

Title Page

Title: A painful message: Testing the roles of suffering and understanding in punishment judgments in second- and third-party contexts

Authors: Eyal Aharoni,¹ David Simpson,¹ Eddy Nahmias,¹ & Mario Gollwitzer²

¹ Georgia State University, USA

² Ludwig Maximilian University of Munich, Germany

Correspondence: Eyal Aharoni; eaharoni@gsu.edu; Department of Psychology, Georgia State University, P.O. Box 5010, Atlanta, GA 30302-5010

Author Note: The authors declare no conflicts of interest.

Suggested citation: Aharoni, E., Simpson, D., Nahmias, E., & Gollwitzer, M. (forthcoming). A painful message: Testing the roles of suffering and understanding in punishment judgments in second- and third-party contexts. *Zeitschrift für Psychologie*.

Pre-Registration Protocol

Abstract

When people exact retribution on moral offenders, what psychological goals are our punishments designed to realize? This study represents a conceptual replication and extension of recent research on two proximate drivers of retribution: evidence that the perpetrator *suffered*, and evidence that he *understood* why he is being punished. Using a contrastive vignette method, we will present U.S. adults with vignettes about a fictitious high-seriousness (robbery) and low seriousness (theft) crime. In a between-subjects design, we will independently vary perpetrator suffering (present vs. absent) and perpetrator understanding (present vs. absent), as well as the participant's perspective (personal vs. impersonal). Following Gollwitzer and Denzler (2009), we will estimate punishment goal-fulfillment by measuring sentencing recommendations and punishment satisfaction ratings before and after exposure to the manipulations. We hypothesize that goal fulfillment will be greatest following combined evidence of suffering and understanding.

Introduction

Perhaps in no other social context are human beings more motivated to condone, support, and even celebrate the suffering of others than when we punish violators of social norms. We accommodate and systematize the delivery of punishment across domains of social life, including interpersonal, criminal justice, and international contexts. But punishing others is risky and costly, so why do we so readily engage in it? Research in social psychology has suggested that typical individuals espouse multiple punishment motives (Carlsmith & Darley, 2008; Gromet & Darley, 2009; Vidmar & Miller, 1980), including the desire for retribution (McFatter, 1982; Orth, 2004; Vidmar, 1974; Warr, Meier, & Erickson, 1983) and consequentialist aims like deterrence (Crockett, Özdemir, & Fehr, 2014; Ellsworth & Ross, 1983; Vuk, Applegate, Ouelette, Bolin, & Aizpurua, 2019), and rehabilitation (Gromet & Darley, 2009). Though when tested in rivalrous contexts, retribution may play a dominant role (Aharoni & Fridlund, 2012; Carlsmith, 2006; Carlsmith, Darley, & Robinson, 2002; Carlsmith, Monahan, & Evans, 2007; Darley, Carlsmith, & Robinson, 2000). Despite the support for this “retributivism hypothesis,” it remains unclear (a) what proximate goals retribution is designed to realize, and (b) whether this pattern generalizes across offenses of different levels of seriousness and punisher perspectives (i.e., personal vs. impersonal punishment). These open questions call for a conceptual replication of the retributivism hypothesis.

Research on the psychological mechanisms driving retribution has identified a short list of contenders including the motivation to make perpetrators suffer as an end in itself (see Berman, 2010) and the motivation to make them understand why they have been punished and feel remorseful (see Duff, 2001, Duff, 2002). On the “suffering hypothesis” evidence that punishers seek to deliver suffering for its own sake would accord with strict deontological accounts of retribution, which seek to justify punishment on purely retrospective grounds, using

principles of proportionality (Berman, 2010; Crombag, Rassin, & Horselenberg, 2003; Gerber & Jackson, 2013). On the “understanding hypothesis” evidence that punishers care about perpetrators’ level of understanding, even without suffering, would be consistent with expressive and communicative accounts, which aim to justify punishment as a means to express the community’s condemnation and communicate to perpetrators that they violated a norm and must apologize and reform (Berman, 2010; Cushman, Sarin, & Ho, in press; Duff, 2001; Funk, McGeer, & Gollwitzer, 2014). To the extent that these factors are viewed as predictive of the perpetrator’s future dangerousness, displays of suffering, understanding, and remorse might also be relevant to consequentialist theories of punishment. Indeed, the proximate motivations of real-world punishment judgments may commingle in complex and interesting ways that have been largely ignored in the literature. For this reason, the question of their relative and combined influence on lay punishment attitudes is valid and important in its own right, regardless of which of the classical punishment theories these constructs ultimately best support.

