

Nos. 08-7412, 08-7621

IN THE
Supreme Court of the United States

TERRANCE JAMAR GRAHAM,
Petitioner,

v.

STATE OF FLORIDA,
Respondent.

JOE HARRIS SULLIVAN,
Petitioner,

v.

STATE OF FLORIDA,
Respondent.

ON WRIT OF CERTIORARI TO THE
FLORIDA DISTRICT COURT OF APPEAL, FIRST DISTRICT

**BRIEF FOR THE AMERICAN PSYCHOLOGICAL
ASSOCIATION, AMERICAN PSYCHIATRIC ASSOCIATION,
NATIONAL ASSOCIATION OF SOCIAL WORKERS, AND
MENTAL HEALTH AMERICA AS AMICI CURIAE
SUPPORTING PETITIONERS**

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TABLE OF CONTENTS

	Page
TABLE OF AUTHORITIES	iii
INTEREST OF AMICI CURIAE.....	1
INTRODUCTION AND SUMMARY OF ARGUMENT.....	3
ARGUMENT.....	6
I. RESEARCH IN DEVELOPMENTAL PSY- CHOLOGY AND NEUROSCIENCE DOCU- MENTS JUVENILES' GREATER IMMATURETY, VULNERABILITY, AND CHANGEABILITY	6
A. Developmental Psychology And Social Science Research Confirms That Juve- niles Are Less Mature, More Vulner- able, And More Changeable Than Adults.....	7
1. Juveniles have a lesser capacity for mature judgment	7
2. Juveniles are more vulnerable to negative external influences	15
3. Juveniles' unformed identity makes it less likely that their offenses evinced a fixed bad character and more likely that they will reform.....	19
B. Juveniles' Psychosocial Immaturity Is Consistent With Emerging Research Regarding Brain Development.....	22

TABLE OF CONTENTS—Continued

	Page
II. SENTENCING THE JUVENILE OFFENDERS IN THESE CASES TO DIE IN PRISON WITH NO OPPORTUNITY TO DEMONSTRATE RE- FORM IS A DISPROPORTIONATE PUNISH- MENT.....	28
CONCLUSION	34

TABLE OF AUTHORITIES

CASES

	Page(s)
<i>Atkins v. Virginia</i> , 536 U.S. 304 (2002).....	31
<i>Eddings v. Oklahoma</i> , 455 U.S. 104 (1982)	18, 28, 31
<i>Ewing v. California</i> , 538 U.S. 11 (2003).....	29, 30
<i>Harmelin v. Michigan</i> , 501 U.S. 957 (1991)	28, 29
<i>Hodgson v. Minnesota</i> , 497 U.S. 417 (1990)	13
<i>Johnson v. Texas</i> , 509 U.S. 350 (1993).....	7
<i>Lockett v. Ohio</i> , 438 U.S. 586 (1978).....	29
<i>Lockyer v. Andrade</i> , 538 U.S. 63 (2003)	29, 30
<i>Morissette v. United States</i> , 342 U.S. 246 (1952)	31
<i>Roper v. Simmons</i> , 543 U.S. 551 (2005)	<i>passim</i>
<i>Solem v. Helm</i> , 463 U.S. 277 (1983)	29
<i>Tennard v. Dretke</i> , 542 U.S. 274 (2004).....	13
<i>Thompson v. Oklahoma</i> , 487 U.S. 815 (1988).....	3, 28, 30

OTHER AUTHORITIES

American Psychiatric Association, <i>Diagnostic and Statistical Manual of Mental Disorders</i> (4th ed. rev. 2000).....	21
Arnett, Jeffrey, <i>Reckless Behavior in Adolescence: A Developmental Perspective</i> , 12 <i>Developmental Rev.</i> 339 (1992).....	<i>passim</i>
Bechara, Antoine, et al., <i>Characterization of the Decision-Making Deficit of Patients with Ventromedial Prefrontal Cortex Lesions</i> , 123 <i>Brain</i> 2189 (2000).....	24

