MILLER V. ALABAMA AND THE PROBLEM OF PREDICTION

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Beginning in 2010, the Supreme Court severely limited states' ability to impose juvenile life without parole sentences. In a seminal case, Miller v. Alabama*, the Court banned mandatory life without parole sentences for juveniles and declared that only the "rare juvenile offender whose crime reflects irreparable corruption" should be made to spend the rest of their lives in prison. While* Miller *has been the subject of much scholarly debate, there has yet to be any discussion of a core instability at the center of its mandate: By limiting life without parole sentences to only those juveniles who are irreparably corrupt, the Court is asking sentencers to predict whether a juvenile will be a danger decades down the road and after a long prison sentence. This Note uses legal and social science literature on long-term predictions about juvenile development to argue that the requirement of prediction in* Miller *prevents just application of the decision. It then presents potential solutions to the problem of prediction, ultimately arguing that this instability should lead to a ban on juvenile life without parole sentences.*

INTRODUCTION

Over the past fifteen years, the Supreme Court has severely limited the ability of courts to impose life without parole sentences on juvenile offenders.[1] In the 2010 case of *Graham v. Florida,* the Court placed a categorical ban on the use of juvenile life without parole sentences for nonhomicide crimes.[2] Two years later, in *Miller v. Alabama,* the Court prohibited mandatory life without parole sentences for juveniles, but stopped short of banning the sentence entirely.[3] The Court declared that a sentencer must examine "an offender's age and the wealth of characteristics and circumstances attendant to it" before sentencing them to life without parole.[4] These sentences, according to the Court, were appropriate only for juveniles "whose crime reflected irreparable corruption."[5]

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1. Perry L. Moriearty, The Trilogy and Beyond, 62 S.D. L. Rev. 539, 541 (2017) [hereinafter Moriearty, The Trilogy].

2. 560 U.S. 48, 82 (2010).

3. See 567 U.S. 460, 489 (2012).

4. Id. at 476.

5. Id. at 479–80 (internal quotation marks omitted) (quoting Roper v. Simmons, 543 U.S. 551, 573 (2005)).

Finally, in *Montgomery v. Louisiana,* the Court clarified that *Miller* applied retroactively to defendants who had been sentenced to life without parole as juveniles prior to 2012.[6]

This trilogy of cases received praise for its recognition that "children are different,"[7] as well as criticism that the cases—especially *Miller* and *Montgomery*—do not go far enough in limiting life without parole sentences for juveniles.[8] While *Miller* and *Montgomery* recognize that developmental differences between juveniles and adults "counsel against irrevocably sentencing [juveniles] to a lifetime in prison,"[9] there are still

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6. See 136 S. Ct. 718, 736–37 (2016) ("In light of what this Court has said in . . . *Miller* [juveniles sentenced to life without parole] must be given the opportunity to show their crime did not reflect irreparable corruption . . . .").

Because this Note focuses on juvenile life without parole sentences levied at the time of trial, there is less analysis of *Montgomery* because it dealt with the resentencing of juveniles who were sentenced before *Miller*. That said, *Montgomery*'s analysis of *Miller* does provide helpful instruction for the topic of this Note. First, the *Montgomery* Court restated that the limitation on juvenile life without parole sentencing was appropriate because juveniles had "diminished culpability and greater prospects for reform." Id. at 733 (internal quotation marks omitted) (quoting *Miller*, 567 U.S. at 471). In addition, it reaffirmed that only those juveniles whose crimes demonstrate "irreparable corruption" should be sentenced to life without parole. Id. at 736. With this in mind, *Montgomery* is sometimes cited alongside *Miller* in this Note as additional support for the Court's intention in *Miller*.

7. *Miller*, 567 U.S. at 480. This phrase is meant to mirror the Court's axiom that "death is different." Id. at 481 ("So if (as *Harmelin* recognized) 'death is different,' children are different too." (quoting Harmelin v. Michigan, 501 U.S. 957, 994 (1991))). The Court uses the phrase "death is different" to explain why some elements of death penalty jurisprudence are not generalizable to all Eighth Amendment law. See *Harmelin*, 501 U.S. at 994 ("Proportionality review is one of several respects in which we have held that 'death is different' and have imposed protections that the Constitution nowhere else provides."). Similarly, the Court uses "children are different" to explain why certain elements of juvenile extreme punishment jurisprudence veer from traditional Eighth Amendment jurisprudence. See, e.g., *Miller,* 567 U.S. at 481 (explaining why *Harmelin*, which allowed a mandatory life without parole sentence for a nonviolent drug offense, did not apply to juveniles).

8. See, e.g., Mary Berkheiser, Development Detour: How the Minimalism of *Miller v. Alabama* Led the Court's "Kids Are Different" Eighth Amendment Jurisprudence Down a Blind Alley, 46 Akron L. Rev. 489, 517 (2013) (arguing that the Supreme Court should have "seize[d] the opportunity" to ban life without parole sentences for all juveniles when it decided *Miller v. Alabama*); Perry L. Moriearty, Implementing Proportionality, 50 U.C. Davis L. Rev. 961, 985–98, 991 (2017) [hereinafter Moriearty, Implementing Proportionality] (arguing that lack of clarity from the Court has led to slippage in limitations to juvenile life without parole); Moriearty, The Trilogy, supra note 1, at 552 ("[U]nless the Court moves swiftly toward abolition, there is also a risk that the sentence of juvenile life without parole could become a fragile and unpopular, yet entrenched, punishment."); Anna K. Christensen, Note, Rehabilitating Juvenile Life Without Parole: An Analysis of *Miller v. Alabama*, 2013 Calif. L. Rev. Cir. 132, 133, http://scholarship.law.berkeley.edu/clrcircuit/21 (on file with the *Columbia Law Review*) ("[T]he Court [in *Miller*] should have done more to heed policy concerns relating to youths' unique vulnerability and their capacity for reform by barring juvenile life without parole sentences altogether.").

9. See *Miller*, 576 U.S. at 480.

approximately 1,100 people in the United States serving life without parole for crimes they committed as children.[10] Additionally, at least seventy new life without parole sentences have been imposed against juveniles since *Miller*.[11]

Given the continued use of life without parole sentences for juveniles, the implementation of *Miller* is a topic of scholarly debate and ongoing litigation.[12] There has yet to be analysis, however, of a fundamental instability at the core of *Miller*'s mandate: By limiting life without parole sentences to only those juveniles who are irreparably corrupt, the Court is asking sentencers to predict whether a juvenile will be a danger decades down the road and after a long prison sentence. This stands in stark contrast to other limitations on extreme punishment,[13] which ask sentencers to look back on culpability at the time of crime.[14] *Miller* emphasizes a unique,[15] indeed impossible,[16] prediction about how a juvenile will develop over time.

This Note uses legal, neuroscience, and social science literature on long-term predictions about juvenile development to argue that the requirement of prediction in *Miller* prevents just application of the decision. Part I analyzes the line of "children are different" cases that led to *Miller* and explores how *Miller* represented a turning point in this line of jurisprudence. Part II argues that prediction is at the core of the *Miller* sentencing scheme by examining language in *Miller,* juxtaposing *Miller* with other extreme punishment cases, and examining how *Miller* has been implemented in the states. Part III then uses social science and legal literature to demonstrate why this prediction is fundamentally impossible and practically guaranteed to result in unjust outcomes. Part IV makes recommendations for how the Court can rectify this issue, ultimately arguing for a categorical ban on juvenile life without parole sentences.

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10. See The Campaign for the Fair Sentencing of Youth, Tipping Point: A Majority of States Abandon Life-Without-Parole Sentences for Children 2, 7 (2018), https://www.fairsentencingofyouth.org/wp-content/uploads/Tipping-Point.pdf [https://perma.cc/GD4E-VC6G] (detailing the current national trends of juvenile life without parole sentencing).

11. Id. at 7.

12. See infra section I.C.

13. "Extreme punishment" is used by scholars to refer to death and life without parole sentences. See, e.g., Natalie A. Pifer, Re-Entrenchment Through Reform: The Promises and Perils of Categorical Exemptions for Extreme Punishment Policy, 7 Ala. C.R. & C.L. L. Rev. 171, 174–75 (2016) (naming the death penalty, life without parole, and prolonged solitary confinement as examples of extreme punishment).

14. See infra section II.A. There is some discussion in *Miller* of a backward-looking culpability analysis. However, this Note will argue that it is at least secondary to, and at most only in service of, the prediction at the core of the decision.

15. See infra sections II.A–.C.

16. See infra section III.

I. *MILLER V. ALABAMA* AS A TURNING POINT IN JUVENILE EXTREME PUNISHMENT JURISPRUDENCE

Beginning with *Thompson v. Oklahoma* in 1988, the Supreme Court has used the diminished culpability of juveniles to justify categorical bans on various forms of juvenile extreme punishment.[17] Ostensibly, *Miller v. Alabama* builds on *Thompson* and the long line of "children are different" cases that follow it.[18] A closer look at *Miller*, however, especially in juxtaposition with the juvenile extreme punishment cases that immediately precede it, makes clear that *Miller* represents a sharp divergence from previous precedent.[19]

This Part examines the Supreme Court's "children are different" jurisprudence to show why *Miller* is a uniquely predictive case. Section I.A examines the "children are different" cases prior to *Miller*, with a focus on *Roper v. Simmons*[20] and *Graham v. Florida*.[21] Section I.B analyzes the *Miller* decision itself and how it represented a turning point in juvenile extreme punishment jurisprudence. Finally, Section I.C examines the literature and litigation around the implementation of *Miller*.

A. *Pre-*Miller *Juvenile Extreme Punishment:* Roper v. Simmons *and* Graham v. Florida

While the Supreme Court has recognized the significance of childhood as a mitigating factor in punishment for decades,[22] it is the two "children are different" cases immediately preceding *Miller* that best illustrate how *Miller* breaks with previous precedent. These cases—*Roper v. Simmons* and *Graham v. Florida*—imposed categorical bans on forms of

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17. See Graham v. Florida, 560 U.S. 48, 74 (2010) (holding that the "limited culpability of juvenile nonhomicide offenders" made life without parole sentences inappropriate for that group); Roper v. Simmons, 543 U.S. 551, 553 (2005) (holding death sentences for anyone under the age of eighteen unconstitutional because of juveniles' diminished culpability); Thompson v. Oklahoma, 487 U.S. 815, 835, 838 (1988) (citing the diminished culpability of juveniles as justification for banning death sentences for anyone under sixteen).

18. See 567 U.S. 460, 470 (2012) (noting that "[t]he cases before us implicate two strands of precedent" including "cases . . . [that] have specially focused on juvenile offenders, because of their lesser culpability").

19. *Miller*'s failure to impose a categorical ban and resulting reliance on prediction make it fundamentally different from the cases that preceded it, ultimately opening it up to flaws discussed in this Note. See id. at 479 (stating that life without parole sentences would be appropriate for some juveniles); infra section II.A (arguing that the *Miller* decision requires juries to make a prediction about how a juvenile will behave in the future).

20. 543 U.S. 551.

21. 560 U.S. 48.

22. See, e.g., *Thompson*, 487 U.S. at 835, 838 (citing the diminished culpability of juveniles as justification for banning death sentences for anyone under sixteen); Eddings v. Oklahoma, 455 U.S. 104, 117 (1982) (requiring a sentencer to consider mitigating qualities of youth, inter alia, when levying a death sentence).

extreme punishment for juveniles.[23] Both couched bans in the logic of what "any parent knows"[24] about the diminished capacity of children to make rational decisions,[25] and both, unlike *Miller*, avoided any requirement of prediction about a juvenile's ability to reform sometime in the future.[26]

1. Roper v. Simmons. — In *Roper*, decided in 2005, the Court addressed whether a juvenile who committed murder when they were older than fifteen, but younger than eighteen, could be executed for their crime.[27] The Court had upheld the death penalty for this category of offenders sixteen years earlier in *Stanford v. Kentucky*.[28] Just as in *Stanford*, the defendant in *Roper* was a few months shy of his eighteenth birthday when he committed a brutal murder.[29]

The Court in *Roper* approached its analysis differently than in *Stanford*. Rather than looking solely at evidence of the popularity of the juvenile death penalty of the states, the Court also used scientific evidence and its own independent judgment to inform the holding.[30] The Court noted research demonstrating that juveniles were less culpable than adults because of their lack of maturity, their susceptibility to outside influences, and their unformed character.[31] These key differences meant that "penological justifications for the death penalty apply to [juveniles] with lesser force than to adults."[32] This, combined with a national consensus against the juvenile death penalty that had emerged in the

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23. See supra note 17 and accompanying text.

24. *Roper*, 543 U.S. at 569 ("First, as any parent knows . . . '[a] lack of maturity and an underdeveloped sense of responsibility are found in youth more often than in adults and are more understandable among the young.'" (second alteration in original) (quoting Johnson v. Texas, 509 U.S. 350, 367 (1993))).

25. See *Graham*, 560 U.S. at 68 (outlining *Roper*'s holding that juveniles have a lessened culpability because of a variety of factors unique to youth).

26. Since both cases categorically ban the penalties at issue, there is no prediction required about whether a juvenile is capable of rehabilitation. See id. at 77–79 ("[I]t does not follow that courts taking a case-by-case proportionality approach could with sufficient accuracy distinguish the few incorrigible juvenile offenders from the many that have the capacity for change."); *Roper*, 543 U.S. at 572–73 ("The differences between juvenile and adult offenders are too marked and well understood to risk allowing a youthful person to receive the death penalty despite insufficient culpability.").

27. *Roper*, 543 U.S. at 555–56.

28. 492 U.S. 361, 380 (1989).

