

[NOTE: This isn't quite a draft yet – it's a concept paper. You'll see after the first 10 pages a good bit of text in brackets, which are primarily notes for me, but it'll give you a sense of the content of those sections. I'd like to talk through the concept – the "duty" to mitigate emotional distress damages and how courts have struggled with it, as a foray into a broader dichotomy that I see in a number of areas of law that suggest an implicit value in "cognitive liberty." This is a smaller version of a broader book project "On Cognitive Liberty" that I'm writing, but I'd like to talk through how I might structure this as a standalone article. Forgive its brevity and incompleteness, but it's a great time for me to workshop the concept with you.]

THE COSTS OF CHANGING OUR MINDS

Nita A. Farahany*

INTRODUCTION 2
 I. CHANGING YOUR "MIND" 6
 II. A DUTY TO AVOID PAIN AND SUFFERING? 9
 A. [Discussion of Tort Cases and the Interesting Divide Between Mitigating Physical Injuries and Mitigating "Invisible" Injuries] 10
 III. THE UNMITIGATED MIND 11
 IV. COGNITIVE LIBERTY IN MODERN LEGAL DEBATES 11
 A. Accessing the Mind 12
 a. Passwords and Employers 12
 b. Absolute Judicial Deliberative Privilege 12
 B. Changing the Mind 12
 a. Forcible Competency 12
 b. Confronting Erased Memories 13
 CONCLUSION 14

* Professor of Law & Philosophy, Duke University; BA, Dartmouth College; MA, JD, Ph.D., Duke University; ALM, Harvard University. Member, Presidential Commission for the Study of Bioethical Issues. Thanks to Henry T. Greely, . . . the conference and workshop attendees . . . The author is grateful and indebted to, for the excellent research assistance, *All opinions expressed in this article are the author's alone and do not reflect those of any institution, entity or organization with which she is affiliated.*

INTRODUCTION

Rape kits do not yet include propranolol but they soon may. Propranolol, a beta-blocker drug developed in the 1960s as a treatment for high blood pressure, could blunt or even altogether extinguish the fear and emotional memory of a recent rape.¹ Without propranolol, when the victim presents in the emergency room just hours after her assault, her physician cannot then predict if she will become one of the one third of rape victims who will develop post-traumatic stress disorder (PTSD). If she does develop PTSD, then even years later, the smallest trigger—a sound, the refrain of a song, a smell—could recall for her in full force the anguish of her attack, “as if it were yesterday.” While the physician cannot initially predict her likelihood of future psychological trauma—he can know that her memories of the attack, just like all newly formed memories, are extremely fragile.² So fragile that if the physician could somehow alter her brain activity then and there, she might never form the long-term fear memory associated with her assault.³

Propranolol may offer precisely that. If the physician administers propranolol to her in those early hours after her assault, her memory of that horrific experience may soon fade, so much so that she might come to observe that terrible day as just another day long passed. This may sound like a medical miracle—and it very well may be—but with those prospects, would anyone reasonably refuse the drug? The answer to that question brings daylight to an increasingly critical issue in society—the role of cognitive liberty in our law and lives.

Most people would agree that society should allow or perhaps even enable a rape victim to have the choice to mitigate the lasting psychological trauma of her assault. But how should the legal system regard a decision by her to refuse the drug? Had she been stabbed during a robbery instead of being raped, we would consider it perverse for her to refuse medical treatment of her wounds. And in a tort suit against the robber, a judge or jury would limit her damages because of her negligent treatment of her own injuries. Is her refusal to take propranolol analogous? Or is there some value to remembering her attack more clearly? Could, for example, altering her memory render her an ineffective witness in the prosecution of the crime? Perhaps the police could take her statement the moment before she ingests

¹ Cassandra Willyard, *Remembered for Forgetting*, 18 *Nature* 482, 483 (2012).