TABLE OF AUTHORITIES—Continued

	Page(s)
Bechara, Antoine, et al., <i>Dissociation of Working Memory from Decision Making Within the Human Prefrontal Cortex</i> , 18 <i>J. Neurosci.</i> 428 (1998).....	24
Berndt, Thomas J., <i>Developmental Changes in Conformity to Peers and Parents</i> , 15 <i>Developmental Psychol.</i> 608 (1979).....	16
Casey, B.J., et al., <i>Structural and Functional Brain Development and its Relation to Cognitive Development</i> , 54 <i>Biological Psychol.</i> 241 (2000).....	25, 26, 27
Cauffman, Elizabeth, & Laurence Steinberg, <i>(Im)Maturity of Judgment in Adolescence: Why Adolescents May Be Less Culpable Than Adults</i> , 18 <i>Behav. Sci. & L.</i> 741 (2000).....	9, 12, 13, 14, 15
Cauffman, Elizabeth, et al., <i>Age Differences in Affective Decision Making as Indexed by Performance on the Iowa Gambling Test</i> , <i>Developmental Psychol.</i> (forthcoming 2009).....	11
Damasio, Antonio R. & Steven W. Anderson, <i>The Frontal Lobes, in Clinical Neuropsychology</i> 404 (Kenneth M. Heilman & Edward Valenstein eds., 4th ed. 2003).....	25
DOJ Statistical Briefing Book, available at www.ojjdp.ncjrs.org/ojstatbb/crime/qa05301.asp?qaDate=20040801 and www.ojjdp.ncjrs.org/ojstatbb/crime/qa05305.asp?qaDate=20040801 (last visited July 20, 2009).....	8

TABLE OF AUTHORITIES—Continued

	Page(s)
Edens, John F., et al., <i>Assessment of “Juvenile Psychopathy” and Its Association with Violence: A Critical Review</i> , 19 <i>Behav. Sci. & L.</i> 53 (2001)	21
Erickson, Kristan, et al., <i>A Social Process Model of Adolescent Deviance: Combining Social Control and Differential Association Perspectives</i> , 29 <i>J. Youth & Adolescence</i> 395 (2000)	16
Eshel, Neir, et al., <i>Neural Substrates of Choice Selection in Adults and Adolescents: Development of the Ventrolateral Prefrontal and Anterior Cingulate Cortices</i> , 45 <i>Neuropsychologia</i> 1270 (2007).....	23, 26
Fagan, Jeffrey, <i>Contexts of Choice by Adolescents in Criminal Events, in Youth on Trial</i> 371 (Thomas Grisso & Robert G. Schwartz eds., 2000).....	15, 16
Galvan, Adriana, et al., <i>Risk Taking and the Adolescent Brain: Who is at Risk?</i> , 10 <i>Developmental Sci.</i> F8 (2007)	9
Gardner, Margo & Laurence Steinberg, <i>Peer Influence on Risk Taking, Risk Preference, and Risky Decision Making in Adolescence and Adulthood: An Experimental Study</i> , 41 <i>Developmental Psychol.</i> 625 (2005)	16, 17

TABLE OF AUTHORITIES—Continued

	Page(s)
Giedd, Jay N., et al., <i>Brain Development During Childhood and Adolescence: A Longitudinal MRI Study</i> , 2 <i>Nature Neurosci.</i> 861 (1999)	24, 27
Gogtay, Nitin, et al., <i>Dynamic Mapping of Human Cortical Development During Childhood Through Early Adulthood</i> , 101 <i>Proc. Nat'l Acad. Sci.</i> 8174 (2004).....	25, 26
Goldberg, Elkhonon, <i>The Executive Brain: Frontal Lobes and the Civilized Mind</i> (2001)	25, 26, 27
Grisso, Thomas, <i>Double Jeopardy: Adolescent Offenders with Mental Disorders</i> (2005).....	21
Grisso, Thomas, et al., <i>Juveniles' Competence to Stand Trial</i> , 27 <i>Law & Hum. Behav.</i> 333 (2003)	14
Halpern-Felsher, Bonnie L. & Elizabeth Cauffman, <i>Costs and Benefits of a Decision: Decision-Making Competence in Adolescents and Adults</i> , 22 <i>J. Applied Developmental Psychol.</i> 257 (2001)	10, 11, 14, 15
Huttenlocher, Peter R., <i>Neural Plasticity: The Effects of Environment on the Development of the Cerebral Cortex</i> (2002).....	26, 27
Jensen, Eric L. & Linda K. Metsger, <i>A Test of the Deterrent Effect of Legislative Waiver on Violent Juvenile Crime</i> , 40 <i>Crime & Delinq.</i> 96 (1994)	32

