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## Scientizing Culpability: The Implications of *Hall v. Florida* and the Possibility of a “Scientific Stare Decisis”

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**SCIENTIZING CULPABILITY: THE IMPLICATIONS OF  
HALL V. FLORIDA AND THE POSSIBILITY OF A  
“SCIENTIFIC STARE DECISIS”**

Christopher Slobogin\*

ABSTRACT

The Supreme Court’s decision in *Hall v. Florida* held that “clinical definitions” control the meaning of intellectual disability in the death penalty context. In other words, *Hall* “scientized” the definition of a legal concept. This Article discusses the implications of this unprecedented move. It also introduces the idea of scientific stare decisis—a requirement that groups that are scientifically alike be treated similarly for culpability purposes—as a means of implementing the scientization process.

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INTRODUCTION

When *Atkins v. Virginia*<sup>1</sup> held that execution of people with intellectual disabilities violates the Eighth Amendment’s prohibition on cruel and unusual punishment, it left the definition of intellectual disability up to the states.<sup>2</sup> Twelve years later, however, the Court stated, in *Hall v. Florida*,<sup>3</sup> that “clinical definitions of intellectual disability . . . were a fundamental premise of *Atkins*.”<sup>4</sup> *Hall* went on to hold that operationalizing intellectual disability in the death penalty context requires incorporation of professional views about threshold IQ scores and standard errors of measurement, and also appeared to mandate that states adopt clinical standards related to the adaptive functioning component of the diagnosis.<sup>5</sup> While *Hall* cautioned that “the views of

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<sup>1</sup> 536 U.S. 304 (2002).

<sup>2</sup> *Id.* at 317 (“[W]e leave to the State[s] the task of developing appropriate ways to enforce the constitutional restriction upon [their] execution of sentences.” (second and third alteration in original) (quoting *Ford v. Wainwright*, 477 U.S. 399, 405, 416–17 (1986))).

<sup>3</sup> 134 S. Ct. 1986 (2014).

<sup>4</sup> *Id.* at 1999.

<sup>5</sup> *Id.* (“[C]linical definitions have long included the SEM.”); *id.* at 2001 (“Florida’s law [which does not consider SEM] not only contradicts the test’s own design but also bars an essential part of a sentencing court’s inquiry into adaptive functioning.”).

medical experts . . . do not dictate the Court's decision,"<sup>6</sup> it also stated that these views "inform[] our determination whether there is a consensus that instructs how to decide the specific issue presented here."<sup>7</sup>

As the dissent in *Hall* pointed out, in defining intellectual disability for death penalty purposes the majority in essence equated "evolving standards of decency"—which is the test for determining the scope of the Eighth Amendment<sup>8</sup>—with "the evolving standards of *professional societies*, most notably the American Psychiatric Association (APA)."<sup>9</sup> At the time *Hall* was decided, only twelve out of the thirty-one death penalty states clearly required consideration of the standard error of measurement (SEM) in assessing whether an individual met the IQ threshold for intellectual disability, with the result that at least nine states set that threshold at 70.<sup>10</sup> Yet, the *Hall* majority adopted a  $\pm 5$  point SEM requirement—effectively making a score of 75 the IQ threshold<sup>11</sup>—because the APA and similar organizations had done so.<sup>12</sup> Additionally, although virtually every state's definition of intellectual disability requires consideration of adaptive functioning,<sup>13</sup> many do not define that term the way the APA does,<sup>14</sup> a divergence which, after *Hall*, is apparently unconstitutional. In other words, rather than assessing the consensus of society as measured through legislation and normative analysis, as Eighth Amendment jurisprudence has traditionally required, the majority "scientized" the definition of intellectual disability for capital punishment purposes.<sup>15</sup>

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<sup>6</sup> *Id.* at 2000.

<sup>7</sup> *Id.* at 2005.

<sup>8</sup> *Trop v. Dulles*, 356 U.S. 86, 101 (1958).

<sup>9</sup> *Hall*, 134 S. Ct. at 2002 (Alito, J., dissenting).

<sup>10</sup> *Id.* at 2004 (Alito, J., dissenting); *see also id.* at 1997 (stating that nine states "mandate a strict IQ score cutoff at 70").

<sup>11</sup> *See id.* at 1996 (citing favorably a Nebraska Supreme Court decision finding that, despite a statutory IQ score cutoff of 70, a score of 75 "considered in light of the standard error of measurement, could be considered as subaverage general intellectual functioning for purposes of diagnosing mental retardation").

<sup>12</sup> *Id.* at 2000 ("By failing to take into account the SEM and setting a strict cutoff at 70, 'Florida goes against the unanimous professional consensus.'" (quoting Brief for American Psychological Association et al. as Amici Curiae at 15, *Hall v. Florida*, 134 S. Ct. 1986 (2013) (No. 12-10882))).

<sup>13</sup> *See* David DeMatteo, Geoffrey Marczyk & Michele Pich, *A National Survey of State Legislation Defining Mental Retardation: Implications for Policy and Practice After Atkins*, 25 BEHAV. SCI. & L. 781, 787–88 (2007) (noting that, of the thirty-eight states that permit the death penalty, thirty-two use a definition of mental retardation that includes a consideration of adaptive functioning).

<sup>14</sup> *Id.* at 788 (noting that at least eight death penalty states do not define either intellectual or adaptive functioning); *id.* at 796–802 (listing state definitions of adaptive functioning that vary considerably from one another).

<sup>15</sup> Throughout this Article, I assume that the DSM's definition of intellectual disability is "scientific." I recognize that the DSM can be infected by non-scientific value judgments. *See generally* HERB KUTCHINS & STUART A. KIRK, MAKING US CRAZY: DSM: THE PSYCHIATRIC

This Essay briefly explores the implications of this move, which is unprecedented not just in the death penalty setting but within criminal culpability doctrine generally. It concludes that, in the specific context of measuring intellectual disability in death penalty cases, the Court's equation of clinical and legal definitions is justifiable. More controversially, it suggests that the law ought to consider scientizing other criminal culpability concepts, and proposes the notion of *scientific stare decisis*—the principle that groups that are scientifically alike should be treated similarly for culpability purposes—as a means of implementing that idea. At the same time, the Article identifies the pitfalls of scientization and suggests it should only occur through an iterative process of dialogue between the legal system and scientists.