29. See *Roper*, 543 U.S. at 556; *Stanford*, 492 U.S. at 365.

30. In *Stanford*, the Court looked only at objective indicia of consensus from the states when it determined that the death penalty for juveniles was not cruel and unusual punishment. See 492 U.S. at 370–73. Because a majority of the states that retained the death penalty allowed juveniles to be executed, the Court determined that it could not declare the punishment unconstitutional. See id. at 370–72.

31. See *Roper*, 543 U.S. at 569–70; *Stanford*, 492 U.S. at 370–73 (focusing only on objective indicia from the states to conclude that the death penalty for juveniles was not cruel and unusual punishment); see also supra note 30.

32. *Roper*, 543 U.S. at 571.

years since *Stanford*,[33] meant the death penalty was cruel and unusual when applied to juveniles.[34]

Importantly, the majority in *Roper* acknowledged that there may be some juveniles who exhibit such "depravity" as to justify a sentence of death.[35] The Court used the phrases "irretrievably depraved" and "irreparable corruption" to describe such juveniles, though it gave no clear definition of either term.[36] Though these "irretrievably depraved" juveniles may exist, the Court still felt that a total ban was appropriate.[37] "The differences between juvenile and adult offenders are too marked and well understood to risk allowing a youthful person to receive the death penalty despite insufficient culpability."[38] In other words, the Court was unwilling to risk the chance of a "false positive" finding that a juvenile was sufficiently culpable to be sentenced to death:[39] "It is difficult even for expert psychologists to differentiate between the juvenile offender whose crime reflects unfortunate yet transient immaturity, and the rare juvenile offender whose crime reflects irreparable corruption."[40] As such, the Court was unwilling to allow juries to attempt to differentiate between the two.[41]

This fear of false positives is a novel element of the *Roper* decision. Unlike prior cases that imposed categorical bans on the death penalty, the Court in *Roper* acknowledged that not all defendants who received

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33. See id. at 564–66 (citing Atkins v. Virginia, 536 U.S. 304, 313–16 (2002)) (concluding the rate and permanence of change in state practice against the juvenile death penalty is evidence of national rejection of the practice, and parallels evidence upon which the Court in *Atkins* relied when finding a national consensus against death as a punishment for the mentally disabled).

34. See id. at 578 ("The Eighth and Fourteenth Amendments forbid imposition of the death penalty on offenders who were under the age of 18 when their crimes were committed.").

35. Id. at 572 ("[I]t can be argued, although we by no means concede the point, that a rare case might arise in which a juvenile offender has sufficient psychological maturity, and at the same time demonstrates sufficient depravity, to merit a sentence of death.").

36. See id. at 570, 573. For a longer discussion of what the Court may have meant by these phrases, see infra notes 77–80 and accompanying text.

37. *Roper*, 543 U.S. at 572–73.

38. Id.

39. See Michael M. O'Hear, Not Just Kid Stuff? Extending *Graham* and *Miller* to Adults, 78 Mo. L. Rev. 1087, 1102 (2013) (identifying a "false positive" as an incorrect determination that a juvenile deserves a certain sentence and noting that the Court suggested in *Roper* that there "might be systemic tendencies to impose overly harsh sentences for juveniles").

40. *Roper*, 543 U.S. at 573.

41. See id. ("If trained psychiatrists with the advantage of clinical testing and observation refrain, despite diagnostic expertise, from assessing any juvenile under 18 as having antisocial personality disorder, we conclude that States should refrain from asking jurors to issue a far graver condemnation—that a juvenile offender merits the death penalty.").

relief would have diminished culpability.[42] This tradeoff, however, was one that the Court was willing to endure. It was too difficult, the Court concluded, to distinguish juveniles who deserved death from those who did not.[43] As this Note will later argue, *Miller*'s abandonment of this fear of false positives distinguishes it from *Graham* and *Roper*.[44]

2. Graham v. Florida. — Five years later, the Court in *Graham* applied the logic of lessened juvenile culpability in *Roper* to juvenile life without parole.[45] Graham was sentenced to life without parole for nonhomicide offenses he committed when he was sixteen years old.[46] Pointing to the same factors it noted in *Roper*, the Court held that life without parole sentences for juvenile nonhomicide offenders were unconstitutional.[47] According to the Court, there is no legitimate penological justification for condemning a juvenile to die in prison.[48] A life without parole sentence would deny juvenile nonhomicide offenders the ability to show maturity and reform.[49] This, the Court reasoned, would stand in the way

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42. There are five other cases that ban the death penalty for a certain category of offenders. See Kennedy v. Louisiana, 554 U.S. 407, 418 (2008) (holding that the death penalty for rape of a child when the crime did not result, and was not intended to result, in the child's death was disproportionate punishment); Atkins v. Virginia, 536 U.S. 304, 321 (2002) (holding that executing people with intellectual disabilities was cruel and unusual punishment); Ford v. Wainwright, 477 U.S. 399, 409–10 (1986) (holding that the death penalty for those declared clinically insane was unconstitutional); Enmund v. Florida, 458 U.S. 782, 797 (1982) (holding that the death penalty for someone who aided and abetted a crime but did not kill, attempt to kill, or intend to kill was disproportionate punishment); Coker v. Georgia, 433 U.S. 584, 592 (1977) (holding that the death penalty for rape of an adult woman was disproportionate and excessive punishment). In all five cases, the Court declared the death penalty unconstitutional to an entire class of people because they completely lacked the requisite culpability to be put to death. See *Kennedy*, 554 U.S. at 447; *Atkins*, 536 U.S. at 320; *Ford*, 477 U.S. at 417–18; *Enmund*, 458 U.S. at 801; *Coker*, 433 U.S. at 599.

43. See *Roper*, 543 U.S. at 573.

44. See infra section I.B.

45. See Graham v. Florida, 560 U.S. 48, 68 (2010) (explaining the continued relevance of *Roper*'s findings on the mitigating nature of youth and diminished culpability of juveniles).

46. Graham was first arrested for armed robbery when he was sixteen. Id. at 53. He pleaded guilty and was sentenced to concurrent three-year terms of probation, with a requirement that he spend the first year in the county jail. See id. at 54. Six months after his release, and while he was still under eighteen, Graham was again arrested for participation in multiple armed robberies. See id. at 54–55. At his second sentencing, the judge sentenced him to life imprisonment. See id. at 57. Florida has no parole, so this sentence meant that Graham would spend the rest of his life in prison unless granted clemency. See id.

47. See id. at 68, 82 (holding that a juvenile's lack of maturity, susceptibility to outside influences, and propensity for change make a life without parole sentence inappropriate).

48. See id. at 74.

49. See id. at 78 ("Here, as with the death penalty, '[t]he differences between juvenile and adult offenders are too marked and well understood to risk allowing a youthful person to receive' a sentence of life without parole for a nonhomicide crime

of a juvenile's ability to eventually recognize the extent of "human worth and potential."[50]

Just as in *Roper*, the Court in *Graham* noted that a categorical ban might mean that some truly "irredeemably depraved" juveniles are not sentenced to life without parole when such a sentence would be appropriate.[51] Just as in *Roper*, the Court determined this was an acceptable risk.[52] The Court again noted the difficulty of accurately determining if a juvenile was truly irredeemably depraved.[53] As such, the risk of false positives with juvenile nonhomicide offenders facing life without parole was as unacceptable as it was in the death penalty context.[54]

In combination, *Graham* and *Roper* laid out a set of principles for "children are different" jurisprudence. These cases described three core differences between juveniles and adults that make juveniles less culpable: lack of maturity, susceptibility to outside influences, and unformed personalities.[55] These three things, in turn, made extreme punishment of juveniles disproportionate.[56] This is not necessarily because all juveniles are per se less culpable. In fact, the Court noted that there may be the rare juvenile offender that truly deserves these punishments.[57] The imperfect nature of judge and jury sentencing, however, runs an unacceptable risk of producing false positives—sentencing juveniles to death or life without parole when they are not truly irreparably corrupt.[58]

'despite insufficient culpability.'" (quoting Roper v. Simmons, 543 U.S. 551, 572–73 (2005))).

50. Id. at 79.

51. See id. at 75.

52. See id. at 79.

53. See id. at 77.

54. See id. at 78.

55. See id. at 68 ("As compared to adults, juveniles have a 'lack of maturity and an underdeveloped sense of responsibility'; they 'are more vulnerable or susceptible to negative influences and outside pressures, including peer pressure'; and their characters are 'not as well formed.'" (internal quotation marks omitted) (quoting Roper v. Simmons, 543 U.S. 551, 569–570 (2005))); *Roper*, 543 U.S. at 569–70 (noting three factors that make juveniles less culpable than adults—that they lack maturity; that they are more vulnerable to negative influences; and that their character is not as fully formed as an adult's might be).

56. See *Graham*, 560 U.S. at 71–72; *Roper*, 543 U.S. at 572–73.

57. See *Graham*, 560 U.S. at 77 (noting the possibility that some juvenile nonhomicide offenders might have sufficient psychological maturity and depravity to merit a life without parole sentence); *Roper*, 543 U.S. at 572 ("Certainly it can be argued . . . that a rare case might arise in which a juvenile offender has sufficient psychological maturity, and at the same time demonstrates sufficient depravity, to merit a sentence of death.").

58. See *Graham*, 560 U.S. at 78 (noting the unacceptable risk that a brutal crime might overpower mitigating arguments "even where the juvenile offender's objective immaturity, vulnerability, and lack of true depravity should require" a less severe sentence (internal quotation marks omitted) (quoting *Roper*, 543 U.S. at 573)); *Roper*, 543 U.S. at 572–73 ("The differences between juvenile and adult offenders are too marked and well

Both decisions also cite the limitation of scientists' ability to determine whether a child is a "rare juvenile offender whose crime reflects irreparable corruption" as a reason for total bans.[59] At the time these decisions were announced, it seemed as though these core principles would continue to control the Court's jurisprudence around juveniles and extreme punishment. Then came *Miller*.

B. Miller v. Alabama—*A Turning Point in Juvenile Extreme Punishment*

Miller consolidated two appeals of fourteen-year-old offenders who were convicted of murder and sentenced to life imprisonment without parole.[60] In both cases, the sentence was mandatory based on the crime.[61] Relying on both *Roper* and *Graham*, the Supreme Court declared that mandatory life without parole sentences were unconstitutional for juveniles.[62] The decision followed a familiar line of reasoning—the Court described juveniles' diminished culpability, noting the same three factors that drove its decisions in *Graham* and *Roper*.[63] The Court also highlighted juveniles' heightened capacity for change, just as it had in *Graham* and *Roper*.[64] It then discussed how those factors weaken any penological justification for imposing life without parole sentences on juveniles.[65]

Unlike in *Graham* and *Roper*, however, the Court stopped short of a categorical ban on juvenile life without parole sentences.[66] Drawing on procedural death penalty precedent,[67] the Court instead declared only

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understood to risk allowing a youthful person to receive the death penalty despite insufficient culpability.").

59. See *Graham*, 560 U.S. at 73 ("It is difficult even for expert psychologists to differentiate between the juvenile offender whose crime reflects unfortunate yet transient immaturity, and the rare juvenile offender whose crime reflects irreparable corruption." (internal quotation marks omitted) (quoting *Roper*, 543 U.S. at 573)); *Roper*, 543 U.S. at 573.

60. Miller v. Alabama, 567 U.S. 460, 465 (2012).

61. Id.

62. See id. at 479, 489 ("*Graham*, *Roper*, and our individualized sentencing decisions make clear that a judge or jury must have the opportunity to consider mitigating circumstances before imposing the harshest possible penalty for juveniles.").

63. See id. at 471 ("[C]hildren have a 'lack of maturity and an underdeveloped sense of responsibility,' . . . children 'are more vulnerable . . . to negative influences and outside pressures,' . . . [a]nd third, a child's character is not as 'well formed' as an adult's . . . ." (third alteration in original) (quoting *Roper*, 543 U.S. at 569–70)).

64. See id. at 465 ("[A mandatory life without parole sentencing] scheme prevents those meting out punishment from considering a juvenile's . . . greater 'capacity for change' . . . ." (quoting *Graham*, 560 U.S. at 74)).

65. See id. at 472–73, 78 (explaining how the differences between juveniles and adults make juveniles less blameworthy, render incapacitation of juveniles less effective, and significantly increase the likelihood of rehabilitation).

66. See id. at 489.

67. See id. at 475–76, 489 (relying on Woodson v. North Carolina, 428 U.S. 280, 304 (1976) (plurality opinion) to determine that the mitigating factors of youth should be considered before levying a life without parole sentence upon a juvenile). The Court's

that *mandatory* life without parole sentences were unconstitutional.[68] *Miller* did not decide that juvenile life without parole punishments are disproportionate to the crime of murder.[69] Instead, the Court objected to a lack of procedural safeguards for ensuring that a defendant's youth and attendant characteristics were considered before a life without parole sentence was levied on someone under the age of eighteen.[70] The Court acknowledged that *Roper* and *Graham* meant that "children are different."[71] But unlike in *Roper* and *Graham,* their differences earned them

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death penalty precedent can be roughly divided into two categories: protections based in procedural mandates and protections based in proportionality doctrine. See Carol S. Steiker & Jordan M. Steiker, Courting Death: The Supreme Court and Capital Punishment 104, 163–64 (2016) (explaining the Warren Court's interest in protecting criminal defendants through procedure and the more recent expansion of death penalty jurisprudence through proportionality doctrine). Protections based in procedural mandates seek to protect death penalty defendants by requiring that sentencers consider certain characteristics and the individuality of the defendant before sentencing them to death. See, e.g., Lockett v. Ohio, 438 U.S. 586, 608 (1978) (invalidating an Ohio statute that limited the range of mitigating circumstances that could be considered by a sentencer in a death penalty case and holding that all relevant mitigating evidence must be considered before sentencing a defendant to death); *Woodson*, 428 U.S. at 303–05 (holding mandatory death sentences unconstitutional because, among other reasons, they prevent consideration of individual characteristics and the culpability of the defendant before putting them to death). Protections based in the proportionality doctrine categorically bar the death penalty for certain defendants because it is out of proportion with the seriousness of their crime or their culpability. See, e.g., Kennedy v. Louisiana, 554 U.S. 407, 435, 446–47 (2008) (holding that the death penalty for crimes that did not result in loss of life was disproportionate punishment); Atkins v. Virginia, 536 U.S. 304, 319–21 (2002) (holding that the death penalty for intellectually disabled people was unconstitutional, primarily because they lacked the requisite culpability due to their disability). *Miller* more closely resembles the first line of precedent by mandating that courts take youth and its attendant characteristics into account before sentencing a juvenile to life without parole, rather than imposing a ban because a punishment is disproportionate.

