

“Kids are Kids”: Benevolent Ignorance and the Omission of Race in Developmental Justice Reform

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Abstract

The criminal culpability of juvenile offenders remains a controversial and contested issue in the legal and public arenas in the United States. Since the mid-2000s, juvenile crime has been reframed by SCOTUS as a problem of brain immaturity. This article interrogates the omission of race from this new discourse of immaturity. First, I show that an alliance of learned societies, scholars, policy experts, legal professionals, and philanthropic foundations, which I call the new child savers, strategically sowed doubt about the criminological evidence of “high-risk” offenders to ensure the success of this new discourse of immaturity. I introduce the concept of benevolent ignorance to explain how they strategically concealed this inconvenient knowledge to achieve the socially valued goal of “saving children” from harsh sentences, and to escape public controversies over the racial overtones of risk assessment tools. Second, using Mills’ s concept of white

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ignorance, I argue that progressive elites and scholars involved in juvenile justice reform have historically ignored the lived experiences of juveniles of color. Finally, I discuss how the discourse of brain immaturity perpetuates and reinforces a colorblind explanation of juvenile crime that ignores the role of race in young people's encounters with the justice system.

Keywords

Ignorance, juvenile justice, brain immaturity, neurolaw, law and science, child savers

Introduction

The question of how juvenile offenders should be treated by the law has been debated since the nineteenth century. At the heart of these debates is a "hybrid" (Lynch Michael, McNally and Jordan 2008, 43) controversy that neither law nor science has been able to resolve definitively: on what grounds should juvenile offenders be treated differently from adults? In the United States, the creation of the first juvenile court in 1899 and a semi-autonomous field of juvenile justice in the following decades institutionalized the differential treatment of juvenile and adult offenders. In the last quarter of the twentieth century, however, the U.S. criminal justice system underwent a profound shift in its approach to juvenile delinquency. Beginning in the 1980s, the rehabilitative ideal and the sociomedical model that had guided the "treatment" of young offenders since the Progressive Era lost considerable ground to an actuarial and retributivist model of justice that emphasized punishment and incarceration over rehabilitation (Muncie 2008). This punitive turn drew on criminological evidence to implement an individual risk-based model in which young offenders were assessed, adjudicated, and sentenced according to the level of risk they posed to themselves and others.

Beginning in the mid-2000s, when most states had adopted tougher sentencing laws for juvenile offenders, the pendulum unexpectedly swung back from punishment to rehabilitation. In a series of three decisions¹ the Supreme Court of the United States (SCOTUS) declared the death penalty and life without the possibility of parole (LWOP) for juvenile offenders unconstitutional under the Eighth Amendment of the U.S. Constitution.² SCOTUS decisions were notable for going against the retributivist zeitgeist, even more so because the justices uncharacteristically supported their

opinion with “new”³ scientific evidence from *amicus curiae* briefs⁴ claiming that juvenile crime is the byproduct of the immaturity of the adolescent brain.

In their *amicus* briefs, prestigious learned societies⁵ argued that adolescents, as a group, engage in risky behavior because their brains are immature, and should therefore be sentenced more leniently than adults. Their argument was based on emerging neuroscientific evidence about the “average” adolescent brain’s development—a scientific construct of the “normal” developmental trajectory of the human brain during adolescence. This discourse of immaturity portrays juvenile offenders as average immature adolescent risk-takers who will eventually mature out of delinquency. Its central claim is that because of their psychological and neurobiological immaturity, adolescents as a category should be treated more leniently than adults, and given a chance at rehabilitation.

The discourse of immaturity provided juvenile justice advocates with biological evidence to support decades of psychological and behavioral research on the psychosocial immaturity of adolescents. It succeeded in overturning the death penalty in 2005 where psychology alone had failed in *Stanford v. Kentucky* in 1989.⁶ As SCOTUS increasingly relied on the discourse of immaturity to buttress its opinion, legitimizing it further, it quickly gained popularity among juvenile justice advocates and in public discourse. Its influence eventually extended beyond juvenile justice, as lawyers, scholars, and advocates began to argue that young adult offenders under the age of 21 should be treated as leniently as juveniles, based on recent neuroscientific evidence that the brain continues to mature until at least the age of 25.⁷ The discourse of immaturity is now a core component of juvenile justice reform in the U.S. (National Research Council 2013), and it has reopened the debate in several states about the legal age threshold that separates juveniles from adults in criminal law.

Despite remarkable popularity, the discourse of immaturity has been criticized by scientists and legal scholars. Social scientists have accused neuroscientists of presenting findings as strong evidence of a causal link between neurobiological development and risky adolescent behavior (Sercombe 2010; Bessant 2008). They have also disputed that brain scan images are neurobiological evidence of adolescents’ inability to make rational decisions (Sercombe and Paus 2009; France 2012; Dumit 2014), emphasizing the technical complexity (Kelly 2012) and the epistemological apriorism that these images contain (Bessant and Watts 2012). Legal scholars have questioned SCOTUS’s overreliance on *amicus* briefs from learned societies in its decisions (Denno 2005), the legal applicability of the neurobiological

immaturity argument (Maroney 2009), and the very admissibility of neuroscientific evidence of adolescent brain immaturity (Aronson 2007; 2009). Philosophers have questioned the relevance of neuroscience to the legal determination of criminal responsibility (Morse 2005), argued about the legal implications of treating juvenile offenders as distinct constitutional subjects (Berk 2019), and debated the policy ramifications of a neurodevelopmental framing of the role of adolescents in the polity (Yaffe 2018).

This article proposes a different kind of critique. It focuses not on what the discourse of immaturity is “made of” but rather on what it is “made without.” Despite important contributions, scholars have failed to interrogate the color-blindness of the discourse of immaturity. Racism has plagued the U.S. juvenile justice system since its inception, making non-whiteness the leading risk factor for police brutality, arrest, and incarceration for young offenders (Alexander 2010; Cochran and Mears 2015; TenEyck et al. 2024). Yet the discourse of immaturity portrays all youth, regardless of color, as more at-risk than adults in their interactions with the criminal justice system because of their immature brains. Building on the work of STS scholars as well as sociologists and epistemologists of ignorance, I interrogate this omission of race by (1) demonstrating that racism had a structuring effect on the construction of the discourse of immaturity; and (2) by arguing this new scientific discourse perpetuates and reinforces the racial stratification processes of criminal justice.

