

# PAIN AS FACT AND HEURISTIC: HOW PAIN NEUROIMAGING ILLUMINATES MORAL DIMENSIONS OF LAW

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*In legal domains ranging from tort to torture, pain and its degree do important definitional work by delimiting boundaries of lawfulness and of entitlements. Yet, for all the work done by pain as a term in legal texts and practice, it has a confounding lack of external verifiability. Now, neuroimaging is rendering pain and myriad other subjective states at least partly ascertainable. This emerging ability to ascertain and quantify subjective states is prompting a “hedonic” or a “subjectivist” turn in legal scholarship, which has sparked a vigorous debate as to whether the quantification of subjective states might affect legal theory and practice. Subjectivists contend that much values-talk in law has been a necessary but poor substitute for quantitative determinations of subjective states—determinations that will be possible in the law’s “experiential future.” This Article argues the converse: that pain discourse in law frequently is a heuristic for values. Drawing on interviews and laboratory visits with neuroimaging researchers, this Article shows current and in-principle limitations of pain quantification through neuroimaging. It then presents case studies on torture-murder, torture, the death penalty, and abortion to show the largely heuristic role of pain discourse in law. Introducing the theory of “embodied morality,” the Article describes how moral conceptions of rights and duties are informed by human physicality and constrained by the limits of empathic identification. Pain neuroimaging helps reveal this dual factual and heuristic nature of pain in the law, and thus itself points to the translational work required for neuroimaging to influence, much less transform, legal practice and doctrine.*

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## INTRODUCTION

Important legal distinctions turn on the presence and degree of physical pain. Statutes refer to degrees of physical pain to define criminal offenses like torture-murder,<sup>1</sup> while pain that rises to the level of cruelty draws the boundary between constitutionally permissible and impermissible punishment.<sup>2</sup> Claims about pain motivate legislative action to protect previously unrecognized classes, such as in several states' recent passage of statutes concerning fetal pain and fetal anesthesia during abortion.<sup>3</sup> In legal domains ranging from tort to torture, pain and its degree do important, definitional work by estab-

<sup>1</sup> See, e.g., IDAHO CODE ANN. § 18-4001 (2004).

<sup>2</sup> See *Baze v. Rees*, 553 U.S. 35, 47-48 (2008) (plurality opinion) (summarizing case law stating that execution methods imposing more pain than is required to cause death would violate the Eighth Amendment bar on cruel and unusual punishments).

<sup>3</sup> See *infra* notes 170-73 and accompanying text.

lishing boundaries of lawfulness and of entitlements. The omnipresence of pain in law reminds us of Robert Cover's famous dictum that "[l]egal interpretation takes place in a field of pain and death"<sup>4</sup> and suggests that the law embodies an intuition about the ontological primacy of pain.

For all of the work done by pain as a term in statutes, treatises, constitutions, and administrative- and common-law jurisprudence, it has had a troubling lack of externally verifiable reality.<sup>5</sup> Like other subjective, affective states, pain has been invisible and, frequently, unspeakable.<sup>6</sup> Though we have been able to impute pain based on experience or knowledge or by observing expressions of it in behavior, we have not been able to observe or measure it directly.<sup>7</sup> For this reason, great pain—or claims of great pain—come with great doubt.<sup>8</sup>

But now, pain rests on the cusp of visibility. That is, neuroimaging technology is in the process of making pain, anxiety, certain forms of deception, and potentially myriad other subjective states at least partly knowable and quantifiable.

The increasing ability to ascertain and quantify subjective states is prompting a "hedonic" or a "subjectivist" turn in legal scholarship,<sup>9</sup> which has in turn sparked a vigorous scholarly debate as to whether and why the quantification of subjective states might affect legal theory and practice.<sup>10</sup> To date, this literature has focused primarily on hedonic considerations in punishment, but the implications of the

<sup>4</sup> Robert M. Cover, *Violence and the Word*, 95 YALE L.J. 1601, 1601 (1986) (footnote omitted).

<sup>5</sup> See ELAINE SCARRY, *THE BODY IN PAIN: THE MAKING AND UNMAKING OF THE WORLD* 3–4 (1985) ("[P]hysical pain . . . may seem to have . . . no reality because it has not yet manifested itself on the visible surface of the earth. . . . [P]ain comes unsharably into our midst as at once that which cannot be denied and that which cannot be confirmed.").

<sup>6</sup> See *id.* at 3.

<sup>7</sup> See *id.* at 3–4.

<sup>8</sup> See *id.* at 7.

<sup>9</sup> See Adam J. Kolber, *The Subjective Experience of Punishment*, 109 COLUM. L. REV. 182, 222–23 (2009) (noting that new technologies, particularly neuroimaging technologies, can be expected to help in assessing a person's distress level); see also John Bronsteen et al., *Happiness and Punishment*, 76 U. CHI. L. REV. 1037, 1069 (2009) (explaining the relationship between retributive theories of punishment and an understanding of the amount of harm punishment inflicts).

<sup>10</sup> See Sean Hannon Williams, *Self-Altering Injury: The Hidden Harms of Hedonic Adaptation*, 96 CORNELL L. REV. 535, 536–38 (2011). But see David Gray, *Punishment as Suffering*, 63 VAND. L. REV. 1619, 1620–24, 1626 (2010) (describing and critiquing the "subjectivist" turn in recent legal scholarship and offering a counterargument for objective theories of punishment); Kenneth W. Simons, *Retributivists Need Not and Should Not Endorse the Subjectivist Account of Punishment*, 109 COLUM. L. REV. SIDEBAR 1, 1–2 (2009) (responding to Kolber and rejecting the subjectivist view from a retributivist perspective), available at [http://www.columbialawreview.org/Sidebar/volume/109/1\\_Simons.pdf](http://www.columbialawreview.org/Sidebar/volume/109/1_Simons.pdf).

subjectivist work extend well beyond punishment theory.<sup>11</sup> Under this account, pain neuroimaging will, for instance, prove the claims of torture victims and catch perfidious malingerers.<sup>12</sup> Further, it will lead to broad changes in legal theory; where law previously had to be content with vague principles as proxies for actual experiential states, it will be able to substitute reliable quantification. Subjectivists suggest that entire branches of law will transform as they assimilate the technologically enabled “experiential future”<sup>13</sup> because, until now, much discussion of values in law has been merely a necessary but poor substitute for quantitative determinations of subjective states.

This Article argues the converse: that pain discourse in law frequently is a proxy or heuristic for values and that attempting to solve normatively freighted legal problems through quantification would be profoundly misguided. There are serious empirical and epistemic questions as to whether even perfect pain quantification could modify or improve facially pain-related areas of legal doctrine. This is not because the technology is not “there yet” (although it is not) but more fundamentally because doctrinal legal issues presented as pain-measurement problems are predominantly values problems.<sup>14</sup>

Assessing the impact that the neuroimaging of pain may have on diverse areas of law illuminates the point that legal issues concerning the body rarely assume the form of straightforward questions about physical facts or measurement. Though they may involve measurement, they also fundamentally implicate the normative dimension of how suffering relates to empathy and of who deserves (or does not deserve) empathy in the law.

It is not accidental that pain functions as a moral status indicator; rather, this result stems from the unique relationship between pain and empathy. Our conceptions of rights and duties are necessarily informed by human physicality and constrained by the limits of empathic identification. A person’s moral proscription against excess

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<sup>11</sup> See Bronsteen et al., *supra* note 9, at 1041–42; Kolber, *supra* note 9, at 196–97; see also Dan Markel & Chad Flanders, *Bentham on Stilts: The Bare Relevance of Subjectivity to Retributive Justice*, 98 CALIF. L. REV. 907, 915–16 (2010).

<sup>12</sup> See Adam J. Kolber, *The Experiential Future of the Law*, 60 EMORY L.J. 585, 585 (2011) (“[N]ew technologies will improve our assessments . . . [of whether] a placebo treatment relieves pain . . . [or] an interrogatee has been tortured . . .”).

<sup>13</sup> *Id.* at 587–88, 604 (asserting that, in the near future, technologies will measure subjective experiences of physical pain, emotional distress, and anxiety, among others).

<sup>14</sup> This Article is the first part of a broader project exploring the role of pain imaging in law. A companion piece focusing on chronic pain will argue that functional magnetic resonance imaging (fMRI) and similar neuroimaging technologies should and will impact legal doctrines and practice related to chronic pain. Specifically, it will argue that statutory definitions of chronic pain and judicial interpretations both of such statutes and of evidence presented by chronic pain claimants must be updated to reflect recent discoveries that various chronic pain syndromes constitute verifiable and distinct neurological disorders.

pain ends when that person encounters the boundaries of empathic identification—the ability to say that a category of subjects is in some way “like us.”<sup>15</sup> This helps explain why different groups hold incompatible intuitions about whether the infliction of excess pain constitutes a wrong, even where death may be justified in such disparate contexts as the death penalty, previability abortion, and animal welfare. Drawing on the work of philosopher Maurice Merleau-Ponty, this Article argues that, when the law speaks of the body, and particularly of the body in pain, it expresses an implicit morality of the body or “embodied morality,” which cannot be reduced to non-normative measurement of physical facts.<sup>16</sup>

Pain measurement thus represents the archetypal example of the need to recognize embodied morality within the law in order to properly understand if, when, and how to adapt the findings of brain imaging to bodies of legal doctrine. Thus, any attempt to resolve values-laden issues with neuroimaging or other hedonic measurement techniques would suffer as a measurement fallacy; this would in turn produce policy prescriptions as morally unconvincing as they would be practically infeasible.

This Article proceeds in four parts. Part I describes the biology of pain and the science of pain detection, focusing on functional magnetic resonance imaging (fMRI) for the detection of acute pain. It reviews interviews with leading pain researchers in the United States and United Kingdom who offer their views on the potential and limits of pain detection, which complement current medical and scientific literature. This Part contends that, while stunning advances have occurred in neuroimaging, current and in-principle barriers to accurate pain measurement remain.

Part II presents the first of two case studies. It analyzes criminal torture-murder statutes (with related case law) and then analyzes state torture statutes and treaties, both of which facially speak in terms of quanta of pain. Torture-murder, a capital offense, is defined as a death that results from or in the course of the defendant’s infliction of “severe pain” or “excess” pain upon the victim, regardless of the defendant’s intent to kill. State torture is almost universally defined as the infliction of “severe,” “extreme,” or “prolonged” physical and mental suffering for proscribed purposes. These apparently pain-based offenses thus provide a test case for the notion that the law must and should take a hedonic (or experiential) turn. As Part II will show,

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<sup>15</sup> Cf. SCARRY, *supra* note 5, at 3–4 (describing a person’s reaction to pain as retaining inherently personal aspects).

<sup>16</sup> See Maurice Hamington, *Resources for Feminist Care Ethics in Merleau-Ponty’s Phenomenology of the Body*, in *INTERTWININGS: INTERDISCIPLINARY ENCOUNTERS WITH MERLEAU-PONTY* 203, 204 (Gail Weiss ed., 2008).

however, hedonic measurement would not solve the problem of defining torture in either the private or state context; nor can hedonic loss explain the additional legal sanctions and moral opprobrium that attend these acts. A review of all published and unpublished torture-murder opinions from 1985 to the present makes clear that the key factor in torture-murder liability is not quantum of pain.<sup>17</sup> Rather, torture-murder functions as an expressive designation for the categories of offenses that are most normatively transgressive, such as the sexual abuse of children or the elderly. Similarly, case law and scholarly analyses of anti-torture treatises support the conclusion that, consistent with liberal political theory, the harm primarily lies in the expression of corrupt values relative to the autonomy and personhood of the victim.

Part III presents a second set of case studies that examine the role of pain in Eighth Amendment challenges to execution by lethal injection and in recent legislation restricting late-term abortion. In these areas, advocates who oppose state execution or abortion frame their challenges to the contested practices as challenges to excess physical suffering—that the state should neither inflict nor countenance the infliction of suffering on the condemned or the unborn. Moreover, death-penalty and abortion opponents may employ arguments about pain instrumentally, seeking not to render the target practices painless but halt them. Yet, these challenges are not only instrumental: taken on their own terms, they express the principle that inflicting excess pain can itself constitute a legal wrong, even where inflicting death does not. In these areas, pain serves as a heuristic to reflect concerns about the categories of actors who deserve empathy and protection. Concern about pain reflects who (and what) we understand as being sufficiently like us to morally mandate the protection from certain degrees of physical suffering. Boundaries on empathic identification may help explain the inconsistent positions advocates and decision makers may hold on the relative permissibility of excess pain in abortion versus death-penalty cases.

Part IV draws on the insights from the case studies to develop the concept of embodied morality: the idea that facts about the body do not translate directly into legal conclusions or concepts but do inform a community's norms about what constitutes morally permissible treatment of the body. Pain's role across different areas of law thus provides a fascinating lens through which to understand legal notions of the embodied person and its normative dimensions.

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<sup>17</sup> See *infra* note 85 and accompanying text.

## I

## PAIN AND PAIN IMAGING: A BRIEF INTRODUCTION

## A. Acute Pain: Definition and Mechanisms

1. *Definition and Basic Mechanisms of Acute Pain*

Acute pain is the pain that a person experiences immediately when something goes wrong. Such pain results from the brain's translation of signals it receives from the body's contact with a noxious external stimulus, like a hot stove, or from a sudden change in the body's internal condition, like intestinal cramps. Acute pain is characterized not by its severity but by its suddenness and short duration. Although there exists a common vernacular misuse of "acute pain" to mean "very severe pain," acute pain may indeed be only minor or moderate. For example, the pain of getting a paper cut and of breaking a leg are both acute, but the former is minor while the latter is severe. Acute pain is the basic pain model and is also a highly important survival mechanism that motivates the sufferer to get away from the harmful thing.<sup>18</sup>

Regardless of where pain originates in the body, the brain acts as the central processing unit for pain. The pain-detecting nerves present in the part of the body that encounters the noxious stimulus send the message to the brain through ascending or "afferent" neurons. The brain interprets the signal and then sends signals back via descending or "efferent" neurons to where the afferent signal originated. The signal from the brain back to the peripheral site can be amped up or tamped down by descending modulation. That is, the body's physiological state (including mental state) can both magnify or moderate the pain signal.<sup>19</sup>

Although we often think of pain as being instantaneous and "in" a particular body part, it is possible to demonstrate in a few ways that pain is actually not "in" the place that feels hurt. One classic example is the experience of pain in body parts that no longer exist: so-called phantom limb pain. For example, when present, the phenomenon may cause pain in a missing hand that feels exactly like pain in a physically present hand.<sup>20</sup> Conversely, if signaling to the brain has been

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<sup>18</sup> See *Pain Management Basics*, WEBMD, <http://www.webmd.com/pain-management/guide/pain-basics> (last visited Mar. 19, 2011); see also *FAQs: What is Pain?*, THE BRITISH PAIN SOC'Y, [http://www.britishpainsociety.org/patient\\_faq.htm#q1](http://www.britishpainsociety.org/patient_faq.htm#q1) (last visited Mar. 19, 2012).

<sup>19</sup> See *FAQs: What is Pain?*, *supra* note 18; *The Autonomic Nervous System*, NAT'L DYSAUTONOMIA RES. FOUND., <http://www.ndrf.org/ans.html> (last visited Oct. 23, 2011).

<sup>20</sup> See *Phantom Pain: Definition*, MAYO CLINIC (Oct. 27, 2011), <http://www.mayoclinic.com/health/phantom-pain/DS00444>; see also OLIVER SACKS, *THE MAN WHO MISTOOK HIS WIFE FOR A HAT* 66–70 (1985) (recounting a patient who had damaged proprioception that caused him to lose his sense of balance).

blocked, a painful stimulus applied to the physically present hand will produce no pain at all.<sup>21</sup>

Thus, there is no simple one-to-one relationship between harm to the peripheral site, signal strength up to the brain, efferent signal strength back down to the site, and pain perception.<sup>22</sup> The brain's reception and interpretation of the afferent signal is essential for the brain's detection of and response to aversive stimuli, but pain perception requires something more.<sup>23</sup> The brain must receive and interpret the afferent signal *and* operationalize conscious awareness of the signal.<sup>24</sup>

## 2. *The Role of Consciousness in Acute Pain*

Without consciousness, there is no pain. Consider the case of a person who is anaesthetized with general anesthesia for a surgical procedure. Anesthesia renders the person unconscious;<sup>25</sup> however, it does not prevent the operation's target tissues from registering tissue damage.<sup>26</sup> When the surgeon cuts into the patient's abdomen, the tissues still send messages to the brain—principally to the thalamus,<sup>27</sup> insula,<sup>28</sup> and somatosensory cortex<sup>29</sup>—relaying information. This sig-

<sup>21</sup> This is the mechanism through which local anesthetics like bupivacaine work: by flooding the sodium channels in the nerve fibers around where it is injected, the anesthetic blocks the nerves from transmitting signals up to the brain. For this reason, procedures that otherwise would cause pain can be performed without any pain perception. *See* STEPHEN E. ABRAM, *PAIN MEDICINE: THE REQUISITES IN ANESTHESIOLOGY* 91–93 (2006) (describing bupivacaine and other sensory-blocking, local anesthetics).