68. *Miller*, 567 U.S. at 489 ("By requiring that all children convicted of homicide receive lifetime incarceration without possibility of parole, regardless of their age and age-related characteristics and the nature of their crimes, the mandatory-sentencing schemes before us violate . . . the Eighth Amendment's ban on cruel and unusual punishment.").

69. See id. at 479–80 (noting that life without parole sentences may be appropriate for some juvenile homicide offenders).

70. See id. at 483 (noting that the Court's decision was not imposing a categorical ban, but instead "mandates only that a sentencer follow a certain process . . . before imposing a particular penalty"). Indeed, there was confusion in the wake of *Miller* about whether the Court had pronounced a procedural or substantive right. See Brandon Buskey & Daniel Korobkin, Elevating Substance over Procedure: The Retroactivity of *Miller v. Alabama* Under the *Teague v. Lane* Doctrine, 18 CUNY L. Rev. 21, 23–24 (2014) (detailing the split across state courts on whether *Miller* was substantive or procedural). The substance–procedure distinction had ramifications for whether the right was retroactive under Teague v. Lane, 498 U.S. 288 (1989). See Buskey & Korobkin, supra, at 27–28. Ultimately, the Court settled this question in *Montgomery v. Louisiana* when it declared that "*Miller* announced a substantive rule of constitutional law." 136 S. Ct. 718, 736 (2016).

71. See *Miller*, 567 U.S. at 479–80.

only additional procedural protection, not a substantive right against life without parole sentences.

Specifically, the Court held that judges and juries should have to take "youth and attendant characteristics" into account when determining if a juvenile life without parole sentence is appropriate.[72] The "attendant characteristics" the Court highlighted are:

> [1] [I]mmaturity, impetuosity, and failure to appreciate risks and consequences . . . [;] [2] the family and home environment that surrounds him . . . [;] [3] the circumstances of the homicide offense, including the extent of his participation in the conduct and the way familial and peer pressures may have affected him . . . [;] [4] that he might have been charged and convicted of a lesser offense if not for incompetencies associated with youth—for example, his inability to deal with police officers or prosecutors . . . or his incapacity to assist his own attorneys . . . [;] [and] [5] the possibility of rehabilitation . . . .[73]

These five aspects are known as the "*Miller* factors."[74] These factors, the Court declared, should allow sentencers to distinguish the "rare juvenile offender whose crime reflects irreparable corruption."[75] The Court did not detail what any adjudicative procedure evaluating these factors might look like. Instead, it left it to the states to determine how a sentencer should use youth and its attendant characteristics to inform its decision about whether to sentence a juvenile to life without parole.[76]

The Court also gave no exact definition of what would make a juvenile irreparably corrupt. The phrase, which entered the Court's lexicon in *Roper,* does not come from scientific literature.[77] That said, *Miller* implies that an irreparably corrupt juvenile is one who is incapable

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72. See id. at 483.

73. Id. at 477–78.

74. See, e.g., Parker v. State, 119 So. 3d 987, 999 (Miss. 2013) ("The United States Supreme Court has mandated that the sentencing authority consider the *Miller* factors before sentencing."); State v. Zuber, 152 A.3d 197, 201 (N.J. 2017) ("[W]e direct that defendants be resentenced and that the *Miller* factors be addressed at that time."); Elizabeth Scott, Thomas Grisso, Marsha Levick & Laurence Steinberg, Juvenile Sentencing Reform in a Constitutional Framework, 88 Temp. L. Rev. 675, 689 (2016) [hereinafter Scott et al., Juvenile Sentencing Reform] (noting that some state courts have responded to *Miller* by simply stating that judges should consider the "*Miller* factors" in sentencing without providing additional procedural guidance).

75. See *Miller*, 567 U.S. at 479–80 (internal quotation marks omitted) (quoting Roper v. Simmons, 543 U.S. 551, 573 (2005)).

76. See id. at 489.

77. See *Roper*, 543 U.S. at 573. The Court cites to an article by Elizabeth Scott and Laurence Steinberg immediately after using the phrase "irreparable corruption" in *Roper*, but the phrase is not found in that article. See Lawrence Steinberg & Elizabeth Scott, Less Guilty by Reason of Adolescence, 58 Am. Psychologist 1009 (2003).

of rehabilitation and bound to continue to be a threat to society.[78] In *Montgomery v. Louisiana*, which followed *Miller,* the Court equated an irreparably corrupt juvenile with one whose crime reflects "permanent incorrigibility."[79] Again, while the Court did not precisely define "permanent incorrigibility," this phrase indicates that juvenile life without parole sentences should be limited to defendants who are incapable of reform, are likely to reoffend, and will never be able to live peacefully in society.[80]

Moreover, the Court's analysis in *Miller* lacked the concern about false positives that played a crucial role in *Roper* and *Graham*. While the Court noted, as it had in the previous two "children are different" cases, that determining whether a juvenile is irreparably corrupt presents "great difficulty," it did not address the impact that difficulty would have on accurately levying such a severe punishment.[81] Instead, the Court simply noted that it believed "appropriate occasions for sentencing juveniles to this harshest possible penalty will be uncommon."[82] This, as well as the lack of explicit definitions and procedures, left states with little guidance on how best to administer the decision.

C. *Confusion in* Miller*'s Wake*

Because *Miller* left the procedural details of sentencing hearings up to the states, there has been considerable litigation and scholarship around what form post-*Miller* sentencing hearings should take.[83] Immediately after the decision, scholarship and litigation focused on whether juveniles who were sentenced to life without parole prior to *Miller* would be able to have their sentence re-evaluated.[84] The Court answered this

78. See *Miller*, 567 U.S. at 479–80.

79. See Montgomery v. Louisiana, 136 S. Ct. 718, 734 (2016). This phrase was also emphasized by Justice Sotomayor in her concurring opinion in *Tatum v. Arizona*. 137 S. Ct. 11, 12 (2016) (Sotomayor, J., concurring in the decision to grant, vacate, and remand).

80. Incorrigible is defined as "incapable of being corrected or amended," "not manageable," and "unalterable." See Incorrigible, Merriam-Webster, https://www.merriam-webster.com/dictionary/incorrigible [https://perma.cc/7KD4-4EPZ] (last visited July 23, 2019).

81. See *Miller*, 567 U.S. at 479.

82. Id.

83. See, e.g., Jennifer S. Breen & John R. Mills, Mandating Discretion: Juvenile Sentencing Schemes After *Miller v. Alabama*, 52 Am. Crim. L. Rev. 293, 294–95 (2015) (arguing that state sentencing schemes after *Miller* were not faithful to the decision and should be altered to do more to take youth into account); Moriearty, The Trilogy, supra note 1, at 551 ("Among the states that have retained juvenile life without parole as a sentencing option, legislatures and courts have wrestled with questions about how to craft individualized sentencing schemes."); Scott et al., Juvenile Sentencing Reform, supra note 74, at 676–77 (exploring the ways developmental neuroscience might play a role in post-*Miller* sentencing hearings).

84. See, e.g., Buskey & Korobkin, supra note 70, at 23–24 (detailing the split at the state court level about whether *Miller* was retroactive); Tracy A. Rhodes, Cruel and Unusual Before and After 2012: *Miller v. Alabama* Must Apply Retroactively, 74 Md. L. Rev.

question affirmatively in *Montgomery v. Louisiana*.[85] Since *Montgomery*, the question of how best to examine "youth and its attendant characteristics" and determine "irreparable corruption" in a court hearing has taken center stage.

In recent years, litigation around *Miller* sentencing hearings has focused on whether there must be a factual finding that a juvenile is permanently incorrigible or irreparably corrupt in order to impose a sentence of life without parole.[86] State courts have split on the issue—at least seven state courts of last resort require such a finding[87] and at least four do not.[88] Federal circuits are similarly split.[89] Thus far, the Supreme Court has declined to address this question.[90] For states that do require a finding of irreparable corruption, whether a jury must make that

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1001, 1030 (2015) (arguing that *Miller* must apply retroactively under *Teague v. Lane*); Eric Schab, Departing from *Teague*: *Miller v. Alabama*'s Invitation to the States to Experiment with New Retroactivity Standards, 12 Ohio St. J. Crim. L. 213, 214 (2014) (arguing that the debate over whether *Miller* was substantive or procedural was an invitation to the states to create new rules around the substance–procedure divide and retroactivity).

85. 136 S. Ct. 718, 736–37 (2016) (holding that the petitioner and others sentenced to life without parole before *Miller* should "be given the opportunity to show their crime did not reflect irreparable corruption; and, if it did not, their hope for some years of life outside prison walls must be restored").

86. See, e.g., Petition for Writ of Certiorari at 3, Hyatt v. Michigan, 139 S. Ct. 1543 (2019) (No. 18-6777) (requesting that the Court address whether *Miller* requires a jury finding of circumstances that increase potential punishment and whether the Eighth Amendment requires finding of a "narrowing criteria" before life without parole can be imposed); Petition for Writ of Certiorari at 2, 9–10 & nn.4–5, Chandler v. Mississippi, 139 S. Ct. 790 (2018) (No. 18-203), 2018 WL 3952035 (requesting that the Court combine with two other cases out of Mississippi and address the question of whether a jury finding of permanent incorrigibility is necessary before a juvenile can be sentenced to life without parole).

87. See Landrum v. State, 192 So. 3d 459, 469 (Fla. 2016); Veal v. State, 784 S.E.2d 403, 412 (Ga. 2016); People v. Holman, 91 N.E.3d 849, 863 (Ill. 2017); State v. Seats, 865 N.W.2d 545, 555–56 (Iowa 2015); Luna v. State, 387 P.3d 956, 961 (Okla. Crim. App. 2016); Commonwealth v. Batts, 163 A.3d 410, 435 (Pa. 2017); Sen v. State, 301 P.3d 106, 127 (Wyo. 2013).

88. See State v. Valencia, 386 P.3d 392, 395–96 (Ariz. 2016); Johnson v. State, 395 P.3d 1246, 1258 (Idaho 2017); People v. Skinner, 917 N.W.2d 292, 295 (Mich. 2018); Chandler v. State, 242 So. 3d 65, 69 (Miss. 2018), cert. denied sub nom. Chandler v. Mississippi, 139 S. Ct. 790 (2019) (mem.).

89. Compare Malvo v. Mathena, 893 F.3d 265, 275 (4th Cir. 2018) (requiring a specific finding of permanent incorrigibility before a juvenile can be sentenced to life without parole), with United States v. Briones, 929 F.3d 1057, 1067 (9th Cir. 2019) (en banc) (holding that no specific finding of permanent incorrigibility is required before sentencing a juvenile to life without parole).

90. See *Chandler*, 139 S. Ct. at 790 (denying certiorari in a case that held that no specific finding of permanent incorrigibility or irreparable corruption is necessary to sentence a juvenile to life without parole); see also Davis v. State, 234 So. 3d 440, 442 (Miss. 2017), cert. denied sub nom. Davis v. Mississippi, 139 S. Ct. 58 (2018) (denying certiorari in a case that held that no jury finding is necessary to sentence a juvenile to life without parole).

determination under *Apprendi v. New Jersey*[91] is also a frequent topic of litigation.[92]

Scholars writing about issues of administrability in post-*Miller* sentencings have often focused on what role science should play in informing *Miller* decisions.[93] Given that the Court's decision was so clearly rooted in the scientific understanding of how juveniles are different from adults,[94] these scholars have questioned how science and scientific experts might make determinations about a given juvenile's culpability or likelihood of rehabilitation.

Notably absent from the scholarship and litigation, however, is any discussion of whether what the Court requires of sentencers in *Miller* is even *possible*. Some articles mention only briefly that predictions about whether a juvenile is capable of rehabilitation are difficult before moving on to analyze other aspects of the decision.[95] To the extent that potential pitfalls of applying the *Miller* factors are discussed, it is through a scientific, rather than a legal, lens.[96] This may be because the *Miller* factors appear to provide multiple ways of analyzing juvenile culpability, not just a focus on predicting rehabilitation.[97] However, as Part II argues, all five

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91. 530 U.S. 466, 456 (2000) (holding that, other than a prior conviction, any fact that increases a defendant's punishment must be admitted by the defendant or proved to the jury beyond a reasonable doubt).

92. See, e.g., Stevens v. State, 422 P.3d 741, 750 (Okla. 2018) (holding that a jury was necessary in juvenile life without parole sentencing hearings); *Batts*, 163 A.3d at 456 (holding that a jury was not required in juvenile life without parole sentencing hearings); Petition for Immediate Review, Raines v. State, 12R-0064 (Ga. Sup. Ct. Mar. 22, 2019), appeal docketed, S19I125 (Ga. Apr. 4, 2019).