² Cristina M. Alberini, *Long-term Memories: The Good, the Bad, and the Ugly*, *Cerebrum* 3 (October 2010).

³ Cristina M. Alberini, *Long-term Memories: The Good, the Bad, and the Ugly*, *Cerebrum* 3 (October 2010) (“Memory consolidation requires the activation of molecular and cellular pathways, including those involved in stress, cell survival, cell-to-cell communication, and the release of several neurotransmitters (chemicals released in the brain to transmit signals across cells.)”)

Month 20xx]

The Costs of Changing Our Minds

3

propranolol. But would the use of her statement, which she has later partially forgotten, violate the alleged perpetrator's constitutional right to confront witnesses against him? Moreover, would she be better off remembering and then transcending her assault? Writers, public figures, artists and more speak openly about how overcoming a pivotal adversity in their lives has enabled them to reach a new consciousness, to gain new insight, or to achieve new courage. Do these stories of transcendence impact how the law should consider her refusal? Moreover, could blunting her suffering have the paradoxical effect of diminishing societal outrage to and condemnation of rape?

This article begins with a deceptively simple principle of tort law: A victim of tortious wrongdoing by another is held responsible for averting the aggravation of her own injuries. This article addresses whether that same doctrine requires a tort victim to likewise mitigate her emotional distress injuries. The answer to that question is of great and increasing importance because it goes to the heart of how society should address the dramatic advances neuroscience that enable us to change our own brains.

Already new discoveries in neuroscience enable us to selectively remember or forget past experiences by erasing parts or entire memories from our brains. With the advent of selective forgetting, rape victims, car accident victims, burn victims and more may soon have to choose whether to numb their memories--or have their civil damages reduced for failing to mitigate their own suffering. This prospect poses a deep puzzle that tort law and tort theory are ill-equipped to solve. Courts and commentators have almost entirely ignored the increasingly crucial issue of whether the doctrine of avoidable consequences requires a civil plaintiff to mitigate her own pain and suffering. This doctrine, often called the "duty to mitigate," requires that an individual injured by the tortious acts of another exercise ordinary care under the circumstances to prevent the aggravation of her injuries.⁴ Courts and commentators all agree that a plaintiff must take reasonable steps to mitigate their ordinary physical injuries. But they remain utterly perplexed about whether or to what extent a plaintiff must similarly mitigate their pain and suffering.

Pain and suffering are the "invisible" injuries that a person suffers—the fright, anxiety, shock, humiliation, indignity, terror, or loss of enjoyment of life that a tort victim suffers because of the civil wrongdoing of another.⁵ While no sum of money can ever restore the peace of mind disturbed by physical injury to the body or humiliation endured, these compensatory

⁴ Avoidable Consequences in Disability Insurance, Newark L. Rev. 8, 9-10.

⁵ See e.g., *Capelouto v. Kaiser Found. Hosp.*, 500 P.2d 880, 883 (Cal. 1972) (describing pain and suffering as encompassing "fright, nervousness, grief, anxiety, worry, mortification, shock, humiliation, indignity, embarrassment, apprehension, terror or ordeal"); Lars Noah, *Comfortable Numb: Medicalizing (and Mitigation) Pain-and-Suffering Damages*, 42 U.Mich. J.L. Reform 431 (2009).

Month 20xx]

The Costs of Changing Our Minds

4

damages “give to the injured person some pecuniary return for what he has suffered or is likely to suffer.”⁶ These damages also reflect societal “disapproval of the harm caused by the tortfeasor,” and “promote loss avoidance goals [of the tort system] by sending a fuller deterrent signal.”⁷

Scholars recognize the pivotal role that the doctrine of avoidable consequences plays in the award of damages for ordinary physical injuries,⁸ but have remained practically silent about its relevance in the mitigation of “invisible” emotional damages. Perhaps they don’t see a distinction between ordinary physical injuries and the invisible ones of pain and suffering. Or, perhaps they have approached it as a purely legal matter, without considering or understanding the broader scientific and philosophical context, and the deep ethical issues that underlie the divide. To date only one student note on the issue, plus a couple of law review articles considering the law and economic issues implicated have addressed the divide. Those articles overlook entirely the role of cognitive liberty in the discussion. A few pages of another article makes mention of emerging memory-dampening techniques, but doesn’t offer any conclusions with respect to emotional distress damages.