TABLE OF AUTHORITIES—Continued

	Page(s)
Kazdin, Alan E., <i>Adolescent Development, Mental Disorders, and Decision Making of Delinquent Youths</i> , in <i>Youth on Trial</i> 33 (Thomas Grisso & Robert G. Schwartz eds., 2000)	15
Keating, Daniel P., <i>Cognitive and Brain Development</i> , in <i>Handbook of Adolescent Psychology</i> 45 (Richard M. Lerner & Laurence Steinberg eds., 2004).....	14
Kwong, Kenneth K., et al., <i>Dynamic Magnetic Resonance Imaging of Human Brain Activity During Primary Sensory Stimulation</i> , 89 <i>Proc. Nat'l Acad. Sci.</i> 5675 (1992)	24
Leshem, Rotem & Joseph Glicksohn, <i>The Construct of Impulsivity Revisited</i> , 43 <i>Personality & Individual Differences</i> 681 (2007)	9
Lynam, Donald R., <i>Longitudinal Evidence That Psychopathy Scores in Early Adolescence Predict Adult Psychopathy</i> , 116 <i>J. Abnormal Psychol.</i> 155 (2007).....	22
McCord, Joan & Kevin P. Conway, <i>Co-Offending and Patterns of Juvenile Crime</i> (Dec. 2005)	18
Millstein, Susan G. & Bonnie L. Halpern-Felsher, <i>Perceptions of Risk and Vulnerability</i> , in <i>Adolescent Risk and Vulnerability</i> 15 (Baruch Fischhoff et al. eds., 2001)	10

TABLE OF AUTHORITIES—Continued

	Page(s)
Modecki, Kathryn, <i>Addressing Gaps in the Maturity of Judgment Literature: Age Differences in Delinquency</i> , 32 <i>Law & Hum. Behav.</i> 78 (2008).....	23
Moffitt, Terrie E., <i>Natural Histories of Delinquency</i> , in <i>Cross-National Longitudinal Research on Human Development and Criminal Behavior</i> 3 (Elmar G.M. Weitekamp & Hans-Jürgen Kerner eds., 1994).....	8
Moffitt, Terrie E., <i>Adolescent-Limited and Life-Course-Persistent Antisocial Behavior: A Developmental Taxonomy</i> , 100 <i>Psychol. Rev.</i> 674 (1993).....	8, 17, 20
Mulvey, Edward P. & Elizabeth Cauffman, <i>The Inherent Limits of Predicting School Violence</i> , 56 <i>Am. Psychologist</i> 797 (2001)	21
Nurmi, Jari-Erik, <i>How Do Adolescents See Their Future? A Review of the Development of Future Orientation and Planning</i> , 11 <i>Developmental Rev.</i> 1 (1991).....	12
Paus, Tomáš, <i>Brain Development</i> , in <i>Handbook of Adolescent Psychology</i> 95 (Richard M. Lerner & Laurence Steinberg eds., 2009)	24
Reiss, Allan L., <i>et al.</i> , <i>Brain Development, Gender and IQ in Children: A Volumetric Imaging Study</i> , 119 <i>Brain</i> 1763 (1996)	26, 27
Scott, Elizabeth S. & Laurence Steinberg, <i>Rethinking Juvenile Justice</i> (2008).....	16, 17, 18, 19

