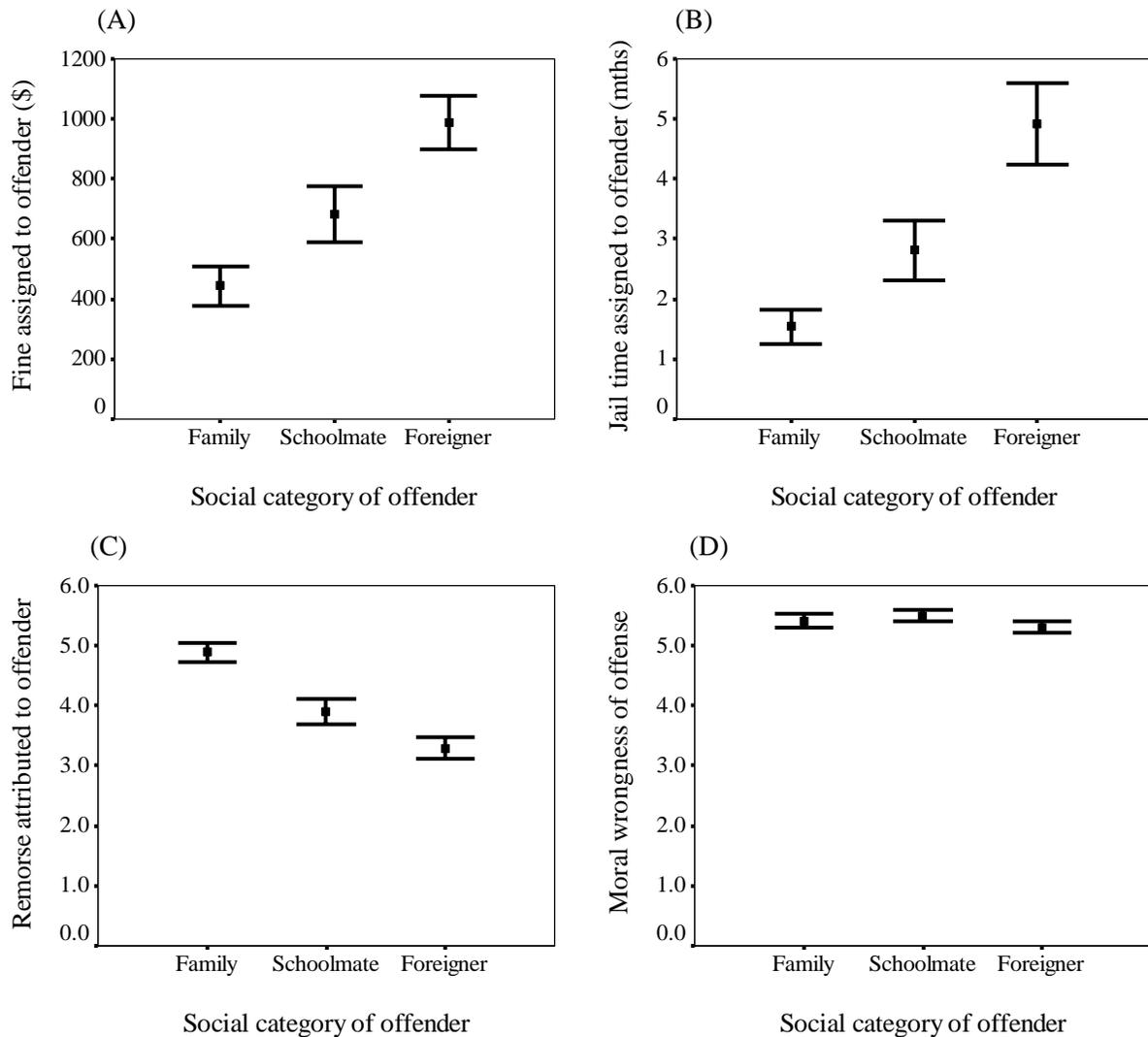
A predictor variable with the following values was created to index perpetrator social category: “1” = family member, “2” = schoolmate, “3” = foreign visitor. All analyses use the more conservative categorical dependent measures, not the actual fine (\$) or jail time (months). However, analyses yield similar outcomes when actual dependent measures are used. Actual fine and jail time are depicted in figures. Directed univariate and multivariate analyses were performed (Rice and Gaines, 1994). All comparisons report the

Cohen's *d* measure of effect size.

