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What Constitutes Torture? Psychological Impediments to an Objective Evaluation of Enhanced Interrogation Tactics

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Abstract

Torture is prohibited by statutes worldwide, yet the legal definition of torture is almost invariably based on an inherently subjective judgment involving pain severity. In four experiments, we demonstrate that judgments of whether specific interrogation tactics constitute torture are subject to an empathy gap: People who are experiencing even a mild version of the specific pain produced by an interrogation tactic are more likely to classify that tactic as torture or as unethical than are those who are not experiencing pain. This discrepancy could result from an overestimation of the pain of torture by people in pain, an underestimation of the pain of torture by those not in pain, or both. The fourth experiment shows that the discrepancy results from an underestimation of pain by people who are not experiencing it. Given that legal standards guiding torture are typically established by people who are not in pain, this research suggests that practices that do constitute torture are likely to not be classified as such.

Keywords

torture, empathy gaps, pain

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Nearly all nations condemn the use of torture (de Wet, 2004). Yet in contrast to the consensus over its prohibition, there is considerable disagreement over what specific acts constitute torture. Most laws define torture in terms of the severity of pain the act produces. The United Nations (1984) Convention Against Torture—ratified by more than 150 countries—defines torture as the infliction of severe physical or mental pain or suffering (Article 1.1). Nearly all country-specific standards similarly define torture in terms of pain severity. Consequently, determining whether a particular interrogation tactic constitutes torture requires an accurate assessment of how much pain the tactic inflicts.

Because policymakers do not subject themselves to interrogation before assessing its permissibility, in evaluating interrogation policies they must predominantly rely on their subjective intuitions about how painful the experience seems. This ambiguity in judging torture policy has become particularly acute with the increased use of “enhanced interrogation techniques,” such as prolonged sleep deprivation, social isolation, and exposure to cold temperatures, that are intended to

induce physical and psychological distress without inflicting enduring harm (Wolfendale, 2009). Because such a tactic produces no physical trace, judging the severity of suffering becomes purely a matter of judging what is going on in the mind of the person on whom the act is performed.

Yet emerging research on the hot-cold empathy gap (Loewenstein, 1996) challenges the assumption that people who are not actively experiencing a particular interrogation tactic (and likely never have experienced it) can accurately judge the degree of pain that tactic inflicts. The notion of a hot-cold empathy gap captures the idea that people who are not actively experiencing an emotional or visceral state (e.g., pain) generally underestimate that state’s motivational force and intensity. Numerous studies supporting this view have documented that people who are not actively experiencing physical or mental

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pain tend to underestimate pain's severity. For example, the medical literature has consistently reported that physicians underestimate the severity of their patients' pain (Kappesser, Williams, & Prkachin, 2006; Marquie et al., 2004; Pasero & McCaffery, 2001), and that patients themselves underestimate the severity of the pain that upcoming medical procedures will produce (Christensen-Szalanski, 1984). Laboratory studies have similarly demonstrated that individuals who are not actively experiencing physical pain dramatically underestimate the severity of both past and future painful events (Nordgren, van der Pligt, & van Harreveld, 2006; Read & Loewenstein, 1999). And a recent study on perceptions of ostracism found that people also experience empathy gaps for psychological pain: People who are not actively feeling socially excluded have great difficulty appreciating the severity of the experience (Nordgren, Banas, & MacDonald, in press).

Applying the empathy gap to judgments of torture, we predicted that people who are not actively experiencing physical or psychological pain will underestimate the severity of interrogation practices designed to inflict pain—a psychological impediment that may increase the likelihood that enhanced interrogation practices are judged to be morally or legally acceptable. To test this prediction, we asked participants in three studies to evaluate the pain severity of three common interrogation techniques—exposure to cold temperatures, sleep deprivation, and solitary confinement.¹ Some participants made their evaluation without actually experiencing the distress of the interrogation tactic (as is generally the case), whereas others made the same evaluation while experiencing a mild version of the specific form of pain produced by the tactic, and were thereby brought closer to the actual experience of torture.

We argue that experiencing a small dose of the specific pain produced by an interrogation tactic provides a more realistic understanding of how torture is experienced. Therefore, judgments of torture that are made in a state of pain are more fully informed, and hence more valid, than those made in the absence of pain. Although this reasoning is consistent with the literature on pain perception that we have just reviewed, a discrepancy between judgments made by people in pain and those made by people not in pain could also be produced by an overestimation of pain severity by people who are themselves in pain. To rule out this possibility, in a final study we tested a less severe interrogational practice (standing outside in the cold), which allowed us to compare the ratings of participants who imagined what the practice would be like with the ratings of participants who actually experienced the practice.

