
THE PSYCHOLOGY OF CRUELTY: RECOGNIZING GRAVE MENTAL HARM IN AMERICAN PRISONS

Over the past forty years, American prisons have increasingly relied on a brutal method of confinement that inflicts severe suffering on prisoners. Inmates confined in this manner have endured symptoms ranging from hallucinations and perceptual distortions¹ to self-mutilation and suicidal ideation.² Walking past these inmates, one can observe babbling, shrieking, and the banging of prisoners' bodies against the walls of their cells.³ There is no dispute that this method of confinement has a terrible effect on prisoners' well-being, and yet because it inflicts mental harm, rather than physical harm, courts have largely turned a blind eye.

Solitary confinement — the confinement of a prisoner in isolation with limited chance for social interaction or environmental stimulus⁴ — has existed in America for centuries,⁵ but until the late twentieth century, it was rarely used.⁶ In the 1970s and 1980s, the use of solitary confinement began to expand,⁷ as prisons started to employ it not only for discipline and safety,⁸ but also, in America's supermax prisons, as a

¹ Peter Scharff Smith, *The Effects of Solitary Confinement on Prison Inmates: A Brief History and Review of the Literature*, in 34 CRIME AND JUSTICE 441, 493 (Michael Tonry ed., 2006).

² Craig Haney, *Mental Health Issues in Long-Term Solitary and "Supermax" Confinement*, 49 CRIME & DELINQ. 124, 130, 131 (2003); see also Ruiz v. Johnson, 37 F. Supp. 2d 855, 908 (S.D. Tex. 1999), *rev'd and remanded sub nom.* Ruiz v. United States, 243 F.3d 941 (5th Cir. 2001).

³ Ruiz, 37 F. Supp. 2d at 908, 909; see also Craig Haney & Mona Lynch, *Regulating Prisons of the Future: A Psychological Analysis of Supermax and Solitary Confinement*, 23 N.Y.U. REV. L. & SOC. CHANGE 477, 531 (1997).

⁴ See Stuart Grassian, *Psychiatric Effects of Solitary Confinement*, 22 WASH. U. J.L. & POL'Y 325, 327 (2006); Alexa T. Steinbuch, Note, *The Movement Away from Solitary Confinement in the United States*, 40 NEW ENG. J. ON CRIM. & CIV. CONFINEMENT 499, 501 (2014). Though many courts have grouped social interaction and environmental stimulus together, this Note focuses only on the former, as there is much clearer scientific evidence that social interaction is a human need.

⁵ Thomas L. Hafemeister & Jeff George, *The Ninth Circle of Hell: An Eighth Amendment Analysis of Imposing Prolonged Supermax Solitary Confinement on Inmates with a Mental Illness*, 90 DENV. U. L. REV. 1, 9–10 (2012) (describing nineteenth-century uses).

⁶ *Id.* at 12.

⁷ See *id.* at 13.

⁸ Smith, *supra* note 1, at 442 ("Solitary confinement is occasionally used in most prison systems as a means to maintain prison order: as disciplinary punishment or as an administrative measure for inmates who are considered an escape risk or a risk to themselves or to prison order in general. Some inmates, for example, sex offenders, choose voluntary isolation to avoid harassment from other prisoners."). But see Angela A. Allen-Bell, *Perception Profiling & Prolonged Solitary Confinement Viewed Through the Lens of the Angola 3 Case: When Prison Officials Become Judges, Judges Become Visually Challenged, and Justice Becomes Legally Blind*, 39 HASTINGS CONST. L.Q. 763, 772–76 (2012) (documenting the wide-ranging types of inmates that have been placed in solitary confinement and concluding "there is no real indicator as to who a likely candidate for isolation is and there is no consistency with respect to how long one might remain in an isolation unit," *id.* at 772).

method of long-term imprisonment. Supermax prisons — prisons that house inmates in perpetual conditions of solitary confinement⁹ — have continued to spread across the country since the first one opened in 1983.¹⁰ Today, about forty states have at least one supermax prison, and nearly sixty total facilities are in operation around the country.¹¹ Though estimates vary, most conclude that about 25,000 inmates are currently incarcerated in supermax facilities, with another 55,000 in solitary confinement outside the supermax setting.¹²

Although there has been no shortage of Eighth Amendment challenges to solitary confinement, they have only rarely succeeded.¹³ This is because a condition of confinement must deprive a prisoner of a “single, identifiable human need” to be unconstitutional¹⁴ and all but a handful of courts have restricted those needs to things that a person cannot be deprived of without suffering grave physical harm¹⁵ — for the purposes of this Note, “physical needs.” Substantial psychological and neuroscientific research shows that the deprivation of social interaction results in grave harm,¹⁶ but that harm is mental, not physical — meaning social interaction would be a “mental need”¹⁷ — and this dif-

⁹ Smith, *supra* note 1, at 442–43; Mikel-Meredith Weidman, *The Culture of Judicial Deference and the Problem of Supermax Prisons*, 51 UCLA L. REV. 1505, 1506–07 (2004) (“Supermax prisons are uniquely harsh, high-tech facilities that house inmates typically identified as ‘the worst of the worst.’” *Id.* at 1506.). In a supermax prison, inmates are isolated in a cell for around twenty-three hours a day. Shireen A. Barday, *Prison Conditions and Inmate Competency to Waive Constitutional Rights*, 111 W. VA. L. REV. 831, 832 (2009). They leave their cells only to exercise and shower, with both activities also occurring in isolation. *Id.* at 832–33.

¹⁰ Weidman, *supra* note 9, at 1529 (“Although the model of the supermax prison is barely twenty years old, the prisons have proliferated rapidly in that time, so that some states with a shortage of medium-security beds now have supermax beds lying empty.”).

¹¹ Jules Lobel, *Prolonged Solitary Confinement and the Constitution*, 11 U. PA. J. CONST. L. 115, 115 (2008). The federal government runs one supermax prison, ADX Florence, in Colorado. Barday, *supra* note 9, at 834.

¹² Steinbuch, *supra* note 4, at 501.

¹³ See, e.g., Ruiz v. Johnson, 37 F. Supp. 2d 855 (S.D. Tex. 1999), *rev’d and remanded sub nom.* Ruiz v. United States, 243 F.3d 941 (5th Cir. 2001).

¹⁴ See Wilson v. Seiter, 501 U.S. 294, 304 (1991). What constitutes a human need is not entirely clear from Supreme Court and lower court jurisprudence, but the general understanding seems to be that the deprivation of a need must result in grave harm approximating the harm resulting from a deprivation of a basic element of sustenance such as food or shelter. See Brown v. Plata, 131 S. Ct. 1910, 1928 (2011); *infra* pp. 1258–59.

¹⁵ See *infra* section I.B.2, pp. 1260–62.

¹⁶ See *infra* notes 134–43 and accompanying text.

¹⁷ It is possible that the deprivation of a human need could cause both grave physical harm and grave mental harm. In that case, the need would not fit the mental need/physical need dichotomy used in this Note, and it would instead be what one might call a “mixed need.” Such mixed needs would not cause a doctrinal problem, however, because a court confronting the deprivation of a mixed need would at least take account of the grave physical harm. For doctrinal clarity, then, such a need can be thought of as a physical need. This Note considers only deprivations that result in grave mental harm without inflicting grave physical harm.

ference has proven largely insurmountable.¹⁸ Lower courts have only rarely recognized grave mental harm in the conditions of confinement context,¹⁹ and the Supreme Court has never done so.²⁰ In the past fifteen years, though, the Court has relied on recent psychological and neuroscientific evidence to inform its application of another Eighth Amendment test, the proportionality inquiry.²¹ The conditions of confinement assessment would similarly become more comprehensive and robust if the Court used psychological and neuroscientific research as a basis for identifying grave mental harm and the unconstitutional mental deprivations that cause it. By equipping itself with this information, the Court would more fully ensure that it carries out its constitutional duty to prevent cruelty, no matter its form.

This Note proceeds in four parts. Part I lays out the doctrinal frameworks of the proportionality and conditions of confinement inquiries and examines the Court's past use of psychological and neuroscientific research to inform the two tests. Part II first describes how the Court's use of psychological and neuroscientific research regarding juvenile culpability strengthened the proportionality assessment. It then contends that the Court would similarly improve the conditions of confinement inquiry were it to use scientific research to identify mental needs. This Part focuses specifically on psychological

¹⁸ In order to prove that a condition of confinement is unconstitutional under the Eighth Amendment, a prisoner must also prove that prison officials had subjective awareness of the prisoner's suffering. Because this requirement would likely be easy to satisfy in most cases and does not pose the same systemic obstacles as the "grave harm" requirement, this Note does not focus on it. For a brief analysis of how this "subjective" requirement would be satisfied in a challenge to solitary confinement, see *infra* note 90.

¹⁹ See *infra* p. 1262.

