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Punishing Passion: The Law and Psychology of Impulsive Transgressions

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ABSTRACT

In this article, we extend psychological literature on the hot-to-cold empathy gap to empirically assess whether people who are currently experiencing a 'hot' emotional or visceral state will be less punitive toward a defendant whose harmful action was motivated by a similar state. Across two separate studies that test two distinct hot states – pain and fatigue – we find that people experiencing a hot state assign less severe punishments toward defendants who claim to have acted while experiencing that state. Our findings suggest that current visceral experience is a natural and inextricable part of the judgment process when decision-makers must assign blame and allot punishment for a hot state transgression. Ultimately, this supports the intuition that, despite the law's best efforts to cure its jurors of emotional experience, people naturally use their immediate visceral or emotional experiences as a source of information when making judgments and assigning blame.

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Introduction

"[A] good interpreter of the laws… [is] able in judgment to divest himself of all fear, anger, hatred, love, and compassion."

-Thomas Hobbes[1]

We sometimes make decisions and take actions without regard to consequences. Stress, exhaustion, hunger, or pain can make it difficult to summon the mental resources needed to make a deliberate decision, making it more likely that we succumb to frustration, craving, or discomfort. Thus, cigarette smokers who believe that they can quit smoking whenever they choose often later discover that the discomfort of nicotine craving is overwhelming. Hungry grocery shoppers often end up buying more food than they had planned. As a general matter, behavior that is not deliberately chosen to achieve rationally-chosen goals is contrary to fundamental assumptions of economics. Such behavior is nevertheless sometimes anticipated by the law. For example, a person who kills while his self-control is overwhelmed by intense passion might be convicted of an offense less serious than murder. A thief who steals food because she is hungry might receive a relatively lenient punishment. And a victim who insults or provokes another person who then assaults him might not be able to recover for damages in tort.

But just because the law recognizes the power that visceral factors like stress, pain, exhaustion, or hunger have over decision making, does not mean those judging such decisions will always fully appreciate that power. Just as people underestimate the power that visceral states have on their own future behavior, people underestimate the power these states have on other people's behavior. Thus, just as a recovering alcoholic might think he will be able to attend the holiday party and resist drinking alcohol, a judge might think that the fearful battered woman defendant should have left rather than killed.

Lawmakers, judges, and jurors must sometimes consider how to blame and punish a person who commits a transgression while in the grips of a "hot state." Acting impulsively and without full control of one's faculties might make one less blameworthy or deserving of less severe punishment. But this assumes that lawmakers, judges, and jurors are able to judge the hot states of others without currently experiencing a similar visceral state. In this paper, we show that it is difficult for people to fully appreciate the power that visceral states like pain, stress, and exhaustion have over decision making and behavior, without currently experiencing those states at the time of

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1 THOMAS HOBBES, LEVIATHAN 203 (A.R. Waller ed., Cambridge Univ. Press 1904) (1651).

judging. We investigate this difficulty by drawing upon the psychological literature on the hot-to-cold empathy gap that shows that people have a chronic tendency to underestimate the intensity of a viscerally-charged hot state – states like fear, hunger, fatigue, or pain – that they are not currently experiencing.[2] Applied to present context, this research suggests that lawmakers, judges, and jurors who are currently experiencing some semblance of the hot state that motivates a transgression will judge the state to be more compelling, and the impulsive action underlying the transgression as less blameworthy, than those who are in a neutral state. Thus, we hypothesize that people who are currently experiencing a hot state will be less punitive toward a transgressor whose harmful action was motivated by a similar state.

To empirically test our hypothesis, we present two experiments that provide evidence that the empathy gap influences the severity of punishment assigned to hot state offenses. Across two separate studies that test two distinct hot states – pain and fatigue – we find that people experiencing a hot state assign less severe punishments toward defendants who claim to have acted while experiencing that state. Our findings suggest that current visceral experience is a natural and inextricable part of the judgment process when decision-makers must assign blame and allot punishment for a hot state transgression. Ultimately, this supports the intuition that, despite the fact that the Rule of Law privileges rationality over feeling and empathy, decision makers naturally use their immediate visceral or emotional experiences as a source of information when making judgments and assigning blame.[3]

Our claims in this paper are primarily descriptive. Rather than providing a normative assessment of whether empathy or emotion plays a useful or justifiable role in blaming processes, we hope to provide a more nuanced empirical characterization of how emotions and visceral experiences influence jury decision-making. By doing so, we hope to address an issue that other legal scholars have lamented as a persistent "extreme neglect of emotion within the psychology of

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[2] *See, e.g.,* Loran F. Nordgren et al., *Visceral Drives in Retrospect: Explanations About the Inaccessible Past*, 17 PSYCHOL. SCI. 635, 635 (2007) ("Empirical studies in a number of domains confirm the tendency to underestimate the effect of visceral drives.") (citing George Loewenstein, *Out of Control: Visceral Influences on Behavior*, 65 ORGANIZATIONAL BEHAV. & HUM.DECISION PROCESSES 272, 284–85 (1996)).

[3] Kathryn Abrams, *Emotions in the Mobilization of Rights*, 46 HARV. C.R.-C.L. L.REV. 551, 568-69 (2011) ("Jurors are, by design, members of the lay public, rather than professionals socialized to an objective or dispassionate stance. As such, emotion is often more salient in jury trials than in bench trials or appeals."); Richard A. Posner, *Emotion Versus Emotionalism in Law*, in THE PASSIONS OF LAW at 309, 311 (Susan A. Bandes ed., 1999) ("The idea of emotion as a kind of cognitive shortcut explains why jurors, like children, are more likely to make emotional judgments than judges.").

judging."[4] But, the present project must be distinguished from prior work that endeavors to explain why society legally endorses some emotional excuses and not others,[5] or more normative projects assessing whether emotions can be beneficial to jury decision-making processes.[6] Although we recognize these questions as fascinating and important, the primary question we address in the present project is whether and to what extent an evaluator's present visceral experience affects the way that they perceive and judge the viscerally-motivated actions of a defendant.

In the section that immediately follows, we will review the psychological research on the hot-cold empathy gap, discussing how a person's visceral experience affects their judgments of another's impulsive actions. Then, we will introduce the two empirical studies we used to assess how visceral experience affects punishment for hot state transgressions. Finally, we close with a discussion of what our findings say about the role played by emotionally- or viscerally-charged experiences within the legal blaming process.

