

# **LONELY TOO LONG: REDEFINING AND REFORMING JUVENILE SOLITARY CONFINEMENT**

*Jessica Lee\**

*Solitary confinement is a frequently used penal tool in all fifty states against all types of offenders. However, since its development in the 1800s, solitary confinement has been found to have damaging psychological effects. Juvenile inmates in particular suffer the greatest psychological damage from solitary confinement because their brains are still in a developmental state. This has led many to propose various reforms that would either end or limit the use of solitary confinement for those under the age of eighteen. However, new neurological studies on brain development show that inmates between the ages of eighteen and twenty-five also suffer similar psychological harms and therefore should be included in these reforms. Pulling from these new neurological studies, this Note proposes federal legislation that would limit the use of solitary confinement for inmates under the age of twenty-five.*

INTRODUCTION.....	846
I. MAN IN THE BOX: THE BIRTH OF SOLITARY CONFINEMENT .....	849
A. <i>What Is Solitary Confinement?</i> .....	849
1. The Rise of Solitary Confinement .....	850
2. The Structure of Solitary Confinement.....	851
3. The Effects of Solitary Confinement .....	853
B. <i>Juvenile Solitary Confinement</i> .....	854
1. The Purpose of Juvenile Solitary Confinement .....	856
2. The Effects of Solitary on Juveniles .....	856
a. <i>Psychological Effects</i> .....	857
b. <i>Social and Developmental Harm</i> .....	858
c. <i>Educational Harm</i> .....	859
d. <i>Physical Harm</i> .....	859
II. HOPE FOR THE FUTURE: SOLITARY REFORM EFFORTS .....	860

---

\* J.D. Candidate, 2017, Fordham University School of Law; B.A., Politics, Philosophy, and Economics, 2014, The King’s College. I would like to thank Jeff Shafer for sparking my interest in the topic, Professor Deborah Denno for helping me hone the topic and find my niche in it, Professor David Tubbs for teaching me how to write effectively and confidently, and my mother for having faith in me.

A. <i>Scholarly Proposals for Reform</i> .....	860
B. <i>Legislative Reforms</i> .....	862
1. Federal Legislation.....	862
2. State and Local Legislation.....	863
III. STUCK IN THE MIDDLE: WHEN IS NEUROLOGICAL ADULTHOOD?....	864
A. <i>New Neurological Studies on Brain Development</i> .....	865
1. The Importance of the Reduction of Gray Matter.....	866
2. The Importance of the Development of the Prefrontal Cortex.....	867
B. <i>The Effects of the “Emerging Adulthood” Developmental         State</i> .....	869
IV. CLOSING THE GAP.....	871
A. <i>Different Age Group but Similar Effects</i> .....	871
B. <i>Rethinking Previous Line Drawing: Neurology Displaces         Historical Notions of Adulthood</i> .....	872
C. <i>Federal Legislation Is Necessary</i> .....	873
1. Congress Is in a Better Position to Institute Reform.....	874
2. Federal Legislation Would Serve Public Safety and Fiscal Interests.....	875
CONCLUSION.....	876

#### INTRODUCTION

On May 15, 2010, sixteen-year-old Bronx native Kaleif Browder, known as “Peanut” to his family, was accused of stealing a backpack.<sup>1</sup> Despite police not finding a backpack on Browder when they searched him and despite the complaining witness’s inconsistent stories, Browder was arrested and charged with robbery, grand larceny, and assault, and he was sent to Rikers Island, New York City’s main jail complex.<sup>2</sup> This arrest was particularly serious for Browder because he was on probation for a prior “youthful” offense—a crime in which he played a minor role.<sup>3</sup>

Because of the notorious backlog in the New York Court System, Browder was held at Rikers for three years awaiting trial.<sup>4</sup> Instead of walking across the stage with his classmates at graduation, Browder was trapped in the “Bing”—the inmates’ name for Rikers Island’s solitary confinement unit—for up to ten months at a time.<sup>5</sup>

---

1. Michael Schwirtz & Michael Winerip, *Kalief Browder, Held at Rikers Island for 3 Years Without Trial, Commits Suicide*, N.Y. TIMES (June 8, 2015), [http://www.nytimes.com/2015/06/09/nyregion/kalief-browder-held-at-rikers-island-for-3-years-without-trial-commits-suicide.html?\\_r=0](http://www.nytimes.com/2015/06/09/nyregion/kalief-browder-held-at-rikers-island-for-3-years-without-trial-commits-suicide.html?_r=0) [<https://perma.cc/WQ8E-VSDJ>].

2. Jennifer Gonnerman, *Before the Law*, NEW YORKER (Oct. 6, 2014), <http://www.newyorker.com/magazine/2014/10/06/before-the-law> [<https://perma.cc/3FCW-X34C>].

3. *Id.*

4. *Id.*

5. *Id.*

Browder's first trip to the Bing was punishment for throwing a shoe at another inmate in an attempt to stop him from harming others.<sup>6</sup> While in the Bing, Browder lost significant weight because the food, delivered through a slot in the door, was not enough for a growing adolescent.<sup>7</sup> Unlike when he was held in the general population, Browder could not supplement his meals with snacks.<sup>8</sup> Browder also was denied access to the classrooms and teachers offered at the facility; instead he had to slide his homework through the slot in the door, and sometimes the guards neglected to collect it.<sup>9</sup> Browder, who was called foolish by other inmates for not taking a plea deal and instead choosing to fight for his innocence in the face of dubious charges, grew severely depressed and attempted suicide twice while incarcerated.<sup>10</sup> His first attempt was in February 2012 when he tried to hang himself by his sheets from a light fixture in his cell.<sup>11</sup>

Browder's protestations of innocence were finally heard and charges against him were dropped, and he returned to his home in the Bronx.<sup>12</sup> But his experiences in solitary followed him.<sup>13</sup> Jennifer Gonnerman, a reporter who interviewed Browder, recalled that he was acting as if he was "recreat[ing] the conditions of solitary."<sup>14</sup> Browder became paranoid and worried,<sup>15</sup> displaying similar symptoms to individuals who suffer posttraumatic stress disorder (PTSD). His paranoia became so great that he threw his television out the window because he claimed, "it was watching me."<sup>16</sup> He was eventually confined to a psychiatric ward but after his release, sadly, tied an air-conditioning unit cord around his neck and pushed himself out of a window at his parents' home, hanging himself.<sup>17</sup>

Kalief Browder's suicide grabbed the attention of the media and eventually, his story reached New York City Mayor Bill de Blasio, who said that Browder inspired de Blasio's reform efforts for Rikers.<sup>18</sup> But, Browder's experience is also a tragic tale of how the effects of solitary confinement are just as damaging for young adults as they are for juveniles. Although Browder was a juvenile when he first experienced solitary, he also was held in solitary, and for longer periods of time, after he had turned eighteen. These effects, even after a stint in a psychiatric facility, drove him to suicide at the age of twenty-two.

---

6. *Id.*

7. *Id.*

8. *Id.*

9. *Id.*

10. *Id.*

11. Jennifer Gonnerman, *Kalief Browder, 1993–2015*, NEW YORKER (June 7, 2015), <http://www.newyorker.com/news/news-desk/kalief-browder-1993-2015> [https://perma.cc/K9S5-9Y5C].

12. Gonnerman, *supra* note 2.

13. *Id.*

14. Schwartz & Winerip, *supra* note 1.

15. Gonnerman, *supra* note 2.

16. Gonnerman, *supra* note 11.

17. *Id.*

18. Schwartz & Winerip, *supra* note 1.

There is a growing consensus that juvenile offenders (i.e., those under the age of eighteen) should not be placed in solitary confinement because of the psychological effects and, moreover, many argue that the practice should be unconstitutional.<sup>19</sup> This consensus can be seen through several scholarly articles and local reform movements.<sup>20</sup> A recent congressional, bipartisan bill highlights this fact.<sup>21</sup>

However, other than a groundbreaking New York City policy that prohibits the use of solitary for those under the age of twenty-one, there is not a consensus on expanding that prohibition to inmates between the ages of eighteen and twenty-one, and there is even less consensus on expanding it to cover inmates up to the age of twenty-five.

Although this Note acknowledges that this scholarship and legislation, including New York City's reforms, are positive steps, it argues that they do not go far enough. Most critics use the psychiatric effects of solitary confinement and Eighth Amendment jurisprudence to argue that solitary confinement is cruel and unusual punishment.<sup>22</sup> Most of the reform movements focus on the psychological effects of solitary confinement and look at equally effective alternatives for prison officials to use.<sup>23</sup> These efforts ignore the newer neurological studies and their implications discussed in this Note.<sup>24</sup>

There should be federal legislation, similar to that proposed by Senator Cory Booker,<sup>25</sup> banning the use of solitary confinement for offenders under the age of twenty-five. This Note finds support for this argument in recent neurological studies finding that the effects of solitary are just as devastating for inmates between the ages of eighteen and twenty-five as they are for inmates under the age of eighteen because of the rate of human brain development.<sup>26</sup> And tragedies such as Browder's illustrate this sad truth in lives lost and destroyed.<sup>27</sup>

Part I of this Note explains the history of solitary confinement with an emphasis on juvenile solitary confinement. Next, Part II discusses recent solitary confinement reform efforts. Then, Part III explains new neurological advances in determining neurological adulthood and the implications those advances have for solitary confinement. Finally, Part IV proposes federal legislation that would ban the use of solitary confinement on inmates under the age of twenty-five.

---

19. *See infra* Part II.

20. *See infra* Part II.B.2.

21. Press Release, Cory Booker, U.S. Senator, Booker Introduces Legislation Banning Juvenile Solitary Confinement (Aug. 5, 2015), [https://www.booker.senate.gov/?p=press\\_release&id=293](https://www.booker.senate.gov/?p=press_release&id=293) [<https://perma.cc/V3KX-3PCW>]. .

22. *See infra* Part II.A.

23. *See infra* Part II.

24. *See infra* Parts III–IV.

25. *See infra* Part IV.

26. *See infra* Part III.

27. *See infra* Part I.A.3, I.B.2.

I. MAN IN THE BOX:  
THE BIRTH OF SOLITARY CONFINEMENT

A Human Rights Watch report found that “[y]outh offenders often spend significant amounts of their time in U.S. prisons isolated from the general prison population.”<sup>28</sup> Juveniles can be placed in solitary confinement for a multitude of reasons, ranging from violence against guards to having “unauthorized amounts of clothing or art supplies.”<sup>29</sup> The Department of Justice found that 47 percent of juvenile detention centers used solitary confinement, and some held juveniles for “up to 23 hours a day with no human interaction.”<sup>30</sup>

However, before discussing juvenile solitary confinement specifically, as well as the controversy surrounding it, it is important to understand what solitary confinement is and the history of its use in this country. The basic structure of solitary confinement is largely similar for juveniles and adults.<sup>31</sup> Where solitary confinement deviates between the two age groups is the severity of solitary’s psychological effects.<sup>32</sup>

Part I.A explains what solitary confinement is and its history, including why it has been considered a useful tool for prison administrators. It then discusses the use and effects of solitary on adults. Part I.B turns to the use and effects of solitary on juveniles.

A. *What Is Solitary Confinement?*

Prison officials are allowed to place individuals in solitary confinement when those individuals are awaiting classification or transfer or are a danger to the general population.<sup>33</sup> The special facilities that house solitary confinement cells are called supermaximum (“supermax”) facilities.<sup>34</sup> As of 2005, over forty states had supermax facilities (a total of at least fifty-seven facilities).<sup>35</sup> In addition to these supermax facilities, there are solitary

28. HUMAN RIGHTS WATCH, *AGAINST ALL ODDS: PRISON CONDITIONS FOR YOUTH OFFENDERS SERVING LIFE WITHOUT PAROLE SENTENCES IN THE UNITED STATES* 21 (2012).