### I. THE RADICAL MOVE IN *HALL*

In criminal cases, the courts have generally eschewed linking key assessments to scientific concepts. Rather, as the Supreme Court stated in *Kansas v. Hendricks*,<sup>16</sup> “we have traditionally left to legislators the task of defining terms of a medical nature that have legal significance.”<sup>17</sup> *Hendricks* also emphasized that “[l]egal definitions” in criminal and quasi-criminal matters “need not mirror those advanced by the medical profession,”<sup>18</sup> and cited in support the APA's Diagnostic and Statistical Manual (DSM), which similarly stated that a “clinical diagnosis” does not establish “whether an individual meets a specific legal standard (e.g., for competence, criminal responsibility, or disability).”<sup>19</sup>

As a general matter, this refusal to equate criminal justice constructs with medical or other scientific concepts is understandable. Blameworthiness is an amalgam of conduct and mental-state requirements that can vary immensely between individual cases. And, of course, criminal law must be applied by laypeople, either juries or judges, and has to speak in universal language if it is to have deterrent and expressive effects.<sup>20</sup> The law's use of relatively vague, common sense terms—“premeditation,” “adequate provocation,” “the reasonable person,” “appreciation of wrongfulness,” and “inability to conform behavior”<sup>21</sup>—rather than the quantified lexicon of science is thus

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BIBLE AND THE CREATION OF MENTAL DISORDERS (1997). Nonetheless, the Court has treated the DSM as a scientific source, and it works as a symbol of the point being made in this Article.

<sup>16</sup> 521 U.S. 346 (1997).

<sup>17</sup> *Id.* at 359.

<sup>18</sup> *Id.*

<sup>19</sup> AM. PSYCHIATRIC ASS'N, DIAGNOSTIC AND STATISTICAL MANUAL OF MENTAL DISORDERS xxiii, xxvii (4th ed. 1994).

<sup>20</sup> See, e.g., Paul H. Robinson & John M. Darley, *The Role of Deterrence in the Formulation of Criminal Law Rules: At Its Worst When Doing Its Best*, 91 GEO. L.J. 949, 989–91 (2003) (noting that, among various ways to possibly improve the deterrent effects of laws, it would be helpful to draft laws in plain language, keep them simple, and make them reducible to easy-to-remember slogans).

<sup>21</sup> For the origins of these terms, see WAYNE R. LAFAVE, CRIMINAL LAW §§ 5.4, 7.5, 14.1, 15.2 (5th ed. 2010).

consonant with the normative nature of law and its goal of assuring public participation in and understanding of its tenets.

*Atkins* continued that practice. While it referenced clinical definitions of intellectual disability in discussing the impact of intellectual disability, it stated “we leave to the State[s] the task of developing appropriate ways to enforce the constitutional restriction upon [their] execution of sentences.”<sup>22</sup> That language presumably did not allow legislatures to define intellectual disability any way they wanted. But it did suggest that the states could rely on something other than rote recitation of the APA’s diagnostic manual. More specifically, *Atkins*’s normative rationale for its exemption—focusing on the “lesser culpability” and lesser deterrability of people with intellectual disabilities<sup>23</sup>—presumably could have formed the basis for a constitutionally permissible definition that, as with other criminal culpability definitions, ignored clinical language in favor of a more lay-friendly formulation.

But *Hall* held otherwise.<sup>24</sup> From now on, until the Court holds to the contrary, “clinical definitions of intellectual disability” are integral to the exemption created in *Atkins*.<sup>25</sup> In the latest and fifth edition of the APA’s Diagnostic and Statistical Manual (DSM-5), a diagnosis of intellectual disability requires that three criteria be met:

- A. Deficits in intellectual functions, such as reasoning, problem solving, planning, abstract thinking, judgment, academic learning, and learning from experience, confirmed by both clinical assessment and individualized, standardized intelligence testing.

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<sup>22</sup> *Atkins v. Virginia*, 536 U.S. 304, 317 (2002) (alterations in original) (quoting *Ford v. Wainwright*, 477 U.S. 399, 405, 416–17 (1986)).

<sup>23</sup> *Id.* at 319–20 (stating that “[i]f the culpability of the average murderer is insufficient to justify the most extreme sanction available to the State, the lesser culpability of the mentally retarded offender surely does not merit that form of retribution” and that “it is the same cognitive and behavioral impairments that make these defendants less morally culpable—for example, the diminished ability to understand and process information, to learn from experience, to engage in logical reasoning, or to control impulses—that also make it less likely that they can process the information of the possibility of execution as a penalty and, as a result, control their conduct based upon that information”).

<sup>24</sup> One might argue that *Hall* merely held that, if a state chooses to define intellectual disability using IQ scores, it must recognize the SEM of the relevant tests and the DSM’s approach to adaptive functioning. But the gist of the Court’s opinion is that the DSM is crucial to the Eighth Amendment test. See *Hall v. Florida*, 134 S. Ct. 1986, 2000 (2014) (“The DSM-5 [states]: ‘IQ test scores are approximations of conceptual functioning but may be insufficient to assess reasoning in real-life situations and mastery of practical tasks.’ This statement well captures the Court’s independent assessment that an individual with an IQ test score ‘between 70 and 75 or lower,’ may show intellectual disability by presenting additional evidence regarding difficulties in adaptive functioning.” (citations omitted)).

<sup>25</sup> *Id.* at 1999.

- B. Deficits in adaptive functioning that result in failure to meet developmental and socio-cultural standards for personal independence and social responsibility. Without ongoing support, the adaptive deficits limit functioning in one or more activities of daily life, such as communication, social participation, and independent living, across multiple environments, such as home, school, work, and community.
  
