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## Symposium: Justice for the Child\*

# Social and Biological Constructions of Youth: Implications for Juvenile Justice and Racial Equity

Patricia Soung\*\*

### I. INTRODUCTION

¶1 SB 399 was a bill in California that would have permitted judges to review and reduce some sentences of life without the possibility of parole given to youth. When the floor opened for debate on the bill, Republican Assembly Member Jim Nielson warned his colleagues about “these children” whom he said he was loathe to even call children.<sup>1</sup> Two months earlier at an appropriations hearing on the same subject, Nielson had described “these individuals” in even harsher terms: “They are not youngsters. They are not kids. They are hardened criminals. It’s a tragedy and I’ve wept about what happened to them, their broken hearts that have gotten them on this path, what got them there. But they are evil.”<sup>2</sup> By contrast, Democratic Assembly Member Mariko Yamada spoke of one youth who was sentenced to remain in prison forever in a decidedly different way: “He looked at me as someone who’d been thrown away, perhaps by his family, perhaps by society, perhaps by the community.”<sup>3</sup>

¶2 This Article explores such conflicting rhetoric regarding youth who commit crimes. Although SB 399 concerned youth whose serious offenses mostly involve homicide, discourse on juvenile crime and delinquency in general is wrought with competing constructions of youth-gone-bad and youth in serious need of help, care, and protection. Two votes shy of passage, SB 399 surfaced a veritable fight that underscores how some opponents continue to frame the issue of juvenile crime in terms that “adultify” and frequently de-humanize youth. This framework persists no matter how conservative policy is crafted, no matter the individual circumstances of a youth, and no matter the evidence that youth are different from adults.

¶3 The premise of this Article is that youth is a fluid concept, as is race. Within the juvenile justice system, youth is thus a construct that is subject to interpretation,

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\*\* Patricia Soung was a Soros Justice Fellow and attorney with the Children and Family Justice Center, Northwestern University Law School before joining the National Center for Youth Law as a staff attorney. Prior to law school, she worked to build support and the capacity of youth organizing groups nationally at the Funders’ Collaborative on Youth Organizing. Patricia received her J.D. from Northwestern University School of Law and her B.A. from Stanford University.

<sup>1</sup> Transcript of Record, Jim Nielsen, California Assembly Floor Session (Aug. 26, 2010).

<sup>2</sup> Transcript of Record, *Hearing Before Cal. Assembly Appropriations Comm. on SB 399* (June 30, 2010) (statement of Jim Nielsen).

<sup>3</sup> Mariko Yamada, California Assembly Floor Session (Aug. 26, 2010).

including through the lens of race. The fluid and racially informed constructions of youth existed when society first developed an understanding of the age group. Such constructions persist today in shaping the juvenile justice system, which over-selects for youth of color at every stage of its process. The legal and political implications of such dueling narratives for youth justice are far-reaching.

¶4 Part I of the Article establishes different social understandings of youth, and shows how such narratives may overlay conscious and unconscious racial biases to disadvantage youth of color. Part II explores biological definitions of adolescence, born anew by advances in brain imaging technology and also giving way to diverging constructions of youth. Part III examines how these narratives, whether socially or biologically defined, have historically stratified and continue to bifurcate young people by race into two tracks of justice.

¶5 Part IV notes the particular dangers arising from biological or brain-based arguments about adolescent capacity in the context of juvenile justice advocacy. Other critiques have emerged in recent years to temper the potential misuse of neuroscience by lawyers, as well as to correct misunderstandings by judges and jurors.<sup>4</sup> Much of the literature has warned against overdrawing conclusions from adolescent neuroscience, for instance, about behavior,<sup>5</sup> human thought<sup>6</sup> and specific individuals.<sup>7</sup> This Article examines and raises concerns about the implications of such science for youth justice and racial equity.

¶6 In the final analysis, both social and biological constructs of youth are prone to racial bias. However, biological constructions of youth may be especially harmful in perpetuating associations among inborn criminality, incapacity, and race—in a society where such associations already exist, in a system disproportionately populated by youth of color, and in light of a history of racialized, deterministic science. Such constructions of race and youth work hand-in-hand to steer decision-makers towards control and containment, rather than protect-and-nurture approaches to justice-involved youth. From youth who are truant, get in fist fights, or dabble in drug use, to those who commit acts of violence and have the most urgent, complex needs, policymakers and the public have been intolerant of and quick to arrest and lock up youth of color especially, who they view as surely corrupt, hopeless, or undeserving of help. With one in three young black men currently in prison, in jail, on probation or parole in the United States,<sup>8</sup> perceptions

<sup>4</sup> See, e.g., Owen D. Jones et al., *Brain Imaging for Legal Thinkers: A Guide for the Perplexed*, 2009 STAN. TECH. L. REV. 5, n.18, available at <http://stlr.stanford.edu/pdf/jones-brain-imaging.pdf>.

<sup>5</sup> See, e.g., *id.* ¶ 27 (“All behavior results from the interaction of genes, environments (including social contexts), developmental history, and the evolutionary processes that built the brain to function in the way it does.”); Steven K. Erikson, *Blaming the Brain*, 11 MINN. J.L. SCI. & TECH. 27, 28 (2010) (“Instead of people, cognitive neuroscience posits brains as the exclusive agents of behavior and suggests brains are incapable of blame because of their mechanical and determined nature.”).

<sup>6</sup> See, e.g., Jones, *supra* note 4, ¶ 31 (“There is more to a thought than blood flow and oxygen. fMRI is very good at discovering where brain tissue is active . . . . But differences are not thoughts.”); Erikson, *supra* note 5, at 42 (challenging the assertion that “all individual thoughts, emotions, and feelings can be traced to certain defined biological locations of the brain”).

<sup>7</sup> See, e.g., Jones, *supra* note 4, ¶ 33 (“Most brain imaging research is directed toward understanding how *the average brain*, within a subject population, is activated during different tasks.”).

<sup>8</sup> MICHELLE ALEXANDER, *THE NEW JIM CROW: MASS INCARCERATION IN THE AGE OF COLORBLINDNESS* 9 (2010).

and treatment of youth of color are urgent matters. Indeed, how youth are constructed is every bit a part of understanding this nation's mass incarceration of people of color.

## II. SOCIAL CONSTRUCTIONS OF YOUTH

¶7 Until about 1830, social institutions regarded children primarily as property of their parents and a source of cheap labor.<sup>9</sup> The notion of “childhood” or “adolescence” as a distinct stage of life or a social category that afforded political and social rights was nonexistent.<sup>10</sup> In the early nineteenth century, however, factors including increased urbanization, a growing middle class, industrialization and Transcendentalism<sup>11</sup> birthed new attitudes about children and society's obligations to them.<sup>12</sup> Childhood became associated with learning and development, as well as a kind of fragility, innocence, and vulnerability.