29. Daffodil J. Altan & Trey Bundy, *For Teens at Rikers Island, Solitary Confinement Pushes Mental Limits*, REVEAL (Mar. 4, 2014), <https://www.revealnews.org/article-legacy/for-teens-at-rikers-island-solitary-confinement-pushes-mental-limits/> [<https://perma.cc/DCN4-G9K3>].

30. Lydia Wheeler, *Bill Would Ban Solitary Confinement in Juvy*, HILL (Aug. 5, 2015), <http://thehill.com/regulation/250359-bill-would-ban-solitary-confinement-in-juvy> [<https://perma.cc/5K79-YLDK>].

31. HUMAN RIGHTS WATCH & ACLU, *GROWING UP LOCKED DOWN: YOUTH IN SOLITARY CONFINEMENT IN JAILS AND PRISONS ACROSS THE UNITED STATES* 3 (2012).

32. *See infra* Part I.B.2.

33. *See* 28 C.F.R. § 541.23 (2015); *see also* Heather Bersot & Bruce Arrigo, *Inmate Mental Health, Solitary Confinement, and Cruel and Unusual Punishment: An Ethical and Justice Policy Inquiry*, J. THEORETICAL & PHIL. CRIMINOLOGY, Nov. 2010, at 1, 10–11, CORE, <https://core.ac.uk/download/pdf/10688604.pdf> [<https://perma.cc/P2AX-K8P4>].

34. COMM. ON INT’L HUMAN RIGHTS, N.Y.C. BAR ASS’N, *SUPERMAX CONFINEMENT IN U.S. PRISONS* 1 (2011).

35. Daniel P. Mears & Jamie Watson, *Towards a Fair and Balanced Assessment of Supermax Prisons*, 23 JUST. Q. 232, 232 (2006).

confinement cells, called segregated housing or “secured housing units (SHUs),” in prisons that are not classified as supermax.<sup>36</sup>

### 1. The Rise of Solitary Confinement

Solitary confinement is based largely in Quaker ideology.<sup>37</sup> The first supermax facility, and the beginning of the United States’s relationship with solitary confinement, Eastern State Penitentiary, was opened in 1829.<sup>38</sup> Prisoners were left in total isolation, often with only a Bible for the purposes of reflecting on their crimes and repenting.<sup>39</sup> However, the goal of the solitary system was always for the inmate eventually to rejoin the community as a new, contrite man.

Despite these good intentions, the practice of total isolation often resulted in insanity and death.<sup>40</sup> In 1831, an alternative system developed in Auburn, New York, and became known as the “Auburn System.”<sup>41</sup> There, inmates were held in isolation only at night and were allowed to congregate and work during the day.<sup>42</sup> This modified system of solitary confinement developed as experts began to see that the effects of full isolation on inmates in the Eastern State Penitentiary system were so detrimental that inmates died, and the governor ordered the release of the remaining twenty-six inmates in the prison, who earned the title “survivors.”<sup>43</sup> After 1860, the use of solitary confinement declined.<sup>44</sup>

The prominence of the use of solitary confinement and supermax facilities resurfaced in the United States in the 1980s following a riot at a federal prison in Illinois.<sup>45</sup> For prison guards, supermax facilities were seen as an effective tool for increasing safety (largely to decrease the influence of gangs) and controlling the growing prison population, particularly those deemed violent inmates.<sup>46</sup> Prison guards claim to feel safer in their duties

---

36. Bersot & Arrigo, *supra* note 33, at 9.

37. Laura Sullivan, *Timeline: Solitary Confinement in U.S. Prisons*, NPR (July 26, 2006, 7:52 PM), <http://www.npr.org/templates/story/story.php?storyId=5579901> [<https://perma.cc/AKR8-YUGT>].

38. *Id.*

39. *Id.*

40. *Id.*

41. See Harry Elmer Barnes, *The Historical Origin of the Prison System in America*, 12 J. AM. INST. CRIM. L. & CRIMINOLOGY 35, 52 (1921).

42. See *id.* at 52–53.

43. The reports of the effects of full isolation were described as being very “dire.” See Peter Scharff Smith, *The Effects of Solitary Confinement on Prison Inmates: A Brief History and Review of the Literature*, 34 CRIME & JUST. 441, 457 (2006). In other prisons that used this model, prison physicians described mental disorders such as dementia and hallucinations. *Id.*

44. *Id.* at 467.

45. During the riot, inmates killed two prison guards. COMM. ON INT’L HUMAN RIGHTS, *supra* note 34, at 7. Following this, the inmates were kept in solitary confinement for the next twenty-three years. *Id.*

46. See *id.* at 8–9; see also Mears & Watson, *supra* note 35, at 234, 241–42 (“For example, two-thirds (36) of departments of corrections in a National Institute of Corrections (1997) survey considered management of violent inmates a main reason for creating

and some prisoners claim to feel safer by having the most violent offenders locked away from the general population.<sup>47</sup> Prison officials also claim that supermax facilities cause a decline in riots, murders, and assaults.<sup>48</sup> Commenting specifically on solitary confinement's use on young adults, Sidney Schwartzbaum, who leads the union for assistant deputy wardens in New York, stated that "[e]ighteen- to [twenty-one]-year-olds are a very violent group."<sup>49</sup> Schwartzbaum, along with other prison officials, argues that solitary is an important tool in protecting prisoners and guards and therefore should be kept in place.<sup>50</sup>

For politicians and law enforcement officials, supermax facilities became a way to carry out the "tough on crime" policies popular in the 1980s and 90s.<sup>51</sup> However, only *some* supermax facilities claim punishment as a goal for the facility, therefore undermining the purported objective of the "tough on crime" advocates and the idea of solitary being a strong disciplinary tool.<sup>52</sup>

## 2. The Structure of Solitary Confinement

The specific conditions of solitary confinement vary depending on the prison system. However, the basic model involves housing inmates in a small, often windowless, steel door cell and letting the inmates out only two to five times a week for showers and exercise in a small, enclosed space.<sup>53</sup> Most prisoners have limited or no access to sources of mental stimulation,

---

supermax prisons. As one respondent in our study explained, 'by locking up the riskiest inmates, there is greater safety in the prison environment.'").

47. Mears & Watson, *supra* note 35, at 241. Sex offenders are a common example of prisoners who prefer solitary confinement as they almost certainly can expect violence from the general population, and may even be killed, especially if their sex crime involves children. Michael S. James, *Prison Is 'Living Hell' for Pedophiles*, ABC NEWS (Aug. 26, 2003), <http://abcnews.go.com/US/prison-living-hell-pedophiles/story?id=90004> [https://perma.cc/2HAV-D6MP].

48. Mears & Watson, *supra* note 35, at 241. However, a 2003 study of supermax facilities in three states (Arizona, Illinois, and Minnesota) suggests that their actual effectiveness is speculative because of other changes in the facilities that could have caused the decline of violence. See Chad S. Briggs et al., *The Effect of Supermaximum Security Prisons on Aggregate Levels of Institutional Violence*, 41 CRIMINOLOGY 1341, 1371 (2003). At the very least, the study suggests that supermax facilities *alone* do not cure prison violence and, therefore, the reliance on such facilities and the increase in use should be reconsidered in light of other, less mentally damaging methods.

49. Michael Winerip & Michael Schwirtz, *Rikers to Ban Isolation for Inmates 21 and Younger*, N.Y. TIMES (Jan. 13, 2015), <http://www.nytimes.com/2015/01/14/nyregion/new-york-city-to-end-solitary-confinement-for-inmates-21-and-under-at-rikers.html> [https://perma.cc/5239-A7PF].

50. See *id.*; Garrett Therolf, *Advocates Seek to End Solitary Confinement Options for Young Offenders*, L.A. TIMES (May 28, 2015, 4:00 AM), <http://www.latimes.com/local/crime/la-me-solitary-juvenile-20150528-story.html> [https://perma.cc/76SG-C4E2].

51. In conjunction with the "tough on crime" policies, prison officials claim that these facilities offer greater protection to the public because there are fewer successful prison escapes and there is less violence following an inmate's release. Mears & Watson, *supra* note 35, at 234, 242.

52. *Id.* at 244.

53. HUMAN RIGHTS WATCH, ILL EQUIPPED: U.S. PRISONS AND OFFENDERS WITH MENTAL ILLNESS 146 (2003).

including educational activities.<sup>54</sup> Inmates are not allowed to have electronics, such as radios or televisions; even the number of books inmates are allowed is limited—if permitted at all.<sup>55</sup> Personal possessions also are limited.<sup>56</sup>

In addition to in-cell restrictions, prisoners' out-of-cell movements are heavily restricted.<sup>57</sup> The UN Committee Against Torture found that “socially and psychologically meaningful contact is reduced to the absolute minimum, to a point that is insufficient for most detainees to remain mentally well functioning.”<sup>58</sup> One inmate housed in solitary explained that “[t]he only contact that you have with individuals is what they call a pinky shake,” which involves “sticking [your] pinky through one of the little holes in the door.”<sup>59</sup>

Although prison policies and regulations sometimes limit the length of time that an inmate can be placed in solitary, many facilities do not have such protections in place.<sup>60</sup> A survey by the Liman Program at the Yale Law School Association of State Correctional Administrators showed that, out of the forty-four jurisdictions surveyed, forty-two stated they had no time limits after which the inmate *must* be released into the general population.<sup>61</sup> A report by the Vera Institute of Justice stated that, “as a matter of policy within the federal prison system and in at least 19 states, corrections officials are permitted to hold people in segregated housing indefinitely.”<sup>62</sup>

Surprisingly, it is not the crimes inmates committed on the outside that qualifies them to be subjected to these conditions, but it is their behavior on the inside; sometimes this behavior can be as insignificant as talking back to a guard.<sup>63</sup> Christopher B. Epps, then-president-elect of the American Correctional Association, has explained that “prison officials started out isolating inmates they were scared of but ended up adding many they were simply ‘mad at.’”<sup>64</sup> Mr. Epps’s quote shows that, “[w]ith no precise definition of who belonged there, prison systems began to send people to

---

54. *Id.*

55. *Id.*

56. *Id.*

57. *Id.* (“The prisoners are usually handcuffed, shackled, and escorted by two or three correctional officers every time they leave their cells.”).

58. COMM. ON INT’L HUMAN RIGHTS, *supra* note at 34, at 18.

59. Laura Sullivan, *At Pelican Bay Prison, A Life in Solitary*, NPR (July 26, 2006 3:01 PM), <http://www.npr.org/templates/story/story.php?storyId=5584254> [<https://perma.cc/YH-F2-T67K>].

60. THE LIMAN PROGRAM, YALE LAW SCH. & ASS’N OF STATE CORR. ADM’RS, *TIME-IN-CELL: THE ASCA-LIMAN 2014 NATIONAL SURVEY OF ADMINISTRATIVE SEGREGATION IN PRISON* 27 (2015), [https://www.law.yale.edu/system/files/area/center/liman/document/ascaliman\\_administrativesegregationreport.pdf](https://www.law.yale.edu/system/files/area/center/liman/document/ascaliman_administrativesegregationreport.pdf) [<https://perma.cc/ZH86-9W63>].

61. *Id.* The two exceptions were in Colorado and Georgia. *Id.*

62. ALISON SHAMES ET AL., VERA INST. OF JUSTICE, *SOLITARY CONFINEMENT: COMMON MISCONCEPTIONS AND EMERGING SAFE ALTERNATIVES* 15 (2015).