I begin by showing how the discourse of immaturity was carefully crafted by some of the most prominent U.S. learned societies and a group of scholars, policy experts, and legal professionals under the tutelage of the MacArthur Foundation. Together, they sought to rehabilitate the child savers’ conception of juvenile offenders⁸ by updating it with the most recent neuroscientific findings on adolescent brain development. I show that in order to create this neurodevelopmental vision of juvenile delinquency, these new child savers had to disregard well-established but “uncomfortable knowledge” (Marris, Jefferson and Lentzos 2014) about “life-course persistent offenders” (Moffitt 1993), a small percentage of juvenile offenders who criminologists believe are responsible for a disproportionate amount of violent crime. I argue that the new child savers used this “strategic ignorance” (McGoey 2012) to distance themselves from the controversial, i.e., racist, public perception of this criminological knowledge about risk assessment. I introduce the concept of *benevolent ignorance* which I loosely define as the strategic concealment of inconvenient knowledge in order to achieve a socially valued goal, such as social justice. I argue that ignorance does not imply a counterproductive and malicious intent.

Ignorance can be as productive as knowledge, and can be used to achieve progressive and noble goals, such as “saving children” from the death penalty.

In the second part of this article, following recent calls to advance the study of race and racism in STS (Rodríguez-Muñiz 2016; Mascarenhas 2018; Hatch 2020), I interrogate the omission of race in developmental juvenile justice reform using Mills’s (2015, 217) concept of “white ignorance,” that is, “an ignorance among whites—an absence of belief, a false belief, a set of false beliefs, a pervasively deforming outlook—that [is] not contingent but causally linked to their whiteness.” I argue that benevolence, like malevolence, is tied to the positionality of ignorance producers and their worldview. In other words, while well-intentioned advocates may view the strategic use of ignorance as a necessary evil to achieve a goal they perceive as universally good, their assumptions about the inherent positive value of their cause may be constrained by the limited scope of their social position. Finally, I discuss how the discourse of immaturity further reinforces a “color-blind” explanation of crime and criminal justice in the United States that ignores the role of race and social class in young people’s encounters with the justice system.

Ignorance and the Absent Presence of Race

Scholars have repeatedly warned about the dangers of biosocial models of crime (Rafter 2008), of using biotechnologies to monitor and profile citizens (Duster 2004), and of the reification of political categories (Duster 2005). Like behavioral genetics, the “neurocriminological vision” obscures the social and depoliticizes crime by ignoring how social factors interact with (neuro)biology (Fallin, Whooley and Barker 2019).

Yet the discourse of immaturity differs significantly from more traditional biosocial accounts of crime. First, earlier neuroscientific research on crime had focused on linking “specific biological abnormalities and the propensity to commit violent crime” (Rose 2007, 242), and on locating neurobiological markers of the “violent brain” (Rollins 2014), unlike the discourse of immaturity, which portrays juvenile delinquency as a normal process resulting from proximal (i.e., brain immaturity) and distal causes (i.e., evolution). Second, neurocriminology has traditionally sought to pinpoint the brain signatures associated with individual deviant behaviors, such as aggression or impulsivity, and of psychiatric disorders, such as psychopathy, in order to develop “screen-and-intervene” strategies designed to pre-emptively diagnose and neutralize “susceptible individuals” (Rose

2010). By contrast, the discourse of brain immaturity de-emphasizes individual risk in favor of a categorical approach that groups all youth under a psychobiological universal (“adolescents”) and all deviant and criminal behavior under an umbrella term, “risk-taking,” that encompasses a wide range of behaviors from cheating in school to premeditated murder. Third, and most importantly, while traditional biosocial research on crime tends to use essentialist conceptions of race uncritically (Larregue and Rollins 2019), the literature on brain development and delinquency never discusses the core issue of racial disparities in criminal justice. This omission is particularly intriguing given the legacy of racial segregation and mass incarceration in the United States.

STS scholars have argued that the “absent presence of race” (M’charek, Schramm and Skinner 2014) in science and technology expresses two sets of interrelated ideas. First, current racialized social inputs (categories, representations, beliefs, etc.) can be (in)advertently encoded in technoscientific artifacts as race-neutral and (re)produce/reinforce pre-existing racial stratification practices (e.g., Noble 2018; Benjamin 2020; Amrute 2020). In Europe, for example, the various constitutive elements of race appear under different guises, while others disappear and give rise to new presences, making race a slippery construct that “oscillates between reality and non-reality” (M’charek, Schramm and Skinner 2014, 462). So while race may not explicitly appear in DNA profiling technologies used to manage migrant populations, racially coded markers presented as race-neutral do participate in the process of racializing migrants (M’charek 2018).

Second, historical assumptions about racial hierarchies can remain “buried alive” (Duster 2003) in scientific paradigms while being perceived and mobilized in the public sphere as objective, race-neutral knowledge and technologies for social change. For example, rather than focusing on the “molecularization of race” (Duster 2005; Fullwiley 2007), Karkazis and Jordan-Young (2020) discuss how science is embedded in a racialized universe that it helps to reinforce. Using the metaphor of race as a “ghost variable,” they describe how historically accumulated racist assumptions about racial stratification are still embedded in contemporary science, technology, and medicine, leading to racist practices of categorization in and out of science.

These analyses tend to focus on the historical construction of a heterogeneous set of biological and social objects and *dispositifs* haunted by racialized practices and meanings. They shed light on how race is constantly reimagined, and how racism often remains embedded in social processes.

However, they often neglect to explore how the social position, belief systems, and intentionality of those who (re)produce these processes of racial stratification shape their (un)conscious omission of race. As a result, it may appear that these absences passively and sometimes unintentionally reproduce racism. Ignorance, however, offers a broader range of interpretation of actors' underlying motives. As feminist philosopher Marilyn Frye (1983, 118) puts it: "Ignorance is not something simple: it is not a simple lack, absence or emptiness, and it is not a passive state." Regarding contemporary biological research on crime, STS scholars have pointed out that the increasing elusiveness of race is linked to the political hypersensitivity of the relations between race and crime. This "taboo of race" (Rollins 2021) in the biological study of crime and violence has led many biosocial criminologists to avoid collecting, analyzing, and discussing race as a variable in their work (Duster 2006), and has made it more difficult for STS scholars to locate race and racism in scientific practices.