²⁰ One could argue that the court recognized a mental need in *Brown v. Plata*, 131 S. Ct. 1910 (2011), when it determined that mental health care is a need. See *id.* at 1928; see also Hafemeister & George, *supra* note 5, at 24 (arguing that *Plata* provides support for the idea that mental necessities are cognizable under the Eighth Amendment). But the plaintiff class demanding mental health care in *Plata* was a group of prisoners who were seriously mentally ill, *Plata*, 131 S. Ct. at 1926, and the Court made clear that the decision applied only to similarly situated prisoners, *see id.* at 1924, 1940. The Court was thus not recognizing a general mental need but only a necessary medical treatment for a prisoner's condition. The only Supreme Court opinion that in fact passed on the cognizability of mental suffering was Justice Blackmun's concurrence in *Hudson v. McMillian*, 503 U.S. 1 (1992), in which he stated that he "[did] not read anything in the Court's opinion to limit injury cognizable under the Eighth Amendment to physical injury," and that "[i]t is not hard to imagine inflictions of psychological harm — without corresponding physical harm — that might prove to be cruel and unusual punishment," *id.* at 16 (Blackmun, J., concurring in the judgment).

²¹ See *Miller v. Alabama*, 132 S. Ct. 2455, 2464–65 (2012); *Graham v. Florida*, 130 S. Ct. 2011, 2026 (2010); *Roper v. Simmons*, 543 U.S. 551, 568 (2005); *Atkins v. Virginia*, 536 U.S. 304, 318 (2002); see also Marsha Levick et al., *The Eighth Amendment Evolves: Defining Cruel and Unusual Punishment Through the Lens of Childhood and Adolescence*, 15 U. PA. J.L. & SOC. CHANGE 285, 300 (2012) ("The majority made clear in *Graham* and *Roper* that the constitutionality of a particular punishment for juveniles (i.e., whether it is cruel and unusual) is directly tied to prevailing research on adolescent development . . .").

and neuroscientific research regarding social interaction. Part III considers and rejects arguments against judicial use of psychological and neuroscientific research to identify mental needs. Part IV concludes.

I. APPLYING PSYCHOLOGICAL AND NEUROSCIENTIFIC RESEARCH TO THE EIGHTH AMENDMENT INQUIRIES

The Eighth Amendment's prohibition on cruel and unusual punishment is an evolving standard,²² one that prohibits more than the "physically barbarous punishments" that were its focus in the early days of the Republic.²³ While the Court's Eighth Amendment doctrine continues to develop, today it splits into two branches. The first branch governs punishments that are delivered in response to a crime, the primary inquiry in this area being whether the punishment is "grossly out of proportion to the severity of the crime."²⁴ The second branch of Eighth Amendment jurisprudence polices conditions within prisons.

A. *Unconstitutional Punishments: The Proportionality Inquiry*

1. *Doctrinal Framework.* — The Supreme Court's examination of punishments using the proportionality inquiry has generally divided into two groups of cases.²⁵ The first group considers whether a term-of-years sentence is disproportionate to the crime committed.²⁶ In performing this assessment, the Court first undertakes a threshold examination of the sentence to determine whether it is "grossly dispro-

²² See *Trop v. Dulles*, 356 U.S. 86, 101 (1958) (plurality opinion) ("The Amendment must draw its meaning from the evolving standards of decency that mark the progress of a maturing society.").

²³ *Estelle v. Gamble*, 429 U.S. 97, 102 (1976); *see also Atkins*, 536 U.S. at 311 ("A claim that punishment is excessive is judged not by the standards that prevailed in 1685 when Lord Jeffreys presided over the 'Bloody Assizes' or when the Bill of Rights was adopted, but rather by those that currently prevail."). In its early days, the Amendment was considered primarily a constraint on torture and other barbarous punishments. *See, e.g., In re Kemmler*, 136 U.S. 436, 447 (1890) ("Punishments are cruel when they involve torture or a lingering death It implies there [is] something inhuman and barbarous"); *Wilkerson v. Utah*, 99 U.S. 130, 136 (1878) ("[I]t is safe to affirm that punishments of torture, . . . and all others in the same line of unnecessary cruelty, are forbidden").

²⁴ *Coker v. Georgia*, 433 U.S. 584, 592 (1977). A punishment can separately be considered cruel and unusual if it inflicts "unnecessary and wanton" pain, *Gregg v. Georgia*, 428 U.S. 153, 173 (1976) (plurality opinion), but the Court has rarely made this inquiry. The Court has determined that for a punishment to inflict unnecessary and wanton pain, the method of punishment itself would need to cause the pain, not the mental anguish preceding the punishment. *See Louisiana ex rel. Francis v. Resweber*, 329 U.S. 459, 464 (1947) (concluding that death by electrocution did not inflict unnecessary and wanton pain, even when the first execution failed and the petitioner was consequently forced to undergo the entire execution process a second time, because the electrocution itself was humane).

²⁵ *See Graham*, 130 S. Ct. at 2021.

²⁶ *See id.*

portionate" to the crime committed.²⁷ If the Court finds that it is, the Court then conducts "intrajurisdictional and interjurisdictional" comparisons in order to "validate" the initial judgment.²⁸ Although the Court has occasionally struck term-of-years sentences for being disproportionate, victories for defendants have been rare.²⁹

The second group of cases assesses whether a particular punishment is categorically disproportionate for a certain offense or class of offenders. *Coker v. Georgia*³⁰ presents an example of the former. There, the Court held that the death penalty was a disproportionate punishment for the offense of raping an adult woman.³¹ *Roper v. Simmons*³² shows an example of the latter. In *Roper*, the Court held that the death penalty was a disproportionate punishment for people who committed their crimes while under the age of eighteen.³³ Whether an offense or a class of offenders is at issue, the Court follows the same steps. It first looks to objective indicia of societal approval for applying the punishment to that offense or class of offenders and then examines the punishment using its own independent judgment.³⁴ In *Coker*, for example, the Court first determined that state legislatures had rarely approved, and that juries had infrequently imposed, the death penalty for the crime of rape.³⁵ It then used its independent judgment to affirm that death was a disproportionate punishment for

²⁷ *Harmelin v. Michigan*, 501 U.S. 957, 1005 (1991) (Kennedy, J., concurring in part and concurring in the judgment).

²⁸ *Id.* The Court has provided little insight into how this second step is performed, in part because it has infrequently reached it. In a rare instance of its use, the Court applied it in *Solem v. Helm*, 463 U.S. 277 (1983), when striking down a South Dakota court's sentence of life without parole (LWOP) for a defendant who passed a "no account" check, *id.* at 279–81, 303. The Court pointed out that, at the time, life imprisonment was mandated in South Dakota only for murder convictions and for second and third convictions for treason, first degree manslaughter, first degree arson, or kidnapping. *Id.* at 298. The Court then examined other jurisdictions and found that the only other state in which the defendant could have received LWOP for his crime was Nevada. *Id.* at 299.

²⁹ Compare *Solem*, 463 U.S. at 279–81, 303 (striking down sentence of life imprisonment for crime of passing a "no account" check), with *Ewing v. California*, 538 U.S. 11, 18, 20 (2003) (plurality opinion) (upholding sentence of twenty-five years to life under California's three-strikes law for the crime of stealing golf clubs), and *Hutto v. Davis*, 454 U.S. 370, 370–71, 375 (1982) (per curiam) (upholding sentence of forty years for possession with intent to distribute and distribution of marijuana).

³⁰ 433 U.S. 584 (1977).

³¹ *Id.* at 592; see also *Kennedy v. Louisiana*, 554 U.S. 407, 421 (2008) (holding that the death penalty is an unconstitutional punishment for the crime of raping a child when the child is not killed).

³² 543 U.S. 551 (2005).

³³ *Id.* at 578.

³⁴ See *Graham v. Florida*, 130 S. Ct. 2011, 2022 (2010). Departing from its typical practice, the Court went through these steps in reverse order in *Miller v. Alabama*, 132 S. Ct. 2455 (2012). See *infra* p. 1257.

³⁵ *Coker*, 433 U.S. at 593, 596–97.

the rape of an adult woman, largely because the victim does not die.³⁶ In recent years, the Court has shown greater willingness to use its independent judgment to find punishments categorically disproportionate despite objective indicia of societal approval.³⁷

2. *Use of Psychological and Neuroscientific Research.* — Starting in the early 2000s, the Court began looking to psychology and neuroscience when examining whether a punishment was proportionate to the crime committed for certain classes of offenders.³⁸ After conducting the initial inquiry into objective indicia, the Court has then considered psychological and neuroscientific evidence as part of its independent inquiry.³⁹ Primarily, the Court has employed such evidence to show that a class of offenders does not possess the requisite culpability to receive a particular punishment.⁴⁰ But the Court has also found such evidence relevant to proportionality for other reasons: because a defendant with diminished mental capacity may be less capable of presenting a formidable defense⁴¹ and because, for such a defendant, the central justifications for punishment — deterrence and retribution — are less efficacious.⁴²

The Court has not always been inclined to use psychological and neuroscientific evidence when performing the proportionality inquiry. In the 1989 case *Stanford v. Kentucky*,⁴³ the Supreme Court narrowly refused to look to psychology in assessing whether juvenile defendants

³⁶ See *id.* at 598. See generally Meghan J. Ryan, *Judging Cruelty*, 44 U.C. DAVIS L. REV. 81, 88–90 (2010) (describing the origin of the independent judgment inquiry in *Coker*).