I. PSYCHOLOGICAL JUDGMENT OF HOT-STATE TRANSGRESSIONS

As highlighted above, in legal processes of blame and punishment sometimes specifically considers and accounts for a defendant's emotional or visceral state at the time of a transgression. Thus, a lawmaker who is sitting at her desk and considering whether a homicide committed in a sudden fit of explosive anger should be graded as less serious as a homicide committed by poisoning[7] is making a decision while in a cold state. At the same time, the law implicitly assumes that people are able to assess the power and impact of visceral experiences that they are not currently experiencing. In social psychology, this assumption is directly contested by a considerable body of research on a phenomenon called the "hot-cold empathy gap." Research in this area demonstrates that people suffer from a chronic inability to make accurate, abstract assessments about what the experience of aversive hot states entails

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[4] Terry A. Mahoney, *Essay: The Persistent Cultural Script of Judicial Dispassion* , 99 CAL. L. REV. 629, 680 (2011).

[5] Dan M. Kahan & Martha C. Nussbaum, *Two Conceptions of Emotion in Criminal Law*, 96 COLUM. L. REV. 269 (1996).

[6] *See, e.g.,* Irving R. Kaufman, *The Anatomy of Decisionmaking*, 53 FORDHAM L. REV. 1, 16 (1984) ("[O]ur intuition, emotion and conscience are appropriate factors in the jurisprudential calculus.").

[7] The former is typically graded as second-degree murder and the latter as first-degree murder.

and how hot states influence behavior.[8] In this section, we will review this body of research, closing with a discussion of how empathy gaps are likely to affect legal judgments of hot-state transgressions.

Broadly, the hot-cold empathy gap refers to our psychological tendency to underestimate the power and influence of hot states that we are not actively experiencing.[9] The tendency is rooted in our inability to fully recall or imagine what exactly a hot state feels like.[10] As explained in one recent article,

> "[M]uch of sensory experience cannot be freely and fully recollected, making it difficult to objectively imagine what it would be like to experience an aversive state. …Therefore, in attempts to conjure up the experience of a hot state when one is not in such a state, visceral states are only available as simulacrum, stripped of the full panoply of physical and neural fervor that accompanies the experience of a hot state 'in the heat of the moment.'"[11]

In one laboratory study, for example, participants were asked to put a monetary value on pain by naming the amount of money they would have to be paid in order to agree to undergo pain.[12] Some participants made their assessments while actively experiencing pain, holding their arm in a bucket of very cold ice water. Participants in the control condition were asked to make their assessments based on their *memory* of the pain, one week after undergoing the ice water treatment. The participants who named their price while actively experiencing pain demanded significantly higher compensation than the control group. These results comport

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[8] *See, e.g.,* Loren F. Nordgren et al., *Visceral Drives in Retrospect: Exploring Explanations About the Inaccessible Past*, 17 PSYCHOL. SCI. 635, 635 (2007) ("Empirical studies in a number of domains confirm the tendency to underestimate the effect of visceral drives."); George Loewenstein, *Out of Control: Visceral Influences on Behavior*, 65 ORGANIZATIONAL BEHAV. & HUM. DECISION PROCESSES 272, 284-85 (1996).

[9] Mary-Hunter Morris McDonnell, Loran Nordgren & George Loewenstein, *Torture in the Eyes of the Beholder: The Psychological Difficulty of Defining Torture in Law and Policy*, 44 VAND. J. TRANS. L. 87, 92 (2011) (arguing that the hot-to-cold empathy gap "captures the insight… that people who are not currently experiencing a visceral hot state … regularly underestimate its intensity").

[10] *See, e.g.,* Nordgren et al., *supra* note 16, at 76-77 ("[T]hough people can recall the circumstances that led to a visceral drive (e.g., I was hungry because I did not eat all day) and recall the relative strength of a visceral drive (e.g., That was the hungriest I have ever been), they cannot freely bring forth the sensation [of the drive] itself.").

[11] *Id.* at 111-12.

[12] Daniel Read & George Loewenstein, *Enduring Pain for Money: Decisions Based on the Perception and Memory of Pain*, 12 J. BEHAVIORAL DEC. MAKING 1 (1999).

to the general pattern predicted by empathy gap research: people who are actively experiencing a hot state recognize the experience as more powerful and aversive than those who are not actively experiencing a state. Evidencing the empathy gap's robustness and broad application, a similar pattern has been replicated using a diverse range of hot states, including hunger,[13] sexual arousal,[14] fear[15] and drug craving.[16] The gap has also been shown to affect people's applications of legal definitions that involve visceral assessments, such as judgments of whether an enhanced interrogation tactic meets to the torture prohibition's definition of causing "severe physical or mental pain."[17]

In addition to causing people to underestimate the severity of visceral experience, the empathy gap also makes people poor predictors of how hot states affect behavior. For example, in one study examining the empathy gap's application to the visceral experience of fear of embarrassment (i.e., stage fright), researchers asked a classroom of students if they would be willing, in one week's time, to stand before their class and perform an embarrassing mime in exchange for compensation.[18] The researchers predicted that these students would underestimate the aversive nature of this proposed future performance, making them overly confident in their willingness to participate. Confirming this expectation, when the researchers returned one week later to give the students an opportunity to perform the mime, they found that a significantly smaller percentage of students were actually willing to perform than had previously expressed being willing. When this study was repeated to students who were primed to feel fear by watching a scary movie clip, however, a significantly smaller percentage of students

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13 Loran Nordgren et al., *The Restraint Bias: How the Illusion of Self-Restraint Promotes Impulsive Behavior,* 20 PSYCHOL. SCI. 1523 (2009)

14 Dan Ariely & George Loewenstein, *The Heat of the Moment: The Effect of Sexual Arousal on Sexual Decision Making,* 19 J. BEHAV. DECISION MAKING 87 (2006); George Loewenstein, Daniel Nagin, & Raymond Paternoster, *The Effect of Sexual Arousal on Prediction of Sexual Forcefulness*, J. RES. IN CRIME & DELIQ. 443 (1997).

15 Leaf Van Boven et al., *The Illusion of Courage in Social Predictions: Underestimating the Impact of Fear of Embarrassment on Other People*, 96 ORG. BEHAV. & HUM. DECISION PROCESSES 130 (2005).

16 Michael A. Sayette et al., *Exploring the Cold-to-Hot Empathy Gap in Smokers*, 19 PSYCHOL. SCI. 926 (2008).

17 Loran Nordgren, Mary-Hunter Morris McDonnell & George Loewenstein, *What Constitutes Torture? Psychological Impediments to an Objective Evaluation of Interrogation Tactics*, 22 PSYCHOL. SCI. 689 (2011). For a law-oriented companion piece including a more in-depth discussion of the difficulty of creating and applying a torture standard that rests on assessments of hot-state severity, see McDonnell et al., *supra* note 9.

18 Van Boven et al., *supra* note 15.

initially reported being willing to perform the mime in a week's time. This latter result suggests that students who were actually experiencing some semblance of the aversive state that the task entailed were better at predicting how the state would affect their behavior.