63. *See* Gonnerman, *supra* note 2.

64. Erica Goode, *Prisons Rethink Isolation, Saving Money, Lives and Sanity*, N.Y. TIMES (Mar. 10, 2012), [http://www.nytimes.com/2012/03/11/us/rethinking-solitary-confinement.html?pagewanted=all&\\_r=2&](http://www.nytimes.com/2012/03/11/us/rethinking-solitary-confinement.html?pagewanted=all&_r=2&) [<https://perma.cc/Z3NS-3TWR>].

segregation units who bore little resemblance to the serial killers or terrorists the public imagined filled such prisons.”<sup>65</sup>

For example, another publication by the Vera Institute of Justice reported that nonviolent or “overly disruptive” offenders could spend anywhere from “months to years and even decades” in solitary.<sup>66</sup> However, some states are instituting policies to curb this effect.<sup>67</sup> For example, the Washington Department of Corrections reduced the amount of time an inmate can spend in segregation from sixty to forty-seven days unless otherwise approved by the Deputy Director, and Pennsylvania requires multidisciplinary committees to review segregated housing placements.<sup>68</sup>

### 3. The Effects of Solitary Confinement

Several recent reports about American prisons state that segregated inmates display higher levels of mental distress compared to inmates in the general population.<sup>69</sup> Frequent side effects include panic attacks, illusions and hallucinations, obsessional thoughts, random violence and self-harm, and overt paranoia.<sup>70</sup> This is largely due to the prolonged isolation, “limited . . . exposure to sensory stimuli,” and higher reports of abuse by prison staff.<sup>71</sup> The psychologically negative effects of solitary confinement are one large reason why it has been used as torture.<sup>72</sup>

The new head of Colorado’s Department of Corrections, Rick Raemisch, decided to spend a night in solitary to understand its effects and reported:

I couldn’t make sense of any of it, and was left feeling twitchy and paranoid. I kept waiting for the lights to turn off, to signal the end of the day. But the lights did not shut off. I began to count the small holes carved in the walls. Tiny grooves made by inmates who’d chipped away at the cell as the cell chipped away at them.<sup>73</sup>

At that point, Raemisch had not even spent a full day in solitary.<sup>74</sup>

Inmates in solitary confinement also are more likely to self-mutilate and attempt suicide.<sup>75</sup> These are considered secondary effects of solitary confinement, stemming from primary psychological effects such as

65. *Id.*

66. SHAMES ET AL., *supra* note 62, at 16.

67. *Id.*

68. *Id.*

69. *See* Smith, *supra* note 43, at 455.

70. PHYSICIANS FOR HUMAN RIGHTS, BURIED ALIVE: SOLITARY CONFINEMENT IN THE US DETENTION SYSTEM 1 (2013).

71. Mears & Watson, *supra* note 35, at 250.

72. Craig Haney & Mona Lynch, *Regulating Prisons of the Future: A Psychological Analysis of Supermax and Solitary Confinement*, 23 N.Y.U. REV. L. & SOC. CHANGE 477, 509 (1997).

73. Rick Raemisch, *My Night in Solitary*, N.Y. TIMES (Feb. 20, 2014), [http://www.nytimes.com/2014/02/21/opinion/my-night-in-solitary.html?\\_r=0](http://www.nytimes.com/2014/02/21/opinion/my-night-in-solitary.html?_r=0) [https://perma.cc/QJ87-SKW2].

74. *Id.*

75. Haney & Lynch, *supra* note 72, at 525.

depression or anxiety.<sup>76</sup> Accounts of self-mutilation in supermax facilities extend as far back as the 1930s, seen in writings criticizing Alcatraz, a prison for the most troublesome offenders in California.<sup>77</sup> Studies have found that “violence towards self . . . [was] significantly more likely when the violator was alone and living in disciplinary or restricted movement housing.”<sup>78</sup> Current research in Virginia, which has taken place over the course of a year, found that self-mutilations in segregation units made up 51 percent of total self-mutilations.<sup>79</sup>

A nationwide prison survey found a similar correlation between solitary confinement and suicide.<sup>80</sup> An American study of 419 jail suicides during 1979 found that 68 percent of the suicide victims were being held in isolation at the time of their suicide.<sup>81</sup> A study at Maine State Prison analyzing the effects of solitary confinement on prisoners found that “[a]lmost every prisoner set to solitary has attempted to commit or has contemplated suicide.”<sup>82</sup> The range of methods used in the attempts show the desperation of the mentally broken inmates. One inmate tried to hang himself with a sheet.<sup>83</sup> One inmate tried to slit his wrists using glass from a broken light bulb.<sup>84</sup> One especially desperate inmate swallowed glass.<sup>85</sup> Clinical researchers Ray Patterson and Kerry Hughes reported that the higher suicide rates can be attributed to “heightened levels of ‘environmental stress’ that are generated by the ‘isolation, punitive sanctions, [and] severely restricted living conditions.’”<sup>86</sup>

These psychological effects are largely the same for juveniles but heightened.<sup>87</sup> To better understand the effects of solitary confinement on juveniles, the next section explains why juveniles are placed into solitary confinement and the prominence of this practice.

### B. Juvenile Solitary Confinement

Juveniles are placed in solitary confinement across the country. Only seven states have placed any prohibition on juvenile solitary confinement, and, even within those seven, there are loopholes that make the prohibitions

---

76. *Id.*

77. *Id.* at 488 (“It didn’t take long for the routine—and especially [the warden’s] edict of silence—to drive convicts stir-crazy. . . . Word of the self-mutilations began to leak.”).

78. *Id.* at 525.

79. *Id.*

80. *Id.*

81. Smith, *supra* note 43, at 499.

82. Thomas B. Benjamin & Kenneth Lux, *Constitutional and Psychological Implications of the Use of Solitary Confinement: Experience at the Maine State Prison*, 9 CLEARINGHOUSE REV. 83, 84 (1975).

83. *Id.*

84. *Id.*

85. *Id.*

86. Expert Declaration of Craig Haney Re CDCR Segregated Housing Units at 7, *Coleman v. Brown*, 938 F. Supp. 2d 955 (E.D. Cal 2013) (No. Civ S 90-00520 LKK-JFM) (alteration in original).

87. *See infra* Part I.B.2.

ineffective.<sup>88</sup> In an attempt at reform in 1980, the U.S. Office of Juvenile Justice and Delinquency Prevention created guidelines (“OJJDP Guidelines”) that stated juvenile solitary confinement should be limited to twenty-four hours.<sup>89</sup> The same year, the American Bar Association Juvenile Justice Standards Relating to Corrections Administration (“1980 Standards”) were promulgated, which stated that juvenile solitary should be limited to ten consecutive days.<sup>90</sup> However, neither the OJJDP Guidelines nor the 1980 Standards were adopted in their entirety in any jurisdiction, and the states that did adopt the 1980 Standards limited their effectiveness by not assigning enough resources to implement them.<sup>91</sup>

The lack of prohibitions means that juveniles often are often placed into segregation for months at a time.<sup>92</sup> For example, census data at Rikers Island found that juveniles faced sentences in segregation for 60 or more days, and some faced sentences exceeding 200 days.<sup>93</sup>

The exact statistics on juvenile solitary confinement are difficult to find, partially because the federal government does not require prison facilities to report the number of juveniles in solitary confinement or the amount of time they spend in solitary.<sup>94</sup> Most data is supplied by the states that keep track of solitary confinement or through research by independent institutions.<sup>95</sup> Much of this research relies heavily on surveys and interviews with correctional officials, which can make it more susceptible to institutional rhetoric.<sup>96</sup> Recently, however, there has been more in-depth research performed by the U.S. Department of Justice and independent organizations such as the Vera Institute and Human Rights Watch.<sup>97</sup>

---

88. The seven states are Alaska, Arizona, Connecticut, Maine, Nevada, Oklahoma, and West Virginia. For example, the ban is not explicit in Maine, and in Nevada, isolation is allowed if other options have been exhausted. Altan & Bundy, *supra* note 29.

89. Tamar R. Birckhead, *Children in Isolation: The Solitary Confinement of Youth*, 50 WAKE FOREST L. REV. 1, 59 (2015).

90. *Id.*

91. *Id.* at 60. For example, the effectiveness of the 1980 Standards depends on the standards for the size of the facilities, the range of permissible sanctions at the facility, and the availability of community-based services. Barbara Flicker, *Introduction to INST. OF JUDICIAL ADMIN., AM. BAR ASS’N, JUVENILE JUSTICE STANDARDS ANNOTATED: A BALANCED APPROACH*, at xv, xx (Robert E. Shepherd, Jr. ed., 1996).

92. Letter from Preet Bharara et al., U.S. Att’y, S.D.N.Y., to Bill de Blasio, Mayor, N.Y.C. 49 (Aug. 4, 2014), <https://www.justice.gov/sites/default/files/usao-sdny/legacy/2015/03/25/SDNY%20Rikers%20Report.pdf> [hereinafter U.S. Att’y Letter] (regarding the “CRIPA Investigation of the New York City Department of Correction Jails on Rikers Island”) [<https://perma.cc/2J34-PMJB>].

93. *Id.*

94. Trey Bundy, *Sixteen, Alone, 23 Hours a Day, in a Six-by-Eight-Foot Box*, MEDIUM (Mar. 5, 2014), <https://medium.com/solitary-lives/sixteen-alone-23-hours-a-day-in-a-six-by-eight-foot-box-26ab1e09632d> [<https://perma.cc/W9DH-8SJ4>].

95. See, e.g., HUMAN RIGHTS WATCH & ACLU, *supra* note 31, at 3.

96. Christopher Bickel, *The Scene of the Crime: Children in Solitary Confinement*, in LONG-TERM SOLITARY CONFINEMENT AND THE SUPERMAX MOVEMENT 129, 130 (Stephen C. Richards ed., 2015).

97. See, e.g., ACLU, ALONE AND AFRAID: CHILDREN HELD IN SOLITARY CONFINEMENT AND ISOLATION IN JUVENILE DETENTION AND CORRECTIONAL FACILITIES (2014); HUMAN RIGHTS WATCH & ACLU, *supra* note 31; SHAMES ET AL., *supra* note 62.

### 1. The Purpose of Juvenile Solitary Confinement

The most common justifications for placing juveniles in solitary confinement are punishment (disciplinary segregation), overpopulation or special classification as a danger to others (administrative segregation), protection, or treatment (medical segregation).<sup>98</sup> The latter three types of segregation often are lumped under the title administrative segregation.<sup>99</sup> Prison officials usually review the status of those held in segregation weekly or monthly, but review does not necessarily mean the end of the segregation sentence.<sup>100</sup>

Norman Seabrook, who represented 10,000 correction officers in New York City jails through the New York City Correction Officers Union, stated that, specifically at Rikers Island, solitary confinement<sup>101</sup> helps officers safely “make it through the day.”<sup>102</sup> Seabrook believes that prison officials are not equipped to deal with or determine the problems facing all the juveniles assigned to Rikers.<sup>103</sup> Lorenzo Steel Jr., a retired Rikers Island correction officer, stated, “Sixty-six kids banging on their cells at the same time. Imagine that for eight hours. Imagine them throwing feces at you.”<sup>104</sup> The New York City Correction Officers Union sees punitive segregation as a necessary tool to deal with the influx of juveniles who need special attention and protection from the adult population.<sup>105</sup>

### 2. The Effects of Solitary on Juveniles

The Attorney General’s National Task Force on Children Exposed to Violence recently stated, “Nowhere is the damaging impact of incarceration on vulnerable children more obvious than when it involves solitary confinement.”<sup>106</sup> Because juveniles are still developing, the negative effects of solitary are escalated and appear after a shorter amount of time than they do in adults.<sup>107</sup> David Fassler, a clinical professor of psychiatry at the University of Vermont stated, “Young people are at particular risk for such adverse reactions due to their impulsivity, limited frustration tolerance, and overall cognitive and emotional immaturity.”<sup>108</sup> Also, due to their

---

98. Lisa C. Castillo, *No Child Left Alone: Why Iowa Should Ban Juvenile Solitary Confinement*, 100 IOWA L. REV. 1259, 1276–78 (2015).