<sup>22</sup> *Id.* at 12–13 (describing descending control in nociception and pain).

<sup>23</sup> *Id.* at 28.

<sup>24</sup> A conscious person may experience no pain if nerve signaling from the site of injury to the spinal cord or brain has been blocked. This is the mechanism by which local anesthetic and epidurals work. *See supra* note 21 and accompanying text; *see also, e.g.*, C. Richard Chapman, *Pain Perception, Affective Mechanisms, and Conscious Experience*, in *PAIN: PSYCHOLOGICAL PERSPECTIVES* 59, 59–60 (Thomas Hadjistavropoulos & Kenneth D. Craig eds., 2004) (describing human pain as “conscious” and “always a complex psychological experience”).

<sup>25</sup> Contrast this with the description of a nerve block injection, *see supra* note 21, which prevents signal transmission from the nerve to the brain. General anaesthesia does not block afferent signal transmission; rather, “[t]he anesthetized brain doesn't respond to pain signals or surgical manipulations.” *General Anesthesia: Definition*, MAYO CLINIC (June 26, 2010), <http://www.mayoclinic.com/health/anesthesia/MY00100>.

<sup>26</sup> *See* Robert J. Gatchel et al., *The Biopsychosocial Approach to Chronic Pain: Scientific Advances and Future Directions*, 133 *PSYCHOL. BULL.* 581, 582 (2007).

<sup>27</sup> The thalamus is “the main relay site for nociceptive inputs before cortical and sub-cortical structures.” Petra Schweinhardt et al., *Imaging Pain in Patients: Is It Meaningful?*, 19 *CURRENT OPINION NEUROLOGY* 392, 397 (2006).

<sup>28</sup> *See* M.N. Baliki et al., *Parsing Pain Perception Between Nociceptive Representation and Magnitude Estimation*, 101 *J. NEUROPHYSIOLOGY* 875, 885 (2009) (describing how the insula activates sensory modalities during pain perception).

<sup>29</sup> *Somatosensory Cortex Definition*, MEDCONDITIONS.NET, <http://medconditions.net/somatosensory-cortex.html> (last visited Mar. 19, 2012) (defining the somatosensory cortex as the “[a]rea of the parietal lobe concerned with receiving general sensations”).



nal transmission, called “nociception,” meaning the detection and transmission of signals about noxious stimuli, happens even though the patient does not *feel* the incision.<sup>30</sup> Nociception does not translate into pain, though, because the brain is not conscious, and thus the person remains unaware.<sup>31</sup>

At first, this distinction between pain and nociception might seem peculiar. The distinction becomes intuitive and familiar, however, if we shift from thinking about pain to other phenomenological states like cold, thirst, or hunger. If a patient is anaesthetized for long enough, blood sugar levels may drop and the patient may become dehydrated; however, the patient will not *feel* hungry or thirsty. Operating theaters are kept cool, causing the patient’s body temperature to drop; even so, the patient will not *feel* cold (at least until the patient wakes up). We would not expect the unconscious patient to feel these things; thus, by definition, all phenomenological states require consciousness.<sup>32</sup>

Pain perception is continuous with all other subjectively perceived body states, which can only be said to exist when they intrude upon consciousness.<sup>33</sup> Accordingly, the nociception/pain distinction does not differ much from the relationships between lack of sleep and fatigue, dehydration and thirst, low blood sugar and hunger, and so forth. This fundamentally phenomenological quality of pain and the experience of phenomenological states generally are subjects of extensive consideration and debate in the philosophy of the mind.<sup>34</sup> The ineffability as well as the intersubjective discontinuity of pain comprise a large part of this debate.<sup>35</sup> Different people certainly may have different physiological susceptibilities and phenomenological experiences, mediated by their context and unique life experiences. Yet, understanding hunger or cold or thirst—or pain—for particular purposes ought not to require fully unraveling the nature of consciousness.

<sup>30</sup> Gatchel et al., *supra* note 26, at 582.

<sup>31</sup> *See id.*

<sup>32</sup> Similarly, though many of us have had the experience of being woken from sleep by pain, we did not feel it *as* pain until we awoke.

<sup>33</sup> *See id.*; cf. Donald D. Price et al., *Integrating Experiential–Phenomenological Methods and Neuroscience to Study Neural Mechanisms of Pain and Consciousness*, 11 CONSCIOUSNESS & COGNITION 593, 597 (2002) (arguing that a subjective, “first person experiential” approach is an essential component to the study of pain).

<sup>34</sup> *See, e.g.*, Murat Aydede & Güven Güzeldere, *Some Foundational Problems in the Scientific Study of Pain*, 69 PHIL. SCI. S265, S266 (2002); Price et al., *supra* note 33, at 595; Jennifer Radden, *A Confusion of Pains: The Sensory and Affective Components of Pain, Suffering, and Hurt*, in FACT AND VALUE IN EMOTION 65, 66–69 (Louis C. Charland & Peter Zachar eds., 2008); Sydney Shoemaker, *The First-Person Perspective*, in THE NATURE OF CONSCIOUSNESS: PHILOSOPHICAL DEBATES 503, 503–05 (Ned Block et al. eds., 1997).

<sup>35</sup> *See, e.g.*, Daniel Goldberg, *Subjectivity, Consciousness, and Pain: The Importance of Thinking Phenomenologically*, 9 AM. J. BIOETHICS 14, 15 (2009).

The relationship between nociception and pain (the phenomenological nature of pain), though, does show that the appropriate locus for pain assessment rests in the combination of the brain itself *and* the subject's report of experienced feelings. In addition, pain's phenomenology poses certain challenges for reliable pain detection.

This is so for two reasons. First, because the brain interprets signals to transform them into pain, acute pain cannot be measured by monitoring the strength of nerve impulses from the affected body part. What matters in detecting and measuring acute pain is how the brain decoded the message and the intensity the brain assigned to it.<sup>36</sup> Second, brains and their responses vary—not just across individuals but within individuals over time.<sup>37</sup> Variation in pain sensitivity across individuals may arise from numerous factors, ranging from genetic make-up<sup>38</sup> to conditioning.<sup>39</sup>

The ways the same nociceptive signals are interpreted also vary within a single individual, even over a very short time scale. These intrasubject variations depend on internal physiological and external contextual factors like mood,<sup>40</sup> levels of sex and stress hormones,<sup>41</sup> depth of breath,<sup>42</sup> status of sleep deprivation,<sup>43</sup> source of the pain,<sup>44</sup> and perceived degree of control.<sup>45</sup> So, while pain is indeed biological

<sup>36</sup> See Frederic Berthier et al., *Comparative Study of Methods of Measuring Acute Pain Intensity in an ED*, 16 AM. J. EMERGENCY MED. 132, 132 (1998) (“[P]atients are ultimately the only true experts in evaluating the intensity of their own pain.” (citation omitted)).

<sup>37</sup> See, e.g., Stephen J. Gibson & Christine T. Chambers, *Pain over the Life Span: A Developmental Perspective*, in PAIN: PSYCHOLOGICAL PERSPECTIVES, *supra* note 24, at 113, 119 (“[T]he evidence generally supports that, as children grow older, prevalence of chronic pain increases. Conversely, . . . increasing child age is associated with decreased pain and distress. . . . [I]t is likely that various complex psychological . . . , social . . . , and biological factors . . . interact to contribute to these findings.”).

<sup>38</sup> See Karin B. Jensen et al., *Increased Sensitivity to Thermal Pain Following a Single Opiate Dose Is Influenced by the COMT-*val*<sup>58</sup> *met* Polymorphism*, PLOS ONE, June 2009, at 2, available at <http://www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0006016> (describing how individuals with different inherited alleles, called “*val*” and “*met*,” display different degrees of acute pain sensitivity).

<sup>39</sup> See Katja Wiech et al., *Neurocognitive Aspects of Pain Perception*, 12 TRENDS COGNITIVE SCI. 306, 310 (2008) (discussing the role of beliefs about pain in pain perception).

<sup>40</sup> See Chantal Villemure & M. Catherine Bushnell, *Mood Influences Supraspinal Pain Processing Separately from Attention*, 29 J. NEUROSCIENCE 705, 712 (2009).

<sup>41</sup> See Wiech et al., *supra* note 39, at 306.

<sup>42</sup> See generally S-Hakki Onen et al., *Pain Tolerance and Obstructive Sleep Apnea in the Elderly*, 11 J. AM. MED. DIRECTORS ASS'N 612, 612–13 (2010) (showing that patients with sleep-related oxygen deprivation experienced significantly higher pain perception before treatment than following treatment with oxygen-enhancing devices).

<sup>43</sup> See generally Bernd Kundermann et al., *The Effect of Sleep Deprivation on Pain*, 9 PAIN RES. & MGMT. 25, 31 (2004), available at <http://www.pulsus.com/journals/toc.jsp?sCurrPg=journal&jnlKy=7&isuKy=550> (concluding that sleep deprivation leads to heightened pain sensitivity and reduced response to analgesic drugs).

<sup>44</sup> See Wiech et al., *supra* note 39, at 308.

<sup>45</sup> See *id.* at 309–10.

and measurable, it is also inherently variable, subjective, and individual.

## B. Acute Pain in the Scanner

The brain's processing of different noxious stimuli correlates with activation in several specific regions. Further, the degree of activation in certain parts of the brain correlates well with the intensity of pain or discomfort reported by a subject. In other words, the physiology and the phenomenology seem closely related. The main challenge is that the degree of activation and its relationship to the intensity of pain or discomfort does *not* correlate very well across subjects. This section describes the brain regions involved in pain processes and the fMRI research correlating brain activation with subjective experience.

### 1. *Specific Areas of Brain Activity Correlate with Painful Stimulus*

Many regions of the brain become active in research subjects who experience a painful heat stimulus.<sup>46</sup> Identified in the 1990s with PET scanning,<sup>47</sup> the major areas that display activity in response to acute pain include the anterior insula, anterior cingulate cortex (ACC), primary and secondary somatosensory cortex, and thalamus.<sup>48</sup> More recent acute pain studies also find activation in the prefrontal cortex, supplemental motor cortex, basal ganglia, cerebellum, amygdala, hippocampus, hypothalamus, and periaqueductal gray (PAG).<sup>49</sup> This section will briefly describe the role of these various brain regions and why pain response is distributed so widely across the brain.

<sup>46</sup> A heat stimulus—a heated piece of metal applied to the arm—is the most common research protocol for acute pain in the lab. To isolate brain activation due exclusively to pain—and not to tactile sensation from the touch of metal against the arm—a standardized heat stimulus delivered by laser is also commonly used. Use of uniform stimuli allows different researchers working in different laboratories to compare their experimental results. See, e.g., Susanna J. Bantick et al., *Imaging How Attention Modulates Pain in Humans Using Functional MRI*, 125 *BRAIN* 310, 312 (2002) (applying “[t]hermal noxious stimuli . . . using a thermal resistor” in measuring “experimentally induced pain”).

<sup>47</sup> PET stands for “positron emission tomography,” a technique with fairly good spatial resolution but far poorer temporal resolution than fMRI. For an overview of different brain imaging techniques, see generally MATT CARTER & JENNIFER SHIEH, *GUIDE TO RESEARCH TECHNIQUES IN NEUROSCIENCE* 1–23 (2010).

<sup>48</sup> See Kenneth L. Casey et al., *Positron Emission Tomographic Analysis of Cerebral Structures Activated Specifically by Repetitive Noxious Heat Stimuli*, 71 *J. NEUROPHYSIOLOGY* 802, 805–06 (1994); A. May, *Neuroimaging: Visualising the Brain in Pain*, 28 *NEUROLOGICAL SCI.* S101, S101 (2007) (summarizing earlier PET research). Typically, activation is seen in the contralateral thalamus. For example, if a pain stimulus is applied to the right hand, only the left thalamus (in the brain's left hemisphere) shows activity. U. Bingel et al., *Single Trial fMRI Reveals Significant Contralateral Bias in Responses to Laser Pain Within Thalamus and Somatosensory Cortices*, 18 *NEUROIMAGE* 740, 740–41 (2003).

<sup>49</sup> See Gatchel et al., *supra* note 26, at 592–93 (citing and reviewing extensive literature).

So many parts of the brain respond to painful stimuli because pain is a multidimensional experience: it involves sensory, motor, and affective components as well as memory and executive functions (like planning and self-control).<sup>50</sup> Specifically, when a conscious person perceives pain, activity likely arises in the prefrontal cortex, thalamus, insula, anterior cingulate cortex, and brain areas correlated with sensory perception (somatosensory cortex and somatosensory association areas). The individual may reflexively or deliberately move away from the stimulus, activating brain areas involved in motor function (like the motor cortex and cerebellum).<sup>51</sup> The individual may turn to distractions in order to minimize the experience of the pain, an exercise in self-control that also would engage the prefrontal cortex.<sup>52</sup> The individual will have an instantaneous, negative affective reaction to the pain, engaging the amygdala and anterior cingulate cortex, key areas of the brain involved with emotional processing.<sup>53</sup> The individual may utilize implicit and explicit memory to identify what the pain experience is; this would involve several areas of the brain including the hippocampus and likely also (again) the somatosensory association cortex. If the memory involves visual recollection, there will also be activity in, among other areas, the occipital lobe. Thus, the sum of processes and reactions that we call “pain” involves nearly a whole-brain experience.

## 2. *Degree of Brain Activation Correlates with Degree of Reported Pain*

Studies involving fMRI acute pain imaging show that a person’s degree of brain activation correlates—not perfectly, but well—with self-reported degree of pain. That is, people who report more sensitivity to pain show greater brain activity in areas of the brain associated with pain perception (and people who report less sensitivity to pain show less). Therefore, brain activation at least crudely matches phenomenology.

This is a truly striking result because it largely settles the centuries-long debate about whether people who respond more or less “stojically” to pain actually experience the pain differently or whether the more stoic one is simply mentally tougher in the face of the same degree of experienced pain. In laboratory subjects who report their degree of pain honestly (i.e., they have incentives neither to exagger-

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<sup>50</sup> See *id.* at 582.

<sup>51</sup> See Jeanne D. Talbot et al., *Multiple Representations of Pain in Human Cerebral Cortex*, 251 SCIENCE 1355, 1355–56 (1991). But see Andrew K. Jones et al., *Localization of Responses to Pain in Human Cerebral Cortex*, 255 SCIENCE 215, 215 (1992) (presenting Jones’s comment on Talbot’s article and Talbot’s response).

<sup>52</sup> See Bantick et al., *supra* note 46, at 316–18.

<sup>53</sup> See *id.* at 317 (noting how the anterior cingulate cortex provides an emotion-processing function).

ate nor act tough), a direct relationship exists between biological response and psychological experience. This means that people who report pain differently actually experience pain differently. Toughness or neuroticism may play some role in mediating the pain experience; but, if so, the effect of personality structure on pain reporting may well be at the level of shaping the experience itself, not the reporting of the experience.<sup>54</sup>

### 3. *Experimental Error*

The kinds of fMRI-based pain assessments described above could produce both type-one and type-two errors—that is, false positives and false negatives.<sup>55</sup> False-positive and false-negative results from fMRI pain detection could result in several ways.

First, consider the case in which activation above a significant threshold *is* present in areas of the brain associated with pain perception (both nociception and affective experience). This should indicate that a person is experiencing pain. However, a person may not subjectively feel pain. Predicting pain based on this scan pattern could produce type-one errors.

The second case is where activation above a significant threshold *is not* present in areas of the brain associated with pain perception (nociception and affective experience). This should indicate that a person is *not* experiencing pain. However, the subject still *could* sub-

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<sup>54</sup> At the time of writing, this point received no support from anyone; however, to view some commentary about stoicism, see generally PAIN: PSYCHOLOGICAL PERSPECTIVES, *supra* note 24. For instance, some stoicism may be a refusal to report (or show) the perceived pain (dishonesty outside of the laboratory). See Thomas Hadjistavropoulos et al., *Social Influences and the Communication of Pain*, in PAIN: PSYCHOLOGICAL PERSPECTIVES, *supra* note 24, at 94, 100 (“Although it is often difficult to determine whether social influences and context affect the experience of pain or simply the report of pain, there is both anthropological and experimental evidence in support of their importance. . . . Acculturation also has an impact on pain expression. Men are often socialized to downplay pain reports in order to meet social, religious and cultural expectations.”); see also Suzanne M. Skevington & Victoria L. Mason, *Social Influences on Individual Differences in Responding to Pain*, in PAIN: PSYCHOLOGICAL PERSPECTIVES, *supra* note 24, at 179, 182 (arguing that social factors affect pain perception and should be considered in pain research). Yet, other work suggests that mood and expectation actually change physiological response to an experience, not merely the self-reporting about an experience. The best example to date is in wine-tasting: subjects given expensive wine and told that it was cheap experienced less pleasure from the wine than subjects who were told the wine’s true cost. Though this phenomenon had been known for a long time, a robust debate raged over whether people who reported more satisfaction from the expensive wine were simply misreporting—for example, because they were afraid of appearing ignorant about wine, or doubted their own judgment, and so gave the “costly” wine high marks. In any event, this experiment strongly suggests that, at least in this narrow context, expectations condition and modify experience. See Michael Siegrist & Marie-Eve Cousin, *Expectations Influence Sensory Experience in a Wine Tasting*, 52 APPETITE 762, 763–64 (2009).