Why does the hot-cold empathy gap occur? Psychologists suggest that empathy gaps are within the family of *projection biases*.[19] That is to say, when we are judging the actions or motives of another person (or predicting our own future actions), we instinctively draw on our immediate feelings and desires, projecting those desires onto the subject of our judgment. For example, in one study, participants were asked to make assessments about whether a hypothetical hiker lost in the forest without sustenance would most desire food or water.[20] Before reporting their assessments, half of the study's participants were made to vigorously exercise to induce a state of mild dehydration and thirst. These dehydrated participants were more likely to surmise that the hiker desired water, projecting their own feelings of thirst onto the subject of their judgment. Participants who had not exercised, on the other hand, were more likely to claim that the hiker desired food.[21]

Because we draw upon our current visceral experience when we assess the desires and behaviors of other people, the empathy gap naturally affects the way that we judge the viscerally-induced, impulsive actions of others. When people act impulsively, they often claim that their behavior was compelled by a hot state. The dieter ate a cookie because of his hunger craving; the addict's withdrawal pangs pushed her to commit theft to fund her next fix; the jilted lover's jealous rage prompted him to attack his partner. But, if people who are not experiencing a hot state generally judge that state to be less *compelling*, they are also less likely to judge the impulsive actions of others as being truly *compelled*.

Across a recent set of studies, Loran Nordgren and colleagues demonstrated this aspect of the empathy gap. They argue that impulsive behaviors are often stigmatized due to a general lack of

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19 *See* Leaf Van Boven & George F. Loewenstein, *Social Projection of Transient Drive States*, 29 PERSONALITY & SOC. PSYCHOL. BULL. 1159 (1998) ("[P]eople typically overestimate the similarity between themselves and other people who are in similar situations or faced with similar decisions."); George Loewenstein, Ted O'Donoghue & Matthew Rabin, *Projection Bias in Predicting Future Utility*, 118 Q. J. ECON. 1209, 1210 (2003) "[People] tend to exaggerate the degree to which their future tastes will resemble their current tastes.");

20 Van Boven & Loewenstein, *supra* note 19.

21 *Id.* For a study finding similar results using a sample of children who were either in a neutral state or induced to feel thirsty by being fed salty pretzels, see Cristina M. Atance & Andrew N. Meltzoff, *Preschoolers' Current Desires Warp Their Choices for the Future*, 17 PSYCHOL. SCI. 583 (2006).

appreciation for the force of hot states.[22] In one set of the studies, participants were either brought into a hot state (the experimental group) or not (the control group) and then were asked to read about and evaluate a person who acted impulsively while under that control state. Results across studies involving three different visceral states – fatigue, hunger, and sexual arousal – confirmed the researchers' hypothesis that people experiencing a hot state evaluate the impulsive behavior of others more favorably than people in a neutral state.[23]

In a second project, Nordgren and colleagues explored how visceral experience affects our attributions about the causes of impulsive behavior.[24] In one study, half of the participants were primed to feel fatigued through a difficult mental exercise before. Participants were first asked to read a vignette about a student who did poorly on a test and then blamed his performance on his fatigue. Next, participants were asked to provide their own opinion about the likely reason for the student's poor performance. They found that the students who were feeling fatigue were more likely than the control group to blame the student's performance on fatigue. The control group, on the other hand, was more likely to explain the student's failure in terms of stable attributes, like deficient motivation and poor study skills. Ultimately, this study suggests that people experiencing a hot state are more likely attribute the impulsive behavior of others to the hot state itself (a situational cause), rather than to a character flaw of the impulsive actor (a dispositional cause). When considered in light of recent evidence that negative character attributions tend to prompt more punitive responses from decision makers,[25] the results of this study may be taken to suggest that jury members who are not experiencing a visceral state may be inclined to punish a defendant more severely for a hot-state transgression.

In addition to altering the way that we judge the impulsive actions of others, prior research on the empathy gap also suggests that visceral experience affects the way that we perceive our own impulsive proclivities. Specifically, people who are currently

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[22] Loran F. Nordgren et al., *Evaluating Eve: Visceral States Influence the Evaluation of Impulsive Behavior*, 93 J. PERSONALITY & SOC. PSYCHOL. 75 (2007).

[23] *Id.* at 77 (finding that participants primed to feel fatigued by playing a tiring memorization game gave more positive evaluations of a sleep-deprived mother who loses her temper and directs several racial slurs at a difficult grocery store cashier). S*ee also id.* at 79 (finding that hungry participants evaluated an impulsive eater portrayed in a video more positively than satiated participants, and also made significantly fewer negative facial gestures while watching the video).

[24] Loran F. Nordgren et al., *Visceral Drives in Retrospect: Explanations about an Inaccessible Past*, 17 PSYCHOL. SCI. 635 (2006).

[25] *See* Janice Nadler and Mary-Hunter McDonnell, *Moral Character, Motive, and the Psychology of Blame*, 97 CORNELL L. REV. 257 (2012).

experiencing a hot state may actually see *themselves* as being more likely to commit a harmful impulsive action. This tendency is perhaps best documented in the literature on empathy gaps for sexual arousal. For example, in studies that compared men who were not sexually aroused to those who were sexually aroused, the latter group reported being more likely to behave in a sexually forceful manner should a date protest to having sex,[26] "try[] to have sex after [a] date says 'no'" and "slip a woman a drug to increase the chance that she would have sex…."[27] These studies underline the first-hand, empathic aspect of the response that viscerally-charged jury members may have to a person who has committed a hot-state transgression. Applied to the present context, this research suggests that jury members who are experiencing a hot state may actually see themselves as more similar to the defendant. And, because people tend to use information about their own self when making inferences about others,[28] these jury members may perceive the defendant's actions as less negatively distinguishing, calling for a less severe punishment.

Taken together, past research on the empathy gap provides multi-faceted evidence that people who are experiencing a hot state will be more likely than those in a neutral state to empathize with a defendant who committed a harmful action while experiencing that hot state. Moreover, people who are experiencing a hot-state should judge the state to be more compelling, and the defendant's act as less blameworthy, than people in a neutral state. Ultimately, therefore, we hypothesize that people who are experiencing a hot state will recommend less severe punishments for a hot-state transgression. In the next section, we introduce two original studies employed to test this hypothesis.

III. EXPERIMENTS: TESTING THE INFLUENCE OF VISCERAL STATE ON JUDGING EMOTION-DRIVEN TRANSGRESSIONS

In the two experiments we conducted for this paper, we tested the hypothesis that when we judge a person whose visceral emotional state led them to cause harm, we are less punitive when we are experiencing a similar visceral emotional state than when we are not.

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26 Loewenstein et al., *supra* note 14, at 456.