99. See Birckhead, *supra* note 89, at 19.

100. *Id.* at 21.

101. Solitary confinement at Rikers Island is used for discipline and called punitive segregation, which is another word for disciplinary segregation. See Bundy, *supra* note 94.

102. *Id.*

103. *Id.*

104. *Id.*

105. *Id.*

106. ATT’Y GEN.’S NAT’L TASK FORCE, REPORT OF THE ATTORNEY GENERAL’S NATIONAL TASK FORCE ON CHILDREN EXPOSED TO VIOLENCE 178 (2012).

107. See *supra* Part I.A.3.

108. *What Happens to a Young Brain in Solitary Confinement*, YAHOO: HEALTH (Aug. 21, 2015), <https://www.yahoo.com/health/what-happens-to-a-young-brain-in-solitary-127235455527.html> [<https://perma.cc/4GGV-VXUP>].

developmental state, juveniles face other detrimental effects that adults do not, such as educational setbacks and the stunting of their physical growth.

*a. Psychological Effects*

Just as there is a lack of statistical information on juvenile solitary confinement in general, there is a lack of research on the psychological effects of solitary on juveniles compared to that on adult inmates. Similar to adult solitary confinement, much of the research that is available on juveniles is through independent organizations and is often reported in anecdotal form.<sup>109</sup> However, according to the Academy of Child and Adolescent Studies, because juveniles are still developing, they are at a particular risk for having adverse psychological reactions to solitary, such as depression, anxiety, and psychosis.<sup>110</sup> This is because “young people have fewer psychological resources than adults do to help them manage the stress, anxiety and discomfort they experience in solitary confinement.”<sup>111</sup>

Juveniles in solitary confinement also face similar rates of suicide and attempted suicide as adults placed in solitary.<sup>112</sup> A national survey on suicide in juvenile prisons found that half (50.6 percent) of incarcerated juveniles who had committed suicide were housed in behavioral “room confinement” (i.e., disciplinary segregation).<sup>113</sup> Of those juveniles who committed suicide while in disciplinary segregation, about half were receiving this discipline for conduct such as “failure to follow program rules” or inappropriate, nonthreatening behavior.<sup>114</sup> While touring Rikers Island, staff from the U.S. Attorney’s Office witnessed an inmate’s attempted suicide by hanging.<sup>115</sup> They stated, “[O]ur consultant heard a number of comments from uniformed staff about inmates using suicide attempts to manipulate the officers and that the attempts therefore did not need to be taken seriously.”<sup>116</sup>

Instead of attempting suicide, some juvenile inmates cope by creating imaginary friends or simply talking to themselves.<sup>117</sup> Alyssa,<sup>118</sup> a sixteen-year-old who was housed in segregation for four months, said she created a friend in her head and that the friend would tell her positive things.<sup>119</sup> Carter, a fourteen-year-old held multiple times in segregation, stated that he created characters with his hands and acted out video games and talked to

---

109. See HUMAN RIGHTS WATCH & ACLU, *supra* note 31, at 24.

110. Gary Gately, *Juvenile Solitary Confinement: Modern-Day ‘Torture’ in the US*, JUV. JUST. INFO. EXCHANGE (Mar. 5, 2014), <http://jjie.org/juvenile-solitary-confinement-modern-day-torture-in-the-u-s/> [<https://perma.cc/JM38-R38H>].

111. HUMAN RIGHTS WATCH & ACLU, *supra* note 31, at 24.

112. LINDSAY M. HAYES, NAT’L CTR. ON INSTS. & ALTS., *JUVENILE SUICIDE IN CONFINEMENT: A NATIONAL SURVEY* 18 (2009).

113. *Id.*

114. *Id.* at 36.

115. U.S. Att’y Letter, *supra* note 92, at 48.

116. *Id.*

117. HUMAN RIGHTS WATCH & ACLU, *supra* note 31, at 25.

118. This is a pseudonym. *Id.* at 25 n.61.

119. *Id.* at 25.

himself; eventually he created his own language, which was effectively gibberish, that the guards could not understand.<sup>120</sup>

In addition to anxiety, depression, and paranoia, juveniles placed in solitary confinement are “more prone to unstable and violent behavior.”<sup>121</sup>

One juvenile inmate described it as such:

The loneliness made me depressed and the depression caused me to be angry [sic], leading to a desire to displace the agony by hurting others. . . . And at the first opportunity of release (whether I was being released from isolation or receiving a cell-mate) I erupted like a volcano, directing violent forces at anyone in my path.<sup>122</sup>

This inclination towards violence strongly contradicts antireformer arguments that solitary confinement helps curb violence.

*b. Social and Developmental Harm*

Juveniles also suffer social and developmental harm as a result of solitary confinement. While in solitary confinement, juveniles often are isolated from their families; this can mean no in-person visits, phone calls, or letters.<sup>123</sup> A recent study by the Vera Institute found a correlation between incarcerated juveniles who have visits from their family and improved behavior.<sup>124</sup> Familial nurturing is key in helping juveniles develop an identity.<sup>125</sup> This hindrance on juvenile development “decreases the likelihood that they will be able to successfully reintegrate into the community.”<sup>126</sup> Craig Haney, a psychology professor at the University of California at Santa Cruz, stated, “Regardless of what they have done, they are in an uncertain, unformed state of social identity. . . . [Y]ou are making it impossible for them to develop a healthy functioning adult social identity.”<sup>127</sup> Haney goes on to say that this process twists the juvenile psyche in such a way that makes it extremely difficult for juveniles to recover and develop normally.<sup>128</sup> In addition to hindering development, lack of loving and physical contact with family can aggravate an already existing depression. Juveniles describe the lack of familial hugs and kisses as an additional “source of pain and suffering.”<sup>129</sup>

---

120. *Id.*

121. U.S. Att’y Letter, *supra* note 92, at 47.

122. HUMAN RIGHTS WATCH & ACLU, *supra* note 31, at 27 (alteration in original).

123. *Id.* at 41.

124. SANDRA VILLALOBOS AGUDELO, VERA INST. OF JUSTICE, THE IMPACT OF FAMILY VISITATION ON INCARCERATED YOUTH’S BEHAVIOR AND SCHOOL PERFORMANCE: FINDINGS FROM THE FAMILIES AS PARTNERS PROJECTS 1 (2013).

125. See Birckhead, *supra* note 89, at 16 (defining juveniles’ “identity” as “a stable definition of themselves and their outlook on life—both of which are critical stages of adolescent psychosocial development”).

126. *Id.*

127. Matt Olson, *Kids in the Hole*, PROGRESSIVE, Aug. 1, 2003, at 27.

128. *Id.*

129. HUMAN RIGHTS WATCH & ACLU, *supra* note 31, at 42.

*c. Educational Harm*

While in solitary, juveniles also have limited access to educational and other developmental and rehabilitative activities.<sup>130</sup> This is not only detrimental to their academic growth but also to their social growth, as school often provides an environment in which individuals learn how to relate to others in a positive way, and it is one of the places where they develop a healthy view of authority.<sup>131</sup> A few states' departments of education provide education to inmates, either in general consultation or directly.<sup>132</sup> However, the hours allocated for education often are severely curtailed.<sup>133</sup> In some facilities, juveniles are given course packets to be completed in their cells by themselves.<sup>134</sup> Often, their work is not graded, and any questions the inmates have go unanswered.<sup>135</sup> Some of the facilities that allowed in-cell study gave juveniles an opportunity to talk to their teacher on the phone, but some juveniles reported that the conversations were interrupted or inadequate.<sup>136</sup> In other facilities, as soon as the juvenile solitary cell door closes, so does the door to education.<sup>137</sup> Even those few facilities that do allow for these educational opportunities do not always have programs to help juveniles with learning disabilities, often due to the inability and lack of resources to diagnose such disabilities.<sup>138</sup>

*d. Physical Harm*

Not only does solitary confinement stunt juveniles' emotional and social growth, but it can also stunt their physical growth through lack of physical exercise and inadequate nutrition.<sup>139</sup> The U.S. Centers for Disease Control and the U.S. Department of Health both have stated that children between the ages of six and seventeen need regular physical activity.<sup>140</sup> However, while in solitary, inmates often are deprived of any out-of-cell physical activity.<sup>141</sup>

The U.S. Department of Agriculture recommends "a balanced diet of nutrient-dense foods, including vegetables, fruits, and whole grains," with

---

130. *See id.*

131. *See id.* at 46–47.

132. *See id.* at 43.

133. *See id.* For example, in Colorado, the law only provides for four hours of education per week. *Id.*

134. *See id.* at 42.

135. *Id.*

136. *See id.* at 44.

137. *See id.* at 43.

138. *See id.* at 44–45.

139. *Id.* at 49.

140. *See How Much Physical Activity Do Children Need?*, CENTERS DISEASE CONTROL & PREVENTION, <http://www.cdc.gov/physicalactivity/basics/children/> (last updated June 4, 2015) [<https://perma.cc/NF3J-6SKU>]; *Physical Activity Guidelines for Americans*, HEALTH.GOV, <http://www.health.gov/paguidelines/factsheetprof.aspx> (last updated Sept. 26, 2016) [<https://perma.cc/SXF9-FQN8>].

141. ACLU, *supra* note 97, at 5.

youth needing a higher nutritional intake than adults because of their developmental stage.<sup>142</sup> However, juveniles in solitary are not able to supplement prison meals with snacks bought at the commissary, as they can when housed in the general population.<sup>143</sup> Also, according to some juvenile inmates, their meals were being changed to “a baked nutritional loaf” or to beans and processed food.<sup>144</sup> As a result, juveniles reported losing weight, anywhere between fifteen and twenty pounds in a little over a month.<sup>145</sup>

These detrimental effects on juveniles’ psychological, educational, and physical wellness are largely why there has been a push for juvenile solitary confinement reform and solitary confinement reform in general. However, a big question arises when discussing reform: Who should institute the reform? Part II discusses the different approaches to this question.

## II. HOPE FOR THE FUTURE: SOLITARY REFORM EFFORTS

The extremely detrimental effects of solitary confinement have led to a call for reform by many legal and scientific scholars and legislators. Many scholarly articles call for courts, particularly the U.S. Supreme Court, to intervene and find the practice of solitary confinement unconstitutional. Other scholars call for judicial intervention first and then, in the face of its absence, call for, at the very least, more regulation of solitary confinement.

Local legislators are answering this call and proposing local-level solitary confinement reform. The extent of these reforms varies from jurisdiction to jurisdiction. Some reforms are the result of expert psychological reports, while others are the result of lawsuits brought by prisoners who are or were housed in solitary confinement. Some reforms apply only to juveniles, while others apply to all inmates.

This part discusses the recent call for reform. Part II.A describes scholarly reform efforts that call for judicial or legislative intervention, and Part II.B discusses recent federal and local legislative reforms. Both approaches to reform include general solitary confinement reform and juvenile-specific reform.