93. See, e.g., Scott et al., Juvenile Sentencing Reform, supra note 74, at 677 (arguing for reforms to juvenile sentencing that reflect current scientific understanding of the juvenile brain); Elizabeth S. Scott, Richard J. Bonnie & Laurence Steinberg, Young Adulthood as a Transitional Legal Category: Science, Social Change, and Justice Policy, 85 Fordham L. Rev. 641, 644 (2016) (using psychology and neuroscience to argue that young adulthood should be an independent legal category); John F. Stinneford, Youth Matters: *Miller v. Alabama* and the Future of Juvenile Sentencing, 11 Ohio St. J. Crim. L. 1, 2–3 (2013) (noting that science is a core theme of *Miller* and the Court's "children are different" jurisprudence).

94. See Miller v. Alabama, 567 U.S. 460, 479–80 (2012).

95. See Scott et al., Juvenile Sentencing Reform, supra note 74, at 684 (noting that "prediction of future violence from adolescent criminal behavior, even serious criminal behavior, is unreliable and prone to error"); see also Tiffani N. Darden, Known Unknowns: Legislating for a Juvenile's Reformative Uncertainty, 97 Neb. L. Rev. 334, 357–58 (2018) (noting that the *Graham* Court stressed the difficulty of predicting the likelihood of rehabilitation and that this informed the Court's decision in *Miller*).

96. See Kimberly Larson, Frank DiCataldo & Robert Kinscherff, *Miller v. Alabama*: Implications for Forensic Mental Health Assessment at the Intersection of Social Science and the Law, 39 New Eng. J. on Crim. & Civ. Confinement 319, 320 (2013); Alex R. Piquero, Youth Matters: The Meaning of *Miller* for Theory, Research, and Policy Regarding Developmental/Life-Course Criminology, 39 New Eng. J. on Crim. & Civ. Confinement 347, 355 (2013).

97. See supra notes 72–76 and accompanying text.

of the *Miller* factors ultimately work in service of one: predicting whether a juvenile offender is capable of reform.[98] The mandate of prediction, in turn, makes the decision unviable.

II. THE REQUIREMENT OF PREDICTION

This Part explains how the *Miller* decision requires sentencers to make a prediction about how a juvenile will behave decades in the future. The first section explains how the *Miller* decision itself requires prediction. Next, sections II.B and II.C juxtapose *Miller* against two other extreme punishment cases[99]—*Atkins v. Virginia*[100] and *Eddings v. Oklahoma*[101]—in order to highlight how prediction is central to the *Miller* decision. Finally, section II.D explores how states have applied the decision, which again serves to illuminate *Miller*'s predictive mandate.

A. *Prediction Within the* Miller *Decision Itself*

To understand the requirement of prediction in *Miller*, it is helpful to analyze the five *Miller* factors as belonging to either of two broad categories: backward-looking and forward-looking. The first four factors—immaturity at the time of crime, the family and home environment, peer pressure, and inability to successfully navigate the justice system—all require a sentencer to examine a juvenile's culpability at the time of the crime through the trial. At the time of sentencing, these factors are fixed because they are based on things that happened in the past. The final factor—capacity for change—necessarily requires a forward-looking analysis. By asking a sentencer to determine whether a juvenile is capable of reform, the logic of the decision necessarily requires some sort of determination about how a juvenile will behave many years in the future.

If the Court's decision implied that all five of these factors should be weighed evenly, then perhaps the fifth element's predictive mandate would be less troubling. But this is not the case. Instead, the backward-looking factors are to be used in service of making a prediction about irreparable corruption. For example, a juvenile who committed a crime because they failed to "appreciate risks and consequences"[102] is far more likely to be able to learn from their mistakes and change in the future. Thus, this *Miller* prong helps a sentencer determine whether a juvenile should be sentenced to spend the rest of their life in prison, or whether they should be allowed the opportunity to prove they have changed.[103]

98. See infra section II.A.

99. See infra notes 115, 123 and accompanying text.

100. 536 U.S. 304 (2002).

101. 455 U.S. 104 (1982).

102. Miller v. Alabama, 567 U.S. 460, 477 (2012).

103. See id. at 472 (noting that "transient rashness, proclivity for risk, and inability to assess consequences" made it more likely that a juvenile would be capable of reform after their brain developed).

Similarly, the other *Miller* prongs are meant to allow a sentencer to determine whether a juvenile's crime is a sign of passing immaturity or irreparable corruption.[104]

Indeed, the use of the phrase "irreparable corruption" in *Miller* and *Montgomery* further proves that prediction is at the core of the sentencing scheme in *Miller*. In *Miller*, the Court states specifically that juvenile life without parole should be reserved for "the rare juvenile offender whose crime represents irreparable corruption."[105] In *Montgomery*, the Court reiterated that "*Miller* determined that sentencing a child to life without parole is excessive for all but the 'rare juvenile offender whose crime reflects irreparable corruption.'"[106] Additionally, the Court stated that "[t]he only difference between *Roper* and *Graham*, on the one hand, and *Miller*, on the other hand, is that *Miller* drew a line between children whose crimes reflect transient immaturity and those rare children whose crimes reflect irreparable corruption."[107] That is to say, the only reason a juvenile would receive life without parole is that they are incapable of change.

This interpretation of *Miller* as predictive is further confirmed by the Court's actions in the wake of *Montgomery*. In 2016, the Court granted, vacated, and remanded for further consideration a juvenile life without parole sentence in light of *Montgomery*.[108] Justice Alito, joined by Justice Thomas, dissented from the decision to vacate and remand, noting that the sentences at issue were each given after *Miller* and that the sentencing courts had taken youth into account before determining that a life without parole sentence was appropriate.[109] Justice Sotomayor, concurring in the judgment, responded to this critique by noting that "[o]n the record before us, none of the sentencing judges addressed the question *Miller* and *Montgomery* require a sentencer to ask: whether the petitioner was among the very 'rarest of juvenile offenders, those whose crimes reflect permanent incorrigibility.'"[110] Although this opinion does not have precedential value, it illustrates what the majority in *Miller* and *Montgomery*, both of which Justice Sotomayor joined,[111] saw as the core of its holdings: Youth and its attendant characteristics should be used as a guide to determine whether the juvenile offender will ever be capable of change.

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104. See supra notes 72–76 and accompanying text (explaining the *Miller* factors and the role they play in determining whether to sentence a juvenile to life without parole).

105. *Miller*, 567 U.S at 479–80 (quoting Roper v. Simmons, 543 U.S. 551, 573 (2005)).

106. Montgomery v. Louisiana, 136 S. Ct. 718, 734 (2016) (quoting *Miller*, 567 U.S. at 479–80).

107. Id.

108. See Tatum v. Arizona, 137 S. Ct. 11 (2016) (mem.).

109. See id. at 13 (Alito, J., dissenting).

110. See id. at 12 (Sotomayor, J., concurring) (quoting *Montgomery*, 136 S. Ct. at 734).

111. *Montgomery*, 136 S. Ct. at 725; *Miller*, 567 U.S. at 463.

While the Court does not advise lower courts how to weigh each of the *Miller* factors,[112] *Miller* and subsequent decisions show that analysis of the factors should ultimately determine whether the defendant is one of the rare juvenile offenders who is "irreparably corrupt."[113] This is, by definition, a determination about how the juvenile will behave in the future.[114] Juxtaposing *Miller* with other extreme punishment decisions makes this emphasis on prediction clearer.

B. *"Irreparable Corruption" Versus Intellectual Disability*

Miller is sometimes compared to *Atkins v. Virginia,* which declared execution of intellectually disabled persons unconstitutional.[115] At first blush, *Atkins* appears to mirror *Miller* on two fronts—the Court provides guidance for determining when someone is intellectually disabled[116] and holds this to be a basis for lessened moral culpability.[117]

Atkins, however, varies from *Miller* in two key ways. First, the factors given for determining whether someone is intellectually disabled in *Atkins* constitute an empirically-supported medical diagnosis.[118] They represent the consensus of the medical community based on scientific testing. The *Miller* factors, on the other hand, do not contemplate any medical standards or empiric testing in determining whether a juvenile is

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112. See *Montgomery*, 136 S. Ct. at 735 (noting that the Court did not give explicit procedural directions in *Miller* "to avoid intruding more than necessary upon the States' sovereign administration of their criminal justice systems").

113. See id. at 734; see also supra notes 80–86 and accompanying text.

114. See supra notes 77–80 and accompanying text.

115. See Atkins v. Virginia, 536 U.S. 304, 321 (2002); Buskey & Korobkin, supra note 70, at 27–28 (arguing that *Atkins* and *Miller* were similar because they both announced substantive rules of criminal law); Megan McCabe Jarrett, Stifling the Shot at a Second Change: Florida's Response to *Graham* and *Miller* and the Missed Opportunity for Change in Juvenile Sentencing, 45 Stetson L. Rev. 499, 504–08 (2016) (arguing that the "evolving standard of decency" argument in *Miller* springs from *Atkins*); Moriearty, Implementing Proportionality, supra note 8, at 963 (2017) (comparing *Atkins* and *Miller* because both decisions imposed "substantive constraints on the harshest forms of punishment in [America]"). In *Atkins,* the Court uses the term "mentally retarded." See *Atkins*, 536 U.S. at 306. This Note uses the term "intellectually disabled," which is preferred by activists and practitioners, to mean the same thing. See Michelle Diament, Obama Signs Bill Replacing 'Mental Retardation' with 'Intellectual Disability,' Disability Scoop (Oct. 5, 2010), https://www.disabilityscoop.com/2010/10/05/obama-signs-rosas-law/10547/ [https://perma.cc/2KDK-EMY8].

116. See *Atkins*, 536 U.S. at 318 ("[C]linical definitions of [intellectual disability] require not only subaverage intellectual functioning, but also significant limitations in adaptive skills such as communication, self-care, and self-direction that . . . manifest before age 18.").

117. See id. at 306 ("Because of their disabilities in areas of reasoning, judgment, and control of their impulses, however, [intellectually disabled persons] do not act with the level of moral culpability that characterizes the most serious adult criminal conduct.").

118. Id. at 318 (describing the requirements for the clinical definitions of intellectual disability).

"irreparably corrupt." To be sure, the factors have some basis in neuroscience, development, and psychology, but they do not constitute a medical test like the one described in *Atkins*.[119]

Additionally, the analysis in *Atkins* is retrospective, focusing on the moral culpability of the defendant at the time of the crime.[120] The Court does not ask sentencers to determine whether an intellectually disabled person will recover and thus not murder in the future. A sentencer must only decide whether an offender's disability is so severe that they do not have the requisite moral culpability to merit the country's harshest punishment.[121] This stands in stark contrast to the decision required under *Miller*, in which a Court must determine whether a juvenile is capable of reform and thus worthy of a chance of gaining release in the future.[122]

C. *Youth as Mitigation Versus Youth as a Temporary State*

Miller is often analogized to *Eddings v. Oklahoma*.[123] Yet, like *Atkins*, key distinctions, namely a lack of a predictive mandate, make the *Eddings* decision more administrable than *Miller*.

In *Eddings*, a sixteen-year-old was convicted of the murder of a police officer and sentenced to death.[124] During sentencing, Eddings presented evidence of his violent and traumatizing childhood.[125] The sentencing judge believed, however, that "following the law" he could not "consider the fact of this young man's violent background" and sentenced him to death.[126] The Supreme Court set aside his sentence, declaring that "state courts must consider all relevant mitigating evidence and weigh it against aggravating circumstances."[127]

As a threshold matter, *Miller* and *Eddings* mandate the same thing: that the mitigating factors of youth be considered when determining a

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119. See Laurence Steinberg, Adolescent Brain Science and Juvenile Justice Policymaking, 23 Psychol. Pub. Pol'y & L. 410, 411–12 (2017).

120. See *Atkins*, 536 U.S. at 319–20 (describing how intellectual disability reduces a defendant's moral culpability).

121. See id.

122. See supra section II.A.

123. The Court makes this comparison in the *Miller* decision. See Miller v. Alabama, 567 U.S. 460, 476 (2012) ("*Eddings* is especially on point."). Scholars also look to *Eddings* when analyzing *Miller*. See, e.g., Janet C. Hoeffel, The Jurisprudence of Death and Youth: Now the Twain Should Meet, 46 Tex. Tech L. Rev. 29, 30 & n.3 (2013) (noting that *Eddings* is one of the original cases to demonstrate that "youth is different"); Lindsey E. Krause, One Size Does Not Fit All: The Need for a Complete Abolition of Mandatory Minimum Sentences for Juveniles in Response to *Roper*, *Graham*, and *Miller*, 33 Law & Ineq. 481, 491 (2015) (noting *Miller*'s use of *Eddings* in defining what makes juveniles different for the purpose of sentencing).

124. Eddings v. Oklahoma, 455 U.S. 104, 106, 109 (1982).

125. See id. at 107.

126. Id. at 109.

127. Id. at 117.

sentence for a juvenile.[128] However, in *Eddings,* the Court again only asks sentencers to complete a backward-looking analysis. Whether Eddings will outgrow the mental health issues brought on by his violent youth is not a concern for the Court in deciding whether he should live or die. Instead, the analysis is, as in *Atkins*, a question of reduced moral culpability at the time of the offense.[129] A sentencer need only determine whether a defendant's background makes them less blameworthy, and thus undeserving of a death sentence.[130] In *Miller,* by contrast, youth's mitigating effect is found in the fact that it is temporary.[131] While the Court in *Miller* does acknowledge that youth is a mitigating factor,[132] the ultimate determination in *Miller* differs from *Eddings* because it rests not only on youth at the time of the crime but on whether the juvenile's dangerousness will disappear as they age, leaving the offender deserving of a second chance at freedom.[133]

Juxtaposing *Atkins* and *Eddings* further highlights how *Miller* requires a prediction about a juvenile's ability to reform. In both *Atkins* and *Eddings*, sentencers are asked only to use information from the past to make a decision about moral culpability at the time of the crime.[134] *Atkins* also includes a scientific guide of medical diagnosis.[135] In contrast, the Court in *Miller* acknowledges the reduced moral culpability of juveniles, but asks sentencers to examine more than moral culpability.[136] If the Court had based the decision exclusively on reduced culpability at the time of the crime, it would be nearly the same as *Atkins*, *Eddings*, and other decisions that require courts to take mitigating factors into account when levying sentences.[137] Instead, in *Miller*, reduced moral culpability

128. See *Miller*, 567 U.S. at 462, 475–476, 489; *Eddings*, 455 U.S. at 115–16.

129. See supra notes 120–122 and accompanying text.

130. See *Eddings*, 455 U.S. at 110–11 (explaining the importance of considering mitigating evidence in determining a defendant's individual culpability).