³⁷ See *Miller*, 132 S. Ct. at 2471 (striking down mandatory LWOP for juveniles despite twenty-nine jurisdictions allowing it); *id.* (showing that in *Graham v. Florida*, 130 S. Ct. 2011, the Court prohibited LWOP for juveniles who committed nonhomicide crimes despite thirty-nine jurisdictions permitting it (citing *id.* at 2023)). But see *Miller*, 132 S. Ct. at 2478 (Roberts, C.J., dissenting) (arguing that *Graham* concluded that the sentence of LWOP was exceptionally rare in practice despite legislative approval (citing *Graham*, 130 S. Ct. at 2026)).

³⁸ See *Atkins v. Virginia*, 536 U.S. 304, 318 (2002). One could imagine the Court striking down a term-of-years sentence on the ground that the punishment was grossly disproportionate based on the diminished culpability of the particular offender, but so far the Court has used psychological and neuroscientific evidence only in the context of assessing the proportionality of a punishment for a class of offenders.

³⁹ In *Atkins v. Virginia*, 536 U.S. 304, the Court also looked to the positions of psychological organizations as evidence of objective indicia against imposing the death penalty on persons with intellectual disability, *see id.* at 316 n.21.

⁴⁰ See, e.g., *Graham*, 130 S. Ct. at 2026 (“The judicial exercise of independent judgment requires consideration of the culpability of the offenders at issue in light of their crimes and characteristics, along with the severity of the punishment in question.”).

⁴¹ See, e.g., *Atkins*, 536 U.S. at 320–21 (noting that defendants with intellectual disability may be less capable of offering meaningful assistance to counsel, are likely to be poor witnesses, and often will appear to have inadequate remorse).

⁴² See, e.g., *Roper v. Simmons*, 543 U.S. 551, 571–72 (2005) (explaining that the death penalty’s significant degree of retribution is inappropriate for juveniles because of their diminished culpability and that the deterrent effect is likely to be diminished because of youth and immaturity).

⁴³ 492 U.S. 361 (1989).

possess the requisite culpability to be punished with the death penalty.⁴⁴ That same year, in *Penry v. Lynaugh*,⁴⁵ the Court declined to adopt a holding proposed by amici that persons with intellectual disability⁴⁶ never possess the requisite culpability to merit the death penalty.⁴⁷

The Court changed course in *Atkins v. Virginia*.⁴⁸ There, after determining that objective indicia — including the opinions of professional psychological organizations⁴⁹ — pointed toward abolition of the death penalty for defendants with intellectual disability,⁵⁰ the Court looked to psychological and neuroscientific research during its independent inquiry,⁵¹ which affirmed that the death penalty was inappropriate.⁵² The Court applied the same approach in a series of decisions following *Atkins* that examined the proportionality of certain punishments for juvenile offenders. In the first of these cases, *Roper*, the Court relied on psychological and neuroscientific evidence⁵³ in reaching its conclusion that the death penalty is unconstitutional when applied to juvenile offenders.⁵⁴ The Court cited similar evidence in *Gras-*

⁴⁴ Five Justices refused to consider scientific evidence of culpability. *See id.* at 378 (opinion of Scalia, J.); *id.* at 380–82 (O’Connor, J., concurring in part and concurring in the judgment). The other four would have looked to the scientific evidence. *See id.* at 383 (Brennan, J., dissenting).

⁴⁵ 492 U.S. 302 (1989).

⁴⁶ In *Penry*, the Court employed the term “mental retardation.” The Court has since begun using the term “intellectual disability,” *see, e.g.*, *Hall v. Florida*, 134 S. Ct. 1986, 1990 (2014), and this Note does the same.

⁴⁷ Four Justices determined that the Eighth Amendment’s “evolving standards of decency” did not require the holding and rejected the notion altogether that a proportionality inquiry should be used to identify Eighth Amendment violations. *See Penry*, 492 U.S. at 351 (Scalia, J., concurring in part and dissenting in part) (quoting *Trop v. Dulles*, 356 U.S. 86, 101 (1958) (plurality opinion)) (internal quotation mark omitted). Justice O’Connor, writing only for herself, concluded that persons with intellectual disability do not always lack sufficient culpability to receive the death penalty. *See id.* at 338 (opinion of O’Connor, J.). The remaining four Justices would have adopted the proposed holding, based in part on the scientific evidence. *See id.* at 345–46 (Brennan, J., concurring in part and dissenting in part); *id.* at 350 (Stevens, J., concurring in part and dissenting in part).

⁴⁸ 536 U.S. 304 (2002). One could argue that the plurality opinion in *Thompson v. Oklahoma*, 487 U.S. 815 (1988) — which would have struck the death penalty for defendants under age sixteen, *id.* at 838 (plurality opinion) — relied on psychology in determining that youth are less mature and responsible than adults and thus show diminished culpability. But the plurality cited no scientific evidence and relied more on general intuition. *See id.* at 834.

⁴⁹ *See Atkins*, 536 U.S. at 316 n.21.

⁵⁰ *See id.* at 314–16.

⁵¹ *See id.* at 318 & nn.23–24.

⁵² *See id.* at 321.

⁵³ *See Roper v. Simmons*, 543 U.S. 551, 569–70 (2005); *see also* Levick et al., *supra* note 21, at 304 (explaining that the Court relied on various scientific studies showing that juveniles are categorically less culpable). *But see* Barry C. Feld, *Adolescent Criminal Responsibility, Proportionality, and Sentencing Policy: Roper, Graham, Miller/Jackson, and the Youth Discount*, 31 LAW & INEQ. 263, 277 (2013) (criticizing the Court’s decision in *Roper* for relying more on intuition than on the abundant scientific evidence presented by amici).

⁵⁴ *Roper*, 543 U.S. at 578.

ham v. Florida,⁵⁵ where it held that life without parole (LWOP) is a disproportionate sentence for a juvenile who does not commit a homicide.⁵⁶ The Court pointed to both its analysis in *Roper* and subsequent evidence showing the diminished culpability of juveniles.⁵⁷ In the most recent of these cases, *Miller v. Alabama*,⁵⁸ the Court turned to psychological and neuroscientific evidence⁵⁹ when it held that mandatory LWOP is unconstitutional when applied to juveniles, no matter the crime.⁶⁰ Departing from the approach of its earlier decisions, the Court considered the science first⁶¹ and then turned to objective indicia such as legislative approval.⁶² The Court also emphasized that it was not bound by the decision of the majority of state legislatures that LWOP is an acceptable punishment for juveniles who commit a homicide.⁶³

B. Unconstitutional Conditions of Confinement

1. *Doctrinal Framework.* — The other branch of Eighth Amendment jurisprudence examines how prisoners are treated within prisons, including their conditions of confinement.⁶⁴ When the Court first considered whether a prison condition was unconstitutional under the Eighth Amendment in *Estelle v. Gamble*,⁶⁵ its inquiry mirrored the infrequently used “unnecessary and wanton infliction of pain” test from

⁵⁵ 130 S. Ct. 2011 (2010); *see id.* at 2026.

⁵⁶ *See id.* at 2034.

⁵⁷ *See id.* at 2026; Kevin W. Saunders, *The Role of Science in the Supreme Court’s Limitations on Juvenile Punishment*, 46 TEX. TECH L. REV. 339, 355 (2013) (describing the Court’s use of information from amicus briefs as the basis for its conclusion that the science had not changed). The Court also looked once again at the inapplicability of penological justifications, including retribution and deterrence, given a juvenile’s immaturity and diminished culpability. *See Graham*, 130 S. Ct. at 2028–30.

⁵⁸ 132 S. Ct. 2455 (2012).

⁵⁹ *See id.* at 2464–65.

⁶⁰ *Id.* at 2460.

⁶¹ *See id.* at 2464–65; *see also* Richard S. Frase, *What’s “Different” (Enough) in Eighth Amendment Law?*, 11 OHIO ST. J. CRIM. L. 9, 16 (2013) (“But in *Miller*, instead of beginning with the national-consensus assessment, Justice Kagan’s categorical analysis began] with what amounts to the Court’s independent judgment — without mentioning the latter by name.”).

⁶² *See Miller*, 132 S. Ct. at 2470–71 (stating that objective indicia represented only “part of the analysis,” *id.* at 2470).

⁶³ *See id.* at 2471–72.

⁶⁴ The Eighth Amendment also prohibits the use of excessive physical force against prisoners. *See Hudson v. McMillian*, 503 U.S. 1, 4 (1992). That subject is outside the scope of this Note, however.

⁶⁵ 429 U.S. 97 (1976); *see Hafemeister & George*, *supra* note 5, at 18. In *Estelle*, the Court considered whether the failure of prison officials to provide necessary medical care to a prisoner violated the Eighth Amendment. *See Estelle*, 429 U.S. at 99–102. The Court extended the Eighth Amendment to conditions of confinement more broadly in *Rhodes v. Chapman*, 452 U.S. 337 (1981). *Hafemeister & George*, *supra* note 5, at 19.

the punishment context.⁶⁶ Since then, the Court has developed the doctrine significantly.