¶8 Professor Kenneth Nunn asserts that youth have been defined as “other than adult, and by their construction, they also produce the meaning of adulthood.”<sup>13</sup> The meaning of their “otherness” is both self-created and produced by adults who define the rules and conditions of their growing up.<sup>14</sup> The positive expression of this otherness treats children as “inchoate adults, as beings with great potential that should be nurtured and developed” and as “trusting, loving, malleable and dependent.”<sup>15</sup> The negative expression of this otherness sees children as “a drain on scarce resources” and as lacking good, rational judgment.<sup>16</sup> For each expression, control is often important as a means to discipline, develop, and contain youth; to be sure, “otherness” may signal threat—whether because of youths' predilection for social experimentation, growing independence, sexual awakenings, or other hallmarks characteristic of the life stage.

¶9 In keeping with these dual notions, the concept of “children's rights” emerged in the middle of the nineteenth century with two meanings:

On the one hand, the expression referred to the notion that children had special needs and interests that adults had an obligation to protect. Children . . . were fragile, vulnerable, and malleable creatures who required proper nurture, protection, play, schooling, and time to mature. On the other hand, the phrase children's rights also suggested that children had a distinctive personhood and unique legal identity and status, separate

<sup>9</sup> Kenneth B. Nunn, *The Child as Other: Race and Differential Treatment in the Juvenile Justice System*, 51 DEPAUL L. REV. 679, 679 (2002).

<sup>10</sup> *Id.*; see also Steven Mintz, *Placing Children's Rights in Historical Perspective*, 44 NO. 3 CRIM. L. BULL. 2 (2008).

<sup>11</sup> Transcendentalism is “a system of philosophy that emphasizes intuition as a means of knowing a spiritual reality and believes that divinity pervades nature and humanity. It is especially associated with Ralph Waldo Emerson and other New England writers.” *Transcendentalism*, ENCARTA DICTIONARY, <http://encarta.msn.com/encnet/features/dictionary/DictionaryResults.aspx?lextype=3&search=Transcendent+alism>.

<sup>12</sup> *Id.*; see also Barry C. Feld, *The Transformation of the Juvenile Court—Part II: Race and the "Crack Down" on Youth Crime*, 84 MINN. L. REV. 327, 331–32 (1999).

<sup>13</sup> See, e.g., Nunn, *supra* note 9, at 700.

<sup>14</sup> *Id.*

<sup>15</sup> *Id.*

<sup>16</sup> *Id.* at 702.

and apart from those of their parents, and deserved a degree of autonomy in their actions.<sup>17</sup>

This appreciation for children and youths' agency and personhood existed alongside, and at times wrestled with, recognition of their vulnerability. Indeed a century after a discernible children's rights movement emerged, efforts to entrust young people with power continued to meet resistance and ambivalence in policy making and public debate. Advocates in the 1960s and early 1970s themselves continued to defend and elaborate on children's rights on grounds of both competence and immaturity. At the same time, "[f]ears erupted about teen pregnancy, stranger abductions, juvenile violence, pedophiles, and gang membership."<sup>18</sup>

¶10

In recent decades, variable constructions of youth have found new fuel in mass media and consequent policymaking. While contending that youth are individuals deserving of rights, the autonomous view of youth has also slid all too readily into rhetoric that *some* youth have forsaken their rights only by their own treacherous doing. While reifying children as the promise of the future, rhetoric around youth also has projected fear, as typified by news reports in the 1980s and 1990s pronouncing an imminent tidal wave of teen "superpredators."<sup>19</sup> Congress was one of the first to respond with the passage of the Gun-Free Schools Act (GFSA) in 1994, requiring schools in states that received federal funding to expel students possessing a firearm on school grounds for at least one year, refer students caught with a weapon to the juvenile justice system, and permit adjustment to the expulsion requirement only on a case-by-case basis.<sup>20</sup> State and local governments quickly followed suit. By 1997, 94 percent of schools had adopted zero-tolerance policies that stiffened punishment for conduct well beyond what the GFSA contemplated; schools began to allow SWAT-style raids in response to suspected student drug possession,<sup>21</sup> and arrested or suspended students in growing numbers, some as young as six years old, for typical misbehavior or even innocuous behavior like passing gas.<sup>22</sup> Political fervor and public demand for "get tough" approaches to violent crime also ushered in automatic transfer and direct file legislation easing the process and criteria for states to try and sentence youth as adults.

<sup>17</sup> Mintz, *supra* note 10, at 2–3.

<sup>18</sup> *Id.* at 10.

<sup>19</sup> A 1996 *Newsweek* headline story proposed that drastic measures be taken to contain these "vicious" youth. Peter Annin, 'Superpredators' Arrive, *NEWSWEEK*, Jan. 22, 1996, at 57. In testimony before the Senate, academic and current director of the Partnership for Research on Religion and At-Risk Youth, John J. Dilulio, Jr., focused on two solutions to an alleged rise in youth violence—churches and prisons—and advocated for the construction of more juvenile prisons to contain these "superpredators," who are "born of abject 'moral poverty.'" *The Changing Nature of Youth Violence: Hearing Before the Subcomm. on Youth Violence of the S. Comm. on the Judiciary*, 104th Cong. 23, 24 (1996) (prepared statement of John J. Dilulio, Jr., *Fill Churches, Not Jails: Youth Crime and Superpredators*); see also Dia N. Brannen et al., *Transfer to Adult Court: A National Study of How Juvenile Court Judges Weigh Pertinent Kent Criteria*, 12 *PSYCHOL. PUB. POL'Y & L.* 332, 333 (2006).

<sup>20</sup> See KIM BROOKS, VINCENT SCHIRALDI, & JASON ZEIDENBERG, JUSTICE POLICY INSTITUTE, CHILDREN'S LAW CENTER, *SCHOOL HOUSE HYPE: TWO YEARS LATER* 26 (2000), available at <http://www.justicepolicy.org/reports/report-j-hype-full.html>.

<sup>21</sup> See ADVANCEMENT PROJECT ET AL., *EDUCATION ON LOCKDOWN: THE SCHOOLHOUSE TO THE JAILHOUSE TRACK* 16–19 (2005).

<sup>22</sup> See ADVANCEMENT PROJECT, *TEST, PUNISH, AND PUSH-OUT: HOW ZERO TOLERANCE AND HIGH-STAKES TESTING FUNNEL YOUTH INTO THE SCHOOL-TO-PRISON PIPELINE* 13 (2010).