131. See *Miller*, 567 U.S. at 479–80 (holding that the dividing line between those juveniles who deserve a sentence of life without parole and those who do not is whether their crime reflects "transient immaturity"); see also Montgomery v. Louisiana, 136 S. Ct. 718, 734 (2016) ("The only difference between *Roper* and *Graham,* on the one hand, and *Miller*, on the other hand, is that *Miller* drew a line between children whose crimes reflect transient immaturity and those rare children whose crimes reflect irreparable corruption.").

132. See *Miller*, 567 U.S. at 476 (using the "mitigating qualities of youth" as a basis for holding that mandatory life without parole sentences for juveniles are unconstitutional (quoting Johnson v. Texas, 509 U.S. 350, 367 (1993))).

133. See id. at 479–80 (noting the difference between juvenile offenders whose crimes reflect transient immaturity, and those whose crimes reflect irreparable corruption).

134. See supra notes 120–122, 126–129 and accompanying text.

135. See Atkins v. Virginia, 536 U.S. 304, 318 (2002).

136. See supra section II.A.

137. See Eddings v. Oklahoma, 455 U.S. 104, 117 (1982); Lockett v. Ohio, 438 U.S. 586, 608 (1978); Woodson v. North Carolina, 428 U.S. 280, 304 (1976).

buys the juvenile the right to have youth taken into account as a sentencer decides whether they are capable of reform in the future.[138]

D. *Prediction in the States*

As previously discussed, *Miller* did not detail the exact procedures states must follow when considering sentencing a juvenile offender to life without parole. Instead, the Court left it up to the states to determine how to take youth into account in juvenile sentencing decisions.[139] An examination of state attempts to implement *Miller* further illustrates that prediction is at the core of the decision.[140]

Many states have responded to *Miller* by simply requiring sentencers to take the *Miller* factors into account when sentencing a juvenile to life without parole.[141] No further guidance is given about what the sentencing hearing should look like or how to weigh the factors when determining if life without parole is an appropriate sentence.[142] That said, any sentence based on the *Miller* factors requires a prediction about a juvenile's behavior in the future.[143] While these states do not especially

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138. See supra section I.B.

139. See Montgomery v. Louisiana, 136 S. Ct. 718, 735 (2016) ("When a new substantive rule of constitutional law is established, this Court is careful to limit the scope of any attendant procedural requirement to avoid intruding more than necessary upon the States' sovereign administration of their criminal justice systems."); Miller v. Alabama, 567 U.S. 460, 489 (2012).

140. Many states have responded to *Miller* and *Montgomery* by banning juvenile life without parole entirely. See The Campaign for the Fair Sentencing of Youth, supra note 10, at 2 ("The number of states that ban life without parole for children has more than quadrupled since [*Miller* was decided]."). For a complete list of states that ban life without parole for juveniles, see States that Ban Life Without Parole for Children, The Campaign for the Fair Sentencing of Youth, https://www.fairsentencingofyouth.org/media-resources/states-that-ban-life/ [https://perma.cc/AW7G-9JRA] (last visited July 23, 2019).

But because enough states continue to sentence juveniles to life without parole, examining the implications of *Miller*'s predictive mandate remains a pressing issue. See The Campaign for the Fair Sentencing of Youth, supra note 10, at 7–10 (detailing the continued use of juvenile life without parole in several jurisdictions and the disparate impact it has on children of color and children who have experienced trauma).

141. Many states have implemented *Miller* factors–based sentencing schemes through a legislative enactment. See, e.g., Mich. Comp. Laws Ann. § 769.25(6) (West 2019) ("At the hearing [to determine if a life without parole sentence is appropriate], the trial court shall consider the factors listed in *Miller v. Alabama* . . . ."); Mo. Ann. Stat. § 565.033.2 (West 2019) (stating that a sentencer should consider factors that match those given by the Court in *Miller*, including likelihood of rehabilitation). Some states, however, have implemented this scheme through judicial ruling. See, e.g., Parker v. State, 119 So. 3d 987, 998–99 (Miss. 2013) ("After consideration of all circumstances required by *Miller*, the trial court may sentence Parker, despite his age, to 'life imprisonment.'" (footnote omitted) (quoting Miss. Code Ann. § 47-7-3(1)(e))).

142. See supra notes 86–90 and accompanying text.

143. See supra section II.A; see also *Miller*, 567 U.S. at 478 (listing "possibility of rehabilitation" as a factor sentencers should consider when determining whether a life without parole sentence is appropriate for a juvenile).

emphasize the predictive element of *Miller*, it is nonetheless part of the calculation that lower courts must make when sentencing juveniles.

At least seven states and one federal circuit court, however, go beyond simply requiring consideration of the *Miller* factors in sentencing and focus on the predictive element of *Miller* exclusively.[144] Georgia is a striking example of this. The Georgia Supreme Court ruled in *Veal v. State* that in order for a court to sentence a juvenile to life without parole there must be a finding on the record that the defendant "is irreparably corrupt or permanently incorrigible"—both predictions about the personality of the defendant in the future.[145]

While the *Veal* decision has yet to be tested extensively,[146] lower courts have thus far interpreted it as requiring a forward-looking analysis to determine whether a juvenile should be sentenced to life without parole. In one of the first cases to apply the *Veal* decision, *Elkins v. State*, the trial judge held that an examination of the factors required by *Veal*, *Miller*, and *Montgomery* led him to determine that Elkins was "irreparably corrupt . . . [and] not amenable to change."[147] This prediction, the court believed, made the sentence of life without parole appropriate.[148]

Even states that have taken steps to limit juvenile life parole sentences emphasize the predictive elements of *Miller*. In Pennsylvania, home to the largest number of inmates serving life without parole sentences for crimes committed when they were juveniles,[149] the state Supreme Court recognized a presumption against juvenile life without parole.[150] The burden is now on the state to prove that the juvenile offender is "incapable of rehabilitation"—again, a prediction about how a juvenile offender will behave in the future.[151] Once again, implementation at the state level only confirms *Miller*'s predictive mandate.

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144. See supra note 87 and accompanying text.

145. See 784 S.E.2d 403, 412 (Ga. 2016).

146. On remand, the prosecutors in *Veal* declined to seek life without parole, opting instead to seek consecutive life sentences for each of Veal's crimes. Veal v. State, 810 S.E.2d 127, 128 (Ga. 2018). The Supreme Court of Georgia held that this did not implicate *Miller*, and so no finding of irreparable corruption was necessary. See id. at 128–29. As a result, the Georgia Supreme Court has yet to hear a case that evaluates an application of the *Veal* decision. The case study above, *Elkins v. State*, was appealed to the Georgia Supreme Court, which remanded for hearing on whether Mr. Elkins had ineffective assistance of sentencing counsel. 830 S.E.2d 217, 227–28 (Ga. 2019). The court did not rule on whether the application of *Veal* was appropriate. See id.

147. Order Denying Motion for a New Trial at 43, State v. Elkins, CR-1300180-063 (Ga. Super. Ct. Jul. 12, 2018).

148. See id; see also supra section II.A for a discussion of how determinations of irreparable corruption are necessarily predictive.

149. See Moriearty, The Trilogy, supra note 1, at 549.

150. See Commonwealth v. Batts, 163 A.3d 410, 416 (Pa. 2017).

151. See id.

The Court in *Miller* intended sentencers to decide how a juvenile will behave in the future before sentencing them to life without parole. According to the decision, if a court believes a juvenile is incapable of change, then a life without parole sentence is appropriate. This determination is made by examining previous behavior, but is ultimately a prediction about whether a juvenile will change after a long prison sentence—a prediction that is beyond the bounds of current science.

III. THE PROBLEM OF PREDICTION

Having established that *Miller* requires prediction, it is important to understand why requiring prediction is a problem. This Part explores the social science and neuroscience research on the ability to make reliable predictions about juvenile offenders. Section III.A exposes the limitations of predicting adult behavior through the lens of future dangerousness determinations in capital cases. Section III.B then builds on this by examining the literature on predicting juvenile behavior. Next, section III.C explores the likelihood of increased racial bias when making predictions about juveniles. This Part then concludes by examining how the limitations of prediction discussed in sections III.A through III.C turn *Miller* determinations into a guessing game, thereby undermining the moral logic of the decision.

A. *Future Dangerousness and the Limits of Predicting Adult Behavior*

To understand the limitations of predicting behavior in juveniles, it is helpful to begin by examining the limitations of predicting behavior in adults. If judges and juries cannot reliably predict the future behavior or likelihood of rehabilitation in fully developed adults, then they are less likely to be able to predict the behavior of juveniles.[152] Ample research demonstrates that predicting adult behavior, especially decades into the future, is incredibly difficult.[153]

The challenge of predicting the likelihood of violent behavior in adults decades in the future has been studied in the context of "future dangerousness" determinations.[154] First sanctioned in *Jurek v.*

152. See infra section III.B.

153. See Piquero, supra note 96, at 356–57 (outlining various studies demonstrating the difficulty of predicting whether an adult will desist or persist with criminal behavior).

154. See, e.g., Erica Beecher-Monas, The Epistemology of Prediction: Future Dangerousness Testimony and Intellectual Due Process, 60 Wash. & Lee L. Rev. 353, 362–63 (2003) (arguing that clinical predictions about future dangerousness were too unreliable to be used in court); William W. Berry III, Ending Death by Dangerousness: A Path to the De Facto Abolition of the Death Penalty, 52 Ariz. L. Rev. 889, 907–08 (2010) ("[I]ncontrovertible scientific evidence demonstrates that future dangerousness determinations are, at best, wildly speculative."); Carla Edmondson, Nothing Is Certain but Death: Why Future Dangerousness Mandates Abolition of the Death Penalty, 20 Lewis & Clark L. Rev. 857, 896 (2016) ("[N]umerous studies over the last few decades have shown that predictions of a defendant's future dangerousness are fundamentally flawed.").

Texas,[155] determinations of future dangerousness are used as statutory and nonstatutory aggravating factors in capital sentencing throughout the United States.[156] In *Jurek*, which sanctioned a newly enacted Texas capital punishment statute, the jury was asked to find one of five aggravating factors in order to sentence the defendant to death.[157] One of those factors was "whether there is a probability that the defendant would commit criminal acts of violence that would constitute a continuing threat to society."[158] This clause and clauses like it have come to be known as "future dangerousness" questions because they ask jurors to predict whether defendants will continue to be violent years down the road.[159] In this way, future dangerousness mirrors the questions of irreparable corruption that the Court mandated in *Miller*.

Both courts and commentators alike acknowledge that predictions of future dangerousness are unreliable and inaccurate.[160] Even the

155. See 428 U.S. 262, 275–76 (1976). *Jurek* was one of a trio of decisions, along with Gregg v. Georgia, 428 U.S. 153 (1976), and Proffitt v. Florida, 428 U.S. 242 (1976), that reauthorized use of the death penalty in the United States.

156. Two states have capital statutes that explicitly require juries to find that defendants are a future danger in order to sentence them to death. See Or. Rev. Stat. § 163.150(1)(b)(B) (2017); Tex. Crim. Proc. Code § 37.071(2)(b)(1) (2017). Three more list future dangerousness as a statutory aggravating factor. See Idaho Code § 19-2515(9)(i) (2019); Okla. Stat. tit. 21, § 701.12.7 (2019); Wyo. Stat. Ann. § 6-2-102(h)(xi) (2019). To sentence a defendant to death in Virginia, a jury or the court must find either that the murder at issue was particularly vile or that the defendant would constitute an ongoing threat to society. See Va. Code § 19.2-264.2 (2019). At least fifteen other states allow the prosecution to argue future dangerousness as a nonstatutory aggravating factor. See Berry, supra note 154, at 898–900 & nn.58–71 (listing states that allow prosecutors to argue future dangerousness as a nonstatutory aggravating factor and providing example cases for each state). Two additional states allow the prosecution to argue future danger as rebuttal to mitigating evidence presented by the defense. Id. at 899 & nn.72–73 (noting that Florida and Arizona allow future dangerousness arguments on rebuttal and providing case examples from each state). For an overview of the history and use of future dangerousness evidence in each of these states, see Edmondson, supra note 154, at 863–94.

157. See *Jurek*, 428 U.S. at 273.

158. Id. at 269.

159. See Edmondson, supra note 154, at 860 (noting that these clauses are referred to as "future dangerousness" questions). Several state statutes contain future dangerousness questions. See, e.g., Idaho Code § 19-2515(9) ("The following are statutory aggravating circumstances . . . (i) The defendant, by his conduct, whether such conduct was before, during or after the commission of the murder at hand, has exhibited a propensity to commit murder which will probably constitute a continuing threat to society."); Or. Rev. Stat. § 163.150(1)(b) ("Upon the conclusion of the presentation of the evidence, the court shall submit the following issues to the jury . . . (B) Whether there is a probability that the defendant would commit criminal acts of violence that would constitute a continuing threat to society . . . ."); Wyo. Stat. Ann. § 6-2-102(h) ("Aggravating circumstances are limited to the following . . . (xi) The defendant poses a substantial and continuing threat of future dangerousness or is likely to commit continued acts of criminal violence . . . ."). For a complete list of state statutes that contain future dangerousness questions, see supra note 156.