Study 1: Solitary Confinement

Study 1 examined whether the empathy gap influences the evaluation of solitary confinement, a practice that is commonly used in military and civilian detention centers. Solitary confinement is an aversive experience because people have a fundamental need for social contact and can experience severe

distress when this need is unmet (Baumeister & Leary, 1995). Considerable evidence suggests that the pain derived from social distress shares phenomenological, neurological, and psychological correlates with physical pain (Eisenberger, Lieberman, & Williams, 2003; MacDonald & Leary, 2005). And recent research has shown that people experience empathy gaps for psychological pain much as they do for physical pain (Nordgren et al., in press). On the basis of this evidence, we predicted that participants who were actively experiencing social pain would judge solitary confinement to be more painful and less ethical than would participants who were not experiencing social pain.

Method

Eighty-eight undergraduates from Northwestern University (53 female, 35 male) participated in return for \$8 and were randomly assigned to one of three experimental conditions. We induced social pain through a social exclusion manipulation (Williams, Cheung, & Choi, 2000). Participants in the two treatment conditions played an online ball-toss game, ostensibly with two other players, though in fact the action of the game was preprogrammed. Participants in the *no-pain condition* received the ball on one third of the throws; those in the *social-pain condition* received the ball 10% of the time. Participants in the *control condition* did not play the game.

Next, to avoid suspicion, we told participants that they would complete a second, unrelated study. They were given a brief description of solitary-confinement policies in U.S. jails and were asked to estimate the severity of pain they would experience in prolonged solitary confinement. Responses were made on the Faces Pain Scale-Revised (Bieri, Reeve, Champion, Addicoat, & Ziegler, 1990), a common scale for measuring pain intensity. Finally, participants were asked to indicate, on a dichotomous scale, “whether you support or oppose the use of prolonged solitary confinement in U.S. jails.”

Results

Participants in the social-pain condition perceived the pain of solitary confinement to be more severe ($M = 8.23$, $SD = 1.47$) than did both participants in the no-pain condition ($M = 7.30$, $SD = 1.36$), $F(1, 58) = 6.44$, $p = .01$, and participants in the control condition ($M = 7.25$, $SD = 1.14$), $F(1, 56) = 7.95$, $p = .007$. Responses to the question regarding support for the use of prolonged solitary confinement in U.S. jails were also consistent with the empathy-gap hypothesis. Well over half (63%) of the participants in the social-pain condition opposed the use of prolonged solitary confinement, whereas roughly a third of the participants in the no-pain condition (33%) and the control condition (36%) opposed the use of prolonged solitary confinement, $\chi^2(2, N = 88) = 6.70$, $p = .04$.

Of course, our manipulation of social pain produced much less distress than one would actually experience after prolonged social isolation. Thus, Study 1 was a conservative test

of our predictions, and the results suggest that if participants experienced the full severity of solitary confinement, even fewer would support its practice.

Study 2: Sleep Deprivation

Sleep deprivation is a common interrogation tactic (Lelyveld, 2005). Study 2 tested whether participants' own state of fatigue would influence their assessment of sleep deprivation as a method of interrogation. To enlist sleep-deprived participants, we conducted a field experiment in a part-time M.B.A. night course. The students taking this course had full-time day jobs and were therefore generally very tired by the end of class. Participants were given a description of an interrogation session in which the detainee was deprived of sleep for 48 hr. To manipulate fatigue, we gave the questionnaire to half the students at the beginning of class and to the other half at the end of class. We predicted that fatigued participants would rate sleep-deprivation-based interrogation to be more painful and thus less ethical than would nonfatigued participants.

Another goal of Study 2 was to rule out an alternative mechanism that could explain the impact of pain on judgments of interrogation. We argue that this effect results from the enhanced perspective taking of people experiencing pain, but it is possible that, instead, the arousal itself influences judgment. For example, if pain alters mood, this might account for the observed effect. To rule out this explanation, we had participants in Study 2 evaluate a second interrogation scenario that did not involve sleep deprivation (but rather involved temperature-based interrogation practices). If the sleep-deprivation manipulation affected judgments of the sleep-deprivation-based technique as a result of enhanced perspective taking, as we predicted, then we would observe no difference between conditions in evaluations of the cold-temperature interrogation.