<sup>55</sup> Understanding experimental error matters here, obviously, because the weight given to a technique depends upon the kinds and rates of errors it produces.

jectively be experiencing pain because of a low pain threshold (whether as a result of transient affective state or physiology or some combination of both). Predicting the absence of pain based on this scan pattern could produce both type-one and type-two errors.

The third case is where areas of the brain associated with nociception experience activation above a significant threshold but areas related to affective experience do not. This could produce either a type-one or type-two error. It could suggest any of the following: that the subject is registering nociception but not experiencing pain; the subject is registering nociception and is experiencing pain but is not highly affectively aroused; the subject is sedated, experiencing interference with affective processing of the painful stimulus; or that the areas of the brain related to affective experience are otherwise suppressed (whether through chemical means, unconsciousness, organic brain damage, or difference). On the phenomenological level, it would not be possible to determine from the scan whether the subject definitely does or does not experience pain.

The fourth case is the flipside to the third: where activation above a significant threshold is present in areas of the brain associated with affective experience but not in the areas related to nociception. This also could produce either a type-one or type-two error. It could suggest any of the following: that the subject is not in pain; the subject is not registering significant nociception but *is* experiencing pain because of unusual sensitivity to pain; the subject is not registering significant nociception but *is* experiencing pain because—conversely to the sedated patient above—the subject is highly affectively aroused (e.g., by fear).<sup>56</sup> On the phenomenological level, it would not be possible to determine with confidence from the scan whether the subject definitely is or is not experiencing pain.

In each of the above examples, the “threshold” for activation is itself absolutely critical in determining whether the subject is likely experiencing pain or not. A true resting state for the brain does not exist, as the only time when the brain performs no activity at all is at death. Thus, researchers have to determine what degree of activity in a particular brain region counts as “significant,” a trickier and more subjective task than determining statistical significance for, say, population size in an epidemiological study or political poll. Researchers determine significance in fMRI studies by balancing signal and noise. If the software that crunches the data from the scans is programmed to be very sensitive to differences in scan signal between task one and

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<sup>56</sup> See *supra* notes 40–45 and accompanying text (describing how physiological variables, like fatigue, hypoxia, and affective state, can heighten pain perception).

task two, it will pick up even very faint, relative activations.<sup>57</sup> This may help researchers focus in on a needle in a haystack, but it will also make it look like there are needles everywhere. However, if the software is programmed to be less sensitive to differences in signal between task one and task two, then it will only pick up differences that are comparatively large; in a sense, it will find the broomstick in the haystack but might miss some needles.

### C. Direct Legal Utility?

As summarized above, the brain does not have any single “pain spot” or pain-perceiving organ. And we know that pain varies across and within subjects and depends on internal and external context. Yet, a few other affirmative generalizations can be made. First, nociception of various kinds generally will involve activation in the insula and thalamus,<sup>58</sup> although many other phenomena also involve activation of these brain regions. Second, fMRI may be useful for inferring the absence of nociception and pain. Third, fMRI may have some very limited utility in supporting inferences about the presence and degree of acute pain. These proposed techniques or methods may generate type-one and type-two errors; researchers would need to do more work to establish the confidence levels in the results. Additionally, such tools may be subject to countermeasures.

#### 1. *Inferring Absence of Nociception and Acute Pain*

At this point in its development, fMRI could be used to indicate the absence of nociception and acute pain. In the presence of nociception, observers can expect, at a minimum, engagement of the contralateral thalamus, insula, and somatosensory cortex. This should be true across individuals and types of noxious stimuli. Additionally, in the presence of subjectively perceived acute pain, activation would typically occur in areas related to affective processing, including the anterior cingulate cortex and amygdala. There would also be heightened activation in the prefrontal cortex as a marker of executive function.

Note that the inference of no pain follows only in the complete *absence* of such activation, not if merely very low coordinated activation is present. Because pain is phenomenological, the only sure way to know if a person is in pain is to ask. A person showing very low levels of activation in these target regions—levels that would not correlate with pain in most other individuals—may still genuinely be in pain.

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<sup>57</sup> See ARTHUR W. TOGA & JOHN C. MAZZIOTTA, *BRAIN MAPPING: THE METHODS* 341 (2d ed. 2002) (discussing signal-to-noise ratios in fMRI scanners).

<sup>58</sup> See *supra* notes 27–28 and accompanying text.

## 2. *Partially Inferring Presence and Degree of Acute Pain*

Inferring the presence and degree of acute pain with fMRI poses a greater challenge than demonstrating its absence. As noted above, the degree of activation correlates fairly well with degree of experienced pain. Thus, a research subject must honestly self-report experienced pain for a researcher to accurately correlate the pain to a contemporaneous scan. If a person either cannot respond or has an incentive not to respond honestly, the researcher has no reliable way to trump the self-reported pain level with the data from the scan. Again, this result stems from the fact that people experience stimuli as “painful” at quite different thresholds and reflect the experience in different levels of brain activation.

In the best-case scenario, a researcher would take readings of an individual subject’s self-reported pain levels and brain activation over time in response to stimuli graduated from non-noxious to highly noxious. This would establish this subject’s average sensitivity to noxious stimuli. Then, the researcher could expose the subject to a stimulus, take a brain image, and estimate the subject’s phenomenological experience of pain based on a comparison with prior correlations of self-reporting and scan data. The researcher could then assign a confidence level to the phenomenological guess.

Even in this purely hypothetical best-case scenario, prediction of pain phenomenology remains dicey because individual subjects simply are not very consistent in their pain perception over time and across different internal contexts.<sup>59</sup> In testing across subjects, it might be possible to say that a particular response—of reported pain in response to a moderately noxious stimulus or of no reported pain in response to a highly noxious stimulus—would fall a certain number of standard deviations away from the average subject response. The researcher could then give a probabilistic or statistical estimate of how likely the subject will experience the degree of pain reported. These numerous extrapolative steps, though, reduce the power and credibility of such tests.<sup>60</sup>

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<sup>59</sup> Researchers who study hallucinogenic drugs refer to this as the effect of “set and setting.” “Set” is the subject’s ingoing mindset (fearful, eager, relaxed) while “setting” is the context in which the experience takes place, including the subject’s perceived degree of control. The same subject may receive the same amount of the same compound and have an intensely different reaction based on changes in the subject’s set and setting between the first and the second experience. See Louis A. Faillace & Stephen Szara, *Hallucinogenic Drugs: Influence of Mental Set and Setting*, 29 DISEASES NERVOUS SYS. 124, 125–26 (1968). Pain experience may not be as variable as experience with hallucinogens, but it is still strongly influenced by set and setting. See discussion *supra* Part I.A.2.

<sup>60</sup> In presenting this work in informal talks, the suggestion has arisen several times that researchers could use fMRI to compile tables of the “average painfulness” of particular types of torture. It must be possible, these interlocutors press, to determine using fMRI whether pulling out finger nails, for example, is on average much more or less painful than



II  
CASE STUDY: PAIN AS HEURISTIC IN TORTURE  
AND TORTURE-MURDER

Part I explored the question of whether neuroimaging technologies can measure acute pain with precision and reliability on an individual level and concluded that fMRI acute pain measurement has significant technical and in-principle limitations. This Part turns to the doctrinal and epistemic questions of whether, if perfect pain quantification were to exist, it would improve doctrine and practice in putatively pain-defined areas of law. It explores these questions through the first of two sets of case studies:<sup>61</sup> the cases of criminal torture-murder and state torture.

Criminal torture-murder statutes and state torture statutes, as well as related jurisprudence and treaties, frequently speak in terms of quanta of pain: the infliction of pain upon a victim above a certain threshold and for certain proscribed purposes define these offenses. While the proscribed conduct is defined in terms of pain intensity, the target harm of the offenses is not primarily physical pain. Rather, case

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administering electric shocks to sensitive parts of the body. They envision such tables would serve a benevolent purpose: prohibiting certainly painful conduct that may never lawfully be inflicted while licensing a defined set of practices that would constitute permissible harsh interrogation. This would at least lead to transparency and enforceability, the argument goes.

Three fundamental problems arise from this argument: it is unnecessary, it misses the point, and it invites more subterfuge than it eliminates. First, a sophisticated laboratory inquiry with 7-tesla magnets on a statistically significant set of subjects is not necessary to tell any mentally and morally competent person what kinds of things hurt and about how much. Second, much conduct that is physically painful but not excruciating, like less aggravated forms of rape, sodomy, and sexual abuse, is generally understood to constitute torture because of the conjunction of its painfulness and its normative meaning. Third, as soon as certain conduct becomes by law insufficiently painful to constitute torture, the race to exacerbate the painfulness of the permitted conduct ignites. This would create a back door into torture—victims could be treated with every appearance of lawfulness, indeed with a *presumption* of lawfulness, yet suffer torture.

This is not conjecture or speculation. In 2005, the United States Department of Justice issued two interrogation memoranda that used pain perception research in precisely this way. These recently declassified memoranda used the research of, among others, Kundermann et al., *supra* note 43, to recommend extended sleep deprivation—specifically for *the purpose of enhancing the painfulness* of otherwise-authorized interrogation techniques including beatings, “walling” (throwing a detainee against a flexible wall), and waterboarding. See *Justice Department Interrogation Memos Abuse Sleep Deprivation Research*, UNION OF CONCERNED SCIENTISTS, [http://www.ucsusa.org/scientific\\_integrity/abuses\\_of\\_science/justice-department.html](http://www.ucsusa.org/scientific_integrity/abuses_of_science/justice-department.html) (last visited Mar. 19, 2012) (citing Justice Department memoranda to the Central Intelligence Agency available at <http://documents.nytimes.com/justice-department-memos-on-interrogation-techniques#p=39>); Noah Schactman, *Sleep Scientists: Research Twisted to Justify Torture*, WIRED.CO.UK, Apr. 22, 2009, <http://www.wired.co.uk/news/archive/2009-04/23/sleep-research-twisted-to-justify-torture>; Michael Scherer, *Scientists Claim CIA Misused Work on Sleep Deprivation*, TIME, Apr. 21, 2009, available at <http://www.time.com/time/nation/article/0,8599,1892897,00.html>.

<sup>61</sup> The second set of case studies appears *infra* Part III.

law and scholarship show that, consistent with liberal political theory, the harm primarily lies in the expression of values relative to the autonomy and personhood of the victim.

This Part develops the notion that in these areas of legal doctrine and practice, statements about quanta of pain act as proxies or heuristics for statements about value. Accordingly, this Part argues that it would be misguided to attempt to resolve questions about the threshold between non-torture and torture technologically or quantitatively.

### A. Torture-Murder

The importance of pain as a signal in the law seems nowhere clearer than in the deeply rooted crime of torture-murder. Early American penal statutes defined torture-murder as a specific type of first-degree murder.<sup>62</sup> Today, torture-murder consists of a simple act requirement and a single intent requirement. For the act requirement, torture-murder must include the commission of acts of torture resulting in death;<sup>63</sup> for the intent requirement, there must be something like the “intentional infliction of extreme and prolonged pain with the intent to cause suffering.”<sup>64</sup> Though torture-murder statutes appear to limit the offense to the infliction of pain for particular corrupt purposes only, that limitation turns out to be hollow because the statutorily proscribed purposes are often “revenge, extortion, persuasion, [punishment], or . . . any sadistic purpose.”<sup>65</sup> The first category—revenge, extortion, punishment, and persuasion—broadly

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<sup>62</sup> While torture-murder remains a distinct category of first-degree murder in many states, in others, causing death by torture is one of several kinds of conduct that give rise to a charge of first-degree murder (such as killing by poison and killing following lying in wait). *See, e.g.*, IDAHO CODE ANN. § 18-4001 (2004); MICH. COMP. LAWS ANN. § 750.316 (West 2004) (Michigan’s definition of first-degree murder); NEV. REV. STAT. ANN. § 200.030 (LexisNexis 2006) (categorizing degrees of murder); N.C. GEN. STAT. § 14-17 (2009) (“A murder which shall be perpetrated by means of a nuclear, biological, or chemical weapon of mass destruction[,] . . . poison, lying in wait, imprisonment, starving, torture, or by any other kind of willful, deliberate, and premeditated killing, or which shall be committed in the perpetration or attempted perpetration of [certain other offenses] . . . shall be deemed to be murder in the first degree . . . . All other kinds of murder . . . shall be deemed murder in the second degree . . .”).

<sup>63</sup> *See, e.g.*, CAL. PENAL CODE § 189 (West 2008) (including murder “by means of . . . torture” in the definition of first degree murder); IDAHO CODE ANN. § 18-4001 (defining murder to include “the intentional application of torture to a human being, which results in the death of a human being”).

<sup>64</sup> IDAHO CODE ANN. § 18-4001. In states like Idaho, the intent requirement is relaxed; an offense constitutes torture-murder not only where “intent to cause suffering” is present but also “*irrespective* of proof of intent to cause suffering.” *Id.* (emphasis added).

<sup>65</sup> *People v. Cook*, 139 P.3d 492, 519 (Cal. 2006) (internal quotation marks omitted). This California standard does not include “punishment,” but many other statutes do. *See, e.g.*, IDAHO CODE ANN. § 18-4003(a) (including “intent . . . to execute vengeance” in first-degree torture-murder). Legal dictionaries define “torture” as follows: “[t]he infliction of intense pain to the body or mind to punish, to extract a confession or information, or to obtain sadistic pleasure.” *E.g.*, BLACK’S LAW DICTIONARY 1627 (9th ed. 2009).

covers instrumental purposes for the infliction of pain. The second category—any sadistic purpose—covers the satisfaction of non-instrumental desires.

While defining “torture” relative to state actors remains highly contested,<sup>66</sup> state legislatures and courts appear to have little difficulty defining exactly what torture is among private parties. It is the “intentional infliction of extreme and prolonged pain”<sup>67</sup> or “grievous pain and suffering”<sup>68</sup> upon another. Further, courts have held that because society generally has enough common understanding of this definition of torture, torture-murder statutes provide sufficient notice of prohibited conduct and thus are not unconstitutionally vague.<sup>69</sup>

A conviction on a torture-murder charge does not require intent to cause death. This is remarkable because it places torture-murder with very particular company: except for felony murder, torture-murder is the only capital crime for which the defendant need not have had any intent to kill.<sup>70</sup> The mere intent to inflict pain satisfies the mens rea requirement.<sup>71</sup>

In states that do not have specific torture-murder statutes but that do have the death penalty, pain inflicted equal to torture—so-called “heinous, atrocious, and cruel” (HAC) conduct upon the victim<sup>72</sup>—

<sup>66</sup> See *infra* notes 98–99 and accompanying text.

<sup>67</sup> IDAHO CODE ANN. § 18-4001. This definition of private torture has long been established in American law. See, e.g., *Territory v. Vialpando*, 42 P. 64, 65 (N.M. 1895) (defining torture as the infliction of “pain, anguish, pang[, or] . . . extreme pain”).

<sup>68</sup> 40 AM. JUR. 2D *Homicide* § 41 (2008) (citing *State v. Pierce*, 488 S.E.2d 576, 588 (N.C. 1997)).

<sup>69</sup> In *State v. Crawford*, 406 S.E.2d 579, 589 (N.C. 1991), the defendant challenged his conviction under the state’s torture-murder statute on the ground that the statute’s use of the term “torture” was vague insofar as it failed to put the ordinary person on notice of the conduct prohibited. The North Carolina Supreme Court denied the challenge, holding that the meaning of torture as extreme or prolonged pain is more or less self-evident and “puts a reasonable person on notice of what is forbidden.” *Id.* at 590.

