Moral punishment: How much is enough?

Bryan Koenig

Title of research:
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Abstract:
People want wrongdoers to be punished, but how severe a punishment do they want—and why that amount? In the proposed research, a series of experiments compare people's preferred punishment fines for a thief with that thief's gain and his victim's losses, all in US dollars. We will use these comparisons to evaluate among punishment calibration points predicted by traditional deterrence theory, traditional retribution theory (just deserts), welfare tradeoff theory, and fitness differential theory.

Research question, goals of the study, significance to social/personality psychology:
Understanding why people punish wrongdoers is an enduring and active research topic with implications for psychology, philosophy, and law. Whereas previous research primarily manipulated variables to see if they impact punishment preferences, the current research uses the recently developed method of Koenig & Riley (in press) to evaluate theoretically-derived point predictions regarding punishment calibration points. Such calibration points are predicted by two deterrence and two retribution theories. Bentham's (1823) traditional deterrence approach predicts punishments should be calibrated exclusively with respect to perpetrator gain because rational agents would not commit a crime that entails greater costs than benefits. Bentham's deterrence focuses on preventing specific individuals from committing a crime (specific deterrence) or everyone from committing a crime (general deterrence). In contrast, welfare tradeoff ratio theory argues that punishment deters wrongdoing against specific potential victims by increasing potential wrongdoers' relative valuation of potential victims as compared to themselves. This theory predicts that punishments should be calibrated to the ratio of perpetrator gain to victim loss (Petersen, Sell, Tooby, & Cosmides, 2010). The traditional retribution approach (just deserts) argues that people should punish in proportion to harm done (Carlsmith, Darley, & Robinson, 2002), thus predicting punishment proportional to victim loss. Another view of retribution provided by fitness differential theory predicts punishment should be sufficient to offset the gain perpetrators reap over their victims (Price, Cosmides, & Tooby, 2002), and predicts punishments calibrated with respect to the sum of the victim loss and perpetrator gain. To test among these predictions, the proposed research will utilize Koenig and Riley's (in press) method of evaluating punishment preferences for theft in which the perpetrator gain and victim loss are experimentally manipulated, and punishment preferences are measured in the same units as those used to describe the perpetrator gain and victim loss, allowing punishment preferences to be directly compared with victim loss and perpetrator gain. Follow-up experiments will provide insight into underlying decision making processes by (a) instructing participants to apply one theoretical approach, (b) comparing

punishments with explanations of them, and (c) comparing punishments with self-reported endorsement of theoretical rationales.

Research design and methodology:
The proposed research comprises a pilot study and four experiments. Building on Koenig and Riley (in press), participants will provide preferred punishments for a thief after reading a scenario that depicts the theft, the perpetrator gain (how much the thief made by selling the stolen item) and victim loss (how much the victim paid to replace the stolen item). The pilot study will improve internal validity relative to Koenig and Riley (in press), whose single scenario had an undesired interpretation likely used by some participants such that the market value of the stolen item might correspond to the greater of (a) the thief's gain or (b) the victim's replacement cost. This interpretation will be eliminated by explicitly stating the market value of the stolen item ($3000). The first experiments will use a 2 X 2 between-subjects factorial design, with perpetrator gain levels of $50 and $1000, and victim loss levels of $50 and $1000. The dependent variable is a fine in US dollars (described as not going to the victim). To further test among the proposed theories and to probe cognition underlying the determination of preferred punishments, follow-up experiments will use the same design as the first experiment but include additional manipulations and measures. The second experiment will evaluate whether people's punishment-related attitudes influence punishment preferences by comparing punishment data with participant ratings of perceived personal relevance for various punitive motives (Carlsmith et al., 2002). The third experiment will attempt to detect rational calculation of punishment preferences, if present, by comparing punishment preferences with participant-provided explanations of them (Cushman, Young, & Houser, 2006). The final experiment will test whether people agree with theories regarding what kinds of punishments are required given different goals by asking participants to intentionally use one of the four (described) motives (Darley, Carlsmith, & Robinson, 2000). Note that the second and third experiment will also provide direct replications of the first experiment.
Participants will be workers recruited from Amazon Mechanical Turk.

Participants will complete the experiments on Qualtrics, accessing the research webpage via a link provided in the MTurk job.