In an effort to test the relative contributions of suffering and understanding, Gollwitzer and colleagues conducted a set of experiments using a goal-fulfillment paradigm. According to this approach, a measurable reduction in people’s punitive attitudes or behaviors in response to some manipulated information (such as introducing evidence of suffering or understanding) indicates their satisfaction with that state of affairs, which in turn implies that the information captured goal-relevant information (i.e., reflects the participant’s motivation for punishment). In an economic game setting, the investigators found that, while evidence of perpetrator suffering reduced punishment behavior, this effect was only reliable when the perpetrator demonstrated an understanding of why he had been punished (Gollwitzer & Denzler, 2009; Gollwitzer, Meder, & Schmitt, 2011). Other economic game studies have shown similar effects, finding, for instance, that participants are more likely to shift from a severe to moderate punishment strategy when they believe the cheater would be informed of why he’s being penalized; namely, because he treated his partner unfairly (Molnar, Chaudhry, Loewenstein, 2020). These studies are insightful because they help to identify the characteristic features of punishment goal fulfillment. The results of such studies thus contribute to theoretical models of punishment, but even more, they help to clarify the social utility of different punishment strategies and to predict when the delivery of a given punitive sanction will terminate, or instead, escalate.

Despite these scientific advances, open questions remain about the stability and generalizability of these effects. First, while a main effect of suffering was not consistently observed in the studies described above (e.g., Gollwitzer et al., 2011), it has been found using other formats. In one study that measured retaliatory aggression in response to provocations by an opponent on an ostensible winning streak, participants reduced their retaliatory aggressions when the opponent displayed a facial expression of pain but not other emotion displays (Eder, Mitschke, & Gollwitzer, 2020). It is unclear whether these differences are attributable to differences in the game format, in the way suffering is defined, or some other factor.

In addition, these tests of the suffering and understanding hypotheses have largely adopted a dyadic, two-party structure (Eder et al., 2020; Gollwitzer & Denzler, 2009; Gollwitzer et al., 2011). In that format, the punisher, who also is the victim, has a vested interest in the delivery of punishment, making it distinct from impersonal sanctions, such as criminal sentencing, in which the punisher does not have direct, personal stakes in the punishment. From a traditional rational choice perspective, impersonal punishers (i.e. people who were not directly affected by the crime) should not engage in costly punishment, and yet research has shown that they regularly do so (Fehr & Fischbacher, 2004). Some research even suggests that they are even more punitive than personal punishers, i.e., victims of the crime (e.g., Zhou, Jiao, & Zhang, 2017). One recent vignette study examined, in an impersonal context, the independent effects of evidence of perpetrator suffering and moral change on perceptions that justice had been achieved by prison punishment. Moral change was operationally defined as a sincere apology and desire to help crime victims, implying that the perpetrator came to understand the gravity of his offense. Although evidence of suffering did increase participant's justice perceptions, evidence of moral change had a considerably larger effect (Bauer & Poama, 2020). While such findings are illuminating, none of these studies have directly manipulated the personal versus impersonal perspective, so it is unclear whether punishment by impersonal punishers is similarly motivated by a desire that the perpetrator suffer per se, or whether their punitive motives can be satisfied by signals of understanding, even in the absence of suffering.

Second, studies employing economic-style games are limited to the study of relatively benign norm violations, like inequitably distributing small amounts of game money. So, it remains unclear whether their findings generalize to more serious types of violations, such as various types of criminal behavior. On one hand, more serious norm violations should evoke a stronger desire for suffering, and perhaps a greater demand for understanding and remorse. But on the other hand, for these more serious offenses, people may have higher demands for evidence that the perpetrators actually suffer and actually understand that what they did was wrong. In one study, for instance, researchers found that when a hypothetical rape was portrayed as more intentional, people attributed less remorse to the perpetrator (Kleinke, Wallis, & Stalder, 1992); presumably, the seriousness of his crime made the perpetrator's remorse seem less genuine. Because of the conflicting predictions on this matter, we make no predictions about moderating effects of offense seriousness. However, any evidence of moderation or lack thereof will make a valuable contribution to the punishment literature.

Finally, existing research on the roles of suffering versus understanding typically frames these two motivations as independent, but more complex relationships are possible. For example, do people desire more punishment when suffering and understanding are both absent, or could the presence of understanding actually evoke more punishment, perhaps by implying greater criminal intent? This latter possibility suggests that researchers need to be careful about how we define understanding. If understanding means that the perpetrator fully understood the risk of harm even before commission of the crime, but did it anyway, we would not expect this kind of understanding to pacify punishers; if anything, it should increase punishment further. In order for

understanding to achieve punishment goal fulfillment, it should be portrayed as a newfound realization that is a retrospective response to the crime. Similarly, a deep understanding does not just mean that the perpetrator understands that his actions caused harm. It means that the perpetrator believes that his actions were wrong. In other words, the type of understanding that is most likely to satisfy our punitive goals is one that includes remorse as a part of its definition. Defined in this way, we predict that punishers will be most responsive to signals of deep understanding following the induction of suffering. Such an interaction would suggest that people utilize suffering as a communicative device because they perceive it to be an effective way of inducing a deep understanding (Cushman et al., in press). In this way, evidence of suffering could serve as an indication that the perpetrator has internalized the message. Such an outcome would be consistent with hybrid theories of punishment, including evolutionary (e.g., Cushman, 2015) and communicative theories (e.g., Duff, 2001; Nahmias & Aharoni, 2017). These open questions about the relative and interactive roles of suffering and understanding raise a demand for a conceptual replication and extension of this important body of research.