Today, for a condition of confinement to violate the Eighth Amendment, two prongs must be satisfied. The first prong is objective: the condition of confinement must result in a deprivation that is “sufficiently serious,”⁶⁷ meaning that it deprives the prisoner of “the minimal civilized measure of life’s necessities.”⁶⁸ The Court has explained that a prisoner cannot assert a deprivation of “the minimal civilized measure of life’s necessities”⁶⁹ based on “overall conditions”⁷⁰ but instead must demonstrate the deprivation of a “single, identifiable human need.”⁷¹ Many of these needs have become well established in the jurisprudence. Food, clothing, and medical care all constitute needs.⁷² As do exercise,⁷³ shelter,⁷⁴ and safety.⁷⁵ Lower courts have generally found that sleep⁷⁶ and hygiene⁷⁷ also qualify. But beyond these, separating needs from wants becomes an uncertain task as neither the Supreme Court nor lower courts have articulated what precisely defines a need. A rule has nevertheless emerged across the cases that the deprivation of a need must result in the level of grave harm that occurs when a person lacks items of basic sustenance such as food, water, and shelter.⁷⁸ The Supreme Court said as much in *Brown*

⁶⁶ See *Estelle*, 429 U.S. at 104 (holding that “deliberate indifference to serious medical needs of prisoners constitutes the ‘unnecessary and wanton infliction of pain’ proscribed by the Eighth Amendment” (citation omitted) (quoting *Gregg v. Georgia*, 428 U.S. 153, 173 (1976))); see also *Wilson v. Seiter*, 501 U.S. 294, 297–98 (1991) (tracing *Estelle*’s analysis to the unnecessary and wanton infliction of pain test); *supra* note 24.

⁶⁷ See *Wilson*, 501 U.S. at 298.

⁶⁸ *Farmer v. Brennan*, 511 U.S. 825, 834 (1994) (quoting *Rhodes*, 452 U.S. at 347) (internal quotation marks omitted).

⁶⁹ *Wilson*, 501 U.S. at 304.

⁷⁰ *Id.* (quoting Brief of Petitioner at 36, *Wilson*, 501 U.S. 294 (No. 89-7376), 1990 WL 505735, at *36).

⁷¹ *Id.*

⁷² See *Brown v. Plata*, 131 S. Ct. 1910, 1928 (2011).

⁷³ See *Wilson*, 501 U.S. at 304.

⁷⁴ See *id.*

⁷⁵ See *Farmer v. Brennan*, 511 U.S. 825, 833 (1994).

⁷⁶ See, e.g., *Garrett v. Thaler*, 560 F. App’x 375, 378 (5th Cir. 2014); *Walker v. Schult*, 717 F.3d 119, 126–27 (2d Cir. 2013).

⁷⁷ See, e.g., *Allah v. Bartkowiak*, 574 F. App’x 135, 138 (3d Cir. 2014); *Walker*, 717 F.3d at 127.

⁷⁸ The Court has also indicated — and lower courts have often reached the same conclusion — that courts should look to societal consensus about what human beings need. See, e.g., *Helling v. McKinney*, 509 U.S. 25, 36 (1993); *Carter v. DeKalb Cnty.*, 521 F. App’x 725, 729 (11th Cir. 2013); *Walker*, 717 F.3d at 125; *Bennett v. Chitwood*, 519 F. App’x 569, 574 (11th Cir. 2013). The problem is that, when assessing an alleged need, these courts have not pointed to any indicators of societal consensus beyond other court decisions. See, e.g., *Walker*, 717 F.3d at 126–28; *Ruiz v. Johnson*, 37 F. Supp. 2d 855, 914 (S.D. Tex. 1999) (“More recently, in light of the maturation of our society’s understanding of the very real psychological needs of human beings, courts have recognized the inhumanity of institutionally-imposed psychological pain and suffering.”), *rev’d and remanded sub nom.* *Ruiz v. United States*, 243 F.3d 941 (5th Cir. 2001). Courts have not looked, as

v. *Plata*.⁷⁹ There, when determining that medical care is a human need, the Court explained that the deprivation of medical care would result in suffering or death similar to the suffering or death caused by starvation.⁸⁰ The Court likewise indicated in *Hudson v. McMillian*⁸¹ that a need exists only if its absence effects an “extreme deprivation[.]”⁸² Some lower courts have also required a showing of grave harm.⁸³ Applying this rule — that the deprivation of a human need must cause “grave harm approximating that resulting from the deprivation of a basic element of sustenance such as food and shelter” — sorts the cases into an organized scheme⁸⁴ and makes the objective prong clearer.

The objective prong of the conditions of confinement inquiry is not met, however, just because a prisoner is temporarily deprived of a need. Instead, courts have evaluated the deprivation in the context of the specific need, setting different standards for how long and how frequently a person must be deprived of a need before his conditions of confinement become unconstitutional. Forcing a prisoner to skip a few meals, therefore, does not create an unconstitutional condition of confinement.⁸⁵ Neither does a temporary denial of exercise.⁸⁶ On the other hand, a prisoner cannot be deprived of water for several days because of the critical nature of that necessity.⁸⁷

they do in the proportionality inquiry, to the decisions of legislatures or prison officials. Instead, the reference to societal consensus appears to be little more than rhetorical backing for a court’s independent determination that a deprivation is too severe. Notably, the Supreme Court did not reference societal standards in its most recent conditions of confinement case, *Plata*, and instead focused solely on the extent of the harm. *See* Brown v. *Plata*, 131 S. Ct. 1910, 1928 (2011).

⁷⁹ 131 S. Ct. 1910.

⁸⁰ *See id.* at 1928.

⁸¹ 503 U.S. 1 (1992).

⁸² *Id.* at 9.

⁸³ *See, e.g.*, *Carter*, 521 F. App’x at 729; *Walker*, 717 F.3d at 125 (explaining that a deprivation of a need must result in “an unreasonable risk of serious damage to [the inmate’s] health”); *Bennett*, 519 F. App’x at 574.

⁸⁴ Compare *Allah v. Bartkowski*, 574 F. App’x 135, 138 (3d Cir. 2014) (finding sanitary conditions are a need), and *Garrett v. Thaler*, 560 F. App’x 375, 378 (5th Cir. 2014) (finding sleep is a need), with *Gaines v. McDonald*, 577 F. App’x 335 (5th Cir. 2014) (finding an elevated bed is not a need), and *Watson v. Sec’y Pa. Dep’t of Corr.*, 567 F. App’x 75, 78 (3d Cir. 2014) (finding a prison job is not a need).

⁸⁵ *See* *Shelby v. Dupree*, 574 F. App’x 397, 399 (5th Cir. 2014) (“[T]he denial of approximately three meals per week for approximately six weeks is not sufficiently severe in amount or duration so as to deny [the prisoner] the minimal civilized measure of life’s necessities”).

⁸⁶ *See* *May v. Baldwin*, 109 F.3d 557, 565 (9th Cir. 1997) (determining that preventing an inmate from exercising for twenty-one days was not sufficient to constitute a deprivation of a need).

⁸⁷ *See* *Spires v. Paul*, No. 12-16364, 2014 WL 4548030, at *5 (11th Cir. Sept. 16, 2014). If it were determined that social interaction is a human need, it would then be necessary to identify how long a person can safely go without human interaction. Studies have varied on this point. Some have concluded that the effects of solitary confinement can materialize after only a few days. *See generally* *Smith, supra* note 1, at 494–95 (concluding, after examining the relevant studies, that “health effects can occur after only a few days of solitary confinement” and that “[t]he

The second prong of the conditions of confinement inquiry is subjective: for the condition of confinement to be unconstitutional, a prison official must display “deliberate indifference” to inmate health or safety.⁸⁸ In *Farmer v. Brennan*,⁸⁹ the Court held that for a prisoner to show deliberate indifference on the part of a prison official he must demonstrate that the prison official evinced subjective recklessness: the official must have “know[n] of and disregard[ed] an excessive risk to inmate health or safety.”⁹⁰

2. *Recognition of Grave Mental Harm.* — As of yet, the Supreme Court has recognized only physical needs,⁹¹ and lower courts, with a few exceptions,⁹² have followed its lead. When a prisoner does allege a deprivation of a mental need, courts typically look past it and consider

health risk rises for each additional day in solitary confinement,” *id.* at 495). Others have determined that ten days is the critical cut-off, beyond which symptoms are almost certain to occur. *See* Haney & Lynch, *supra* note 3, at 531 (“There is not a single study of solitary confinement wherein non-voluntary confinement that lasted for longer than 10 days failed to result in negative psychological effects.”). At the very least, if social interaction were a human need, supermax confinement would be unconstitutional since it perpetually deprives prisoners of human interaction.

⁸⁸ *Farmer v. Brennan*, 511 U.S. 825, 834 (1994) (quoting *Wilson v. Seiter*, 501 U.S. 294, 303 (1991)).

⁸⁹ 511 U.S. 825.