STS studies of scientific ignorance have provided insight into how omissions of knowledge can function as powerful political devices. On the one hand, scholars of ignorance have focused on the implicit role of epistemological ignorance in the formulation of research questions, data collection, and evidence-based implementation of new rules in regulatory science (Kleinman and Suryanarayanan 2013). The study of undone science (Frickel et al. 2010) shows how the intricacies of the systemic production of scientific ignorance are linked to neoliberalism. Undone science highlights the absence or insufficiency of research areas or topics that do not conform to the demands of a capitalist mode of governance (Hess 2020). As Hess (2016) argues, society plays a crucial role in pressuring institutions to conduct research in scientific civil areas that contradict the interests of dominant groups and/or helps marginalized groups make political demands.

On the other hand, agnotologists have emphasized the role of "strategic ignorance" (McGoey 2012) in the public sphere where opposing interest groups regularly mobilize scientific evidence according to their own political agendas. The political use of science can lead to the silencing of certain inconvenient scientific facts, as shown by Proctor (1994) in his study of the tobacco industry's efforts to sow doubt about the carcinogenic effects of smoking, or to emphasize the uncertainty of science as shown by Oreskes and Conway (2011) in their work on conservative think tanks promoting distrust in climate change. As Proctor and Schiebinger (2008, 8) argue, commercially driven science can be used to "actively organiz(e) doubt, uncertainty or misinformation to help maintain ignorance." Strategic

ignorance also includes governmental or industrial practices of “sequestering” knowledge (Heimer 2012) by deliberately hiding inconvenient information behind opaque bureaucratic procedures, or by compartmentalizing access to information to isolated individuals or groups.

Thus, agnotology provides a powerful framework for identifying the intentional motivations of actors’ attempts to subvert laws, procedures, public scrutiny, or political oversight. However, case studies of ignorance tend to pit passive and intentional ignorance against each other (Fernández Pinto 2015, 295) as if they were mutually exclusive. On the one hand, agnotologists depict institutional practices of omission that passively favor the production of certain kinds of knowledge aligned with the dominant political ideology, at the expense of other subversive forms of knowledge. On the other hand, they portray ignorance as an active ploy used by government agencies and the private sector to hide embarrassing evidence. Moreover, agnotologists have primarily emphasized the “anti-scientific,” counterproductive, and commercially driven nature of ignorance (Gross and McGoey 2015, 3). The production of ignorance is associated with “deviant science,” self-interest and deception (Frickel and Edwards 2014, 217). Furthermore, agnotologists seem to share the ethical premise that “bad” ignorance encapsulates all illegitimate uses of science to cause social prejudice, while “good” science can be viewed as any legitimate scientific knowledge designed and used for the common good. This implicit normative stance is reflected in the field’s focus on “morally reprehensible” uses of science, such as sowing doubt about climate change, denying the carcinogenic effects of tobacco, or making financial profit.

In this paper, I show that ignorance can be both passive and intentional. To be sure, the emphasis on strategic and fraudulent uses of ignorance by the “merchants of doubt” (Oreskes and Conway 2011) fails to capture the full range of omission practices and limits our understanding of action to conscious and purposeful intent. It relies on a thin conception of strategies because intentional strategies account for only a fraction of the actions of social actors. In fact, most strategies are neither intentional—since they do not follow objectively oriented lines—nor utilitarian since they are unconscious. Moreover, I suggest that the dichotomy between passive and strategic ignorance fails to account for the fact that strategies reflect both conscious and unconscious motives that are tied to agents’ positionality in the social world and relative to competing strategies. As feminist scholars and epistemologists of ignorance have argued, knowers are always positioned somewhere in the social space, “at once

limited and enabled by the specificities of their locations” (Code 1993, 39). Group identity, experience, and social location shape assumptions and beliefs about the world and thus the upstream epistemological operations that appear plausible and coherent (Alcoff 2007, 48). As I argue in the second part of this article, understanding the full extent of the benevolent ignorance of race in the discourse of immaturity requires considering the “coloniality of knowledge” (Santos 2018, 8): not only what kinds of knowledge are silenced, omitted, and absent, but also who is speaking, from where, and in whose name.

Data and Methods

The data presented in this article are part of a larger research project on the origins and development of neurolaw in the United States. The analyses in this article are based on 37 in-depth semi-structured interviews conducted in the United States between September 2018 and May 2020 with U.S. academics, federal and state judges, government officials, juvenile justice advocates, crime victims’ organizations, and philanthropic foundations. Using a snowball sampling technique, participants were recruited based on their contributions to the field. They were asked questions about their involvement with the MacArthur Foundation, their role in producing and disseminating work at the intersection of law and neuroscience, and about their perspective on the benefits, pitfalls, and risks of using neuroscience to inform/reform the law. All interviews were transcribed verbatim and were analyzed using *QDA Miner* software. Given the prominence of the participants, I decided to keep their contributions anonymous and disclose only information directly relevant to this research.

In addition, I used the SCOTUS online library, the *Heinonline* database, and SCOTUS online multimedia archival websites, such as *Scotusblog.com*, *Oyez.org* and *Supreme.justicia.com*, to compile and analyze the legal materials of three landmark SCOTUS decisions: *Roper v. Simmons* (2005), *Graham v. Florida* (2010), and *Miller v. Alabama* (2012). These cases were chosen because they bucked the punitive trends of the 1990s, ending the death penalty and limiting the use of LWOP for juvenile offenders. The idea that minors are less mature than adults and should therefore be punished differently was by no means new. However, as I will show, the neurobiological framing of immaturity was created as a response to the weakening of the boundary separating juvenile and adult offenders in the penal system, and as a way to institutionalize a scientifically based legal precedent. The dataset constructed to assess the co-construction of the

discourse of immaturity comprises publicly available material, including the three SCOTUS decisions, the briefs of all defendants and respondents, all the *amicus* briefs submitted to SCOTUS, and the audio recordings of each oral argument. Finally, I examined how the scientific literature cited in the *amicus* briefs of the American Medical Association (AMA) and the American Psychological Association (APA) was used to construct the discourse of immaturity.

