RETHINKING THE SCIENTIFIC AND LEGAL IMPLICATIONS OF DEVELOPMENTAL DIFFERENCES RESEARCH IN JUVENILE JUSTICE

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A recent string of Supreme Court cases now ensures that fewer juveniles will be subjected to our most extreme punitive sanctions, a sign of forward movement toward evolving standards of decency in our culture and jurisprudence. However, this article will argue that there are potential long-term costs associated with the interpretation of developmental differences research relied upon by the Court, not only to juveniles and adults accused and convicted of serious crimes, but to the credibility of science and the legitimacy of the criminal law. The article draws on cutting-edge scientific research to argue that juveniles should indeed be treated differently than we currently treat adults for criminal offenses. However, the primary reason we should treat them differently is not because they are developmentally immature (which many of them may indeed be), but because our retributive justifications for adult punishment do not and will not stand up to scientific scrutiny and the ongoing, inevitable advances in the behavioral and biological sciences. Adolescent immaturity is just one example of the growing number of diminished capacities taking aim at the legitimacy of retributive justifications for punishment. As philosophical and commonsense explanations for criminal behavior give way to scientific and empirical analyses across biological, psychological, and social levels, the justification for and

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responses to criminal responsibility will need to shift from retribution and just desert toward more forward-looking, consequentialist approaches with both juveniles and adults.

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INTRODUCTION

The Supreme Court's decision in *Miller v. Alabama* was the Court's third decision in a string of cases that addressed questions of whether a juvenile offender should be treated differently than an adult accused and convicted of the same crime. In all three cases, the Court answered Yes, much to the delight of child advocates and adolescent development researchers. Although there is considerable precedent for the legal system's embrace of the relative immaturity and lack of full capacity of children and adolescents, especially in the civil realm,[1] those past decisions were grounded in common sense rather than scientific research. In the more recent *Roper*,[2] *Graham*,[3] and *Miller*[4] decisions, the Court accepted the arguments, provided by developmental researchers and their legal allies, that empirical research supports the conclusion that, in comparison to adults, adolescents are less mature, more susceptible to peer influences, more malleable, and less crystalized in their character development in a manner that adds up to less legal culpability for criminal behavior. Given their relative incapacity and diminished culpability, the Court concluded that juveniles were deserving of less severe sanctions. Specifically, offenders under the age of eighteen were ineligible for: (1) the death penalty in *Roper*, (2) life without parole for noncapital crimes in *Graham*, and (3) life without parole for capital crimes when no individualized assessment is provided in *Miller*.

The short-term, pragmatic effect of these decisions is that fewer juveniles will be subjected to our most extreme punitive sanctions, a sign of forward

1. *See* SAMUEL M. DAVIS ET AL., CHILDREN IN THE LEGAL SYSTEM: CASES AND MATERIALS 114–115 (4th ed. 2009) (describing the infancy doctrine under contract law and the special standard for minors' tort liability).

2. Roper v. Simmons, 543 U.S. 551 (2005).

3. Graham v. Florida, 130 S.Ct. 2011 (2010).

4. Miller v. Alabama, 132 S.Ct. 2455 (2012).

movement toward evolving standards of decency in our culture and jurisprudence. However, this article will argue that there are potential long-term costs, not only to juveniles and adults accused and convicted of serious crimes, but to the credibility of science and the legitimacy of the criminal law. The article draws on cutting-edge scientific research to argue that juveniles should indeed be treated differently than we currently treat adults for criminal offenses. However, the primary reason we should treat them differently is not because they are developmentally immature (which many of them may indeed be), but because our retributive justifications for adult punishment do not and will not stand up to scientific scrutiny and the ongoing, inevitable advances in the behavioral and biological sciences. Adolescent immaturity is just one example of the growing number of diminished capacities taking aim at the legitimacy of retributive justifications for punishment. As philosophical and commonsense explanations for criminal behavior give way to scientific and empirical analyses across biological, psychological, and social levels, the justification for and responses to criminal responsibility will need to shift from retribution and just desert toward more forward-looking, consequentialist approaches with both juveniles and adults.[5]

Part I of this article will review the Supreme Court's analyses in the *Roper*, *Graham*, and *Miller* decisions, with an emphasis on the Court's reliance on developmental differences research. Part II will examine the case made by developmental researchers and child advocates for the diminished culpability model of juvenile justice adopted by the Supreme Court, including the importance of retaining retribution as a limiting principle in juvenile justice. Part III will critically analyze the scientific and legal bases for the Supreme Court's adoption of the diminished culpability model, and present some of the negative policy implications for both juvenile and adult offenders and for the institutions of science and our criminal justice system. Part IV presents some prescriptions for the relationship between science and law as the relationship progresses, evolves, and matures over time. Part V presents an outline of what a more consequentialist approach to juvenile justice and criminal law more broadly might look like. Finally, the Conclusion is aimed at encouraging the inclusion of a wider range of behavioral

5. *See generally* Joshua Greene & Jonathan Cohen, *For the Law, Neuroscience Changes Everything and Nothing*, 359 PHIL. TRANSACTIONS ROYAL SOC'Y LONDON B 1775 (2004).

scientists and legal scholars to help advance evidence-based reforms of our juvenile justice and adult criminal justice systems.

I. THE SUPREME COURT CASES

If the 1960s and '70s were characterized by a due process revolution in the Supreme Court's jurisprudence of juvenile justice,[6] then the first decade of the twenty-first century might be characterized as the beginning of the era of substantive reform. The Supreme Court's earlier focus on due process was in part a reaction to widely held perceptions that juveniles who were accused of breaking the law were receiving the "worst of both worlds": neither the procedural safeguards afforded adults nor the effective rehabilitation promised in exchange for the lax procedural oversight and guidelines. At that point, the Supreme Court turned to the most familiar and handy tool it had at the time—procedural due process, and more of it. With the advent of the new era of substantive reform, it would appear that the Supreme Court now has turned to science. However, on closer examination, the story is a bit more complex. As we shall see in analyzing the Court's decisions in the *Roper*, *Graham*, and *Miller* cases, the Court based its decisions on an amalgam of science, child advocacy, and common sense—a common sense about human behavior that is increasingly at odds with cutting-edge scientific research in the behavioral and biological sciences.

The first case in this new era of substantive reform was *Roper v. Simmons*.[7] The issue facing the Supreme Court in *Roper* was whether the execution of a juvenile offender under the age of eighteen at the time of the crime is a violation of the Eight Amendment's prohibition against cruel and unusual punishment. The Court noted that the Eight Amendment's guarantee against excessive sanctions was grounded in the principle of proportionality[8] and that calibration of disproportionality and cruelty was measured against "the evolving standards of decency that mark the progress of a maturing society."[9] The general legal analytic framework followed by the Court involved a review of objective indications of a national consensus

6. *See generally* Mark R. Fondacaro et al., *Reconceptualizing Due Process in Juvenile Justice: Contributions from Law and Social Science*, 57 HASTINGS L.J. 955 (2006).

7. *Roper*, 543 U.S.

8. *Id.* at 560.

9. *Id.* at 561.

against the death penalty for minors and the exercise of its own independent judgment about whether the death penalty was disproportionate for juveniles. After reviewing available evidence of a national consensus, the Court decided that execution of minors under eighteen was unconstitutional under the Eight Amendment as applied to the States through the Fourteenth Amendment. Evidence of an evolving national consensus against the juvenile death penalty was interpreted by the Court as evidence that American society views juveniles as "categorically less culpable than the average criminal."[10]

The Court also based its decision in part on several developmental differences between juveniles and adults.[11] First, the Court noted that the common wisdom of parents and the weight of social scientific evidence presented by *amici* tended to support the view that juveniles are less mature and responsible than adults. To support this conclusion, they cited empirical evidence documenting that adolescents are particularly prone to a wide range of reckless behaviors.[12] Second, juveniles are more susceptible to negative outside influences, including peer pressure. Here they cited several articles coauthored by Lawrence Steinberg, a developmental psychologist, and Elizabeth Scott, a child and family law scholar. Third, relying on the theoretical framework proposed by Eric Erickson, they concluded that the character of a juvenile is not as a fully formed and fixed as the character of an adult. Drawing on these factors, the Court surmised that juveniles have diminished culpability, are deserving of less retributive punishment, and are less likely to be deterred by severe sanctions. Overall, the Court reasoned that juveniles could not be considered among the worst of the worst offenders deserving of the death penalty because, in comparison to adults, their immaturity made their criminal conduct less morally reprehensible, their susceptibility to outside influences and relative lack of control over their environment made them more deserving of forgiveness, and their lack

10. *Id.* at 567. (Note here that the Court is contrasting juveniles—and not juvenile offenders—with adult criminals. One might also conclude that our society views clergy as categorically less culpable than the average criminal. However, it does not necessarily follow that the criminal law should categorically sanction pedophile priests differently than the "average" criminal pedophile.)