⁹⁰ *Id.* at 837; *see also id.* (“[T]he official must both be aware of facts from which the inference could be drawn that a substantial risk of serious harm exists, and he must also draw the inference.”). The subjective prong could pose an obstacle in some solitary confinement cases if an inmate were demonstrating no signs of suffering, but a prison official’s claim that he did not know of and disregard an excessive risk to a prisoner’s safety would certainly fail if the prisoner were displaying symptoms such as self-mutilation, suicidal actions, babbling, or screaming. *See* McClary v. Kelly, 4 F. Supp. 2d 195, 208 (W.D.N.Y. 1998) (“A conclusion . . . that prolonged isolation from social and environmental stimulation increases the risk of developing mental illness does not strike this Court as rocket science.”); *see also* Haney, *supra* note 2, at 130–31 (listing symptoms). It is unsurprising, then, that when courts have found the objective prong satisfied by solitary confinement, they have easily found the subjective prong satisfied as well. *See, e.g.*, Ruiz v. Johnson, 37 F. Supp. 2d 855, 915 (S.D. Tex. 1999) (concluding without discussion that the subjective prong was satisfied based on the objective severity of the conditions), *rev’d and remanded sub nom.* Ruiz v. United States, 243 F.3d 941 (5th Cir. 2001); Madrid v. Gomez, 889 F. Supp. 1146, 1266–67 (N.D. Cal. 1995) (determining with limited analysis that based on the “findings of fact, and the evidence presented,” *id.* at 1266, officials had “actual subjective knowledge that the conditions . . . presented a substantial or excessive risk of harm,” *id.* at 1266–67). Thus, in particular cases, the deliberate indifference requirement might prove difficult to satisfy, but it is the mental need requirement that presents the systemic obstacle and that is therefore the focus of this Note.

⁹¹ *See, e.g.*, Helling v. McKinney, 509 U.S. 25, 33–35 (1993) (acknowledging the possibility that the prisoner could “prove an Eighth Amendment violation based on exposure to [second-hand smoke],” *id.* at 35); Rhodes v. Chapman, 452 U.S. 337, 339–40, 348 (1981) (rejecting a conditions of confinement challenge to double-celling, the confinement of two prisoners in one cell, because the prisoners were not deprived of physical needs such as food, medical care, or sanitation).

⁹² *See, e.g.*, United States v. Corozzo, 256 F.R.D. 398, 401–02 (E.D.N.Y. 2009) (recognizing that social interaction is a human need but not passing on the constitutionality of depriving a prisoner of it); Wilkerson v. Stalder, 639 F. Supp. 2d 654, 679 (M.D. La. 2007) (recognizing “social contact” as a “basic human need”); *see also infra* p. 1262.

only whether the prisoner was deprived of a physical need.⁹³ In *McMillan v. Wiley*,⁹⁴ for example, an inmate in a supermax prison challenged his conditions of confinement on the ground that he had no opportunity to interact with other people.⁹⁵ The district court rejected the prisoner's challenge, finding that his "lack of social opportunities"⁹⁶ did not constitute a deprivation of one of life's necessities.⁹⁷ The court instead concluded that the prisoner had suffered no deprivations of life's necessities at all, citing as proof that he "receive[d] meals, [was] housed in a cell, and [had] limited, but regular, recreation periods."⁹⁸ *Gibson v. Lynch*⁹⁹ applied similar logic. There, the prisoner argued that his conditions of confinement deprived him of a number of physical needs, as well as social interaction.¹⁰⁰ After refuting the prisoner's claim that he was denied physical needs, the Third Circuit rejected the prisoner's assertion of a denial of social interaction for not being of "constitutional dimension."¹⁰¹

Because most courts have focused exclusively on physical deprivations,¹⁰² challenges to solitary confinement have generally succeeded only when a prisoner alleged a concurrent deprivation of a physical need.¹⁰³ In *Keenan v. Hall*,¹⁰⁴ for example, the Ninth Circuit allowed a plaintiff-inmate to proceed to trial based on various alleged physical deprivations surrounding his placement in solitary confinement, including lack of exercise, inadequate lighting, and lack of personal hygiene.¹⁰⁵

⁹³ See John F. Cockrell, Student Article, *Solitary Confinement: The Law Today and the Way Forward*, 37 LAW & PSYCHOL. REV. 211, 216 (2013) ("[Human] needs are generally understood to include health, safety, food, clothing, shelter, hygiene and exercise. Social interaction is only very recently starting to be identified as a basic human need, and only in some courts." (footnote omitted)).

⁹⁴ 813 F. Supp. 2d 1238 (D. Colo. 2011).

⁹⁵ See *id.* at 1250–51.

⁹⁶ *Id.* at 1251.

⁹⁷ *Id.* at 1250–51.

⁹⁸ *Id.* at 1250.

⁹⁹ 652 F.2d 348 (3d Cir. 1981).

¹⁰⁰ See *id.* at 352.

¹⁰¹ *See id.*

¹⁰² See, e.g., *Gallo v. Burson*, 568 F. App'x 516, 517 (9th Cir. 2014) (finding that a prisoner failed to demonstrate an Eighth Amendment violation because he did not show that placement in disciplinary segregation "posed a substantial risk of serious harm to his health or safety" or that it denied him life's necessities); *Ajaj v. United States*, 293 F. App'x 575, 582–84 (10th Cir. 2008) (concluding that a prisoner failed to assert a deprivation of a single, identifiable human need despite his being placed in "lock-down for 23 hours per day in extreme isolation," *id.* at 582).

¹⁰³ See *Haney & Lynch*, *supra* note 3, at 543.

¹⁰⁴ 83 F.3d 1083 (9th Cir. 1996), amended on denial of reh'g, 135 F.3d 1318 (9th Cir. 1998).

¹⁰⁵ *Id.* at 1089.

More recently, a few courts have found solitary confinement unconstitutional based on mental harm alone,¹⁰⁶ but only one — *Ruiz v. Johnson*¹⁰⁷ — did so with respect to all prisoners.¹⁰⁸ In *Ruiz*, a federal district court determined that the placement of Texas prisoners into administrative segregation units — units which achieve solitary confinement-like conditions¹⁰⁹ — violated the Eighth Amendment “through extreme deprivations which cause profound and obvious psychological pain and suffering.”¹¹⁰ The court explained, “[a]s the pain and suffering caused by a cat-o’-nine-tails lashing an inmate’s back are cruel and unusual punishment by today’s standards of humanity and decency, the pain and suffering caused by extreme levels of psychological deprivation are equally, if not more, cruel and unusual.”¹¹¹ Another district court reached a similar conclusion in *Madrid v. Gomez*,¹¹² but it limited its holding to those prisoners who already suffered from mental and psychological illnesses.¹¹³ The court did observe that “[m]ental health, just as much as physical health, is a mainstay of life.”¹¹⁴ In *Jones’El v. Berge*,¹¹⁵ a district court asserted that mental suffering is cognizable under the Eighth Amendment,¹¹⁶ but its preliminary injunction required the removal from a supermax prison of only a group of mentally ill inmates.¹¹⁷ In contrast, *Wilkerson v. Stalder*¹¹⁸ recognized that social interaction and environmental stimulation are basic human needs for all people,¹¹⁹ but the district court did not specify whether it was basing its decision on mental needs or physical ones.¹²⁰

¹⁰⁶ There are also cases that have recognized the mental suffering inflicted by solitary confinement without passing directly on its constitutionality. *See, e.g.*, *Davenport v. DeRobertis*, 844 F.2d 1310 (7th Cir. 1988) (noting that it “seems pretty obvious, that isolating a human being from other human beings year after year or even month after month can cause substantial psychological damage,” *id.* at 1313, while affirming a district court’s finding of an Eighth Amendment violation on the unrelated ground that the prison allowed insufficient access to exercise, *id.* at 1314).

¹⁰⁷ 37 F. Supp. 2d 855 (S.D. Tex. 1999), *rev’d and remanded sub nom. Ruiz v. United States*, 243 F.3d 941 (5th Cir. 2001). The Fifth Circuit reversed on procedural grounds, *see Ruiz*, 243 F.3d at 952–53, without deciding whether the conditions of confinement at issue were unconstitutional.

¹⁰⁸ Barday, *supra* note 9, at 841.

¹⁰⁹ *See Ruiz*, 37 F. Supp. 2d at 907–08.

¹¹⁰ *Id.* at 907.

¹¹¹ *Id.* at 914.

¹¹² 889 F. Supp. 1146 (N.D. Cal. 1995).

¹¹³ *Id.* at 1261, 1265.

¹¹⁴ *Id.* at 1261.

¹¹⁵ 164 F. Supp. 2d 1096 (W.D. Wis. 2001).

¹¹⁶ *Id.* at 1117.

¹¹⁷ *Id.* at 1098.

¹¹⁸ 639 F. Supp. 2d 654 (M.D. La. 2007).

¹¹⁹ *Id.* at 678.

¹²⁰ *See id.* at 679 (explaining that there was a “deprivation of at least one basic human need, including but not limited to sleep, exercise, social contact and environmental stimulation”).