160. See Adam Lamparello, Using Cognitive Neuroscience to Predict Future Dangerousness, 42 Colum. Hum. Rts. L. Rev. 481, 488 (2011) ("[T]he courts—and

Supreme Court itself acknowledged—in *Barefoot v. Estelle*—that psychiatric predictions of future danger were wrong one out of every three times.[161] *Barefoot* challenged the use of psychiatric testimony by the prosecution to demonstrate a defendant's future dangerousness.[162] There, the Court ultimately allowed psychiatric evidence of future danger to be admitted at trial, but only because they were "unconvinced, . . . at least as of now, that the adversarial process cannot be trusted to sort out the reliable from the unreliable evidence and opinion about future dangerousness, particularly when the convicted felon has the opportunity to present his own side of the case."[163]

Substantial empirical evidence since *Barefoot* suggests the adversarial process indeed cannot be trusted to sort out reliable evidence on future dangerousness. Studies of juries, prosecutors, and psychologists all indicate that predictions of future dangerousness are no better than random guesses.[164] For example, an analysis of testimony at capital sen-

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commentators—have consistently recognized that predictive adjudications, whether it be for future dangerousness or lack of control, are often unreliable or . . . simply inaccurate.").

161. 463 U.S. 880, 900 n.7 (1983).

162. See id. at 896.

163. Id. at 901.

164. See Tex. Def. Serv., Deadly Speculation: Misleading Texas Capital Juries with False Predictions of Future Dangerousness 23 (2004), http://texasdefender.org/wp-content/uploads/TDS_Deadly-Speculation.pdf [https://perma.cc/GP4Q-GH8T] (analyzing the disciplinary records of 155 capital defendants in Texas and finding that expert predictions of future dangerousness were wrong 95% of the time); Mark D. Cunningham, Thomas J. Reidy & Jon R. Sorensen, Assertions of "Future Dangerousness" at Federal Capital Sentencing: Rates and Correlates of Subsequent Prison Misconduct and Violence, 32 Law & Hum. Behav. 46, 61 (2008) [hereinafter Cunningham et al., Assertions of Future Dangerousness] (analyzing prison disciplinary records of inmates convicted of capital offenses who prosecutors alleged posed a future danger and finding that only 10% of those inmates had been cited for serious assault); Thomas J. Reidy, Jon R. Sorensen & Mark D. Cunningham, Probability of Criminal Acts of Violence: A Test of Jury Predictive Accuracy, 31 Behav. Sci. & L. 286, 299 (2013) ("[J]uries were right 90% of the time when predicting that future violence was not likely, and wrong 90% of the time when they predicted that future violence was likely."); see also Brief for Am. Psychiatric Ass'n as Amicus Curiae Supporting Petitioner at 4, *Barefoot*, 463 U.S. 880 (No. 82-6080), 1983 U.S. S. Ct. Briefs LEXIS 1529, at *18–19 (arguing that the psychiatrists were incapable of making the predictions of future dangerousness that underpinned the death sentence in *Estelle*); Mark Douglas Cunningham & Jon R. Sorenson, Capital Offenders in Texas Prisons: Rates, Correlates, and an Actuarial Analysis of Violent Misconduct, 31 Law & Hum. Behav. 553, 554–55 (2007) (overviewing previous studies of future dangerousness and their motivations); Edmondson, supra note 154, at 895–910 (detailing the failure of experts and juries to accurately predict a defendant's future dangerousness).

Despite the fact that future dangerousness is often couched in terms of a defendant's ongoing danger to "society," studies of the accuracy of future dangerousness predictions made by judges and juries are limited to behavior in prison. See, e.g., Tex. Def. Serv., supra, at 21–22 (studying 155 capital inmates in Texas prisons); Cunningham et al., Assertions of Future Dangerousness, supra, at 51 (studying 145 male inmates convicted of capital offenses in federal prisons); Reidy et al., supra, at 292 (studying 155 male inmates in Oregon prisons, convicted of aggravated murder, that had received either life without

tencing trials found that expert predictions of future dangerousness were accurate only five percent of the time.[165] A similar study that examined the accuracy of jury predictions of future prison violence showed that such predictions were accurate only ten percent of the time.[166] In more recent years, lower courts have argued that expert witnesses should not be allowed to share their predictions on future dangerousness to juries because the evidence is wholly unreliable.[167]

B. *The Limits of Predicting Juvenile Behavior*

All the limitations of predicting future dangerousness in adults become more pronounced when making predictions about whether a juvenile is capable of rehabilitation. There is substantial evidence to suggest that such predictions are impossible.[168]

Long-term studies of juveniles who commit crime[169] demonstrate this impossibility.[170] For example, one of the longest longitudinal studies

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parole or the death penalty). In all jurisdictions that have the death penalty, however, life without parole is authorized as a possible sentence and frequently the sentence given in lieu of the death penalty. See Steiker & Steiker, supra note 67, at 296. As a result, the predictions of future dangerousness, which happen in the sentencing phase, are necessarily about a defendant's likelihood of presenting a continuing danger in prison. See supra note 156 and accompanying text. At least one jurisdiction, Georgia, has explicitly acknowledged this by limiting arguments around future dangerousness to the prison context. See Henry v. State, 604 S.E.2d 826, 829 (Ga. 2004) ("An argument that a death sentence is necessary to prevent future dangerous behavior by the defendant in prison must be based on evidence suggesting that the defendant will be dangerous in prison.").

165. See Tex. Def. Serv., supra note 164, at 23.

166. See Reidy et al., supra note 164, at 299. Conversely, jurors were right ninety percent of the time when predicting future violence was not likely. Id.

167. See Flores v. Johnson, 210 F.3d 456, 464 (5th Cir. 2000) (Garza, J., specially concurring) (explaining that the use of psychiatric evidence to predict future dangerousness fails the Supreme Court's standard of reliability for scientific evidence set forth in Daubert v. Merrell Dow Pharm., Inc., 509 U.S. 579, 593–94 (1993)); United States v. Sampson, 335 F. Supp. 2d 166, 219–21 (D. Mass. 2004) (noting that expert predictions of future dangerousness are so unreliable that they should probably not be admitted in court).

168. See Larson et al., supra note 96, at 335–36 ("[T]here is currently no basis in current behavioral science nor well-informed professional knowledge that can support any reliable forensic expert opinion on the relative likelihood of a specific adolescent's prospects for rehabilitation at a date that may be years to decades in the future."); Piquero, supra note 96, at 355 ("[I]t is very difficult to predict early in the life-course which individual juvenile offender will go on to become a recidivistic adult offender."); Scott et al., Juvenile Sentencing Reform, supra note 74, at 684 ("[P]rediction of future violence from adolescent criminal behavior, even serious criminal behavior, is unreliable and prone to error.").

169. This section frequently uses the phrase "juvenile reoffense" in lieu of the phrase "irreparable corruption." This is in large part because the literature on predicting juvenile behavior is focused on the likelihood of recidivism and criminal persistence. Irreparable corruption is not a term used by researchers who study long-term patterns of juvenile criminal behavior. That said, an irreparably corrupt juvenile will necessarily be one that reoffends, so the comparison is applicable. See supra text accompanying notes 77–80 (explaining the meaning of irreparable corruption in the *Miller* context).

of age and crime followed 500 American men in the late 1920s and early 1930s from childhood to age seventy.[171] Researchers in the study analyzed myriad potential risk factors of crime in an attempt to determine which, if any, factors separated lifelong offenders from the rest of the group.[172] Despite these rich longitudinal data, researchers struggle to predict which children will persist with criminal behavior in the future.[173] As children and teenagers, many lifelong offenders in the study had similar risk factors to those who would stop committing crime.[174] Shorter-term studies,[175]

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170. See John H. Laub & Robert J. Sampson, Shared Beginnings, Divergent Lives: Delinquent Boys to Age 70, at 289–90 (2003) (explaining the limitations of using juvenile risk factors to attempt to predict future criminal behavior); Rolf Loeber, Barbara Menting, Donald R. Lynam, Terri E. Moffitt, Magda Stouthamer-Loeber, Rebecca Stallings, David P. Farrington & Dustin Pardini, Findings from the Pittsburgh Youth Study: Cognitive Impulsivity and Intelligence as Predictors of the Age–Crime Curve, 51 J. Am. Acad. Child & Adolescent Psychiatry 1136, 1146 (2012) (noting that their study was unable to predict who would reoffend into adulthood).

171. See Laub & Sampson, supra note 170, at 8.

172. See id. at 8–10 (providing an overview of the focus of the analysis in the book).

173. See id. at 289–90 (explaining the limitation of criminological prediction based on childhood factors).

174. See id. at 276 (explaining how adolescent offenders had "considerable heterogeneity in adult outcomes").

175. The Pittsburgh Youth Study began interviewing boys attending first, fourth, and seventh grades in public schools in inner-city Pittsburgh in 1987. See Loeber et al., supra note 170, at 1136–37. To date, the study has followed those boys up to age thirty-five, focusing on their juvenile offending, mental health problems, drug use, and other risk factors. Id. In their most recent update in 2012, the Pittsburgh Study researchers noted multiple times that it was not possible to know who will desist from criminal behavior and who will not. Id. at 1138–39, 1146–47 (noting that no single risk factor identified by the study could predict homicide offenders and explaining the difficulties in "investigating the influence of cognitive factors on later criminal behavior").

One longitudinal study has reported distinct risk factors for juvenile reoffense or criminal persistence. The Cambridge Study in Delinquent Development, which tracked males from a working-class area of London from ages eight to nine until thirty-two, found that persistent juvenile offenders tended to come from poor, broken households, were likely to have family members who committed crimes, and tended to do poorly in school. See David P. Farrington & Donald J. West, The Cambridge Study in Delinquent Development: A Long-Term Follow-Up of 411 London Males, *in* Kriminalitat 115, 116–18, 122 (H.-J. Kerner & G. Kaiser eds., 1990) ("[F]our factors were independently important predictors of offending: (a) economic deprivation, including low income and poor housing; (b) family criminality, including convicted parents and delinquent siblings; (c) parental mishandling, including poor supervision and poor child-rearing behavior; and (d) school failure, including low intelligence and attainment."). Those who persisted after twenty tended to have substance use issues and absent fathers. See id. at 127–28 ("Persistence in crime after age 20 was predicted especially by heavy drinking at age 18 and by having a father who rarely joined in the boy's leisure activities at age 12, as well as by indicators of economic deprivation, family criminality and school failure at age 8–10."). More than these risk factors, however, the best predictor of whether a study member would commit crime at any given age was whether they had done so at the immediately preceding age. See id. at 122. That said, the Cambridge Study researchers are clear that these risk factors are not determinative of whether a juvenile will become a persistent adult offender. See id. at 128 (noting that the risk factors used by the study to create

as well as papers that aggregate research from across shorter studies, have come to similar conclusions.[176]

The prediction required in *Miller* is particularly troubling because predictions about future criminal behavior in juveniles tend to be over-inclusive—what researchers call a "false positive problem."[177] In essence, the exact worry from *Roper* and *Graham* that the Court abandoned in *Miller*[178] is exacerbated by the decision's prediction requirement. In one study predicting juvenile criminal behavior, the false positive rate was 87

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prediction scores did not "significantly predict[] persistence as opposed to desistance"). A variety of factors shape criminal behavior over the course of a life. Policymakers should use risk factors as guides for intervention. See id. at 131–32 (recommending interventions to combat the effects of poverty, poor parental child-rearing techniques, and other risk factors).

Even if the Cambridge study researchers believed their work were grounds for prediction, there are several reasons why it is irrelevant in the context of juvenile life without parole in the United States. First, the study only follows juveniles until age thirty-two, much younger than juvenile murderers would be when eligible for parole. See id. at 115. Second, crime and punishment are different in the United Kingdom. It has a much lower murder rate and its prison population is markedly smaller than the United States'. See UN Office on Drugs and Crime, Intentional Homicides (per 100,000 People), The World Bank, https://data.worldbank.org/indicator/VC.IHR.PSRC.P5?locations=GB-US [https://perma.cc/e793-8UX4] (last visited July 23, 2019) (showing the United States has a murder rate about five times as high as the United Kingdom); World Prison Populations, BBC News, http://news.bbc.co.uk/2/shared/spl/hi/uk/06/prisons/html/nn2page1.stm [http://perma.cc/LUC5-ZYSQ] (last visited July 23, 2019) (listing the United Kingdom's prison population at 88,249 and the United States' as 2,193,798). Furthermore, the vast majority of respondents in the Cambridge survey were white and part of the majority population of the U.K. See Farrington & West, supra, at 116. By contrast, it is estimated that sixty percent of juvenile lifers in the United States are black. Ashley Nellis, The Sentencing Project, The Lives of Juvenile Lifers: Findings from a National Survey 8 tbl.2 (2012), https://www.sentencingproject.org/wp-content/uploads/2016/01/The-Lives-of-Juvenile-Lifers.pdf [https://perma.cc/453E-JGBY]. Juvenile delinquency researchers warn that results from the majority population should be viewed with caution when applied to a minority population. See Robert D. Hoge, Gina M. Vincent & Laura Guy, Prediction and Risk/Needs Assessment, *in* From Juvenile Delinquency to Adult Crime 150, 175 (Rolf Loeber & David P. Farrington eds., 2012) (noting the limitations of applying their review of predictive tools to minority ethnic and cultural groups as well as to women). The findings of the Cambridge Study's researchers that some risk factors clearly correlate with persistent criminal behavior into adulthood do not have strong bearing on the ability of American juries to predict whether a juvenile is irreparably corrupt.