By the late 1990s, every state in the country had adopted such laws in some form,<sup>23</sup> for instance, by reducing the minimum age for transfer from juvenile to adult criminal court, expanding the list of transfer eligible offenses or easing the process for waiving youths by eliminating previously considered criteria.<sup>24</sup> Alongside mandatory minimum sentencing, “three strikes” laws and other aggressive measures in the name of the “War on Drugs,” transfer mechanisms began to sweep youth in unprecedented numbers into the criminal justice system.<sup>25</sup>

¶11 Across the board, such tough-on-crime laws have disproportionately reined youth of color into the juvenile and criminal justice system. Professor Barry Feld argues that at the get-go, the protect-and-nurture ideology of social and legal institutions in the nineteenth century began primarily for white children.<sup>26</sup> Post-slavery, black children retained their status as property and continued to lack legal rights.<sup>27</sup> Their primary social function was to provide labor for the economic welfare of white people. As a consequence, “there was no beginning of adolescence for African American youth.”<sup>28</sup> Or at least they were excepted from the conception of youth as innocent babes to be protected and nurtured into citizens afforded a full array of political, economic and social rights. As explored further in section IV, outcomes in the juvenile justice system suggest that black youth are disproportionately denied their status as children, in the same way that they were more than a century ago.

### III. BIOLOGICAL DEFINITIONS OF YOUTH

¶12 Like social constructions of youth, a growing body of neuroscience has defined youth as other-than-adult as a biological matter.<sup>29</sup> In the last decade or so, new imaging technologies have been able to map the development of the human brain from childhood to adulthood.<sup>30</sup> Advances in brain imaging technology have led to two major discoveries about the process and pace by which adolescent brains develop relative to adult brains.<sup>31</sup>

<sup>23</sup> BARRY HOLMAN & JASON ZEIDENBERG, JUSTICE POLICY INSTITUTE, *THE DANGERS OF DETENTION: THE IMPACT OF INCARCERATING YOUTH IN DETENTION AND OTHER SECURE FACILITIES* 12 (2006).

<sup>24</sup> Brannen, *supra* note 19, at 332–33.

<sup>25</sup> See ADVANCEMENT PROJECT ET AL., *supra* note 21, at 15.

<sup>26</sup> Feld, *supra* note 12, at 332–33.

<sup>27</sup> Nunn, *supra* note 9, at 680.

<sup>28</sup> *Id.* at 679.

<sup>29</sup> See, e.g., Donna M. Bishop & Hillary B. Farber, *Joining the Legal Significance of Adolescent Developmental Capacities with the Legal Rights Provided by In Re Gault*, 60 RUTGERS L. REV. 125, 152 (2007) (“Advances in neuroscience have produced a new body of knowledge showing that fundamental differences in the psychosocial maturity of adolescents and adults are rooted in biochemical changes in the structures and processes of the brain.”).

<sup>30</sup> See Mary Beckman, *Crime, Culpability and the Adolescent Brain*, 305 SCI. MAG. 596, 596 (2004); see also NAT’L INST. OF MENTAL HEALTH, NIH PUB. NO. 01-4929, *TEENAGE BRAIN: A WORK IN PROGRESS* (2001).

<sup>31</sup> Brain imaging technology includes computed tomography (CT) scanning that show structural abnormalities in the body, PET scanning which captures radioactive tracers moving through the bloodstream to learn about how the brain functions, EEG and MEG recordings of electromagnetic fluctuations in various parts of the brain, and fMRI (functional magnetic resonance imaging) which detects changes in the properties of the brain while a subject is performing very specific mental tasks. See Jones et al., *supra* note 4, ¶¶ 13–16. fMRI is the newest technology that sheds light on how the brain works, how much, and for how long during particular tasks. *Id.* ¶¶ 17–18.

First, the adolescent brain experiences an intense overproduction of “gray matter,” material responsible for thought.<sup>32</sup> The brain then undergoes “pruning,” a process in which the brain rapidly eliminates gray matter; it then goes through “myelination,” which produces insulation called white matter and makes the brain more efficient and precise.<sup>33</sup> Second, the frontal lobe—the part of the brain associated with cognitive reasoning—undergoes more change during adolescence than during any other stage of life.<sup>34</sup> The frontal lobe is also the last region of the brain to develop.<sup>35</sup>

¶13 Interpretations of adolescent brain science differ among neuroscientists, psychiatrists, psychologists and other health care professionals, and few, if any, researchers have gone so far as to claim that biology alone explains the mind and behavior of teenagers.<sup>36</sup> Notwithstanding its praise of advances in brain imaging technology, the National Institute of Mental Health has cautioned, “Individual brains differ enough that only broad generalizations can be made from comparisons of different individuals at different ages.”<sup>37</sup> The Institute further acknowledges that “both genes and environment play major roles in shaping early brain developments” and that researchers have yet to apportion the relative influences of experience versus biology in brain maturation.<sup>38</sup>

¶14 Still, many youth advocates are offering neuroscience, sometimes by itself and sometimes along with behavioral and social science, to show that youth are not yet fully formed, cognitively and psychosocially, relative to adults. They use the technology to prove that the structure and activity of the “average” teenager’s brain is different from that of adults, and by extension, that the average teenager’s cognitive and social behavior is different as well. National Institute of Health psychiatrists, for instance, have written that the new brain research “confirms a long-held, common sense view: teenagers are not the same as adults in a variety of key areas such as the ability to make sound judgments when confronted by complex situations, the capacity to control impulses, and the ability to plan effectively.”<sup>39</sup> Their article further concludes that neuroscience affirms youth’s need for caring adults and institutions to help them learn and mature.<sup>40</sup>

¶15 Other researchers have studied the brain in the context of trauma and other environmental “risk factors” given its plasticity during early childhood and adolescence. For example, psychiatrist Bruce Perry has concluded that chronic stress or trauma can lead to neurochemical changes that affect attention, impulse control, sleep and motor

<sup>32</sup> See Jay N. Giedd et al., *Brain Development During Childhood and Adolescence: A Longitudinal MRI Study*, 2 NATURE NEUROSCIENCE 861, 861 (1999) (discussing a National Institute of Mental Health longitudinal study of 145 children and adolescents).

<sup>33</sup> *Id.* at 862–63.

<sup>34</sup> See Elizabeth R. Sowell et al., *In Vivo Evidence for Post-Adolescent Brain Maturation in Frontal and Striatal Regions*, 2 NATURE NEUROSCIENCE 859 (1999); see also Elizabeth R. Sowell et al., *Mapping Continued Brain Growth and Gray Matter Density Reduction in Dorsal Frontal Cortex: Inverse Relationships During Postadolescent Brain Maturation*, 21 J. NEUROSCIENCE 8819 (2001).

<sup>35</sup> *Id.*

<sup>36</sup> See Jones et al., *supra* note 4.

<sup>37</sup> NAT’L INST. OF MENTAL HEALTH, *supra* note 30, at \*1.

<sup>38</sup> *Id.*

<sup>39</sup> DANIEL R. WEINBERGER, BRITTA ELVEVAG, & JAY N. GLEDD, *THE ADOLESCENT BRAIN: A WORK IN PROGRESS* 19 (2005).