- C. Onset of intellectual and adaptive deficits during the developmental period.<sup>26</sup>

The DSM's definition of intellectual functioning in Criterion A and of adaptive functioning in Criterion B were the focus of *Hall*. The DSM's commentary indicates that, with respect to Criterion A, individuals should "have scores of approximately two standard deviations or more below the population mean, including a margin for measurement error (generally +5 points)," and then explains "[o]n tests with a standard deviation of 15 and a mean of 100, this involves a score of 65–75 ( $70 \pm 5$ )."<sup>27</sup> With respect to adaptive functioning, the commentary states that "[a]daptive functioning involves adaptive reasoning in three domains: conceptual, social, and practical."<sup>28</sup> The conceptual domain "involves competence in memory, language, reading, writing, math reasoning, acquisition of practical knowledge, problem solving, and judgment in novel situations, among others."<sup>29</sup> The social domain includes "awareness of others' thoughts, feelings, and experiences; empathy; interpersonal communication skills; friendship abilities; and social judgment."<sup>30</sup> The practical domain encompasses "learning and self-management across life settings, including personal care, job responsibilities, money management, recreation, self-management of behavior, and school and work task organization."<sup>31</sup> Importantly, Criterion B is met if there is an adaptive deficit in "one or more" of the daily activities listed; that means, for instance, that the absence of a deficit in communication does not make up for a deficit in independent living ability.<sup>32</sup>

In contrast to the foregoing definition, the Florida death penalty scheme at issue in *Hall* required the defense to prove the offender had an IQ score of 70 or below, and it did not allow introduction of testimony about either the standard error of

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<sup>26</sup> AM. PSYCHIATRIC ASS'N, DIAGNOSTIC AND STATISTICAL MANUAL OF MENTAL DISORDERS 33 (5th ed. 2013) [hereinafter DSM-5].

<sup>27</sup> *Id.* at 37.

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

<sup>29</sup> *Id.*

<sup>30</sup> *Id.*

<sup>31</sup> *Id.*

<sup>32</sup> *Id.* at 33.

measurement associated with IQ tests or adaptive functioning.<sup>33</sup> In holding this scheme unconstitutional, the Supreme Court stated that

Florida's rule is in direct opposition to the views of those who design, administer, and interpret the IQ test. By failing to take into account the standard error of measurement, Florida's law not only contradicts the test's own design but also bars an essential part of a sentencing court's inquiry into adaptive functioning.<sup>34</sup>

Based on this reasoning, the Court overturned the death sentence of Freddie Lee Hall, whose seven admissible test scores ranged from 71 to 80,<sup>35</sup> and who had not been allowed to present evidence of adaptive functioning.<sup>36</sup> As noted earlier, the Court bolstered its analysis by emphasizing that “clinical definitions of intellectual disability, which take into account that IQ scores represent a range, not a fixed number, were a fundamental premise of *Atkins*.”<sup>37</sup>

The conceptual problem with this stance should be apparent. Even at the time *Atkins* was decided, several commentators noted that the fit between clinical definitions of intellectual disability and the goal of gauging culpability for criminal law purposes is rough at best. For example, Professor Weithorn, an accomplished psychologist as well as a law professor, noted that intelligence tests, created for use in educational and treatment contexts, “were not developed for the purpose of distinguishing between capital offenders whose deficits in intellectual functioning render them ineligible for the death penalty and capital offenders without such deficits.”<sup>38</sup> Academic skills do not necessarily map onto the lesser culpability and lesser deter-ability attributes described in *Atkins*.<sup>39</sup>

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<sup>33</sup> *Hall v. Florida*, 134 S. Ct. 1986, 1992 (2014). The Florida statute simply required proof that an offender's IQ was two standard deviations below the mean. FLA. STAT. § 921.137(1) (2014). But the Florida Supreme Court had interpreted this language to require the rule described in the text. *Cherry v. State*, 959 So. 2d 702, 712–13 (Fla. 2007), *cert. denied*, 552 U.S. 993 (2007).

<sup>34</sup> *Hall*, 134 S. Ct. at 2001.

<sup>35</sup> Hall proffered the results of nine IQ tests administered to him over the years, but the trial court excluded the only two scores below 70 for evidentiary reasons. *Id.* at 1992.

<sup>36</sup> *See id.* (“Florida law requires that, as a threshold matter, Hall show an IQ test score of 70 or below before presenting any additional evidence of his intellectual disability.”).

<sup>37</sup> *Id.* at 1999.

<sup>38</sup> Lois A. Weithorn, *Conceptual Hurdles in the Application of Atkins v. Virginia*, 59 HASTINGS L.J. 1203, 1223 (2007); *see also* Douglas Mossman, *Atkins v. Virginia: A Psychiatric Can of Worms*, 33 N.M. L. REV. 255, 256 (2003) (“*Atkins* mistakenly (and perhaps ominously) approves of basing opinions about moral capacities on a person's psychiatric diagnosis.”).

<sup>39</sup> Weithorn, *supra* note 38, at 1212 (“[H]ow an offender performs on tests that tap more academic skills, such as knowledge of vocabulary or ability to execute certain mathematical

Assessment of adaptive functioning, added to the diagnostic criteria in the 1960s in part because of the narrow scope of IQ tests, could perhaps fill these gaps.<sup>40</sup> But, as the commentary to the DSM makes clear, while adaptive deficits can occur in domains that seem relevant to culpability (domains such as “social judgment” and “self-management of behavior”), these deficits might also occur in connection with “reading,” “writing,” “friendship abilities,” and “money management”—functions that bear at best a tenuous connection to blameworthiness.<sup>41</sup> Thus, the APA’s definition, while adequate for defining when a person is in need of services, might not precisely fit the issue raised in *Atkins* cases. Again, Professor Weithorn makes the relevant point: because “the social-ecological model requires us to examine the individual’s abilities with reference to the demands of the *particular social context* in which he or she must function, we must then treat all inquiries about adaptive behavior as requiring us to first specify the nature of the particular context and situational demands to which the person must ‘adapt.’”<sup>42</sup>

Thus it is not surprising that, after *Atkins*, some legislatures and courts resorted to more familiar criminal law concepts in defining both intellectual and adaptive deficits. For instance, more than half of the states that have the death penalty did not operationalize intellectual disability either in terms of IQ score or by referencing standard deviations from the mean; rather, they simply required proof of “[s]ignificantly subaverage intellectual functioning.”<sup>43</sup> Another state, Kansas, did define intellectual disability in terms of standard deviations from the mean, but also provided, in language echoing *Atkins*, that the offender’s condition “must substantially impair one’s capacity to appreciate the criminality of one’s conduct or conform one’s conduct to the requirements of the law.”<sup>44</sup> After *Hall*, these states need to adopt APA-consistent definitions, alluding in some fashion to an IQ score of 75 as the threshold below which evidence of adaptive functioning may be introduced, and eliminating the kind of qualifying language adopted in Kansas.