Method

One hundred nine part-time M.B.A. students (39 female, 70 male) participated in return for course credit. Half of the participants received the questionnaire at the beginning of class (at 6 p.m.), and half received it at the end of class (at 9 p.m.). Participants were given a description of an interrogation session in which a suspected criminal was deprived of sleep for 48 hr and were then asked to indicate how painful the sleep deprivation in this scenario would be (with the pain scale, Bieri et al., 1990, used in Study 1). They were also asked, "How ethical was the sleep-deprivation method employed in this scenario?" and responded on a 7-point scale (from 1, *completely ethical*, to 7, *completely unethical*).

Participants then received a scenario involving an interrogation in which a detainee wearing little clothing was kept in a nearly freezing room for up to 5 hr at a time. They were asked to rate the pain and ethicality of this form of interrogation. Finally, we measured participants' mood, using the Positive and

Negative Affect Schedule (Watson, Clark, & Tellegen, 1988), and the extent to which participants were sleep deprived. Our measure of sleep deprivation consisted of the following two questions: "How tired do you feel right now?" and "How difficult is it for you to stay awake?" Both questions were answered using a 7-point scale (from 1, *not at all tired/difficult*, to 7, *extremely tired/difficult*). Cronbach's alpha was .84. We measured sleep deprivation last to avoid cuing awareness of the purpose of the study, thereby minimizing demand effects.

Results

The manipulation was successful. Participants who filled out the questionnaire at 6 p.m. were less fatigued ($M = 3.50$, $SD = 1.14$) than were participants who filled out the questionnaire at 9 p.m. ($M = 4.13$, $SD = 1.42$), $F(1, 108) = 6.34$, $p = .01$. Moreover, mood did not differ between the two conditions, $p > .05$.

In separate 2 (condition: fatigued vs. nonfatigued) \times 2 (scenario: sleep deprivation vs. cold temperature) ANOVAs, we found the predicted interaction for ratings of pain severity, $F(1, 104) = 3.46$, $p = .06$, and ethical evaluation, $F(1, 104) = 5.14$, $p = .03$. Specifically, fatigued participants judged sleep deprivation to be more painful ($M = 6.17$, $SD = 1.53$) than did nonfatigued participants ($M = 5.14$, $SD = 1.48$), $F(1, 105) = 12.43$, $p = .001$. Fatigued participants also evaluated sleep deprivation to be more unethical ($M = 4.48$, $SD = 1.51$) than did nonfatigued participants ($M = 3.86$, $SD = 1.48$), $F(1, 105) = 4.54$, $p = .04$. However, fatigued ($M = 5.42$, $SD = 1.39$) and nonfatigued ($M = 5.14$, $SD = 1.45$) participants did not differ in their evaluation of the pain of temperature-based interrogation, $p = .30$. Nor were differences observed in how fatigued ($M = 3.66$, $SD = 1.27$) and nonfatigued ($M = 3.92$, $SD = 1.49$) participants evaluated the ethics of temperature-based interrogation, $p = .34$.

Finally, we examined whether pain ratings mediated the correlation between sleep deprivation and ethical judgment for the sleep-deprivation scenario, $r(109) = .39$, $p = .001$. We found that the association between fatigue and judgments of ethicality could be fully explained by the impact of fatigue on perceptions of pain severity (Sobel test of mediation, $z = 4.40$, $p = .001$).

Study 3: Exposure to Cold Temperatures

In the first two studies, we found that people who were not actively experiencing pain judged interrogation tactics to be less severe than did participants who were experiencing pain. The goal of Study 3 was to examine whether past experience helps bridge this gap. This is a crucial point because during their training, professional interrogators generally undergo mild versions of enhanced interrogation, which may give them better insight into the severity of such practices.

Study 3 examined this issue in the context of exposure to cold temperatures. We examined whether participants who

were actively feeling cold would have reduced tolerance for interrogation tactics that involved subjection to cold temperatures. Participants were randomly assigned to conditions in which they experienced cold temperatures while they made their assessments, did not experience cold temperatures while they made their assessments, or made their assessments 10 min after experiencing cold (i.e., they no longer felt cold). This latter condition was included to test whether people need to actively experience pain in order to appreciate its severity, or whether recent personal experience is sufficient. It also helped to rule out demand effects, because participants in this condition and the first condition were both exposed to cold temperatures before making their judgments. We predicted that only participants who were actively experiencing cold temperatures would have a heightened appreciation for the severity of cold-temperature interrogation.