### A. Scholarly Proposals for Reform

Several academics have published articles advocating for solitary confinement reform. Some focus on the eradication of solitary specifically for juveniles,<sup>146</sup> while others advocate for the eradication of solitary confinement across the entire prison population.<sup>147</sup> A number of articles call for judicial intervention that would find solitary confinement unconstitutional based on the Eighth Amendment’s bar against cruel and

---

142. HUMAN RIGHTS WATCH & ACLU, *supra* note 31, at 40.

143. *See* Gonnerman, *supra* note 2.

144. HUMAN RIGHTS WATCH & ACLU, *supra* note 31, at 40.

145. *Id.*

146. *See infra* note 153.

147. *See infra* note 149.

unusual punishment.<sup>148</sup> A clear example of this is Jules Lobel's article, "Prolonged Solitary Confinement and the Constitution," in which he makes a psychologically based argument that prolonged solitary confinement is barred by the Eighth Amendment's ban on cruel and unusual punishment while also arguing that social interaction is a basic human need.<sup>149</sup>

Others who argue for solitary confinement reform propose using legislative or regulatory means. Several of these articles argue for regulation that would reduce the maximum amount of time inmates are allowed to be placed in solitary and reduce the number of infractions that are punishable by solitary.<sup>150</sup> Others propose federal legislation similar to the proposed regulations mentioned above.<sup>151</sup> For example, a note in the *University of Michigan Journal of Law Reform* proposed that a federal statute should include language stating that (1) solitary can be used only to protect prisoners from violent offenders, (2) solitary must be periodically reviewed every thirty days, (3) solitary not be allowed for the mentally ill and inmates under the age of eighteen, and (4) prisoners in solitary have access to health care and family visits.<sup>152</sup>

Similarly, scholars who focus primarily on juveniles have the same two main types of proposals: judicial intervention and legislative intervention.<sup>153</sup> For example, Laura Anne Gallagher, in "More Than a Time Out: Juvenile Solitary Confinement," states, "Lawmakers should impose caps on the length of isolation, and mandate that prison and juvenile hall supervisors maintain accurate records of which children are isolated and for how long."<sup>154</sup>

---

148. See *infra* note 149.

149. See generally Jules Lobel, *Prolonged Solitary Confinement and the Constitution*, 11 U. PA. J. CONST. L. 115 (2008); see also Bryan B. Walton, *The Eighth Amendment and Psychology Implications of Solitary Confinement*, 21 LAW & PSYCHOL. REV. 271, 287–88 (1997) (concluding that, if prison officials refuse to recognize the detrimental psychological effects of solitary confinement, then courts need to recognize them and find solitary violative of the Eighth Amendment); Laura Matter, Note, *Hey, I Think We're Unconstitutionally Alone Now: The Eighth Amendment Protects Social Interaction as a Basic Human Need*, 14 J. GENDER RACE & JUST. 265, 266 (2010) (concluding that because social interaction "is a basic human need" and because the technology in supermax facilities has "increased the degree of isolation" in these facilities, there is "a cognizable Eighth Amendment claim" that supermax facility isolation is cruel and unusual punishment).

150. See Haney & Lynch, *supra* note 72, at 480–81 ("We conclude by proposing a series of remedies to these legal shortcomings in the form of model regulations for the use of solitary confinement and punitive isolation."); see also Shira E. Gordon, Note, *Solitary Confinement, Public Safety, and Recidivism*, 47 U. MICH. J.L. REFORM 495, 527–28 (2014).

151. See Gordon, *supra* note 150.

152. See *id.* at 527–28.

153. See, e.g., Birckhead, *supra* note 89; Castillo, *supra* note 98; Anthony Giannetti, *The Solitary Confinement of Juveniles in Adult Jails and Prisons: A Cruel and Unusual Punishment?*, 30 BUFF. PUB. INT. L.J. 31 (2012).

154. Laura Anne Gallagher, *More Than a Time Out: Juvenile Solitary Confinement*, 18 U.C. DAVIS J. JUV. L. & POL'Y 244, 266 (2014).

### B. Legislative Reforms

There have been several proposed solitary confinement reform bills and regulations. Most of these have been on state and local levels, although there have been a few federal legislation proposals. Similar to the scholarly proposals, some legislative reform efforts are directed at solitary in general while others are specific to juvenile solitary.

#### 1. Federal Legislation

U.S. Representative Cedric Richmond introduced the Solitary Confinement Study and Reform Act of 2014, a bill that would provide for a national study on the mental and fiscal impacts of solitary confinement and, following the study, an imposition of national standards aimed at reducing the use of solitary confinement.<sup>155</sup> The bill was introduced on May 8, 2014, but died in the House.<sup>156</sup> It was reintroduced on July 29, 2015, as the Solitary Confinement Study and Reform Act of 2015, but, since then, there have been no roll calls or votes on this bill.<sup>157</sup>

In early August 2015 Senator Cory Booker introduced the bipartisan Maintaining Dignity and Eliminating Unnecessary Restrictive Confinement of Youths Act<sup>158</sup> (“Mercy Act”). The bill prohibits the use of solitary confinement of juveniles (inmates under the age of eighteen) in federal custody, except for a maximum of three hours if the juvenile harms any individual.<sup>159</sup> The bill also requires that facilities first use less restrictive measures to control behavior before placing the juvenile into solitary.<sup>160</sup> If, after the maximum three hours of solitary have ended, the juvenile still poses a risk of physical harm to him- or herself or anyone else, then the juvenile can be transferred to a different juvenile facility or “internal location” where he or she can be treated without the use of solitary.<sup>161</sup>

---

155. The Solitary Confinement Study and Reform Act of 2014, H.R. 4618, 113th Cong. §§ 1–2 (2014). For an explanation of the reason underlying Representative Richmond’s proposal, see Cedric Richmond, *Toward a More Constitutional Approach to Solitary Confinement: The Case for Reform*, 52 HARV. J. ON LEGIS. 1 (2015). In his article, Representative Richmond states:

I think that Congress must act to address solitary confinement in statute by affirmatively making clear that certain aspects of the practice are troubling. It is my belief that Congress must act to promote solitary confinement reforms because it appears that prolonged solitary confinement tends to pose serious and unacceptable risks to inmates’ physical and mental well-being. As I will discuss, I have proposed legislation entitled the Solitary Confinement Study and Reform Act of 2014 to begin to address these issues.

*Id.* at 11.

156. H.R. 4618 (113th): *Solitary Confinement Study and Reform Act of 2014*, GOVTRACK, <https://www.govtrack.us/congress/bills/113/hr4618> (last visited Oct. 16, 2016) [<https://perma.cc/8AR4-4WXG>].

157. H.R. 3399: *Solitary Confinement Study and Reform Act of 2015*, GOVTRACK, <https://www.govtrack.us/congress/bills/114/hr3399> (last visited Oct. 16, 2016) [<https://perma.cc/UUC6-YMWF>].

158. S. 1965, 114th Cong. (2015).

159. *Id.* § 5043(b)(2)(B)(ii)(I).

160. *Id.* § 5043(b)(2)(A).

161. *Id.* § 5043(b)(2)(C).

## 2. State and Local Legislation

Other than the two federal proposals discussed above, most of the legislative reforms have been on the state and local level.<sup>162</sup> New York City officials recently agreed to a policy that would ban solitary confinement for all inmates under the age of twenty-one at Rikers Island.<sup>163</sup> Instead, inmates between the ages of eighteen and twenty-one will be placed in a separate facility and will be provided classes and counseling.<sup>164</sup> One of the main reasons for the reform is the extensive psychological effects that solitary confinement has on inmates under the age of twenty-one.<sup>165</sup> Commissioner of the Department of Correction Joseph Ponte stated that he and his department “strongly believe that the eighteen to twenty-one years old brain is about the same” as a juvenile’s and because of this, the new plan will “work well” for New York City.<sup>166</sup>

This new policy places Rikers Island at the forefront of prison reform because most prisons use solitary confinement on inmates above the age of eighteen.<sup>167</sup> The reform arose amid mounting scrutiny and lawsuits from U.S. Attorney Preet Bharara’s office.<sup>168</sup> A report published in August 2014 by Bharara’s office stated that Department of Correction’s use of solitary confinement on adolescents is “excessive and inappropriate.”<sup>169</sup>

In addition to New York City’s policy, pursuant to a settlement with the American Civil Liberties Union (ACLU), New York State agreed to overhaul how solitary confinement is administered in the state’s fifty-four prisons.<sup>170</sup> The reform is aimed at reducing the number of inmates in solitary by establishing a three-month maximum for inmates placed in solitary for most disciplinary violations and a thirty-day maximum for almost any inmate placed in solitary for nonviolent infractions.<sup>171</sup> The new regulations also will reduce the number of infractions that are punishable by

162. *See infra* notes 174–77 and accompanying text.

163. Winerip & Schwartz, *supra* note 49.

164. Jake Pearson, *Seeking to Stem Violence, NYC Will House Hard-to-Manage Inmates Ages 18 to 21 in a Single Jail*, US NEWS & WORLD REP. (Sept. 4, 2015 10:11 AM), <http://www.usnews.com/news/us/articles/2015/09/04/all-nyc-inmates-ages-18-to-21-to-be-housed-in-single-jail> [https://perma.cc/MY99-PT4S].

165. Winerip & Schwartz, *supra* note 49.

166. Pearson, *supra* note 164 (“Ponte said he included inmates ages 19 to 21 in the housing plan because neuroscientists say that the brain isn’t fully formed until age 25 and that subjecting young adult inmates to 23-hour isolation to punish bad behavior is harmful.”).

167. *See* Winerip & Schwartz, *supra* note 49.

168. *Id.*

169. Press Release, U.S. Att’y’s Office S.D.N.Y., Manhattan U.S. Attorney Finds Pattern and Practice of Excessive Force and Violence at NYC Jails on Rikers Island That Violates the Constitutional Rights of Adolescent Male Inmates (Aug. 4, 2014) <https://www.justice.gov/usao-sdny/pr/manhattan-us-attorney-finds-pattern-and-practice-excessive-force-and-violence-nyc-jails> [https://perma.cc/5VNS-7JLC].

170. Michael Schwartz & Michael Winerip, *New York State Agrees to Overhaul Solitary Confinement in Prisons*, N.Y. TIMES (Dec. 16, 2015), [http://www.nytimes.com/2015/12/17/nyregion/new-york-state-agrees-to-overhaul-solitary-confinement-in-prisons.html?\\_r=1](http://www.nytimes.com/2015/12/17/nyregion/new-york-state-agrees-to-overhaul-solitary-confinement-in-prisons.html?_r=1) [https://perma.cc/W5YH-MRTE].

171. *Id.*

solitary, such as first time drug possession violations.<sup>172</sup> In addition, prisoners in solitary also will have more access to reading materials and be able to spend their recreation time with others for two hours a day, three days a week, as opposed to the current policy which allows for only one hour a day of independent recreation time.<sup>173</sup>

Several other states are initiating reform efforts for solitary confinement with varying levels of regulation. For example, California agreed to end unlimited isolation for gang members, which will affect hundreds of inmates.<sup>174</sup> This came as a result of a lawsuit filed against Pelican Bay by 3,000 inmates statewide who argued that their long periods of isolation amounted to cruel and unusual punishment.<sup>175</sup> Pennsylvania agreed to stop putting mentally ill inmates in solitary confinement and instead move them to special treatment units as a result of a settlement between the Pennsylvania Department of Corrections and the Disability Rights Network of Pennsylvania.<sup>176</sup> A lawsuit filed by the Illinois ACLU led to Illinois adopting a policy that would limit solitary confinement for juveniles by requiring juvenile inmates to “spend at least eight hours a day outside their cells.”<sup>177</sup>

Although progressive, these reform efforts are ignoring important new research in neurological development.<sup>178</sup> This new research shows that the reformers definition of juveniles, those under the age of eighteen, should actually be redefined as those under the age of twenty-five. This has created a gap between science and the law that could cause irreparable harm to many. Part III explains this new research and how it applies to juvenile solitary confinement reforms.