<sup>70</sup> See, e.g., *People v. Steger*, 546 P.2d 665, 669 (Cal. 1976) (en banc). Numerous statutorily defined categories of first-degree murder exist; however, with the exception of felony murder, other established categories of first-degree murder turn upon the intent to kill or at least knowledge that death will likely result. Statutory categories of first-degree murder, beyond the basic killing with premeditation (or “malice aforethought”), commonly include killings where the purpose is to interfere with the process of law enforcement or justice—intentionally killing a peace officer, judge, or witness to a crime. In these crimes, the state need not prove premeditation but must prove that the defendant was aware of the victim’s special identity and killed because of that identity. The “intent to inflict pain” suffices for this first-degree crime. *Id.*

<sup>71</sup> Murder by torture does not require premeditation or intent to kill. *Cf.* *People v. Davis*, 234 Cal. Rptr. 859, 863 (Ct. App. 1987) (inferring that the jury found “willful, deliberate and premeditated killing” in the absence of a finding of torture-murder). Specific intent to kill is irrelevant when first-degree murder is perpetrated by torture. See *Crawford*, 406 S.E.2d at 587. Neither premeditation nor intent to kill is an element of first-degree murder perpetrated by torture. See *State v. Phillips*, 399 S.E.2d 293, 303 (N.C. 1991).

<sup>72</sup> Less frequently, states use the formulation “heinous, cruel, and depraved” (HCD). See generally Richard W. Garnett, Note, *Depravity Thrice Removed: Using the “Heinous, Cruel, or*

can differentiate ordinary murder from capital murder. HAC factors are effectively identical to “torture” as defined under torture-murder statutes; HAC conduct is the infliction of “severe pain, agony, or anguish”<sup>73</sup> or the “unnecessary and wanton infliction of severe pain.”<sup>74</sup> While there are differences between the offense of torture-murder and the use of HAC criteria as aggravating factors in the death-penalty context, these categories converge in an important way.<sup>75</sup> In both cases, the state punishes the defendant’s infliction of extreme pain, where, absent the infliction of extreme pain, the defendant would not have been death-eligible for the same killing.

Torture-murder and HAC statutes show that the state metes out additional punishment for the infliction of torture upon the victim as “extreme” or “grievous pain.”<sup>76</sup> These would seem, therefore, to be offenses largely defined by a quantum of pain. While ordinary sanction applies to ordinary killings, heightened sanction applies to deaths that result from particularly pain-inducing conduct; a kind of proportionality rests between the quantum of the victim’s suffering and the quantum of the offender’s punishment. For example, published opinions for torture-murder and HAC cases dwell on the suffering of the victim’s last moments and the degree of pain and fear the victim

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*Depraved” Factor to Aggravate Convictions of Nontriggersmen Accomplices in Capital Cases*, 103 YALE L.J. 2471, 2497–99 (1994) (describing HCD factors and detailing the relationship between statutory cruelty and physical pain).

<sup>73</sup> *State v. Piper*, 709 N.W.2d 783, 799 (S.D. 2006) (quoting *State v. Rhines*, 548 N.W.2d 415, 448 (S.D. 1996) (defining torture under S.D. CODIFIED LAWS § 23A-27A-1(6) (2004), as the “unnecessary and wanton infliction of severe pain, agony, or anguish” and “the intent to inflict such pain, agony or anguish”); *see also* *State v. Kiles*, 857 P.2d 1212, 1221 (Ariz. 1993) (en banc) (“[C]ruelty may be found when a defendant intends to inflict mental anguish or physical pain.”). Some courts require a finding of specific intent to inflict pain and suffering. *See, e.g.*, *Bonifay v. State*, 626 So. 2d 1310, 1313 (Fla. 1993) (defining HCD factors and stating that they are applicable only where a defendant intends extreme pain and torture); *Commonwealth v. Daniels*, 612 A.2d 395, 400 (Pa. 1992) (per curiam) (noting that the aggravating circumstance of torture requires intent to inflict pain).

<sup>74</sup> *Piper*, 709 N.W.2d at 799. Here, “‘[u]nnecessary pain’ implies suffering in excess of what is required to accomplish the murder.” *Id.* (quoting *Rhines*, 548 N.W.2d at 452) (internal quotation marks omitted).

<sup>75</sup> *See, e.g.*, John W. Poulos, *The Lucas Court and Capital Punishment: The Original Understanding of the Special Circumstances*, 30 SANTA CLARA L. REV. 333, 405 (1990) (calling the intent to inflict pain in torture-murder statutes and in the torture or HAC special circumstance “precisely the same”).

<sup>76</sup> One might ask if painful medical treatment resulting in death could be caught up in such a statute. The answer is that it would not be because pain is incidental to medical treatment; it is not the intent or purpose of the medical practitioner to cause pain. One could certainly imagine a hypothetical scenario in which a perpetrator for some reason has the intent to cause severe pain to the victim but believes for some reason that the pain is beneficial to the victim; that conduct would not be embraced by the statutory language. However, it is difficult to fathom how, outside of a classroom hypothetical, such a situation could come about.

likely felt.<sup>77</sup> This trend reinforces the apparent linkage between the extra punishment that the state inflicts on the torture- or HAC-murderer and the victim's suffering.

### 1. *Can Torture-Murder Be Explained in Hedonic Terms?*

One might suggest, following scholars writing in the hedonic or experiential vein, that if it were possible to quantify average pain for particular acts committed upon the body, then it might also be possible to calibrate punishment even more precisely.<sup>78</sup> Alternatively, one might imagine a defense to a torture-murder or HAC charge that the defendant's conduct upon the victim was not sufficiently painful to constitute the "extreme" or "grievous" pain required by these statutes. While it would be impossible to know the precise pain the deceased victim experienced during the commission of the crime because the victim would neither have been hooked up to a measurement device nor have dispassionately self-reported to the perpetrator, a combination of self-reporting and neuroimaging could generate approximate tables of average painfulness.<sup>79</sup>

And yet, a definition of an offense or a defense based on quantum of pain<sup>80</sup> might seem intuitively wrong even if it is empirically feasible. To illustrate this point, we might probe the normative contours of the torture-murder/HAC category by hypothesizing an unconscious or insensate victim. A torture-murderer, whose sole intent is to cause pain, physically abuses the unconscious victim. The victim perceives nothing and then dies from the injuries. The offender will in all cases be liable for some category of homicide. One who subscribes to the hedonic or experiential understanding of pain-based offenses, however, likely would argue that this offender does not deserve to be punished for the offenses the offender committed on the unconscious victim's body. Since the victim did not *feel* any torture, the offender does not merit any additional punishment. In hedonic terms, the torture component of such an offense becomes a nullity. Therefore, abuse of the unconscious victim would equate to abuse of

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<sup>77</sup> See, e.g., *People v. Campbell*, 239 Cal. Rptr. 214, 224 (Ct. App. 1987) (noting in a torture-murder case that the defendant left the victim "to suffer in pain"); *Evans v. State*, 800 So. 2d 182, 194 (Fla. 2001) (noting in a HAC case that the victim "suffered fear and emotional strain").

<sup>78</sup> See discussion *supra* Part I.C.2.

<sup>79</sup> Cf. *People v. Cole*, 95 P.3d 811, 845 (Cal. 2004) (articulating a rule that the victim need not perceive the pain for a conviction for murder by torture to be upheld); *People v. Pensinger*, 805 P.2d 899, 910 (Cal. 1991) (en banc) (articulating a similar rule).

<sup>80</sup> Imagine, for example, a crime that required the victim to experience one hundred units of pain. If the victim only suffered seventy-three units of provable pain before death, the defendant would enjoy immunity from conviction for the crime.

a dead body, a far lesser offense that obviously has no hedonic component and does not avenge hedonic wrongs.<sup>81</sup>

## 2. *Pain as a Symbol in Torture-Murder*

The extra punishment for torture-murder of an unconscious victim (beyond the punishment for non-torture murder) shows that a concern for hedonic harms to victims does not drive the torture-murder/HAC cases. Indeed, case law in this area turns out to be hedonically agnostic. While torture-murder and HAC are indeed defined in hedonic terms, convictions for these offenses (and their affirmances) are *totally independent of the victim's perception*. As clearly articulated by the California Supreme Court: “[A] defendant may be found guilty of murder by torture even if the victim is *never aware of any pain*.”<sup>82</sup>

Indeed, numerous jurisdictions have held that a conviction for torture-murder may lie where the victim is not conscious and has no awareness of the torture inflicted.<sup>83</sup> This upends the notion that what we punish in this category is the actual suffering inflicted on the victim or that the additional punishment for a torture-murder is proportional to the extra suffering of the victim. Theoretically, a defendant could be convicted for the intentional infliction of extreme pain on a physiologically insensate victim, rendering the pain element of torture-murder unnecessary and in some cases perhaps irrelevant.

How can actual pain be irrelevant to torture-murder, an offense defined by the infliction of “extreme” or “grievous pain” or “agony”?<sup>84</sup> This Article posits that, in this context, “infliction of pain” is not a description of facts about the body but rather a heuristic for certain values. Punishment aims at the corrupt tastes and preferences of the torture-murderer or HAC murderer, *not* the pain purportedly caused to the victim. A review of the reported cases supports this interpretation; in the last twenty-five years (1985 to present), opinions have been issued in more than two hundred torture-murder cases.<sup>85</sup> Of

<sup>81</sup> See, e.g., FLA. STAT. ANN. § 872.06 (West 2000) (defining abuse of a dead human body as a second-degree felony).

<sup>82</sup> *People v. Elliot*, 122 P.3d 968, 978 (Cal. 2005) (emphasis added) (citations omitted).

<sup>83</sup> See, e.g., *id.* (establishing the “no awareness” rule in California); *Hill v. State*, 724 P.2d 734, 736 & n.4 (Nev. 1986) (implying a similar rule in Nevada by upholding the defendant’s conviction while noting that the victim was paralyzed); *Commonwealth v. Brown*, 711 A.2d 444, 448, 454 (Pa. 1998) (implying a similar rule in Pennsylvania). As discussed in Part I.A.2, an unconscious person cannot have subjective awareness of pain, as pain has no existence distinct from the awareness thereof.

<sup>84</sup> See *supra* notes 67–68 and accompanying text.

<sup>85</sup> An informal search of “all state and all feds (pub & unpub)” databases on Westlaw, with a date parameter starting (arbitrarily) with 1985, using the search phrase “tortur! /50 (homicide murder manslaughter) & da(aft 1/01/1985)” pulled several thousand cases from which relevant results were counted.

those, more than half involved some kind of battery on the sexual organs of the victim.<sup>86</sup> Nearly half involved acts committed against children or in the presence of children.<sup>87</sup>

The frequency of torture-murder convictions in cases involving offenses upon or in the presence of a child throws into relief the relational values of this category. As a California Supreme Court justice remarked in his dissenting opinion to *People v. Steger*, it is difficult to “conceive that society finds anything more deplorable than intentionally causing an innocent child the suffering of the damned.”<sup>88</sup> There, though the element of suffering was not absent—i.e., the victim had awareness of suffering<sup>89</sup>—the dissent stresses not the degree of pain but the juxtaposition of the child’s innocence with the horror of the acts he suffered.<sup>90</sup> This is an important distinction when considering an unappealing victim—say, a mob hitman—who may not have experienced any less physical pain from the same acts as the innocent child. Under the court’s approach, what is “deplorable” is the abuse of an innocent; indeed, an ethical judgment rather than a measurement of pain guides the decision.

Based on the typical torture-murder statute, we could imagine a final case that makes clear that what is being punished in torture-murder/HAC cases is not the *fact* of pain. Instead, the target of punishment is the normative transgression of a perpetrator who seeks to inflict pain. Rather than an insensate or unconscious victim upon whom horrible acts attach, we could posit a fully conscious victim killed by an incompetent murderer. If the killer unwittingly selected a very blunt axe and, not being very strong, had to strike the victim with it many times to effect a decapitation, the killer would not possess the mental state required for torture-murder. Although the victim suffers greatly, such is not the killer’s purpose. Rather, the suffering is inci-

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<sup>86</sup> See, e.g., *Hernandez v. State*, 50 P.3d 1100, 1104–05 (Nev. 2002) (death of adult woman in rape and sexual battery with knife); *Commonwealth v. Elliott*, 700 A.2d 1243, 1247 (Pa. 1997) (death of adult woman during rape and sexual battery, involving strangulation).

<sup>87</sup> See, e.g., *People v. Mincey*, 827 P.2d 388, 398–99 (Cal. 1992) (murder by prolonged beating of five-year-old boy); *State v. Lee*, 501 S.E.2d 334, 337–39 (N.C. 1998) (abuse of child over a one-week period resulting in death); *Hernandez*, 50 P.3d at 1104–05; *Brown*, 711 A.2d at 454 (death of a child by sexual torture where victim was possibly unconscious due to blood loss); *Commonwealth v. Edmiston*, 634 A.2d 1078, 1084 (Pa. 1993) (mutilation of a two-year-old kidnapping victim by beating, carving, and sexual abuse).

<sup>88</sup> *People v. Steger*, 546 P.2d 665, 676 (Cal. 1976) (Clark, J., dissenting). Although the court reversed the defendant’s conviction for the torture-murder of her stepchild, holding that she lacked the requisite intent to inflict extreme pain, *id.* at 671, Justice Clark expresses best the view that animates the large number of torture-murder opinions involving the death of children.

<sup>89</sup> See *id.* at 667.

<sup>90</sup> See *id.* at 676.

dental to the botched killing—a sort of example of the double-effect problem.<sup>91</sup>

From the cases above, the following paradox arises: a murderer who causes a victim to suffer great pain merely incident to an incompetently performed and drawn-out killing (e.g., the botched decapitation) *could not* be convicted of torture-murder. Yet, a murderer who wished a victim to experience pain, even though the victim did not possess the capacity of feeling pain, *could* be convicted of torture-murder. Although the experience of pain is irrelevant to the outcome, statutes define torture uniformly in terms of “grievous pain” or “suffering.”<sup>92</sup>

That torture-murder can occur even when it is conclusively known the victim could not have felt pain makes it clear that punishment does not target the infliction of actual pain and that the increased punishment for torture-murder is not proportional to the pain the victim experienced. Rather, punishment targets the offender’s preference or taste for the infliction of pain, regardless of whether actual pain results. This explains why the additional punishment for torture-murder attaches to particularly repugnant acts; it expresses and reinforces society’s condemnation of the corrupt purposes of the torturer. That is, capital torture-murder conviction responds to the *values* of these torturers. Thus, it follows that these tastes and preferences are so corrupt that the torturers who hold them deserve to be permanently excluded from society.

Because the degree of pain experienced by the victim is largely or totally irrelevant, as the hypotheticals above show, pain measurement would add nothing to torture-murder or HAC doctrine. Torture-murder doctrine and case law thus illustrate how a legal regime that appears to turn on pain experience and pain-as-facts-about-the-body actually rests on the notion of pain-as-heuristic. The case of torture-murder helps show that adoption of a hedonic theory of criminal punishment would be utterly inapposite because felt pain is not the necessary (or perhaps even the primary) object of these legal prohibitions. Here, pain is a proxy—a stand-in for values.

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<sup>91</sup> Broadly speaking, the doctrine of double effect justifies an action causing a serious harm when that harm is an unintended consequence or “double effect” of the pursuit of a good end, even though the same action would not be justified as a direct means to that end. See Alison McIntyre, *Doctrine of Double Effect*, STAN. ENCYCLOPEDIA PHIL. (Sept. 7, 2011), <http://plato.stanford.edu/entries/double-effect/>; see also Frances M. Kamm, *The Doctrine of Double Effect: Reflections on Theoretical and Practical Issues*, 16 J. MED. & PHIL. 571, 571–75 (1991) (describing the doctrine of double effect and applying it to end-of-life issues).

<sup>92</sup> See, e.g., *Lee*, 501 S.E.2d at 343 (quoting *State v. Anderson*, 484 S.E.2d 543, 545 (N.C. 1997)) (describing torture as the intentional infliction of “grievous pain” and “suffering”).



## B. State Torture and Pain Measurement

The common understanding of state torture—that is, state-sanctioned or official torture—finds close ties to pain. After reflecting upon the definition of “torture,” most people would suggest that torture equates to severe physical pain, inflicted on the victim intentionally (and not beneficially). Indeed, this sense that torture involves severe pain or the threat of severe pain to the victim or the victim’s loved ones<sup>93</sup> is tracked by definitions drawn from dictionaries,<sup>94</sup> ency-

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<sup>93</sup> We might conceive of “mental suffering” and severe physical pain as equally constitutive of torture. The relationship of physical and mental pain, and whether mental “suffering” and mental “pain” are equivalent or identical concepts and experiences, deserve exploration in their own right but are beyond the scope of this Article. Preliminary work suggests that many forms of acute emotional distress involve the same brain regions as acute physical pain experience—that the neurobiology tracks the phenomenology when we speak of “the pain of rejection” or the feeling of “broken-heartedness.” In this domain, language is wise; it contains intuitions of our embodiment.

Interestingly, although emotional pain may be painful in its own right, the forms of suffering or “anguish” that states recognize as constituting torture generally hew closely to the threat of physical pain: threats of physical torture; threats to physically torture the victim’s loved ones or comrades; mock drowning (where the physical pain is heightened by the mental pain of panic); menacing with dogs, where the threat is of pain and death from the dogs; and physical immobilization. Sleep deprivation and bombardment with loud music (which causes sleep deprivation) can result in serious physical suffering and even death, marrying physical and mental anguish. See *generally* Torture: A Collection 147–48 (Sanford Levinson ed., 2004).