<sup>40</sup> *Id.*

control.<sup>41</sup> Perry has specifically observed how non-responsive or threatening treatment can impair a child’s ability to form healthy relationships,<sup>42</sup> and how exposure to violence can numb a youth’s capacity for remorse or empathy when he hurts or even kills another person.<sup>43</sup> Undergirding Perry’s developmental trauma research is a “use it or lose it” principle—that is, brains become “wired” within a certain time period and in the absence of key experiences and stimulants, neurological pathways may be lost and their capabilities compromised.<sup>44</sup>

¶16 As with social constructions, biological narratives of youth may stand in tension with one another. One narrative suggests that adolescents are inchoate beings, capable while changing and developing and that society’s duty is to protect and nurture them. Another narrative describes youth as hard-wired during this formative stage of life; a too-late mentality here concentrates societal resources and energy on early childhood interventions and control, containment, and zero tolerance of older youth.

¶17 As discussed in the next section, constructions of youth are too often formulated along racial lines in the context of juvenile justice. Biological and medical explanations of adolescent behavior and capacity are particularly deleterious for youth of color. When combined with racial bias and the fact that youth of color are over-represented in the juvenile justice system, biological definitions of youth may reinforce notions of criminality and incapacity as inborn, natural, and inevitable.

#### IV. RACIAL CONSTRUCTIONS OF YOUTH IN JUVENILE JUSTICE

¶18 This section argues that juvenile justice systems have always treated and continue to treat youth differently based on competing and ultimately racialized narratives of “youth.” Whether supported by social or biological evidence, conceptions of youth in the United States have often emerged unevenly for different races and ethnicities, classes, genders, and sexualities. This Article focuses only on the intersection of youth and race in the juvenile justice system and the fluidity of “youth” as a legal identifier. Ultimately, the individual rights-based and race-neutral frameworks that govern our laws, policies, and practices have failed to defend and support youth of color who are too systematically subjected to racial biases in the justice system.

##### A. *Racial Disparities in Juvenile Justice*

¶19 Juvenile courts first emerged as part of the Progressive Movement, ignited by modernization and industrialization at the turn of the twentieth century, and driven by an agenda to reform social and economic problems through government intervention. The power of the state served as the movement’s mantra and thus clothed the impulse to protect and develop children in institutional reforms such as child labor laws, social

<sup>41</sup> BRUCE D. PERRY, *THE NEUROARCHEOLOGY OF CHILDHOOD MALTREATMENT: THE NEURODEVELOPMENTAL COSTS OF ADVERSE CHILDHOOD EVENTS* (2000).

<sup>42</sup> BRUCE D. PERRY, *VIOLENCE AND CHILDHOOD: HOW PERSISTING FEAR CAN ALTER THE DEVELOPING CHILD’S BRAIN* (2001).

<sup>43</sup> BRUCE D. PERRY, *INCUBATED IN TERROR: NEURODEVELOPMENTAL FACTORS IN THE ‘CYCLE OF VIOLENCE’* (1997).

<sup>44</sup> See William T. Greenough, James E. Black & Christopher S. Wallace, *Experience and Brain Development*, 58 *CHILD DEV.* 539 (1987).

welfare legislation, compulsory school attendance, and the creation of the juvenile court.<sup>45</sup>

¶20 The juvenile court also developed amidst Transcendentalism and “positive criminology,” schools of thought that spawned scientific and medical strategies to addressing crime. Progressive reformers challenged the attribution of criminal behavior to choice and free will, qualified individual responsibility for crime, and shifted the analysis of crime towards external and deterministic influences.<sup>46</sup> These reformers relied on a philosophy of diagnosis and treatment in emphasizing rehabilitation and reform, rather than punishment and retribution.<sup>47</sup> They also conceived juvenile courts as an alternative to criminal prosecution, and thus separated youth from adults in the criminal justice system.<sup>48</sup>

¶21 Guided by a mission to rehabilitate, the juvenile court adopted at least two guiding principles. First, it considered youth to be reason for reduced culpability, though the court also avoided abdicating youth of total responsibility, recognizing that older youth, in particular, “possess sufficient moral reasoning, cognitive capacity, and volitional control to hold them partially responsible for their behavior, albeit not to the same degree as adults.”<sup>49</sup> Second, the court declared itself *parens patriae*, or “father of the people,” to intervene as a parental figure to determine what it deemed to be “in the best interests of the child,” as opposed to the “expressed interests” of a client in the criminal justice system.<sup>50</sup> These principles endowed the juvenile court with flexibility and wide discretion in responding to criminal as well as non-criminal behavior, such as smoking, sexual activity, and truancy.<sup>51</sup> In contrast to criminal courts, juvenile courts adopted informal processes, excluded lawyers and juries, and conducted confidential hearings.<sup>52</sup> In this manner, the courts joined other state-sanctioned institutions, including the child welfare system and public schools, to “rescue” youth, teaming up with social workers, clinicians and probation officers to carry out its mission. This flexible and informal design to mete out remedies for youth acknowledged the importance of individualized determinations to meet the needs of youth. It also acknowledged the malleability of youth and embodied a hope and belief that youth could be taught, righted and reformed.

¶22 Yet, whether at its inception or over time, the juvenile court system mirrored broader children’s rights discourse and society at-large in conceiving two views of youth—as innocent, vulnerable, and dependent on the state for nurture and protection, and as crafty, autonomous almost-adults whose delinquent or criminal behavior threatens the public.<sup>53</sup> In the end, while professing protection and rehabilitation as its ideals, the juvenile court has been ambivalent about whom it is actually protecting—youth from society and its vices, or society from youth and their vices. This ambivalence and conflict within “jurisprudence of youth” has allowed policymakers to inconsistently adopt

<sup>45</sup> Feld, *supra* note 12, at, 334–35.

<sup>46</sup> *Id.* at 335–36.

<sup>47</sup> *Id.* at 339.

<sup>48</sup> *See id.* at 337–38.

<sup>49</sup> *See id.* at 384; *see also* Nicholas Espiritu, (*E*)racing Youth: The Racialized Construction of California’s Proposition 21 and the Development of Alternate Contestations, 52 CLEV. ST. L. REV. 189, 201 (2005).

<sup>50</sup> Feld, *supra* note 12, at 337.

<sup>51</sup> *See generally* Mintz, *supra* note 10.