11. *Id.* at 569.

12. Jeffrey Arnett, *Reckless Behavior in Adolescence: A Developmental Perspective*, 12 DEVELOPMENTAL REV. 339 (1992) (discussing adolescence as a period between puberty and the assumption of adult roles and responsibilities, typically into the early 20s).

of crystalized character development made them more amenable to treatment and rehabilitation and more likely to "mature out" of antisocial behavior.[13]

The Court distinguished between the two primary justifications for the death penalty: retribution and deterrence. With respect to retribution, the Court identified two main functions of punishment: expressing moral outrage and correcting the balance for the wrong committed against the victim. They concluded that the death penalty was not a proportional punishment in the case of juveniles because their culpability was substantially diminished by their youthful immaturity. With respect to deterrence, the Court concluded that there was little evidence that the death penalty served as a deterrent for juveniles, and that the same factors that contributed to diminished culpability in youth contributed to their diminished deterrability.[14]

The Court acknowledged that "[d]rawing the line at 18 years of age is subject, of course, to the objections always raised against categorical rules. The qualities that distinguish juveniles from adults do not disappear when an individual turns 18. By the same token, some under 18 have already attained a level of maturity some adults will never reach."[15] The Court noted that a line needed to be drawn, and that eighteen was "the age at which death eligibility ought to rest."[16] The Court defended its reliance on a categorical rule by noting the following:

> An unacceptable likelihood exists that the brutality or cold-blooded nature of any particular crime would overpower mitigating arguments based on youth as a matter of course, even where the juvenile offender's objective immaturity, vulnerability, and lack of true depravity should require a sentence less severe than death. In some cases a defendant's youth may even be counted against him.[17]

Thus, the Court was concerned that individualized assessments of culpability and just desert might result in excessive punishments being imposed on immature juveniles with diminished culpability in cases involving strong moral outrage.

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13. *Roper*, 543 U.S. at 569–571.
14. *Id.* at 571.
15. *Id.* at 574.
16. *Id.*
17. *Id.*

In *Graham v. Florida*,[18] the issue before the Court was whether a sentence of life in prison without parole was a violation of the Eighth and Fourteenth Amendments for juveniles under the age of eighteen convicted of a nonhomicide offense. Again, the Court began its analysis with the Eight Amendment and the proportionality analysis, citing *Weems v. United States* for the proposition that the ban on cruel and unusual punishment is grounded in the principle that punishment should be graduated and proportionate to the offense committed.[19] The Court concluded that principles of retribution do "not justify imposing the second most severe penalty on the less culpable juvenile nonhomicide offender."[20] Deterrence was not considered a satisfactory justification for a life sentence either, because the same characteristics that contributed to diminished culpability also made juveniles less responsive to deterrence than adults. Given that the death penalty was not at issue, the Court also broadened its analysis of legal justifications for punishment beyond retribution and deterrence to include incapacitation and rehabilitation. The Court challenged both of these policy objectives as legitimate bases for a life sentence because incapacitation for life presumes judgments about the incorrigibility of particular juveniles that the Court asserted could not be made reliably even by experts, and that the penalty of life without parole "foreswears altogether the rehabilitative ideal."[21] The Court held that for juveniles who commit nonhomicide offenses before the age of eighteen, a sentence of life without parole is categorically prohibited. The state is not required to release the offender if he continues to warrant confinement based on his behavior once imprisoned. However, a sentence of life with no chance of parole violates the Eighth Amendment's prohibition of cruel and unusual punishment.

Again, the Court based its decision in part on the conclusions it had reached in *Roper* about the lessened culpability of juveniles based on their relative lack of maturity and responsibility, greater susceptibility to peer influences, and less crystallized character development.[22] Based on these general differences between typical adolescents and typical adults, the Court concluded that even experts could not reliably distinguish between

18. Graham v. Florida, 130 S.Ct. 2011 (2010).
19. *Id.* at 2021, *citing Weems*, 217 U.S. 349, 367 (1910).
20. *Id.* at 2028.
21. *Id.* at 2030.
22. *Id.* at 2026.

juvenile offenders whose crimes where the result of youthful immaturity from the more rare, hard-core offenders whose crimes reflected "irreparable corruption."[23] Moreover, the Court noted that since its decision in *Roper*, the scientific evidence, including new developments in psychology and the brain sciences, tended to support the conclusion that the "minds" of juveniles and adults are fundamentally different.[24]

The Court noted that when comparing a juvenile who did not kill someone to an adult murderer, the juvenile "has a twice diminished moral culpability"—their age and the nature of their offense.[25] This line of analysis then went in two distinct directions. On the one hand, the fact that the juvenile crime was not the most serious offense of murder was used by the Court to buttress the argument for relative leniency of punishment, certainly short of the second most serve punishment—life without parole. On the other hand, the Court argued that life without parole was particularly harsh on juveniles, because they stood to spend a much longer time in prison than an adult given the same sentence. The Court considered that a sentence of life without parole for a juvenile shared several characteristics of a death sentence and therefore concluded that a categorical rule and bright line needed to be established. As a result, they once again drew the line at age eighteen and buttressed the need for a categorical rule with the argument that professionals could not reliably make the kind of individualized distinctions to ensure that juveniles whose crimes were the result of their youthful immaturity were not sentenced to life in prison without parole.

The most recent case in the Supreme Court's trilogy of substantive juvenile justice cases is *Miller v. Alabama*.[26] In *Miller*, the defendants were two fourteen-year-olds who had been convicted of murder and given mandatory life sentences without the possibility of parole. The Court held that "mandatory life without parole for those under the age of 18 at the time of their crimes violates the Eighth Amendment's prohibition on 'cruel and unusual punishment.'"[27] The Court noted explicitly that it had based its

23. *Id.*

24. *Id.* Again, this says nothing about whether the minds of juvenile offenders differ from the minds of adult offenders, or whether the minds of adult offenders differ from the minds of "average" adults.

25. *Id. at* 2027.

26. *Miller*, 132 S.Ct.

27. *Id.* at 2460.

decisions in *Roper* and *Graham* on a combination of common sense and science, again citing articles by Steinberg and Scott as sources of scientific authority.[28] In again holding life without parole for juveniles as unconstitutional, there were two major distinctions from the decision in *Graham*. First, the decision in *Miller* focused on juveniles convicted of murder, and second, the Court in Miller did not find a categorical prohibition on life without parole for all juveniles under the age of eighteen at the time of their crime. Rather, the Court held that individualized sentencing was required in the case of a juvenile convicted of murder, whereas a sentence of life without parole was considered unconstitutional for nonhomicide cases involving juveniles under eighteen at the time of their offense. The Court's reasoning was that *Graham* analogized life without parole for a juvenile to the death penalty, given the longer duration of a life sentence for someone who is young and has more years to serve in prison. The equation of life without parole to a virtual death sentence for a juvenile then required the Court to apply principles of individualized sentencing in the case of life without parole for a juvenile, since it was constructively equivalent to a death sentence. Overall, the Court concluded that

> *Graham*, *Roper*, and our individualized sentencing decisions make clear that a judge or jury must have the opportunity to consider mitigating circumstances before imposing the harshest possible penalty for juveniles. By requiring that all children convicted of homicide receive lifetime incarceration without possibility of parole, regardless of their age and age-related characteristics and the nature of their crimes, the mandatory sentencing schemes before us violate this principle of proportionality, and so the Eighth Amendment's ban on cruel and unusual punishment.[29]

II. THE CASE FOR THE DIMINISHED CULPABILITY MODEL

The Supreme Court's decisions in *Roper*, *Graham*, and *Miller* have been widely celebrated by many in the legal and adolescent development research communities—and for some good reasons. For one, many adolescents under the age of eighteen who commit serious crimes will no longer be put to death

28. *Id.* at 2464.
29. *Id.* at 2475.