Similar changes may need to be forthcoming in connection with the adaptive functioning assessment. In defining adaptive deficits post-*Atkins*, several courts downplayed clinical assessments in favor of an analysis of what the capital murder might say about the individual’s functioning. For instance, in one case, the Tennessee

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calculations, may not tell us much about the attributes cited by the *Atkins* Court as justifying its differential treatment of capital offenders who are ‘mentally retarded’ from those who are not.”)

<sup>40</sup> See generally Kazuo Nihira, *Adaptive Behavior: A Historical Overview*, in ADAPTIVE BEHAVIOR AND ITS MEASUREMENT: IMPLICATIONS FOR THE FIELD OF MENTAL RETARDATION 7 (Robert L. Schalock & David L. Braddock eds., 1999).

<sup>41</sup> DSM-5, *supra* note 26, at 37.

<sup>42</sup> Weithorn, *supra* note 38, at 1222.

<sup>43</sup> DeMatteo, Marczyk & Pich, *supra* note 13, at 783, 789 (noting that the majority of the forty-eight states that defined mental retardation at the time of the article’s survey in 2007 did not “operationally define” subaverage intelligence).

<sup>44</sup> *Id.* at 787.

Court of Criminal Appeals ignored expert testimony that the defendant had deficits in five of the ten skill areas listed in the fourth edition of the DSM, and instead relied on the defendant's behavior during the crime in finding that the individual did not have significant limitations in adaptive behavior.<sup>45</sup> In so finding, the court stated that "[t]he more complex the crime . . . the less likely that the person is mentally retarded."<sup>46</sup> The Texas Court of Criminal Appeals likewise adopted a definition of adaptive functioning that focused heavily on the offender's criminal behavior and other "commonsense" ways of distinguishing intellectual disability from personality disorders or normal behavior.<sup>47</sup>

Commentators have rightly suggested that crime-related analysis is suspect because the court does not necessarily know the full context of the behavior during the commission of the crime (e.g., was the offender "coached" by a colleague?) and because the criminal behavior might itself be the result of maladaptive deficits (e.g., poor social judgment in novel situations).<sup>48</sup> But it is also important to remember that, under the APA's approach, even a *clear* ability to function in the criminal context is irrelevant if the offender can identify an adaptive deficit in either communication, social participation, or independent living. As Professor Weithorn points out, this approach is inconsistent with the idea that adaptive functioning can be assessed only by reference to the specific context at issue—here, commission of crimes.<sup>49</sup> But *Hall*'s endorsement of the APA definition appears to require this compartmentalized assessment of adaptive functioning as a constitutional matter.<sup>50</sup>

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<sup>45</sup> See *Van Tran v. State*, No. W2005-01334-CCA-R3-PD, 2006 WL 3327828, at \*10, \*23, \*25 (Tenn. Crim. App. Nov. 9, 2006) (holding that background and behavior should be taken into account when determining mental disability), *cert. denied*, 552 U.S. 1009 (2007).

<sup>46</sup> *Id.* at \*25.

<sup>47</sup> See *Ex parte Briseno*, 135 S.W.3d 1, 8 (Tex. Crim. App. 2003) (identifying seven adaptive factors, one which focuses exclusively on the capital murder, and others which rely heavily on other behavior that might occur in the criminal context, such as the ability to "formulate[] plans and carr[y] them through," "respond coherently, rationally, and on point to oral or written questions," respond to external stimuli in a "rational and appropriate" manner, and "lie effectively in his own or others' interests").

<sup>48</sup> See John H. Blume, Sheri Lynn Johnson & Christopher Seeds, *Of Atkins and Men: Deviations from Clinical Definitions of Mental Retardation in Death Penalty Cases*, 18 CORNELL J.L. & PUB. POL'Y 689, 723–34 (2009) (discussing why some mentally disabled individuals are inappropriately excluded from *Atkins*'s protection).

<sup>49</sup> Weithorn, *supra* note 38, at 1218–22 ("Arguably, we must strive for a far more focused and situation-specific mode of assessment in order to determine whether an individual is truly disabled with reference to a particular context.").

<sup>50</sup> Several courts so held even before *Hall*. See, e.g., *Holladay v. Campbell*, 463 F. Supp. 2d 1324, 1333, 1343 (N.D. Ala. 2006) (noting that, according to the clinical definition of intellectual disability at the time, the defendant need only show "adaptive deficiencies" in any two of the ten listed areas); *Lambert v. State*, 126 P.3d 646, 651 (Okla. Crim. App. 2005) (stating that if the defendant shows an adaptive deficit, his "burden is met no matter what evidence the State might offer that he has no deficits in other skill areas"), *cert. denied*, 549 U.S. 941 (2006).

One justification for *Hall*'s adoption of clinical definitions for intellectual disability in the Eighth Amendment context is that the public and its representatives are not capable of defining the term "correctly." But legislatures and courts have long had the authority, and thus the presumed expertise, to define analogous concepts such as insanity, diminished responsibility, and provocation. In contrast, *Hall* leaves the definition of which individuals deserve the death penalty to non-legal actors who are neither trained to consider nor primarily concerned about the diminished culpability and deterrability that *Atkins* identified as crucial rationales for its prohibition. *Hall* is analogous to a Court decision that exempts everyone below age twenty-five from the death penalty because the APA has declared that, given new neuroscientific discoveries,<sup>51</sup> that age is now the threshold for adulthood. Thus, one can see how the dissent in *Hall* could say that the majority's ruling "cannot be reconciled with the framework prescribed by our Eighth Amendment cases."<sup>52</sup> *Hall*'s focus on professional, rather than societal, consensus violated that framework.