<sup>52</sup> *Id.*

<sup>53</sup> *Id.*

philosophies of leniency, treatment and rehabilitation or severity and punishment. The results are racially stratified. At their inception, juvenile courts would “order[] more lenient treatment to children like the judges’ own and send[] ‘foreign’ or ‘alien’ youth to institutions.”<sup>54</sup>

¶23

The same flexibility and discretion nominally intended to better equip juvenile courts to protect and rehabilitate children has also punished “other” children disproportionately and more harshly. As judges lose discretion to prosecutors, legislators and law enforcement, racial bias has increased opportunities to infect the juvenile and criminal justice systems. Studies today regularly confirm that at every stage of the juvenile justice system,<sup>55</sup> black, Latino, and Native American youth receive harsher treatment than do white youth; they are more likely to be arrested, charged, detained, sentenced severely, and tried as adults.<sup>56</sup> These racial disparities in the juvenile justice system have been traced to discretionary decisions made early in the juvenile justice process and “build as the process continues.”<sup>57</sup> For example, a study of pretrial detentions in one state showed that the differential treatment of juveniles is attributable to both individual characteristics of the juveniles and the context in which the court operates, namely the racial composition of a county.<sup>58</sup> Counties with higher percentages of non-white populations were more likely to detain juveniles prior to adjudication.<sup>59</sup> Ultimately, the decision to detain a youth appears “rooted in notions of protecting either the community or the youth, providing proper placement when juvenile delinquents lack it, and/or to ensure court appearance.”<sup>60</sup> Black youth also shoulder the heaviest burden of punitive transfer laws. Decisions to transfer juveniles to the adult system reflect the penultimate too-late mentality; symbolically, they represent “a revocation of child’s status as a juvenile” and an abandonment of the rehabilitation ideal that birthed the juvenile justice system.<sup>61</sup> Substantively, transfers deny youth the protections and supports that are supposed to exist in the juvenile justice system, while subjecting them to harsher treatment in the criminal justice system.<sup>62</sup> In comparison to youth who are processed in the juvenile system, transferred youth receive stiffer sentences, including

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<sup>54</sup> Nunn, *supra* note 9, at 707.

<sup>55</sup> Juvenile courts usually involve six stages, several of which may be combined—intake, detention, petitioning, waiver, adjudication, and disposition.

<sup>56</sup> Nunn, *supra* note 9, at 681–82.

<sup>57</sup> *Id.* at 687.

<sup>58</sup> Gaylene S. Armstrong & Nancy Rodriguez, *Effects of Individual and Contextual Characteristics on Preadjudication Detention of Juvenile Delinquents*, 22 JUST. Q. 522 (2005).

<sup>59</sup> *Id.* at 534. Although some studies have found that the nature of the offense, prior record and probation violations are stronger predictors of detention status than race, other researchers have firmly concluded both the race and gender of a juvenile affects his or her detention status. *Id.* at 522. Data shows that non-white males and females are detained at similar rates, whereas white males are more likely to be detained than white females. *Id.* Black and Latino youth are more likely to be detained than white youth. *Id.* Even those who found no direct effect between race and detention status did acknowledge a higher rate of court referrals for white youth who were detained. *Id.*

<sup>60</sup> *Id.* at 524–25.

<sup>61</sup> Matthew William Bell, *Prosecutorial Waiver in Michigan and Nationwide*, 2004 MICH. ST. L. REV. 1071, 1085–86 (2004).

<sup>62</sup> *Id.* at 1086.

life without parole,<sup>63</sup> and little or no education or rehabilitative programming.<sup>64</sup> Even Congress expressed concern over racial disparity in the juvenile justice system by passing mandates in 1992 under the Juvenile Justice and Delinquency Prevention Act to require states to study and address disproportionate minority confinement.<sup>65</sup>

### B. Discretion and Bias in Racially-neutral Decision-making

¶24 Decisions about whether to treat, protect or punish youth become susceptible to preexisting notions of threat, danger, and irresponsibility that have historically been attached to black youth in particular. Indeed, social scientists confirm that race influences, consciously or unconsciously, perceptions of capacity,<sup>66</sup> dangerousness and blameworthiness.<sup>67</sup> One study found that system officials may have different theories about the causes of crime for blacks and whites, and such logic ultimately directs the disposition of an offender.<sup>68</sup> In that study, probation officers “consistently portray black youths differently than white youths in their written court reports, more frequently attributing blacks’ delinquency to negative attitudinal and personality traits” while “depictions of white youths more frequently stress the influence of the individual’s social environment.”<sup>69</sup> The varying attributions significantly affect assessments of a youth’s risk of re-offending and sentence recommendations, even after adjusting for legally relevant case and offender characteristics.<sup>70</sup> Ultimately, harsher penalties are meted out to youth of color, who are perceived to be more blameworthy, dangerous and unresponsive to treatment.<sup>71</sup>

¶25 Such decisions touched by racial bias disproportionately cast aside youth of color as miniature-adults—forgetting or dismissing their status as children. Another study confirms that unconscious racial stereotypes may influence judgments about young offenders’ negative traits, culpability, risk of recidivism and deserved punishment.<sup>72</sup>

<sup>63</sup> An estimated 2,225 youth under age eighteen were serving sentences of life without parole in 2002. See AMNESTY INTERNATIONAL & HUMAN RIGHTS WATCH, *THE REST OF THEIR LIVES LIFE WITHOUT PAROLE FOR CHILD OFFENDERS IN THE UNITED STATES* (2005).

<sup>64</sup> See CENTER FOR POLICY INITIATIVES, *JUVENILE TRANSFER REFORM SUMMARY* 140 (2005). One study found that juveniles in adult courts are given sentences that are 83 percent more severe. *Id.* at 141.

<sup>65</sup> See Juvenile Delinquency and Prevention Act of 1992, 42 U.S.C. § 223(a)(22) (1992); OUR CHILDREN, THEIR CHILDREN: CONFRONTING RACIAL AND ETHNIC DIFFERENCES IN AMERICAN JUVENILE JUSTICE 12 (Kimberly Kempt-Leonard & Darnell F. Hawkins eds., 2005) [hereinafter *THEIR CHILDREN*].

<sup>66</sup> See, e.g., Devah Pager, Bruce Western & Bart Bonikowski, *Discrimination in a Low Wage Labor Market: A Field Experiment*, IZA DISCUSSION PAPER No. 4469 (2009), available at <http://ssrn.com/abstract=1490471> (noting that blacks were half as likely to receive a callback or job offer as equally qualified white applicants for entry-level jobs, and blacks with clean criminal records had no better chance of callbacks or job offers than a white man just released from prison).

<sup>67</sup> See, e.g., Sandra Graham & Brian S. Lowery, *Priming Unconscious Racial Stereotypes About Adolescent Offenders*, 28 LAW & HUM. BEHAV. 483 (2004), available at [http://humanservices.vermont.gov/boards-committees/cfcpp/publications/publications-2007/macarthur/publications/Priming\\_Unconscious\\_Racial\\_Stereotypes.pdf](http://humanservices.vermont.gov/boards-committees/cfcpp/publications/publications-2007/macarthur/publications/Priming_Unconscious_Racial_Stereotypes.pdf); George S. Bridges & Sara Steen, *Racial Disparities in Official Assessments of Juvenile Offenders: Attributional Stereotypes as Mediating Mechanisms*, 63 AM. SOC. REV. 554 (1998).

<sup>68</sup> Bridges et al., *supra* note 67, at 567.

<sup>69</sup> *Id.* at 567.

<sup>70</sup> *Id.*

<sup>71</sup> *Id.*

<sup>72</sup> Graham & Lowery, *supra* note 67, at 499.