Results

Our main results are presented in Figure 1. As predicted, increased social distance led to increased levels of punishment (Figure 1A, B). Multivariate analyses were conducted entering fine and jail time as dependent variables and sex as a covariate. Analyses showed a significant effect of social category for both fine ($F_{2,262} = 7.11, P < .001$) and jail time

Figure 1: Punishment, attribution and moral judgment according to offender social category



($F_{2,262} = 5.58, P = .003$). No effect for sex was found nor was there a significant interaction between sex and social category (F 's < 1).

Planned comparisons indicated that participants assigned a greater fine and jail time when the offender was a foreigner compared to when the offender was either a schoolmate (fine: $t_{172} = 2.43, P = .008, d = .37$; jail time: $t_{175} = 2.56, P = .005, d = .39$) or a family

member (fine: $t_{181} = 5.17$, $P < .001$, $d = .77$; jail time: $t_{132} = 5.14$, $P < .001$, $d = .89$). In addition, participants assigned a greater fine and jail time when the offender was a schoolmate compared to when the offender was a family member (fine: $t_{151} = 2.32$, $P = .01$, $d = .38$; jail time: $t_{122} = 2.56$, $P = .006$, $d = .46$; see Figure 1A [family: ($M \pm S.D.$) 443.26 ± 603.88 , $n = 89$; schoolmate: 683.75 ± 835.40 , $n = 80$; foreigner: 988.38 ± 896.39 , $n = 99$] and Figure 1B [jail time: family: 1.54 ± 2.67 ; schoolmate: 2.81 ± 4.43 ; foreigner: 4.92 ± 6.81]).

Though we found differences in punishment magnitude, participants reported the same level of moral wrongness across perpetrator social category (Figure 1D; ($M \pm S.D.$): family: 5.42 ± 1.03 ; schoolmate: $5.50 \pm .84$; foreigner: $5.30 \pm .97$).

Univariate analyses indicated a significant effect for social category on attributions of remorse, $F_{2,260} = 14.33$, $P < .001$ (Figure 1C). No effect for sex or any interaction between sex and social category was found. Planned contrasts showed significant differences between each third party pair with participants attributing greater feelings of remorse to family members that committed an offense ($M \pm S.D.$: 4.89 ± 1.41) followed by schoolmates (3.90 ± 1.89), and then foreigners (3.29 ± 1.84 ; kin-schoolmate: $t_{145} = 3.67$, $P < .001$, $d = .61$; kin-foreigner: $t_{181} = 6.59$, $P < .001$, $d = .98$; schoolmate-foreigner: $t_{166} = 2.25$, $P = .013$, $d = .35$).

Discussion

Results from Experiment 1 indicate that the social category of the perpetrator of an offense affects the magnitude of punishment deemed appropriate with kin receiving the least punishment and out-group members receiving the greatest punishment. While attributions of remorse followed the predicted pattern, moral judgments did not. That is, regardless of the perpetrator's social category, participants viewed the transgression as very morally wrong. From these data, it seems that participants do not base their levels of punishment on their (reported) moral judgments (indeed, moral ratings were not correlated with jail time and only weakly correlated with fine: $r = .14$). However, given that ratings of morality were uniformly at ceiling, it is possible that either participants used more objective standards to evaluate moral wrongness or our measure did not capture actual variation in moral sentiments leaving open the possibility that a positive relationship exists between sentiments of moral wrongness and punishment magnitude.

To provide converging lines of evidence that social category influences decisions to punish outside a collective interaction, we developed a second experiment manipulating the social category of the victim of an offense. Again, we predicted different reactions based on whether the victim was described as kin, a schoolmate or a foreigner with the strongest punitive reactions when the victim was kin. Consistent with results from an experiment employing methods from experimental economics (Bernhard et al., 2006), we also predicted that the perpetrator of an offense would receive the greatest punishment when the victim was described as kin followed by a schoolmate (in-group members) and then a foreigner (an out-group member).