The present project addresses these questions using a contrastive vignette experiment in a U.S. sample. The *understanding hypothesis*, as found in previous research (e.g., Funk et al. 2014; Gollwitzer & Denzler, 2009; Gollwitzer et al., 2011), predicts that the signal that the perpetrator understands why he has been punished will increase satisfaction with the punishment and reduce additional punishment recommendations, relative to the no understanding condition (a main effect of understanding). The *suffering hypothesis*, also receiving some support (e.g., Eder et al., 2020), predicts that the induction of suffering alone will be sufficient to evoke satisfaction with the punishment and reduce additional punishment recommendations. We expect, however, that indicators of punishment goal fulfillment will be greatest in the presence of both suffering and understanding (an interaction effect).

Ultimately, evidence that punishers are most responsive to signals of understanding following the induction of suffering would suggest that the delivery of suffering is a reliable, albeit coercive, communicative device designed to ensure that the perpetrator has internalized an intended message.

Method

Design and Hypotheses.

This experiment will employ a contrastive vignette method, presenting text-based criminal case summaries that vary in systematic ways. The design will be comprised of a 2 Suffering (present v. absent) x 2 Understanding (present v. absent) x 2 Party (personal v. impersonal) x 2 Crime Seriousness (low vs. high) x 2 vignette Order mixed factorial design with random assignment to conditions, where Suffering, Understanding, Party, and Order will be manipulated between subjects and Crime Seriousness will be varied within subjects. Varying crime type within subjects enables us to increase statistical sensitivity by using each subject as their own control. To offset the risk of order effects, the order of the two crime vignettes will be

reverse counterbalanced. This strategy has been employed successfully by other investigators in this research area (e.g., Darley et al., 2000). The less serious offense will be a second-degree theft (An employee stole a winning lottery ticket for \$5,000 that was purchased with money from a collective pool and intended for a group of ten), and the more serious offense will be an aggravated robbery (A perpetrator robbed a bystander and injured him with a weapon). Theft related crimes were selected to more closely approximate the economic-type norm violations that were used in previous studies of the competing hypotheses. The two crime vignettes (impersonal version) were pretested in an independent sample of university undergraduates to ensure that they differ in perceived seriousness ($p < .01$). Suffering will be operationally defined as testimonial evidence from the perpetrator's therapist that he has already suffered greatly as a direct result of his initial time in jail of 10 weeks (e.g., job loss, mental and physical distress). Understanding will be defined as testimonial evidence from the therapist that the perpetrator now regrets his actions and understands why they were wrong. We deliberately included evidence of remorse as part of our definition of understanding on the view that a deep understanding of one's crime would be seen as necessarily entailing some level of remorse. The Party manipulation will stipulate that the victim of the offense was the participant (personal) or an unrelated community member (impersonal).

Two dependent measures are designed to estimate punishment goal fulfillment. First, we will administer a prison sentencing scale ("How long in prison should the defendant be incarcerated for this offense?"), delivered both before and after the experimental induction, from which a pre-post difference score will be derived (with larger decreases in recommended sentences indicating greater punishment goal fulfillment). The purpose of this repeated measure is to observe attitude change directly within individuals rather than to merely infer it from random assignment to conditions. This approach also affords greater statistical sensitivity by using each participant as his/her own control. However, this design also permits a fully-between-subjects analysis of post-induction sentencing scores by themselves. We will also administer a Likert-type scale measuring satisfaction with the prospect of immediate parole ("How satisfied or dissatisfied are you with the prospect of granting the defendant immediate parole in the community instead of prison time?"), also before and after the experimental induction. The rationale is that the greater the punishment goal-fulfillment, the more the participant will be satisfied by the prospect of early parole, which is generally regarded as less severe than the same period of time in prison. In Western countries like the U.S., framing the alternative as early parole tends to be more realistic than an unconditional discharge and encourages participants to make use of the full scale range. See Appendix for details.

H1 (Understanding hypothesis). The signal that the perpetrator understands why he has been punished will increase satisfaction with the prospect of parole and reduce additional prison sentence recommendations relative to the signal that the perpetrator does not understand why he has been punished, regardless of whether the perpetrator suffered. Such an effect would constitute a main effect of Understanding.

H2 (Suffering hypothesis). Evidence of suffering will increase satisfaction with the prospect of parole and reduce additional prison sentence recommendations compared to evidence that the perpetrator did not suffer, regardless of whether the perpetrator understands why he is being punished. This pattern would constitute a main effect of Suffering.

H3 (Understanding by Suffering hypothesis). Indicators of punishment goal fulfillment will be greatest among the combined presence of suffering and understanding (a synergistic interaction effect).

Sampling Plan and Data Acquisition.