or sentenced to life in prison without the possibility of parole. These substantive developments in juvenile law shielding adolescents from the most severe sanctions for criminal behavior bring us more in line with the rest of the international community. Moreover, the view that children and adolescents are less culpable than adults for their criminal behavior tracks and reflects common sense. This common sense is based on basic assumptions about human capacity for agency and autonomy, and the idea that these psychological capacities are a work in progress during adolescence and become fully developed by adulthood. This commonsense argument seems to track rather closely with the perspective expressed in the research studies and amicus briefs relied on by the majorities in the Supreme Court. For example, the Court in both *Roper* and *Miller* relied explicitly on the evidence and reasoning presented in a paper authored by Lawrence Steinberg and Elizabeth Scott entitled "Less Guilty by Reason of Adolescence: Developmental Immaturity, Diminished Responsibility, and the Juvenile Death Penalty."[30]

Steinberg and Scott sought to address the issue "of whether juveniles should be punished to the same extent as adults who have committed comparable crimes."[31] Framed in this manner, you might expect that most if not all of the research relied upon would be based on comparisons of juvenile offenders with adult offenders. As we shall see, this was not typically the case. Many of the research conclusions and speculations offered by Steinberg and Scott involved no adult comparison group or a comparison group of adults who were not offenders. Overall, Steinberg and Scott concluded that juvenile offenders deserve less punishment than adult offenders because their culpability is mitigated by diminished decision making, greater susceptibility to coercive influences, and character development that is "still undergoing change."[32] The best evidence to support these claims would be studies that compared juvenile offenders with adult offenders and found that juvenile offenders had more diminished decision making than adult offenders, were more susceptible to peer influences than adult offenders, and were undergoing changes in character whereas adult offenders had developed a stable and unchanging character.

30. Laurence Steinberg & Elizabeth S. Scott, *Less Guilty by Reason of Adolescence: Developmental Immaturity, Diminished Responsibility, and the Juvenile Death Penalty*, 58 Am. Psychologist 1009 (2003).

31. *Id.* at 1009.

32. *Id.*

In framing their argument for mitigation based on developmental immaturity, Steinberg and Scott pivot from focusing on juvenile offenders and adults offenders who have committed comparable crimes to "typical" adolescents and adults—suggesting that the former are less culpable because "their criminal conduct is driven by transitory influences that are constitutive of this developmental stage."[33] Their conceptual framework is rooted in principles of normative adolescent and adult development. However, the types of criminal behaviors committed by both juveniles and adults, particularly those who commit felonies, are often not the product of normative development but of abnormal adolescent and adult development—the kinds of psychological and behavioral patterns that would routinely be covered in a textbook on abnormal psychology rather than developmental psychology.[34] Moreover, even within the field of normative developmental psychology, many modern textbooks would be more likely to take a life course developmental perspective, where personal identity and character are conceptualized as dynamic and multifaceted, subject to ongoing change and contextual influences, rather than as a fixed and unchanging end-state reached at the age of eighteen, or even twenty-five, thirty-five, or beyond. Moreover, the abnormal psychology textbook would not only describe the development of aggressive and criminal behavior, but would draw on research from the disciples of clinical and community psychology describing the extent to which various interventions at the psychological, biological, and social levels of analysis could bring about behavioral change for both adolescent and for adults.

Taking the issue of susceptibility to peer influences as an example, Steinberg and Scott argue that "substantial research supports the conventional wisdom that, even in middle adolescence, teenagers are more responsive to peer influence than are adults."[35] They cite two studies to support this proposition, one by Berndt and the other by Steinberg and Silverberg. The Berndt study focused on children from the third, sixth, ninth, eleventh, and twelfth grades. The Steinberg and Silverberg study focused on students between the ages of ten and sixteen. Neither of these studies had an adult

33. *Id.* at 1011.

34. *See, e.g.*, ANNA M. KRING ET AL., ABNORMAL PSYCHOLOGY 472 (2013) (noting that approximately 75% of convicted felons meet the diagnostic criteria for Antisocial Personality Disorder, and that the majority of people with this diagnosis also meet the criteria for another disorder).

35. Steinberg & Scott, *supra* note 30, at 1012.

comparison group, and neither of them involved either juvenile offenders or adult offenders. Basically, both of these studies are relevant to normative changes in susceptibility to peer influence over the course of childhood and adolescence, but neither of these studies gets to the heart of Steinberg and Scott's conclusion or the legally relevant issues: whether juveniles who engage in crimes that are comparable to crimes committed by adults should be treated less harshly because they are more susceptible to peer influences. These studies tell us nothing conclusive about whether juvenile offenders are more susceptible than adult offenders to peer influences.

A similar line of critique applies to Steinberg and Scott's assertions about the diminished future orientation of youths—much of their analysis is speculative, the studies they do rely on lack comparisons to adult offenders, and some lack any adult comparison groups at all. Moreover, when the best of the best of their studies are combined, there is no clear scientific basis for drawing the dividing line between juveniles and adults at the age of eighteen. In their 2003 paper, which was cited by the Supreme Court as scientific authority in the *Roper* and *Miller* cases, Steinberg and Scott were explicit about the fact that their conclusions about the greater impulsivity of adolescents and the relevance of neurobiological development to diminished culpability were largely speculative at that point, as was their discussion about heightened vulnerability to coercive circumstances more generally. However, the Supreme Court repeatedly embraced and uncritically accepted Steinberg and Scott's conclusions about developmental differences between "juveniles" and "adults," and their relevance to diminished culpability and punishment.

On the topic of unformed character as mitigation, Steinberg and Scott correctly state that "the criminal law implicitly assumes that harmful conduct reflects the actor's bad character and treats evidence that this assumption is inaccurate as mitigating of culpability."[36] They go on to conclude that "[f]or most adolescents, this assumption *is* inaccurate, and thus their crimes are less culpable than those of typical criminals." However, what they fail to point out is that this assumption is also inaccurate for many adults as well, based on an extensive body of behavioral science research.[37] Moreover, their definition of character and character development is more

36. *Id.* at 1014.

37. *See generally* Mark R. Fondacaro, *The Injustice of Retribution: Toward a Multi-Systemic Risk Management Model of Juvenile Justice*, 20 J.L. & POL'Y 145 (2011) [hereinafter *Injustice of*

consistent with commonsense notions of that construct than with more modern, empirically based life span, ecological models of human development. In contrast to juveniles, they attribute most of adult crime to "deficient moral character,"[38] embracing an evildoer theory of crime that reflects commonsense notions but has not been taken seriously by behavioral scientists and criminologists who have studied crime over the past century.

Steinberg and Scott do point out that some adults have character traits that are comparable to adolescents, but suggest that such adults should be judged to be fully culpable because, unlike adolescents, their bad character traits are unlikely to change with the mere passage of time. This assertion is clearly at odds with empirical research indicating that the majority of adults with Antisocial Personality Disorder improve over time.[39] Moreover, they also fail to consider whether adults with so-called character flaws would be more likely to change in a positive direction if they received comprehensive rehabilitative intervention rather than retributive punishment for their crimes. Again, this failure to adequately consider the role of contextual influences on behavior, in terms of both causing and reducing criminal behavior, is not limited to their discussion of adolescents. The developmental framework adopted by Steinberg and Scott considers the likely individual characteristics and behavior of the typical adolescent and the typical adult offender or typical adult without regard to contextual factors that might bring about different levels of development and functioning and behavior change for both adolescents and adults.

In a later article, Scott and Steinberg[40] provide a comprehensive outline of the merits of their developmental differences model of juvenile justice. Again, they point to both psychological and neurobiological research suggesting that, on average, typical adolescents are less mature, more susceptible to peer influences, and not as fixed in their character development as typical adults. Second, they argue that the legal model of diminished retribution based on developmental differences and diminished culpability is necessary as a limiting principle to prevent the state from imposing open-ended liability on adolescent offenders in ways that might otherwise

Retribution]; Mark R. Fondacaro, *Toward an Ecological Jurisprudence Rooted in Concepts of Justice and Empirical Research*, 69 UMKC L. REV. 179 (2000).

38. Steinberg & Scott, *supra* note 30, at 1015.

39. *See* KRING ET AL., *supra* note 34 (*citing* a study by Black, Baumgard & Bell, 1995).

40. *See generally* Elizabeth Scott & Laurence Steinberg, *Social Welfare and Fairness in Juvenile Crime Regulation*, 71 LA. L. REV. 35 (2010).

be disproportionate to the punishment they deserve. Third, they argue that the diminished retribution model reduces potential bias and disparate treatment that might be associated with other models of juvenile justice that focused on either rehabilitation or risk management. Finally, they argue that maintaining the retributive justification for punishment in the juvenile justice system is essential to maintaining the legitimacy of the system because the public is solidly behind principles of just desert, and if the system did not accommodate the public's preferences and moral intuitions in this regard, then the system would lose support and legitimacy in the eyes of the public.