At the same time, as many commentators have noted, beginning with *Atkins* and continuing through its cases involving challenges to other death penalty practices and to mandatory life sentences-without-parole,<sup>53</sup> the Court's decisions construing the Cruel and Unusual Punishment Clause have been moving away from a pure societal consensus view to one that requires an analysis of the rationale behind the punishment in question.<sup>54</sup> The Court will probably never abandon its demand that some evidence of societal consensus—usually legislative enactments—support its Eighth Amendment decisions. But increasingly it has also looked closely at, and some would say made dispositive,<sup>55</sup> the extent to which retributive and general deterrence principles justify the punishment. This reliance on the Court's independent judgment has

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<sup>51</sup> Cf. Diana Fishbein et al., *Deficits in Behavioral Inhibition Predict Treatment Engagement in Prison Inmates*, 33 LAW & HUM. BEHAV. 419, 429 (2009) (explaining that the brain is still developing well into the third decade of life).

<sup>52</sup> *Hall v. Florida*, 134 S. Ct. 1986, 2002 (2014) (Alito, J., dissenting).

<sup>53</sup> See generally *Miller v. Alabama*, 132 S. Ct. 2455 (2012) (mandatory life-without-parole for juveniles); *Kennedy v. Louisiana*, 554 U.S. 407 (2008) (death penalty for rape of a child); *Roper v. Simmons*, 543 U.S. 551 (2005) (death penalty for juveniles).

<sup>54</sup> See, e.g., Mitchel Brim, *A Sneak Preview into How the Court Took Away a State's Right to Execute Sixteen and Seventeen Year Old Juveniles: The Threat of Execution Will No Longer Save an Innocent Victim's Life*, 82 DENV. U. L. REV. 739, 740–41 (2005) (arguing that in *Simmons*, the juvenile death penalty case, the majority's interpretation of evolving standards of decency allowed it to rely on its "own morality" and ignore "factors that are reflected through state legislation"); see also *Miller*, 132 S. Ct. at 2488 (Alito, J., dissenting) (noting how the evidence of national consensus in the Court's Eighth Amendment cases has become "weaker and weaker").

<sup>55</sup> See, e.g., sources cited *supra* note 54; *Atkins v. Virginia*, 536 U.S. 304, 349 (Scalia, J., dissenting) ("The genuinely operative portion of the opinion, then, is the Court's statement of the reasons why it agrees with the contrived consensus it has found, that the 'diminished capacities' of the mentally retarded render the death penalty excessive.").

been especially pronounced when the issue can be characterized as a “procedural” one that defines when a substantive decision of the Court about a particular punishment applies, a category into which *Hall*—which is meant to implement *Atkins*—arguably fits.<sup>56</sup>

From that perspective, *Hall* arrives at the normatively right result. That is not because the APA has special insight into death penalty jurisprudence. Rather it is because, *at a minimum*, any person who is intellectually disabled as the APA defines it should be exempted from the death penalty. As the Court has stated in its Eighth Amendment opinions, the death penalty is reserved for the worst of the worst.<sup>57</sup> Thus, the category of people eligible for the death penalty should be exceedingly small. *Atkins* recognized that people with intellectual disability are simply not capable of the depravity required to warrant execution. If there were any doubt about that fact, it should have disappeared when, three years after *Atkins*, the Court held in *Roper v. Simmons*<sup>58</sup> that no one under eighteen may be executed<sup>59</sup> and held, seven years later in *Miller v. Alabama*,<sup>60</sup> that juveniles may not be subjected even to mandatory life without parole;<sup>61</sup> given those decisions, anyone with an IQ below 75—which equates with a mental age of no more than twelve<sup>62</sup>—should be exempt as well. Allowing a state to execute someone who meets the APA’s definition of intellectual disability would be like authorizing it to put to death a twelve-year-old, and that—regardless of how state legislatures might define intellectual disability—is unconstitutional.

## II. THE IMPLICATIONS OF *HALL*—A SCIENTIFIC STARE DECISIS?

If scientific categories can determine which people are exempt from the death penalty on intellectual disability grounds, perhaps they can also help the law devise other liability tests. Of course, experts can always provide *evidence* relevant to

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<sup>56</sup> The Court has sent signals it is willing to ignore national consensus when the issue is “procedural” rather than “substantive;” the latter situation arises only when the Court “categorically bar[s] a penalty for a class of offenders or type of crime,” while the former occurs when the Court requires the states to “follow a certain process” when determining punishment, such as “considering an offender’s youth and attendant characteristics.” *Miller*, 132 S. Ct. at 2471. *Hall* could be said to fit in the process category because it deals with how people with intellectual disability will be identified.

<sup>57</sup> See, e.g., *Kansas v. Marsh*, 548 U.S. 163, 206 (2006) (Souter, J., dissenting) (“[W]ithin the category of capital crimes, the death penalty must be reserved for ‘the worst of the worst.’”).

<sup>58</sup> 543 U.S. 551 (2005).

<sup>59</sup> *Id.* at 578.

<sup>60</sup> 132 S. Ct. 2455 (2012).

<sup>61</sup> *Id.* at 2475.

<sup>62</sup> Generally, to convert an IQ score into a rough mental age equivalent, the IQ is multiplied by 16, and then divided by 100. See Jonathan Rich, *Intelligence Testing*, PSYCHOL. TESTING, <http://www.psychologicaltesting.com/iqtest.htm> (last visited Dec. 1, 2014). Thus, an IQ of 75 equates roughly with a mental age of twelve.

culpability in individual cases. The inquiry here, however, is whether professional standards can *define the substantive law* that such expert evidence should address, as occurred in *Hall*. That project—the scientization of the criminal law—is much more ambitious, but nonetheless one that is worth some thought in the wake of the *Hall* decision.