Participants will be 630 U.S. adult Internet users. They will be screened for eligibility and matched against the broader U.S. population for age and gender. Assuming a completion rate of 75% (by excluding those who fail the attention and memory checks (~15%) and accounting for attrition (~10%)), the final sample will be $N \geq 472$, the minimum estimated sample size required to detect a small- to medium-size three-way interaction effect ($f = .15$) between Suffering, Understanding, and Order on sentencing recommendation, using a significance level of $\alpha = .05$ and a power of $1 - \beta = .90$, and rounded up to the nearest whole number per cell. Previous tests of the suffering and understanding hypotheses have obtained medium effect sizes (i.e., $d > .50$; Eder, Mitschke, & Gollwitzer, 2020; Gollwitzer & Denzler, 2009). However, those estimates were based on the assumption of a two-way interaction. Since our conceptual replication study seeks to examine higher-order interactions, a smaller effect is expected.

To ensure that our sample is representative of the broader adult population, sampling will be conducted by a professional sampling company administrated by PsychLab, a division of the Leibniz Institute for Psychology Information. The sampling company will ensure sample representativeness by employing multi-source methods, including recruiting from a variety of Internet platforms such as advertisements on websites, email recruitment (to a preexisting list of people who have given permission), face-to-face recruitment and telephone recruitment. Since the participants are recruited from multiple sources, the sampling company will use algorithms to minimize source bias. One potential drawback of self-selected Internet samples is under-representing people with limitations on Internet access, such as the elderly and those with less than a high school education (see Smith, 2018). Such characteristics, thus, will be monitored and strategically over-sampled (i.e. stratified) or weighted until their proportion matches that of the broader U.S. population.

Procedures

The survey will be delivered on the Qualtrics survey platform, which supports random assignment to between-subjects conditions. Individuals who respond to the survey invitation will navigate (via hyperlink) to a survey consent form. Following consent, participants will read the survey instructions and two case summary vignettes, describing a high and low seriousness crime, from either a personal or impersonal perspective. The high and low seriousness vignettes will be counterbalanced for order.

After each of the two vignettes, the following steps will occur: Participants will be prompted to make baseline prison punishment and parole satisfaction ratings. Then, they will be exposed to the experimental induction, namely the testimonial evidence of understanding and suffering being present or absent (also counterbalanced for order). Next, participants will complete the two dependent measures collectively designed to estimate punishment goal fulfillment. First, they will complete the final prison sentencing scale, then the final parole satisfaction scale. Following the dependent measures, participants will answer several manipulation check questions and a question about their memory for the crime case summaries.

Having completed this process for each crime vignette, participants will be asked to complete a punishment justification ranking scale, a question about criminal justice system involvement, an attention check question, and standard demographic questions. See Materials section for further details. Last, participants will be debriefed as to the purpose of the study. All study procedures will have been approved by the host university's ethical review board and participation will be contingent upon informed consent. All study procedures will be published on the Open Science Framework.

Materials

All stimuli, including the crime vignettes, text of the experimental induction, and primary dependent measures were developed internally. See Appendix for details. The planned manipulation checks will include Likert-type questions about whether the perpetrator fully understands that his actions were wrong, whether he genuinely suffered as a result of his 10-week jail stay, whether early parole would be sufficient, and how harmful the crime was (-3 to +3). The memory check questions will ask participants to select from a multiple-choice list which crime the perpetrator committed and which party perspective they were asked to adopt.

A self-reported punishment justification scale, adapted from Bauer and Poama (2020) and Nadelhoffer and Nichols (2013) will ask participants to rank their endorsement of four distinct statements, counterbalanced for order, about the proper justification for criminal punishment. This scale was designed to capture the most salient features of the main punishment theories (retributive, consequentialist, and communicative). Although the individual statements are not necessarily unique to one punishment theory (e.g., the desire to "send a message to the offender" could be inspired by communicative, retributive, and/or consequentialists motivations), each statement was crafted to be more typical of one than the other.

Two items will ask participants to report any contact with the criminal justice system (either as a defendant or an accuser). One attention check will ask participants to answer a multiple-choice question they should all know, namely the colors of the U.S. flag. The demographic questions will query age, gender, race, ethnicity, and political ideology, a scale from "very liberal" (-3) to "very conservative" (+3). See Appendix for exact text.

Analysis Plan

Data Preparation. The raw data will be inspected for missing values. Participants will be excluded from analysis for any of the following reasons: Failure to answer all survey questions; Failed attention check question (what are the colors of the American flag); Failed the memory check (about the nature of the crimes committed); Indicating they want to change their sentence but then not changing it (or vice versa), Time to submit the survey is greater than two standard deviations above the duration mean; Time to submit the survey is less than five minutes.

For our dependent measures, difference scores will be computed representing each participant's pre-post-induction sentencing recommendation, and each participant's pre-post satisfaction rating. The distributions of all dependent measures will be inspected for violations of normality. Descriptive statistics will be tabulated for all participant demographic variables such as age, race, and gender.

To test for unwanted effects of vignette order, we will subject each dependent measure to an independent-samples *t*-test using Order at the independent factor. If any effects reach significance ($p < .05$), then Order will be entered as an independent factor in our hypothesis tests to control for its effects. If Order exerts an interaction effect with our other factors, we will eliminate possible carry-over effects by conducting each hypothesis test for the vignette presented first only.