Experiment 2: Punishment and judgments according to victim social category

Materials and Methods

Participants were 288 undergraduate students (188 females; 100 males; age: 18-59: Mean \pm S.D. = 21.22 \pm 4.52) at the University of Hawaii who participated in this research for class credit. Participants were asked to read a scenario involving a burglary in which \$1500 of property was stolen. In this experiment, the social category of the *victim* of this crime was varied between participants and was described as the participant's family member, a schoolmate, or a foreign visitor. The scenario read as follows:

“Imagine that one evening a burglar broke into your family member’s [a classmate’s, a foreign visitor’s] home while they were asleep and stole some expensive property including electronics and jewelry that was estimated to be worth \$1500.”

After reading the scenario, participants were asked to complete a short survey similar to Experiment 1, which included questions about appropriate punishments for the act described (e.g., fines and jail times that best fit the offense). Two dependent variables, fine and jail time, were created based on responses to the following questions:

Fine: “Let’s say the burglar’s punishment is to return the items stolen and pay an additional fine. What additional fine best fits this act?” Participants were asked to choose from potential fines ranging from \$50 to \$3000 (response categories were the same as reported in Experiment 1; descriptive statistics: fine (categorical): range 1-8, $M \pm SD$: 4.84 \pm 2.06; fine (actual): range: \$50-\$3000, $M \pm SD$: \$1446.76 \pm \$992.40).

Jail time: “Let’s say the burglar’s punishment is to return the items stolen and serve some jail time. How much jail time fits this crime?” Participants were asked to choose from eight categories of jail times ranging from one month to 10 years (response categories and variable manipulations were the same as reported in Experiment 1; descriptive statistics: jail time (categorical): range 1-4, $M \pm SD$: 2.61 \pm 1.06; jail time (actual): range: 1-48 months, $M \pm SD$: 11.47 months \pm 8.45 months). Data analyses are the same as reported for Experiment 1.