Such associations between race, immaturity and blameworthiness have invigorated tough responses to juvenile crime, including relaxed standards for waiver to criminal court.<sup>73</sup> Black youth, in particular, have been disproportionately transferred to criminal court, likely in part because they trigger the belief that the system should treat them not as redeemable youth, but hardened criminals who are just as blameworthy as adults who commit similar offenses.

¶26 Besides individual characteristics, research also shows that juvenile courts in areas characterized by urbanization, racial inequality and poverty, high rates of violent crime or high proportions of minorities and youth “process cases more formally, use detention more frequently, and impose harsher dispositions, especially for minority youths.”<sup>74</sup> Though not conclusive, the evidence also suggests in these same areas where minorities are often highly visible, “youths of color are perceived by justice officials—and perhaps by the community at large—as especially needy, especially threatening, or both.”<sup>75</sup> Perceptual bias and racial coding, therefore, also combine with structural disadvantages to further strip poor black youth in high-crime, segregated urban neighborhoods of their juvenile status, and expose them to harsher penalties and secure confinement.

¶27 Efforts to formalize and standardize juvenile proceedings, partly for the sake of uniformity in decision-making, have failed to protect youth of color from perceptual bias. Advocates express continued disappointments about inadequate due process rights for youth, even after *In re Gault*, the milestone case that afforded youth in juvenile delinquency proceedings many of the same procedural rights as adults.<sup>76</sup> Youth of color continue to suffer disproportionately and more severely along all points of the justice process, where racial bias can produce worse outcomes for them and is hard or nearly impossible to prove. Ultimately, the outcomes for youth of color in the juvenile justice system seem consistently worse whether procedures are informal or formal. Without explicitly confronting racial biases that overlay any procedural fix, such disparities and inequities are likely to persist.

## V. BIOLOGIZING YOUTH AND RACE IN JUVENILE JUSTICE

¶28 While acknowledging the value added by science to legal arguments, this section argues that reliance on neuroscience to explain adolescent cognition and behavior is subject to misinterpretation, misuse and even abuse. More than one hundred years of legal recognition by juvenile courts and age-based laws already stand behind the foundational claim that recent adolescent neuroscience makes: youth are different. Yet, children’s advocates have found themselves needing to reassert this difference so that youth continue to receive special protections and relative leniency in the criminal justice system. In arguing for developmentally informed treatment though, advocates should be

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<sup>73</sup> *Id.* at 500.

<sup>74</sup> Donna M. Bishop, *The Role of Race and Ethnicity in Juvenile Justice Processing*, in *THEIR CHILDREN*, *supra* note 65, at 23, 62.

<sup>75</sup> *Id.*

<sup>76</sup> 387 U.S. 1 (1967); Mintz, *supra* note 10, at 8 (“A major battlefield in the contest over children’s rights involved the treatment of juvenile crime. Children’s rights advocates looked skeptically at the claim that the juvenile court system operated in children’s best interests. . . . Children’s rights reformers stressed that juveniles were denied basic due process protections, even after the high court’s decision in *Gault*.”).

wary of the risks and unintended consequences of biological explanations of age and delinquent and criminal behavior.

¶29 In recent years, the Supreme Court has acknowledged developmental differences between youth and adults in its Eighth Amendment jurisprudence governing harsh sentences. Its landmark decision in *Roper v. Simmons* ruled the death penalty unconstitutional for youth under eighteen years old, reasoning that their developmental immaturity, vulnerability to negative influence and transient characters render them “categorically less culpable.”<sup>77</sup> In doing so, the decision further fanned the popularity and hope surrounding neuroscience as a new arsenal in juvenile justice.<sup>78</sup> Relying in part on biological and social science research,<sup>79</sup> the Court held that “[t]he differences between juvenile and adult offenders are too marked and well understood to risk allowing a youthful person to receive the death penalty despite insufficient culpability.”<sup>80</sup> More recently, the Court in *Graham v. Florida* banned life without the possibility of parole sentences for youth under eighteen years old who did not commit homicide.<sup>81</sup> The Court reiterated the important principle established in *Roper* that a child is different than an adult, and though “not absolved of responsibility for his action . . . his transgression ‘is not as morally reprehensible as that of an adult.’”<sup>82</sup> Though it is unclear to what extent neuroscience played a role in the Court’s holding, both the *Roper* and *Graham* Courts relied heavily in their reasoning on youth being a distinct development phase to reach their holdings.

¶30 Stephen Harper, the capital defense attorney who coordinated efforts to abolish the juvenile death penalty, observed that neuroscience is attractive to advocates because it is “hard evidence” of youths’ cognitive and behavioral capacities, as opposed to common sense or soft evidence from behavioral and social science studies that predated *Roper* by decades.<sup>83</sup> Indeed since the 1990s, a veritable field of “neurolaw” has emerged, fusing neuropsychology with the legal system to, among other goals, modify criminal law doctrine and inform debates about culpability and responsibility.<sup>84</sup>

¶31 The problems with neurolaw are many. Interpretations and applications of neuroscience may “medicalize” a state through which every person passes as they age. In this respect, interpretations of the science is too often laden with deficits-language, even

<sup>77</sup> *Roper v. Simmons*, 543 U.S. 551, 567 (2005).

<sup>78</sup> *Id.* at 569–70 (quoting *Thompson v. Oklahoma*, 487 U.S. 815, 835 (1988)) (“The susceptibility of juveniles to immature and irresponsible behavior means ‘their irresponsible conduct is not as morally reprehensible as that of an adult.’”); see, e.g., Peggy Sasso, *Implementing the Death Penalty: The Moral Implications of Recent Advances in Neuropsychology*, 29 *CARDOZO L. REV.* 765, 819 (2007), available at [http://www.cardozolawreview.com/PastIssues/29.2\\_sasso.pdf](http://www.cardozolawreview.com/PastIssues/29.2_sasso.pdf) (“[T]he Supreme Court began to signal a change in attitude” when it “implicitly recognized in *Simmons* that neurological evidence can be useful in assessing individual moral culpability” and that criminal law must expand consideration of neurological evidence to determine whether a defendant lacks the capacity to qualify as a “full moral agent.”).

<sup>79</sup> *Roper*, 543 U.S. at 569.

<sup>80</sup> *Id.* at 572–73.

<sup>81</sup> A sixteen-year-old committed home invasion robbery while on probation for a prior armed burglary, and the trial judge had revoked probation and sentenced him to life without parole. *Graham v. Florida*, 130 S. Ct. 2011 (2010).

<sup>82</sup> *Id.* at 2026 (quoting *Thompson*, 487 U.S. at 836).

<sup>83</sup> Jay D. Aronson, *Brain Imaging, Culpability and the Juvenile Death Penalty*, 13 *PSYCHOL. PUB. POL’Y & L.* 115, 133 (2007) (citing an interview with Stephen Harper on May 24, 2005).