Or, perhaps it has escaped scholarly attention because so few legal cases have squarely addressed the concern. Courts that have considered what measures, if any, a plaintiff must take to mitigate her own pain and suffering express deep ambivalence about the issue.⁹ In the several cases that have found a duty to mitigate emotional distress damages, they have stopped short of finding the measures an individual employed to be *insufficient* to have satisfied that duty.¹⁰ Other courts have intuited that something more is at stake—and have invoked concepts like self-determination and autonomy as reasons that the doctrine of avoidable consequences may not apply to pain and suffering.¹¹

Courts and scholars have not developed a satisfactory theoretical answer to the general question of mitigating ordinary pain and suffering. Advances like propranolol that offer a simple way to mitigate invisible injuries arising from emotional suffering—by literally changing one’s brain—pose a theoretical riddle several layers deeper. They require us to decide the boundaries of cognitive liberty and its implication for other areas

⁶ Restatement (Second) of Torts § 903 cmt. a.; see also *McDougald v. Garber*, 536 N.E2d 372, 374-75 (N.Y. 1989) (“recovery for noneconomic losses such as pain and suffering and loss of enjoyment of life rest on the legal fiction that money damages can compensate for a victim’s injury . . . We accept this fiction, knowing that although money will neither ease the pain nor restore the victim’s abilities, this device is as close as the law can come in its effort to right the wrong.”).

⁷ Lars Noah, 42 *Univ. of Mich. J. of L. Reform* 431, 449 (2009).

⁸ String Cite

⁹

¹⁰ Stringcite

¹¹ cite

Month 20xx]

The Costs of Changing Our Minds

5

of law such as whether choosing to forego memory mitigation should lessen recoverable damages in tort law.

The time has come for a systematic and thoroughgoing inquiry. Modern neuroscience and medicine have heralded stunning advances in our understanding of and ability to change the human experience—with meditation, psychotherapy, electrical stimulation, drugs, and more. These advances may enable individuals to understand—and to change—their conscious and subconscious experiences. Yet we have made almost no progress on deciding whether our legal regimes will encourage, or even oblige, individuals to alter their brains in such ways lest they be deemed to have wrongfully failed to lessen their own suffering.

The answer to this question bears on far more than just a legal rule governing the apportionment of damages in civil suits. It implicates an interest that is distinct from “liberty” in the ordinary sense, an interest that is only dimly recognized in the cases and the scholarship, an interest that is increasingly implicated by dramatic advances in modern science. This is an interest in “cognitive liberty.” This value appears (although often obliquely) throughout many modern legal debates. Consider, for example, current controversies about whether an employer can require as a condition of employment that employees provide their passwords to social media accounts which they store mentally but not in any other physical medium. Do employees have an interest in cognitive liberty to contractually barter with employers about such requirements? Or the doctrine of absolute judicial deliberative privilege, which protects the deliberative process a judge uses in decision-making from discovery by others. What is the source of this common-law tradition, and can it survive developments in modern neuroscience? What about the forcible medication of prisoners who lack competency to stand trial? Are there contexts in which their cognitive liberty trumps societal interests in bringing those individuals to justice? And what if the victim of a sexual assault provides a statement to the police and then dampens her memory. Can her statement be used in a criminal case against the perpetrator without running afoul of his rights under the Confrontation Clause of the U.S. Constitution?