Confirmatory Analyses. To test our formal hypotheses, two models will be constructed. First, we will construct a Mixed Multivariate Analysis of Variance (MANOVA) with Understanding and Suffering (and possibly Order) as between-subjects factors. Self-reported parole satisfaction and sentencing difference scores will be entered as dependent measures. If our hypotheses are not supported, we will inspect the correlation between the two dependent measures. If their correlation is not statistically significant and positive at $\alpha = .05$, we will run them in separate ANOVAs with the same factor structure. For the model that performs better (MANOVA or ANOVA), we will attempt to replicate those effects using the post-induction sentencing and satisfaction scores as singular dependent measures, rather than using the difference scores. This approach offers a purer test of the between-subjects effects of our variables.

If our hypotheses are not supported and include non-normal distributions, these distributions will be corrected to approximate a normal distribution using the log10 transform. If our hypotheses are still not supported, we will limit our sample to those who passed our manipulation check questions (> 0 on the scale midpoint). If our hypotheses are still not supported and an order effect is observed, we will conduct a separate test of the vignette ordered first. Hypothesis testing will cease upon failure to obtain support for our hypotheses using these three strategies. Cohen's f^2 effect size and 95% confidence intervals will be reported alongside all formal hypothesis tests.

Exploratory Analyses. We will also conduct several exploratory analyses. Most importantly, we will construct a Mixed MANOVA (or two Mixed ANOVAs depending on which confirmatory model performed better) to test for any moderating effects of the Party (between-

subjects) and Crime Seriousness (within-subjects) variables on the effects of Understanding and Suffering on our dependent measures.

If H1, H2, or H3 are supported, we will expand the corresponding Understanding x Suffering ANOVA model to include self-reported political ideology as a control variable. This will enable us to test the specificity of our predicted effects of Suffering and Understanding above and beyond self-reported political persuasion.

We will construct a three-way between-subjects ANOVA to test whether the effects of Suffering and/or Understanding on punishment goal fulfillment are moderated by self-reported support for conventional justifications for punishment (i.e., retribution, utility, rehabilitation, and communication). While there is good reason to expect that retributivists will support the role of suffering in punishment, proponents of the other theories might also value suffering as a means to public safety, effectively rehabilitation, or effective communication. Similarly, while supporters of rehabilitation might value defendant understanding as a means to effective rehabilitation, utilitarians might value understanding to the extent that it predicts desistance, retributivists, should value understanding to the extent that it signals penitence, and communicative theorists might value it as an indicator of effective communication. For these reasons, we make no *a priori* predictions about these relationships, but rely instead on this test to help clarify such relationships.

Using a three-way ANOVA, we will examine the moderating role of gender in the effect of Suffering and/or Understanding on punishment goal fulfillment. However, we do not expect strong differences by gender.

We will also examine whether our predicted H3 effects are altered by self-reported contact with the criminal justice system. Although empirical evidence bearing on such predictions is limited, it is intuitively plausible that punishment goal fulfillment by former accusers will exhibit more susceptibility to cues of suffering than that of former defendants, and vice versa for cues of understanding.

References

- Aharoni, E., & Fridlund, A. J. (2012). Punishment without reason: Isolating retribution in lay punishment of criminal offenders. *Psychology, Public Policy, and Law*, *18*(4), 599-625. doi:10.1037/a0025821
- Bauer, P. C., & Poama, A. (2020). Does suffering suffice? An experimental assessment of desert retributivism. *Plos One*, *15*(4), e0230304. doi:10.1371/journal.pone.0230304
- Berman, M. N. (2010). Two kinds of retributivism. *U of Texas Law, Public Law Research Paper*, (171).
- Carlsmith, K. M. (2006). The roles of retribution and utility in determining punishment. *Journal of Experimental Social Psychology*, *42*(4), 437-451. doi:10.1016/j.jesp.2005.06.007
- Carlsmith, K. M., & Darley, J. M. (2008). Psychological aspects of retributive justice. *Advances in Experimental Social Psychology*, *40*, 193-236. [https://doi.org/10.1016/S0065-2601\(07\)00004-4](https://doi.org/10.1016/S0065-2601(07)00004-4)
- Carlsmith, K. M., Darley, J. M., & Robinson, P. H. (2002). Why do we punish? Deterrence and just deserts as motives for punishment. *Journal of Personality and Social Psychology*, *83*(2), 284-299. doi:10.1037//0022-3514.83.2.284
- Carlsmith, K. M., Monahan, J., & Evans, A. (2007). The function of punishment in the “civil” commitment of sexually violent predators. *Behavioral Sciences & the Law*, *25*(4), 437-448. doi:10.1002/bsl.761
- Crockett, M. J., Özdemir, Y., & Fehr, E. (2014). The value of vengeance and the demand for deterrence. *Journal of Experimental Psychology: General*, *143*(6), 2279-2286. <http://dx.doi.org/10.1037/xge0000018>
- Crombag, H., Rassin, E., & Horselenberg, R. (2003). On vengeance. *Psychology, Crime & Law*, *9*, 333-344. doi:10.1080/1068316031000068647
- Cushman, F. (2015). Punishment in humans: From intuitions to institutions. *Philosophy Compass*, *10*(2), 117-133. doi:10.1111/phc3.12192
- Cushman, F. A., Sarin, A., & Ho, M. (in press). Punishment as communication. In J. Doris & M. Vargas (Eds.), *The Oxford Handbook of Moral Psychology*. Oxford, UK: Oxford University Press. Preprint available from <https://psyarxiv.com/wf3tz>.
- Darley, J. M., Carlsmith, K. M., & Robinson, P. H. (2000). Incapacitation and just deserts as motives for punishment. *Law and Human Behavior*, *24*(6), 659-683. doi:10.1023/A:1005552203727
- Duff, R. A. (2001). *Punishment, communication, and community*. New York, NY: Oxford University Press.
- Duff, R. A. (2002). Punishing the young. In Weijers, I., & Duff, R. A. (Eds.), *Punishing Juveniles: Principle and Critique* (pp. 115-134).
- Eder, A., Mitschke, V., & Gollwitzer, M. (2020): What stops revenge taking? Effects of observed emotional reactions on revenge seeking.