<sup>84</sup> Erikson, *supra* note 5, at 35.

describing “youth” as a form of mental deficiency. Moreover, the application of neuroscience to a juvenile and criminal justice system disproportionately populated by people of color perpetuates and naturalizes associations between race, criminality and intellect. In the end, “biologizing” youth and race in the same moment distracts from a fuller social understanding of how youth, race and context interact, and what measures should be taken to address youth crime and racial inequity.

#### A. Youth as a Condition

¶32 Many lawyers and legal groups have adopted neural scientific findings to contend that youth have a natural and special capacity for reform given the immense developmental changes they undergo. Some advocates have also cloaked the findings in deficit terms. For example, the American Bar Association reports that adolescents have “significant neurological deficiencies that result in stark limitations of judgment.”<sup>85</sup> Mental health professionals explain in their *Roper v. Simmons* brief to the Supreme Court that the difference between the adolescent and adult brain is a function of “deficiencies in the way adolescents think.”<sup>86</sup> Add to their incomplete biological make-up the stresses of being teenagers—including emotional angst and peer pressures—and the researchers find that “the deficiencies in the adolescent mind and emotional and social development are especially pronounced.”<sup>87</sup> In the justice system specifically, youth are found on average to “function at a substandard level.”<sup>88</sup>

¶33 The deficits framework understands youth in the juvenile justice system to be under-developed, incapable or even ill. The fact of offending and consequent punishment is somehow a natural consequence of the youths’ own deficiencies. Yet studies for decades demonstrate that who enters the juvenile and criminal justice system is highly defined by poverty and race. Psychologist Jerome Kagan points out that teen violence and murder rates vary drastically from country to country, although adolescent brains presumably develop at around the same rate worldwide; Kagan maintains that brain development must be understood in a cultural and historical context.<sup>89</sup>

¶34 Even where deficits understandings are avoided, the danger in using biology to help explain youth delinquency and crime is that the focus remains largely on the adolescent as the site of damage, sometimes to the exclusion of the broader social context. With its fancy graphics and technology, brain science can be hypnotizing, and may direct too much attention on individual treatment and solutions; the preoccupation with such science may thus undermine diagnosis of crime to some debatable degree as a public health epidemic influenced by poverty, failing public schools, depressed job markets and pervasive violence in and out of homes. Indeed, at a recent symposium, a psychiatrist from Northwestern University School of Medicine posed the question, “Where in the

<sup>85</sup> JUVENILE JUSTICE CTR., AM. BAR ASS’N, ADOLESCENCE, BRAIN DEVELOPMENT AND LEGAL CULPABILITY 3, available at

[http://www.americanbar.org/content/dam/aba/publishing/criminal\\_justice\\_section\\_newsletter/crimjust\\_juv\\_us\\_Adolescence.authcheckdam.pdf](http://www.americanbar.org/content/dam/aba/publishing/criminal_justice_section_newsletter/crimjust_juv_us_Adolescence.authcheckdam.pdf).

<sup>86</sup> Brief of American Medical Association et al., *Roper v. Simmons*, No. 03-633 (2004).

<sup>87</sup> *Id.* at 7.

<sup>88</sup> *Id.* at 20–21.

<sup>89</sup> Bruce Bower, *Teen Brains: The Science of Neural Development Tangles with the Juvenile Death Penalty*, 165 SCI. NEWS 291, 299 (2004).

brain is violence?,” and offered “medications for violence” as one possible treatment for youth who show “risks of violence.”<sup>90</sup> The very question presumes that brain structure and composition is key to understanding and consequently addressing violence.<sup>91</sup> Yet scholars assert that no brain structure or set of brain structures are specifically responsible for criminal or law-abiding behavior, which are socially determined categorizations.<sup>92</sup> Correlation is still not causation. So, for instance, even though 70 percent of inmates on death row for homicide may have atypical brain activation in a given region compared to non-incarcerated subjects, the statistic can mean many things—brain activation pattern causes homicidal behavior, having murdered affects brain activation, being incarcerated for a lengthy time affects brain activations, or something else entirely.<sup>93</sup>

¶35 At least a few scholars have cautioned that the use of neuroscience in treating youth as being in a “natural state” of diminished capacity must not “further erode the already limited rights of adolescents instead of strengthening them.”<sup>94</sup> Scholar Stephen Mintz agrees that legal experts have tended to emphasize young people’s deficiencies in recent years, invoking brain science to conclude that youth are less competent decision-makers, have less formed characters, and are more susceptible to peer pressure than adults. Yet, he argues, history, sociology and cognitive science have shown that “young people are, in general, much more competent, resilient, adaptable, and knowledgeable at far earlier ages than we previously assumed.”<sup>95</sup> In using a developmental framework for understanding children’s rights then, advocates embrace the idea that youth are competent and capable, while also recognizing the need to guide them in their ongoing exploration, identity formation and consequent decision-making. Arguments for lesser culpability should avoid damage to notions of youth competence, and vice versa.

### B. Science and Race

¶36 Technology is unlikely to reveal what constitutes a normal brain.<sup>96</sup> Stanford University biologist Robert Sapolsky regards such projects as politically and scientifically worrisome, noting that “efforts to identify normal and abnormal brains have been responsible for some of the darkest movements in the history of science and technology, from phrenology to eugenics.”<sup>97</sup> Sapolsky’s cautionary reference to dark scientific movements raises a related, second objection to the use of neuroscience in the juvenile justice context. Again, the context is that youth of color are disproportionately over-represented at every stage of the system from stops, arrests and detentions to transfers, convictions and incarceration.<sup>98</sup> With racial stereotypes afloat and numbers seemingly to back them up, the use of neuroscience to explain cognitive and behavioral

<sup>90</sup> Darren Gitelman presentation at Chicago Stories: Violence and the Ethics of Urban Health Care at Northwestern University Feinberg School of Medicine (Sept. 25, 2009).

<sup>91</sup> *Id.*

<sup>92</sup> See, e.g., Jones, *supra* note 4, ¶ 28.

<sup>93</sup> *Id.* ¶ 38.

<sup>94</sup> Aronson, *supra* note 83, at 118.

<sup>95</sup> Mintz, *supra* note 10, at 12.

<sup>96</sup> See Erikson, *supra* note 5, at 40–41.

<sup>97</sup> Jeffrey Rosen, *The Brain on the Stand*, N.Y. TIMES MAG., Mar. 11, 2007, available at <http://query.nytimes.com/gst/fullpage.html?res=9A03E1DF1531F932A25750C0A9619C8B63>.

<sup>98</sup> See THEIR CHILDREN, *supra* note 65, at 12.

“deficiencies” in a criminal context poses an inherent risk of reinforcing associations between cognitive maturity and criminality, and race.