The major form of mental torture that does not include a nexus with acute physical pain may be that of threatening death to the victim or victim’s loved ones, including through mock executions. There, the pure fear of death seems distinct from fear of physical pain. Extreme abasement and humiliation also may constitute torture, though independent of bodily pain. Conversely, other ways of infliction of emotional anguish, like the threat of being held indefinitely without hope of release, may deeply demoralize—may cause acute emotional pain—but would not ordinarily constitute torture.

Thus, we see that the infliction of even severe mental distress that does not have a nexus with physical pain only constitutes torture in a few, well-delineated instances like mock executions—and may not constitute torture at all. Definitions can change; it is not my normative claim that mental pain cannot constitute torture. Rather, this is a descriptive claim that, while torture definitions include a mental suffering or anguish prong, the suffering inherent to torture remains *constructed as* primarily physical.

<sup>94</sup> 18 OXFORD ENGLISH DICTIONARY 278 (James A.H. Murray et al. eds., 2d ed. 1991) (defining torture as the “infliction of severe bodily pain, as punishment or a means of persuasion; spec. *judicial torture*, inflicted by a judicial or quasi-judicial authority, for the purpose of forcing an accused or suspected person to confess, or an unwilling witness to give evidence or information”).

clopedias,<sup>95</sup> blogs, and other repositories of cultural meaning<sup>96</sup> and has remained largely consistent over time.<sup>97</sup>

What constitutes “severe pain”? This single question seems to have become the battleground for most of the current debates about what constitutes torture and separates it from so-called “harsh interrogation tactics.” Quantum of pain provides the arena in which opponents fight out the questions of what constitutes torture, what constitutes the lesser but still prohibited “cruel, inhuman, and degrading” (CID) treatment,<sup>98</sup> and what constitutes permissible conduct.<sup>99</sup> In this way, “the threshold test of suffering has been used in an attempt to fly below the radar of the absolute prohibition on torture”<sup>100</sup> as well as to challenge practices not currently classified as torture.

Could pain quantification for interrogation tactics even be possible? Assuming—and, to be sure, this is indeed a grand assumption for now—that acute pain could be quantified relatively accurately using neuroimaging and other monitoring techniques, data gathering

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<sup>95</sup> See, e.g., Nigel S. Rodley, 11 *ENCYCLOPEDIA BRITANNICA* 861 (15th ed. 1998), available at <http://www.britannica.com/EBchecked/topic/600270/torture> (defining “torture” as “the infliction of severe physical or mental pain or suffering for a purpose, such as extracting information, coercing a confession, or inflicting punishment . . . [that is] normally committed by a public official or other person exercising comparable power and authority”); Seumas Miller, *Torture*, *STAN. ENCYCLOPEDIA PHIL.* (Apr. 29, 2011), <http://plato.stanford.edu/entries/torture/> (“Torture includes such practices as searing with hot irons, burning at the stake, electric shock treatment to the genitals . . . and denying food, water or sleep for days or weeks on end. All of these practices presuppose that the torturer has control over the victim’s body, e.g. the victim is strapped to a chair. Most of these practices, but not all of them, involve the infliction of extreme physical pain.” (footnote omitted)).

<sup>96</sup> See, e.g., *The Ethics of Torture*, *PHILOSOPHY TALK* (Apr. 10, 2010), <http://web.archive.org/web/20100417075220/http://theblog.philosophytalk.org/2010/04/the-ethics-of-torture.html> (pointing out the broader categorization of torture to include both physical and mental anguish); cf. David Luban, *The Fundamental Trick: Pretending that “Torture” is a Technical Term*, *BALKINIZATION* (Feb. 26, 2010), <http://balkin.blogspot.com/2010/02/fundamental-trick-pretending-that.html> (arguing that torture is defined by severe pain, as elaborated in David Luban, *Liberalism, Torture, and the Ticking Time Bomb*, 91 *VA. L. REV.* 1425, 1425–28 (2005) [hereinafter Luban, *Liberalism*]).

<sup>97</sup> Elizabeth Hanson, *Torture and Truth in Renaissance England*, 34 *REPRESENTATIONS* 53, 57 (1991) (quoting Sir Thomas Smith to have defined torture as “torment . . . which is used by the order of the civill lawe and custome . . . to put a malefactor to excessive paine, to make him confesse him selfe, or of his fellowes or complices” and noting its absence in English law in the sixteenth and seventeenth centuries (internal quotation marks omitted)).

<sup>98</sup> See, e.g., Yutaka Arai-Yokoi, *Grading Scale of Degradation: Identifying the Threshold of Degrading Treatment or Punishment Under Article 3*, 21 *NETH. Q. HUM. RTS.* 385, 415 (2003).

<sup>99</sup> See, e.g., Ian Brownlie, *Interrogation in Depth: The Compton and Parker Reports*, 35 *MOD. L. REV.* 501, 501–02 (1972) (describing tactics classified in British colonies as permissible “interrogation in depth,” not torture). For a more recent example, consider the extensive public and academic debates over whether waterboarding constitutes torture; cruel, inhuman, and degrading conduct; or permissible enhanced interrogation.

<sup>100</sup> Oren Gross, *Are Torture Warrants Warranted? Pragmatic Absolutism and Official Disobedience*, 88 *MINN. L. REV.* 1481, 1488 (2004).

would be less of a problem than one might assume. Certainly, it would be impossible to obtain institutional review board (IRB) approval for a human-subjects study that proposed to inflict actual torture (instead of a Milgramian simulacrum).<sup>101</sup> However, a potential data source for pain is readily available. In foreign prisons where torture is practiced and in the sites of extraordinary rendition to which the United States sends high-value suspects for interrogation, the experiment is already under way. If interrogators or jailers already perform these functions, it should be possible to collect data on the average pain associated with each technique. There could be robust debate on what pain threshold should separate torture from CID treatment and CID from harsh practices, as well as data integrity. But there is no reason *a priori* why these theoretical and empirical problems could not also be resolved *if* torture could be reduced to pain experience.

Like torture-murder, however, torture points toward the normative dimensions of physical experience. It shows that, while we cannot separate ourselves from our physicality, we are not entirely reducible to it because we process our relationships with our bodies through normative constructs. Further, discourse about pain within the context of torture may hide the ball; for example, when the ostensible issue refers to severity of pain, the actual issue may be the values at stake in the treatment of detained persons. In relying on a discourse concerned with the apparently physical, we may actually suppress more contentious questions about values. In this way, pain serves as a heuristic for values and not as a description of physical facts at all.

In any case, no measurement system for pain quantification alone could ever definitively answer what torture is or is not and whether in any given context particular pain-causing actions ought to be permissible. The following sections explore the relationship between pain and torture and how one informs the understanding of the other. Sections 1 and 2, respectively, present definitions of torture that are predominantly framed in terms of severe pain and those that are not. Section 3 shows how stances toward torture correlate with relative emphases on pain; that is, the harsher the conduct the proponent seeks to permit, the more closely the definition hews to a pain formula (and vice versa). Section 4 discusses harms that flow from torture but are independent of the harms to torture victims, further pointing to the irreducibility of torture as solely affecting the victims' physical experience. In so doing, it looks at the normative harms to victims as well as

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<sup>101</sup> Cf. STANLEY MILGRAM, OBEEDIENCE TO AUTHORITY: AN EXPERIMENTAL VIEW *passim* (2009). In experiments conducted by Milgram, subjects complied with directions to inflict pain upon others; unbeknownst to the subjects, the others were confederates of the researchers and the pain was merely simulated. *See id.* at 3–6.

to torturers and emphasizes the relationship between the torture prescription and liberal political theory. In conclusion, it argues for the existence of what this Article calls an “embodied morality” or “embodied normativity.” This phrase suggests that notions of what is normatively permissible derive from shared physical experience and that normative constructs of the body reciprocally shape perception of physical experience.<sup>102</sup>

### 1. *Torture as Severe Pain*

The essential relationship between torture and pain is confirmed by sources of political meaning such as definitions of torture promulgated by major supranational organizations. The United Nations Convention Against Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment (UN Convention Against Torture) defines torture as

any act by which *severe pain* or suffering, whether physical or mental, is intentionally inflicted on a person for such purposes as obtaining from him or a third person information or a confession, punishing him for an act he or a third person has committed or is suspected of having committed, or intimidating or coercing him or a third person.<sup>103</sup>

This UN definition hinges on the infliction of severe physical pain or mental anguish. Severe pain does not suffice in itself, however; the definition also requires state action and the restriction to particular purposes. But the essential term of this definition is physical or mental pain; without it, conduct might be coercive but would not amount to torture.

Unlike the UN Convention Against Torture, the European Convention on Human Rights, though it bars torture, does not delineate what constitutes it.<sup>104</sup> Jurisprudence under the Convention, however, has relied upon a “severity of suffering” test.<sup>105</sup>

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<sup>102</sup> Daniel C. Dennett, *Review of Damasio, Descartes' Error*, TIMES LITERARY SUPPLEMENT, Aug. 25, 1995, at 3, 3–4 (reviewing Antonio R. Damasio, *DESCARTES' ERROR: EMOTION, REASON, AND THE HUMAN BRAIN* (1994)); see also MICHAEL TOMASELLO, *THE CULTURAL ORIGINS OF HUMAN COGNITION* 180 (1999) (describing the relationship between physical empathy for the pain of others and moral development in children).

<sup>103</sup> United Nations Convention Against Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment art. 1, Dec. 10, 1984, 1465 U.N.T.S. 113–14 (emphasis added).

<sup>104</sup> See European Convention on Human Rights, Convention for the Protection of Human Rights and Fundamental Freedoms art. 3, Nov. 4, 1950, 213 U.N.T.S. 221, 224 (“No one shall be subjected to torture or to inhuman or degrading treatment or punishment.”).

<sup>105</sup> Gross, *supra* note 100, at 1488 (citing Fionnuala Ní Aoláin, *The European Convention on Human Rights and Its Prohibition on Torture*, in *TORTURE* 213, 213–28 (Sanford Levinson ed., 2004)).

U.S. law defines torture compatibly with the UN Convention Against Torture. Section 2340 of Title 18 of the U.S. Code provides that torture is “an act committed by a person acting under the color of law specifically intended to *inflict severe physical or mental pain or suffering* (other than pain or suffering incidental to lawful sanctions) upon another person within his custody or physical control.”<sup>106</sup>

Definitions from other conventions and those promulgated by nongovernmental organizations emphasize pain in varying degrees; like those in U.S. law, these definitions emphasize the intentionality of the infliction of physical pain and the specific purposes that cause the infliction of pain or suffering to constitute torture. Amnesty International adopts the definition of torture as “severe pain,” stating that torture is “the deliberate infliction of severe pain or suffering by state agents” or other organized political groups.<sup>107</sup> Because of the intimate connection between torture and pain, and perhaps for other important reasons that will be discussed below, “[m]uch recent discussion of torture focuses on the severity of suffering involved.”<sup>108</sup>

The most notorious recent example of torture defined exclusively in terms of infliction of severe pain is the much debated “Bybee Memo.” This August 2002 memorandum from Assistant Attorney General Jay S. Bybee to then-White House Counsel Alberto Gonzales expressly defines torture by the quantum of pain the victim experiences. The Memo states that to constitute torture under U.S. law,<sup>109</sup> “severe pain” must be inflicted on a prisoner; further, “severe pain” means pain “akin to that which accompanies serious physical injury such as death or organ failure.”<sup>110</sup>

Although the Bybee Memo and its progeny equate torture and pain, they do so nonsensically: What is the degree of pain equivalent to organ failure or death? Death can be painless; organ failure, too, may be pain-free, as when heart failure causes a person to slip away during sleep. Conversely, excruciatingly painful torments may not result in organ failure.

As is now well known, the Bybee Memo adopted this incoherent definition from other U.S. statutes that do not themselves define pain;<sup>111</sup> rather, the statutes set forth the circumstances under which

<sup>106</sup> 18 U.S.C. § 2340(1) (2006) (emphasis added).

<sup>107</sup> AMNESTY INT’L, *END IMPUNITY: JUSTICE FOR THE VICTIMS OF TORTURE* 5 (2001), *available at* <http://www.amnesty.ca/stoptorture/impunity.pdf>.

<sup>108</sup> David Sussman, *Defining Torture*, 37 CASE W. RES. J. INT’L L. 225, 226 (2006).

<sup>109</sup> 18 U.S.C. § 2340.

<sup>110</sup> Memorandum from Jay S. Bybee, Assistant Attorney Gen., U.S. Dep’t of Justice, to Alberto R. Gonzales, Counsel to the President on Standards of Conduct for Interrogation Under 18 U.S.C. §§ 2340–2340A (Aug. 1, 2002), *reprinted in* MARK DANNER, *TORTURE AND TRUTH: AMERICA, ABU GHRAIB, AND THE WAR ON TERROR* 115, 155 (2004).

<sup>111</sup> *See, e.g.*, 8 U.S.C. § 1369(d) (2006) (noting that emergency medical conditions include those manifesting symptoms of severe pain); *see also* 42 U.S.C. § 1395w-22(d)(3)(B)

hospitals are obligated to provide treatment to the uninsured for “severe” medical emergencies.<sup>112</sup> Others have remarked how the Memo ironically co-opts for torture purposes the statutory minimum obligations of care for society’s unfortunate members.<sup>113</sup> And the Bybee Memo has been criticized extensively for nearly every other aspect of its logic and legitimacy.<sup>114</sup> Indeed, not long after it became public, the Department of Justice replaced it with new guidance known as the “Levin Memo” that expressly condemned torture.<sup>115</sup>

Yet the heart of the Bybee Memo has not been repudiated or abandoned. The notion remains that torture is best defined and described by the victim’s quantum of acute pain. The Levin Memo uses as examples of torture only those practices that inflict the most extreme pain (and which would have qualified under the definition of torture found in the Bybee Memo).<sup>116</sup> Further, many scholars and attorneys who have challenged the Bybee Memo’s pain standard leave intact the notion that *some* threshold of pain could be established to separate torturous from non-torturous conduct.<sup>117</sup>

This Article suggests neither that these efforts are flawed because they emphasize pain nor that definitions of torture should somehow be independent of the body. Rather, it purports to demonstrate the significance of the connection of torture with quanta of pain in these analyses, critiques, and commentaries because such a connection shows that even serious efforts to define torture succumb to a mea-

(2006) (same); *id.* § 1395x(v)(1)(K)(ii) (same); *id.* § 1395dd(e)(1)(A) (same); *id.* § 1396b(v)(3) (same); *id.* § 1396u-2(b)(2)(C) (same).

<sup>112</sup> See *supra* note 111 and accompanying text.

<sup>113</sup> See M. Cathleen Kaveny, *Prophecy and Casuistry: Abortion, Torture and Moral Discourse*, 51 VILL. L. REV. 499, 553–54 (2006) (“Taken together, these statutory provisions express Congress’s overarching concern to insure that no one in need of emergency medical treatment will be denied such treatment. . . . [T]hey express the conviction that the moral imperative to *alleviate* the severe physical suffering of another human being overrides other important national goals and policies.”).

<sup>114</sup> Indeed, there is “a near consensus that the legal analysis in the Bybee Memo [is] bizarre.” Luban, *Liberalism*, *supra* note 96, at 1455.

<sup>115</sup> Memorandum from Daniel Levin, Acting Assistant Attorney Gen., U.S. Dep’t of Justice, to James B. Comey, Deputy Attorney Gen. (Dec. 30, 2004). The Memo opens by stating: “Torture is abhorrent both to American law and values and to international norms.” *Id.* at 1.

<sup>116</sup> *Id.* The Levin Memo’s examples of practices that would cause proscribed degrees of severe pain included, for example, “severe beatings to the genitals, head, and other parts of the body with metal pipes . . . ; removal of teeth with pliers; . . . cutting off . . . fingers[;]” and other, similar conduct. *Id.* at 10 (citing *Mehinovic v. Vuckovic*, 198 F. Supp. 2d 1322, 1332–40, 1345–46 (N.D. Ga. 2002), and *Daliberti v. Republic of Iraq*, 146 F. Supp. 2d 19, 22–23 (D.D.C. 2001)); see also Luban, *Liberalism*, *supra* note 96, at 1456 (“Although the Levin Memo condemns torture and repudiates the Bybee Memo’s narrow definition of ‘severe pain,’ a careful reading shows that it does not broaden it substantially.”).

<sup>117</sup> See, e.g., Sussman, *supra* note 108, at 227 (suggesting that a definition of torture should take into account forced alienation and passivity *in addition* to “the intensity of pain that might be inflicted”).

surement fallacy. In attempting to restrict the definition of torture by retaining a connection with embodiment, the various commentators suggest that torture is reducible to a measurable quantum of pain inflicted on the body by a state actor.