### III. STUCK IN THE MIDDLE: WHEN IS NEUROLOGICAL ADULTHOOD?

One of the main reasons juvenile offenders are considered less culpable than adult offenders is because of the stage of their brain development.<sup>179</sup> Adolescents value risks and rewards differently and have lower impulse and

---

172. *Id.*

173. *Id.*

174. See Don Thompson, *California Moves to End Unlimited Solitary Confinement*, USA TODAY (Sept. 2, 2015, 8:22 AM), <http://www.usatoday.com/story/news/nation-now/2015/09/02/california-gang-members-solitary-confinement/71564146/> [<https://perma.cc/H7V4-SSKL>].

175. *See id.*

176. See Mark Berman, *The Pennsylvania Prison System Will Stop Putting Mentally Ill Inmates in Solitary*, WASH. POST (Jan. 8, 2015), <https://www.washingtonpost.com/news/post-nation/wp/2015/01/08/the-pennsylvania-prison-system-will-stop-putting-mentally-ill-inmates-in-solitary/> [<https://perma.cc/44Z2-XTFW>].

177. Julie Bosman, *Lawsuit Leads to New Limits on Solitary Confinement at Juvenile Prisons in Illinois*, N.Y. TIMES (May 4, 2015), <http://www.nytimes.com/2015/05/05/us/politics/lawsuit-leads-to-new-limits-on-solitary-confinement-at-juvenile-prisons-in-illinois.html> [<https://perma.cc/5A6E-HTCK>].

178. *See infra* Part III.

179. *See infra* note 231 and accompanying text.

emotional response control than adults.<sup>180</sup> New advances in brain-imaging technology have confirmed that the areas of the brain that are still developing in adolescents are those associated with behavior control, which explains adolescents' impulsive behavior.<sup>181</sup> Dr. Ruben C. Gur, neuropsychologist and Director of the Brain Behavior Laboratory at the University of Pennsylvania, stated, "The evidence now is strong that the brain does not cease to mature until the early 20s in those relevant parts that govern impulsivity, judgment, planning for the future, foresight of consequences, and other characteristics that make people morally culpable."<sup>182</sup>

Thus, "[t]he difference between adolescent and adult behavior . . . is not a function of adolescents' inability to distinguish right from wrong or in their intellectual abilities *per se*, but rather from psychosocial limitations in their ability to consistently and reliably control their behavior."<sup>183</sup> Neurological imaging studies reveal that adolescents and adults have "different patterns of brain activity" when making decisions, explaining why there are differences in risky and impulsive behavior between age groups.<sup>184</sup> During decision making, adolescents rely on the amygdala, which is the part of the brain "associated with primitive impulses of aggression, anger, and fear," while adults rely on the frontal lobe, which is associated with "impulse control and good judgment."<sup>185</sup> This means that adolescents are not as culpable as adults of reflecting before they act.<sup>186</sup>

Recent neurological studies have shed light on how long this neurological adolescent stage is based on the length of time it takes specific parts of the brain to mature. The following section discusses these new developments and explains their importance in understanding neurological adulthood.

#### A. New Neurological Studies on Brain Development

Over the last decade, new imaging technology, called functional magnetic resonance imaging (fMRI), has led scientists to find that the brain

---

180. Brief for the American Medical Ass'n & the American Academy of Children & Adolescent Psychiatry as Amici Curiae in Support of Neither Party at 4, *Miller v. Alabama*, 132 S. Ct. 2455 (2012) (Nos. 10-9646, 10-9647), 2012 WL 121237, at \*4 [hereinafter AMA Brief].

181. *Id.* at 10 ("Impulse control means allowing a goal-directed response to override a more compelling/reflexive, yet goal-inappropriate response.").

182. JUVENILE JUSTICE CTR., AM. BAR ASS'N, CRUEL AND UNUSUAL PUNISHMENT: THE JUVENILE DEATH PENALTY: ADOLESCENCE, BRAIN DEVELOPMENT AND LEGAL CULPABILITY 2 (2004).

183. See AMA Brief, *supra* note 180, at 6; see also Elizabeth Cauffman & Lawrence Steinberg, (*Im*)Maturity of Judgment in Adolescents: Why Adolescents May Be Less Culpable Than Adults, 18 BEHAV. SCI. & L. 741, 742 (2000).

184. AMA Brief, *supra* note 180, at 29.

185. Brief for the American Medical Ass'n et al. as Amici Curiae in Support of Respondent at 11, *Roper v. Simons*, 543 U.S. 551 (2000) (No. 03-633) 2004 WL 1633549, at \*11.

186. AMA Brief, *supra* note 180, at 11.

does not fully develop until as late as the early twenties.<sup>187</sup> Researchers have found a strong relationship between the structural developments of the brain and its cognitive developments.<sup>188</sup> In an interview with National Public Radio (NPR), Dr. Sandra Aamodt explained that “[t]he car rental companies got to it first, but neuroscientists have caught up and brain scans show clearly that the brain is not fully finished developing until about age 25.”<sup>189</sup> She went on to say that “the changes that happen between 18 and 25 are a continuation of the process that starts around puberty, and 18 year olds are about halfway through that process.”<sup>190</sup> This is because the prefrontal cortex is not nearly as developed at eighteen as it is at twenty-five.<sup>191</sup>

In their 2005 article, Jennifer Lynn Tanner and Jeffrey Jensen Arnett describe this development phase between eighteen and twenty-five as “emerging adulthood.”<sup>192</sup> The authors explain that this stage is distinct from adulthood because it is at this point that gray matter in the brain reduces, causing the reasoning and problem solving centers of the brain to start to develop more fully, although they will not *fully* develop until the mid-twenties.<sup>193</sup> Between the ages of eighteen and twenty-five, individuals respond to emotional stimuli differently than older adults; specifically, their reaction to negative stimuli, such as fear, is more emotional than logical.<sup>194</sup> Again, this is a function of the differences in the development of the prefrontal cortex.<sup>195</sup>

Together, new studies on the reduction of gray matter and the prefrontal cortex explain the importance of the postadolescent development of the brain in determining the maturity level of individuals. The following subsection examines the functions of these parts of the brain and how they affect maturity.

### 1. The Importance of the Reduction of Gray Matter

A study on postadolescent brain development comparing the brains of adolescents (with the mean age of fourteen) to that of postadolescents (with the mean age of twenty-four) found that several structural changes in the

---

187. See Andrea MacIver, *The Clash Between Science and Law: Can Science Save Nineteen-Year-Old Dzhokhar Tsarnaev's Life?*, 35 N. ILL. U. L. REV. 1, 16 (2014).

188. B.J. Casey et al., *Structural and Functional Brain Development and Its Relation to Cognitive Development*, 54 BIOLOGICAL PSYCHOL. 241, 242, 253 (2000).

189. Tony Cox, *Brain Maturity Extends Well Beyond Teen Years*, NPR (Oct. 10, 2015, 12:00 PM), <http://www.npr.org/templates/story/story.php?storyId=141164708> [https://perma.cc/HC47-Z6PS].

190. *Id.*

191. *Id.*

192. Jennifer Lynn Tanner & Jeffrey Jensen Arnett, *The Emergence of 'Emerging Adulthood': The New Life Stage Between Adolescence and Young Adulthood*, in HANDBOOK OF YOUTH AND YOUNG ADULTHOOD 39, 39 (Andy Furlong ed., 2005).

193. *Id.* at 41.

194. *Id.* at 42.

195. *Id.*

brain occurred during the postadolescent period.<sup>196</sup> Specifically, the reduction in gray matter showed that there were cognitive developmental processes still occurring in postadolescence.<sup>197</sup> Researchers found that the reduction in gray matter corresponded to brain maturation.<sup>198</sup> This reduction culminates at age twenty-four or twenty-five.<sup>199</sup>

As gray matter reduces (called “pruning”), an individual is able to consistently use their impulse control skills.<sup>200</sup> Although children may have impulse control skills, with the pruning of the gray matter comes the ability to use these skills consistently.<sup>201</sup> Once the gray matter has been pruned, the prefrontal cortex of the brain begins to operate more effectively by allowing nerve impulses to quickly travel through the brain.<sup>202</sup> Once the impulses begin to travel quickly through the brain, there is increased integration of brain activity.<sup>203</sup>

## 2. The Importance of the Development of the Prefrontal Cortex

The prefrontal cortex controls “executive functions” (inhibition, emotional regulation, planning, and organization).<sup>204</sup> MRIs have shown that one of the last parts of the brain to develop is the prefrontal cortex<sup>205</sup> and that it is not fully developed even in late adolescence.<sup>206</sup> This means that the “response inhibition, emotional regulation, planning and organization . . . continue to develop between adolescence and young adulthood.”<sup>207</sup>

---

196. Anca-Larisa Sandu et al., *Post-Adolescent Developmental Changes in Cortical Complexity*, BEHAV. & BRAIN FUNCTIONS, Nov. 2014, at 1; see also Sara B. Johnson et al., *Adolescent Maturity and the Brain: The Promise and Pitfalls of Neuroscience Research in Adolescent Health Policy*, 45 J. ADOLESCENT HEALTH 216, 217 (2009) (“Evidence suggests that, in the prefrontal cortex, this does not occur until the early 20s or later.”).

197. Sandu et al., *supra* note 196, at 5.

198. *Id.* at 7.

199. See Reporter’s Transcript at 46, *People v. Ray*, No. 06CR697 (Colo. Dist. Ct. May 15, 2009) (testimony of Dr. Gur).

200. Johnson et al., *supra* note 196, at 217.

201. *Id.*

202. *Id.*

203. *Id.*

204. Elizabeth R. Sowell et al., *In Vivo Evidence for Post-Adolescent Brain Maturation in Frontal and Striatal Regions*, 2 NATURE NEUROSCIENCE 859, 860 (1999).

205. See Casey et al., *supra* note 188, at 243; Carol Samango-Sprouse, *Frontal Lobe Development in Childhood*, in THE HUMAN FRONTAL LOBES: FUNCTIONS AND DISORDERS 576, 577 (Bruce L. Miller & Jeffrey L. Cummings eds., 2d ed. 2007) (“The dorsal prefrontal cortex (DPFC) is the last area of the frontal lobe to mature and is not fully developed until ten years after puberty, or twenty-five years of age.”).

206. Casey et al., *supra* note 188, at 243.

207. AMA Brief, *supra* note 180, at 20 (quoting Elizabeth R. Sowell et al., *supra* note 204, at 860); see also Jacqueline M. Arnone, *Adolescents May Be Older Than We Think: Today 25 Is the New 18, or Is It?*, 2 INT’L J. CELIAC DISEASE 47, 48 (2014) (“Density of the neural connections between the amygdala and cortices that make up the frontal lobes assimilate emotional and cognitive activity in adolescence. They assert that this process continues to progress clearly into adulthood.”).