I used a comparative discourse analysis (Gilbert and Mulkay 1984) to identify discursive (ir)regularities between the respondents' discourse, the scientific literature, and the legal material. *Amicus* briefs from learned societies were particularly useful because of their hybrid nature as science-based legal artifacts, combining elements of scientific discourse with other discursive repertoires belonging to other "cultures of belief" encountered in court (Jasanoff 1998, 731–2), such as common sense and jurisprudence. Comparing scientists' different repertoires allowed me to ask interviewees about the discrepancies between their scientific claims and their legal arguments (e.g., some participants' involvement in risk assessment science and their progressive stance). STS has a long tradition of challenging scientific expertise in court (Collins and Evans 2002; Lynch and Cole 2005). But with few exceptions (Edmond 2002; Edmond and Mercer 2004; Edmond and Mercer 2006), scholars rarely include *amicus* briefs as a source of data. *Amicus* briefs are a privileged means for various third parties, scholars and non-scholars, to mobilize science in the legal arena, and to lobby judicial institutions. Their hybrid nature generates debate and disagreement among scientists because their scientific claims are perceived as tainted by advocacy (e.g., Elliott 1991; Barrett and Morris 1993). As such, they provide important insights into the "boundary work" (Gieryn 1983) at the intersection of science and law.

The Punitive Turn and the Superpredator Narrative

To understand how juvenile delinquency became a brain condition, we must first consider how young offenders were portrayed by criminologists, politicians, and the media in the 1980s and 1990s. In the 1970s and 1980s, U.S. criminologists claimed to have identified a subgroup of "high-risk delinquents" whose "propensity" to commit crimes began in childhood and continued into adulthood. Several U.S.-based longitudinal studies seemed to show that a small percentage of juvenile offenders (about 6 percent) committed nearly half of all crimes (Wolfgang, Figlio and Sellin 1972; Wolfgang 1983; Farrington, Ohlin and Wilson 1986). These juveniles were labeled

“life-course persistent offenders” after the influential work of clinical psychologist Terrie Moffitt (1993), as opposed to “adolescence-limited offenders,” who represent the majority of juvenile delinquents that commit mostly minor crimes during adolescence and become law-abiding citizens as they enter adulthood.

Criminologists’ work on “high-risk delinquents” had a significant impact on the U.S. criminal justice system because it promised to uncover tangible risk factors and develop actuarial risk assessment tools that judges, probation officers and social workers could use to “separate the wheat from the chaff.” In the long run, it was expected to provide an actuarial framework for reducing the prison population and its associated costs, locking up only the “high-risk” 6 percent of offenders (Harcourt 2015, 238). This risk-based classification of offenders opened up the way for implementing a selective incapacitation approach, and was key to the reconfiguration of the juvenile justice field during what the CDC called the “epidemic of violence” of the 1990s.

The emphasis on “dangerous” youth and violent crime was also central to the public rearticulation of the “problem” of juvenile crime. The rise in juvenile arrest rates between the 1970s and 1990s was often used in political discourse to justify harsher criminal sanctions against minors. Although in the late 1990s juvenile arrests for violent offenses nationwide was the lowest in a decade (Snyder 1999), intense news coverage amplified the scale and public perception of the phenomenon (Muschert 2007, 351). In the mid-1990s, as the Democratic Party underwent an ideological shift to break with the public perception that Democrats were weak on crime, then-Congressman Joe Biden and presidential candidate Bill Clinton crafted the *Violent Crime Control and Law Enforcement Act* of 1994. Along with elected officials, the media reinforced public perceptions of dangerous and out-of-control youth, including disproportionate coverage of violent youth crime (Bazelon 2000, 165–7).

The Democrats’ actions provoked strong disapproval among progressive elites, who felt that their loyalties had been betrayed for political gain. A MacArthur Foundation administrator I interviewed recalls that the general feeling among liberals was that elected officials had lost sight of the founding principle of juvenile justice, that “kids are kids.” This sentiment would soon lead to an alliance of scholars, foundations, and learned societies to “rehabilitate rehabilitation.” In just a few years, these new child savers would strategically use science to reframe juvenile delinquency as a consequence of psychological and neurobiological immaturity, a “new” narrative that would prove highly effective in the legal arena.

The new Child Savers and the Discourse of Immaturity

In the mid-1990s, the MacArthur Foundation⁹ established the Research Network on Adolescent Development and Juvenile Justice (RNADJJ). Its primary goal was to counter the effects of the punitive turn by compiling scientific evidence showing that adolescents, as a group, are less culpable for their crimes than adults. The research group was deliberately structured differently from other traditional MacArthur research networks. A key member of the group explained to me that the Foundation's intent was "to force us to develop research projects that had clear practical implications" and "to develop and disseminate scientifically sound information that would inform policy and practice." Thus, the RNADJJ included not only academics and legal scholars, but also a judge, a prosecutor, a defense attorney and a juvenile justice advocate.

By the early 2000s, the RNADJJ had managed to gather enough psychological, behavioral, and neurodevelopmental data to articulate a new scientific explanation of juvenile delinquency that centered on the psychological and neurobiological immaturity of adolescents. In the courtroom, the contest for credibility is not so much about establishing the truth as it is about ending the case, so plausibility often wins out (Shapin 1995; Jasanoff 1998). Although evidence of causality between brain immaturity and delinquency remained elusive, the discourse of immaturity was plausible enough to have a major impact on juvenile sentencing laws. Beginning in 2004, the RNADJJ collaborated with prestigious learned societies to place the discourse of immaturity at the center of their *amicus* briefs in what became three landmark SCOTUS decisions. Building on their success in Roper (2005), Graham (2010), and Miller (2012), the new child savers continued to gather and disseminate scientific evidence about the psychobiological immaturity of young offenders at conferences, in workshops, and in state courts. The success of the discourse of immaturity is truly remarkable given the retributive zeitgeist of the period. But in order to successfully promote the idea that every juvenile should be "saved," the new child savers had to ignore an inconvenient fact: the criminological evidence of "high-risk" offenders.

The Benevolent Ignorance of Inconvenient Knowledge

A central figure in the RNADJJ explained to me that from the outset researchers were asked to stay away from criminological explanations of juvenile delinquency, and to focus on psychology's findings about

“normal” adolescent development. In addition, the Foundation appointed as director a developmental psychologist with no prior experience in juvenile justice research. Criminology has traditionally othered juvenile offenders as deviant youth, and risk assessment classifications support the argument that some youths are beyond rehabilitation. By privileging a developmental approach, the Foundation posited that all juvenile offenders are average adolescents, and hoped to gather scientific data to support the argument that they are inherently different from adults.