3. Why Courts Have Not Recognized Grave Mental Harm More Frequently. — It is hard to determine specifically why courts have not recognized grave mental harm in the conditions of confinement inquiry because, in most cases, courts simply dismiss the alleged mental need out of hand without providing any analysis. Part of the problem is assuredly a compounding effect: because few courts have recognized mental needs, other courts assert that precedent is against doing so.¹²¹ But the more significant problem is that most courts appear unaware of the grave harm caused by the deprivation of mental needs. Courts that have looked to psychological and neuroscientific evidence have generally found the deprivation of social interaction to be unconstitutional.¹²² Courts that have not looked to the evidence have reached the opposite conclusion.¹²³

Why then have most courts not looked to the evidence? Part of the problem is likely poor briefing by prisoners, who are often filing pro se complaints.¹²⁴ But a more fundamental problem is that adequate psychological and neuroscientific evidence did not exist until recently.

II. USING PSYCHOLOGICAL AND NEUROSCIENTIFIC RESEARCH AS A BASIS FOR RECOGNIZING GRAVE MENTAL HARM

For challenges based on deprivations of mental needs to be successful, more courts will need to follow the approach taken in decisions like *Ruiz* and *Madrid* and use psychological and neuroscientific evidence to identify grave mental harm. Rather than wait for this gradual process to play itself out, and thus potentially allow unconstitutional psychological suffering to persist, the Court ought to take it upon itself to enlist scientific evidence to identify mental needs. Although the Court has never looked to psychological or neuroscientific research when applying the conditions of confinement inquiry, the Court has recently begun to use such research to guide its application of the Eighth Amendment proportionality test. Engaging with recent re-

¹²¹ See, e.g., *Ajaj v. United States*, 293 F. App'x 575, 583 (10th Cir. 2008) (drawing a contrast between the types of needs that are commonly recognized by courts and the ones raised by the prisoner). Given that courts frequently rely on other court decisions as indicators of what conditions of confinement are tolerable, *see supra* note 78, this result is not surprising.

¹²² See, e.g., *Ruiz v. Johnson*, 37 F. Supp. 2d 855, 913 (S.D. Tex. 1999) ("The scene revealed by the plaintiffs' experts, one largely unrefuted by defendants' emphasis on policies and procedures, is one of a frenzied and frantic state of human despair and desperation."), *rev'd and remanded on other grounds sub nom. Ruiz v. United States*, 243 F.3d 941 (5th Cir. 2001); *Madrid v. Gomez*, 889 F. Supp. 1146, 1230 (N.D. Cal. 1995) ("Social science and clinical literature have consistently reported that when human beings are subjected to social isolation and reduced environmental stimulation, they may deteriorate mentally and in some cases develop psychiatric disturbances.").

¹²³ See, e.g., *McMillan v. Wiley*, 813 F. Supp. 2d 1238, 1250–51 (D. Colo. 2011).

¹²⁴ See, e.g., *Tiggs v. Berge*, No. 01-C-171-C, 2002 WL 32342678 (W.D. Wis. Nov. 14, 2002).

search when conducting the conditions of confinement inquiry would be just as beneficial.

A. Juvenile Brain Research and the Proportionality Inquiry

Between the Court's decisions in *Stanford* and *Penry* and its string of proportionality decisions in the last fifteen years, psychological and neuroscientific research pertaining to offender culpability, at least with respect to juveniles, developed considerably,¹²⁵ providing the Court with sounder evidence from which to draw conclusions.¹²⁶ At the time of *Stanford*, it remained unclear whether juvenile brains continued developing after early childhood,¹²⁷ and without that information, there was no way for courts to distinguish between juvenile and adult offenders.¹²⁸ Although some research had been done on brain development prior to *Stanford*,¹²⁹ the period of time between *Stanford* and *Roper* was when the scientific research, aided by new technology,¹³⁰ strengthened around the conclusion that juvenile brains are not fully

¹²⁵ It is not clear that between *Penry* and *Atkins* such a trend was evident with research into the diminished culpability of persons with intellectual disability. In *Penry*, Justice O'Connor, who could have provided the fifth vote for a holding that the death penalty should not be applied to persons with intellectual disability, explained that, in her view, persons with intellectual disability could at times possess inadequate culpability but that they vary so widely in their degree of impairment that a categorical holding was inappropriate. *See Penry v. Lynaugh*, 492 U.S. 302, 338–39 (1989) (opinion of O'Connor, J.). The Court appeared to indicate in *Atkins* that this problem still persisted. The Court noted there, “[t]o the extent there is serious disagreement about the execution of mentally retarded offenders, it is in determining which offenders are in fact retarded,” *Atkins v. Virginia*, 536 U.S. 304, 317 (2002), and then indicated that it would rely on the states to fill in the gap, *see id.* The Court, however, did cite post-*Penry* psychological evidence demonstrating the diminished culpability of persons with intellectual disability. *See id.* at 318 nn.23–24.

¹²⁶ *See* Saunders, *supra* note 57, at 347 (“Neuroscience that spoke to juvenile capacity and culpability existed at the time of the earlier Supreme Court cases, but it was nowhere near as developed as it would come to be.”); *id.* at 352 (“By the time the Court returned to the issue of the juvenile death penalty in *Roper v. Simmons* and later cases on other harsh punishments, science, with regard to the juvenile brain and its impact on behavior, had clearly advanced beyond that which was available in the earlier cases.” (footnotes omitted)).

¹²⁷ *See id.* at 347.

¹²⁸ *Id.* at 347–48. That being said, four Justices in *Stanford* rejected any use of science when considering Eighth Amendment challenges, *see Stanford v. Kentucky*, 492 U.S. 361, 378 (1989) (opinion of Scalia, J.), and it is unclear whether Justice O'Connor would have used it, *see id.* at 382 (O'Connor, J., concurring in part and concurring in the judgment) (accepting that the Court has “a constitutional obligation to conduct proportionality analysis” but not addressing whether scientific research should be used in that analysis). So even if the science had been clear in 1989, it may not have made any difference.

¹²⁹ *See, e.g.*, Peter R. Huttenlocher, *Synaptic Density in Human Frontal Cortex — Developmental Changes and Effects of Aging*, 163 BRAIN RES. 195 (1979).

¹³⁰ *See* BARBARA STRAUCH, THE PRIMAL TEEN: WHAT THE NEW DISCOVERIES ABOUT THE TEENAGE BRAIN TELL US ABOUT OUR KIDS 7–8 (2003) (“Using powerful new brain-scanning machines, peering for the first time into living, working teenage brains . . . the neuroscientists are finding that the teenage brain, far from being an innocent bystander to hormonal hijinks, is undergoing a dramatic transformation.”); Saunders, *supra* note 57, at 349.

developed.¹³¹ This information was not far from the Justices' minds when they reconsidered the culpability of juveniles in *Roper*. Amici cited psychological and neuroscientific research to this effect in their briefs,¹³² and the Court relied on the research in reaching its decision.¹³³

B. Social Isolation Research and the Conditions of Confinement Inquiry

The Court's decision to examine the scientific research regarding juvenile brain development ensured a more comprehensive Eighth Amendment proportionality inquiry. In a similar fashion, engaging with research that shows the psychological consequences of various mental deprivations would enable the Court to conduct a more robust analysis of those deprivations' constitutionality. A substantial body of such research exists regarding the effects of social isolation, providing the Court ample resources to assess the constitutionality of solitary confinement.

Although it has long been understood that human beings depend on social interaction for their well-being,¹³⁴ there was little scientific evidence to back this intuition three decades ago,¹³⁵ when the Court first began using the Eighth Amendment to assess prisoners' condi-

¹³¹ See Saunders, *supra* note 57, at 349–51; see also STRAUCH, *supra* note 130, at 8 (“The teenage brain, it’s now becoming clear, is still very much a work in progress . . .”).

¹³² See Brief for the American Psychological Ass’n & the Missouri Psychological Ass’n as Amici Curiae Supporting Respondent at 4–12, *Roper v. Simmons*, 543 U.S. 551 (2005) (No. 03-633), 2004 WL 1636447, at *4–12.

¹³³ *Roper*, 543 U.S. at 569 (citing evidence of amici). The Court stated in *Graham* that it had seen no subsequent evidence that would call its earlier conclusions in *Roper* into question: “No recent data provide reason to reconsider the Court’s observations in *Roper* about the nature of juveniles. As petitioner’s *amici* point out, developments in psychology and brain science continue to show fundamental differences between juvenile and adult minds.” *Graham v. Florida*, 130 S. Ct. 2011, 2026 (2010).

¹³⁴ See Madrid v. Gomez, 889 F. Supp. 1146, 1231 (N.D. Cal. 1995) (citing experiments from the late-eighteenth and nineteenth centuries that concluded solitary confinement led to “psychiatric disturbances”); Haney & Lynch, *supra* note 3, at 503–04 (citing early and mid-twentieth-century social psychology that emphasized “the importance of social contact for the creation and maintenance of ‘self,’” *id.* at 503).