Although this article focuses specifically on the legal obligations concerning mitigation of emotional pain and suffering, it also provides a critical foray into a much wider theoretical issue—the role of cognitive liberty in our legal system and in our society. Part I puts the concern in context, explaining the extraordinary advances in modern medicine and neuroscience that enable us to quite literally change our minds. Part II explains the normative underpinnings of the avoidable consequences doctrine, and how its application to these novel treatments shines light on the role of cognitive liberty in society. Part III applies these insights to how we should address novel therapies in emotional distress damages. Finally,

Month 20xx]

The Costs of Changing Our Minds

6

Part IV introduces the broader concept of cognitive liberty and its implications for modern legal debates.

I. CHANGING YOUR “MIND”

Do you remember where you were on September 11, 2001? Can you recall in vivid detail the events of that day, the emotions you experienced, the people you were with, and who you called first? Across the world many individuals remember the excruciating details of the 9/11 attacks even more strongly than they can remember what they ate for breakfast this morning or where they parked their car. This is because traumatic memories tend to be the strongest memories.¹² The emotional content of a memory enhances the strength with which the memory is stored in the brain, and the degree to which it can be modified by intervention.¹³ Because they are so strongly encoded, traumatic memories often haunt the victim of the traumatic experience by being evoked by environmental stimuli weeks, months and even years after the event, leading to secondary effects of anxiety, stress, and sometimes post-traumatic stress disorder (PTSD).¹⁴

Just a few decades ago neuroscientists believed that by adulthood our brains are static and unchangeable. The common wisdom held that our adult brains are fixed and immutable.¹⁵ By the 1970s, new research dramatically changed our understanding of the human brain. We now understand that the brain is plastic and changeable. And that the information such as memories stored therein change and are changeable over time.

Memories do not immediately become permanent upon experiencing events in the world.¹⁶ Newly formed memories remain fragile as they are

¹² Dean G. Kilpatrick, *Rape-Related PTSD: Issues and Interventions*, 25 *Psychiatric Times* 50 (June 20, 2007) (The emotional charge of traumatic events cause the body to release stress hormones such as adrenaline or epinephrine, which may enhance memory consolidation and the strength of the memory itself. Because of the mechanism by which such memories are stored and the strength of their consolidation, pharmacological interventions that block the effect of stress hormones such as b-adrenergic antagonists like propranolol may reduce the strength or stability of these memories.)

¹³ Cristina M. Alberini, *Long-term Memories: The Good, the Bad, and the Ugly*, *Cerebrum* 6 (October 2010).

¹⁴ Cristina M. Alberini, *Long-term Memories: The Good, the Bad, and the Ugly*, *Cerebrum* 7 (October 2010) (“Recent studies report that 8 percent of Americans suffer from PTSD and about 15 percent of veterans experience multiple or all PTSD symptoms after returning from combat.”¹⁴ These conditions are often intractable, with only 20 to 30 percent of patients ever achieving full remission from the disorder.”)

¹⁵ Meghan O’Rourke, *Train Your Brain: The New Mania for Neuroplasticity*, *Slate*, April 25, 2007, http://www.slate.com/articles/life/brains/2007/04/train_your_brain.html (last accessed February 28, 2013).

¹⁶ Yutaka Matsuoka, *Clearance of Fear Memory From the Hippocampus Through Neurogenesis By Omega-3 Fatty Acids: A Novel Preventive Strategy For Posttraumatic Stress Disorder?*, 5 *BioPsychoSocial Medicine* 1, 2 (2011), available at

initially being stored in the brain.¹⁷ A computer, for example, stores information in random-access-memory (RAM) until a more stable copy is stored in erasable and programmable read-only memory of flash memory, systems that retains the contents of stored information even when the power to a computer is turned off. Similarly, the hippocampus in the brain can process and temporarily store a new memory before that memory is transferred and consolidated for long-term stored in the cortex of the brain.¹⁸ Particularly during this initial window of time that the memory is first in the brain's "RAM" and has yet not been consolidated, it remains quite fragile.¹⁹ As the brain moves the memory from short-term to long-term storage, it synthesizes new proteins that strengthen the connections between neurons. After a day or two, the event has been etched into our minds.²⁰ As a result, each time we recall an experience, it comes out of long-term storage and goes back into the short-term cache. From there, the memory is reconsolidated into long-term storage.