## 2. *Torture as Power Relations*

While many efforts to define torture described above turn on degree of pain, there is in fact nothing close to a consensus on which acts (or omissions) constitute torture. Indeed, torture “has . . . proved surprisingly resistant to any very clear definition in current debates.”<sup>118</sup> Several of these definitions have excluded pain entirely, countering the presupposition that torture is reducible to some objectively discernable quantum of pain. Yet, such definitions of torture that exclude bodily pain produce issues. In addition to being both over- and under-inclusive, they also feel partly unconvincing. Perhaps this is because they miss what Louis Seidman has called “torture’s truth”: that the destruction of the body is the surest route to the destruction of the psyche and that, ultimately, no belief, cause, or construct can withstand physical assault.<sup>119</sup>

Taking a different approach, other scholars seek to define torture in terms of power rather than pain. John T. Parry, for example, has advanced the notion that torture is the infliction of even brief, non-severe pain if it occurs “against a background of total control and potential escalation that asserts the state’s dominance and unsettles or destroys the victim’s normative world.”<sup>120</sup> Similarly, David Sussman has described the true horror of torture as being that which results from the “asymmetry of power, knowledge, and prerogative” between interrogator and subject, where “the victim is in a position of complete vulnerability and exposure, the torturer in one of perfect control and inscrutability.”<sup>121</sup> These definitions capture something about the essence and horror of torture that the purely pain-based definitions do not; namely, that the normative dimensions of torture—the ability to psychologically destroy the victim and cause the renouncement of whatever had been held most sacred—comprise an essential purpose or component of torture.

At least one important supranational organization has adopted an approach to defining torture that is consistent with the intuitions

<sup>118</sup> *Id.* at 225.

<sup>119</sup> Louis Michael Seidman, *Torture’s Truth*, 72 U. CHI. L. REV. 881, 906–07 (2005).

<sup>120</sup> John T. Parry, *What Is Torture, Are We Doing It, and What If We Are?*, 64 U. PITT. L. REV. 237, 249 (2003).

<sup>121</sup> Sussman, *supra* note 108, at 228. See generally David Sussman, *What’s Wrong with Torture?*, 33 PHIL. & PUB. AFF. 1, 3–5 (2005) (arguing for an account of why torture is morally reprehensible that transcends the mental and physical harms involved, focusing specially on “interrogational torture”).

about torture expressed in these non-pain-based definitions. The Inter-American Convention to Prevent and Punish Torture (Inter-American Convention) looks significantly more to the relational aspects of a torture situation than to degrees of pain.<sup>122</sup> The Inter-American Convention defines torture broadly such that *any* degree of pain may constitute torture provided it is inflicted for specified purposes: for “criminal investigation, as a means of intimidation, as personal punishment, as a preventive measure, as a penalty, or for any other purpose” other than those incident to lawful sanctions. Further, the Convention acknowledges that torture may also be made up of tactics that have as their intent “to obliterate the personality of the victim or to diminish [the victim’s] physical or mental capacities.”<sup>123</sup> This Convention illustrates clearly the values component of torture—that physical pain itself may have less significance than the impact on the mental state of the victim. Indeed, in determining what torture is and why it is horrible, the impact on the victim, whether physical or mental, may be less significant than the mental state of the agent inflicting the torturous conduct upon the victim.

Yet, while these non-pain-based definitions capture a certain truth—that torture is more than just a lot of pain—they do not grapple with what I would argue remains the essence of torture as an embodied experience. These descriptions of torture are underdeveloped in a number of ways. For example, what precisely would it mean to destroy the victim’s normative world? It also remains unclear how personnel reasonably attempting to avoid torture would know enough about each subject’s normative world to draw appropriate lines of interrogational conduct so as not to transgress them. Further, it cannot be the case that a mere disparity in power is sufficient to constitute torture. Indeed, asymmetries of power, knowledge, and prerogative are not only common but ubiquitous. In a world of inequalities, power dynamics between subjects are the norm, not the exception.<sup>124</sup> Even in ordinary, lawful domestic police investigation, “some dominance and some unsettling are proper.”<sup>125</sup> Thus, these asymmetries, though perhaps describing “subjugation,” cannot of themselves be said to constitute “torture.”

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<sup>122</sup> Organization of American States, Inter-American Convention to Prevent and Punish Torture art. 2, Dec. 9, 1985, 25 I.L.M. 519.

<sup>123</sup> *Id.*

<sup>124</sup> *See generally id.*

<sup>125</sup> A. John Radsan, *A Better Model for Interrogating High-Level Terrorists*, 79 TEMP. L. REV. 1227, 1238 (2006).



### 3. *Harms of Torture Beyond Direct Harm to Victims*

The sources that define torture primarily in physical terms suggest the possibility of pain quantification. Those that define it primarily in relational or power-relational terms, however, suggest that pain is perhaps merely incidental to torture but still best understood as primarily or exclusively a harm to the victim.

The liberal theoretical objection to torture offers another approach, focusing instead on the harms of torture to the *body politic*. The abhorrence of cruelty, as Judith N. Shklar has argued, only arises with liberal consciousness because physical subjugation of the individual to the *raison d'état* was presumed in earlier periods.<sup>126</sup> Indeed, norms of respect for the prisoner's body began to emerge in European society only after the French Revolution.<sup>127</sup> The writings of statesmen and political philosophers active in the founding of the United States and in the political underpinnings of the American and French revolutions also had parts to play, making evident that the primary party harmed by torture is the state practicing it. To take one of many examples, Patrick Henry, although best known for his "Give me Liberty or Give Me Death" speech, also spoke passionately against torture: "What has distinguished our ancestors? That they would not admit of tortures, or cruel and barbarous punishment. But Congress may . . . tell you that there is such a necessity of strengthening the arm of government, that they must . . . extort confession by torture . . . . We are then lost and undone."<sup>128</sup> As David Luban argues, "torture is a microcosm, raised to the highest level of intensity, of . . . tyrannical political relationships,"<sup>129</sup> of the elevation of the state (*staatsraison* or *raison d'état*) over the autonomy and dignity of the individual.<sup>130</sup> This puts torture in direct opposition to liberal political theory. Liberal theory rejects the individual as a mere state subject. Rather, the indi-

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<sup>126</sup> JUDITH N. SHKLAR, *ORDINARY VICES* 43 (1984); see Luban, *Liberalism*, *supra* note 96, at 1429.

<sup>127</sup> JAMES Q. WHITMAN, *HARSH JUSTICE: CRIMINAL PUNISHMENT AND THE WIDENING DIVIDE BETWEEN AMERICA AND EUROPE* 9–10 (2003); see also Heikki Pihlajamäki, *The Painful Question: The Fate of Judicial Torture in Early Modern Sweden*, 25 *LAW & HIST. REV.* 557, 582 (2007) ("[T]he idea of respectful treatment of the prisoner only ar[ose] in Europe after the French Revolution." (footnote omitted)).

<sup>128</sup> 3 *THE DEBATES IN THE SEVERAL STATE CONVENTIONS ON THE ADOPTION OF THE FEDERAL CONSTITUTION, AS RECOMMENDED BY THE GENERAL CONVENTION AT PHILADELPHIA, IN 1787*, at 447–48 (Jonathan Elliot ed., 2d ed. 1891 prtg.).

<sup>129</sup> Luban, *Liberalism*, *supra* note 96, at 1430.

<sup>130</sup> Pihlajamäki, *supra* note 127, at 558 (citing MATHIAS SCHMOECKEL, *HUMANITÄT UND STAATSRATION: DIE ABSCHAFFUNG DER FOLTER IN EUROPA UND DIE ENTWICKLUNG DES GEMEINEN STRAFPROZESS- UND BEWEISRECHTS SEIT DEM HOHEN MITTELALTER* 359, 536, 591 (2000)).

vidual's triumph over the state may be seen as liberalism's core achievement.<sup>131</sup>

A powerful set of arguments against torture also focuses on the ways in which the practice can lead to pernicious political effects such as "corruption, gratuitous brutality, and abuse."<sup>132</sup> These arguments emphasize that torture also leads to questions that impinge on the norms of citizens generally, not just the small segment that might be directly involved in torture practice. For example:

Should we create a professional cadre of trained torturers? . . . Do we want federal grants for research to devise new and better techniques? Patents issued on high-tech torture devices? Companies competing to manufacture them? Trade conventions in Las Vegas? . . . Do we really want to create a torture culture and the kind of people who inhabit it?<sup>133</sup>

The values dimension of torture is again evident when we examine the torture proscription in utilitarian terms. Collective pain—or total disutility—may fail to capture the chief objections to torture. This is illustrated by the response a few years ago to Alan M. Dershowitz's proposal to formalize torture through "torture warrants."<sup>134</sup> Torture warrants have a deep legal history; they were used in England, among other places, to regulate the practice of judicial torture.<sup>135</sup> The heart of the Dershowitz proposal proclaims that torture warrants, by enforcing transparency in torture practices, would produce fewer instances of torture.<sup>136</sup>

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<sup>131</sup> See Gerald Gaus & Shane D. Courtland, *Liberalism*, STAN. ENCYCLOPEDIA OF PHIL., (Sept. 16, 2010), <http://plato.stanford.edu/entries/liberalism/#PreFavLib> ("The *a priori* assumption is in favour of freedom . . . . This might be called the *Fundamental Liberal Principle*: freedom is normatively basic, and so the onus of justification is on those who would limit freedom, especially through coercive means. It follows from this that political authority and law must be justified, as they limit the liberty of citizens." (citations omitted) (internal quotation marks omitted)); see also, JOHN LOCKE, TWO TREATISES ON GOVERNMENT § 119, at 291 (1821) ("*Every man being . . . naturally free, and nothing being able to put him into subjection to any earthly power, but only his own consent . . .*"); JOHN STUART MILL, ON LIBERTY 21–22 (London, Longman, Roberts & Green 2d ed. 1859), available at <http://www.bartleby.com/130/index.html> (advocating the limitation of society's authority over individuals).

<sup>132</sup> Seidman, *supra* note 119, at 893.

<sup>133</sup> Luban, *Liberalism*, *supra* note 96, at 1445–46.

<sup>134</sup> ALAN M. DERSHOWITZ, WHY TERRORISM WORKS: UNDERSTANDING THE THREAT, RESPONDING TO THE CHALLENGE 131–63 (2002) (suggesting that a regime of torture warrants would increase transparency in detention and interrogation practices, reduce the suffering inflicted on most suspects, and allow public debate on torture standards).

<sup>135</sup> See *id.*

<sup>136</sup> See *id.* at 158 ("It is always difficult to extrapolate from history, but it seems logical that a formal, visible, accountable, and centralized system is somewhat easier to control than an ad hoc, off-the-books, and under-the-radar-screen nonsystem. I believe . . . that a formal requirement of a judicial warrant as a prerequisite to nonlethal torture would decrease the amount of physical violence directed against suspects.").

This notion of a net reduction in pain accompanied by less suffering and more supervision should be appealing, even if empirically debatable. Though Dershowitz's proposal focuses on interrogational torture, it could extend to punitive torture; some offenders might choose brief, state-imposed torture over lengthy incarceration.<sup>137</sup> This, too, would minimize total disutility and possibly even total physical pain. Yet, strongly expressed academic and public condemnation of the core proposal of torture warrants stretched to nearly universal agreement. "That anger" toward the proposal, Seidman suggests, indicates that adherents of classical liberal values "are unwilling to trade the symbolic . . . [importance of] the legal prohibition of torture for a reduction in the incidence of the practice itself."<sup>138</sup> As Seidman notes, particularly in the instance of the bar on punitive torture in favor of incarceration, "[o]ne must ask . . . who, precisely, we are protecting by not offering prisoners this choice."<sup>139</sup>

#### 4. *Torture, Measurement, and Embodied Morality*

Definitions of torture that focus exclusively on the degree of bodily pain ultimately mislead because they suggest a measurement fallacy: specifically, that torture is no more than a lot of pain and anything that hurts less than, say, eighty-five units of pain out of one hundred does not constitute torture. Waterboarding provides the paradigmatic example of the shortcomings of and subterfuges permitted by the notion of torture as a specific and potentially measurable amount of pain. Volunteers who have experienced waterboarding, perhaps as part of military training, describe the experience as not intensely, physically painful but nevertheless filled with panic and dread.<sup>140</sup> Because of the emphasis on physical pain in recent interpretative guidelines governing torture,<sup>141</sup> proponents of waterboarding and similar practices may argue that it categorically does not constitute torture because it simply does not hurt enough.

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<sup>137</sup> See Seidman, *supra* note 119, at 884, 887.

<sup>138</sup> *Id.* at 885.

<sup>139</sup> *Id.* at 897 (citing MICHEL FOUCAULT, *DISCIPLINE AND PUNISH* 24–31 (Alan Sheridan trans., Vintage Books 2d ed. 1995) (1977)). Of course, utilitarian critiques of proposals that would permit torture also exist, primarily arguing that the full utilitarian calculus must also account for the negative externalities produced by torture. See Lincoln Allison, *The Utilitarian Ethics of Punishment and Torture*, in *THE UTILITARIAN RESPONSE: THE CONTEMPORARY VIABILITY OF UTILITARIAN POLITICAL PHILOSOPHY* 9, 24 (Lincoln Allison ed., 1990) (arguing that torture corrupts social, legal, and political institutions).

<sup>140</sup> Memorandum for John A. Rizzo, Senior Deputy General Counsel, Central Intelligence Agency re: Application of 18 U.S.C. §§ 2340–2340A to Certain Techniques That May Be Used in the Interrogation of a High Value al Qaeda Detainee (May 10, 2005), *reprinted* in *THE TORTURE MEMOS: RATIONALIZING THE UNTHINKABLE* 152, 191–96 (David Cole ed., 2009).

<sup>141</sup> See sources cited *supra* notes 115–16.

Conversely, definitions of torture that abjure any connection to the body suffer from incompleteness as well because they are overinclusive and fail to account for the moral status of the body. Both torture and torture-murder show how legal categories defined by pain cannot be reduced to facts about the body yet remain rooted in it through embodied morality.<sup>142</sup>

The embodied morality of these offenses is twofold. First, the suffering of the victim involves embodied morality because of the normative dimensions of transgressions against the victim's body committed for particular purposes. Second, the conduct of the perpetrator involves embodied morality; there is a moral dimension to the conduct of the perpetrator independent of the amount of pain the perpetrator inflicts. The normative implications of the perpetrator's conduct remain connected to the physical victim because even though an insensate victim would not negate the crime of torture (or torture-murder), a dead "victim" would. This second category of normative transgressions made by torture and torture-murder cannot be reduced to differences in quanta of pain because the essential wrong subsists in either the perpetrator's expression of corrupt and sadistic preferences, as in torture-murder, or of corrupt power relations between the state and the individual, as in state torture. However characterized, both offenses certainly express disregard for the norms of dignity and autonomy.

Further, given the consistent contemporary and historical emphasis on pain, we cannot reject pain—the physical degradation of the victim—as part of the moral sum. Perhaps this is because, as Louis Seidman, Elaine Scarry, and others speculate, "torture's truth" rests in the fact that we have no existence apart from our embodiment.<sup>143</sup> Though this might appear to elevate the potential for pain measurement as a way of drawing effective lines, such lines would fail to capture the conception and experience of the body, which differ from the body itself—the body-as-fact.<sup>144</sup> Rather, the relationship between

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<sup>142</sup> It is not my intent to attempt to define torture. But, as the above suggests, productive avenues will consist of embodied definitions that integrate the body's moral or normative status. Professor Michael W. Lewis provides an interesting effort in this regard. Lewis proposes that the definition of torture be bounded objectively by the physical and psychological trials through which a nation puts its own military personnel in special forces training. Without resorting either to pain measurement on the one hand or the metaphysics of power relations on the other, this standard sets boundaries of physical and mental distress while hewing to a classic normative standard: I wouldn't do to anyone else what I wouldn't do to myself. See Michael W. Lewis, *A Dark Descent into Reality: Making the Case for an Objective Definition of Torture*, 67 WASH. & LEE L. REV. 77, 121–25 (2010). Of course, like any standard, this one is also subject to critique; there are obvious differences between a volunteer and a prisoner, not the least of which is that the volunteer can quit.

<sup>143</sup> See SCARRY, *supra* note 5, at 47; Seidman, *supra* note 119, at 886.

<sup>144</sup> Support for this notion ranges from Freud to Merleau-Ponty to contemporary feminist theory and the ethics of care. See generally SIGMUND FREUD, THREE ESSAYS ON THE THE-

an individual and the individual's body is both physically rooted and normatively constructed. Torture targets both of these. Focusing on pain measurement to the exclusion of torture's normative destruction of victims misses half the equation.