III. THE CASE AGAINSE THE DIMINISHED CULPABILITY MODEL

Although the diminished culpability model has been widely embraced by the Supreme Court, policy makers, and the legal academic community, recent interdisciplinary scholarship has begun to question its scientific and legal basis and its moral legitimacy.[41] Before turning to and expanding on this recent scholarship, I will critically analyze each of the justifications for the diminished culpability model outlined by Scott and Steinberg in "Social Welfare and Fairness in Juvenile Crime Regulation."

First, on the issue of the scientific justification—although the scientific evidence for developmental differences between adolescents and adults in various psychological and psychosocial capacities and neurobiological functioning was more speculative than substantive at the time of the *Roper* decision, behavioral scientists and neuroscientists have been substantiating with empirical evidence significant average differences between adolescents and adults on some, but not all, of the potential characteristics outlined by Steinberg and Scott in their article entitled "Less Guilty by Reason of Adolescence." However, the state of the science still remains unclear on why the dividing line between adolescent and adult development should be drawn at age eighteen. Moreover, although the Supreme Court made mention at several points in its decisions that it views adolescents as less culpable and less deserving of punishment than adult criminals, the bulk

41. *See* Christopher Slobogin & Mark R. Fondacaro, Juveniles at Risk: A Plea for Preventive Justice (2011).

of the available research does not compare the psychological, psychosocial, or neurobiological functioning or development of adolescents to adult criminals—the identified developmental differences are typically based on comparisons of noncriminal adolescents to noncriminal adults. Moreover, comparisons of criminal and noncriminal adolescents are typically not provided. So, for example, we do not know whether or the extent to which the level of functioning of the typical adult offender is distinguishable from the typical or "average" adolescent.

With respect to cognitive functioning, Steinberg and Cauffman would acknowledge that the typical nine-year-old child exceeds the legal threshold for being able to form the intent to commit a crime.[42] On the issue of susceptibility to peer influence, although the Supreme Court relied largely on speculation for the *Roper* decision, more recent evidence suggests that on average, normal adolescents are more susceptible to peer influences than normal adults. However, again this says nothing about how either normal or delinquent youth compare to the typical adult offender in terms of susceptibility to peer influences. Moreover, although the developmental researchers and the Supreme Court treated susceptibility to peer influence as an internal, dispositional characteristic of the adolescent, it is entirely possible that adults are less susceptible to peer influence because peers are less common features of their social context, but that they are more susceptible to the outside influences of family members or significant others.

On the issue of less crystallization of character for adolescents, the researchers and the Supreme Court adopted a view of character and character development that reflects an outdated model of personal identity development. The model adopted caricatures personal identity as a fixed internal attribute of the individual that is in a state of flux during adolescence and then crystalizes and becomes unified and stable in adulthood. More modern theory and research on human development across the life span suggests that identity development is an ongoing process rather than a fixed end state and that people have varied and multifaceted identities, both personal and social.[43] Related to this issue were assertions

42. Laurence Steinberg & Elizabeth Cauffman, *A Developmental Perspective on Jurisdictional Boundary*, in THE CHANGING BORDERS OF JUVENILE JUSTICE: TRANSFERS OF ADOLESCENTS TO ADULT COURT 394 (Jeffrey Fagan & Franklin Zimring eds., 2000).

43. *See generally* URIE BRONFENBRENNER, THE ECOLOGY OF HUMAN DEVELOPMENT: EXPERIMENTS BY NATURE AND DESIGN (1979); John E. Schulenberg, Arnold J. Sameroff,

by the Supreme Court that juveniles deserve less punishment because they are more responsive to treatment. Although this makes intuitive sense and is consistent with folk psychology conceptions of adolescent malleability, scientific evidence is not available to support this conclusion because we simply have not attempted the kinds of multisystemic interventions with adults that might have demonstrated effects on their prospects for change. Recall that a few decades ago, behavioral scientists, clinicians, and the legally community were all in agreement that "nothing works" with juvenile offenders and that they could not be rehabilitated.[44]

In "Social Welfare and Fairness," Scott and Steinberg, like other contemporary criminal law scholars, argue that retribution is a necessary limiting principle, otherwise there would be no basis for placing limits on the amount of punishment or state intervention that could be imposed on a juvenile who committed a crime. However, there seem to be several problems with this line of reasoning. First, and perhaps most ironic, the demand for retribution and just desert is probably one of the main factors that has contributed to the harsh and lengthy sentences handed out in the criminal justice system of the United States. Is there any evidence or rational basis for the belief that, overall, juveniles or adult offenders would receiver even harsher or longer sentences if our criminal justice system became nonretributive or more rehabilitative in focus? In one sense, at least in the juvenile context, the nature and need for a limiting principle takes on new meaning when the response to criminal behavior moves from retributive punishment to one of the several alternative, forward-looking consequentialist responses to crime such as rehabilitation, risk management and recidivism prevention, deterrence, incapacitation, and restitution. Any single one or a combination of these justifications, coupled with principles of evidence-based, least restrictive intervention could serve as an effective and fair limiting principle. In fact, perhaps the most effective consequential limiting principle would be to abandon punishment on retributive grounds

& Dante Cicchetti, *The Transition to Adulthood as a Critical Juncture in the Course of Psychopathology and Mental Health*, 16 DEV. & PSYCHOPATHOLOGY 799 (2004).

44. *See* Randall T. Salekin, *Psychopathy and Therapeutic Pessimism: Clinical Lore or Clinical Reality,* 22 CLINICAL PSYCHOL. REV. 79 (2002) (reviewing 42 treatment studies and concluding that there is little scientific basis for the belief that individuals with antisocial characteristics cannot be treated or rehabilitated).

altogether.[45] It is one thing to say that all people, including adolescents, should be held accountable for their crimes. However, it does not necessarily follow that the necessary, just, or most effective response to promote legal accountability is retributive punishment based on principles of just desert. In fact, there is a long line of clinical and community intervention research that suggests just the opposite.[46]

On the question of bias and disparate treatment, one can hardly imagine a system with more potential bias or with more disproportionate minority contact than the current system. Now, the retributive argument usually focuses on the pitfalls of using risk factors as the basis for intervening in a nonretributive system. However, this argument tends to downplay if not ignore the differences between risk assessment aimed at prediction and risk assessment aimed at risk management—the later emphasizing dynamic or changeable risk factors[47] rather than immutable characteristics such as race—and race is the issue here of major concern and constitutional relevance. Moreover, the concern with disparate treatment fails to consider that the response under a nonretributive regime is not necessarily punitive, notwithstanding the fact that it may involve some curtailment of liberty. Moreover, liberty curtailment in the realm of juvenile justice rehabilitation need not be negative or undesirable. For example, providing school lunches that include only nutritious and wholesome foods and deserts may restrict the liberty of students to drink soda and eat candy, but it is not necessarily a negative infringement on their liberty from the standpoint of their own self-interest or the interests of their parents or society that might have to bear the costs of health care for their poor eating habits. A related point is that the retributive system's focus on internal mental state as a prime determinant of culpability, to the exclusion of contextual factors, means that there will be winners and losers and

45. Abandoning punishment on retributive grounds does not mean that all punishment is off limits. Rather than serving retributive aims, punishment can be used as an instrumental response to negative behavior that serves to bring about positive changes in behavior.

46. *See generally* Mark W. Lipsey & James C. Howell, *A Broader Vision of Evidence-Based Programs Reveals More Options for State Juvenile Justice Systems,* 11 CRIMINOLOGY & PUB. POL'Y 515 (2012).

47. *See generally* Kirk Heilbrun, *Prediction versus Management Models Relevant to Risk Assessment: The Importance of Legal Decision-Making Context,* 21 LAW & HUMAN BEHAV. 347 (1997).

the losers will be those with the greatest vulnerabilities and most traumatic life experiences and circumstances.