176. See, e.g., Lila Kazemian, David P. Farrington & Marc Le Blanc, Can We Make Accurate Long-Term Predictions About Patterns of De-Escalation in Offending Behavior?, 38 J. Youth & Adolescence 384, 397 (2009) (noting that the authors did not believe their findings could predict change within individuals over long periods of time).

177. See Laub & Sampson, supra note 170, at 290 ("Known as the false positive problem, prediction scales often result in the substantial overprediction of future criminality."); Hoge et al., supra note 175, at 155 ("A significant limitation on attempts to identify youth who will become chronic and violent offenders is the potential for a high false positive rate."); Loeber et al., supra note 170, at 1139 (noting "not surprisingly" that the false positive error rate for their analysis was high).

178. See supra notes 81–82 and accompanying text.

percent[179]—a high error rate in any circumstance, but especially so when considering the seriousness of life without parole sentences.[180] In sum, to say that we can reliably determine whether a juvenile is "irreparably corrupt" appears to reach beyond the bounds of science.

These predictions are difficult not only because neither scientists nor sentencing judges know what reliably indicates that a juvenile will reoffend but also because science indicates that the likelihood of a juvenile offender becoming a chronic adult criminal is small.[181] In part, this is because the rates of all kinds of crime decrease precipitously with age.[182] Known as the "age–crime curve," there is a clear pattern in Western culture of juvenile offending beginning in late childhood, increasing through adolescence, and then dropping off in an offender's twenties.[183]

Several social factors likely contribute to the existence of the age–crime curve. For example, as the Court noted in *Miller,* juveniles are more influenced by their environments than adults.[184] As they age, this decreases, making them less likely to be influenced by others to commit crimes.[185] The difference in priorities between adults and juveniles, who lack many of the responsibilities placed on adults, also likely contributes to this difference in behavior.[186]

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179. See Loeber et al., supra note 170, at 1139.

180. See Graham v. Florida, 560 U.S. 48, 69 (2010) (placing juvenile life without parole sentences on par with the death penalty); Jeffrey Fagan, End Natural Life Sentences for Juveniles, 6 Criminology & Pub. Pol'y 735, 740 (arguing that juvenile life without parole is nearly as disproportionate a sentence for juveniles as the death penalty).

181. See Piquero, supra note 96, at 353 ("Only a very small number of persons continue to offend into and throughout adulthood . . . ."); Magda Stouthamer-Leober, Evelyn Wei, Rolf Loeber & Ann S. Masten, Desistance from Persistent Serious Delinquency in the Transition to Adulthood, 16 Dev. & Psychopathology 897, 914–15 (2004) (noting that the authors' analysis could be used to inform juvenile interventions, but that it did not reliably predict future juvenile behavior).

182. Laurence Steinberg, The Influence of Neuroscience on US Supreme Court Decisions About Adolescents' Criminal Culpability, 14 Nature Reviews Neuroscience 513, 515 & fig.1 (2013) (explaining the "age–crime curve"); see also Farrington & West, supra note 175, at 115 (noting that the original aim of the Cambridge Study in Delinquent Development was in part to explain why "adult crime usually ended as men reached their twenties").

183. See Loeber et al., supra note 170, at 1139 ("In western populations of youth, the prevalence of delinquency increases from late childhood, peaks in middle to late adolescence, and then decreases. This is known as the age–crime curve.").

184. Miller v. Alabama, 567 U.S. 460, 471 (2012); see also Elizabeth Scott, Natasha Duell & Laurence Steinberg, Brain Development, Social Context, and Justice Policy, 57 Wash. U. J.L. & Pol'y 13, 43 (2018) [hereinafter Scott et al., Brain Development].

185. See Elizabeth Scott & Laurence Steinberg, Rethinking Juvenile Justice 38–39 (2008) [hereinafter Scott & Steinberg, Rethinking Juvenile Justice]; Scott et al., Brain Development, supra note 184, at 44–45.

186. See Scott et al., Brain Development, supra note 184, at 44 (explaining the role that differing values may have on juvenile risk-seeking behavior).

Brain development also plays a role in desistence from crime as juveniles age. Juveniles are more reward- and risk-seeking than adults, which makes them more likely to commit crimes.[187] This is caused, at least in part, by changes to the brain's reward circuitry that occur during puberty.[188] Developmental neuroscience indicates that large changes take place in the prefrontal cortex throughout the late teens and early twenties. This, in turn, increases executive functioning—the ability to plan ahead, execute plans, and control impulses.[189] Prior to this development, low executive functioning and impulse control in juveniles make them more likely to act rashly and commit crimes.[190] All of these things combined indicate that a juvenile's actions when they are young may not be representative of the type of character they will have as adults. The Court itself acknowledges this in *Miller*.[191] This, in turn, makes it nearly impossible to predict whether a juvenile is likely to reoffend after they have matured.

C. *Prediction and Racial Bias*

Another serious concern with predictions about juveniles is racial bias. Prior to *Miller,* black children were already significantly more likely than their white peers to be sentenced to life without parole.[192] Since *Miller,* the disparity in life without parole sentencing between black juveniles and their white peers has only increased.[193] While this cannot be attributed to the predictive element of *Miller* alone, there is a large overlap between the *Miller* factors, such as the lessened culpability of youth, and traits that American society seems incapable of understanding in juveniles of color.[194] These disparities make ensuring a just and administrable sentencing scheme all the more important.

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187. See id. at 23; see also Scott & Steinberg, Rethinking Juvenile Justice, supra note 185, at 42–43 (explaining that while adults and adolescents perceive risk at the same rate, adolescents normally see more benefits in taking risk than adults, leading them to engage in risk-seeking behavior).

188. See Scott & Steinberg, Rethinking Juvenile Justice, supra note 185, at 42–43 (explaining that developments in the limbic system of the brain and connections between the limbic system and the prefrontal cortex may account for reward seeking).

189. See id. at 44–45 (explaining the development of the prefrontal cortex and its implications for executive functions).

190. See id. at 43; Piquero, supra note 96, at 349–50.

191. See Miller v. Alabama, 567 U.S. 460, 471 (2012). Despite acknowledging that juvenile character is unlikely to follow someone into adulthood, the Court failed to note that this would make predictions about irreparable corruption virtually impossible.

192. See The Campaign for the Fair Sentencing of Youth, supra note 10, at 2 (noting that prior to *Miller,* sixty-one percent of juveniles sentenced to life without parole were black).

193. See id. ("[O]f new cases tried since 2012, approximately 72% of children sentenced to life without parole have been Black—as compared to approximately 61% before 2012.").

194. See infra notes 197–202 and accompanying text.

Adults and children of color are more likely to be viewed by juries and judges as violent and likely to reoffend.[195] Indeed, there is evidence to suggest that racial bias plays a significant role in predictions of future dangerousness in capital cases for black defendants.[196] Given the similarity between future dangerousness prediction and the *Miller* prediction, it is difficult to imagine that the decision to sentence a juvenile to life without parole under *Miller* could ever be free of racial bias.

There are also racial biases specific to children that undoubtedly have an impact on prediction in the *Miller* context. For example, children of color are more likely to be perceived as older than their white peers, and thus more deserving of punishment.[197] In the school context, this leads black children to be punished at a higher rate than their white peers.[198] In a similar vein, outside observers are more likely to attribute bad actions by children of color as reflective of their internal character, rather than as a result of their neighborhood or surroundings.[199] For example, a study of presentence reports by juvenile probation officers in Washington state showed that officers were more likely to

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195. See Jeffrey Fagan, The Contradictions of Juvenile Crime and Punishment, Daedalus, Summer 2010, at 43, 52 [hereinafter Fagan, Contradictions] (citing studies showing that racial disparities in the decision to detain juveniles are more influenced by race than by criminal behavior); cf. John Paul Wilson, Kurt Hugenberg & Nicholas O. Rule, Racial Bias in Judgments of Physical Size and Formidability: From Size to Threat, 113 J. Personality & Soc. Psychol. 59, 77 (2017) ("Across a range of different stimuli and dependent variables, perceivers showed a consistent and strong bias to perceive young Black men as larger and more capable of harm than young White men . . . .").

196. See Tex. Def. Serv., supra note 164, at 42 (arguing that the juror's race and the defendant's race have an "undeniable effect on determinations of future dangerousness"); William J. Bowers, Benjamin D. Steiner & Marla Sandys, Death Sentencing in Black and White: An Empirical Analysis of the Role of Jurors' Race and Jury Racial Composition, 3 U. Pa. J. Const. L. 171, 260 (2001) ("[W]hites more often than blacks see the [black] defendant as likely to be dangerous to society in the future and as likely to get back on the streets if not sentenced to death."); see also Kathryn Roe Eldridge, Racial Disparities in the Capital System: Invidious or Accidental?, 14 Cap. Def. J. 305, 317 (2002) (arguing that jury selection procedures lead African American capital defendants to face juries that are more likely "to sentence [them] to death on the future dangerousness predicate[d] out of subconscious" racial bias).

197. See Phillip Atiba Goff, Matthew Christian Jackson, Brooke Allison Lewis Di Leone, Carme Marie Culotta & Natalie Ann DiTomasso, The Essence of Innocence: Consequences of Dehumanizing Black Children, 106 J. Personality & Soc. Psychol. 526, 540 (2014) ("Black boys can be misperceived as older than they actually are and prematurely perceived as responsible for their actions during a developmental period where their peers receive the beneficial assumption of childlike innocence.").

198. See German Lopez, Black Kids Are Way More Likely to Be Punished in School than White Kids, Study Finds, Vox (Apr. 5, 2018), https://www.vox.com/identities/2018/4/5/17199810/school-discipline-race-racism-gao [https://perma.cc/N8NZ-KH7M] (explaining the results of a GAO study of racial bias in discipline records of K–12 schools and noting that it fits in with a larger body of research that confirms that black children are more likely to be punished in school than their white peers).

199. See Fagan, Contradictions, supra note 195, at 52–53 (summarizing studies on racial bias in perceptions of juvenile culpability).

attribute criminal behavior by African Americans to internal, rather than external, factors.[200] This, in turn, made the African American juveniles seem more culpable than their white peers.[201] Other studies of police and probation officers yielded similar results.[202] In sum, with respect to the bases of the *Miller* prediction, we seem to be incapable of understanding juveniles of color.

D. *Prediction and the Moral Logic of* Miller

The predictive element of *Miller* and the dramatic scientific imprecision of prediction present several normative problems. The first stems not from the *Miller* decision itself but from prior "children are different" precedent. One of the key principles of *Roper* and *Graham* is that allowing juries to determine which juveniles are truly irreparably corrupt runs an unacceptable risk of sentencing an undeserving juvenile to death or life without parole.[203] Any chance that there are juveniles who might be deserving of this punishment is outweighed by the risk of false positives.[204] In both cases, the Court reached this conclusion without pointing to research that false positives in these sorts of predictions are overly common.[205] The difficulty of making the prediction accurately alone was enough to deter them from giving juries discretion.[206] *Miller*

200. See George S. Bridges & Sara Steen, Racial Disparities in Official Assessments of Juvenile Offenders: Attributional Stereotypes as Mediating Mechanisms, 63 Am. Soc. Rev. 554, 561, 563–64 (1998).

201. See id. at 567 (finding that young offenders whose crimes are perceived to stem from negative internal traits are more likely to be assessed to have a high risk of reoffending); see also Fagan, Contradictions, supra note 195, at 52.

202. See, e.g., Sandra Graham & Brian S. Lowery, Priming Unconscious Racial Stereotypes About Adolescent Offenders, 28 Law & Hum. Behav. 483, 499 (2004) (finding that unconscious police and probation officer bias "influenced attributionally relevant judgments about offenders' negative traits, culpability, likely recidivism, and deserved punishment"). See generally Lawrence D. Bobo & Victor Thompson, Unfair By Design: The War on Drugs, Race, and the Legitimacy of the Criminal Justice System, 73 Soc. Res. 445, 448 (2006) (outlining the history of racial bias leading to unequal enforcement of the law and mass incarcerations of blacks compared to whites).

203. See Roper v. Simmons, 543 U.S. 551, 572–73 (2005) ("Certainly it can be argued, although we by no means concede the point, that a rare case might arise in which a juvenile offender has sufficient psychological maturity, and at the same time demonstrates sufficient depravity, to merit a sentence of death."); supra notes 37–44 and accompanying text.

204. See supra notes 35–41, 51–54 and accompanying text.

205. See Graham v. Florida, 560 U.S. 48, 77–78 (2010) (noting that allowing juries to levy life without parole sentences to nonhomicide offenders on a case-by-case basis was unacceptable because it risked sentencing an insufficiently culpable juvenile to life without parole); *Roper*, 543 U.S. at 572–73 (noting that allowing juries to assess whether a juvenile is culpable on a case-by-case basis is unacceptable because "[t]he differences between juvenile and adult offenders are too well marked and well understood to risk allowing a youthful person to receive the death penalty despite insufficient culpability").

206. See *Graham*, 560 U.S. at 77 (explaining that state laws imposing juvenile life without parole sentences "based only on a discretionary, subjective judgment by a judge or

abandoned that principle, and thereby threw aside a driving element of prior precedent.[207]

Even if *Miller* were not such a clear break from *Roper* and *Graham* on false positives, the scientific limitations of the predictive element of *Miller* would still pose a normative problem. The Court in *Miller* envisioned a world in which sentencers would be able to make a rational, informed decision about whether a juvenile was truly deserving of a life without parole sentence.[208] Predicting irreparable corruption is incompatible with that goal. When sentencers are asked to make a determination that is beyond their capacity or that of science writ large, they are functionally left to guess. Not only can this guessing lead to inequitable administration of the law, but also research around racial bias and threat perceptions indicates that racial bias will play a strong role in informing these decisions.[209] Absent the ability to accurately predict a juvenile's likelihood of rehabilitation, allowing sentencers to make this prediction poses serious problems for equality and justice in juvenile life without parole sentencing that require fundamental reform.