The members of the RNADJJ were familiar with the work of criminologists on “high-risk” youth. In some of their earlier publications, they repeatedly discussed Moffitt’s (1993) developmental taxonomy, which distinguishes “life-course persistent offenders” from “adolescent-limited offenders” (e.g., Steinberg and Cauffman 1999; Steinberg and Scott 2003). They also recognized that these two categories of juvenile offenders have different “risk factors:”

the overall pattern of findings suggests some possible differences between the correlates of serious offending (which are neuropsychological, autonomic¹⁰ and self-control) versus minor delinquency (which are self-control, but not neuropsychological or autonomic). (Cauffman, Steinberg and Piquero 2005, 160–1)

While initially acknowledging the work of criminologists, over time the new child savers distanced themselves from the idea that juvenile offenders could be divided into “high-risk” and “low-risk” groups. Rather than engaging this literature to formulate an evidence-based critique of its findings, they increasingly rejected its relevance to debates about the age of criminal responsibility. One way of doing this was to present a truncated interpretation of findings, for example by stating that “high-risk” offenders represent only a small fraction of all offenders, while failing to mention their overrepresentation in the prison population and their involvement in 50 percent of all crimes. Another way was to ignore the distinction between “high” and “low” risk offenders altogether, lumping all juvenile offenders together under umbrella terms like “adolescents” or “kids,” and portraying them as “‘moving targets’ for assessment of character and future dangerousness” (Brief for APA in *Roper v. Simmons* 2005, 3).

Making predictions about future delinquency based on adolescents’ risky behavior was reframed as an “uncertain business” (Steinberg and Scott 2003, 1014). For example, a significant portion of the APA’s *amicus* brief in *Roper* argued that science and medicine cannot reliably assess whether juvenile

offenders will continue to commit crimes into adulthood, and that psychopathy, which is commonly associated with “high-risk” offenders, is not a reliable diagnosis for adolescents. Summarizing its main arguments, the APA wrote:

The absence of proof that assessments of adolescent behavior will remain stable into adulthood invites unreliable capital sentencing based on faulty appraisals of character and future conduct. (Brief for APA in *Roper v. Simmons* 2005, 24)

Five years later in *Graham*, the same arguments were mentioned only in footnotes (Brief for APA in *Graham v. Florida* 2010, 22, footnote 44). They would reappear briefly in the APA’s brief in *Miller*, but only to conclude that:

there is no reliable way to determine that a juvenile’s offenses are the result of an irredeemably corrupt character; and there is thus no reliable way to conclude that a juvenile—even one convicted of an extremely serious offense—should be sentenced to life in prison, without any opportunity to demonstrate change or reform. (Brief for APA in *Miller v. Alabama* 2012, 25)

By sowing doubt about the reliability of risk-assessment science, the new child savers reframed the debate about the dangerousness of “high-risk” offenders into a discussion of the more benign figure of the “immature” and brash adolescent. Risk remained an integral part of the discourse on juvenile delinquency, not as an expression of an irredeemable flaw in some “at-risk” adolescents, but as a manifestation of the normal process of growing up. From there on, adolescents were portrayed as “risk takers to a far greater degree than adults” (Brief for APA in *Roper v. Simmons* 2005, 6). A neuroscientist I interviewed who worked with the MacArthur Foundation on various juvenile justice projects at the time explained the Foundation’s strategy:

The philosophy really (was) that no juvenile should ever be incarcerated.... The MacArthur Foundation was particularly interested in not funding studies that would ever show that someone’s brain was high-risk. They wanted to show that every juvenile brain was amenable to treatment.

To be sure, the primary goal of the new child savers was benevolent, and ignoring scientific evidence that directly contradicted the seemingly more inclusive discourse of immaturity was essential to its success. However,

this benevolent ignorance of risk assessment science is surprising for several reasons. Beginning in the 1980s, risk assessment strategies and tools played a critical role in the implementation of a “new penology” (Feeley and Simon 1992) in the criminal justice system, as authorities focused their attention on monitoring, profiling, and neutralizing “high-risk” youth (Hannah-Moffat 2013). By the early 2000s, risk classifications of juvenile offenders had become consensual among criminologists and widespread in the justice system. Additionally, emerging neurocriminological research claimed to have identified structural and functional neurobiological markers of antisocial behavior and aggression in “high-risk” youths (Ortiz and Raine 2004; Sterzer et al. 2007; Huebner et al. 2008; Passamonti et al. 2010).

Most importantly, the MacArthur Foundation had been involved in promoting risk-assessment tools in the criminal justice system for more than a decade. As one interviewee explained:

The MacArthur Foundation has funded the development of the psychopathy checklist...in the MacArthur Violence Risk Assessment Study. They published and funded...work on psychopathy and children and adolescents...they funded the development of risk assessment variables for kids. They have a history of doing this risk assessment work.

Like many other organizations, the MacArthur Foundation supported the actuarial turn in the criminal justice system and the shift from danger to risk. Throughout the 1990s and 2000s, the Foundation participated in several efforts to develop and implement risk-assessment tools, on the basis that identifying and classifying young offenders would further the rehabilitative goal of the justice system. In 1990, for example, the Foundation initiated the *Project on Human Development in Chicago Neighborhoods* to assess the risk factors that contribute to “the pathways to juvenile delinquency, adult crime, substance abuse, and violence” (Inter-University Consortium for Political and Social Research 2024). As the discourse of immaturity spread in the mid-2000s, the Foundation continued to invest in developing and refining these tools through its *Models for Change* initiative, a program to disseminate “best practices” in juvenile justice. A key figure in this initiative explained in an interview:

My primary involvement with the MacArthur Foundation was the *Models for change initiative*. We had a research network for that. We were in the field working with juvenile justice agencies in 16 states, informing them about

adolescent development, the brain and how this affects risk for reoffending, creating an assessment measure to assess risk of reoffending.