Planned analyses:
All experiments will use regression and theoretically-based categorization of punishments. Follow-up experiments will have additional statistics. Multiple regression will test among theories, using as predictors the victim loss (retribution theory), perpetrator gain (deterrence theory), the ratio of the victim loss to perpetrator gain (welfare tradeoff ratios), the sum of victim loss and perpetrator gain (fitness differential theory), punishment attitudes ratings, punishment explanation coding, and assigned punishment motive. To test proportionality, predictors will include multiples of calibration points (e.g., doubling the perpetrator gain). For non-normally distributed data, transformation (e.g., natural log transformation) and/or non-parametric alternatives will be used (see Koenig & Riley, in press).

A complementary analysis will code punishments based on a priori categories regarding which punishment motive, if any, can uniquely account for a punishment. For example, traditional deterrence theory best explains preferred punishments that are equal to multiples of the perpetrator gain (if not also equal to a multiple of the victim loss or their sum, which would be ambiguous). Similarly, traditional retribution theory best explains punishments that are equal to multiples of the victim loss (but see the caveat for perpetrator gain). Finally, outcome differential theory best explains punishments that are equal to the sum of the victim loss and perpetrator gain, and multiples thereof (again see the caveat).

Participants' provided explanations will be coded based on their match to theoretically-related content as well as their match to theoretically-related calculations. For example, an explanation referring to punishment's ability to prevent others from similar crimes would count as traditional deterrence. An explanation that says punishments teach wrongdoers to value others would count as welfare tradeoff ratios. An explanation mentioning eye-for-an-eye would count as traditional retribution. Finally, an explanation that says punishments bring the perpetrator down to the level of the victim would count as fitness differential theory. For all coding, reliability will be assessed.

To more fully characterize punishment preferences, additional chi-square analyses will use participants grouped on their punishment approach (based, respectively across follow-up experiments, on top-rated punitive motive, explanation coding, and assigned condition) as compared to the theoretical-based coding of those participants' punishments.

Itemized budget:
This proposal is for a pilot study and four experiments already approved by the Institutional Review Board of Washington University in St. Louis. A previous, related study (Koenig & Riley, in press) found for the smallest effect of interest (that was statistically non-zero), the eta squared effect size was .06, which is equivalent to Cohen's d = .5, a medium effect size. According to the guide provided by Cohen (1992), for 80% power given alpha = .05, each condition should have at minimum 64 participants.

All experiments have at least 4 conditions per scenario (due to varying the victim loss and perpetrator gain), and we anticipate running 3 scenarios (to demonstrate that the results are not dependent upon the details of any one scenario; scenarios depict the theft of a TV, laptop, watch, and prized bird), so each experiment will have 64 participants X 4 conditions X 3 scenarios = 768 participants. The final experiment (with assigned punitive motives) will have four additional conditions, so we will use only one scenario, for a total of 64 participants X 4 conditions X 4 motivations = 1024 participants. The pilot study will have 4 scenarios (anticipating that at least three will work well), for 64 participants X 4 conditions X 4 scenarios = 1024 participants. Participants will be workers on Amazon Mechanical Turk. We intend to pay participants

40 cents each, an amount commensurate with the going rate on MTurk for a survey of this length. We thus expect the costs to be 768 X .40 = $307.20 for each of three experiments, and the final experiment and the pilot study have anticipated costs of 1024 X .40 = $409.60.

Experiment	Cost
Pilot	$409.60
1	$307.20
2	$307.20
3	$307.20
4	$409.60
Total	$1740.80

Costs exceeding the grant's $1500 maximum will be borne out of pocket by the researcher.

We anticipate being able to run the pilot and the four experiments within a year. We will present this research at the annual SPSP Conference and submit it for publication to a scholarly journal, such as Personality and Social Psychology Bulletin.

Over the past 5 years, estimate the average amount of grant dollars per year (both internal and external) that the PI has been awarded for research?:
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Researcher
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Proposed Timeline

December, 2016 to January, 2017	Collect Pilot Study Data
February to March, 2017	Analysis of Pilot Study Data
April to May, 2017	Collect and analyze Experiment 1 Data
June to July, 2017	Collect and analyze Experiment 2 Data
August to September, 2017	Collect and analyze Experiment 3 Data / Submit to present at SPSP Conference
October to November, 2017	Collect and analyze Experiment 4 Data
December, 2017 to March, 2018	Write manuscript and submit it for publication