During the fragile period of memory consolidation, if brain activity is tampered with (such as through drug administration) then a long-term memory of the event might never form.²¹ A drug such as propranolol (long used as a first-line drug therapy for cardiovascular care) may do precisely that by preventing noradrenaline from binding to its receptors in the amygdala. Several studies, for example, have confirmed that administering propranolol within six hours of a traumatic event substantially reduced post-traumatic stress disorder experienced by trauma victims.²² But even simple visuospatial tasks if performed during the critical period after a trauma can reduce the visual flashbacks that arise after exposure to

<http://www.bpsmedicine.com/content/pdf/1751-0759-5-3.pdf> (last accessed October 11, 2011).

¹⁷ Cristina M. Alberini, *Long-term Memories: The Good, the Bad, and the Ugly*, *Cerebrum* 3 (October 2010).

¹⁸ ¹⁸ Yutaka Matsuoka, *Clearance of Fear Memory From the Hippocampus Through Neurogenesis By Omega-3 Fatty Acids: A Novel Preventive Strategy For Posttraumatic Stress Disorder?*, 5 *BioPsychoSocial Medicine* 1, 2 (2011), available at <http://www.bpsmedicine.com/content/pdf/1751-0759-5-3.pdf> (last accessed October 11, 2011).

¹⁹ Cassandra Willyard, Remembered for Forgetting, 18 *Nature* 482, 483 (April 2012).

²⁰ Cassandra Willyard, Remembered for Forgetting, 18 *Nature* 482, 482 (April 2012).

²¹ Cristina M. Alberini, *Long-term Memories: The Good, the Bad, and the Ugly*, *Cerebrum* 3 (October 2010) ("Memory consolidation requires the activation of molecular and cellular pathways, including those involved in stress, cell survival, cell-to-cell communication, and the release of several neurotransmitters (chemicals released in the brain to transmit signals across cells.)")

²² Dean G. Kilpatrick, *Rape-Related PTSD: Issues and Interventions*, 25 *Psychiatric Times* 50 (June 20, 2007) (In a randomized placebo-controlled 10-day trial of propranolol beginning 6 hours after a traumatic event, 30% in the placebo group and 18% in the propranolol group developed PTSD. A subsequent nonrandomized controlled trial of propranolol with survivors of motor vehicle accidents or victims of physical assault yielded similar results).

upsetting trauma.²³ One research team has shown that playing the videogame Tetris (a simple visuospatial task) substantially reduces the flashback symptoms of PTSD when played continuously up to 4 hours post-trauma.²⁴

With these novel interventions, we could choose to blunt ourselves from the emotional pain and suffering that accompanies the recall of traumatic experiences. This could be done in anticipation of a traumatic event—for example military personnel safeguarding their minds from the trauma witnessed daily on the battlefield—or after experiencing a traumatic event—such as a victim of sexual or other physical assault seeking to avoid recalling the trauma she endured.

Earlier memory modification techniques posed less significant quandaries than those of today. Electroconvulsive therapy (ECT) has long been used to impair the memory of patients.²⁵ Entire memories from the days and weeks prior to ECT have been permanently degraded.²⁶ And earlier drug interventions have been used to dampen or extinguish entire memories. The ingestion of alcohol and other mind-altering substances, for example, can cause blackouts that prevent conscious awareness and the formation of memories of experiences. These wholesale memory modification techniques bear on the broader value of cognitive liberty. But brain interventions of today are importantly different. They offer the possibility of *selective* forgetting, by disassociating the pain and suffering from the factual content of the experience itself. The fear and emotional memory of a traumatic event could be extinguished while the semantic or factual content is preserved.²⁷