Results

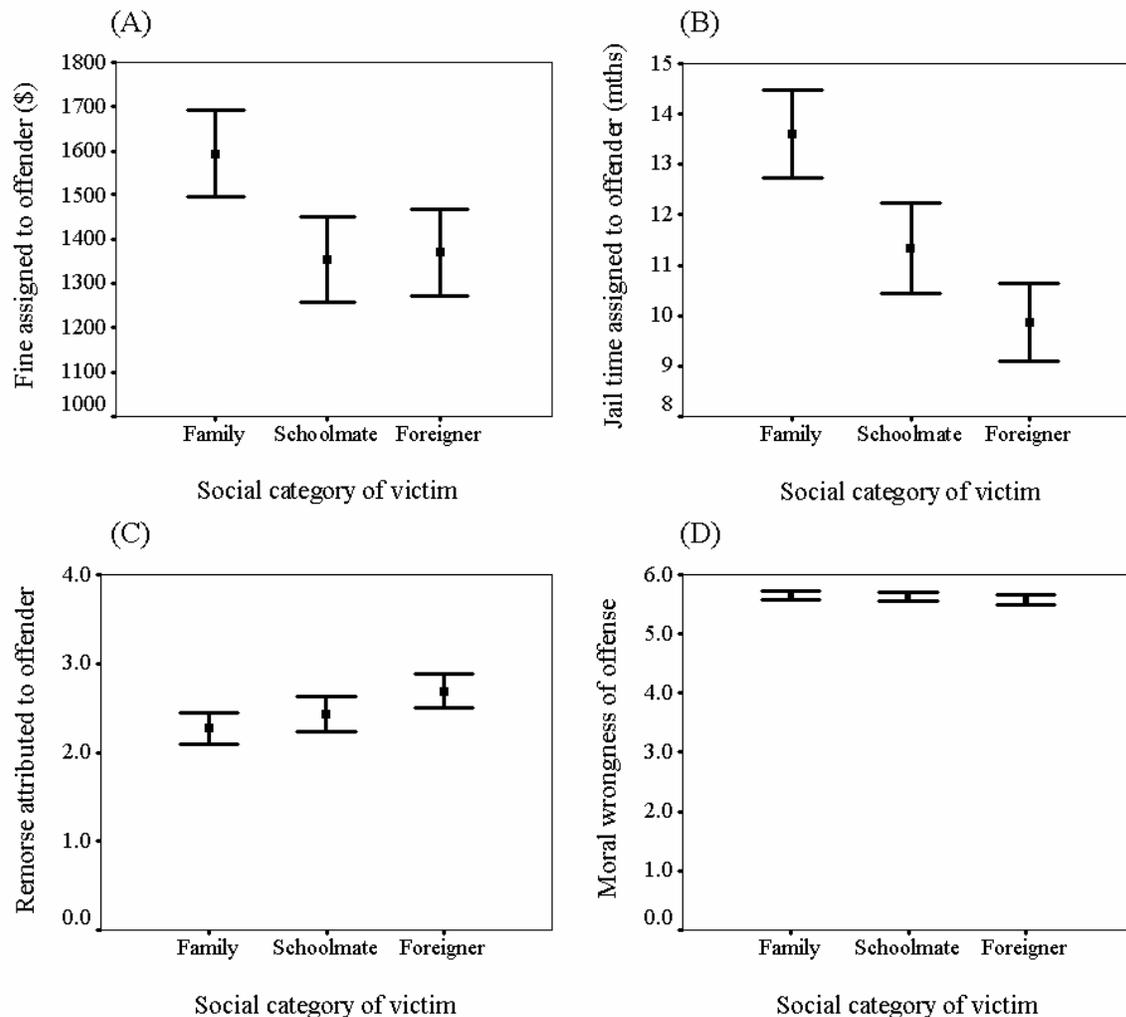
Similar to Experiment 1, social category affects decisions regarding punishment magnitude, especially decisions regarding kin versus non-kin (see Figure 2). Directed multivariate analyses yielded a significant effect of social category on jail time ($F_{2,284} = 4.81$, $P = .006$) but not fine ($P = .11$; Figure 2 shows actual, not categorical fines and jail times; see Methods). Similar to Experiment 1, there was no effect for subject sex or interaction between social category and sex.

Planned comparisons indicated participants reported greater punishments fit the offense when the victim was kin compared to when the victim was a schoolmate (fine: $t_{284} = 1.62$, $P = .05$, $d = .19$; jail time: $t_{284} = 1.98$, $P = .025$, $d = .23$) and when the victim was a foreign visitor (fine: $t_{284} = 1.62$, $P = .05$, $d = .19$; jail time: $t_{284} = 3.06$, $P = .001$, $d = .36$; see Figure 2A [family: 1594.39 \pm 985.43, $n = 98$; schoolmate: 1354.40 \pm 918.26, $n = 91$; foreigner: 1370.71 \pm 981.23, $n = 99$] and Figure 2B [family: 13.60 \pm 8.67; schoolmate: 11.34 \pm 8.42; foreigner: 9.86 \pm 7.77]). No significant difference was found between the punishments assigned when the victim was a schoolmate or a foreign visitor.

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In this Experiment there was also no effect of social category on how morally wrong the offense was perceived to be; the mean moral wrongness was ~5.6 out of 6.0 across all social categories of victims (Figure 2D).

Figure 2: Punishment assigned to burglar as a function of social category of victim.



Unlike Experiment 1, there was not a significant effect of social category on attributions of remorse though responses did follow the expected pattern. Nevertheless, planned contrasts did show a significant difference in the attributions reported for kin (2.27 ± 1.73) compared to foreigners (2.71 ± 1.93 ; $t_{285} = 1.73$, $P = .042$; see Figure 2C; schoolmate: 2.42 ± 1.96).

Discussion

Data from Experiment 2 provide additional evidence that social category influences the level of punishment deemed appropriate for a norm violation. Though punishment magnitude for the perpetrator varied according to victim social category, moral judgments

did not, replicating the pattern found in Experiment 1. Attributions, while they were in the predicted direction, did not yield a significant main effect unlike in Experiment 1.