Method

Seventy-three Northwestern University students (48 female, 25 male) participated in return for \$8. They were randomly assigned to one of three conditions. In the *cold condition*, participants placed their nondominant arm in a bucket of ice water kept at roughly 40 °F while they completed the cold-exposure questionnaire. Participants in the *control condition* held their nondominant arm in room-temperature water while they completed the cold-exposure questionnaire. In the *prior-cold condition*, participants held their nondominant arm in a bucket of ice water while they completed an unrelated questionnaire. After removing their arm from the ice water, they answered a 10-min filler task and then completed the cold-exposure questionnaire.

The cold-exposure questionnaire asked participants to imagine the following scenario: “Exposing detainees to cold weather is a common interrogation tactic. This tactic involves keeping a detainee in a near freezing room with little clothing on for up to five hours at a time.” This description is reminiscent of “cold cell” tactics that have been used extensively by the U.S. military. After reading the description, participants used the Faces Pain Scale-Revised (Bieri et al., 1990) to estimate the severity of pain that this tactic would produce. Next, they were asked to indicate which of four categories best represented the cold-exposure interrogation:

- *Questioning*: The method is always acceptable.
- *Interrogation*: The method is acceptable whenever there is probable cause to believe that a suspect has information pertinent to a crime.
- *Oppressive interrogation*: The method is acceptable for use only when necessary to avoid imminent harm in the most extreme circumstances.
- *Torture*: This is an unacceptable method under any circumstance.

Results

Results were consistent with the empathy-gap hypothesis. Participants in the cold condition judged this tactic to be more painful ($M = 6.41$, $SD = 0.78$) than did participants in both the control condition ($M = 5.62$, $SD = 1.34$), $F(1, 46) = 6.23$, $p = .02$, and the prior-cold condition ($M = 5.48$, $SD = 1.05$), $F(1, 47) = 12.60$, $p = .001$. A similar pattern was observed for ethical judgments. Participants in the cold condition were more inclined to categorize this interrogation tactic as torture ($M = 3.66$, $SD = 0.56$) than were participants in the prior-cold condition ($M = 3.20$, $SD = 0.65$), $F(1, 47) = 7.23$, $p = .01$, and were marginally more likely to categorize it as torture than were participants in the control condition ($M = 3.33$, $SD = 0.70$), $F(1, 46) = 3.28$, $p = .07$.

A particularly striking finding of this study is that an empathy gap emerged between the cold and prior-cold conditions. Experiencing cold temperature just 10 min prior to answering the pain and ethicality questions did not affect participants' evaluations, a finding that underscores the point that people need to actively experience pain in order to appreciate torture's severity. This finding also challenges the notion that people who have experienced the pain produced by interrogation tactics in the past—for example, interrogators who have experienced enhanced interrogation during training or people who have experienced cold in their daily lives—are in a better position than others to assess the ethicality of using such tactics.

Study 4: Real Versus Simulated Pain

In the first three studies, we found that participants who were actively experiencing simulated interrogation pain evaluated interrogation tactics to be more painful and less ethical than did participants who made their judgments while pain free. The design we used was based on the assumption that experiencing a small dose of the specific pain produced by an interrogation tactic provides a more realistic and complete understanding of how that tactic is experienced. However, such a discrepancy between individuals experiencing and not experiencing pain need not be due to underestimation of pain by those who are not experiencing it (as predicted by the empathy-gap hypothesis); it could also arise if those experiencing pain tend to overestimate the severity of pain produced by torture. Although such an overestimation seemed unlikely both intuitively and given prior research on the empathy gap, we conducted Study 4 to explicitly test the hypothesis that the discrepancy between judgments of interrogation tactics by people who are and are not experiencing pain results from underestimation on the part of those who are not in pain.

To do this, we used a less severe method of interrogation (standing outside in the cold), which allowed us to compare the ratings of participants who imagined what the interrogation would be like with the ratings of participants who actually experienced the tactic. Participants read about a private school that forced misbehaving students to stand outside in the cold

without a jacket on for up to 3 min (as long as the temperature did not fall below freezing). Participants then evaluated this practice while holding their hand in nearly freezing water, holding their hand in room-temperature water, or standing in the cold for 3 min without a jacket on. First, we predicted that participants who held their hand in warm water would rate this form of punishment to be less painful and more ethical compared with participants who were actually experiencing cold weather. Second, we predicted that participants who held their hand in ice water and those who were actually experiencing cold weather would not differ in their ratings of the punishment's pain severity.