### III

#### CASE STUDY: ACUTE PAIN IN DEATH PENALTY AND ABORTION LAWMAKING

Part II argued that discourse about pain in certain legal contexts is only partly about the fact of pain. Frequently, pain acts only as a heuristic or proxy for the moral status of actions committed upon the bodies of subjects and for the values of agents who *inflict* pain. Accordingly, while not wholly orthogonal to these controversies, measurement of pain may frequently be ancillary to them.

This Part extends this hypothesis through a second pair of case studies. Two highly contentious, current legal controversies appear to be framed exclusively in terms of quanta of pain: Eighth Amendment challenges to the death penalty and limitations on abortion based upon fetal pain. In Eighth Amendment challenges to the death penalty, the battlefield has moved from the constitutionality of execution to the question of whether lethal injection is unconstitutionally painful. In abortion legislation and jurisprudence, the pressing contemporary question has transformed from the constitutionality of access to the procedure to whether the procedure may be limited on the ground that fetuses experience pain. In these areas, the major public claims have shifted from arguments for outright abolition to arguments for pain-limiting restrictions. That is, opponents of these practices argue for their severe curtailment based on the unwarranted degree of pain they cause while supporters either assert that current practices are sufficiently humane or not painful.

These two controversies, at first glance, appear to represent classic instances where empirical information about degree of pain would be dispositive. Only the naïve, however, would suppose that activists opposing these practices would be appeased by, say, legislation requiring analgesia. The terms of the debates themselves show that the appeal to pain—a transcendent signifier, a universal proxy for empathy, and a subject that evokes visceral and moral horror—is substantially

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ORY OF SEXUALITY (1962) (introducing psychological theory on the sense of reality by a cognitive self); GENDER/BODY/KNOWLEDGE: FEMINIST RECONSTRUCTIONS OF BEING AND KNOWING (Alison M. Jaggar & Susan R. Bordo eds., 1989); INTERTWININGS: INTERDISCIPLINARY ENCOUNTERS WITH MERLEAU-PONTY (Gail Weiss ed., 2008) (collecting works in diverse disciplines that use Merleau-Ponty's intersubjective ontology to theorize about bodies); MAURICE MERLEAU-PONTY, PHENOMENOLOGY OF PERCEPTION (Colin Smith trans., Routledge Classics 2002) (1945) (describing the body as an object and the relationship between sensory organs and physiological reactions).

strategic. This is not to say that real pain does not count or that limiting suffering is not in itself a worthy goal; rather, these discourses do not view the limiting of suffering as the primary issue. Accordingly, guaranteeing complete painlessness in administering abortions and the death penalty would not resolve the abovementioned problems; the abolition debate would simply shift to yet another area. The brief consideration below will point out the *heuristic* role of pain in each of these areas.

### A. Pain-Based Challenges to the Death Penalty

Since 2006, all major anti-death penalty litigation has focused on Eighth Amendment challenges to the painfulness of lethal injection.<sup>145</sup> Prior to 2006, the Supreme Court had rejected method-of-execution challenges to lethal injection.<sup>146</sup> Then, in *Hill v. McDonough*, the Court held that petitioners could employ 42 U.S.C. § 1983 to challenge the method of their scheduled lethal injections as a violation of their civil rights.<sup>147</sup>

The usual claim raised under § 1983 is the following: The most common lethal injection protocol, which involves three drugs being injected in sequence, sometimes fails. If the drug that induces unconsciousness is not administered successfully, the condemned remains conscious during injection of the final drugs.<sup>148</sup> Without adequate anesthesia, one such drug, potassium chloride, causes “excruciating pain”<sup>149</sup> as it “inflames . . . the sensory nerve fibers, literally burning up the veins as it travels to the heart.”<sup>150</sup> The third drug, pancuronium bromide, is believed to be no less painful.<sup>151</sup>

How painful is the unanesthetized administration of potassium chloride and pancuronium bromide? By law, one literally cannot

<sup>145</sup> See generally Note, *A New Test for Evaluating Eighth Amendment Challenges to Lethal Injections*, 120 HARV. L. REV. 1301, 1301, 1304–06 (2007) (noting that “[a]n explosion of Eighth Amendment challenges to lethal injection protocols has struck the federal courts” and describing such litigation).

<sup>146</sup> *Id.* at 1304 (citing *Morales v. Hickman*, 415 F. Supp. 2d 1037, 1043 (N.D. Cal.), *aff’d per curiam*, 438 F.3d 926 (9th Cir. 2006)) (collecting cases).

<sup>147</sup> 547 U.S. 573 (2006); see also Douglas A. Berman, *Finding Bickel Gold in a Hill of Beans*, 2005–2006 CATO SUP. CT. REV. 311, 318 (“[T]he Court’s work in *Hill* had a profound nationwide ripple effect on lethal injection litigation and on state efforts to carry out scheduled executions.”). Section 1983 permits a petitioner to challenge the circumstances of a lawfully imposed sentence; thus it is more limited than a habeas claim, which challenges the lawfulness of the sentence itself. See *Hill*, 547 U.S. at 579.

<sup>148</sup> See HUMAN RIGHTS WATCH, *SO LONG AS THEY DIE: LETHAL INJECTIONS IN THE UNITED STATES* 21 (2006), available at <http://hrw.org/reports/2006/us0406/us0406web.pdf>.

<sup>149</sup> *Brown v. Beck*, No. 5:06CT3018 H, 2006 WL 3914717, at \*7 (E.D.N.C. Apr. 7, 2006).

<sup>150</sup> HUMAN RIGHTS WATCH, *supra* note 148, at 22.

<sup>151</sup> See *Abdur’Rahman v. Bredesen*, 181 S.W.3d 292, 300, 309, 312–13 (Tenn. 2005) (declining to apply a state animal euthanasia statute to humans but noting the potential painfulness of the challenged substance).

treat a dog this way—the American Veterinary Medical Association prohibits the use of potassium chloride in animal euthanasia unless the animal is unconscious.<sup>152</sup> Similarly, thirty states have banned pancuronium bromide outright in animal euthanasia because it causes extreme pain.<sup>153</sup>

Since *Hill*, petitioners have brought scores of challenges to lethal injection protocols with some success. Federal courts have granted stays on these grounds to executions in at least three jurisdictions.<sup>154</sup> Furthermore, although the Eastern District of North Carolina did not halt executions, it did require that the Department of Corrections submit a plan for medical monitoring and ordered that executions could not proceed without proper medical monitoring.<sup>155</sup>

Post-*Hill* Eighth Amendment challenges to the painfulness of lethal injection have necessarily styled themselves as method-of-execution cases. Yet, they effectively use the claim of pain to challenge the practice of execution itself. This appears clearest in the Supreme Court's recent Eighth Amendment case *Baze v. Rees*, which both clarified and confounded the state of pain-based challenges to lethal injection.<sup>156</sup> In *Baze*, two Kentucky death-row inmates challenged the state's lethal injection protocol as unconstitutional because it had the potential to cause a cruel or unusual level of pain.<sup>157</sup> They urged the Court to require medical monitoring of Kentucky's executions to ensure that unreasonably painful executions would not take place.<sup>158</sup>

This surely looked like a purely pain-based challenge in which success on the merits would have done nothing for the petitioners but tweak the execution protocol to which they were entitled. But the petitioners (or their attorneys) had a clever play: they asserted that only physician monitoring would assure an execution sufficiently pain-free to satisfy constitutional standards.<sup>159</sup> However, physicians in Kentucky may not legally assist in any capacity with executions, and the American Society of Anesthesiologists' "ethical guidelines prohibit an-

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<sup>152</sup> Note, *supra* note 145, at 1302–03 (citing *2000 Report of the AVMA Panel on Euthanasia*, 218 J. AM. VETERINARY MED. ASS'N 669, 680–81 (2001), available at [http://www.state.nj.us/dep/fgw/pdf/bear/policy\\_lit/cbbmp\\_euthanasia\\_avma.pdf](http://www.state.nj.us/dep/fgw/pdf/bear/policy_lit/cbbmp_euthanasia_avma.pdf)).

<sup>153</sup> See HUMAN RIGHTS WATCH, *supra* note 148, at 25.

<sup>154</sup> See, e.g., *Norris v. Davis*, 548 U.S. 927, 927 (2006) (mem.) (declining to vacate an Arkansas stay of execution); *Jackson v. Taylor*, No. Civ. 06-300-SLR, 2006 WL 1237044, at \*1 (D. Del. May 9, 2006) (granting a preliminary injunction enjoining execution in anticipation of the *Hill* decision); see also *Stays and Executions*, DEATH PENALTY INFO. CTR., <http://www.deathpenaltyinfo.org/lethal-injection-stays-granted> (last visited Mar. 19, 2012) (listing stays of execution granted on pain-based challenges to lethal injection).

<sup>155</sup> *Brown v. Beck*, No. 5:06CT3018 H, 2006 WL 3914717, at \*8 (E.D.N.C. Apr. 7, 2006).

<sup>156</sup> 553 U.S. 35, 41, 49–50 (2008).

<sup>157</sup> See *id.* at 41.

<sup>158</sup> See *id.* at 51.

<sup>159</sup> See *id.* at 59.

esthesiologists from participating in capital punishment.”<sup>160</sup> Since doctors cannot participate in executions, a decision requiring physician monitoring of pain would have the underlying effect of halting executions.<sup>161</sup>

The Court did not bite. In a stunning example of “judicial minimalism,”<sup>162</sup> the Court very narrowly held that Kentucky’s execution protocol did not require medical monitoring while reserving judgment as to the constitutionality of the risk and amount of pain incident to the execution protocol of any other state.<sup>163</sup> This resolved the immediate question at bar—execution of the *Baze* petitioners could go forward. But it left wide open the general questions of (1) whether lethal injection methods other than Kentucky’s violate the Eighth Amendment based on undue risk and amount of pain, (2) what level of pain in the course of execution is constitutionally prohibited, and (3) whether states generally owe a duty to the condemned to monitor executions for degree of pain.

Like the position taken by the *Baze* petitioners, the sum of the Court’s plurality ruling is quite subtle. By deciding the matter so narrowly, the Court substantively leaves open these major questions for future consideration—consideration that may go well beyond questions of quantum of pain and to the heart of the death penalty itself. As Justice Stevens wrote in his concurrence:

The question whether a similar three-drug protocol may be used in other States remains open, and may well be answered differently in a future case . . . . I am now convinced that this case will generate debate not only about the constitutionality of the three-drug protocol . . . but also about the justification for the death penalty itself.<sup>164</sup>

*Baze* shows how pain stands in as a proxy for the larger values and commitments at stake. In bringing a challenge to the degree of painfulness of Kentucky’s execution protocol, the litigants meant to do no less than halt the practice of execution in Kentucky. In deciding *Baze* so narrowly, the Court effectively left the door open not only for fu-

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<sup>160</sup> *Id.* at 59–60 (“The asserted need for a professional anesthesiologist to interpret the BIS monitor readings is nothing more than an argument against the entire procedure, given that both Kentucky law and the American Society of Anesthesiologists’ own ethical guidelines prohibit anesthesiologists from participating in capital punishment.” (citations omitted)).

<sup>161</sup> *See id.*

<sup>162</sup> *See generally* CASS R. SUNSTEIN, ONE CASE AT A TIME: JUDICIAL MINIMALISM ON THE SUPREME COURT ix–xi (1999) (establishing interpretive method of “judicial minimalism,” whereby a court “settles the case before it, but . . . leaves many things undecided”). *Cf.* Tara Leigh Grove, *The Structural Case for Vertical Maximalism*, 95 CORNELL L. REV. 1, 14–17 (2009) (critiquing *Baze* as an example of judicial minimalism and arguing instead for maximalism).

<sup>163</sup> *Baze*, 553 U.S. at 61–63.

<sup>164</sup> *Id.* at 71 (Stevens, J., concurring) (emphasis added).



ture method-of-execution cases but for challenges to the practice of execution itself (regardless of whether intent can be imputed to a fractured court).

At the same time, there is no doubt that the facts of bodily pain also played a non-incidental role in *Baze*. At one extreme, if Kentucky's execution method were demonstrably painless, the litigants could not have styled the case as a pain-based Eighth Amendment challenge. At the other extreme, if the Kentucky execution protocol involved gratuitous pain, no Justice could have affirmed it because settled precedent would clearly deem it unconstitutional.<sup>165</sup>

Thus, pain plays a real role in this area, if only at the extremes. But everything in between these extremes involves clearly normative judgments as to the level of pain a state or a society finds tolerable in the specific context of the death penalty. And it is in this unquantifiable, normative ground that ideological differences between members of the Court emerge. On the one hand, if the punishment of execution equates to the taking of life, execution should be actually painless—anything else is gratuitous, additional punishment. Justices espousing this view, unsurprisingly, have espoused anti-death penalty views and have proven instrumental in limiting the application of the death penalty to special populations like juveniles and the intellectually disabled.<sup>166</sup> On the other hand, Justices who view pain incident to death as an acceptable part of execution do not find themselves ideologically opposed to the death penalty. These Justices' opinions do not suggest that pain above and beyond what is incidental to a standard method of execution would be acceptable, but they hold that the condemned is not entitled to a pain-free death.<sup>167</sup> The "pain tolerance," as it were, of Justices on both sides of the issue is a reflection of and a proxy for their values.

## B. Fetal Pain as Abortion Challenge

As death-penalty litigation has evolved toward challenges to the practice's painfulness, so too has the controversy around the other great lightning rod in American politics—abortion.<sup>168</sup> The strategy of

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<sup>165</sup> See *Gregg v. Georgia*, 428 U.S. 153, 183 (1976) (plurality opinion) (noting that a criminal sanction may not impose "gratuitous infliction of suffering" unrelated to "penological justification"); see also *In re Kemmler*, 136 U.S. 436, 447 (1890) ("Punishments are cruel when they involve torture or a lingering death . . . . It implies there [sic] something inhuman and barbarous, something more than the mere extinguishment of life.").

<sup>166</sup> See, e.g., *Roper v. Simmons*, 543 U.S. 551, 575 (2005) (holding that the death penalty is unconstitutional for juvenile offenders); *Atkins v. Virginia*, 536 U.S. 304, 321 (2002) (same with respect to mentally retarded defendants).

<sup>167</sup> See, e.g., *Louisiana ex rel. Francis v. Resweber*, 329 U.S. 459, 464 (1947) (permitting a second attempt to execute by electrocution).

<sup>168</sup> Of course, an obvious distinction exists. In pain-based challenges to the death penalty, the petitioner who seeks to halt the practice is also the one who allegedly will experi-

focusing on fetal pain allows the debate to shift away from the endless and irresolvable controversy over personhood. Instead, it permits anti-abortion advocates to propose, along with Bentham, that “[t]he question is not Can they reason?, nor, Can they talk?, but Can they suffer?”<sup>169</sup> In addition to Bentham’s moral question, the disgust factor related to thinking about fetal pain also plays a role, a factor that may be more viscerally effective than the philosophical and rhetorical strategies related to personhood.

As in the animal-rights context, the tactic of focusing on pain has had considerable success. In 2010, Nebraska passed the Abortion Pain Prevention Act, which bans abortions of any fetus deemed “pain capable.”<sup>170</sup> The statute establishes a bright-line rule (subject to the typical exceptions)<sup>171</sup> that no abortion may be performed at or after the twentieth week of gestation on the ground that such fetuses can experience pain.<sup>172</sup> Arkansas, Georgia, Illinois, Minnesota, and Oklahoma passed inform-and-consent, fetal pain abortion legislation.<sup>173</sup> A proposed federal inform-and-consent statute, the Unborn Child Pain Awareness Act, also known as the “Abortion Pain Bill,” nearly passed the House of Representatives in 2006.<sup>174</sup>

The Abortion Pain Bill had a similar rationale to those of the state inform-and-consent statutes currently in force, made evident

ence the pain; however, in abortion challenges, advocates for pain-based restrictions seek to halt the consenting subject from accessing a procedure that they claim will cause pain to the subject’s fetus. Holding aside this difference, these types of pain-based challenges are strikingly similar, as explored later.

<sup>169</sup> Katherine E. Engelman, Note, *Fetal Pain Legislation: Protection Against Pain is Not an Undue Burden*, 10 QUINNIAC HEALTH L.J. 279, 279 (2007) (quoting JEREMY BENTHAM, AN INTRODUCTION TO THE PRINCIPLES OF MORALS AND LEGISLATION (DOVER PUBL’NS 2007) (1789)) (internal quotation marks omitted) (analogizing between Bentham’s animal-welfare argument and positions adopted by those who understand abortion at least partially in terms of a fetus as a rights-bearing entity with a right to be free of pain).

<sup>170</sup> The relevant part of this legislation is known as the Pain-Capable Unborn Child Protection Act, 2010 Neb. Laws 874.

<sup>171</sup> The statute makes an exception where the abortion is necessary to avert the death or “serious risk of substantial and irreversible physical impairment of a major bodily function” of the mother or to save the life of the unborn child. *See id.* at 875.