One limitation of Experiments 1 and 2 is that participants did not have to think about trade-offs when punishing the perpetrator. For this reason, we designed Experiment 3 to investigate how willing participants would be to devote time and energy to bring a perpetrator to justice as a function of victim social category. We also investigated whether emotional response to the offense varied as a function of victim social category. If emotions play a role in motivating punitive behaviors (e.g., Averill, 1983; Haidt, 2003; Lerner, Goldberg, and Tetlock, 1998; O’Gorman, Wilson, and Miller, 2005; Rozin et al., 1999), then emotional intensity should correlate with punishment magnitude and more intense negative emotions should be reported for victims described, for example, as kin versus non-kin and in-group versus out-group members.

Experiment 3: The effect of victim social category on emotional reactions and willingness to expend time and energy to bring an offender to justice

Materials and Methods

Participants were 78 undergraduate psychology students (52 females; 26 males; age: 19-46; Mean \pm S.D.: 22.81 \pm 5.05) at the University of Hawaii who participated in this research for class credit. Participants were asked to read a scenario involving a burglary in which \$3000 of property was stolen. The *victim* of the crime was varied between participants and was described as the participant’s family member, a schoolmate, or a foreign visitor. The scenario read as follows:

“Imagine that one evening a burglar broke into your family member’s [a classmate’s, a foreign visitor’s] home while they were asleep and stole some expensive property including electronics and jewelry that was estimated to be worth \$3000.”

After reading the scenario, participants were asked to complete a short survey which included questions about the participant’s emotional reactions to the offense. Participants were provided with a list of emotion terms and asked to indicate how much they felt each one on a 7-point Likert scale ranging from 1 (do not feel this at all) to 7 (feel this intensely). The emotion terms included angry, disgusted, indifferent, and vengeful. In addition, participants were asked to indicate how many days they would be willing to take off work and forfeit pay to search for the burglar and, separately, how willing they would be to devote their weekends for three months to finding the burglar. These questions were designed to assess how willing participants would be to incur a cost to bring the burglar to justice. Two dependent variables, no pay and weekends, were created based on responses to the following questions:

No pay: “If it meant not getting paid from work, how many days would you be willing to take off from work to help find the burglar?” This variable consists of the number of days participants wrote in (Mean \pm S.D.: 4.99 \pm 14.62; Range: 0-120). Approximately 80% of participants earned income from a job (daily pay: \$0-\$150; $M \pm S.D.$: \$45.37 \pm \$35.94). Daily income did not correlate with the constructed variable.

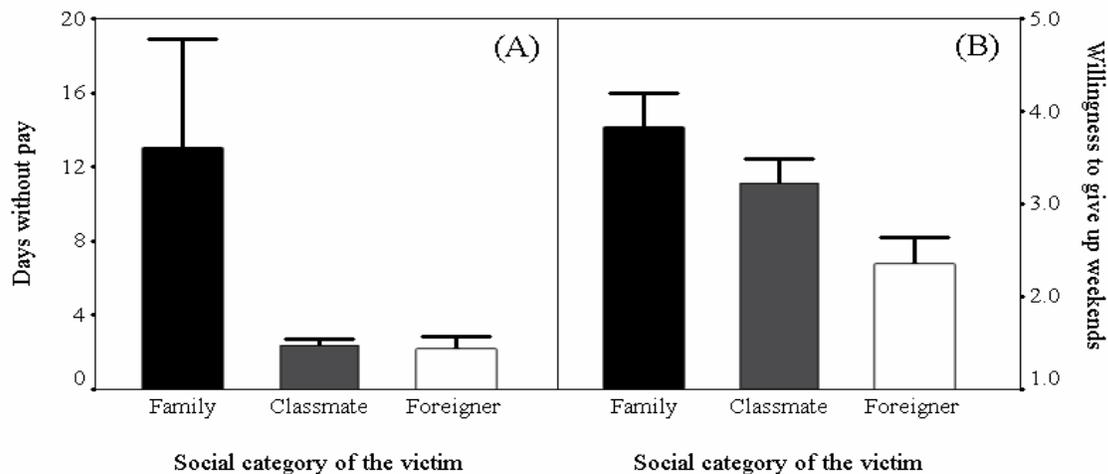
Weekends: “How willing would you be to give up weekends for the next 3 months to search for the burglar?” Participants responded on a 7-point Likert scale ranging from 1 (not willing at all) to 7 (extremely willing) ($M \pm S.D.$: 3.12 \pm 1.76).