TABLE OF AUTHORITIES—Continued

	Page(s)
Scott, Elizabeth S., et al., <i>Evaluating Adolescent Decision Making in Legal Contexts</i> , 19 <i>Law & Hum. Behav.</i> 221 (1995).....	13
Singer, Simon I. & David McDowall, <i>Criminalizing Delinquency: The Deterrent Effect of the New York Juvenile Offender Law</i> , 22 <i>Law & Soc’y Rev.</i> 521 (1988)	32
Snyder, Howard N. & Melissa Sickmund, National Center for Juvenile Justice, <i>Juvenile Offenders and Victims: 1999 National Report</i> (1999).....	18
Sowell, Elizabeth R., et al., <i>In Vivo Evidence for Post-Adolescent Brain Maturation in Frontal and Striatal Regions</i> , 2 <i>Nature Neurosci.</i> 859 (1999)	25
Sowell, Elizabeth R., et al., <i>Mapping Continued Brain Growth and Gray Matter Density Reduction in Dorsal Frontal Cortex: Inverse Relationships During Postadolescent Brain Maturation</i> , 21 <i>J. Neurosci.</i> 8819 (2001)	26, 27
Spear, Linda, <i>The Behavioral Neuroscience of Adolescence</i> (forthcoming 2009).....	24, 25, 26
Steinberg, Laurence, <i>Adolescent Development and Juvenile Justice</i> , 5 <i>Ann. Rev. Clinical Psychol.</i> 47 (2008)	15
Steinberg, Laurence, <i>A Social Neuroscience Perspective on Adolescent Risk-Taking</i> , 28 <i>Developmental Rev.</i> 78 (2008).....	23, 26, 27

TABLE OF AUTHORITIES—Continued

	Page(s)
Steinberg, Laurence & Kathryn C. Monahan, <i>Age Differences in Resistance to Peer Influence</i> , 43 <i>Developmental Psychol.</i> 1531 (2007)	16
Steinberg, Laurence & Robert G. Schwartz, <i>Developmental Psychology Goes to Court, in Youth on Trial 9</i> (Thomas Grisso & Robert G. Schwartz eds., 2000)	19
Steinberg, Laurence & Elizabeth S. Scott, <i>Less Guilty by Reason of Adolescence: Developmental Immaturity, Diminished Responsibility, and the Juvenile Death Penalty</i> , 58 <i>Am. Psychologist</i> 1009 (2003)	10, 20, 31
Steinberg, Laurence & Susan B. Silverberg, <i>The Vicissitudes of Autonomy in Early Adolescence</i> , 57 <i>Child Dev.</i> 841 (1986)	16
Steinberg, Laurence, et al., <i>Age Differences in Future Orientation and Delay Discounting</i> , 80 <i>Child Dev.</i> 28 (2009)	12
Steinberg, Laurence, et al., <i>Age Differences in Sensation Seeking and Impulsivity as Indexed by Behavior and Self-Report: Evidence for a Dual Systems Model</i> , 44 <i>Developmental Psychol.</i> 1764 (2008)	9, 23
Steinberg, Laurence, et al., <i>Are Adolescents Less Mature Than Adults? Minors' Access to Abortion, the Juvenile Death Penalty, and the Alleged APA "Flip-Flop"</i> , <i>Am. Psychologist</i> (forthcoming 2009)	13, 14, 23

TABLE OF AUTHORITIES—Continued

	Page(s)
Waterman, Alan S., <i>Identity Development from Adolescence to Adulthood</i> , 18 <i>Developmental Psychol.</i> 341 (1982).....	19
Zimring, Franklin E., <i>Penal Proportionality for the Young Offender</i> , in <i>Youth on Trial</i> 271 (Thomas Grisso & Robert G. Schwartz eds., 2000)	10, 17, 18

INTEREST OF AMICI CURIAE¹

The American Psychological Association is a voluntary nonprofit scientific and professional organization with more than 152,000 members and affiliates. Since 1892, the Association has been the principal organization of psychologists in the United States. Its membership includes the vast majority of psychologists holding doctoral degrees from accredited universities in the United States.²

An integral part of the Association's mission is to increase and disseminate knowledge regarding human behavior and to advance psychology as a science, profession, and means of promoting health, education, and human welfare. Based on the well-developed body of research distinguishing the developmental characteristics of juveniles from those of adults, the Association has endorsed the policy reflected in the United Nations Convention on the Rights of the Child, which rejects life imprisonment without possibility of release for offenses committed by persons below 18 years of age.