For instance, in the death penalty context, the mental health profession might be able to identify other categories of people who should be exempted from execution. Prominent candidates in this regard are offenders with traumatic brain injuries that result in intellectual and adaptive deficits analogous to those experienced by people with intellectual disabilities, but that occur after age eighteen and therefore do not meet the age of onset criterion for that disorder (criterion C in the APA definition set out earlier).<sup>63</sup> Such an exemption could be said to exist if the first two criteria of the APA’s definition of intellectual disability are met.<sup>64</sup>

A second category of individuals who could be exempted from the death penalty based on clinical constructs might encompass offenders who were actively psychotic at the time of their offense. A *Hall*-like approach to the issue would require, per the DSM-5, that at the time of the offense the person demonstrated at least two of the following symptoms: “delusions,” “hallucinations,” “disorganized speech,” or “grossly disorganized . . . behavior.”<sup>65</sup> While all of these terms are contestable, they are no more so than “[d]eficits in adaptive functioning”<sup>66</sup> and, in any event, the adversarial process would provide plenty of opportunity to point out the potential for misdiagnosis.

As a third, more complex example, consider the possibility of scientizing culpability constructs that address self-control, a concept that is relevant not only in the death penalty context but also permeates trial doctrines like the insanity defense, provocation, and in some cases even mens rea.<sup>67</sup> In a recent piece, Joshua Buckholtz, Valerie Reyna, and I argued that the law of self-control might be amenable to operationalization through neuroscientific testing.<sup>68</sup> At present, science is very far from

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<sup>63</sup> For the criteria for traumatic brain injury, see DSM-5, *supra* note 26, at 624–25 (noting that traumatic brain injury is associated with “[d]ifficulties in the domains of complex attention, executive ability, learning, and memory as well as slowing in speed of information processing and disturbances in social cognition”).

<sup>64</sup> The American Psychological Association and the American Bar Association have jointly supported such a position. See AM. BAR ASS’N, RECOMMENDATION 122A: MENTAL ILLNESS RESOLUTION pmbl. (2006), available at [http://www.americanbar.org/groups/committees/death\\_penalty\\_representation/resources/dp-policy/mental-illness-2006.html](http://www.americanbar.org/groups/committees/death_penalty_representation/resources/dp-policy/mental-illness-2006.html) [hereinafter ABA RESOLUTION].

<sup>65</sup> DSM-5, *supra* note 26, at 99; see also ABA RESOLUTION, *supra* note 64, at 1 (proposing a similar exemption).

<sup>66</sup> DSM-5, *supra* note 26, at 33.

<sup>67</sup> See generally Rebecca Hollander-Blumoff, *Crime, Punishment, and the Psychology of Self-Control*, 61 EMORY L.J. 501, 513–23 (2012) (describing the various criminal doctrines that might raise self-control issues).

<sup>68</sup> See Joshua W. Buckholtz, Valerie Reyna & Christopher Slobogin, A Neuro-Legal

producing a workable definition of impulsivity. But at some point scientists could conceivably develop a list of criteria, based on an individual's performance on various neuropsychological tests (such as the "Go/No-Go," "Stop-Signal," and "Card Sorting" tasks), that would indicate the extent to which, compared to the general population, the individual is able to self-regulate behavior, in the same way the DSM lists criteria for intellectual disability or schizophrenia.<sup>69</sup> If that development occurs, the law might consider adopting that list in whole or in part in addressing mitigation claims of capital offenders that are based on lack of volition.

Of course, the small matter remains of whether legislatures can be forced to declare that these types of conditions render an offender ineligible for the death penalty, as *Atkins* and *Hall* did with intellectual disability. It is unlikely that, as an Eighth Amendment matter, any of these exemptions would be constitutionally required in the death penalty context. As noted earlier, recent court decisions have downplayed the importance of legislative nose-counting in Eighth Amendment cases. But they have not ignored it altogether,<sup>70</sup> and no death penalty state has recognized brain injuries, psychosis, or self-control deficiencies as grounds for preclusion from execution.<sup>71</sup> Thus, as a constitutional mechanism for creating these exemptions, traditional analysis under the Cruel and Unusual Punishment Clause is a dead end.

Two other possibilities exist, however. In other work, I have argued that, at least with respect to traumatic brain injury and psychosis, the Equal Protection Clause provides a separate constitutional basis for an exemption, on the ground that offenders with these conditions are as diminished in culpability and deterrability as people with intellectual disability or juveniles, and thus should be entitled to the same exemption those groups enjoy.<sup>72</sup> If that argument were accepted, the behavioral sciences could provide a means of operationalizing it.

As an alternative, or supplement to, the equal protection argument, consider a concept that might be called *scientific stare decisis*. Scientific stare decisis is meant

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Lingua Franca: Bridging Law and Neuroscience on the Issue of Self-Control 13–18 (May 6, 2014) (unpublished manuscript) (on file with author).

<sup>69</sup> *Id.* at 8–13 (but also expressing several caveats to this view).

<sup>70</sup> For instance, in *Hall* the Court emphasized that most death penalty states recognized the SEM in defining intellectual disability. *Hall v. Florida*, 134 S. Ct. 1986, 1996–98 (2014).

<sup>71</sup> See DeMatteo, Marczyk & Pich, *supra* note 13, at 785–88 (examining statutory definitions of mental disability among states with death penalty).

<sup>72</sup> CHRISTOPHER SLOBOGIN, MINDING JUSTICE: LAWS THAT DEPRIVE PEOPLE WITH MENTAL DISABILITY OF LIFE AND LIBERTY 64–80 (2006) (outlining the equal protection argument against executing those with mental disabilities); Christopher Slobogin, *What Atkins Could Mean for People with Mental Illness*, 33 N.M. L. REV. 293 (2003) (expanding upon the equal protection argument); see also Robert J. Smith, Sophie Cull & Zoë Robinson, *The Failure of Mitigation?*, 65 HASTINGS L.J. 1221, 1224 (2014) (cataloguing cases in which an offender subjected to capital sentencing proceedings demonstrated "intellectual or psychological deficits comparable to those shared by classes of offenders categorically excluded from capital punishment").

to convey the idea that two conditions that are scientifically alike ought to be treated the same for legal purposes, in the same way that legal stare decisis requires two similar factual situations be resolved in the same way.<sup>73</sup> If two conditions are alike in all relevant scientific respects and the law grants mitigating impact to one under the Eighth Amendment or any other legal doctrine, it should also grant mitigating impact to the other.