Consider, by contrast, the plot of the fictional movie *Eternal Sunshine of the Spotless Mind*. Actors Jim Carey and Kate Winslet play characters that initially to the audience to be two strangers on a train, inexplicably but immediately drawn to one another. We soon realize something is deeply amiss. Somehow, these two have forgotten entirely their shared and recently ended two-year romantic relationship. How can this be? How can two people be intimately intertwined for years, and yet now fail to recognize one another? The fictional company Lacuna, Incorporated, is to blame. To avoid the emotional trauma of a broken heart, they have each

²³ E.A. Holmes et al., *Key Steps In Developing a Cognitive Vaccine Against Traumatic Flashbacks: Visuospatial Tetris Versus Verbal Pub Quiz*, 10 PLoS One 1 (2010).

²⁴ E.A. Holmes et al., *Key Steps In Developing a Cognitive Vaccine Against Traumatic Flashbacks: Visuospatial Tetris Versus Verbal Pub Quiz*, 10 PLoS One 1, 5 (2010).

²⁵ J-O Ottosson, *Experimental studies of memory impairment after electroconvulsive therapy*, 35 Acta Psychiatrica Scandinavica, 103 (1960) [READ]

²⁶ A.B. Donahue, *Electroconvulsive therapy and memory loss: A personal journey*, 16 Journal of ECT 133 (2000).

²⁷ Stephen Maren *Seeking a Spotless Mind: Extinction, Deconsolidation, and Erasure of Fear Memory*, 70 Neuron 830, 836 (2011).

hired the company to erase their memories of the relationship. Selective erasure of entire memories enabled them to forget the existence of the other person.

Modern neuroscience has ushered in more discriminating ways to change our brains. Novel techniques enable us to dampen or eliminate the emotional charge and trauma of a memory while remembering the literal facts of the experience itself. In other words, it is possible to leave declarative memory—that is, the factual content associated with the memory—intact. But the emotional content associated with that memory is lessened or entirely extinguished.²⁸

There are consequences to memory of doing so. Reducing the emotional charge associated with the declarative memory might also weaken the strength of the declarative memory itself. The strength—and therefore the long-term accuracy—of memories are enhanced when emotional stimuli accompanying that memory is consolidated along with it, and diminished when it is extinguished. But weakened declarative memory is just one of the many consequences to changing our minds. Our individual identities and societal norms are challenged by these changes. The ability to selectively shape and change the brain opens Pandora's Box of legal, ethical, and social concerns.

II. A DUTY TO AVOID PAIN AND SUFFERING?

The legal obligation to mitigate one's own damages has normative underpinnings. Society benefits from decreasing the cost of accidents, and injured individuals are often in the best position to avert the aggravation of their injuries. The rules for awarding damages, therefore, are designed to discourage even those who have suffered loss at the hands of another from passively suffering such losses if they can be averted by reasonable efforts.²⁹ Does this same rationale hold true when invisible injuries such as emotional pain and suffering are at stake? Is society also better off by having victims of tortious wrongdoing blunt their own emotional suffering? Will choosing an unmitigated mind hereinafter result in lesser damages rewarded to victims in civil cases?

[[The doctrine of mitigation of damages in tort law, known also as the "avoidable consequences" doctrine, is an established principle in the common law of damages. The doctrine states that a defendant is not liable towards a plaintiff for any loss resulting from the defendant's wrongdoing if the plaintiff could and should have avoided that loss. The plaintiff has the right to demand reimbursement for any reasonable cost incurred while

²⁸ See Lars Schwabe & Oliver T. Wolf, *New Episodic Learning Interferes with the Reconsolidation of Autobiographical Memories*, 4 PLOS ONE e7519 (2009).

²⁹ Avoidable Consequences in Disability Insurance, Newark L. Rev. 8, 13-14.