27 Ariely and Loewenstein, *supra* note 14, at 94.

28 *See, e.g.,* S.J. Hoch, *Perceived Consensus and Predictive Accuracy: The Pros and Cons of Projection*, 53 J. PERSONALITY & SOCIAL PSYCHOL. 221 (1987); R.M. Dawes, *Statistical Criteria for Establishing a Truly False Consensus Effect*, 1 J. EXP. SOCIAL PSYCHOL. 1 (1989); R.M. Dawes, *The Potential Nonfalsity of the False Consensus Effect*, in INSIGHTS IN DECISION MAKING: A TRIBUTE TO HILLEL J. EINHORN 179-99 (1990) (R.M. Hogard, ed.).

This is because the current experience of the visceral state causes the perceiver to understand the effects of that state to be more compelling, and the impulsive action that follows from it as less blameworthy.

A. Experiment 1: Judging Civil Assault Under Fatigue

In this experiment we tested the idea that a person who acts rashly while in a state of fatigue will be judged less harshly when the decision maker is also in a fatigued state at the time of the decision, compared to when the decision maker is in a neutral state. We recruited graduate students in law and business to evaluate a brief vignette involving a doctor who assaulted a nurse during an emergency. The doctor in the story was exasperated and was fatigued from overwork. The student participants read the vignette either before a long evening class (less fatigued) or after (more fatigued).

1. Participants

Participants were 77 law and business students enrolled in one of two graduate level courses on Business Law or Leadership. The class meeting time for both classes was 6pm-9pm. Typically students came to class following a full day of classes and/or work. Participants were assured that their responses would remain anonymous and that we would not collect identifying information. Of the 77 participants, 64% were male, with a mean age of 27 years. Six percent identified as Black/African American, 17% as Asian, 57% as Caucasian, 14% as Hispanic, and 5% as other.

2. Design and Procedure

During each class, we randomly divided participants into two groups. At the beginning of class at about 6pm, every student received a questionnaire. Half received the questionnaire associated with this experiment. The other half received a filler task. At the end of class at about 9pm, every student received another questionnaire. The students who completed the filler task at the beginning of class completed the experiment questionnaire at the end of class; the students who completed the experiment questionnaire at the beginning of class completed the filler task at the end of class. Overall, half the students participated in the experiment at the beginning of class at around 6pm, and the other half participated in the experiment at the end of class at around 9pm; these roles were randomly assigned.

All participants read the following instructions followed by a vignette:

Instructions: You are a jury member assigned to the case of Amanda Taylor vs. Dr. Bob Blair. Ms. Taylor, the plaintiff, is a nurse in the emergency wing of the local hospital. Dr. Blair, the defendant, is a doctor in the same wing. The facts established in the trial are provided below. Please read the facts then answer the questions that follow.

Vignette

Ms. Taylor and Dr. Blair were both working the night shift on the evening of May 3, 2011. Ms. Taylor had only been employed at the hospital for two weeks. A few hours into the shift, one of the patients in the ward – a young man who had been shot in the chest earlier that evening – went into severe cardiac arrest. Dr. Blair was the first to enter the room. Dr. Blair testified that he was on his fourth straight shift and experiencing extreme fatigue at the time, making it more difficult for him to keep his composure under the circumstances. Ms. Taylor testified that when she entered the room Dr. Blair was leaned over the patient and yelled something to her that she did not understand. When she did not respond, Dr. Blair lashed out and struck her on the cheek, yelling "give me a goddamn towel you worthless woman." She testified that no physical injury arose as a result of the incident. She alleges that Blair committed an assault and battery on her. She argues that she should be awarded $1.00 in compensatory damages and $500,000 in punitive damages.

After reading the materials, we asked participants to provide their own opinion about how they would rule in the case. Specifically, participants were asked, "Given the information available to you, what amount of punitive damages would you grant Ms. Taylor?" Participants were also asked to rate the extent to which they believed Dr. Blair intended to strike and injure Ms. Taylor; the extent to which Dr. Blair regularly engages in similar behavior; and the extent to which Dr. Blair's behavior was similar to the behavior of other doctors. All ratings were measured on a scale ranging from 1 (not at all) to 7 (very much).

In order to check whether participants who completed the questionnaire at 9pm (at the end of a workday followed by three hours of class) were more fatigued than participants who completed the questionnaire at 6pm (before the start of class), we asked them to rate the extent to which they currently feel physically tired, mentally tired, and overwhelmed. We asked these questions at the end of the questionnaire. So as to disguise the purpose of the questions, we embedded them in filler questions about their current mood, in which they rated the extent to which they currently feel happy, comfortable, depressed, and excited.

3. Results

Participants' end-of-questionnaire ratings of the extent to which they felt physically tired, mentally tired, and overwhelmed were highly correlated.[29] We combined these into a single measure of fatigue, and found that participants who completed the questionnaire at the end of the three hour class were more fatigued than those who completed it at the beginning of class.[30] This result suggests that any differences between the before and after class experimental groups in their assessment of the case are plausibly attributable to differences in participant fatigue.

Participants judged the amount of punitive damages they would grant Ms. Taylor. Consistent with our hypothesis, more fatigued participants (who responded at the end of class at 9pm) awarded a lower mean amount of punitive damages than less fatigued participants (who responded at the beginning of class at 6pm).[31] (See Figure 1). Consistent with this difference in damage awards, more fatigued participants judged Dr. Blair's action to be less intentional than did less fatigued participants.[32] More fatigued participants also judged Dr. Blair's behavior to be more similar to the average doctor than did less fatigued participants.[33] (See Figure 2).

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[29] Cronbach's alpha = .78.

[30] We note that the difference falls just short of conventional levels of statistical significance. Mean (after class) = 4.26; Mean (before class) = 4.75; $t(75) = -1.52$; $p=.066$ (one-tailed).

[31] Mean (less fatigued) = $140,577; Mean (more fatigued) = $78,574. $t(75) = 1.68$; $p < .05$.

[32] Mean (less fatigued) = 4.00; Mean (more fatigued) = 2.97. $t(75) = 2.68$; $p < .01$.

[33] This difference did not quite reach the conventional level of statistical significance. Mean (less fatigued) = 5.01.; Mean (more fatigued) =4.62. $t(75) = 1.45$; $p < .08$. Participants were also asked to rate the extent to which Dr. Blair regularly engages in this type of behavior. There were no observed differences between groups on this measure.