Scientific stare decisis, so defined, has obvious parallels with equal protection doctrine. But because it is based entirely on a factual demonstration about an individual's functioning, not a normative one about whether an individual's interest is "fundamental" or whether the government's interest is "compelling" or "rational,"<sup>74</sup> it should apply even when equal protection doctrine, with its many limitations,<sup>75</sup> does not. At the same time, because it is based on an empirical assessment of capacities, scientific stare decisis might not be as far-reaching as equal protection doctrine if and when it does apply.

Consider, for instance, how scientific stare decisis would apply to the three types of conditions already discussed. If people with traumatic brain injury that occurs after age eighteen meet the other two criteria for intellectual disability (deficits in intellectual and adaptive functioning), scientific stare decisis would require that they be exempted from the death penalty, even if equal protection analysis is inapposite, because people with brain injury are just as impaired, and impaired in the same way, as people with intellectual disability. The Supreme Court itself has come close to accepting this type of argument. In *Sears v. Upton*,<sup>76</sup> it reversed a death sentence in the case of an offender who "perform[ed] at or below the bottom first percentile in several measures of cognitive functioning and reasoning," apparently because of frontal lobe deficits that were incurred throughout his childhood and teen years.<sup>77</sup> The Court explained its holding by noting that, "[r]egardless of the cause of his brain damage" he was "among the most impaired individuals in the population."<sup>78</sup>

In contrast, scientific stare decisis would not require an exemption from the death penalty for people with psychosis at the time of the offense. This type of offender is

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<sup>73</sup> Cf. Shawn Kolitch, *Constitutional Fact Finding and the Appropriate Use of Empirical Data in Constitutional Law*, 10 LEWIS & CLARK L. REV. 673, 695 (2006) (arguing for making room in the law for the scientific method because "[t]here is no provision in our justice system for legal hypotheses, and thus a legal proposition, once articulated, typically will remain in place until overruled by a jurisprudential shift, rather than an empirical one"). *But see* Bone Shirt v. Hazeltine, 461 F.3d 1011, 1026 (8th Cir. 2006) (noting that "scientific stare decisis" may lead to detrimental precedent if it were used to enshrine into law an "admittedly erroneous equation" with an unknown rate of error).

<sup>74</sup> See SLOBOGIN, MINDING JUSTICE, *supra* note 72, at 68–69 (discussing the Supreme Court's treatment of mental disability under equal protection doctrine).

<sup>75</sup> See *id.* at 68–73 (discussing whether heightened scrutiny applies in this context).

<sup>76</sup> 130 S. Ct. 3259 (2010).

<sup>77</sup> *Id.* at 3261.

<sup>78</sup> *Id.* at 3262 (emphasis added).

probably more impaired in *legally* relevant ways than people with intellectual disability, and thus should win an equal protection challenge if that kind of claim were recognized. But the nature of psychotic impairment (hallucinations and delusions) is different than the impairment resulting from intellectual disability, and thus would not trigger *scientific* stare decisis.

Finally, consider the third type of condition mentioned above—impaired self-control. Here application of the scientific stare decisis concept is more complicated. Assume neuroscientists could measure the self-regulatory capacities of the juvenile brain and determine how the average juvenile performs on the various types of neuropsychological measures mentioned above. If scientific stare decisis were a recognized legal concept and a particular adult were shown to do as poorly on these measures as the average juvenile, the question would be whether the adult should be spared execution on authority of *Simmons*, the decision that exempted juveniles from the death penalty. Even on folk psychological grounds, the argument has some plausibility, since some adults appear to be at least as impulsive as the average juvenile.

However, under current law, scientific stare decisis probably should not benefit such an adult offender. While *Simmons* did base its holding on the assumption that juveniles are “less susceptible to deterrence,”<sup>79</sup> this concept was not reduced to a scientific construct the way intellectual disability was in *Hall*. Rather *Simmons* spoke of three common sense differences between juveniles and adults: (1) juveniles tend to have “an underdeveloped sense of responsibility”; (2) juveniles are “more vulnerable or susceptible to negative influences and outside pressures, including peer pressure”; and (3) the “character of a juvenile is not as well formed as that of an adult.”<sup>80</sup> These traits are at best imprecisely related to the type of self-control that neuroscientists might study. If, however, the Court coalesced these ideas around an empirically verifiable phenomenon such as “impulsivity,” scientific stare decisis might be of help to adults comparing themselves to juveniles on the basis of a similar lack of self-control.

#### CONCLUSION

I broach the scientization of culpability idea and the related concept of scientific stare decisis with some trepidation for several reasons. First, as noted earlier, the criminal law is fundamentally a normative enterprise designed to be administered by laypeople. The law should not surrender its power to define criminal law norms in terms that can be understood by judges and juries; science should generally be an adjunct to, not dispositive of, culpability doctrine. Second, as the examples in this Article illustrate, legally relevant culpability concepts are hard to translate into empirically verifiable concepts, and vice versa.<sup>81</sup> Third, in most areas outside of the death

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<sup>79</sup> *Roper v. Simmons*, 543 U.S. 551, 571 (2005).

<sup>80</sup> *Id.* at 569–70.

<sup>81</sup> For an account of how the legal and psychiatric professions of the nineteenth century found it impossible to agree on a definition of the word “insanity,” see Janet Tighe, “What’s

penalty and the insanity defense, the behavioral sciences have a very long way to go before they can provide anything useful to the process of defining the substantive law.