The executive functions operate effectively once the brain's gray matter has been trimmed.<sup>208</sup> The prefrontal cortex helps individuals "to plan and organize . . . behavior to reach a goal."<sup>209</sup> Furthermore, the prefrontal cortex "allow[s] an individual to pause long enough to take stock of a situation, assess his or her options, plan a course of action, and execute it."<sup>210</sup> This means that when the prefrontal cortex is not fully developed, decisions are made using the part of the brain associated with impulsive behavior.<sup>211</sup>

A study by researchers from the MacArthur Foundation involving 950 individuals between the ages of ten and thirty used simple puzzles that required the individuals to move pushpins from one end of a board to the other in as few steps as possible.<sup>212</sup> Each time an individual completed a puzzle, he or she was given a similar but more difficult one.<sup>213</sup> The study found that the amount of planning an individual did before starting the puzzle increased with the age of the individual so that the youngest individuals immediately started the puzzle while the older individuals pondered their moves beforehand.<sup>214</sup> The researchers also found that the eighteen- to twenty-five-year-olds planned less than the twenty-six- to thirty-year-olds.<sup>215</sup> The researchers attributed this to the developmental state of the frontal lobe (the prefrontal cortex is part of this section of the brain) and the executive functions, causing more impulsive behavior in the eighteen- to twenty-five-year-old age group than the twenty-six- to thirty-year-old age group.<sup>216</sup>

If, as stated above, the main difference between adolescence and adulthood is the ability to "consistently and reliably control their behavior," the lack of development in the prefrontal cortex places those between the ages of eighteen and twenty-five closer to the adolescent than the adult.<sup>217</sup> The statistics on adolescent and postadolescent behavior show that similarity.<sup>218</sup>

---

208. Johnson et al., *supra* note 196, at 217.

209. See Cox, *supra* note 189; see also Samango-Sprouse, *supra* note 205, at 277 ("The DPFPC is responsible for . . . prioritizing and strategizing to obtain a solution to the presenting problem.").

210. Johnson et al., *supra* note 196, at 217.

211. See *supra* note 180 and accompanying text.

212. The individuals were of average intelligence and recruited from Washington, D.C.; Denver, Colorado; Philadelphia, Pennsylvania; Los Angeles, California; and Irvine, California. The group was divided into seven age groups: ten- to eleven-year-olds, twelve- to thirteen-year-olds, fourteen- to fifteen-year-olds, sixteen- to seventeen-year-olds, eighteen- to twenty-one-year-olds, twenty-two- to twenty-five-year-olds, and twenty-six- to thirty-year-olds. Court Reporter's Transcript at 20, 24, *People v. Ray*, No. 06CR697 (Colo. Dist. Ct. Oct. 14, 2009) (testimony of Dr. Banich).

213. *Id.* at 26.

214. *Id.* at 27–28.

215. *Id.* at 28.

216. *Id.* at 26.

217. See AMA Brief, *supra* note 180, at 6.

218. See *infra* Part IV.B.

*B. The Effects of the “Emerging Adulthood”  
Developmental State*

Eighteen to twenty-five-year-olds’ responses to peer pressure and their level of violence is an effect of the gray matter in their brains still reducing and their prefrontal cortex still developing. A 1996 National Youth Gang survey found that eighteen- to twenty-four-year-olds made up a slightly larger percent of gangs, at 37 percent, while fifteen- to seventeen-year-olds made up 34 percent.<sup>219</sup> This suggests that peer pressure to join gangs is similar at both age levels, which corresponds to the maturity level of the brain and the struggle for identity.

There is a similar trend when looking at the statistics on those who commit violent crimes.<sup>220</sup> A study supported by the National Institute of Justice used an “Age-Crime Curve” to graph the prevalence of offending between the ages of fifteen and twenty-nine using statistics from North American and Europe.<sup>221</sup> The groups used for the study were juvenile and adult offenders who offend from adolescence into early adulthood, adults who were juvenile offenders but stopped during adolescence, adults who started offending in early adulthood, and nonoffenders.<sup>222</sup> The Age-Crime Curve, specifically for violent crimes, showed that the “prevalence of offending (the percentage of offenders in a population) tends to increase from late childhood, peak in the teenage years (around ages 15–19), and then declines in the early 20s.”<sup>223</sup> The recent scientific data discussed above appears to corroborate these results, as the impulsive behavior would be a result of the developmental state of the frontal lobe.<sup>224</sup> This can be attributed to the fact that the brain’s reward system is hyperactive until around age twenty-five, which “makes adolescents and young adults more interested in entering uncertain situations.”<sup>225</sup>

Because this development is on a continuum, it is unreasonable to argue that a twenty-five-year-old has the same level of neurological maturity as a twelve-year-old and wakes up at twenty-six a fully cognitively developed adult. Individuals over the age of eighteen have full time jobs, buy homes, and start families. Nevertheless, this does not mean that they are doing these activities well. For example, after ten years of marriage, women who were between eighteen (and in some cases under eighteen) and twenty-four

---

219. SHAY BILCHIK, OFFICE OF JUVENILE JUSTICE & DELINQUENCY PREVENTION, 1996 NATIONAL YOUTH GANG SURVEY 16 (1999), <https://www.ncjrs.gov/pdffiles1/173964.pdf> [<https://perma.cc/8VJP-HEH2>]. These results were consistent in metropolitan and rural settings. *Id.* at 17.

220. *See* ROLF LOEBER, DAVID FARRINGTON & DAVID PETECHUK, BULLETIN 1: FROM JUVENILE DELINQUENCY TO YOUNG ADULT OFFENDING 2 (2013), <https://www.ncjrs.gov/pdffiles1/nij/grants/242931.pdf> [<https://perma.cc/3RVU-AGSG>].

221. *Id.* at 2–3.

222. *Id.*

223. *Id.* at 3.

224. *See supra* note 185 and accompanying text.

225. Cox, *supra* note 189.

when they first married were almost twice as likely to divorce than those who were at least twenty-five when they first got married.<sup>226</sup>

Individuals over the age of eighteen can enter these activities but not execute them well because executive functions are not the same as intellectual abilities, or IQ.<sup>227</sup> The executive functions use an individual's intelligence and apply it toward a future goal or purpose, resulting in less impulsive behavior.<sup>228</sup> These functions continue to develop beyond adolescence and into the early twenties.<sup>229</sup> A researcher from the above-discussed MacArthur Group study stated:

I think a lot of times people look at individuals and they see, look, they solved the problem, they must be just—working just like an older adult. And the point I'm trying to make is that our work suggested that really there are differences in the way that occurs, that there are more thoughtful, planned out systematic ways of doing things as you get older . . . even into the late 20s as compared to when you're younger.<sup>230</sup>

This further establishes that eighteen may not be the best measure of mature adulthood.

These recent advances in the understanding of brain development play a role in society's understanding of criminal culpability, which bears on how certain individuals are treated under the law. Although the criminal law punishes negligence and recklessness, intentional behavior is considered more culpable than negligent or reckless behavior.<sup>231</sup> This is why intentional crimes usually bear higher sentences than reckless crimes.<sup>232</sup> Therefore, "self-control, foresight, and susceptibility to peer pressure [are] . . . important for making determinations of culpability."<sup>233</sup> Viewed in light of this, these advances in scientific understanding should play a key role in any type of legal reform that seeks to draw lines based on age or mental capabilities.

---

226. NAT'L CTR. FOR HEALTH STATISTICS, CTRS. FOR DISEASE CONTROL, COHABITATION, MARRIAGE, DIVORCE, AND REMARRIAGE IN THE UNITED STATES 17 (2002), [http://www.cdc.gov/nchs/data/series/sr\\_23/sr23\\_022.pdf](http://www.cdc.gov/nchs/data/series/sr_23/sr23_022.pdf) [<https://perma.cc/6ASM-NV5Z>].

227. See Laurence Steinberg et al., *Are Adolescents Less Mature Than Adults?: Minors' Access to Abortion, the Juvenile Death Penalty, and the Alleged APA "Flip-Flop,"* 64 AM. PSYCHOL. 583, 587–90 (2009).

228. See *id.*

229. *Id.* at 587.

230. Court Reporter's Transcript, *supra* note 212, at 29.

231. Stephen J. Morse, *Immaturity and Irresponsibility*, 88 J. CRIM. L. & CRIMINOLOGY 15, 55 (1997) ("[T]he moral reason not to engage in conduct is in general vastly stronger and more immediate when the harm is intended rather than risked, which explains why we consider intentional wrongdoing more culpable than risky wrongdoing.").

232. See Laurence Steinberg, *Adolescent Development and Juvenile Justice*, 5 ANN. REV. CLINICAL PSYCHOL. 459, 464 (2009) ("A crime that is committed impulsively is punished less severely than one that is premeditated, as is a crime that is committed under coercive pressure from others.").

233. *Id.*

## IV. CLOSING THE GAP

While solitary confinement is damaging for all age groups, it is most damaging to juveniles.<sup>234</sup> Therefore, reform should start with this group of offenders. This Note supports the previously discussed legislative reforms that seek to end or limit confinement for juveniles,<sup>235</sup> but it pushes for more comprehensive legislation on the federal level. The new neurological studies suggest that the best reform would exclude inmates under the age of twenty-five from being subjected to solitary confinement because of its highly damaging psychological effects. This part discusses this proposal for more comprehensive reform. Part IV.A discusses the similar detrimental effects solitary has on inmates under the age of eighteen and inmates between the ages of eighteen and twenty-five. Then, Part IV.B explains why the previous practice of drawing the line at eighteen for juvenile treatment needs to be reconsidered. Lastly, Part IV.C proposes that this reform be through federal legislation.

*A. Different Age Group but Similar Effects*

As discussed in Part II.B.1, the main reason for juvenile solitary confinement reform is the belief that juveniles should not be exposed to such a harsh punishment that produces extremely damaging psychological effects on the developing brain. For example, these psychological effects, along with the Department of Justice's report, were the main basis for Rikers Island's updated and improved policy.<sup>236</sup> But, Rikers's policy to extend its ban on solitary for inmates up to the age of twenty-one also was based on neurological studies that showed that the brain was not as fully developed at eighteen as previously believed.<sup>237</sup> However, the new developments in neuroscience show that this rationality can be extended to individuals up to the age of twenty-five.<sup>238</sup>

Because the parts of the brain crucial to how individuals respond to situations are still developing, those between the ages of eighteen and twenty-five would likely suffer the same psychological effects from solitary confinement as those under the age of eighteen.<sup>239</sup> For example, because the juvenile brain reacts to stressful situations with anger and aggression as compared to the adult brain, which reacts with rational decision making, it makes sense that inmates in this developmental stage would react more violently than adults to being subjected to solitary confinement.<sup>240</sup> Also, because they are more susceptible to risky behavior or to act out of fear,<sup>241</sup>

---

234. *See supra* Part I.B.2.

235. *See supra* Part II.B.

236. *See supra* note 165 and accompanying text.

237. *See* Telephone Interview with Martha King, Exec. Dir., N.Y.C. Bd. of Corr. (Oct. 5, 2015).

238. *See supra* Part III.

239. *See supra* Part I.B.2, I.C.

240. *See supra* note 122 and accompanying text; *see also supra* notes 183–86 and accompanying text.

241. *See supra* Part III.B.

inmates twenty-five and under would be more likely to try damaging actions to try to get out of solitary confinement.