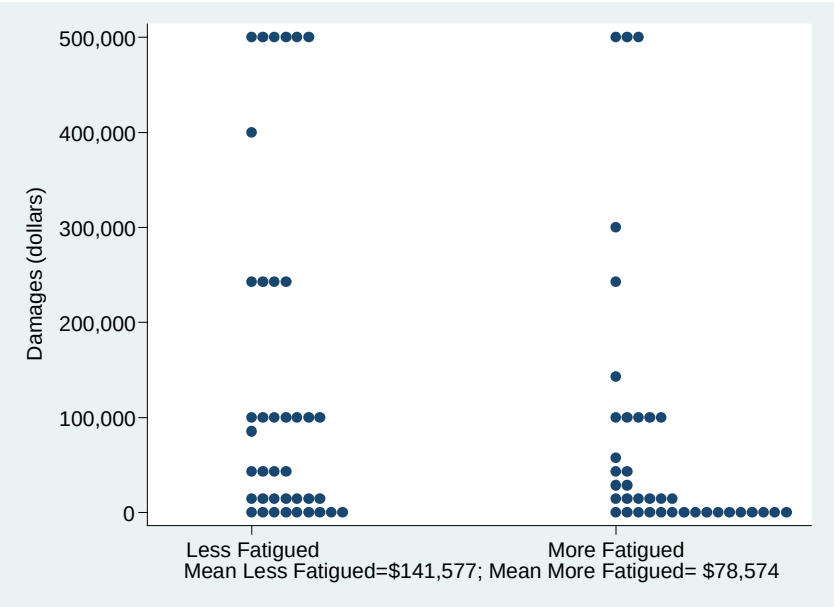

Figure 1. Punitive damage awards by participant fatigue group (Experiment 1).

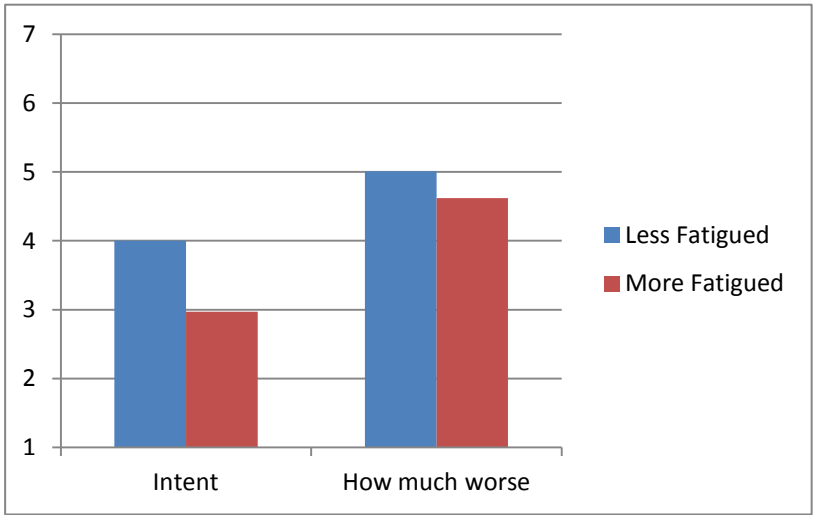

Figure 2. Mean attributions about Dr. Blair by participant fatigue group (1=not at all; 7=very much) (Experiment 1)

4. Discussion

In this experiment we found support for our hypothesis that experiencing a visceral state causes people to be less punitive toward others who cause harm while experiencing the same visceral state. Here, participants who were experiencing fatigue after a full day of work or school, followed by a three hour class that ended at 9pm, were less punitive in the damage award judgment toward a doctor who committed assault while also experiencing the visceral state of fatigue. These lower punitive damage award judgments were supported by participants less extreme judgments of intentionality; participants who were more fatigued judged the doctor's behavior to be less intentional than participants who were less fatigued. Finally, participants who were more fatigued were more inclined to attribute Dr. Blair's behavior to the behavior of a typical doctor in this situation.

B. Experiment 2: Judging Criminal Assault While in Pain

We sought to replicate and extend the findings from Experiment 1 by testing a different visceral state – feeling painfully cold. We presented participants with a vignette in which a teenage runaway seeking shelter from the cold assaulted a homeowner who was trying to eject the teenager from his property. In addition, we sought to explore whether having experienced a visceral state in the past would give rise to the same pattern of results as experiencing the visceral state simultaneously with making punishment judgments. That is, if participants experiencing pain from cold are less punitive toward a defendant who acted rashly in a state of pain from cold, would participants who were previously cold (but no longer) also be less punitive? We conducted Experiment 2 both to explore this question and to test the effects of judging while in a visceral state different from the state tested in Experiment 1.

1. Participants

Participants were 133 undergraduate students who participated in exchange for $5. Participants were assured that their responses would remain anonymous and that we would not collect identifying information. Of the 133 participants, 40% were male, with a mean age of 20 years.

2. Design and Procedure

Upon arriving at the laboratory, each participant was escorted to a small private room. In each room was a bucket filled with water. In the Cold condition and the Delayed Cold condition, the bucket was

filled with ice water. In the Warm condition, the bucket was filled with room temperature water. Each participant was informed that the researchers were interested on the effects of body temperature on decision making, and each was asked to immerse their arm up to their elbow in the bucket of water. In the Cold and Warm conditions, participants read the vignette (described below) and answered the questions pertaining to the vignette, all while their arm was submerged in the bucket of water. In the Delayed Cold condition, participants submerged their arm in the ice water for five minutes. After they removed their arm from the water, they completed a filler task (a soduku puzzle) which took about 10 minutes. After completing the filler task, the Delayed Cold condition participants read the vignette and answered the questions. Assignments to Cold, Delayed Cold, and Warm condition were random.

All participants were presented with the following materials:

> Instructions: You are a jury member assigned to the case of State vs. Jennifer Smith. The facts established in the trial are provided below. Please read the facts then answer the questions that follow.
>
> *Vignette*
>
> Jennifer Smith, a 16 year-old who ran had away from home, was living on the streets of Minneapolis. On the night of December 3, there was a snowstorm in Minneapolis and temperatures fell well below freezing. After spending three hours on the street, Ms. Smith took refuge in the open garage of Robert Blanchard's single family home. When Mr. Blanchard arrived home and discovered Ms. Smith on his property, he ordered her to leave. Ms. Smith refused. Mr. Blanchard then took Ms. Smith by the arm to escort her out of the garage and Ms. Smith attacked him, striking him with her fist twice in the stomach. Ms. Smith is now being charged with criminal assault.

After reading the instructions and the vignette, participants were asked to rate the extent to which Jennifer intended to strike and harm Mr. Blanchard, and the extent to which she regularly behaves in similar behavior. Participants rated the likelihood that they would behave in the same way if they were in Jennifer's situation, and the extent to which they agree that Jennifer is a violent person (1=not at all; 7=very much).