- Ellsworth, P. C., & Ross, L. (1983). Public opinion and capital punishment: A close examination of the views of abolitionists and retentionists. *Crime & Delinquency*, 29, 116-169. doi:10.1177/001112878302900105
- Fehr, E., & Fischbacher, U. (2004). Third-party punishment and social norms. *Evolution and Human Behavior*, 25(2), 63-87. doi:10.1016/S1090-5138(04)00005-4
- Funk, F., McGeer, V., & Gollwitzer, M. (2014). Get the message: Punishment is satisfying if the transgressor responds to its communicative intent. *Personality and Social Psychology Bulletin*, 40(8), 986-997. doi:10.1177/0146167214533130
- Gerber, M. M., & Jackson, J. (2013). Retribution as revenge and retribution as just deserts. *Social Justice Research*, 26(1), 61-80. doi:10.1007/s11211-012-0174-7
- Gollwitzer, M., & Denzler, M. (2009). What makes revenge sweet: Seeing the offender suffer or delivering a message? *Journal of Experimental Social Psychology*, 45(4), 840-844. doi:10.1016/j.jesp.2009.03.001
- Gollwitzer, M., Meder, M., & Schmitt, M. (2011). What gives victims satisfaction when they seek revenge?. *European journal of social psychology*, 41(3), 364-374. doi:10.1002/ejsp.782
- Gromet, D. M., & Darley, J. M. (2009). Punishment and beyond: Achieving justice through the satisfaction of multiple goals. *Law & Society Review*, 43(1), 1-38. doi:10.1111/j.1540-5893.2009.00365.x
- Kleinke, C. L., Wallis, R., & Stalder, K. (1992). Evaluation of a rapist as a function of expressed intent and remorse. *The Journal of Social Psychology*, 132(4), 525-537. doi:10.1080/00224545.1992.9924732
- McFatter, R. M. (1982). Purposes of punishment: Effects of utilities of criminal sanctions on perceived appropriateness. *Journal of Applied Psychology*, 67(3), 255. <https://doi.org/10.1037/0021-9010.67.3.255>
- Molnar, Andras and Chaudhry, Shereen and Loewenstein, George F., 'It's Not About the Money. It's About Sending a Message!': Unpacking the Components of Revenge (January 24, 2020). Available at SSRN: <https://ssrn.com/abstract=3524910>
- Nahmias, E. & Aharoni, E. (2017). Communicative Theories of Punishment and the Impact of Apology. In C. W. Surprenant (Ed.) *Rethinking punishment in an era of mass incarceration*. Routledge.
- Orth, U. (2004). Does perpetrator punishment satisfy victims' feelings of revenge? *Aggressive Behavior: Official Journal of the International Society for Research on Aggression*, 30(1), 62-70. doi:10.1002/ab.20003
- Smith, A. (2018). Older Adults and Technology Use. Adoption is increasing, but many seniors remain isolated from digital life. *Pew Research Center*.
- Vidmar, N. (1974). Retributive and utilitarian motives and other correlates of Canadian attitudes toward the death penalty. *Canadian Psychologist/Psychologie Canadienne*, 15(4), 337-356. <https://doi.org/10.1037/h0081769>

Vidmar, N., & Miller, D. T. (1980). Socialpsychological processes underlying attitudes toward legal punishment. *Law and Society Review*, 565-602. doi:10.2307/3053193

Vuk, M., Applegate, B. K., Ouellette, H. M., Bolin, R. M., & Aizpurua, E. (2019). The pragmatic public? The impact of practical concerns on support for punitive and rehabilitative prison policies. *American Journal of Criminal Justice*, 1-20. <https://doi.org/10.1007/s12103-019-09507-2>