Finally, proponents and defenders of a retribution-based system for both adults and juveniles often argue that adhering to principles of retribution is necessary to maintain the legitimacy and public acceptance of the criminal justice system. The presumption is that most if not all people favor retribution, especially for serious offenses, and failing to provide retribution will lead to the erosion of public support, periodic backlash, and vigilantism. There certainly is good evidence for strong public support for retribution, especially for serious offenses, and this retributive urge has deep biological, psychological, and cultural bases. In fact, if more forward-looking, nonretributive responses to crime are to take hold in the United States, the question of how to address the issue of public acceptance and legitimacy will need to be on the front burner of policy makers and researchers. With that said, some academic consensus is beginning to build for the position that as people learn more and more about the biological, psychological, and social influences on behavior, their moral intuitions about moral and criminal responsibility will change and become more favorable to nonretributive responses to crime, especially those committed by juveniles.[48] In any event, in addition to the case for and against the justifications provided by Scott and Steinberg for anchoring juvenile justice in a retributive model of criminal justice, there are more general and fundamental problems with adopting their approach and the approach sanctioned by the Supreme Court in *Roper*, *Graham*, *and Miller*.

A. Scientific Research Questioning Legal Presumptions Underlying Retribution

The model of juvenile justice embraced by the Supreme Court has been characterized as a diminished retribution model based on developmental differences between adolescents and adults that result in diminished adolescent culpability for criminal behavior. As noted by Scott and Steinberg, the developmental differences translate into mitigation of culpability but not excuse; adolescents are still held accountable based on principles of retributive justice and just desert. Thus, developmental differences and the mitigation in culpability and sanctions they imply are squarely rooted

48. *See generally* Greene & Cohen, *supra* note 5; *Injustice of Retribution*, *supra* note 37.

in retributive justifications for punishment. In fact, as noted above, the major proponents of this perspective champion this relationship and tout retribution as a necessary limiting principle that ultimately shields those convicted of crimes from over-punishment.

Retributive justice is grounded in principles of autonomous individualism and an evildoer theory of crime. From a retributive standpoint, it is presumed that the lion's share of human behavior, at least for adults, is guided by rational deliberation and conscious choice. Individuals who break the law choose to do so and could have done otherwise. It is this rational capacity for choice that serves as the justification for retributive punishment: the idea that people deserve to be punished for their criminal behavior. Moreover, they should receive no more and no less punishment than they deserve, or their just desert. This view of human behavior as largely driven by conscious will and free choice is deeply grounded in common sense, folk psychology, religious principles, and foundational legal presumptions and principles.[49] However, there is one significant institutional community in which this model of human behavior is not widely embraced, and that is the scientific community, the community of scholars and researchers whose primary ambition is to focus the lens of the scientific method to help understand the interrelated biological, psychological, and social factors that drive human behavior. Although a comprehensive review of the relevant scientific literature across these domains is beyond the scope of this article, I will highlight some of the most significant and legally relevant research, beginning with research relevant to judgments of culpability and mens rea analysis.

As already noted, the legal and folk psychology conceptions of human behavior both presume that behavior is the result of conscious will and free choice. Under the Model Penal Code, to be held criminally responsible for illegal behavior, the person has to commit an illegal act (actus reus) coupled with a guilty mind (mens rea). Moreover, there must be concurrence between the illegal act and the guilty mind: mens rea must actuate the illegal behavior. This presumed link between thought and behavior provides the justification for retributive punishment. However, recent scientific advances have challenge this folk psychology conception of human behavior on the following grounds: (1) systematic empirical research shows that this presumed link between cognition and behavior is largely if not

49. *See generally Injustice of Retribution*, *supra* note 37.

completely illusory;[50] (2) even if cognition can actuate human behavior, as the law presumes, we cannot make valid judgments of past mental state with the degree of accuracy necessary to justify punishment on retributive grounds;[51] (3) even if punishment could be justified on retributive grounds, we are not able to come up with agreed upon standards of what constitutes just punishment because such judgments can vary widely depending on the nature of information provided to decision makers;[52] and (4) increasing evidence of gene-environment interactions indicate not only that more and more human behavior is being accounted for by factors other than conscious will,[53] but also that people are willing to mitigate and excuse punishment based on an understanding of these factors.[54] As the number and scope of these identified, interrelated biological and contextual influences on human behavior increase rapidly over time, the folk psychology homunculus will eventually shrink in size, driven away by scientific research at the forefront and intersection of the behavioral and neurobiological sciences.

B. Challenges to the Legal Relevance of Developmental Differences Research

Even accepting that many (but not all) typical adolescents are less developmentally "mature" than many (but not all) typical adults, this begs the question of whether such differences are legally relevant to judgments of criminal responsibility. By their own acknowledgement, leading proponents of the diminished culpability model suggest that the typical adolescent is capable of forming the criminal intent to satisfy mens rea requirements for criminal responsibility. To be held accountable for a particular act, the law merely asks whether the person knew what they were doing, knew what they

50. Daniel M. Wegner & Thalia Wheatley, *Apparent Mental Causation: Sources of the Experience of Will*, 54 Am. Psychologist 480 (1999).

51. Laurence J. Severance et al., *Inferring the Criminal Mind: Toward a Bridge Between Legal Doctrine and Psychological Understanding*, 20 J. Crim. Just. 107 (1992).

52. Christopher Slobogin & Lauren Brinkley-Rubinstein, *Putting Desert in Its Place*, 65 Stan. L. Rev. 77 (2013).

53. *See, e.g.*, Terrie E. Moffitt, *The New Look of Behavioral Genetics in Developmental Psychopathology: Gene-Environment Interplay in Antisocial Behaviors*, 131 Psychol. Bull. 533 (2005).

54. Lisa G. Aspinwall, Teneille R. Brown, & James Tabery, *The Double-Edged Sword: Does Biomechanism Increase or Decrease Judges' Sentencing of Psychopaths?*, 17 Science 846 (2012).

were doing was wrong, and at least knew (or in rare cases, should have known) that their behavior created an unreasonable or unjustifiable risk for someone else. For serious crimes such as murder, the law requires a mental state of purpose or knowledge, but note that even severely mentally ill individuals and adults with more limited intellectual capabilities than the typical adolescent are usually held legally accountable for their behavior. In fact, it should be noted that the recent trilogy of Supreme Court cases—*Roper*, *Graham*, and *Miller*—focused on issues of sentencing, not whether the juveniles could be held legally accountable at all. All of the defendants in those cases were held legally accountable and subject to very lengthy sentences.

The point is, if juveniles are held less accountable based on empirical evidence of their developmental differences from adults, this basis is not an application of the scientific evidence to the legal standards for criminal responsibility; it is a value preference. If that is indeed the case, then developmental differences research—whether we are talking about cognitive variables, psychosocial functioning, or neurobiological differences—is entirely beside the point. The decision merely reflects a value preference, gussied up perhaps in a façade of empirical science, but it is not a decision grounded in a sound application of the science to traditional standards and criteria for judging criminal responsibility. Although, in the short run, this may be justified by child advocates from within either the behavioral sciences or the legal system, in the long run it runs the risk of eroding the legitimacy of the scientific community. Moreover, to the extent that such empirical research can be applied to established legal doctrine in ways that accommodate a fit that justifies mitigation or excuse, this would only seem to open the floodgates to other sympathetic groups of defendants whose behavior can be accounted for by a combination of environmental and genetic factors. This is not necessarily a bad thing—but we should recognize that principles of retribution will no longer provide a principled or robust justification for punishing criminal behavior. In fact, the youngsters most likely to be held accountable to adult standards of conduct and punishment by both child advocates and courts sympathetic to a diminished retribution model—that is, life-course-persistent juvenile offenders with stable patterns and histories of delinquent behavior—are the very youngsters with the most mitigating life circumstances and neurobiological vulnerabilities. These are the youngsters who are least "deserving" of punishment on retributive grounds.

C. Legitimizes Empirically Unsupported Legal Presumptions about Adult Crime

The primary concern of child advocates from both the behavioral sciences and the legal profession is to ensure that juveniles do not receive overly harsh and punitive sanctions for criminal behavior during their formative years. It makes sense that legal advocates would use any empirical data or any helpful narrative to argue for policy and legal positions that serve the best interests of youth. In fact, legal advocates have a professional duty to argue zealously on behalf of their individual clients facing legal jeopardy. However, in making the policy arguments for a diminished retribution model of juvenile justice based on developmental differences research, developmental researchers and legal advocates are taking positions that have implications beyond the interests of youth; they are embracing foundational principles and legal presumptions about human behavior that legitimize the way we view and treat adult offenders.