<sup>172</sup> *See id.*

<sup>173</sup> *See* ARK. CODE ANN. §§ 20-16-1101 to -1111 (2005); GA. CODE ANN. § 31-9A-3(2) (D) (West 2009) (“The physician . . . shall orally inform the female that materials have been provided by the State of Georgia . . . [that] contain information on fetal pain.”); 720 ILL. COMP. STAT. 510/6(6) (2005) (requiring physician to inform pregnant woman of the availability of an anesthetic to “alleviate organic pain to the fetus”); MINN. STAT. ANN. § 145.4242(a)(1)(iv) (West 2011) (requiring that the female be told “whether or not an anesthetic or analgesic would eliminate or alleviate organic pain to the unborn child”); OKLA. STAT. ANN. tit. 63, §§ 1-738.6 to -17 (West 2011) (requiring physician to inform female of state-provided materials containing “information on pain and the unborn child”).

<sup>174</sup> H.R. 6099, 109th Cong. (2006); *see also* H.R. 6099: *Unborn Child Pain Awareness Act of 2006*, GOVTRACK.US, <http://www.govtrack.us/congress/bill.xpd?bill=h109-6099> (last visited Mar. 19, 2012).

from its requirement that abortion providers make accessible to pregnant women a brochure stating the following:

There is substantial evidence that the process of being killed in an abortion will cause the unborn child pain, even though you receive a pain-reducing drug or drugs. Under [this Act], you have a right to know that there is evidence that the process of being killed in an abortion will cause your unborn child pain.<sup>175</sup>

As the language above indicates, repugnance to abortion—not the issue of fetal pain itself—is the driving force behind these statutes. Indeed, these statutes can be understood as symbolic in several ways. First, they do not curtail any significant abortion practice. Second, they do not conform to the best objective, current science on fetal pain. And third, they tie into the longstanding rhetorical uses of fetal pain by pro-life advocates. This Article will explore each of these symbolic aspects below.

The inform-and-consent statutes and Nebraska's ban (entitled the Pain Capable Unborn Child Act) apply only to abortions performed at or after the twentieth week of gestation.<sup>176</sup> Such late-term procedures account for just over 1% of all abortions in the United States.<sup>177</sup> If the national average were applied to Nebraska, then 99% of that state's annual abortion procedures would be unaffected and just over 1% (about 29 procedures per year)<sup>178</sup> would come within the

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<sup>175</sup> H.R. 6099, § 2902(c)(1)(B). On December 6, 2006, the bill failed in the House of Representatives by roll-call vote, which required a two-thirds majority for the bill to pass. The bill received a 58% majority, failing to pass by thirty-five votes. There were 250 votes in favor; 162 opposed; twenty voting "present" only. *H.R. 6099: Unborn Child Pain Awareness Act of 2006*, GOVTRACK.US, <http://www.govtrack.us/congress/bill.xpd?bill=h109-6099> (last visited Mar. 19, 2012) (under "Bill Overview," click on "view all 1 votes on this bill"). This bill was subsequently reintroduced in the Senate in 2007 and 2011 as the Unborn Child Pain Awareness Act, where it has remained in committee. S. 314, 112th Cong. (2011); S. 356, 110th Cong. (2007).

<sup>176</sup> See *supra* notes 170–72 and accompanying text. Several other states, including California, New York, Virginia, and Oregon, have considered legislation similar to the Nebraska statute. See Susan J. Lee et al., *Fetal Pain: A Systematic Multidisciplinary Review of the Evidence*, 294 JAMA 947, 947 (2005). The reason for current legislative and judicial action around fetal pain, as with pain-based challenges to the death penalty, stems from a change in political terrain created by the Supreme Court. While *Hill* enabled challenges to lethal injection under 42 U.S.C. § 1983, see 547 U.S. 573, 580 (2006), *Planned Parenthood of Southeastern Pennsylvania v. Casey*, 505 U.S. 833, 874–76 (1992), opened the door to abortion regulation beyond the trimester framework established in *Roe v. Wade*, 410 U.S. 113, 163–65 (1973). Under *Casey*, a state may legislatively limit access to abortion provided such limitations are not pretextual and do not place an "undue burden" on the ability to obtain an otherwise lawful abortion. See *Casey*, 505 U.S. at 874–75.

<sup>177</sup> See *Facts on Induced Abortion in the United States*, GUTTMACHER INST. (Aug. 2011), [http://www.guttmacher.org/pubs/fb\\_induced\\_abortion.html](http://www.guttmacher.org/pubs/fb_induced_abortion.html). About 90% of abortions in the United States take place at or prior to twelve weeks' gestation. See *id.*

<sup>178</sup> See Rachel K. Jones & Kathryn Kooistra, *Abortion Incidence and Access to Services in the United States, 2008*, 43 PERSP. ON SEXUAL & REPROD. HEALTH 41, 44 (2011) (showing the 2008 figure for reported abortions in Nebraska as 2,840).

statute's ambit. These figures suggest that the legislation's very slight, practical impact on abortion procedures within the state could not by itself have justified the legislation's passage.

Fetal pain statutes not only fail to address any significant practice in their jurisdictions but also run contrary to the current weight of medical evidence on fetal pain; certainly, they do not grow out of the new science of pain monitoring. The American Medical Association suggests that fetuses cannot experience pain until at least twenty-nine weeks.<sup>179</sup> A 2010 study, commissioned by the British government and carried out by the Royal College of Obstetricians and Gynaecologists, concludes that fetuses cannot feel pain in any meaningful way up to the point of birth because "the fetus never experiences a state of true wakefulness *in utero* and is kept, by the presence of its chemical environment, in a continuous, sleep-like unconsciousness or sedation."<sup>180</sup> On this basis, the College concludes that, "in the light of current evidence[,] . . . the use of analgesia [during diagnostic and surgical procedures] provided no clear benefit to the fetus."<sup>181</sup> Two structures necessary for nociception, the thalamus and insula, form in infants prior to twenty-four weeks.<sup>182</sup> The prefrontal cortex, however, a necessary component for taking noxious, nociceptive input and translating it into conscious or affective experience—into *perception*—does not develop until after week thirty-four.<sup>183</sup> Accordingly, researchers conclude that fetuses prior to this stage may, like a person in a state of unconsciousness or in a coma, experience nociception without experiencing pain.<sup>184</sup> The twenty-four week threshold holds significance for another reason: by twenty-four weeks, the fetus is viable.

Finally, the symbolic nature of the emphasis on fetal pain is evident from its longstanding use as a persuasion technique. Recognizing the (putative) pain of the fetus is humanizing; if the fetus can experience pain, it seems less like an inanimate entity and more like a living, feeling person. Ronald Reagan notably stated during his presi-

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<sup>179</sup> See Lee et al., *supra* note 176, at 947. Behavioral studies have shown that neonatal facial movements in response to invasive procedures at twenty-eight to thirty weeks mimic those of adults experiencing pain. See *id.* at 950. Premature infants born at twenty-eight weeks or earlier may also feel pain. See ROYAL COLL. OF OBSTETRICIANS & GYNAECOLOGISTS, FETAL AWARENESS: REVIEW OF RESEARCH AND RECOMMENDATIONS FOR PRACTICE 9, 23 (2010), available at <http://www.rcog.org.uk/files/rcog-corp/RCOGFetalAwarenessWPR0610.pdf> [hereinafter RCOG Report]. Hormonal, environmental, and neurological changes brought about by birth account for these differences between pain perception in an in-utero fetus and one born at the same gestational age. See *id.* at 10.

<sup>180</sup> RCOG Report, *supra* note 179, at viii.

<sup>181</sup> *Id.*

<sup>182</sup> See *id.* at 8.

<sup>183</sup> *Id.* at 8.

<sup>184</sup> This somewhat simplifies the biology of fetal pain perception. Interested readers should consult the JAMA piece, see Lee et al., *supra* note 176, and the RCOG Report, see RCOG Report, *supra* note 179. See generally sources cited *supra* notes 177, 176–80.

dency that “when the lives of the unborn are snuffed out, they often feel pain—pain that is long and agonizing.”<sup>185</sup> In the same year, an influential film, *The Silent Scream*,<sup>186</sup> spliced together ultrasound stills of an eleven-week-old fetus during abortion in a manner that purported to show the fetus flinching in pain.<sup>187</sup> *The Silent Scream* gained tremendous attention and distribution, including a screening at the White House.<sup>188</sup> Moreover, writers who emphasize the importance of converting the undecided to the pro-life perspective particularly focus on the issue of pain. Among many examples, works like *Pro-Life 101: A Step-by-Step Guide to Making Your Case Persuasively* discuss pain throughout.<sup>189</sup> The fetus’ ability to feel pain also features prominently on pro-life websites and with outreach groups.<sup>190</sup>

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<sup>185</sup> Francis X. Clines, *Reagan Appeal on Abortion is Made to Fundamentalists*, N.Y. TIMES, Jan. 31, 1984, at A16 (quoting comments of Ronald Reagan to the National Religious Broadcasters).

<sup>186</sup> See THE SILENT SCREAM (American Portrait Films 1984), available at <http://www.silentscream.org>.

<sup>187</sup> See Rosalind Pollack Petchesky, *Fetal Images: The Power of Visual Culture in the Politics of Reproduction*, 13 FEMINIST STUD. 263, 266 (1987); see also Katie Roiphe, *Choice Words*, THE GUARDIAN, Feb. 25, 2005, <http://www.guardian.co.uk/theguardian/2005/feb/26/weekend7.weekend>. Note that anencephalic fetuses also will flinch and withdraw from aversive stimuli. See RCOG Report, *supra* note 179, at 9.

<sup>188</sup> Jason DeParle, *Beyond the Legal Right: Why Liberals and Feminists Don’t Like to Talk About the Morality of Abortion*, WASH. MONTHLY, Apr. 1989, at 28.

<sup>189</sup> See SCOTT KLUSENDORF, *PRO-LIFE 101: A STEP-BY-STEP GUIDE TO MAKING YOUR CASE PERSUASIVELY passim* (2002).

<sup>190</sup> See, e.g., *id.* (suggesting pain as an argumentative tactic); BERNARD NATHANSON, *THE HAND OF GOD: A JOURNEY FROM DEATH TO LIFE BY THE ABORTION DOCTOR WHO CHANGED HIS MIND* 141–43 (2001) (detailing arguments regarding fetal pain in abortions); MARI-GOLD REYNOLDS, *EPIPHANY* 53–54 (2007) (arguing that the various ways of terminating a fetus cause it pain); *Does a Fetus Feel Pain?*, ABORT73.COM, [http://www.abort73.com/abortion/does\\_a\\_fetus\\_feel\\_pain](http://www.abort73.com/abortion/does_a_fetus_feel_pain) (last updated Oct. 6, 2010) (arguing that fetal pain should be merely ancillary to the question of the morality of abortions); Steven Ertelt, *Abortion Ban Based on Fetal Pain Could Be Partial-Birth Abortion Ban Followup*, LIFE NEWS.COM (Feb. 25, 2010, 9:00 AM), <http://www.lifenews.com/nat6047.html> (stating, *inter alia*, that “the leading national expert on the topic confirms that unborn children definitely have the capacity to feel intense pain during abortions”); *Fetal Pain: The Evidence*, DOCTORS ON FETAL PAIN, <http://www.doctorsonfetalpain.com/fetal-pain-the-evidence> (last visited Mar. 19, 2012); *Pain of the Unborn: What Does an Unborn Child Feel During an Abortion?*, NAT’L RIGHT TO LIFE EDUC. TRUST FUND, [http://www.nrlc.org/abortion/fetal\\_pain/fetalpain091604.pdf](http://www.nrlc.org/abortion/fetal_pain/fetalpain091604.pdf) (purporting to show, using certain data, that twenty-week-old fetuses feel pain during abortions and addressing abortion in the public sphere); Charles Pope, *On Fetal Pain and the Humanizing of the Abortion Debate*, ARCHDIOCESE OF WASH., <http://blog.adw.org/2010/04/on-fetal-pain-and-humanizing-the-abortion-debate/> (last visited Mar. 19, 2012) (suggesting that the idea of fetal pain may sway some of those in the prochoice camp); *Unborn Babies Can Feel Pain*, MINN. CITIZENS CONCERNED FOR LIFE, <http://www.mcccl.org/Page.aspx?pid=298> (last visited Mar. 19, 2012) (displaying data suggesting that fetuses can feel pain during abortion procedures and supporting Minnesota’s fetal-pain inform-and-consent law); J.C. Willke, *Why Can’t We Love Them Both*, ABORTIONFACTS.COM, [http://www.abortionfacts.com/online\\_books/love\\_them\\_both/why\\_cant\\_we\\_love\\_them\\_both\\_14.asp](http://www.abortionfacts.com/online_books/love_them_both/why_cant_we_love_them_both_14.asp) (last visited Mar. 19, 2012) (collecting statements and quotes from various individuals and institutions attesting to fetal pain in abortions).

Like the various opinions in the *Baze* case, the fetal-pain statutes discussed above are very illuminating because they show how pain represents a heuristic for values. Those who oppose abortion credit the proposition that fetuses feel pain when they are “killed”<sup>191</sup> despite the insistence of physicians that fetuses do not feel pain prior to the age at which they become legally viable (or independently alive). Further, those who lobbied for and passed these statutes seem indifferent to the fact that they will affect few to no actual abortions in their jurisdictions and are merely exercises in symbolic lawmaking.

In this arena, judgments about the presence and degree of pain align well with moral precommitments. The moral substrate of this discourse makes it highly improbable that *any* degree of scientific knowledge about fetal pain would materially change basic positions on abortion. For those to whom abortion consists of the unjustified taking of human life, certain knowledge of the presence or absence of fetal pain would not alter their view of its wrongfulness. For those to whom abortion does not constitute the taking of a human life, knowledge of the presence or absence of fetal pain might at the margin change views about abortion timing or protocols but would not alter their central belief that the rights of the individual trump those of the merely incipient individual. Again, as in the previous Part, the role of pain in the abortion debate seems best explained by ideologies and morals.

#### CONCLUSION

The development of neurotechnologies prompts us to reexamine the role that the body, including the brain and brain state, plays within the law. Without opportunities to measure and ascertain brain states like pain, legal discourse about pain can function as both a heuristic and as a set of facts about the body, shifting back and forth between both. When neurotechnology promises the ability to measure pain, it requires us to ask the question of what, precisely, measurement will solve. This forces us to untangle the heuristic nature of pain discourse from its physical, factual bases. Thus, pain neuroimaging not only provides a tool for measuring pain but also for separating which types of legal discourse about pain are principally heuristic or principally factual.

This set of technologies will or should lead to a more explicit realization of how culture, as mediated through legal culture, engages in and produces embodied normativity. How we experience the body is shaped by norms; reciprocally, our norms about the body are shaped by physical experience itself. In turn, physical experience pro-

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<sup>191</sup> H.R. 6099, 109th Cong. § 2902(c)(1)(B) (2006); *see also* Clines, *supra* note 185.

vides grounding for defining what constitutes moral or immoral treatment of the bodies of others and what conduct toward the bodies of others valorizes or corrupts our values.

A sense of the normative relationship to the body leads to moral judgments about what is or is not morally permissible conduct. Pain occupies a unique position in this regard ontologically and epistemologically. There is an ontological primacy to pain because it is through the suffering of the self that we understand the wrongfulness of causing gratuitous suffering to others; some of this is direct, empathic, and likely physiological. In a sense, such reasoning is grounded in the body's physicality. And yet, it is also grounded in the body's status within the *nomos* which is informed by—but not coextensive with—physiological experience. The experience of the body, both of self and “other,” is also contingent. Sociohistorical context defines which “others” are seen as sufficiently like the self such that their pain experience is credited as real; once categorized, they are deemed deserving of protection from pain. Since such questions as “who can suffer” and “whose suffering counts” define the membership of the community of empathic inclusion, they also define what degree of treatment toward particular legal subjects (whether humans, human fetuses, animals, conscious machines, and others yet to be named) is permissible.

Though primarily normative determinations about status, these questions also involve factual determinations of bodily capacities and of the subject's relationship (if any) to its embodiment.<sup>192</sup> In these ways, the question of pain neuroimaging shows that there must always be significant translational work in moving from neuroimaging technologies to their legal uses and implications. Questions in law about or involving the body (perhaps particularly questions about the brain) are rarely pure questions of fact or value. Rather, we must understand the heuristic and normative role of the law's body-language—of the embodied morality implicit within the law—to properly understand if, when, and how to adapt the findings of brain imaging to bodies of legal doctrine. Knowledge of what causes the body to suffer informs what a society views as moral or immoral treatment of the person; nevertheless, simple measurement can never resolve fundamental questions about just treatment.

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<sup>192</sup> For example, based upon normative development, we might extend empathic identification to conscious machines or extraterrestrials in order to avoid causing them pain. But to meet that goal, we would need to know what the fact of pain means for a being of totally different physiology and relationship to its embodiment.