Warr, M., Meier, R. F., & Erickson, M. L. (1983). Norms, theories of punishment, and publicly preferred penalties for crimes. *Sociological Quarterly*, 24(1), 75-91. doi:10.1111/j.1533-8525.1983.tb02229.x

Zhou, Y., Jiao, P., & Zhang, Q. (2017). Second-party and third-party punishment in a public goods experiment. *Applied Economics Letters*, 24(1), 54-57. doi:10.1080/13504851.2016.1161709

Appendix A

Study Stimuli

Instructions. In this task, you will read a case about a defendant who has been found guilty of a felony crime. Your job is to decide how much the defendant should be punished, if at all. Please assume that all the information described in the case is true. Your punishment recommendation should be based on your personal opinion, not what you think a court would expect you to say. Then, you will be asked questions about yourself and about the case, so please read very attentively.

Criminal Case Summaries with Party manipulation:

Case Summary

[Low seriousness crime] Dwight Davis, a 32 year old sales representative [that you work with], was convicted of one count of *second-degree theft*. While on the job as an employee of a large company, he stole a winning lottery ticket in the amount of \$5,000. The ticket had been purchased by a group of 10 employees using personal money that they donated to a collective pool. [You were a part of this group and contributed to the collective pool.] The winnings were intended to be shared by the group [, and so each employee would have made \$500 / , and so you would have made \$500]. Company security cameras captured Dwight taking the ticket [from an employee's locker / from your locker], and a bank statement subsequently showed the winnings cashed out in Dwight's name. Dwight has one prior felony on record for tax evasion.

[High seriousness crime] Karl Johnson, a 29 year old construction worker, was convicted of one count of *aggravated robbery*. [You were the person he robbed.] According to two security personnel who witnessed the event, Karl confronted [a patron / you] behind a gas station, demanding [their / your] wallet. When [the patron / you] hesitated, Karl swung a crowbar at [their / your] face, breaking [their / your] jaw, then fled with [their / your] wallet. Police were able to conclusively match Karl's fingerprints to the crowbar and found him with the wallet. Karl has one prior felony for domestic violence.

Baseline Punishment:

While awaiting trial, [defendant name] served a 10-week jail term. In the trial, the defendant pled guilty and underwent a sentencing hearing to decide on his punishment. The maximum possible prison sentence for this crime is [5 years / 10 years]. The sentencing guidelines in your state require that any amount of this time *not* served in prison must be served under community supervision in the form of parole.

[Baseline Sentencing DV]

Understanding x Suffering Manipulation:

[For all descriptions below, the order of understanding-related information and suffering-related information will be randomized.]

Therapist Evaluation

Low Seriousness:

[Understanding present/Suffering present] In the hearing, the jail therapist, who conducted several interviews with Dwight Davis, testified that, in her professional opinion, [Dwight has come to understand why his actions were wrong and now deeply regrets what he did. He also expressed a desire to apologize to his victims, publicly or privately. [The therapist also stated that Dwight has already suffered greatly as a direct result of his time in jail. While in custody, he lost his job, and his asthma has worsened, causing full-body weakness and panic attacks.]

[Understanding present/Suffering absent] In the hearing, the jail therapist, who conducted several interviews with Dwight Davis, testified that, in her professional opinion, [Dwight has come to understand why his actions were wrong and now deeply regrets what he did. He also expressed a desire to apologize to his victims, publicly or privately.] [The therapist also stated that Dwight did not suffer as a direct result of his time in jail. He managed to keep his job and experienced no emotional or physical distress.]

[Understanding absent/Suffering present] In the hearing, the jail therapist, who conducted several interviews with Dwight Davis, testified that, in her professional opinion, [Dwight does not believe his actions were wrong and does not regret doing what he did. He also refused to apologize to his victims.] [The therapist also stated that Dwight has already suffered greatly as a direct result of his time in jail. While in custody, he lost his job, and his asthma has worsened, causing full-body weakness and panic attacks.]

[Understanding absent/Suffering absent] In the hearing, the jail therapist, who conducted several interviews with Dwight Davis, testified that, in her professional opinion, [Dwight does not believe his actions were wrong and does not regret doing what he did. He also refused to apologize to his victims.] [The therapist also stated that Dwight did not suffer as a direct result of his time in jail. He managed to keep his job and experienced no emotional or physical distress.]

High Seriousness:

[Understanding present/Suffering present] In the hearing, the jail therapist, after numerous interviews with Karl Johnson, testified that, in her professional opinion, [Karl has come to deeply regret his actions and now understands why they were wrong. He also requested to

apologize to his victim in a public or private forum.] [The therapist also stated that Karl has already suffered greatly as a direct result of his time in jail. He lost his job and experienced severe anxiety, which re-activated a painful stomach ulcer.]

[Understanding present/Suffering absent] In the hearing, the jail therapist, after numerous interviews with Karl Johnson, testified that, in her professional opinion, [Karl has come to deeply regret his actions and now understands why they were wrong. He also requested to apologize to his victim in a public or private forum.] [The therapist also stated that Karl did not suffer as a direct result of his time in jail. He managed to keep his job and experienced no emotional or physical distress.]