¹ The parties have consented to the filing of this brief. Pursuant to Rule 37.3(a), letters consenting to the filing of this brief are on file with the Clerk of the Court. No counsel for a party authored this brief in whole or in part, and no person, other than the amici curiae, their members, or their counsel made any monetary contribution to the preparation or submission of this brief.

² Amici acknowledge the assistance of Laurence Steinberg, Ph.D., Thomas Grisso, Ph.D., Joel Dvoskin, Ph.D., and Brian Wilcox, Ph.D., in the preparation of this brief.

Research cited in this brief includes data from studies conducted using the scientific method. Such research typically is subject to critical review by outside experts, usually during the peer review process preceding publication in a scholarly journal.

The American Psychiatric Association, with roughly 35,000 members, is the principal association of physicians who specialize in psychiatry. It has an interest in this Court's understanding of the lessons of scientific study and professional experience as the Court applies constitutional principles to individuals who often are patients of the organization's members.

The National Association of Social Workers (NASW) is the largest association of professional social workers in the world, with 147,000 members and 56 chapters throughout the United States and abroad. NASW conducts research, publishes books and studies, promulgates professional criteria, and develops policy statements on relevant issues of importance. NASW opposes any legislation or prosecutorial discretion permitting children to be charged and punished under adult standards.

Mental Health America (MHA) (formerly known as the National Mental Health Association) is the oldest mental health advocacy and education organization in the United States. Its board and staff are comprised of professionals with expertise in the diagnosis and treatment of mental illnesses, persons with mental illnesses, and other persons with expertise in mental health public policy. MHA is interested in ensuring that determinations about criminal sanctions imposed upon juveniles reflect the scientific consensus regarding juveniles' ability to understand the nature and consequences of their acts, their response to deterrence, and the likelihood that they can be successfully treated or rehabilitated.

INTRODUCTION AND SUMMARY OF ARGUMENT

In *Roper v. Simmons*, this Court held that imposition of the death penalty on those under the age of 18 violated the basic precept that punishment should be proportionate to the culpability of the offender. 543 U.S. 551, 568-575 (2005). The Court explained that juveniles differ from adults in several ways that—without excusing their crimes—reduce juveniles’ culpability and undermine any justification for definitively ending their free lives: they lack adults’ capacity for mature judgment; they are more vulnerable to negative external influences; and their characters are not yet fully formed. *Id.* at 569-570. “The susceptibility of juveniles to immature and irresponsible behavior means ‘their irresponsible conduct is not as morally reprehensible as that of an adult.’” *Id.* at 570 (quoting *Thompson v. Oklahoma*, 487 U.S. 815, 835 (1988) (plurality opinion)). Juveniles’ vulnerability and lack of control over their surroundings “mean juveniles have a greater claim than adults to be forgiven for failing to escape negative influences in their ... environment.” *Id.* And “[t]he reality that juveniles still struggle to define their identity means it is less supportable to conclude that even a heinous crime committed by a juvenile is evidence of [an] irretrievably depraved character.” *Id.*

Research in developmental psychology and neuroscience—including the research presented to the Court in *Simmons* and additional research conducted since *Simmons* was decided—confirms and strengthens the conclusion that juveniles, as a group, differ from adults in the salient ways the Court identified. Juveniles—including older adolescents—are less able to restrain their impulses and exercise self-control; less capable than adults of considering alternative courses of action and maturely weighing risks and rewards; and less ori-