Method

Sixty-seven Northwestern University undergraduates (39 female, 28 male) participated in return for \$8. They were randomly assigned to the three conditions. The *warm-water* and *ice-water conditions* followed the same procedure as the cold and control conditions, respectively, in Study 3. Participants in the *cold-weather condition* made their evaluation while actually standing in the cold for 3 min without a jacket on (the temperature outside on the day of the study was 38 °F). Participants read a brief vignette about a private school that used physical punishment to discipline students. Specifically, during the winter, students who acted out were forced to stand outside in the cold without a jacket on for up to 3 min (but only on days when the temperature did not fall below freezing). After reading the vignette, participants were asked to estimate the severity of pain they would experience while standing in the cold; ratings were made using the Faces Pain Scale-Revised (Bieri et al., 1990), as in Study 1. Finally, participants were asked to "indicate whether you oppose or support the use of this kind of punishment in private schools"; responses were made on a 5-point scale (from 1, *totally oppose*, to 5, *totally support*).

Results

There was an overall effect of condition on both estimates of pain severity, $F(2, 66) = 8.60, p = .001$, and support for this method of punishment, $F(2, 66) = 5.97, p = .004$. Results were consistent with the specific pattern predicted by the empathy-gap hypothesis. Participants who were not experiencing pain (warm-water condition) underestimated the pain severity of standing in the cold ($M = 4.60, SD = 1.69$) compared with participants who were actually experiencing cold weather ($M = 6.33, SD = 1.55$), $F(1, 43) = 12.28, p = .001$. Participants who were not experiencing pain also supported this form of punishment ($M = 2.86, SD = 1.27$) more than did participants who were actually experiencing cold weather ($M = 1.90, SD = 1.04$), $F(1, 43) = 7.88, p = .008$. These findings support the claim that people who are not actively experiencing pain tend to underestimate its severity.

We next examined whether participants experiencing simulated interrogation pain (the ice-water condition) provided

more realistic estimates of the pain produced by this form of punishment than did pain-free participants. As predicted, participants in the ice-water condition ($M = 6.21, SD = 1.41$) and participants who were actually experiencing cold weather ($M = 6.33, SD = 1.55$) did not differ in pain-severity ratings, $F(1, 43) = 0.06, p = .79$. Likewise, participants in the ice-water condition ($M = 1.95, SD = 0.88$) did not differ from participants who were actually experiencing cold weather ($M = 1.90, SD = 1.04$) in their support for this form of punishment, $F(1, 43) = 0.03, p = .85$. These results bolster our claim that participants in the simulated-interrogation-pain conditions in Studies 1 through 3 were more accurate in their estimates of pain severity than were those in the pain-free conditions.

Discussion

Legal doctrine specifies that whether a particular interrogation method should be deemed to be torture depends on the severity of pain the tactic produces. Yet our findings suggest that empathy gaps for physical and psychological pain undermine people's ability to objectively evaluate interrogation practices. In Studies 1 through 3, people were more likely to classify a particular interrogation technique as unethical when they themselves were experiencing even a small degree of the particular pain that the technique produces. To the extent that such small doses of pain bridge the empathy gap and provide a more realistic and complete understanding of how torture is experienced by people who are tortured, it seems reasonable to conclude that judgments of interrogation tactics are more fully informed, and hence more valid, if they are made by individuals in a state of pain than if they are made by individuals who are not experiencing pain.

In an attempt to bolster this claim, Study 4 included a condition in which some participants actually experienced the interrogation tactic while they evaluated it. Participants who experienced a small sample of the pain produced by the tactic gave estimates that were closely matched to the self-reports of participants who actually experienced the pain, but participants who were not themselves in pain underestimated the pain. Because the people who make torture policy rarely subject themselves to interrogation tactics before assessing their permissibility, our results suggest that such policies are misinformed by a systematic tendency to underestimate the pain produced by interrogation practices.

Our results also shed light on the question of whether past exposure to interrogation provides greater insight into these practices in the future. It is well documented that psychologists helped conduct enhanced interrogation at Guantanamo Bay. One justification for their participation was that during previous training, they had endured the precise techniques they used on detainees. Yet in Study 3, we found that prior experience with interrogation-based pain did not provide a more accurate understanding of these practices later on.