How do we explain this paradox? Why did the new child savers ignore risk assessment science while supporting its implementation in the juvenile justice system? Although risk assessment practices were becoming more widespread, the fact that some juveniles could be labeled “high risk” and beyond rehabilitation ran counter to the rehabilitative ideal underlying the discourse of immaturity. Above all, the new child savers’ benevolent ignorance of risk-assessment science aimed to escape controversies surrounding the latent racism of some of its political uses.

The Superpredator: Science, Racism and Politics

The rise in crime rates in the last quarter of the twentieth century is often portrayed as the cause of the transformation of the United States into a “penal state” (Wacquant 2009). Many social scientists have argued that racial attitudes, not crime rates, were the driving factor behind white Americans’ support of tougher laws and anti-welfare measures (Alexander 2010, 68). White voters were concerned about the demographic transformation of U.S. society and the rapid increase in the proportion of racial minority youth (Males and Brown 2014, 6). The “baby boom” of the 1960s had led to a rapid increase in the relative proportion of young people of color from 15 percent of the youth population in the 1960s, to over 40 percent in the early 2000s (Males 2009, 6).

This demographic shift particularly preoccupied scholars on the conservative fringe of U.S. political science and criminology, such as James Q. Wilson, Charles Murray, James Fox, and John Dilulio. In the mid-1990s, these scholars fueled popular concerns about violence and crime by heralding the emergence of a new “species” of juvenile delinquent, which they portrayed as a harbinger of the collapse of American society. “Superpredators” were described as:

radically impulsive, brutally remorseless youngsters... who murder, assault, rape, rob, burglarize, deal deadly drugs, join gun-toting gangs, and create serious communal disorders. (Bennett and Dilulio 1996, 27)

Then-Princeton University political science and public policy professor John Dilulio and like-minded colleagues claimed that young black men were committing violent crimes at twice the rate of their white counterparts.

They predicted that this trend, combined with the rapid demographic growth of black youth, would lead to a wave of “super crime-prone young males” over the next decade (Dilulio 1995). The superpredator theory rested on three basic premises. First, the changing demographics of the U.S. population would lead to a collapse of American, i.e., White, Anglo-Saxon, Protestant moral values. Second, children growing up without “loving, capable and responsible” parents in “abusive, violence-ridden, fatherless, Godless, and jobless” neighborhoods would inevitably become remorseless violent criminals (*ibid.*). Third and most importantly, it relied on a key criminological finding to support its claims: that a minority of “high-risk” offenders commit a disproportionate percentage of violent crimes.

The superpredator theory had considerable political resonance. In their efforts to maintain public support for tougher laws against young people, Democrats drew on this stereotype of violent and uncontrollable youths ready to destroy American society. The superpredator trope became an integral part of the Democrats’ populist rhetoric during Clinton’s first term. Unlike Dilulio and his colleagues, the Democrats never explicitly equated superpredators with young black men in the inner cities—but the underlying racial coding was not lost on anyone. Moreover, the deployment of state surveillance in the social space left little doubt as to who the “enemy” was. As Wacquant (2009, 67, italics in the original) wrote: “*Class and ethnic selectiveness was achieved primarily by the targeting of certain geographic zones*, which guaranteed that the categories composing their residents would be the primary if not exclusive ‘beneficiaries’ of the newfound policing zeal and penal largesse of the state.” Groups targeted by this return to “traditional” values and conservative moral discipline were the poor, the immigrants, the drug users, and especially young black men.

In the 1990s, risk assessment tools became the gold standard for assessing juvenile offenders, but also for attempting to predict “dangerousness” outside the prison walls. Central to this “new modality of surveillance” (Castel 1983, 123) was the systematic screening of so-called “at-risk” populations. In the early 1990s the MacArthur Foundation partnered with the National Institute of Justice, the National Institute of Mental Health, and the U.S. Department of Education to launch a crime prevention campaign called the Program on Human Development and Criminal Behavior. Based at the Harvard School of Public Health, the program screened children in Chicago to identify biological, psychological, and social factors that predispose them to crime (Rose 2007, 245). Scientists would follow cohorts of children over eight years to identify biomarkers that predict crime. As part of the broader framework of the National Violence

Initiative (NVI) launched by the National Institute of Mental Health in the early 1990s, the program shared its ambitions for early identification of dangerous youth to nip potential “superpredators” in the bud.

These programs generated a great deal of opposition in the scientific field and in the public sphere. Reactions to the NVI were particularly strong because it targeted inner-city black youth with a screening campaign designed to identify children biologically predisposed to violence. The use of risk assessment strategies to prevent juvenile delinquency and predict recidivism came under fire when critics began to argue that risk was a “proxy for race” (Harcourt 2015). The racist connotations of some of the work underlying the program and its political recuperation to reinforce strategies for controlling the underprivileged racial minorities, cast a negative light on the research on “high-risk” youth. The straw that broke the camel’s back came in 1992 when Frederick K. Goodwin, then director of the Alcohol, Drug Abuse, and Mental Health Administration and a key player in the NVI, compared black inner-city youths to “monkeys in the jungle” during a public meeting of a departmental mental health advisory committee. The ensuing controversy reinforced the public perception of the underlying racist nature of the initiative and led to demonstrations against the NVI. As a result of complaints from the Congressional Black Caucus, the NAACP, and mounting public pressure, the NIH withdrew its financial support for the Maryland Conference on Genetics and Crime scheduled for September 1992 at the University of Maryland, and canceled the MacArthur-funded Program on Human Development and Criminal Behavior.

Philanthropic foundations are reputational organizations, and their success in attracting support depends on their ability to maintain a public image that aligns with the political inclinations of their benefactors (Bourdieu 2011, 133). With this in mind, the MacArthur Foundation was careful to separate its work on juvenile justice reform at the policy level from the controversial issue of risk assessment in the justice system, and its racial overtones. In the years that followed, however, the Foundation renewed funding for risk assessment research, an approach that remained central to juvenile justice. But as the discourse of immaturity gained traction in the legal arena, the new child savers continued to ignore risk assessment scholarship while producing and disseminating further evidence of the role of brain immaturity in juvenile delinquency.

The Dark side of Benevolence

The benevolent ignorance of risk assessment science has allowed the new child savers to erode the grip of retributivism on juvenile offenders.

Nevertheless, it reflects a commitment to “doing good,” as well as a worldview that is inherently tied to the positionality of its proponents. In this section, I consider how “white ignorance” (Mills 2007) has historically blinded the child savers to racial inequities, and how the discourse of brain immaturity reproduces a racially ignorant explanation of juvenile delinquency, oblivious to the social realities of the legal encounters of youths of color with the juvenile justice system.