The diminished retribution argument goes as follows: juveniles should be treated differently than adults because they are developmentally different than adults, they are still "works in progress," on their way to full adult development and human autonomy. Once they reach that state of adult development and autonomy, they should be judged and treated in the same way that we currently judge and treat adults, as autonomous individuals with a fully developed, internal "rational capacity" that is held in reserve to guide decision making. When adults with "rational capacity" break the law, it is presumed that they consciously choose to do so and, therefore, deserve retributive punishment as payback for their moral failing.[55] The problem with this characterization of adult criminal behavior is that it is inconsistent with the weight of the empirical research conducted over the past century on the causes and consequences of criminal behavior. Although this evil-doer theory of crime is quite consistent with folk psychology, common sense, and legal presumptions about human behavior, it is not consistent with the weight of accumulating behavioral science research.[56] Most major proponents of retribution as the primary justification for criminal punishment see no problem with this characterization; in fact, many from outside the "retribution" community believe that these foundational legal presumptions

55. *See generally* Stephen J. Morse, *Rationality and Responsibility*, 74 S. CAL. L. REV. 251 (2000).

56. *See Injustice of Retribution*, *supra* note 37.

need to be vigorously defended against scientific incursions. Steven Morse, a major proponent of retribution and the legal status quo, has suggested that legal doctrine is and should be grounded in folk psychology conceptions of human behavior.[57] The suggestion that folk psychology conceptions would be challenged or replaced in the law by conceptions anchored in scientific research seems to have triggered panic among many in the legal community. However, as I hope to make clear, just as we would not want to use folk physics to guide the launch of a spacecraft to the moon, we should not rely on folk psychology to guide legal decision making when vital issues of life and liberty are at stake. Folk physics is good enough to help us (most of the time) drive our car from home to work without crashing into another car. Likewise, folk psychology is very helpful (most of the time) in guiding our interactions with others and making informed predictions about how others might behave toward us. However, when scientific evidence challenges and contradicts those folk psychology conceptions, justice demands that those biased or inaccurate conceptions be replaced and acted upon accordingly.

The main point of this section is to argue that by embedding juvenile justice in the retributive foundations of our legal system, we are legitimizing aspects of our criminal justice system that are becoming increasingly indefensible—scientifically, legally, and morally, as we learn more and more about the biopsychosocial bases of human behavior.

D. Fails to Fairly Address Adults Who Have Social Cognitive Deficits Similar to Typical Adolescents

As noted above, most of the developmental differences research on which the Supreme Court based its trilogy of decisions either compared adolescents at various ages or compared adolescents to normal adults. We know very little about the social cognitive functioning, susceptibility to outside influences, and degree of personal identity consolidation among typical adult offenders. Moreover, we know very little about how changes in context might influence these factors in adults. For example, when adult offenders receive interventions comparable to comprehensive, multisystemic interventions that have been shown to be highly effective with youth, do the adults exhibit changes and improvements in their social cognitive

57. Stephen J. Morse, *Determinism and the Death of Folk Psychology: Two Challenges to Responsibility from Neuroscience*, 9 MINN. J.L. SCI. & TECH. 1(2008).

functioning, their ability to resist outside influences, or the nature and degree of "crystallization" of their so-called character? Do typical adult offenders differ from typical adolescents on these variables? Is there a subset of individual offenders who are indistinguishable from typical adolescents on these factors? Do we really have a scientifically based justification for treating adult offenders differently than diminished retribution advocates suggest we should treat adolescents? What is the legal basis and justification for treating them differently? Do the current legal justifications withstand more modern conceptions of human development as an ongoing and dynamic process subject to modification and change throughout the life span?

Again, adult offenders who have the same level of social cognitive skills or susceptibility to outside influences as the typical adolescent are only one of the groups of potential defendants who will have a scientific basis to argue for mitigation or excuse within the existing retributive framework. This outcome would not be so bad if the only effect was to decrease the number of offenders subjected to overly harsh punishment in our criminal justice system. However, this would serve neither most offenders nor the public interest. Why is this? Because we would have no retributive basis for holding such offenders accountable. We would merely reduce their sentences or find them not culpable under principles of retribution. However, as we shall see, there is no need to panic or to use folk psychology blinders or pretext to address this issue—we merely need to turn to more consequentialist justifications for holding both adolescents and adults accountable for criminal behavior.

E. Social and Economic Costs of Scratching the Retributive Itch

The question of whether to continue grounding our criminal justice system in retributive justifications for punishment has more than scientific and legal implications; vital social and economic interests are at stake as well. We continue to incarcerate a greater percentage of our population than any other industrialized nation, and a disproportionate number of those incarcerated are racial minorities. With respect to juveniles, those in the deep end of the criminal justice system, including those in institutional settings or serving long prison sentences, place a very significant financial burden on state and local budgets. According to the Justice Policy Institute, states spend billions of dollars a year incarcerating nonviolent offenders who

could be treated in their local communities.[58] Principles of retribution suggest that the consequences of punishment are largely irrelevant and incidental to ensuring the delivery of "just desert." However, that type of "desert" can be more costly than a gourmet banquet—and unnecessarily so, if one shifts the focus of our criminal justice system away from a backward-looking retributive model and toward a more forward-looking preventive and consequentialist regime.

IV. TOWARD SCIENTIFIC AND LEGAL MATURITY

Although legal scholars, including some who also have scientific credentials, have been working furiously to ward off challenges to fundamental legal doctrine from science, and the neurosciences in particular,[59] there is a growing consensus in the scientific community that folk psychology conceptions that underlie the legal system do not withstand theoretical or empirical scrutiny.[60] People are not autonomous individuals who consciously weigh inside their head the pros and cons of different courses of action and then freely choose whether to break the law. Human behavior is much more complex.[61] Contextual factors such as family, peer, neighborhood, and cultural factors guide and shape human behavior.[62] Very often, unconscious and emotional factors outside the person's awareness, rather than conscious choice, actuate human behavior. We are learning more and more about genetic influences on human behavior. With respect to children and adolescents, we are only beginning to unravel the combined, interactive, and additive gene-environment interaction effects that account for an increasing share of our understanding of human behavior.[63] As our

58. JUSTICE POLICY INSTITUTE, THE COST OF CONFINEMENT: WHY GOOD JUVENILE JUSTICE POLICIES MAKE GOOD FISCAL SENSE (2009).

59. *See, e.g.*, Nita A. Farahany, *A Neurological Foundation for Freedom*, 2011 STAN. TECH. L. REV. 11 (2011); Morse, *supra* note 57.

60. *See* Susan Pockett, *Does Consciousness Cause Behavior?*, 11 J. CONSCIOUSNESS STUD. 23 (2004).

61. *Injustice of Retribution*, *supra* note 37.

62. BRONFENBRENNER, *supra* note 43; Charles M. Borduin et al., *Multisystemic Treatment of Serious Juvenile Offenders: Long-Term Prevention of Criminality and Violence*, 63 J. CONSULTING & CLINICAL PSYCHOL. 569 (1995).

63. *See, e.g.*, Sara R. Jaffee et al., *Nature x Nurture: Genetic Vulnerabilities Interact with Physical Maltreatment to Promote Conduct Problems*, 17 DEV. & PSYCHOPATHOLOGY 67 (2005).

knowledge at the intersection of biology and environment multiplies, the fictional homunculus at the core of retribution and the evildoer theory of crime shrinks and melts away like the Wicked Witch of the West.

A. Contextual Influences on Human Behavior over the Life Span

During the course of the twentieth century, psychological models of human behavior evolved from those focused primarily on internal (intrapsychic) explanations to more ecological models that focused on the relationship between the individual and various aspects of their life context, ranging from family, to peer, to neighborhood, to community, to broader cultural influences.[64] This more contextual, ecological model of human behavior proved useful not only by increasing our level of understanding of the interrelated causal influences on human behavior, but it also provided clinical and community practitioners with tools or levers that they could use to help change behavior. In fact, systematic research with juvenile offenders grounded in ecological models of human development and behavior change have revolutionized thinking and expectations about prospects for rehabilitating offenders and reducing rates of recidivism—we have moved from an era characterized by the mantra that "nothing works" to pragmatic optimism about the ability of state-of-the art interventions to reduce recidivism rates from their usual level of around 70 percent to around 20 percent when interventions adhere to evidence-based practices and standards.[65]

B. Toward Biopsychosocial Models of Human Behavior and Development

The transition to the twenty-first century has seen an acceleration of the trend toward more comprehensive, multisystemic models of human behavior that incorporate a biological level of analysis into psychosocial models of human behavior. This biopsychosocial perspective is both ecological, reflecting multiple, nested levels of analysis, and dynamic in that the relationship between biological and psychosocial variables is bidirectional—that is, biological differences between distinct groups of individuals may in

64. *See* Rudolf H. Moos, *Conceptualizations of Human Environments*, 28 AM. PSYCHOLOGIST 652 (1973).