The predictor variable of social category is the same as reported above. Kinship analyses compared the family condition (kin) with the schoolmate and foreigner conditions (non-kin); group membership analyses compared the family and schoolmate conditions (in-group) with the foreigner condition (out-group). All other analyses are similar to those described in the previous two experiments.

Results

Consistent with the results found in Experiment 2, victim social category affects the reported willingness to sacrifice time and money to bring a perpetrator to justice. Multivariate analyses indicated a main effect for social category for both days without pay and willingness to give up weekends (no pay: $F_{2,74} = 4.34, P = .016$; weekends: $F_{2,74} = 3.46, P = .037$; see Figure 3). Planned comparisons revealed a significant difference in the willingness to take off days from work with no pay to search for a burglar who had victimized kin (12.85 ± 26.98) versus a schoolmate ($2.24 \pm 2.89; t_{19} = 1.75, P = .047$) and kin versus a foreign visitor ($2.10 \pm 3.39; t_{20} = 1.77, P = .046$). No difference was found between the schoolmate and foreigner conditions. Planned comparisons also indicated participants were more willing to give up weekends to search for a burglar that victimized kin (3.80 ± 1.76) or a schoolmate (3.11 ± 1.77) compared to a foreign visitor (2.43 ± 1.36 ; kin- foreign visitor: $t_{76} = 2.76, P = .003$; schoolmate-foreign visitor: $t_{76} = 1.82, P = .036$; Figure 3). There was not a significant difference between kin and schoolmate condition for this measure.

Figure 3: Willingness to forfeit pay and invest time to bring a burglar to justice as a function of victim social category.