At the same time, the Court's decision in *Hall* calls for an assessment of the possible benefits of scientization as well. The most obvious potential benefit is that incorporation of scientific concepts into legal doctrine, as *Hall* has done, could help the law better define what it means when it uses culpability language. As it stands now, the adjudication rules governing criminal trials and sentencing are at best indistinct. The terms used to describe mens rea are subject to multiple interpretations; recent research indicates that even the Model Penal Code's relatively precise language is a mystery to many laypeople.<sup>82</sup> Formulations of defenses like insanity and provocation are even more open to interpretation.<sup>83</sup> Submitting these issues to laypeople using this imprecise language undoubtedly leads to disparity and injustice. Sentencing doctrine is just as problematic.<sup>84</sup> Even in jurisdictions that rely on sentencing guidelines aimed at objectifying the criteria for punishment, significant disparity and lack of clarity about the relevant variables exist.<sup>85</sup> And because of the imprecise criteria at both the trial and sentencing stages, the law has difficulty determining whether a given result is just.

Consider, in contrast, developments in the field of risk assessment. Determinations of whether an individual will recidivate are also often inaccurate, with false positive rates hovering between 15 and 50%.<sup>86</sup> But in recent years scientists have made major advances in determining "risk factors" that correlate with heightened recidivism rates.<sup>87</sup>

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*in a Name?": A Brief Foray into the History of Insanity in England and the United States*, 33 J. AM. ACAD. PSYCHIATRY & L. 252, 254–57 (2005).

<sup>82</sup> See, e.g., Matthew R. Ginther et al., *The Language of Mens Rea*, 67 VAND. L. REV. 1327, 1328 (2014) (finding that "even small changes in phrasing can produce significant differences in juror evaluation" of criminal cases).

<sup>83</sup> See MICHAEL L. PERLIN, *THE JURISPRUDENCE OF THE INSANITY DEFENSE* 1 (1994) ("Our insanity defense jurisprudence is incoherent."); Bradford Bigler, *Sexually Provoked: Recognizing Sexual Misrepresentation as Adequate Provocation*, 53 UCLA L. REV. 783, 808 (2006) ("[T]he provocation defense is incoherent and increasingly detached from its cultural base, particularly when applied to cases of [deceptive marital unfaithfulness].").

<sup>84</sup> See generally Christopher Slobogin & Lauren Brinkley-Rubinstein, *Putting Desert in Its Place*, 65 STAN. L. REV. 77, 94–96 (2013) (reporting significant disparity between punishments that interviewed subjects assigned to various crimes against person and property).

<sup>85</sup> Cf. Amy Baron-Evans & Kate Stith, *Booker Rules*, 160 U. PA. L. REV. 1631, 1683–84 (2012) (explaining why guidelines do not always result in sentences for similar offenders convicted of similar offenses).

<sup>86</sup> Christopher Slobogin, *Risk Assessment*, in *THE OXFORD HANDBOOK OF SENTENCING AND CORRECTIONS* 196, 200 (Joan Petersilia & Kevin R. Reitz eds., 2012).

<sup>87</sup> See generally Marnie E. Rice et al., *The Violence Risk Appraisal Guide and Sex Offender Risk Appraisal Guide for Violence Risk Assessment and the Ontario Domestic Assault Risk Assessment and Domestic Violence Risk Appraisal Guide for Wife Assault Risk Assessment*, in *HANDBOOK OF VIOLENCE RISK ASSESSMENT* 99, 105 (Randy K. Otto & Kevin S. Douglas eds., 2010) (describing validation studies of risk assessment techniques in North America and Europe).

Most agree that these actuarial and structured risks assessments are far better than the seat-of-the-pants dangerousness predictions that dominated the legal system two decades ago.<sup>88</sup> Conclusions that result from these more scientific assessments are not dispositive; judges or juries still decide whether a person presents a sufficiently high risk of significant enough harm to warrant preventive intervention. But determining the empirical fact about a person's probability of reoffending is increasingly falling into the bailiwick of science and is probably the better for it.

The same type of factor-identification could happen with culpability assessments at trial and sentencing. If the law is willing to identify a scientific construct, like intellectual disability, psychosis, or neurological self-regulation, as the linchpin of analysis, it will have a more objective indicator of culpability, assuming the underlying science is sufficiently validated. Just as importantly, scientists will have a more understandable research and evaluation target.

The Supreme Court's designation of intellectual disability as the relevant scientific concept was relatively easy.<sup>89</sup> Identification of other legally relevant scientific concepts is likely to be much more difficult. But not impossible. Just as legal precedent develops slowly over time through the common law method, the identification process necessary for scientific stare decisis should involve an iterative, back-and-forth dialogue between scientific and legal actors, at both the trial and appellate levels, before any definitive conclusion is reached.<sup>90</sup> It might also involve multidisciplinary groups that can parse the law and science for overlapping concepts and devise instruments or protocols that capture the relevant factual inquiries.<sup>91</sup>

Even that careful process may never produce legally useful results in connection with highly ambiguous and highly contested concepts such as self-control. But after *Hall*, it is at least imaginable.

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<sup>88</sup> See Stefania Egisdóttir et al., *The Meta-Analysis of Clinical Judgment Project: Fifty-Six Years of Accumulated Research on Clinical versus Statistical Prediction*, 34 COUNSELING PSYCHOLOGIST 341, 360–63 (2006) (finding “partially supported” the hypothesis that statistical methods are more accurate than clinical methods for predicting behavior).

<sup>89</sup> For a caveat, see *supra* note 15.

<sup>90</sup> Cf. John Monahan & Laurens Walker, *Social Authority: Obtaining, Evaluating, and Establishing Social Science in Law*, 134 U. PA. L. REV. 477, 478 (1986) (“[W]e advance the thesis that social science research, when used to create a legal rule, is more analogous to ‘law’ than to ‘fact,’ and hence should be treated much as courts treat legal precedent.”).

<sup>91</sup> The MacArthur Foundation Research Network on Mental Health and the Law, which developed legally and scientifically sophisticated instruments for assessing competency to stand trial, is one example. See generally NORMAN G. POYTHRESS ET AL., ADJUDICATIVE COMPETENCE: THE MACARTHUR STUDIES (2002) (“We bring together in this volume the fruits of [the MacArthur Network] research effort . . .”).