While some individuals between the ages of eighteen and twenty-five are mature and fully capable of living as responsible adults, this does not detract from the scientific finding that the average eighteen- to twenty-five-year-old will suffer some detriment from his or her frontal lobe still developing.<sup>242</sup> As previously acknowledged, this development is on a continuum, but it does not mean that eighteen- to twenty-five-year-olds, because of their developing state, will not suffer the same harsh cognitive and psychological effects as juveniles as a result of solitary confinement.<sup>243</sup>

The Supreme Court sought to protect the juvenile psyche against such extremely harsh punishments in two landmark decisions: *Roper v. Simmons*<sup>244</sup> and *Miller v. Alabama*.<sup>245</sup> In *Roper*, the Court reconsidered whether the execution of a juvenile offender (under eighteen when the crime was committed) was unconstitutional based on the Eighth Amendment's bar against cruel and unusual punishment.<sup>246</sup> The Court held that it was unconstitutional to sentence an offender to death who was under the age of eighteen at the time of the offense.<sup>247</sup> The Court largely based its decision on the neurological differences between juveniles and adults, which showed that juveniles had a diminished culpability and a lack of maturity and sense of responsibility.<sup>248</sup> The Court acknowledged that not all juveniles are the same and that some are as mature as adults, but it still decided that it was more beneficial to draw a bright line to save the majority of juveniles who are still developing.<sup>249</sup>

In *Miller*, the Court, while not banning mandatory life sentences for juveniles, found that the mandatory element of the sentence does not leave room for courts to consider the youth of the offender, stating that "an offender's age is relevant to the Eighth Amendment."<sup>250</sup>

The brain's developmental state and the harshness of solitary confinement are strong evidence for treating inmates between the ages of eighteen and twenty-five as juveniles. This analysis is consistent with the analyses in *Roper* and *Miller*.

*B. Rethinking Previous Line Drawing:  
Neurology Displaces Historical Notions of Adulthood*

Traditional notions of the ages of adulthood are not supported by recent neurological studies and are rooted in history rather than reality. Eighteen

---

242. See *supra* Part III.B.

243. See *supra* Part II.C.

244. 543 U.S. 551 (2005).

245. 132 S. Ct. 2455 (2012).

246. *Roper*, 543 U.S. at 555–56.

247. *Id.* at 560.

248. *Id.* at 569–70.

249. *Id.* at 572, 574.

250. *Miller*, 132 S. Ct. at 2462 (quoting *Jackson v. Norris*, 378 S.W.3d 103, 109 (Ark. 2011) (Danielson, J., dissenting)).

is considered legal adulthood. At eighteen, individuals can vote (45 percent of those between the ages of eighteen and twenty-nine vote in presidential elections),<sup>251</sup> join the military (almost one-half of active-duty enlisted personnel are twenty-five years old or younger),<sup>252</sup> and get married (about 6 percent of males and 10.5 percent of females between the ages of eighteen and twenty-five are living with a spouse).<sup>253</sup> At twenty-one years old, individuals can drink legally and buy alcohol. However, there is little evidence that supports this legal privilege is an accurate indication of adult capabilities and maturity.<sup>254</sup> Because the brain is still in a developmental state, the average eighteen- to twenty-five-year-old will suffer some detriment from his or her frontal lobe still developing.<sup>255</sup>

Most courts acknowledge that it is judicially prudent to create clear standards when a rule applies to the average of a large group.<sup>256</sup> In both *Roper* and *Miller*, the Court drew the line at eighteen, despite previous precedent drawing the line at sixteen, for the same reason that this Note proposes increasing the line to twenty-five: the neurological development of the age group.<sup>257</sup> It would be judicially inefficient for a court or regulatory body to have to consider each case individually to determine maturity when deciding whether to treat the individual as an adult or a juvenile for the purposes of solitary confinement. That line should be drawn at twenty-five instead of eighteen.

### C. Federal Legislation Is Necessary

Local legislative bodies have been the most proactive in instituting solitary confinement reform.<sup>258</sup> However, there needs to be nationwide reform, not just a patchwork of state laws, to protect juvenile inmates. Ideally, the Supreme Court would make uniform what the local legislators have started and go even further by declaring juvenile solitary confinement unconstitutional. Unfortunately, the Supreme Court has chosen not to act.

Recently, President Obama issued an executive order that banned solitary confinement for juveniles in federal prisons as a response to low-level infractions.<sup>259</sup> Even though this executive order is a positive step toward

---

251. THOM FILE, U.S. CENSUS BUREAU, YOUNG-ADULT VOTING: AN ANALYSIS OF PRESIDENTIAL ELECTIONS, 1964–2012, at 4 (2014).

252. OFFICE OF THE DEPUTY ASSISTANT SEC’Y OF DEF., 2012 DEMOGRAPHICS: PROFILE OF THE MILITARY COMMUNITY, at iv, 36 (2012).

253. JONATHAN VESPA ET AL., U.S. CENSUS BUREAU, AMERICA’S FAMILIES AND LIVING ARRANGEMENTS: 2012, at 10 (2013).

254. Johnson et al., *supra* note 196, at 217.

255. *See supra* Part III.B.

256. *See, e.g., Roper v. Simmons*, 543 U.S. 551, 574 (2005).

257. *Id.*; *see also Miller v. Alabama*, 132 S. Ct. 2455 (2012).

258. *See supra* Part II.B.2.

259. Barack Obama, *Why We Must Rethink Solitary Confinement*, WASH. POST (Jan. 25, 2016), [https://www.washingtonpost.com/opinions/barack-obama-why-we-must-rethink-solitary-confinement/2016/01/25/29a361f2-c384-11e5-8965-0607e0e265ce\\_story.html](https://www.washingtonpost.com/opinions/barack-obama-why-we-must-rethink-solitary-confinement/2016/01/25/29a361f2-c384-11e5-8965-0607e0e265ce_story.html) (“The Justice Department has completed its review, and I am adopting its recommendations to reform the federal prison system. These include banning solitary confinement for juveniles and as a response to low-level infractions, expanding treatment for the mentally ill

creating a uniform approach to solitary confinement, Congress is in the best position to institute more permanent and comprehensive reform. Furthermore, the federal government would have a strong fiscal interest in passing such legislation.

### 1. Congress Is in a Better Position to Institute Reform

First, Congress is in a better position to set uniform, criminal law standards that comply with standards of decency and encourage states to pass similar legislation. Even though criminal sentencing policy is traditionally left in the domain of the states, solitary confinement, particularly juvenile solitary confinement, is a national, pressing human rights issue.

In *Trop v. Dulles*,<sup>260</sup> Chief Justice Earl Warren stated that the Eighth Amendment's meaning must be assessed, not only in light of history, but according to "the evolving standards of decency that mark the progress of a maturing society."<sup>261</sup> Although this is a standard for the Court's interpretation of whether a punishment is cruel or unusual, it provides a useful standard for federal legislators to use when determining whether to initiate criminal justice reform in regard to punishment. Here, the numerous reforms in the states show a shift in current social values regarding the excessiveness of solitary confinement.<sup>262</sup> This shift indicates that an increasing number of citizens believe that subjecting individuals, especially juveniles, to solitary confinement is too harsh of a punishment. Therefore, it would be prudent for Congress to legislate according to this shift and set a uniform standard for solitary confinement.

Setting a uniform standard would encourage states to adopt a similar standard by sending a message to the states that it is cruel and dangerous punishment to subject this group to solitary confinement. This would help alleviate the confusion caused by the differing policies in the states regarding solitary confinement for juveniles and would help define the term "juvenile" for the purposes of determining which age group is most harmed by solitary confinement.<sup>263</sup>

Second, Congress is in a better position to institute reform because of the resources available to it. For example, Congress would have the means to create a commission consisting of psychiatric experts and representatives from all fifty states to find a suitable alternative solution for solitary

---

and increasing the amount of time inmates in solitary can spend outside of their cells. These steps will affect some 10,000 federal prisoners held in solitary confinement—and hopefully serve as a model for state and local corrections systems.") [<https://perma.cc/2D3L-QAM9>].

260. 356 U.S. 86 (1958).

261. *Id.* at 101.

262. *See supra* Part II.B.2.

263. Although this is outside the scope of this Note, if states are resistant, it is worth considering whether the federal government could make the adoption of this standard as a condition of the grant of federal funds to state law enforcement. However, this may have constitutional implications and be considered coercive. For a fuller discussion, see *South Dakota v. Dole*, 483 U.S. 203 (1987).

confinement for this postadolescent age group.<sup>264</sup> This would take the financial burden of researching alternatives from state and local governments. Congress also would have the resources to solve the problem of the lack of data on solitary confinement by requiring states to comply with reporting.<sup>265</sup> This data would help inform state and local governments of the number of prisoners under the age of twenty-five who are experiencing the damaging effects of solitary confinement and would lead to informed policy changes.

## 2. Federal Legislation Would Serve Public Safety and Fiscal Interests

Congress has a strong public safety interest in passing solitary confinement reform through federal legislation. Because solitary confinement stunts the mental and emotional growth of inmates whose brains are still in a developmental state, those inmates pose more of a danger to society when they are released from prison.<sup>266</sup> Additionally, these inmates are more likely to develop mental illnesses that go without treatment while in solitary,<sup>267</sup> which also would make them a greater public safety threat upon release. Congressman Cedric Richmond stated in his proposal for federal legislation, “It stands to reason that solitary confinement jeopardizes the long-term rehabilitative goals that we set when we incarcerate people as a punishment for their transgressions against society.”<sup>268</sup>

Congress also has a fiscal concern because of the high cost of solitary confinement compared with the cost of keeping prisoners in the general population. A 2013 report estimates the daily per-inmate cost of federal supermax housing is \$216.12 compared to the \$85.74 it costs to house an inmate in general population.<sup>269</sup> Solitary confinement reform would save the federal government money. For example, Mississippi downsized its solitary confinement population by one thousand and saved taxpayers \$6 million a year.<sup>270</sup>

---

264. See Richmond, *supra* note 155, at 16. “[L]egislation . . . would provide incentives for local stakeholders to act and would create a commission to work with these stakeholders to perform and publish a comprehensive and inclusive study to inform possible future policy decisions by the Executive Branch, Congress, and by local elected and corrections personnel.” *Id.* at 2.

265. See Trey Bundy, *supra* note 94.

266. See Craig Haney, *The Psychological Impact of Incarceration: Implications for Postprison Adjustment*, in PRISONERS ONCE REMOVED: THE IMPACT OF INCARCERATION AND REENTRY ON CHILDREN, FAMILIES, AND COMMUNITIES 33, 53–54 (Jeremy Travis & Michelle Waul eds., 2003).

267. See *supra* Part III.B.2.

268. Richmond, *supra* note 155, at 8.

269. State facilities also have reported large comparative costs. U.S. GOV'T ACCOUNTABILITY OFFICE, GAO-13-429, IMPROVEMENTS NEEDED IN BUREAU OF PRISONS' MONITORING AND EVALUATION OF IMPACT OF SEGREGATED HOUSING 32 (2013).

270. Randall Pinkston & Phil Hirschorn, *Mississippi Rethinks Solitary Confinement*, CBS NEWS (May 18, 2013, 9:13 PM), <http://www.cbsnews.com/news/mississippi-rethinks-solitary-confinement/> [https://perma.cc/ADJ8-MQWS].

## CONCLUSION

The Supreme Court has continued to recognize that juveniles should not be subjected to the harshest forms of punishment because they are cognitively different. Scientific research is shedding light on when exactly this cognitive difference no longer exists and that answer is closer to twenty-five, not eighteen. Therefore, it is logical to extend this protection of the juvenile brain to offenders under the age of twenty-five when it comes to the extremely harsh punishment of solitary confinement. It also is logical for the reform to come through federal legislation because the federal government is in a better position to institute sweeping reform, and it is fiscally prudent for the federal government to be the main actor. The state reforms have shown a growing consensus about the harshness of solitary confinement, signaling to Congress that it is time to act.