ented to the future and thus less capable of apprehending the consequences of their often-impulsive actions. For all those reasons, even once their general cognitive abilities approximate those of adults, juveniles are less capable than adults of mature judgment, and more likely to engage in risky, even criminal, behavior as a result of that immaturity. Research also demonstrates that “juveniles are more vulnerable or susceptible to negative influences and outside pressures, including peer pressure,” while at the same time they lack the freedom and autonomy that adults possess to escape such pressures. *Simmons*, 543 U.S. at 569. Finally, because juveniles are still in the process of forming a coherent identity, adolescent crime often reflects the “signature”—and transient—“qualities of youth” itself, *id.* at 570, rather than an entrenched bad character. Research has documented that the vast majority of youthful offenders will desist from criminal behavior in adulthood. And the malleability of adolescence means that there is no reliable way to identify the minority who will not.

Consistently with these recognized developmental characteristics of adolescents, recent neuroscience research shows that adolescent brains are not yet fully developed in regions related to higher-order executive functions such as impulse control, planning ahead, and risk evaluation. That anatomical immaturity is consonant with juveniles’ demonstrated psychosocial (that is, social and emotional) immaturity.

This Court held in *Simmons* that juveniles’ developmental characteristics mitigated their culpability and made death a disproportionate punishment for juvenile offenders. Those same characteristics support the conclusion that sentencing juveniles to die in prison for the crimes at issue here is likewise a disproportionate pun-

ishment. While this Court has recognized that imposition of the death penalty raises special concern and calls for special precautions in light of death's finality and irreversibility, it has also recognized that the Eighth Amendment forbids any punishment that is seriously disproportionate to the culpability of the offender. A sentence of life imprisonment without the possibility of parole, like a sentence of death, is in a very real sense final: it condemns the offender to die in prison without affording him any opportunity to demonstrate a reformed moral character that might warrant release. And that sentence is particularly harsh as applied to a juvenile, who will never experience free adulthood.

Yet juveniles' immaturity and vulnerability mean that "the case for retribution is not as strong with a minor as with an adult." *Simmons*, 543 U.S. at 571. Moreover, "the same characteristics that render juveniles less culpable than adults suggest as well that juveniles will be less susceptible to deterrence." *Id.* Finally, the imposition of life without parole for a crime committed as a juvenile—a sentence that rejects the possibility of redemption—cannot be reconciled with juveniles' unformed characters and the likelihood that they will change as adults. "From a moral standpoint it would be misguided to equate the failings of a minor with those of an adult, for a greater possibility exists that a minor's character deficiencies will be reformed." *Id.* at 570. In cases like those presented here, condemning an immature, vulnerable, and not-yet-fully-formed adolescent to die in prison is a constitutionally disproportionate punishment.

ARGUMENT**I. RESEARCH IN DEVELOPMENTAL PSYCHOLOGY AND NEUROSCIENCE DOCUMENTS JUVENILES' GREATER IMMATURITY, VULNERABILITY, AND CHANGEABILITY**

In *Simmons*, this Court concluded that developmental differences between juveniles, including 16- and 17-year-old adolescents, and adults both diminish juveniles' blameworthiness for their criminal acts and enhance their prospects of change and reform.³ Based on the scientific evidence presented by Simmons and his amici, the Court concluded that these differences between juvenile and adult offenders were "marked and well understood." 543 U.S. at 572. Continuing research in developmental psychology and neuroscience reinforces that conclusion, confirming that the three developmental characteristics of juveniles that *Simmons* identified—their immaturity, their vulnerability, and their changeability—render them, as a group, very different from adults. As this Court has recognized, those

³ In this brief, we use the terms "juvenile" and "adolescent" to refer to individuals between the ages of 12 and 17. Science cannot, of course, draw bright lines precisely demarcating the boundaries between childhood, adolescence, and adulthood; the "qualities that distinguish juveniles from adults do not disappear when an individual turns 18." *Simmons*, 543 U.S. at 574. Likewise, younger adolescents differ in some respects from the 16- and 17-year-olds discussed in *Simmons*. Nonetheless, because those under 18, on the whole, share certain developmental characteristics that mitigate their culpability, and because "[t]he age of 18 is the point where society draws the line for many purposes between childhood and adulthood," this Court concluded in *Simmons* that it was appropriate to draw the line for death-eligibility at age 18. *Id.* The research discussed in this brief accordingly applies to adolescents under age 18, including older adolescents, unless otherwise noted.

differences are central to the calculus of culpability and the proportionality of punishment imposed on juvenile offenders.