To gauge participants' punitiveness toward Jennifer, they answered the following question: "In Minnesota, sentences for a minor committing criminal assault range from 3 days to 1 year in juvenile detention. What length of time would you recommend is appropriate for the crime she committed? Please write your answer in the blank below." Participants then indicated the extent to which they feel toward Jennifer: sympathy, compassion, anger, disgust, contempt, and similarity (1=not at all; 7=very much). The similarity

measure was presented with a depiction of increasingly overlapping pairs of circles representing self and other, and participants were asked to indicate the pair of circles that best represented how similar they were to Jennifer. Finally, before providing demographic participants rated their current discomfort using a faces pain scale that ranged from 0 to 5. At this point, participants in the Cold and Warm conditions were instructed to remove their arm from the water. Participants in the Delayed Cold condition had removed their arm prior to answering the questions, and so completed the discomfort scale about 15 minutes after they removed their arm from the ice water.[34]

3. Results

The cold water manipulation successfully induced discomfort in the Cold condition (Mean=3.92) compared to the Warm condition (Mean = 0.96). In the Delayed Cold condition, participants had removed their arm from the ice water about 15 minutes prior to rating their current discomfort (Mean=1.31). The cold water manipulation produced statistically significant differences in perceptions of discomfort.[35]

Warm v. Cold Evaluations of Jennifer

Participants who were experiencing painful cold at the time they evaluated the vignette were less punitive toward Jennifer than participants who had not experienced any painful cold. The measure of sentence length (days in juvenile detention) was distributed non-normally, so we used a Wilcoxon rank sum test (also known as the Mann-Whitney test) and determined that participants in the Cold group did in fact assign lower sentence length (M=38.4 days) than participants in the Warm group (M=49.3 days).[36] Supporting this lower level of punitiveness, Cold group participants perceived Jennifer as acting less intentionally when she struck Robert, compared to Warm group participants.[37] Cold group participants also perceived Jennifer as less likely to regularly engage in similar behavior,[38] and as a less violent person than Warm group

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[34] All procedures in the study were approved by the Institutional Review Board at Northwestern University.

[35] $F(132)=148.93$; $p < .001$.

[36] $z=-2.13$; $p < .05$.

[37] $M(Cold) = 3.83$; $M(Warm) = 4.65$; $t(86) = 2.87$; $p < .01$

[38] $M(Cold) = 2.64$; $M(Warm) = 3.41$; $t(86) = 2.73$; $p < .01$

participants.[39] Finally, Cold group participants thought it was more likely that they would behave the same way as Jennifer if they were in her situation, compared to Warm group participants.[40]

Delayed Cold Evaluations of Jennifer

A third group of participants had experienced painful cold that ended about 10 minutes prior to evaluating the vignette. Interestingly, these participants were the most punitive toward Jennifer of all three groups. The mean response for days in juvenile detention was 90.64, substantially higher than the mean responses in the Cold and Warm groups (see Figure 3).[41]

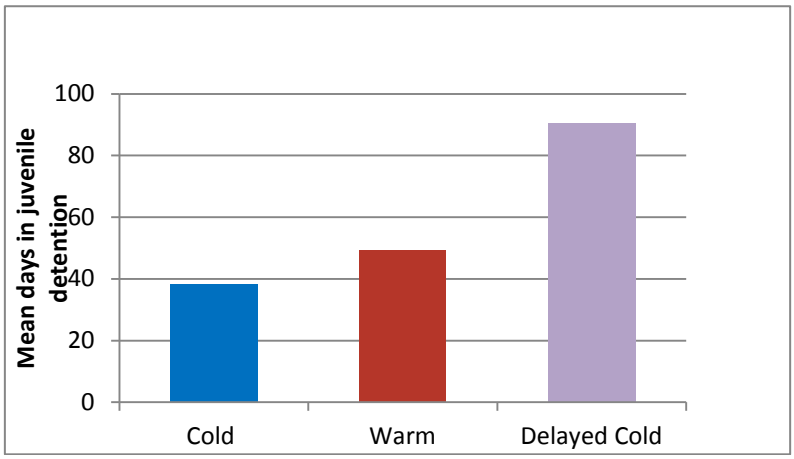

Figure 3. Mean ratings of days in juvenile detention for Jennifer, by pain condition (Experiment 2).

Consistent with this finding, Delayed Cold participants' attributions of Jennifer's motivations matched more closely the Warm participants than the Cold participants. Planned contrasts revealed that Delayed Cold participants' judgments of Jennifer's intent, propensity for violence, whether she regularly engaged in such behavior, and whether they themselves would have behaved similarly were not significantly different from Warm participants' judgments. On the other hand, the Delayed Cold participants' judgments on these

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[39] M(Cold) = 3.14; M(Warm) = 3.63; $t(86) = 1.67$; $p < .05$

[40] M(Cold) = 3.95; M(Warm) = 2.76; $t(86) = -3.47$; $p < .001$

[41] Kruskal-Wallis $X^2(2) = 5.58$; $p = .06$.

measures was higher than that of the Cold participants' judgments.[42] These comparisons are depicted in Figure 4.

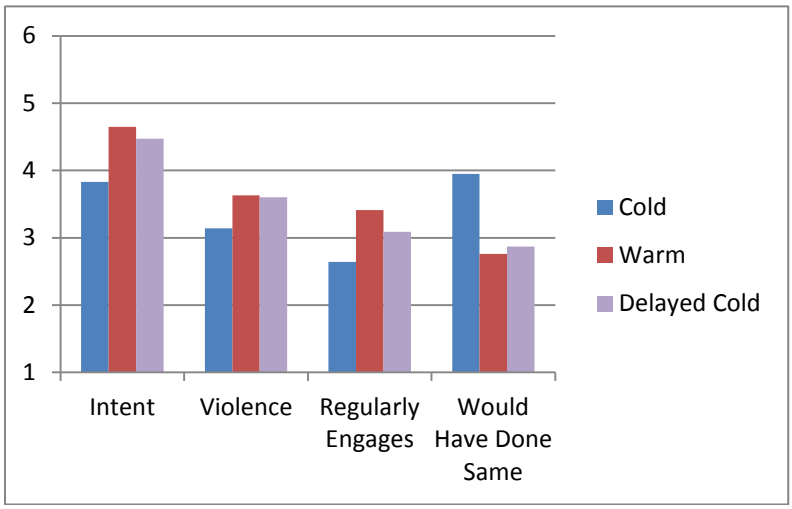

Figure 4. Mean attributions about Jennifer by pain condition (Experiment 2).

Participants were asked to rate the extent to which they feel sympathy and compassion toward Jennifer. There were no differences between groups observed for these measures. Participants also rated the extent to which they felt anger, disgust, and contempt toward Jennifer. These measures were highly correlated[43] and we combined them into a single measure of negative moral emotion. Participants in the Cold condition expressed less negative moral emotion toward Jennifer than participants in the Warm or Delayed Cold conditions.[44] The pain manipulation significantly influenced the extent to which they saw themselves as similar to Jennifer, with Cold condition participants feeling more similar, and Warm and Delayed Cold condition participants feeling less similar.[45] The emotion and similarity measures are depicted in Figure 5.