65. Borduin et al., *supra* note 62, at 573.

part be the outcome of prior or contemporaneous environmental experiences. For example, the dysregulation of affect among aggressive adolescent boys in comparison to their nonaggressive peers may in part be the result of prior and ongoing experiences of maltreatment. As we learn more about the additive and interactive effects of both biological and environmental influences on human behavior generally and deviant behavior more specifically, our need to rely on decontextualized, intrapsychic explanations grounded in notions of "conscious will" and "evil intent" diminishes and virtually vanishes as we become more precise in or biopsychosocial modeling.

Another important consideration of biopsychosocial models of human behavior is their developmental implications. Unlike early twentieth century models that conceptualized critical aspects of human development to crystalize in childhood, or later models that considered identity development to be fixed by adolescence, more recent models consider human development to be more flexible, context dependent, and a process that continues to unfold and progress across the entire life span.

C. Implications for Retribution as a Justification for Punishment of Juveniles and Adults

As argued above, retribution is based on a commonsense, folk psychology model of human behavior that does not withstand scrutiny. Retributive justice is based on the presumption that people have the individual capacity to freely choose their behavior, and that when they break the law, they could have chosen to do otherwise and deserve to be punished in proportion to the harm that they caused. The law, and the retributive system it reflects, assumes that almost all behavior for which people are held criminally responsible is the result of a choice to do wrong. It is this ability to choose whether or not to obey the law that serves as the justification for retributive punishment. As scientific research on environmental and biological influences on behavior progresses, more and more of the variance in illegal behavior is accounted for by these interacting forces. As the amount of variance accounted for increases from 15–25 to 75–95 percent and above, little room is left for the fictional legal homunculus.

As noted above, the scientifically sophisticated legal scholars who are alarmed by these trends have tried to preserve the legal status quo, and retribution in particular, by making conclusory arguments suggesting that retribution requires only a very shallow sense of conscious influence over

one's behavior. Some of these arguments seem to morph notions of mens rea into the actus reas requirement; that is, as long as the person's criminal behavior was voluntary, and they knew or should have known it was illegal, they are considered legally culpable.[66] Others have suggested that all that is required to satisfy mens rea requirements for criminal responsibility from a retributive perspective is that the person has the "rational capacity" to decide whether or not to obey the law.[67] Following both of these lines of reasoning begs the question, is this the kind of robust individual autonomy that animates principles of retributive justice? Are we really saying that someone should be held accountable for murder rather than, say, negligent homicide, if they are judged to have had the unexercised "rational capacity" to do otherwise at the time of taking someone's life? What both of these dilutions of the mens rea requirement do is fix full legal responsibility for criminal behavior based on an objective standard of mens rea that looks very much like negligence.

The apparent doctrinal shift toward a more objective standard for mens rea is by driven by practical necessity brought on by the increasing explanatory power of factors other than free choice and evil intent as the drivers of human behavior, both criminal and law abiding. Although this poses serious challenges to retribution as a justification for punishment, it does not mean that the legal system is left without principled justification for holding people accountable for criminal behavior. Although the notion of "rational capacity" is fraught with conceptual and empirical problems, the idea that an objective, negligence standard can and should serve as the basis for criminal liability has some promise. However, to the extent that a subjective guilty mind is not a requirement for liability, a deontological version of retribution is critically undermined. For example, does it really comport with principles of just desert to hold someone accountable for murder if they did not know, but should have known, that their behavior would take someone else's life? Would the death penalty or life in prison without parole be justified on these grounds under principles of retributive justice? Anyone not desperately trying to stretch the bounds of retributive justice would have difficulty embracing this outcome.

So where does that leave us? I believe that society has a right to establish rules of conduct and that people should be held accountable for disobeying

66. *See generally* Farahany, *supra* note 59.

67. *See, e.g.*, Morse, *supra* note 55.

those rules. I also believe that the criteria for holding people accountable should be based on a combination of the traditional actus resus requirement coupled with an objective standard for legal responsibility. Exactly where to set that standard should be a legislative policy issue. However, divining past subjective mental state should not be part of the legal standard for at least two reasons. First, empirical research increasingly indicates that conscious will as a driver of human behavior is illusory. Second, even if subjective, consciously willed mental states do actuate criminal conduct, as current legal doctrine presumes, the process of making retrospective judgments about what a defendant was or was not thinking at the time of the offense is fraught with bias and inaccuracy. However, this is not troubling from a consequentialist standpoint. Consequentialism is aimed not at moral judgment and punitive payback but at recidivism reduction, crime prevention, and prospective behavior change. That does not mean that punishment is irrelevant to this regime, but the goal of punishment is quite different from the goal of retribution. The goal of punishment is not payback but prospective behavior change toward compliance with the law. That means that if punishment is not seen as an end in itself (just desert), but as a means to an end (prospective compliance with the law), then it becomes one of several available instruments of behavior change. Moreover, the particular instrument of behavior change chosen should be driven primarily by considerations of efficacy and effectiveness. Although no serious behavioral scientists have studied the evildoer theory of crime over the past century, fortunately we do have over a hundred years of systematic research on how best to encourage people to change their behavior.

D. The Science of Behavior Change

One of the main contributing factors to the shift in juvenile justice back toward a more punitive response to juvenile crime was the conclusion among behavioral scientists that with respect to the rehabilitation of juveniles, "nothing works." In fact, this was a fairly accurate characterization of the state of the art at the time Martinson provided his assessment of the field.[68] One of the reasons rehabilitation efforts met with limited if any success during the first two-thirds of the twentieth century is that there

68. Robert Martinson, *What works? Questions and answers about prison reform*, 35 PUBLIC INTEREST 22–54 (1974).

were parallel tracks in the field of psychology—one for research aimed at helping us understand the nature, causes, and consequences of deviant behavior, and the other aimed at treatment. The treatment track was grounded largely in principles of psychodynamics and intrapsychic explanations for deviant behavior, and the more research-oriented track was grounded and guided by the early behavioral psychology movement. As the treatment community began to switch tracks and guide interventions first with behavioral methods, then with cognitive behavior methods, and ultimately with multisystemic models grounded in cognitive-behavioral principles, treatment efficacy and effectiveness gradually began to improve. As noted above, state-of-the-art multisystemic cognitive behavioral interventions have been shown to significantly reduce previously intractable rates of recidivism, even among very serious offenders.[69]

One of the key ingredients of successful interventions aimed at reducing conflict and aggressive behavior goes to the heart of why retribution as a response to crime is so counterproductive: that a key ingredient to reducing aggression is the reduction of counterproductive blaming.[70] Blaming often fuels anger arousal and increases the likelihood of aggressive responding, followed by retaliatory aggression. Moreover, blame is often fueled by an incomplete or inaccurate perception of the intention of others and the situational influences on them.[71] Moving from backward-looking blame toward forward-looking problem solving is a key ingredient of mental health, improved social competence, and I believe, a more fair and effective criminal justice system.

V. A CONSEQUENTIALIST APPROACH TO JUVENILE JUSTICE AND BEYOND

As the legal fictional homunculus shrinks in response to inevitable advances in the behavioral and biological sciences, the moral and legal basis for retribution as the primary justification for punishment of criminal behavior

69. Borduin et al., *supra* note 62.

70. *See generally* Mark Fondacaro & Kenneth Heller, *Attributional Style in Aggressive Adolescent Boys*, 18 J. ABNORMAL CHILD PSYCHOL. 75–89 (1990).

71. *See generally* Kenneth A. Dodge, *Translational Science in Action: Hostile Attributional Style and the Development of Aggressive Behavior Problems*, 18 DEV. & PSYCHOPATHOLOGY 791 (2006).

is undermined as well. Although gallant efforts are being waged by advocates for the status quo to slim down the nature, scope, and depth of mens rea required to justify retributive sanctions, these efforts are unlikely to prevent principled legal reform over time. The policy emphasis will necessarily shift toward more consequentialist justifications for legal sanctions rooted in biopsychosocial models of human behavior, empirically established limiting principles of government intervention, and empirically based rules to guide criminal law and procedure aimed at promoting crime reduction and the legitimacy of the consequentialist regime.