¶37 Indeed, the proof is in the pudding. Racialized studies on brains and intelligence have a long history dating back to the nineteenth century. Physician Samuel George Morton, for example, collected skulls of various races and compiled extensive data about brain sizes to create a racial hierarchy of intelligence.<sup>99</sup> In the late nineteenth century Europe, Paul Broca, a professor of clinical surgery who founded the Anthropological Society of Paris in 1859, continued to develop “craniometry” to argue that the size of a brain bore a strong relationship to intelligence, and that black people tended to have smaller brains and were therefore intellectually and socially inferior to white people.<sup>100</sup> Nineteenth century milieu certainly did not lend itself to questioning racial hierarchies, as leaders and institutions set the tone for accepting white supremacy; Abraham Lincoln, for instance, proclaimed, “[t]here is a physical difference between the white and black races which I believe will forever forbid the two races living together on terms of social and political equality.”<sup>101</sup> Such science mixed with social attitudes to help fuel a eugenics movement that sought to improve the human population by discouraging reproduction among persons with genetic defects or undesirable inheritable traits.

¶38 Biologically deterministic and racialized science continues to find modern permutations. In 1994, Harvard psychologist Richard J. Herrnstein and American Enterprise Institute political scientist Charles Murray published *Bell Curve: Intelligence and Class Structure in American Life*, in which they argued that racial differences in intelligence, as measured by IQ tests, are genetic.<sup>102</sup> In 2009, a study discovered a “warrior” gene associated with gang-banging; its accompanying picture in one news release shows five fierce-looking boys of color, chests glistening, faces hardened, with masked, armed soldiers towering behind them—linking race to criminality through loaded imagery.<sup>103</sup> Indeed, the search for genetic and biological explanations is on the rise, with studies claiming to locate areas of the brain responsible for addiction, violence, wisdom and even morality.<sup>104</sup>

¶39 To be sure, adolescent brain science does not by itself lead to conclusions about race and intelligence, incapacity or dangerousness. The context—of a juvenile and criminal justice system disproportionately populated by people of color, a history of racialized science and eugenics, and pre-existing associations between race and

<sup>99</sup> See STEPHEN JAY GOULD, *MISMEASURE OF MAN* 82 (1996). Morton’s study was eventually shown to be flawed; the study included skulls of white people that were all male and skulls of black people that were all female, which on average tended to be smaller in size.

<sup>100</sup> *Id.* at 115.

<sup>101</sup> *Id.* (citing Lincoln-Douglas debates of 1858.)

<sup>102</sup> RICHARD J. HERRNSTEIN & CHARLES MURRAY, *BELL CURVE: INTELLIGENCE AND CLASS STRUCTURE IN AMERICAN LIFE* (1994). The authors also cautioned though, “both genes and the environment have something to do with racial differences.” *Id.* at 311.

<sup>103</sup> *Gang-Banging May Be Genetic*, ASSOCIATED PRESS, June 17, 1999.

<sup>104</sup> Erikson, *supra* note 5, at 31 n.17 (citing Rita Z. Goldstein et al., *Subjective Sensitivity to Monetary Gradients is Associated with Frontolimbic Activation to Reward in Cocaine Abusers*, 87 *DRUG & ALCOHOL DEPENDENCE* 233 (2007)); Thomas W. Meeks & Dilip V. Jeste, *Neurobiology of Wisdom*, 66 *ARCHIVES GEN. PSYCHIATRY* 355 (2009); Andreas Meyer-Lindenberg et al., *Neural Mechanisms of Genetic Risk for Impulsivity and Violence in Humans*, 103 *PROC. NAT’L ACAD. SCI. U.S.* 6269 (2006); Adrian Raine & Yaling Yang, *Neural Foundations to Moral Reasoning and Antisocial Behavior*, 1 *SOC. COGNITIVE & AFFECTIVE NEUROSCIENCE* 203 (2006).

dangerousness, incapacity and blameworthiness—is enough to create wariness of brain science. Imagine presenting pictures of frontal lobes in honorable defense of black and brown youth, in a society that has too often associated them with inborn criminality and inferior mental aptitude. Despite what actual explanations are given about the science, the impressions left by the image are distasteful—the convergence of science and racism may create a racialized pathology of criminality. Perception of biological difference will too easily, or perhaps too conveniently, be confused with racial difference.<sup>105</sup>

## VI. CONCLUSION

¶40 Both youth and race are social constructs susceptible to varying interpretations and understandings. The two dimensions of identity combine to create different narratives of why youth end up in the juvenile and criminal justice systems. The policy implications are clear. Under a banner of punishment and individual responsibility, the priority is to contain and control youth who go bad or are inherently deficient or dangerous. Under a treatment and rehabilitation model, more room may be available to address the complex roots of delinquency and crime, and account for the interplay between individuals and environment.

¶41 Adolescent neuroscience may in particular be harmful to a project of addressing the needs of youth altogether and youth of color in particular. Explicit and implicit racial discrimination have a long history. Unconsciously or consciously, such racial biases have literally colored biological studies about intellect and criminality before; on this historical stage, adolescent neuroscience is susceptible to differential interpretation and application to perpetuate racial biases. In a sense, social constructs of youth and race overlay the interpretation of “objective” science. What emerges is yet another social construct rather than hard proof of what “youth” means in the context of juvenile justice reform.

¶42 Though social science studies examining the environment of youth are equally prone to racially biased interpretations, the attention in such studies can and should consider the structural inequities and injustices that steer youth, especially youth of color, down wayward paths. That system-involved youth and youth of color disproportionately grow up in neighborhoods that are heavily policed and rife with guns, drugs, violence, underperforming public schools and depressed economies begs examination of context and corresponding policy solutions. Brain imaging and other biology-based studies about crime and violence may add some force to arguments for greater leniency towards and protection of youth. But over-reliance on such science may also fuel dangerous notions of inherent racial inferiority and dangerousness. Adolescent neuroscience can be too comfortable a crutch for avoiding a deep look at the environments and institutions of youth, in particular youth of color. Ultimately, the conclusions and impressions of the research are too incomplete, too easy and too suggestive.

¶43 Certainly, youth, of whatever race, who commit acts of delinquency and crime should not be let off the hook. Even where life circumstances condition or predispose a

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<sup>105</sup> Genomic studies, including the Human Genome Project, have confirmed social science arguing that race is a social construct, and shown “high levels of genetic similarity within the human species.” See Dorothy Roberts, *Torture and the Biopolitics of Race*, 62 U. MIAMI L. REV. 701, 716 (2008) (citing Richard S. Cooper, Jay S. Kaufman & Ryk Ward, *Race and Genomics*, 348 NEW ENG. J. MED. 1166, 1168–69 (2003)).

youth towards breaking the law, or at least to being caught for doing so, society may rightly hold the youth accountable for their actions. Where the harm inflicted is severe, so too must the punishment. But by the same token, society should not let itself off the hook either. Amidst stern insistence that youth be held accountable, especially for serious crimes and repeat offending, we must ask whether the justice system furthers its stated goals of retribution, rehabilitation and deterrence effectively and proportionately. Where have youth gone wrong and where have we collectively, as a community, gone wrong with youth are two sides of the same question concerning crime and violence. Asking such questions should be both age and race conscious.