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[42] Two of these differences reached conventional levels of statistical significance and two did not. Intent: $F(1, 130) = 4.30$; $p < .05$; Violence: $F(1, 130) = 2.28$; $p = .13$; Regularly Engages: $F(1, 130) = 2.32$; $p = .13$; Would Have Done Same: $F(1, 130) = 9.98$; $p < .01$.

[43] Cronbach's alpha = .83.

[44] $F(2, 130) = 2.57$; $p = .08$.

[45] $F(2, 130) = 6.93$; $p < .01$.

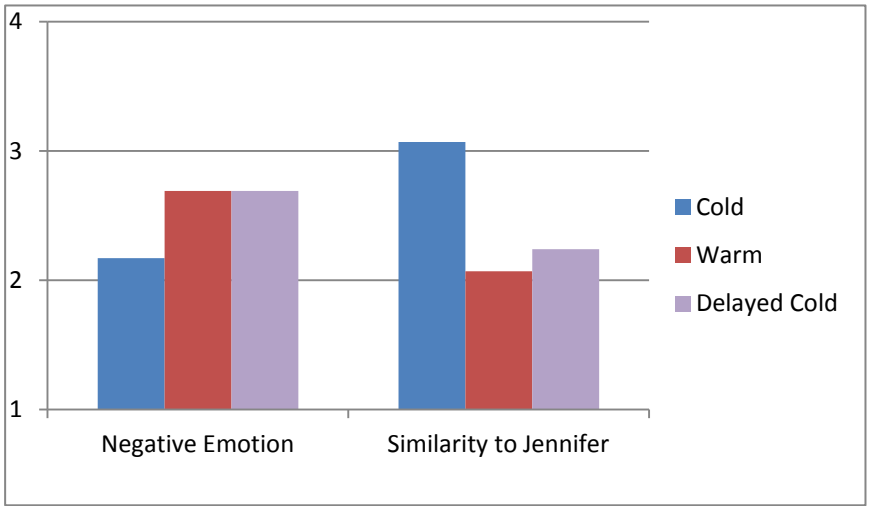

Figure 5. Mean ratings of Negative Emotion (composite of Anger, Disgust, and Contempt), and mean ratings of participant similarity to Jennifer, by pain condition

IV. Discussion and Conclusion

In two experiments, we demonstrated that a viscerally motivated transgression is evaluated differently depending on the visceral state of the observer who is judging the transgression. A fatigued and overworked doctor who lashes out and slaps a nurse during an emergency was evaluated more empathically by observers who were themselves fatigued, compared with observers who were not as fatigued. Greater levels of empathy emerged through several measures. First, the fatigued observers perceived the doctor as having acted less intentionally. Fatigued participants reading about the actions of the fatigued doctor were more likely to infer that he did not mean to injure the nurse. Perhaps fatigued participants imagined that the fatigued doctor lashed out in an automatic and uncontrolled way, and as such, any punishment imposed out to be mitigated to reflect this circumstance. Consistent with this, compared to less fatigued participants, more fatigued participants awarded lower mean punitive damages, reflecting the idea that less intentional harmdoing calls for lower levels of punishment. Whether the more fatigued participants first inferred lack of intention which led them to assign lower mean levels of punishment, or whether, conversely, the punishment judgment came first and intentionality judgments were marshaled later to bolster the initial punishment judgments, is unclear. Indeed the general question of whether blame and desert is assessed early as a gut reaction, or later after inferences about

mental state and causation or assessed, is a matter of some controversy.[46]

A fatigued observer therefore is inclined to attribute the harmful behavior of a fatigued actor in terms of the situation – to these observers it was the perhaps pressures of the emergency situation, the stress of having worked multiple consecutive shifts, and the cognitive impairment resulting from lack of sleep that contributed to Dr. Blair's unfortunate impulse to lash out and slap the nurse. Accordingly, Dr. Blair was not much different than any other doctor under that particular set of circumstances – any other doctor might have done the same thing. Thus, the more fatigued participants rated Dr. Blair as more similar to other doctors than did the less fatigued participants.

Observers who themselves were experiencing pain from cold were similarly empathetic with a teenage runaway who was seeking shelter from the pain of cold and lashes out against the person ejecting her from shelter. Exposure to painfully cold ice water caused these observers to assign less punishment in juvenile detention to Jennifer than observers who were not experiencing pain or discomfort. Accordingly, observers in discomfort also perceived Jennifer as having acted less intentionally, less violent as a person, and less likely to regularly engage in the observed behavior, compared to participants who were physically comfortable while making these ratings. An observer experiencing physical discomfort from cold therefore is inclined to attribute the harmful behavior of a physically cold person to the situation – to these observers it was perhaps Jennifer's desperation to be warm and seek shelter that led her to lash out against the homeowner, and others in that situation might have done the same. Indeed painfully cold observers recognized that they themselves might have done the same as Jennifer, at least to a greater extent than observers who were comfortable. It is not surprising, then, that observers in pain reported feeling less anger, disgust, and contempt for Jennifer than did observers not experiencing physical discomfort. When observers in pain rated their similarity to Jennifer, they indicated that they felt more similar to

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[46] *Compare* Mark D. Alicke, *Culpable Control and the Psychology of Blame*, 126 PSYCHOL. BULL. 556, 557 (2000)(asserting that people blame early, then justify the blame assessment by pointing to corresponding levels of foreseeability, intent, and causation), *and* Jonathan Haidt, *The Emotional Dog and Its Rational Tail: A Social Intuitionist Approach to Moral Judgment*, 108 PSYCHOL. REV. 814 (2001) (moral judgment is caused by quick moral intuitions about the goodness or badness of an act), *with* Fiery Cushman, *Crime and Punishment: Distinguishing the Roles of Causal and Intentional Analyses in Moral Judgment*, 108 COGNITION 353 (2008) (punishment judgments rely on judgments about intention and causality), *and* Bertram F. Malle et al., *Moral, Cognitive, and Social: The Nature of Blame*, *in* SOCIAL THINKING AND INTERPERSONAL BEHAVIOR (Joseph P. Forgas et al. eds., 2012) (mental state judgments guide blame).

her than did the participants who had not experienced discomfort. These responses taken together suggest that increased empathy for Jennifer explains the reduction in punitiveness exhibited by the Cold condition participants. When we physically feel what a transgressor felt during the transgression, we find it easier to understand why the transgressor did what she did.