A. Developmental Psychology And Social Science Research Confirms That Juveniles Are Less Mature, More Vulnerable, And More Changeable Than Adults

1. Juveniles have a lesser capacity for mature judgment

As this Court recognized in *Simmons*, adolescents have a significantly diminished capacity for mature judgment as compared to adults, and as a result are more likely to engage in risky behaviors. “[A]s any parent knows and as ... scientific and sociological studies ... tend to confirm, [a] lack of maturity and an underdeveloped sense of responsibility are found in youth more often than in adults and are more understandable among the young. These qualities often result in impetuous and ill-considered actions and decisions.” 543 U.S. at 569 (quoting *Johnson v. Texas*, 509 U.S. 350, 367 (1993)).

As *Simmons* noted, “adolescents are overrepresented statistically in virtually every category of reckless behavior.” 543 U.S. at 569 (quoting Jeffrey Arnett, *Reckless Behavior in Adolescence: A Developmental Perspective*, 12 *Developmental Rev.* 339, 339 (1992)). Indeed, such behavior is “virtually a normative characteristic of adolescent development.”⁴ Juveniles’ risky behavior frequently includes criminal activity; in

⁴ Jeffrey Arnett, *Reckless Behavior in Adolescence: A Developmental Perspective*, 12 *Developmental Rev.* 339, 344 (1992).

fact, “numerous ... self-report studies have documented that it is statistically aberrant to refrain from crime during adolescence.”⁵ When crime rates are plotted against age, both the total number of offenses and frequency of offending are highest during adolescence.⁶ Both violent crimes and less serious offenses “peak sharply” in late adolescence—around age 17⁷—and “drop precipitously in young adulthood.”⁸ Studies show a steep decrease in antisocial behavior after age 17, as adolescents mature.⁹

Adolescents’ striking tendency to engage in risky and even illegal behavior stems at least in part from their lesser capacity for mature judgment. Research has shown that adolescents’ decision-making differs

⁵ Terrie E. Moffitt, *Adolescent-Limited and Life-Course-Persistent Antisocial Behavior: A Developmental Taxonomy*, 100 *Psychol. Rev.* 674, 685-686 (1993); see also Terrie E. Moffitt, *Natural Histories of Delinquency*, in *Cross-National Longitudinal Research on Human Development and Criminal Behavior* 3, 29 (Elmar G.M. Weitekamp & Hans-Jürgen Kerner eds., 1994).

⁶ Moffitt, *Natural Histories of Delinquency*, *supra* note 5, at 4.

⁷ Moffitt, *Adolescent-Limited and Life-Course-Persistent Antisocial Behavior*, *supra* note 5, at 675; Moffitt, *Natural Histories of Delinquency*, *supra* note 5, at 4, 7; Arnett, *supra* note 4, at 343; see also DOJ Statistical Briefing Book, available at www.ojjdp.ncjrs.org/ojstatbb/crime/qa05301.asp?qaDate=20040801 and www.ojjdp.ncjrs.org/ojstatbb/crime/qa05305.asp?qaDate=20040801 (last visited July 20, 2009) (statistics showing that arrests for both serious violent crimes and property crimes peak in late adolescence).

⁸ Moffitt, *Adolescent-Limited and Life-Course-Persistent Antisocial Behavior*, *supra* note 5, at 675; Moffitt, *Natural Histories of Delinquency*, *supra* note 5, at 4, 7.

⁹ Moffitt, *Natural Histories of Delinquency*, *supra* note 5, at 7.

from that of adults in several respects: adolescents are less able to control their impulses; they weigh the risks and rewards of their conduct differently; and they are less able to envision the future and apprehend the consequences of their actions. Even late adolescents who have developed general cognitive capacities similar to those of adults show deficits in these aspects of social and emotional maturity.