A. A Preventive Risk and Resource Management Model

The inevitable shift toward a more consequentialist approach to both juvenile and adult criminal justice begs the question of what such a system might look like. As Christopher Slobogin and I have noted previously, there is more procedural flexibility with the juvenile justice system because due process in that system is grounded primarily in the due process clause of the Fourteenth Amendment and principles of fundamental fairness rather than the explicit text of the Fifth and Sixth Amendments.[72] However, these procedural differences are most pronounced at the adjudicatory or culpability phase of the process; once legal responsibility is established, any legally required procedural distinctions between the juvenile and adult systems are substantially if not completely diminished.

In the juvenile realm, a preventive risk and resource management model of juvenile justice would be guided by the following principles. First, it would be forward looking and aimed at recidivism reduction rather than backward looking and aimed at retributive punishment. Second, the system would draw on legal expertise and judicial authority to determine legal culpability and to provide graduated responses and incentives to encourage offender compliance with dispositional requirements. The limiting principle guiding intervention would be the least restrictive intervention capable of promoting compliance and reducing recidivism risk to a low level based on actuarial risk assessment measures. The interaction and relationship between the judicial authority and juvenile offender would be guided by principles of procedural justice to enhance compliance. Moreover, the maintenance of a role for a judicial officer with authority to sanction noncompliance would

72. Slobogin & Fondacaro, *supra* note 41, at 95–121.

serve to enhance public acceptance of a more consequentialist approach to juvenile justice. Third, the judicial authority would be complemented by an interdisciplinary group of professionals with expertise in human development, clinical and community intervention, education, mental and physical health, program evaluation, and organizational management. Decision making at the individual, program, system, and policy levels would be evidence-based and draw on the expertise of this interdisciplinary risk and resource management team. Finally, the system would be ecologically self-aware and establish relations with other relevant youth-socializing institutions such as schools, the health care, mental health care, and child welfare systems, and the adult criminal justice system.

With the exception of additional constitutionally required procedural requirements, particularly at the culpability phase of the trial, the adult system could adopt a framework similar to the juvenile system and adapt intervention strategies to the needs of adults, again grounded on an evidence-based approach, with feedback from ongoing research.

B. Anticipating and Preventing Public and Legal Backsliding

Principles of retribution stand the test of time if not the scrutiny of science. Retributive urges are deeply ingrained both biologically and culturally. One of the main challenges to evidence-based legal reform grounded in non-retributive responses to criminal behavior is that people tend to have strong emotional reactions to heinous crimes and regress to demands for harsh punishment. The first time that a seventeen-year-old offender who is in a community-based intervention program for violent offenders sexually assaults the young child who lives next door, the public outcry for harsh punishment and potential backlash against the entire consequentialist regime may threaten to bring down the evidence-based legal reforms proposed. One built-in mechanism to dampen the backlash is the maintenance of judicial authority to provide graduated sanctions or instrumental punishments aimed at encouraging future compliance. Such punitive responses are likely to scratch some of the public retributive itch, notwithstanding the fact the true purpose of such sanctions is to change future behavior rather than as pay-back for past behavior.

A second option to proactively stem the tide of public backlash is to address the issue legislatively by adopting a precommitment strategy by which the legislature proactively commits to periodically reviewing

legislation after an established time period through sunset provisions set at a long enough time interval to let the public emotions settle and memory fade so that reflexive, irrational, and regressive policies are not reinstated during a moral panic.[73]

Overall, the suggested reforms are aimed at taking full advantage of advances at the interface of science and law as both fields develop and mature over time.

CONCLUSION

The legal, developmental science, and child advocacy communities have begun to unite in their efforts to reform what many have come to believe is an overly harsh juvenile justice system. They have united around a diminished culpability model of juvenile justice, anchored in an amalgam of research and rhetoric about the legal significance of differences between juveniles and adults in their levels of psychosocial and neurobiological development. This model of diminished culpability calling for diminished retribution in response to juvenile crime has even been embraced by the current Supreme Court—hardly an institution that many would characterize as progressive. To all of us who are committed to a system of justice for juveniles that is truly just, the fact that we no longer execute minors or commit them to mandatory life sentences that ensure that they will never lead productive or meaningful lives reflects a truly significant step forward.

This progress toward more humane treatment of serious juvenile offenders has been fueled mainly by the interdisciplinary collaboration of developmental scientists and juvenile and family law scholars. Given the primary focus of these respective disciplines, it is not too surprising that their collaborative vision for reform has focused on a diminished culpability model anchored in developmental differences research. After all, the primary role of the developmental scientist, and the developmental psychologist in particular, is to take the individual as the unit of analysis and to identify individual characteristics that develop or change over time, or in the case of children and adolescents, "mature" over time. Although the scientific enterprise is viewed as one grounded primarily in principles of

73. Elizabeth S. Scott & Laurence Steinberg, Rethinking Juvenile Justice 265–85 (2008).

truth seeking and objectivity, the social value of the particular developmental characteristic or developmental difference identified is clearly magnified if it has legal or policy significance. Legal scholars, on the other hand, are less bound in their arguments to empirical evidence or principles of objectivity and indeed are trained to make the best use of the available evidence to persuasively argue their position. In fact, when representing individual clients, they are duty-bound to craft the available evidence into an argument that zealously represents their client's interests.

The diminished culpability model of juvenile justice that is currently in vogue is in part the foreseeable outgrowth of the collaboration between developmental behavioral scientists and child advocacy–oriented legal scholars. This well-intended collaboration has helped to formulate a model of juvenile justice that has put an end in the United States to the most inhumane treatment of serious juvenile offenders. However, the adoption and advocacy for a diminished culpability model has had some unintended consequences that call for the rethinking of the legal and scientific implications of developmental differences research. In the legal realm, the diminished culpability model has led to the embrace of retribution as a legitimate and dominant justification for punishment. Although retributive punishment meted out to juveniles is calibrated downward based on judgments of developmental immaturity and diminished culpability, adults eighteen years of age or older receive retributive punishment as usual. In effect, reliance on developmental differences between juveniles and adults as the basis for mitigating punishment, while adopting retribution as a guiding and limiting principle, legitimizes and solidifies the way we currently view and treat adult offenders: as autonomous individuals with solidified bad characters who consciously choose to break the law and deserve retributive punishment. This state of affairs may not be overly troubling to legal advocates who are accustomed to focusing on one concrete problem at a time and able to draw, if they wish, on their eclectic use of scientific evidence to argue for legal reforms of the adult criminal justice system at a later date. However, for legal scholars with a broader vision or mission of reform, the precedential impact of the Supreme Court's embrace of the evil-doer theory of crime underlying retributive justifications for punishment, wrapped in convincing snippets of scientific knowledge, is potentially more troubling.

The conflicts run even deeper for the developmental scientists whose empirical research is being planted in models of human behavior, theories

of crime, and justifications for punishment that are increasingly out of step with modern advances in the behavioral, neurobiological, and clinical sciences. To date, many in the scientific community who have ventured into the legal realm have opted to ignore or tune out legal discourse about human behavior that is inconsistent with or has been discredited by empirical scientific research. As scientific advances are made toward understanding the complex interplay of biological, psychological, and social factors that contribute to human behavior, it will grow increasingly difficult to remain silent while maintaining credibility in the scientific community. Moreover, in the interest of maintaining the credibility of science itself in the eyes of the law, behavioral scientists who enter the legal and policy arenas will need to recognize and address when their colleagues outside the scientific community are understandably and perhaps unwittingly stretching their interpretations of data to make arguments about human behavior that lack scientific credibility.

In the broader realm of juvenile justice and criminal law reform, one important way to move things forward is to include more relevant voices in the discussion. In addition to the developmental psychologists and juvenile law scholars who have made some of the most important contributions to juvenile justice reform over the past decade, we need to include more of the voices and research findings of clinical and community psychologists whose work focuses on intervention and prevention research. These are the applied behavioral scientists who have been on the forefront of developing the individual and community-based interventions that are effective in rehabilitating juvenile offenders and are beginning to show promise with even some of our most serious adult offenders. We also need to include more criminal law scholars in the discussion to ensure that well-intentioned reforms of the juvenile justice system do not have unintended consequences for the many adults in the American criminal justice system, which incarcerates a greater proportion of its citizens than any other developed nation. Finally, we need more input from economists who can help us monetize just how much we are paying to scratch our collective retributive itch to make those juveniles and adults who break the law pay for their crimes with the unidimensional currency of retributive punishment.