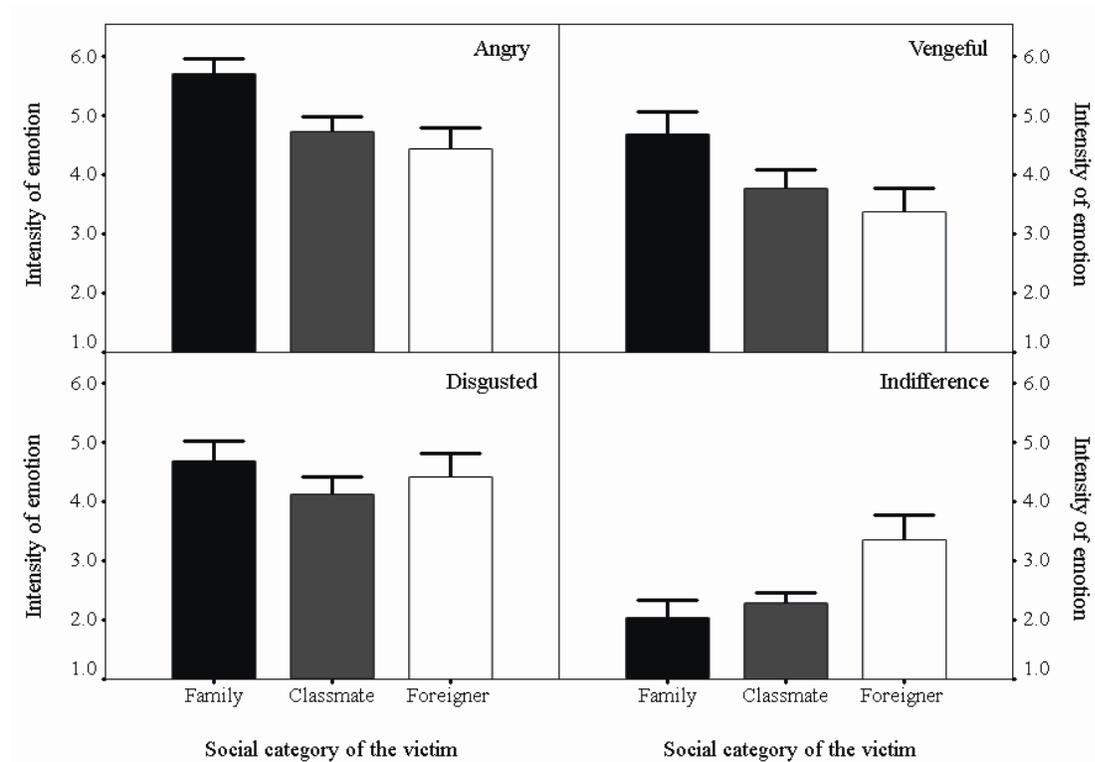


Social distance of the victim correlated with participants' emotional responses to the offense. As predicted, the closer the victim (i.e., as the victim changed from foreigner to schoolmate to family member), the less indifferent ($r = .27, P = .009$), the more angry ($r = -0.26, P = .01$), and the more vengeful ($r = -0.23, P = .023$) participants felt in response to the offense. Interestingly, disgust, an emotion tied to the moral sphere (Haidt, 2003; Rozin et al., 1999) did not correlate with social category. Directed multivariate tests indicated a

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main effect of social category for angry ($F_{2,80} = 2.70, P = .046$), vengeful ($F_{2,80} = 5.36, P = .004$), and indifferent ($F_{2,80} = 3.06, P = .032$; see Figure 4). Again, no effect for disgust was found ($F < 1$). Tables 1 and 2 show the results of the multiple planned comparisons between specific social categories and emotional response and the descriptive statistics, respectively.

Figure 4: Emotional reactions to a burglary as a function of victim social category.



As predicted, emotional responses correlated with reports of time and energy participants were willing to invest to bring a perpetrator to justice. The more angry ($r = .22, P = .028$) and the less indifferent ($r = -.19, P = .046$) participants reported feeling, the more they were willing to give up weekends for three months to search for the perpetrator. Interestingly, these emotional responses did not correlate with the number of days without pay participants were willing to forfeit to search for the perpetrator. Only disgust correlated with this measure ($r = .20, P = .04$).

Table 1: Differences in emotional response based on victim social category.

Emotion	Kin-Schoolmate	Kin-Foreigner	Schoolmate-Foreigner
Angry	2.37*	2.17*	0.19
Indifferent	2.53**	2.25*	0.11
Vengeful	2.06*	3.08**	1.76*
Disgusted	0.59	1.24	0.84

* $p < .05$; ** $p < .01$; directed tests

Table 2: Descriptive statistics ($M \pm S. D.$)

Emotion	Kin	Schoolmate	Foreigner
Angry	5.65 \pm 1.35	4.68 \pm 1.87	4.41 \pm 1.82
Indifferent	2.00 \pm 1.49	2.24 \pm 1.34	3.20 \pm 1.99
Vengeful	4.65 \pm 1.81	3.73 \pm 2.14	3.50 \pm 2.09
Disgusted	4.65 \pm 1.66	4.08 \pm 2.07	4.45 \pm 1.97

General Discussion

Our results indicate that the social category of the perpetrator and the victim of an offense affect punishment magnitude in a non-collective interaction involving theft. Specifically, when asked to indicate an appropriate level of punishment for different perpetrators of an offense, participants assigned lighter penalties to kin compared to non-kin and lighter penalties to in-group members compared to out-group members. Attributions of remorse followed the same pattern with greater remorse attributed to perpetrators described as kin followed by a schoolmate and then a foreigner. When the social category of the victim varied, participants assigned greater levels of punishment to the perpetrator and reported a greater willingness to expend time and energy to bring the perpetrator to justice when the victim was kin followed by a schoolmate and then foreign visitor. This is consistent with previous findings that report greater punishments directed toward a norm-violator targeting an in-group compared to an out-group member (Bernhard et al., 2006). Furthermore, we found emotional reactions tracked victim social category and were related to the reported willingness to incur a cost to bring an offender to justice.