The White Ignorance of the Child Savers

The new child savers’ commitment to juvenile justice reform is a continuation of the work of the Child Study Movement. At the turn of the twentieth century, this “reformist nebula” (Topalov 1999) advocated for legal reforms to make education compulsory, abolish child labor, and create special legal procedures for juvenile offenders (Bakan 1971, 981). The child savers’ successful campaign to create juvenile courts in 1899 was based on the scientific work of Stanley Hall, the father of developmental psychology and a key member of the child study movement. Hall believed that adolescence was the pivotal stage in individual development, and that it should be prolonged as much as possible to bring out “psychological progress” (Arnett 2006, 191). Like Hall, progressive elites believed that premature entry into adulthood corrupted childhood innocence, and placed a brake on the progress of American society. Social scientists have criticized the “moral enterprise” (Becker 1966, 145) of the child savers arguing that their charitable intentions concealed a “program of moral absolutism” (Platt 1969, 27) designed to extend state control over the previously unregulated “deviant” behavior of disenfranchised and marginalized populations (Garland 2001, 27). For example, the precocious entry into adulthood of working-class children, who often worked in factories or as street vendors (Takanishi 1978, 13) and were invested with adult responsibilities, was framed as contrary to Hall’s conception of “normal” development, and justified the “rehabilitation” of poor children in reformatories (Muncie and Goldson 2012, 342).

The child savers’ emphasis on age at the expense of race and social class was tied to their positionality in American society. Because of their privileged position, their worldview was blinded by what Mills calls “white ignorance”—where ignorance is the necessary manifestation of a political system of “global white supremacy” governed by a “racial contract” whereby people in privileged positions adhere to an “inverted epistemology,” i.e., a specific pattern of psychologically and socially functional cognitive dysfunctions, that renders the underprivileged worldview

unintelligible to them (Mills 1997, 18). Central figures of the child study movement such as Jane Addams, Lucy Flower, and Julia Lathrop were white, wealthy, women philanthropists who upheld Jim Crow segregation (Goodman, Page and Phelps 2017, 53). Thus, the benevolence of child savers toward children was not evenly distributed, and was primarily directed toward white children. Moreover, the juvenile courts they helped create differentiated, discriminated against, and rejected black youth. From their inception, they produced a “two-tiered” system of justice that ordered lenient treatment for children of the ruling class, and the institutionalization of alien and disadvantaged youth (Soung 2011, 434–5). In the southern states, the scarcity of juvenile courts further reinforced racial segregation by restricting access to white youth and condemning black youth to the more punitive treatment of adult prisons (Ward 2012, 98).

The Color-Blindness of the Brain Immaturity Plea

The original and the new child savers share a “soteriological ambition” (Stoczkowski 2019, 31) to “save children” from the corrupt world of adults by gathering and using developmental knowledge about young people to demand legislative reform. While the new child savers do not endorse racism, their discourse of immaturity is racially ignorant in two ways.

First, historically, the developmental norms of childhood have been constructed from measurements of white privileged children¹¹ and used for public and health policy purposes, as well as to “educate” poor and racialized parents about “best” parenting practices. Psychologists’ claims about “normality” have been based primarily on white, privileged male students, whom researchers perceive as “the best representatives of normality by virtue of their race, class, and gender” (Prescott 2002, 20). As I have shown elsewhere (Wannyn 2022), the discourse of immaturity also relies on studies conducted among white upper-middle-class, educated, and healthy youth in the United States.¹² Because they are limited in what they can accomplish experimentally by the material at hand and by the need to achieve “doable problems” (Clarke and Fujimura 1992, 9), neuroscientists continue to rely on convenience sampling. Thus, until recently participants in studies of adolescent brain development have been predominantly drawn from the white, privileged population that is most accessible to neuroscientists.¹³ The lack of racial and socioeconomic diversity in brain research mirrors similar problems in other fields of research, where scientists have relied overwhelmingly on white participants to characterize “normal” lungs (Braun 2014), hearts (Pollock 2012), bone density (Fausto-Sterling

2008), or hair and hormones (Carlin and Kramer 2020). The “default whiteness” (Benjamin 2020, 170) of the “average” adolescent brain raises fundamental questions about the generalizability of these findings to the U.S. adolescent population, and about the inferences that can be made about young offenders, a population that is disproportionately nonwhite and underprivileged, and whose developmental trajectories differ significantly from that of their white privileged counterparts. Here, “unmarked whiteness” (Frankenberg 2001) produces a false universalism in which the “white brain” dictates the “constitutive norm” (Mills 2007, 25) of adolescent brain development while obscuring its ontologically racialized nature.¹⁴

Second, despite its undeniable symbolic value, the discourse of immaturity perpetuates and reinforces a color-blind vision of juvenile justice fraught with problematic assumptions about youth, crime and race. The neurocentric explanation of delinquency runs counter to structural explanations of what Alexander (2010) calls the “new caste system,” i.e., the mass incarceration of record numbers of young black men since the 1970s. The emphasis on rehabilitating rehabilitation does not take into account the deeply racialized history of juvenile courts in the United States, nor does it equate social progress with racial justice. It fails to recognize that the majority of juvenile offenders are involved with the justice system not because of brain immaturity, but because of their race. Moreover, the omission of race obscures the fact that in the U.S. justice system the “presumption of immaturity” too often remains the privilege of white youth, while black youth are disproportionately treated as adults (Nunn 2001). Justice actors tend to perceive black youth as more “adult,” violent and aggressive than white adolescents (Graham and Lowery 2004). They are perceived as less “childlike” and more responsible than their white counterparts (Goff et al. 2014). As Henning (2012, 420) wrote: “decision makers, such as police, probation officers, and prosecutors, treat youth of color more harshly than white youth in part because of an implicit bias to ignore developmental immaturity in youth of color.” As a result, the immaturity defense may ultimately have little effect on reducing racial discrimination against young people of color, given that juvenile transfer laws to adult criminal courts remain widespread and have historically been used disproportionately against youth of color to undermine their right to differential treatment (Buss 2022, 886).