[Understanding absent/Suffering present] In the hearing, the jail therapist, after numerous interviews with Karl Johnson, testified that, in her professional opinion, [Karl does not regret his actions and doesn't believe they were wrong. He also indicated no interest in apologizing to his victim.] [The therapist also stated that Karl has already suffered greatly as a direct result of his time in jail. He lost his job and experienced severe anxiety, which re-activated a painful stomach ulcer.]

[Understanding absent/Suffering absent] In the hearing, the jail therapist, after numerous interviews with Karl Johnson, testified that, in her professional opinion, [Karl does not regret his actions and doesn't believe they were wrong. He also indicated no interest in apologizing to his victim.] [The therapist also stated that Karl did not suffer as a direct result of his time in jail. He managed to keep his job and experienced no emotional or physical distress.]

[Final Sentencing and Satisfaction DVs]

Dependent measures

Punishment Measures

[Baseline Punishment DV] How long in prison should the defendant be incarcerated for this offense? (from 0-5 years for low seriousness crime; 0-10 years for high seriousness crime)

[Change sentence] Initially, you recommended that the defendant be incarcerated in prison for **[X year(s)]**. Given the new information you read about his case, would you like to change your previous sentence recommendation or keep it the same?

- Change my sentence
- Keep it the same

[Final Punishment DV] If you said "change my sentence," how long in prison should the defendant be incarcerated for this offense? Remember, any amount of this time not served in

prison must be served under community supervision in some form of parole. You may drag the cursor to change your previous answer.

Otherwise, if you said "keep it the same," please skip ahead to the next question.

(from 0-5 years for low seriousness crime; 0-10 years for high seriousness crime)

Satisfaction Measure

Suppose that after his 10-week jail time, [name] was granted immediate parole in the community instead of prison time. Further suppose that he did not commit any further crimes during parole. How satisfied or dissatisfied are you with parole as his only sentence?

(-3) Very dissatisfied... (+3) Very satisfied

Manipulation checks:

To what extent do you agree or disagree with the following statements? Answer options are from -3 (Strongly disagree) to +3 (Strongly agree)

- “The perpetrator fully understands that his actions were wrong.”
- “The perpetrator genuinely suffered as a result of his 10-week jail stay.”
- “The jail therapist’s assessment of the defendant seemed believable.”
- “Justice has been done in this case.” (Bauer & Poama, 2020)

“If the defendant was granted parole in the community immediately after his 10-week jail time instead of prison time:

...I would feel...” 0 (not at all angry) to +6 (very angry)

...I would think that he suffered...” -3 (too little for his crime) to +3 (too much for his crime)

...That would be...” -3 (less punishment than he deserves) to (+3) (more punishment than he deserves)

...*he* (the defendant) would believe he had been punished... -3 (too little) to +3 (too much)

In your opinion, how likely is it that the defendant will commit another crime within 3 years of his release?

0 (not at all) to +6 (extremely)

In your opinion, how harmful was the defendant's crime in terms of physical, emotional, and financial harm?

0 (not at all) to +6 (extremely)

In your opinion, how morally wrong was the perpetrator's crime?

0 (not at all) to +6 (extremely)

In your opinion, how immoral was the perpetrator's character?

0 (not at all) to +6 (extremely)

Attention check:

What are the colors of the American flag?

- a) Red, White, Green
- b) Red, Yellow, Blue
- c) Red, White, Blue
- d) Blue, White, Grey

Memory Check:

(High seriousness) In the previous story above, what crime did the perpetrator commit?

- a) Murder
- b) Aggravated robbery
- c) Home invasion
- d) Drug trafficking

(Low seriousness) In the previous story above, what crime did the perpetrator commit?

- a. Murder
- b. Drug trafficking
- c. Home invasion
- d. Second-degree theft

In the stories above, which perspective were you asked to take?" "*The victim of the crime was portrayed as...*"

- a) myself
- b) someone else / not specified

Punishment Justification Question (adapted from Bauer & Poama, 2020, and Nadelhoffer & Nichols, 2013):

Please rank the following justifications for punishment by dragging each of the four statements into your preferred order. The statement that you agree with MOST should be placed at the top. “People who commit crimes *should be punished because by punishing them...*”

- we protect society from future crime [utilitarian]
- we give them what they deserve [retribution]
- we reform and rehabilitate them [mixed]
- we send a message that what they did is wrong [communicative]

How strongly do you agree with the following statement? (Nadelhoffer & Nichols, 2013)

“People who commit crimes deserve to be punished even if punishing them won't produce any positive benefits to either the offender or society—e.g., rehabilitation, deterring other would-be offenders, etc.”

- 1- strongly disagree
- 2- disagree
- 3- somewhat disagree
- 4- neutral
- 5- somewhat agree
- 6- agree
- 7- strongly agree

Contact with the criminal justice system:

“Have you or any of your family members ever been part of a criminal trial as [a defendant or an accuser]?”

Political Ideology:

Overall, where do you place your political attitudes on this spectrum?