This research comes at a critical moment in the policy debate surrounding the proper limits of interrogation procedures. In the

aftermath of highly publicized cases of psychologists providing guidance to individuals who formulated torture policies and tactics, the American Psychological Association (2010) has banned member psychologists from participating in torture. Although well intentioned, this declaration does not address the real issue of how to decipher what constitutes torture. Our research suggests that the legal standard for evaluating torture is psychologically untenable. People cannot appreciate the severity of interrogation practices they themselves are not experiencing—a psychological constraint that in effect encourages torture. These insights suggest the need for a more restrictive legal standard for evaluating the ethicality of interrogation techniques.

Declaration of Conflicting Interests

The authors declared that they had no conflicts of interest with respect to their authorship or the publication of this article.

Note

1. We selected these specific practices because they are the most internationally ubiquitous enhanced interrogation tactics employed in the modern era (Lelyveld, 2005). The active use of sleep deprivation and cold exposure has been documented in recent treatment of, for example, Tibetan prisoners in China, captured Irish Nationalists in Northern Ireland, and Palestinian detainees in Israel. Most recently, these practices have been used with alleged terrorists confined at the U.S. Central Intelligence Agency facilities in Guantanamo Bay. Solitary confinement not only is used in military interrogations, but also is extensively practiced domestically by police and civilian detention centers.

References

- American Psychological Association. (2010). *American Psychological Association amends ethics code to address potential conflicts among professional ethics, legal authority and organizational demands*. Retrieved March 2, 2011 from <http://www.apa.org/news/press/releases/2010/02/ethics-code.aspx>
- Baumeister, R.F., & Leary, M.R. (1995). The need to belong: Desire for interpersonal attachments as a fundamental human motivation. *Psychological Bulletin*, *117*, 497–529.
- Bieri, D., Reeve, R., Champion, G.D., Addicoat, L., & Ziegler, J. (1990). The Faces Pain Scale for the self-assessment of the severity of pain experienced by children: Development, initial validation and preliminary investigation for ratio scale properties. *Pain*, *41*, 139–150.
- Christensen-Szalanski, J.J. (1984). Discount functions and the measurement of patients' values: Women's decisions during childbirth. *Medical Decision Making*, *4*, 47–58.
- de Wet, E. (2004). The prohibition of torture as an international norm of jus cogens and its implications for national and customary law. *European Journal of International Law*, *15*, 97–121.
- Eisenberger, N.I., Lieberman, M.D., & Williams, K.D. (2003). Does rejection hurt? An fMRI study of social exclusion. *Science*, *302*, 290–292.
- Kappesser, J., Williams, A., & Prkachin, K.M. (2006). Testing two accounts of pain underestimation. *Pain*, *124*, 109–116.
- Lelyveld, J. (2005, June 12). Interrogating ourselves. *New York Times*, Section 6, p. 36.
- Loewenstein, G. (1996). Out of control: Visceral influences on behavior. *Organizational Behavior and Human Decision Processes*, *65*, 272–292.
- MacDonald, G., & Leary, M.R. (2005). Why does social exclusion hurt? The relationship between social and physical pain. *Psychological Bulletin*, *131*, 202–223.
- Marquie, L., Raufaste, E., Lauque, D., Marine, C., Ecoiffier, M., & Sorum, P. (2004). Pain rating by patients and physicians: Evidence of systematic pain miscalibration. *Pain*, *102*, 193–194.
- Nordgren, L.F., Banas, K., & MacDonald, G. (in press). Empathy gaps for social pain: Why people underestimate the pain of social suffering. *Journal of Personality and Social Psychology*.
- Nordgren, L.F., van der Pligt, J., & van Harreveld, F. (2006). Visceral drives in retrospect: Explanations about the inaccessible past. *Psychological Science*, *17*, 635–640.
- Pasero, C., & McCaffery, M. (2001). The undertreatment of pain. *American Journal of Nursing*, *101*, 62–65.
- Read, D., & Loewenstein, G. (1999). Enduring pain for money: Decisions based on the perception and memory of pain. *Journal of Behavioral Decision Making*, *12*, 1–17.
- United Nations. (1984). *Convention against torture and other cruel, inhuman or degrading treatment or punishment, Article 1.1*. Retrieved March 2, 2011, from <http://www2.ohchr.org/english/law/cat.htm>
- Watson, D., Clark, L.A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS scales. *Journal of Personality and Social Psychology*, *54*, 1063–1070.
- Williams, K.D., Cheung, C.K., & Choi, W. (2000). Cyberostracism: Effects of being ignored over the Internet. *Journal of Personality and Social Psychology*, *79*, 748–762.
- Wolfendale, J. (2009). The myth of “torture lite.” *Ethics and International Affairs*, *23*, 47–61.