Conclusion

Benevolent ignorance poses a moral dilemma for social scientists and STS scholars. On the one hand, the new child savers were able to institutionalize a “new” discourse on juvenile delinquency that halted the punitive turn in the United

States. This accomplishment should not be understated because the pendulum continues to swing between rehabilitation and punishment. As evidenced by the recent SCOTUS decision in *Jones v. Mississippi* (2020), many states and courts still believe that “children who kill” should be tried as adults. On the other hand, the “writing of crime into race” (Muhammad 2010) remains absent from the discourse of immaturity. Its reductionist and color-blind explanation of juvenile delinquency ignores how racial inequalities shape young people’s criminal trajectories, fails to capture the deeply racialized nature of the justice system, and obscures the fact that social stratification is both the underlying cause and a direct consequence of incarceration (Wakefield and Uggen 2010). While white and non-white youth may share a propensity for risk-taking and impulsive behavior, the punitive consequences of such behavior are disproportionately borne by poor young black men (Henning 2012, 411). Therefore, while the legal and political influence of the discourse of immaturity has resulted in important reform, it has also legitimized a neurobiological understanding of juvenile crime that mirrors the progressive elites’ racialized view of young offenders at the expense of the lived experience of racial minorities.

Science has been instrumental in reshaping juvenile justice in the United States in recent decades. Similar debates in Europe have relied not on science, but on sociopolitical and moral frameworks that emphasize the role of the polity in protecting minors, rather than on adolescents’ immaturity¹⁵ (Muncie and Goldson 2006; Sallée 2016). In the United States, legal actors and juvenile justice advocates have turned to neuroscience because they believe that it can objectively, and neutrally, demonstrate that minors are fundamentally different from adults. But scientific knowledge and technologies are co-produced (Jasanoff 2004) with existing social structures, institutions, and ideologies. The credibility and legitimacy of biologization depend on social frameworks in which legitimate institutions or social groups recognize it as such.

Neuroscientists’ ability to link their data to pre-existing conceptions of juvenile delinquency is key to their legitimacy in the criminal justice field. Thus, neurocriminology has maintained its authority in the justice system because it echoes the longstanding belief among probation officers and prison personnel that serious juvenile offenders are fundamentally different from others. Likewise, the discourse of immaturity renews the legal tradition of viewing minors as a population inherently less culpable than adults. Therefore, the competition between neuroscientific explanations of crime, i.e., crime as a brain abnormality, as brain immaturity, or as brain trauma, can only be resolved temporarily through the “categorical alignment” (Epstein 2008, 92) of official and scientific classifications, rather than through the establishment of a definitive scientific truth.

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Notes

1. Roper v. Simmons, 543 U.S. 551 (2005), Graham v. Florida, 560 U.S. 48 (2010), and Miller v. Alabama, 567 U.S. 460 (2012).
2. In Eighth Amendment cases, SCOTUS must determine whether the sentence constitutes a “cruel and unusual punishment” in light of the “evolving standards of decency,” i.e., the history of the sentence, current statutory law, jury verdicts and international opinion.
3. Juvenile immaturity was not a new claim per se. For several decades, legal actors in the U.S. had considered youth as a mitigating factor in sentencing young offenders, and psychologists had argued that the immaturity of juveniles warranted more lenient sentences compared to adults.
4. *Amicus curiae* (literally, “friends of the court”) are individuals and/or organizations from outside the case who support one party or the other by filing an *amicus curiae* brief, a legal document designed to inform the judges of scientific elements relevant to the case.
5. The American Medical Association, the American Psychiatric Association, and the American Psychological Association and others.

6. In *Stanford v. Kentucky*, 492 U.S. 361 (1989), the American Society for Adolescent Psychiatry argued in its *amicus* brief that juveniles should not be sentenced to death based on psychological evidence that they are more impulsive and less mature than adults.
7. See for example *Commonwealth of Kentucky v. Diaz* 15-CR-584-001 (Ky. Cir. Ct. Sept. 6, 2017); *Otte v. State* 96 N.E. 3d 1288, 1290 (Oh. Ct. App. 2017); *Cruz v. USA*, 11-CV-787 (2018).
8. During the Victorian Era, the child saving movement defended a protective conception of young offenders (Platt 1969). Contrary to the punitive ideology of the time and its penitentiary ideal, they emphasized the child's needs (Muncie and Goldson, 2012), and promoted the gradual differentiation of juvenile and adult justice systems, leading to the creation of the first juvenile court in the United States in 1899.
9. With assets of surpassing USD6 billion, the MacArthur Foundation is among the most prominent philanthropic organization in the United States (Influence Watch 2024). Like the George Soros Foundation or the Bill and Melinda Gates Foundation, the MacArthur Foundation promotes a progressive ideology.
10. Autonomic is the part of the nervous system that regulates unconscious bodily functions such as heart rate, blood pressure, etc. The authors suggest that serious offenders may be neurologically different from minor offenders.
11. Hall himself relied on data collected from large numbers of middle-class white citizens. In particular, he urged mothers in local associations to keep detailed diaries of their children's behavior, and to discuss their observations (Demos and Demos 1969, 635).
12. In fact, the AMA and APA did not cite a single neuroscientific study of the juvenile offender population in their *amicus* briefs. The extent to which experiments conducted in a controlled environment with privileged students from affluent areas tell us anything about the brain development and risk-taking of juvenile offenders remains an open question.
13. Recently, large longitudinal studies such as the *Lifespan Human Connectome Project Development* and the *Adolescent Brain Cognitive Development* (ABCD) have recognized this and their participant recruitment methods now seek racial diversity (see Garavan et al. 2018; Iacono et al. 2018).
14. This assumption that the white brain is best suited to study normal neurodevelopment also reveals a persistent racial divide in bio-psycho-developmental research. On the one hand, "unmarked" white privileged youth are often perceived as sheltered from the social and environmental ills that corrupt normal brain development. On the other, "marked" non-white underprivileged children are considered inappropriate for this type of research and are "epistemologically ghettoised" (Brekhus 1998) into research on the effects of poverty or racial discrimination on development.

15. As Berk (2019, 764) points out: “Children and the democratic polity are inextricably bound together in a relationship of obligation and dependence. What the state owes to child lawbreakers it owes not simply because they are ‘immature,’ but because of the choice the polity has made to disqualify children from a full schedule of democratic rights.”

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