Month 20xx]

The Costs of Changing Our Minds

10

attempting to mitigate. But if the plaintiff successfully mitigates her losses, then the damages should be reduced accordingly.]]³⁰

[[The mitigation of damages impose a moral duty to take reasonable steps to protect one's own welfare, even when the source of the risk is the unlawful or unreasonable conduct of another person. In order to encourage people to abide by this perceived moral duty, the common law attached a severe legal sanction, namely, the rule denying plaintiffs any right to demand compensation for harm which they could have and should have avoided had they followed the imperative of self-protection or self-preservation. As tort scholars have noted, the moral justification for this demanding approach towards potential victims is far from obvious.⁸⁰ There seems to be a consensus that the best explanation is provided by two interconnected moral ideas stemming from the individualistic philosophy which dominated legal thought throughout most of the nineteenth century.⁸¹]]

A. *[Discussion of Tort Cases and the Interesting Divide Between Mitigating Physical Injuries and Mitigating "Invisible" Injuries]*

***[In re Air Crash Disaster at Charlotte, N.C., 982 F.Supp. 1101 (D.S.C. 1997): plaintiff flight attendant survived a commercial airline crash and sued the United States under Federal Tort Claims Act to recover for physical and emotional injuries, including a reduction in earning capacity and expenses for continued treatment of PTSD and related symptoms. The defendant argued that the plaintiff's choice not to take antidepressant medications constituted a failure to mitigate the PTSD-related damages he sought.

The court held that "[plaintiff's] choice not to take antidepressant medications is not a wholly unreasonable choice. He has, instead, made major efforts in other ways and obviously declined the reliance on medication based on the same attitude of self-reliance and determination that have brought him this far in his recovery. Therefore, the court does not find this personal choice to be a failure to mitigate damages under the present circumstances."

Commentators have noted that "[d]espite the fact that courts increasingly are willing to rely on psychological testimony to establish emotional distress damages (in the absence of physical impact), cases in which damages for emotional distress are limited because the plaintiff failed to minimize damages are few and far between." Kevin C. Klein & G.

³⁰ HARVEY MCGREGOR, MCGREGOR ON DAMAGES 235-236 (18th ed., 2009); 1 CHITTY ON CONTRACTS, 1478-1479 (Hugh G. Beale Gen. ed., 29th ed. 2004).

Month 20xx]

The Costs of Changing Our Minds

11

Nicole Hininger, *Mitigation of Psychological Damages: An Economic Analysis of the Avoidable Consequences Doctrine and Its Applicability to Emotional Distress Injuries*, 29 Okla. City U. L. Rev. 405 (2004); but compare Noah, *Comfortably Numb: Medicalizing (and Mitigating) Pain-and-Suffering Damages*, 42 U. Mich. J.L. Reform 431 (2009) (claiming that Klein and Hininger were overstating the degree of judicial hostility to the idea of extending the mitigation rule to emotional harms).]***

III. THE UNMITIGATED MIND

A. Pain Cases

B. PTSD Cases

C. Depression Cases

IV. COGNITIVE LIBERTY IN MODERN LEGAL DEBATES

The ability to change our brains enables us to shape our own life experiences. But so, too, can others through modern neuroscience. The brain changes and can be changed, so we must collectively decide whether to limit access to or alteration of the human brain.

Cognitive liberty is a value that encompasses our personal interests over our own brains. It includes the freedom of thought and rumination, freedom of self-access, self-alteration, and self-determination, and autonomy calling for individual consent to changing the brain.

[[The brain has been called the “secular equivalent of the soul.”³¹ Our very experience of self coincides with brain physiology. Our genes, our environment—the foods we eat, our social interactions, the weather, our education, and so on—all influence our personalities and identities. But even Francis Crick, the co-founder of the double-helix structure of DNA that he called the “code for life,” has acknowledged that our feelings, joys, aches, dreams, and wishes are reflected in the physiological activity of our brains.³²]]

³¹ James J. Giordano & Bert Gordijn, *Scientific and Philosophical Perspective in Neuroethics* 256 (2010).