Interestingly, though levels of punishment varied as a function of perpetrator and victim social category, ratings of moral wrongness did not. That is, participants rated the offense in Experiments 1 and 2 statistically equally morally wrong across all social categories. Furthermore, morality ratings only weakly correlated with punishment magnitude, if at all. One possible explanation for the disjunction between punishment magnitude and moral judgment is the methods we used. Asking how morally wrong an act is might cause subjects to think how wrong others would view the act, potentially leading to more homogenous responses. Another possibility is that our rating scale for moral wrongness was inadequate for capturing individual variation. However, use of this same scale has yielded individual variation in response to a number of moral transgressions in the past (Lieberman, unpublished data) making this an unlikely explanation. Interestingly, this lack of correspondence between moral outrage and punishment (e.g., monetary fines) has also been found in the legal sphere (e.g., Sunstein et al., 2002), suggesting our findings are not necessarily an anomaly. Taken together with other data (e.g., Batson et al., 1999) this pattern suggests the operation of two different systems relating to judgments and motivations to punish: one that might take into account cultural norms of equality and fairness leading to similar reports of wrongness across individuals and one that might take into account the costs (or benefits) an act has on oneself or members of one's social network leading to varied levels of punishment. Whether this is the case requires more extensive investigation.

Why did we find an effect of social category on punishment magnitude whereas others did not? In contrast to the results we report here, the study by O’Gorman et al. (2005) reported similar punishment levels for cousins, friends, and strangers violating a social norm. This discrepancy might be a result of two (or more) differences between the present study and theirs. First, O’Gorman et al (2005) looked at second party punishment. That is, the participants in their study were part of the collective action (consisting of cousins, friends or strangers) and incurred a direct cost of a group member violating a social norm. The costs imposed by different social targets might have been similar leading to more homogenous patterns of punishment. Another related possibility is that motivations to punish might differ depending on whether individuals interact in a group context (e.g., a public goods scenario) or not. Whether this truly makes a significant difference in punishment magnitude is a topic for future investigations in which group membership is primed to varying degrees.

Though we found a stable pattern of punishment according to social category, there are some limitations of the present study worth mentioning. First, this study only focused on one type of social transgression, theft. Future studies are required to determine whether social category influences emotions and judgments relating to punishment across the spectrum of social transgressions (e.g., lying, sexual infidelity, defection from a group). Importantly, the social category of interactants is only one factors that can influence the costs (or benefits) of a given action. Other factors include one’s sex, age, SES, marital status, family composition, etc. Which factors matter will depend on the particular behavior in question. For example, the magnitude of punishment assigned to incestuous siblings has been found to depend specifically on whether one has grown up with opposite sex siblings or not (e.g., Fessler and Navarette, 2004). Similarly, reactions to sexual infidelity depend on who committed the infidelity (e.g., Michalski, Shackelford, and Salmon, 2007).

Another limitation of the present study is that we did not specify the type of family member nor did we test different types of family members (or schoolmates of varying emotional closeness). While including other actors would have helped test our hypotheses, the use of these general categories has been implemented in previous research and reliably yielded differences in judgments (e.g., O’Gorman, Wilson, and Miller, 2005, Study 2). Nevertheless, incorporation of additional social categories would be helpful in future investigations.

Finally, we acknowledge that social category influenced decisions regarding appropriate punishment in response to imagined moral transgressions not actual transgressions. Though the use of fictional scenarios is quite common in psychology, whether similar results would occur in more ecologically valid settings is a question worthy of future exploration.

In closing, kinship and group membership are important social categories that influence a wide range of decisions and behaviors (e.g., Burnstein, Crandall, Kitayama, 1995; Lieberman et al., 2003, 2007; Sidanius, Pratto, and Mitchell, 1994). The extent to which they influence the assessment of costs and benefits associated with a particular behavior will depend on the behavior in question and the context in which it is played out. Taking these factors into consideration will help future investigations into the psychology of punishment.

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