¹³⁵ See Grassian, *supra* note 4, at 343 (“Unfortunately, other than some anecdotal reports, there was little discussion of the psychological effects of solitary confinement in the medical literature during the first half of the twentieth century.”); Laura Matter, Student Note, *Hey, I Think We’re Unconstitutionally Alone Now: The Eighth Amendment Protects Social Interaction as a Basic Human Need*, 14 J. GENDER RACE & JUST. 265, 292 (2010) (“Researchers began conducting studies that show the continual role of social interaction on brain chemistry in the 1990s. Earlier courts did not have the benefit of this research . . .” (footnote omitted)). The general concept of basic psychological needs has also only developed in recent years. See, e.g., Edward L. Deci & Richard M. Ryan, *Levels of Analysis, Regnant Causes of Behavior and Well-Being: The Role of Psychological Needs*, 22 PSYCHOL. INQUIRY 17, 19 (2011).

tions of confinement.¹³⁶ Research from recent decades, however, has provided greater insight into the severity of the harm a person suffers when socially isolated.¹³⁷ Buoyed by numerous psychological examinations of people in isolation,¹³⁸ and neuroscientific studies,¹³⁹ a significant body of empirical evidence is now available.¹⁴⁰ This research indicates that depriving a person of social interaction results in substantial harm.¹⁴¹ Additionally, evidence has shown that people's brains process social pain and physical pain in similar ways.¹⁴² This latter finding is potentially quite significant since the Court's test for identifying a need is to ask whether the deprivation of the asserted

¹³⁶ See *Rhodes v. Chapman*, 452 U.S. 337, 344–45 (1981).

¹³⁷ See *Matter*, *supra* note 135, at 292 (describing the progress in the past decades of psychological research regarding the impact of social interaction on the brain in the context of calling for Eighth Amendment protection of social interaction). See generally *id.* at 276–80 (examining the scientific literature on social isolation). This research has tracked recognition of mental suffering more generally. Research into the effects of Post-Traumatic Stress Disorder (PTSD) is emblematic. Although PTSD had long existed, it was largely overlooked until the 1980s. See Charles Kaiman, *PTSD in the World War II Combat Veteran*, AM. J. NURSING, Nov. 2003, at 32, 32 (explaining that PTSD was evident in World War I and World War II veterans but not diagnosed until the 1980s). Subsequent evidence has affirmed the gravity of the mental harm suffered by those who experience severe trauma. See, e.g., Gillian Mezey & Ian Robbins, *Usefulness and Validity of Post-Traumatic Stress Disorder as a Psychiatric Category*, 323 BRIT. MED. J. 561, 562 (2001) (describing changes in brain chemistry associated with PTSD); Benedict Carey, *Combat Stress Among Veterans Is Found to Persist Since Vietnam*, N.Y. TIMES, Aug. 7, 2014, <http://www.nytimes.com/2014/08/08/us/combat-stress-found-to-persist-since-vietnam.html> (explaining that PTSD symptoms can include “disabling flashbacks, hyper-arousal and sleep problems” and that Vietnam veterans with PTSD were twice as likely as Vietnam veterans without PTSD to have died before retirement age).

¹³⁸ See generally *Grassian*, *supra* note 4, at 349–53 (describing interviews and observations of individuals in isolation).

¹³⁹ Atul Gawande, *Hellhole*, NEW YORKER, Mar. 30, 2009, <http://www.newyorker.com/magazine/2009/03/30/hellhole> [<http://perma.cc/8SP9-SQVF>] (describing EEG studies that conclude “[w]ithout sustained social interaction, the human brain may become as impaired as one that has incurred a traumatic injury”).

¹⁴⁰ Roy F. Baumeister & Mark R. Leary, *The Need to Belong: Desire for Interpersonal Attachments as a Fundamental Human Motivation*, 117 PSYCHOL. BULL. 497, 522 (1995) (noting that empirical evidence to evaluate the importance of social interaction was available only recently).

¹⁴¹ See *id.* at 520 (“Deficits in [social interaction] apparently lead to a variety of ill effects, consistent with the view that [social interaction] is a need (as opposed to merely a want).”). Professor Craig Haney’s studies on solitary confinement have shown that the absence of social interaction has a variety of effects on people, including anxiety, hypersensitivity, rage, depression, insomnia, hallucinations, and suicidal behavior. Haney, *supra* note 2, at 130, 131. Overall, there are many different symptoms that social isolation can cause, and individuals will react to it differently. Smith, *supra* note 1, at 493 (“A multitude of pathological reactions are possible, and they can vary greatly.”).

¹⁴² See MATTHEW D. LIEBERMAN, SOCIAL: WHY OUR BRAINS ARE WIRED TO CONNECT 56–66 (2013); Matthew D. Lieberman & Naomi I. Eisenberger, *A Pain by Any Other Name (Rejection, Exclusion, Ostracism) Still Hurts the Same: The Role of Dorsal Anterior Cingulate Cortex in Social and Physical Pain*, in SOCIAL NEUROSCIENCE 167, 167 (John T. Cacioppo et al. eds., 2006) (“[W]e suggest that some of the basic neural mechanisms that support the experience of physical pain also support the experience of social pain . . . ”).

need results in pain similar to that caused by a loss of physical sustenance.¹⁴³ The neurological evidence implies that the substantial harm caused by social isolation may indeed cause the same level of pain. Whether social interaction is in fact a human need would require broader evaluation than this Note can provide, but at the very least, it is clear that scientific evidence exists that provides strong support for this notion. In order to make its conditions of confinement inquiry more thorough and comprehensive, the Court ought to consider this evidence.

III. JUSTIFYING JUDICIAL ACTION

Although psychological and neuroscientific research shows that mental harm — particularly that caused by social isolation — can be quite grave, one can make reasonable arguments that courts are not the appropriate entity to respond to the implications of such research. Given the severity of the harm inflicted on prisoners, and the low likelihood of change coming from another sector of government, these arguments are unconvincing.¹⁴⁴

A. Overcoming Institutional Biases: Why the Courts Are the Correct Entity to Identify Mental Needs

Likely the most common argument against court identification of protected needs is that courts should allow legislatures and prison officials to set prison policy.¹⁴⁵ An offshoot of this argument is that those entities can and should be the ones who apply the lessons of the scientific research, if they are to be applied at all. This argument is unpersuasive and undercut by the Court's actions in the proportionality context.

There, the Court's increased reliance on psychology and neuroscience during the independent judgment step of its analysis seems to reflect its growing acceptance of the common understanding that state

¹⁴³ See *supra* pp. 1258–59.

¹⁴⁴ See *Madrid v. Gomez*, 889 F. Supp. 1146, 1266 (N.D. Cal. 1995) (“We are acutely aware that defendants are entitled to substantial deference with respect to their management of the [prison]. However, subjecting individuals to conditions that are ‘very likely’ to render them psychotic or otherwise inflict a serious mental illness or seriously exacerbate an existing mental illness can not be squared with evolving standards of humanity or decency”).

¹⁴⁵ See, e.g., *Silverstein v. Fed. Bureau of Prisons*, 559 F. App'x 739, 754 (10th Cir. 2014); *Lowery v. Bennett*, 492 F. App'x 405, 410 (4th Cir. 2012); *Trammell v. Keane*, 338 F.3d 155, 163 (2d Cir. 2003); see also *Hafemeister & George*, *supra* note 5, at 33 (explaining that the Supreme Court has “emphasized that deference must be afforded to prison administrators when there is a valid security reason for a given practice, even when that practice might otherwise constitute a constitutional violation”).

legislatures have little incentive to decrease sentences,¹⁴⁶ particularly when the proposed decrease is based on scientific research.¹⁴⁷ Originally, the Court did not take such an approach. In *Stanford*, five Justices refused to apply their independent judgment at all and instead followed the national consensus.¹⁴⁸ By the time of *Atkins* and *Roper*, the Court was willing to engage with psychological evidence but only to reaffirm trends seen in state legislatures.¹⁴⁹ It was not until *Miller* that the Court signaled it was willing to use scientific evidence to reach a conclusion that was at odds with the predominant national practice.¹⁵⁰ Although the Justices provided no explanation for their shift, it is at least notable that five Justices were willing to overturn a popular decision on sentencing based in part on psychological and neuroscientific research.¹⁵¹

¹⁴⁶ See, e.g., William J. Stuntz, *The Pathological Politics of Criminal Law*, 100 MICH. L. REV. 505, 558 (2001) (“[I]n the realm of legislatively defined crime, change is almost entirely one-directional. New crimes are regularly added to criminal codes. Old ones are rarely taken away, and legislatures almost never change definitions of offenses in ways that make violations harder to prove.”); William J. Stuntz, *The Political Constitution of Criminal Justice*, 119 HARV. L. REV. 780, 804 (2006) [hereinafter Stuntz, *Political Constitution*] (“Substantive criminal law and the substantive law of sentencing seem . . . conducive to moral absolutism. Legislation on those subjects is one-dimensional, zero-sum. Criminal liability either expands or contracts; sentences rise or fall.” (emphasis omitted)); *id.* (“More lenient sentences help only convicted criminals. These groups are politically unattractive.” (emphasis omitted)).