³² Francis Crick, *The Astonishing Hypothesis: The Scientific Search for the Soul* (1995).

Month 20xx]

The Costs of Changing Our Minds

13

b. Confronting Erased Memories

[Most courts have held that the Confrontation Clause right is satisfied even if the witness has no recollection of the events in their testimony.³⁶ The main Supreme Court case on this is *U.S. v. Owens*, 484 U.S. 554, 559 (1988), which held that the Confrontation Clause was not violated even though the witness was unable to explain the basis for her past identification of the defendant, because the defendant received an adequate opportunity to probe witness's memory loss. Most Circuit Court cases have read *Owens* as holding that the mere opportunity to question the witness, even if the witness has no memory of the testimony, satisfies the confrontation requirement.³⁷ Hypnotically refreshed testimony, where the witness could not recall the testimony until placed under hypnosis, does not violate the confrontation clause as long as the defendant is permitted to test the reliability of the testimony by cross-examination.³⁸ Even the testimony of a witness with multiple personality disorder has generally been held to satisfy the Confrontation Clause as long as the defendant is given an opportunity to cross-examine the personality who provided the earlier testimony.³⁹

There are, however, some cases that suggest that the mere physical presence of the witness is not sufficient to satisfy the confrontation requirement. *United States v. DiCaro*, 772 F.2d 1314, 1323 (7th Cir. 1985) stated in dicta that “a witness's total amnesia concerning a prior statement will often make him not subject to cross-examination” and so will mean that introduction of the statement violates the Confrontation Clause. In *United States v. Spotted War Bonnet*, 933 F.2d 1471, 1474 (8th Cir. 1991), the Eighth Circuit stated in dicta that where a witness “is so young that she cannot be cross-examined at all, or if she is simply too young and too frightened to be subject to a thorough direct or cross-examination,” her mere physical presence will not satisfy the confrontation requirement. Further, in *Crawford v. Washington*, the Supreme Court held that “[T]he [Confrontation] Clause does not bar admission of a statement so long as the declarant is present at trial to defend or explain it.”⁴⁰ This statement in *Crawford* at first blush suggests that where the declarant is present but unable to defend or explain her past statements, they may be inadmissible under the Confrontation Clause.

South Carolina, and Washington). None were voted down. *Id.*

Month 20xx]

The Costs of Changing Our Minds

14

However, in *United States v. Cookson*, 556 F.3d 647, 651-52 (2009), the Seventh Circuit held that it did not violate the Confrontation Clause, even after *Crawford*, to introduce the testimony of a witness who did not recall either the substance of her past statements or even her making the statements introduced. The Seventh Circuit held in *Cookson* that *DiCaro, supra*, is inconsistent with *Owens* and *Keeter*, and that *Spotted War Bonnet* was inapplicable to the facts because the witness, while she could not remember her past testimony, was not too afraid or young to be cross-examined. *Cookson* suggests that testimonial evidence obtained via neuroimaging may be admissible even from a witness who does not remember the evidence in question, as long as that witness is physically available for cross-examination. Most other cases I could find, including cases from state supreme courts where the Supreme Court denied certiorari on appeal, read *Crawford's* “defend or explain” language as not reversing the *Owens* rule that an opportunity to cross-examine meets the confrontation requirement even in the case of a witness who cannot remember either the content of her past statements or the event of her making them.⁴¹ Only a few cases or opinions read that language as implying that a witness who cannot remember her past statements does not satisfy the confrontation requirement; these opinions generally lack precedential value.⁴² Ultimately, *Keeter's* reading of the Confrontation Clause right seems to accurately capture the current state of the law: “The Supreme Court's point was that the confrontation clause (and the rule) are satisfied when the witness must look the accused in the eye in court.”⁴³]

CONCLUSION