Perhaps the most surprising finding was that participants who had experienced pain from cold 10-15 minutes earlier were the most punitive of all – they assigned substantially more punishment in juvenile detention to Jennifer, on average, than both other groups. What explains the fact that previously cold participants were more punitive not only than currently cold participants, but also than participants who had never experienced discomfort at all? The responses to the questions about Jennifer's intentionality, propensity for violence do not provide a complete explanation, because on these responses the Delayed Cold condition participants are similar to the Warm condition participants. The same pattern obtained for the moral emotion and similarity measures. Thus, these process measures of perceptions of intentionality, violence, and similarity suggest that the empathic influences of current pain dissipate within the 10 minute waiting period between the time of removal of the arm from the bucket of ice water, and the responses to the measures. On this account, then, current visceral states induce empathy, but the end of the visceral state causes the end of empathic responding.

However, this is not what is suggested by the punishment judgments. Instead, the punishment judgments of previously cold participants were substantially higher even than the Warm condition participants. So, even though impression formation measures returned to baseline, a lingering retributive motive not only remains, but rather increased with the passage of time (here, 10 minutes).

This unusual finding needs to be replicated to ensure its reliability. But assuming for the moment that the finding is robust, it suggests that people who experienced a visceral state in the past might more harshly judge defendants who behave badly while in that visceral state. In the second experiment, participants in the Delayed Cold condition might have felt on the one hand that they have unique insight into how Jennifer was feeling, and on the other hand they know that it is possible to overcome the experience of pain from cold without lashing out and hurting someone else. The Delayed Cold condition participants might have reasoned that they overcame their tribulation with no harmful outcome, so Jennifer should have too. This, however, is mere speculation at this point, because nothing in the data, besides the punishment judgments themselves, supports this explanation for the harsh punishment judgments imposed by this group.

Limitations

Both experiments used student participants, so the usual caveats apply. These findings should be replicated with non-student participants to increase confidence in their reliability. It is worth noting, however, that three different types of students participated in these two experiements: undergraduates, graduate law students, and graduate business students. There was therefore some degree of variation in age, as well as background and ethnicity among these participants.

In Experiment 1, we checked to ensure that participants who completed the experimental questionnaire after class reported feeling more physically tired, mentally tired, and overwhelmed than participants who completed it before class. This result suggests that any differences between the before and after class experimental groups in their assessment of the case are plausibly attributable to differences in participant fatigue. However, we induced fatigue using the passage of time, and so it is theoretically possible that differences between the before and after class groups are attributable to other factors. Other possible factors influencing responses are that the after class group may have been influenced by other visceral states such as hunger; or they may have been influenced by something they heard in class. The first alternate explanation – that a different visceral state caused the differences in responses – is unlikely, because other research on visceral states suggests that empathic responses are state specific. Thus, a hungry person will be more empathic to a defendant who acts on an impulse influenced by hunger, but not by other forms of impulse.[47] This suggests that it is the visceral state of fatigue that best explains the pattern of results in Experiment 1.

It is theoretically possible that the fatigue manipulation in Experiment 1 also might have been contaminated by the content of the class lecture material. This is unlikely, however, because the data come from class lectures from two different courses (Leadership and Business Law) and neither class lecture was relevant to the vignette or the questionnaire in Experiment 1. Finally, the pain manipulation in Experiment 2 was isolated from other possible influences, and both experiments showed the same pattern of results. Our assessment, therefore, is that the other possible explanations are less plausible than our theoretically generated explanation that fatigue is the main factor explaining the differences in responses between groups in Experiment 1.

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[47] See Norgdren et al, supra note 28.

Implications for Law

The law discourages harm to others through doctrines imposing liability and punishment for assault and homicide. Trangressors who act out of impulse while in a visceral state sometimes feel like they could not stop themselves. While the law does not fully credit this explanation, imposing some degree of liability and punishment regardless of the transgression's justification, the law sometimes mitigates punishment or reduces liability in recognition of the fact that the defendant's acts were driven by strong emotions, or were a response to a visceral state, especially if the victim contributed to the defendant's being in that state. Most directly, the law of voluntary manslaughter provides reduced liability for a homicide committed when the defendant killed in the heat of passion after being provoked in some way by the victim. The Model Penal Code dispenses with the provocation requirement, and provides mitigation from murder to manslaughter when the defendant kills in a state of "extreme emotional or mental disturbance for which there is a reasonable explanation or excuse." The law of manslaughter represents an explicit recognition that the experience of a visceral state can make us less blameworthy than we otherwise would be.

Other doctrines also recognize and credit the mitigating influence of visceral states, though less explicitly. For example, under the doctrine of self defense, a defendant is justified in using force against another (and in some circumstances is justified in killing) if he believes it is necessary to protect himself. Although it is not explicit, self-defense is a doctrine about assaulting or even killing while in a visceral state of fear. Note that the fear must be justified by an actual (or at least reasonably perceived) threat. But interestingly, justified fear can provide a complete defense, rather than mitigation, to assault or homicide.

These doctrines are recognized by people not currently experiencing the visceral state in question –thus, even when we are not currently experiencing rage or fear, we understand and accept that we mitigate or justify harm to others that satisfies the requirements of voluntary manslaughter or self-defense, respectively. Thus, experiencing a visceral state is not a necessary condition for empathizing with it. At the same time, legal doctrine does not explicitly recognize mitigation for a host of other visceral states that motivate harmful wrongdoing, whether it is a slap in the face committed by an overworked, overtired doctor, a blow struck by a cold, frightened teenage runaway, or a host of other situations. One question then, is why the law does provide, and whether it should provide, mitigation or justification for only the specific circumstances of visceral experience currently recognized, and not for others.

In any event, the question of punishment – whether in the form of punitive damages or criminal sentencing -- involves discretion. And

it is here that the decision maker's propensity to put herself in the shoes of the defendant is likely to make a difference in judgment. A decision maker who takes the perspective of the defendant to the extent that she feels the same emotion the defendant felt at the time of the act is likely to mitigate punishment. Importantly, a decision maker who experiences an incidental visceral state similar to that experienced by the defendant at the time of the harm might assign less punishment as a result. Thus, a judge craving a cigarette during a long hearing might empathize more with a defendant who committed an offense while under the influence of a drug craving. A juror experiencing fatigue from long hours of listening to testimony or deliberating might empathize more with a defendant who assaulted while overworked and overtired. A judge who experiences chronic back pain while on the bench might assign less punishment to a defendant who lashed out and assaulted someone while in pain.

The results of Experiment 2 suggest a possible backlash for decision makers who once experienced, but are no longer experiencing, a visceral state. Thus, a judge who knows what it is like to experience chronic physical pain but is not currently in pain might be more punitive toward a defendant who acted impulsively while in pain, compared to a judge with no prior or current pain experience. This result is a promising candidate for further research in order to replicate and further explore its implications and reach.