¹⁴⁷ See Franklin E. Zimring, Essay, *Populism, Democratic Government, and the Decline of Expert Authority: Some Reflections on “Three Strikes” in California*, 28 PAC. L.J. 243, 253–56 (1996) (tracing and explaining the reasons for a decline in reliance on expert opinion in setting criminal sentences).

¹⁴⁸ See *Stanford v. Kentucky*, 492 U.S. 361, 378 (1989) (opinion of Scalia, J.); *id.* at 380–82 (O’Connor, J., concurring in part and concurring in the judgment).

¹⁴⁹ See *Roper v. Simmons*, 543 U.S. 551, 564–67 (2005); *Atkins v. Virginia*, 536 U.S. 304, 314–16 (2002).

¹⁵⁰ See *Miller v. Alabama*, 132 S. Ct. 2455, 2470–73 (2012); *id.* at 2481 (Roberts, C.J., dissenting) (criticizing the majority opinion for being a “way station on the path to further judicial displacement of the legislative role in prescribing appropriate punishment for crime”); *id.* at 2486 (Thomas, J., dissenting) (“The Court has, thus, gone from ‘merely’ divining the societal consensus of today to shaping the societal consensus of tomorrow.”); see also Ian P. Farrell, *Strict Scrutiny Under the Eighth Amendment*, 40 FLA. ST. U. L. REV. 853, 875–77 (2013) (demonstrating that as of *Graham*, the Court had not resolved whether its independent judgment could overcome objective indicia to the contrary). In *Miller*, though, the Court had particularized doubts about the legislative consensus. It questioned whether the legislative consensus was “endorsed through deliberate, express, and full legislative consideration,” *Miller*, 132 S. Ct. at 2473 (quoting *Graham v. Florida*, 130 S. Ct. 2011, 2026 (2010)) (internal quotation mark omitted), because more than half of the states that mandated LWOP for juveniles convicted of homicide crimes did so based on generally applicable penalty provisions that took no account of age, *id.*

¹⁵¹ See Frase, *supra* note 61, at 16 (“In sum . . . [Justice] Kagan’s opinion may mean that five justices are no longer willing to abdicate their responsibility to play a meaningful checks-and-balances role, and protect politically powerless defendants from excessive (and highly selective) treatment by legislative and executive officials.”); see also Ian P. Farrell, *Abandoning Objective Indicia*, 122 YALE L.J. ONLINE 303, 312 (2013) (criticizing the use of objective indicia because it “contradicts the nature of the Amendment as a limitation on legislatures’ power to punish” and allows the “majority’s preferences [to] define a countermajoritarian right”).

State legislatures and prison administrators are similarly unlikely to apply evidence from psychological and neuroscientific research to shift prison policies. Perhaps even more so than criminal defendants,¹⁵² prisoners have little voice in the political process.¹⁵³ And for prison administrators, safety and discipline will outweigh concerns about prisoner needs in most cases.¹⁵⁴ This is particularly likely when the deprivation at issue is mental, rather than physical, as mental needs have historically not been given the same stature in American society.¹⁵⁵ The confluence of these factors thus makes it unsurprising that only a few state legislatures have sought to place limits on the use of solitary confinement.¹⁵⁶

If the courts do not step in and apply psychological and neuroscientific evidence, it is unlikely that anyone will do so. Courts are critical then to ensuring that prisoners are not subjected to grave mental harm.

¹⁵² Cf. Stuntz, *Political Constitution*, *supra* note 146, at 795 (arguing that criminal suspects are actually a fairly powerful political group as twenty-three million drivers are stopped each year and that as a result there is support for laws regulating policing).

¹⁵³ See *Rhodes v. Chapman*, 452 U.S. 337, 377 (1981) (Marshall, J., dissenting) (“In the current climate, it is unrealistic to expect legislators to care whether the prisons are overcrowded or harmful to inmate health. It is at that point — when conditions are deplorable and the political process offers no redress — that the federal courts are required by the Constitution to play a role.”); James E. Robertson, *The Jurisprudence of the PLRA: Inmates as “Outsiders” and the Countermajoritarian Difficulty*, 92 J. CRIM. L. & CRIMINOLOGY 187, 199 (2001) (questioning whether the “majoritarian paradigm” can protect inmates, a “powerless, stigmatized group[”]); *id.* at 203 (explaining that prisoners are kept away from everyday scrutiny, that they are seen by many people as “unworthy of concern” and that “their disenfranchisement, poverty, and pariah status render them powerless before the elected branches of government” (footnotes omitted)); Transcript, *The Goldwater Institute and the Federalist Society: Federalism and Judicial Mandates*, 28 ARIZ. ST. L.J. 17, 31 (1996) (remarks of Professor Erwin Chemerinsky) (“I believe that prisoners . . . will get no protection from the political process. They have no political constituency. The only way to protect prisoners from inhumane treatment is a federal judiciary.”).

¹⁵⁴ See Weidman, *supra* note 9, at 1527 (describing the arguments in favor of supermax prisons, including that their method of confinement is “vital to the security of general population prisons” and “allow[s] highly volatile inmates to be supervised more closely”).

¹⁵⁵ See Thomas James Brennan, *Living with P.T.S.D. and Allowing Myself to Get Help*, N.Y. TIMES: AT WAR (June 22, 2012, 1:55 PM), <http://atwar.blogs.nytimes.com/2012/06/22/living-with-p-t-s-d-and-allowing-myself-to-get-help> (describing the “stigma associated with PTSD”; the feeling that “unlike physical wounds,” it is considered by some in the military to be “fake”; and how these factors prevent soldiers from seeking needed help); David Brooks, Op-Ed., *The Archipelago of Pain*, N.Y. TIMES, Mar. 6, 2014, <http://www.nytimes.com/2014/03/07/opinion/brooks-the-archipelago-of-pain.html> (demonstrating that American society “make[s] a distinction between physical and social pain”).

¹⁵⁶ Cf. Steinbuch, *supra* note 4, at 502 (describing efforts in Colorado, Maine, Mississippi, New York, and Washington to limit state use of solitary confinement); Editorial, *New York Rethinks Solitary Confinement*, N.Y. TIMES, Feb. 20, 2014, <http://www.nytimes.com/2014/02/21/opinion/new-york-rethinks-solitary-confinement.html> (describing efforts in New York to scale back the use of solitary confinement).

B. Why Courts Are Capable of Identifying Grave Mental Harm

Even if one accepts that courts are more likely than legislatures and prison officials to recognize mental suffering in prisons, another argument arises that courts are simply not capable of determining when a deprivation causes grave mental harm, as opposed to lesser mental harm. There are two reasons why this concern is not particularly significant. First, courts already assess mental suffering. Whenever a court considers a claim of intentional infliction of emotional distress, it must determine whether the plaintiff suffered “severe emotional distress.”¹⁵⁷ In doing so, the court must first inquire into the effects the plaintiff felt as a result of the defendant’s conduct and then determine whether those effects result in adequate emotional distress.¹⁵⁸ The “grave harm” assessment is quite similar. A court must first inquire into the effects the scientific literature reports for a particular mental deprivation and then determine whether those effects result in adequate harm. If a court can undertake the former inquiry, there seems little reason it cannot undertake the latter.¹⁵⁹ But there is also a second, more fundamental problem with this argument. The Constitution imposes a duty on courts to ensure American prisons do not inflict cruel and unusual punishment. It cannot be that this obligation may be shirked merely because determining whether pain is adequately cruel involves tough decisions.

IV. CONCLUSION

In the past decades, psychological and neuroscientific research has provided substantial evidence that depriving people of social interaction results in grave harm. Nonetheless, this harm goes largely unnoticed in the nation’s courts as prisoners continue to be placed in solitary confinement, often for years on end. The reason for this disconnect is that, with only a few exceptions, courts have looked exclusively to physical harms when applying the Eighth Amendment conditions of confinement test. The Court’s recent proportionality decisions provide a basis for a change. In those cases, by looking to psychological and neuroscientific evidence, the Court strengthened its Eighth Amendment analysis. The same outcome should be pursued in

¹⁵⁷ RESTatement (SECOND) OF TORTS § 46 cmt. j (1965).

¹⁵⁸ See, e.g., *Eddy v. V.I. Water & Power Auth.*, 369 F.3d 227, 235–36 (3d Cir. 2004); *Bennett v. Islamic Republic of Iran*, 507 F. Supp. 2d 117, 129–30 (D.D.C. 2007); *Estate of Heiser v. Islamic Republic of Iran*, 466 F. Supp. 2d 229, 271–356 (D.D.C. 2006).

¹⁵⁹ Determining whether harm is sufficiently grave may eventually be unnecessary. Scientific methods are beginning to develop that determine whether a human good is a need. See Baumeister & Leary, *supra* note 140; see also LIEBERMAN, *supra* note 142, at 44–45 (discussing the basic premise that a human need is something that a person must have to avoid significant pain). It is possible that in the future a court could simply adopt the scientific conclusion.

the conditions of confinement setting. The Court ought to engage with the findings of psychology and neuroscience in order to more robustly examine what human beings need. Were the Court to do so, it would dispel the present disparity between different kinds of suffering and more fully achieve the promise of the Eighth Amendment that the American judiciary will sanction punishment, but never cruelty.