IV. RECTIFYING THE PROBLEM OF PREDICTION

Having demonstrated that prediction is at the core of *Miller*'s mandate and explored why such predictions are difficult if not impossible to make, this Part now turns to solutions. Section IV.A explores potential procedural modifications that would help sentencers understand the limitations of any prediction they make about whether a juvenile is irreparably corrupt. Section IV.B examines a reform to juvenile life without parole sentencing that eliminates the predictive mandate and focuses only on the backward-looking *Miller* factors. Ultimately, however, both of these solutions fail to solve the problem of prediction while staying true to the "children are different" line of precedent. Therefore, the final section, IV.C, argues that a total ban on juvenile life without parole sentences is the best solution to the problem of prediction in *Miller*.

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jury that the offender is irredeemably depraved, are insufficient to prevent the possibility that the offender will [receive a sentence] for which [they] lack moral culpability"); *Roper*, 543 U.S. at 572–73 ("If trained psychiatrists with the advantage of clinical testing and observation refrain, despite diagnostic expertise, from assessing any juvenile under 18 as having antisocial personality disorder, . . . [s]tates should refrain from asking jurors to issue a far graver condemnation—that a juvenile offender merits the death penalty.").

207. See supra notes 81–83 and accompanying text.

208. See Miller v. Alabama, 567 U.S. 460, 475–76 (2012) (invoking death penalty precedent to describe the sort of careful consideration a jury should go through before sentencing a juvenile to life without parole).

209. See supra section III.C.

A. *Improving Validity of Evidence*

One way to ameliorate the problem of the limitations of prediction in social sciences is to establish a system to warn sentencers about the limitations of their ability to predict how a juvenile will behave decades in the future after a long prison sentence.

State v. Henderson, a New Jersey criminal case about the reliability of eyewitness testimony,[210] offers an example of how such a system might work. *Henderson* concerned the validity of eyewitness testimony in a murder investigation. The defendant in that case argued that the police had been impermissibly suggestive while interviewing the eyewitness, and that, along with other limitations on eyewitness accounts, made the testimony inadmissible.[211] In response to these arguments, the New Jersey Supreme Court appointed a Special Master to evaluate scientific and other evidence about eyewitness identifications.[212] The Special Master, a retired judge, led a ten-day remand hearing that included the Attorney General, the Public Defender, and several amici. He heard testimony from seven expert witnesses and collected 360 exhibits, including 200 published studies on eyewitness testimony and scientific literature on the validity of eyewitness identifications.[213] Using the results of the hearing, the special master produced a 2,000-page report that covered what was currently known about the validity of eyewitness identification and made recommendations for how to alter the existing standard for admissibility and evaluation of eyewitness testimony.[214]

The New Jersey Supreme Court, using the scientific findings in that report, then issued a detailed opinion highlighting the flaws in the current method of eyewitness identification in New Jersey and altering the state standard for admissibility of eyewitness evidence.[215] The Court, recognizing the limitations of a jury to successfully evaluate eyewitness testimony, also ordered the creation of new jury instructions to assist jurors in understanding the many ways in which eyewitness testimony might be flawed.[216]

A similar process could be followed with determinations about whether a juvenile is "irreparably corrupt." Much like eyewitness testi-

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210. 27 A.3d 872 (N.J. 2011).

211. See id. at 880–83 (detailing the defendant's objections to the police lineup procedure and the eyewitness testimony at trial).

212. See id. at 877.

213. See id. at 884–85 (outlining the experts who testified at the remand hearing as well as the evidence presented).

214. See id. at 877.

215. See id. at 918–22.

216. See id. at 878 ("To help jurors weigh that evidence, they must be told about relevant factors and their effect on reliability. To that end, we have asked the Criminal Practice Committee . . . to draft proposed revisions to the current model charge on eyewitness identification and address various system and estimator variables.").

mony, there is substantial scientific evidence about the ability to predict whether a juvenile will offend in the future. There is also substantial evidence on the sorts of biases that might impact a jury's ability to evaluate evidence about irreparable corruption in a neutral manner.[217] A comprehensive study of available evidence as well as expert testimony might lead the Court to formulate clearer guidance on how to determine whether a juvenile is irreparably corrupt.

There are, however, some limitations to this idea. First and foremost, the Supreme Court has historically only appointed special masters in cases in which it held original jurisdiction, such as disputes between states.[218] Furthermore, the Court specifically stated in *Montgomery* that it did not wish to detail exactly how the *Miller* factors should be considered in state courts out of respect for the sovereignty of state criminal justice systems.[219] It is unlikely that the Court would choose to appoint its first special master in an appellate case in order to mandate specific state criminal procedure.

In addition, this solution presupposes that sentencers could be capable of reliably making predictions about a juvenile's behavior far into the future. As section III.A explains, current scientific literature indicates that such prediction is difficult if not impossible. A special master evaluating the state of current scientific literature might be forced to conclude that the only way to bring the *Miller* decision in line with science is to eliminate the requirement of prediction entirely. This seems especially likely given the scientific consensus around the false positive problem with predictions about juvenile behavior.[220] Since the *Miller* decision specifically declared that juvenile life without parole sentences should be rare,[221] it is hard to imagine a special master recommending a scheme of prediction that will be overinclusive. If a special master is destined to recommend that prediction is weak if not impossible, it would defeat the purpose of the special master in the first place.

B. *Improving Procedural Protections*

Given the limitations of the ability to predict how a juvenile will behave decades in the future, another solution may be to eliminate the element of prediction from the *Miller* factors by instructing sentencers to focus only on the first four: immaturity and failure to appreciate risks

217. See supra section III.C.

218. See Special Master Reports, Supreme Court of the U.S., https://www.supremecourt.gov/SpecMastRpt/SpecMastRpt.aspx [https://perma.cc/K3SJ-2NHG] (last visited July 23, 2019).

219. See Montgomery v. Louisiana, 136 S. Ct. 718, 735 (2016).

220. See supra notes 177–179 and accompanying text.

221. See Miller v. Alabama, 567 U.S. 460, 479 (2012) ("But given all we have said in *Roper*, *Graham*, and this decision about children's diminished culpability and heightened capacity for change, we think appropriate occasions for sentencing juveniles to this harshest possible penalty will be uncommon.").

and consequences; the juvenile's family environment; the extent of the juvenile's participation in the offense and the influence of familial or peer pressure on that participation; and the role the juvenile's lack of legal savvy may have played in their conviction and sentence.[222] This would allow sentencers to examine only evidence that can be known at the time of the crime and to avoid the requirement that sentencers make an unstable prediction about juvenile rehabilitation.

With this reform, juvenile life without parole sentencing would more closely match death penalty sentencing in the United States. In death penalty cases, sentencing juries are asked to consider all relevant mitigating evidence and individual characteristics of the defendant in order to determine whether a death sentence is appropriate.[223] A *Miller* sentencing scheme that looks only at the mitigating influence of youth at the time of the crime would allow for similarly individualized consideration. Given that the Court has compared a juvenile life without parole sentence to death, similar backward-looking sentencing procedures seem appropriate.[224]

If the Court were to examine only backward-looking factors, however, it would be veering from its previous "children are different" jurisprudence. A primary underpinning of *Roper*, *Graham*, *Miller*, and *Montgomery* is that children are capable of change and as a result should not be subjected to the harshest punishments.[225] To focus only on the backward-looking *Miller* factors would be to ignore the fact that children are capable of rehabilitation. While this procedure might be more scientifically sound, it would not follow as clearly from previous cases. This should cause the Court to reject such a solution.

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222. See id. at 477–78.

223. See Lockett v. Ohio, 438 U.S. 586, 608 (1978) (holding that a death penalty statute must allow consideration of all relevant mitigation factors in order to be constitutional); Woodson v. North Carolina, 428 U.S. 280, 304–05 (1976) (declaring a mandatory death penalty statute unconstitutional because it failed to allow individualized consideration of a defendant and the crime before sentencing them to death).

224. See *Miller*, 567 U.S. at 474 ("Life-without-parole terms, the [*Graham*] Court wrote, 'share some characteristics with death sentences that are shared by no other sentences.' Imprisoning an offender until he dies alters the remainder of his life 'by a forfeiture that is irrevocable.'" (quoting Graham v. Florida, 560 U.S. 48, 69 (2010))); *Graham*, 560 U.S. at 69; see also Cara H. Drinan, The *Miller* Revolution, 101 Iowa L. Rev. 1787, 1809 (2016) (arguing that *Miller* suggests that life without parole sentencing should be treated like a "death sentence for children").

225. See Montgomery v. Louisiana, 136 S. Ct. 718, 726 (2016) (citing a juvenile's heightened capacity for change as justification for limiting juvenile life without parole sentences); *Miller*, 567 U.S. at 481 (same); *Graham*, 560 U.S. at 74 (citing a juvenile's capacity for change as a reason for banning life without parole sentences for juvenile nonhomicide offenders); Roper v. Simmons, 543 U.S. 551, 570 (2005) (citing the "less fixed," transient personalities of juveniles as grounds for declaring the juvenile death penalty a disproportionate punishment).

C. *Total Ban*

The most logical solution to the issues presented in this Note is to ban juvenile life without parole sentences entirely. This would follow logically from previous juvenile extreme punishment cases, which rest on the notion that it is impossible to tell which juveniles are permanently incorrigible. It would also avoid the fear of false positives that pervades both *Graham* and *Roper* and is confirmed by scientific research. Most importantly for the purposes of this Note, it would avoid the problem of prediction that currently destabilizes the *Miller* mandate.

A growing consensus against juvenile life without parole on the state level only bolsters the argument for a total ban. When determining if a sentence is disproportionate under the Eighth Amendment, the Supreme Court traditionally looks to the enactments of state legislatures.[226] When evaluating these legislative enactments, "It is not so much the number . . . that is significant, but the consistency of the direction of change."[227] When it comes to juvenile life without parole, this consistent change is happening.

Since the *Miller* decision in 2012, sixteen states and the District of Columbia have banned life without parole sentences for juveniles, bringing the national total to twenty-one states, along with D.C.[228] At least five additional states have no one currently serving a juvenile life without parole sentence.[229] Furthermore, as the Court pointed out in *Graham*, the existence of life without parole for juveniles in many states does not reflect the express wishes of the legislature.[230] Instead, it is a result of states increasingly abandoning juvenile court systems and transferring juveniles to adult court, where life without parole is a potential punishment.[231] This, in combination with the number of states that have explicitly banned life without parole, should push the Court toward a total ban on these sentences.

There are, however, some reasons to expect the Court may not take this step. The Court has only grown more conservative since the *Miller* decision. Justices Alito, Thomas, and Roberts all dissented in *Miller*.[232]

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226. See, e.g., *Roper*, 543 U.S. at 564 ("The beginning point [of determining whether the death penalty of juveniles is disproportionate] is a review of objective indicia of consensus, as expressed in particular enactments of legislatures that have addressed the question.").

227. Atkins v. Virginia, 536 U.S. 304, 315 (2002).

228. The Campaign for the Fair Sentencing of Youth, supra note 10, at 2.

229. Id.

230. See *Graham*, 560 U.S. at 66–67 (noting that few states have statutes expressly condoning juvenile life without parole and that juveniles who are sentenced to life without parole are treated as adults when they are sentenced).

231. See id. (explaining the role transfer plays in sentencing juveniles to life without parole).

232. Miller v. Alabama, 567 U.S. 460, 463 (2012).

The retirement of Justice Kennedy, who was traditionally more liberal on issues of criminal defense, and who wrote almost every one of the "children are different" cases, will make it harder to convince five Justices that a ban is appropriate.[233] This more conservative Court will likely be unwilling to eliminate the possibility of sentencing the worst juvenile offenders to life without parole. That said, the Court may be swayed by the weight of the scientific evidence that the current scheme is unworkable. After all, it was a growing understanding of the science of juvenile development that sparked this line of cases in the first place.[234]

CONCLUSION

When the Court stopped short of a full ban on juvenile life without parole sentences in *Miller*, it created an unmanageable and likely impossible set of guidelines for levying these sentences. While the *Miller* factors are grounded in neuroscience and development, they are used in service of a prediction that appears to be beyond the bounds of current scientific research. As a result, sentencers are left to make what amounts to a guess about how a juvenile will behave many years in the future and after a long prison sentence. This leaves substantial room for racial bias and inequitable administration of the law. To rectify this problem, the Court should take steps either to inform sentencers about the limitations of their ability to make predictions or to eliminate the predictive mandate entirely. Failure to do so may leave juveniles who are capable of reform in prison for the rest of their lives.

233. See Vann R. Newkirk II, What Kennedy's Absence Means for Civil Rights, Atlantic (June 27, 2018), https://www.theatlantic.com/politics/archive/2018/06/the-future-of-civil-rights-in-the-supreme-court/563957/ [https://perma.cc/LV4X-KRUZ] (explaining how Kennedy, traditionally a more conservative Justice, broke with the more conservative wing of the court on many issues of criminal justice). Kennedy wrote the majority opinions in *Roper*, *Graham*, and *Montgomery*. See Montgomery v. Louisiana, 136 S. Ct. 718, 725 (2016); *Graham*, 560 U.S. at 51; Roper v. Simmons, 543 U.S. 551, 554 (2005).

234. See *Graham*, 560 U.S. at 68 ("[D]evelopments in psychology and brain science continue to show fundamental differences between juvenile and adult minds."); *Roper*, 543 U.S. at 569 (explaining the scientific findings about juvenile development that demonstrate that the death penalty is a disproportionate punishment for juveniles).