First, empirical research confirms that adolescents, including older adolescents, are more impulsive than adults and less able to exercise self-control. For example, one study of maturity of judgment found that adolescents, including 17-year-olds, scored significantly lower than adults on measures of “temperance,” which included “impulse control” and “suppression of aggression.”¹⁰ A more recent study examining differences in impulsivity between ages 10 and 30, using both self-report and performance measures, similarly concluded that impulsivity declined throughout that period, with “gains in impulse control occur[ring] throughout adolescence” and into young adulthood.¹¹ “[T]he develop-

¹⁰ Elizabeth Cauffman & Laurence Steinberg, *(Im)Maturity of Judgment in Adolescence: Why Adolescents May Be Less Culpable Than Adults*, 18 *Behav. Sci. & L.* 741, 748-749, 754 & tbl. 4 (2000).

¹¹ Laurence Steinberg et al., *Age Differences in Sensation Seeking and Impulsivity as Indexed by Behavior and Self-Report: Evidence for a Dual Systems Model*, 44 *Developmental Psychol.* 1764, 1774-1776 (2008); see also Adriana Galvan et al., *Risk Taking and the Adolescent Brain: Who is at Risk?*, 10 *Developmental Sci.* F8, F13 (2007) (in study of individuals aged 7 to 29, finding that impulse control continues to develop over the course of adolescence and early adulthood); Rotem Leshem & Joseph Glicksohn, *The Construct of Impulsivity Revisited*, 43 *Personality & Individual Differences* 681, 684-686 (2007) (reporting significant decline in

ing adolescent can only learn his or her way to fully developed control by experience. This process will probably not be completed until very late in the teen years.... [E]xpecting the experience-based ability to resist impulses ... to be fully formed prior to age eighteen or nineteen would seem on present evidence to be wishful thinking.”¹²

Second, adolescents generally do not perceive and evaluate the costs and benefits of their actions in the same way adults do. “In general, adolescents use a risk-reward calculus that places relatively less weight on risk, in relation to reward, than that used by adults.”¹³ For example, one study comparing adolescent and adult decision-making found that when asked to evaluate hypothetical decisions, adolescents as old as 17 were less likely than adults to mention possible long-term consequences, to evaluate both risks and benefits,

impulsivity from ages 14-16 to 20-22 on two different impulsivity scales).

¹² Franklin E. Zimring, *Penal Proportionality for the Young Offender*, in *Youth on Trial* 271, 280, 282 (Thomas Grisso & Robert G. Schwartz eds., 2000).

¹³ Laurence Steinberg & Elizabeth S. Scott, *Less Guilty by Reason of Adolescence: Developmental Immaturity, Diminished Responsibility, and the Juvenile Death Penalty*, 58 *Am. Psychologist* 1009, 1012 (2003); see also Arnett, *supra* note 4, at 350-353 (summarizing evidence that adolescents’ poor capacity for assessing probabilities plays a role in their reckless behavior); Bonnie L. Halpern-Felsher & Elizabeth Cauffman, *Costs and Benefits of a Decision: Decision-Making Competence in Adolescents and Adults*, 22 *J. Applied Developmental Psychol.* 257, 265, 268 (2001); Susan G. Millstein & Bonnie L. Halpern-Felsher, *Perceptions of Risk and Vulnerability, in Adolescent Risk and Vulnerability* 15, 34-35 (Baruch Fischhoff et al. eds., 2001).

and to examine possible alternative options.¹⁴ A forthcoming study of performance on a gambling task likewise found that, in a group of more than 900 individuals aged 10 to 30, adolescents and adults displayed “significant differences” in their behavior relative to risk and reward: while adolescents “may attend more to the potential rewards of a risky decision than to the potential costs, adults tend to consider both.”¹⁵ The study concluded that decision-making with regard to risk and reward “improves throughout adolescence,” likely “due not to cognitive maturation but to changes in affective processing”—that is, the ability to regulate responses to emotional and social influences.¹⁶ Adolescents’ less mature weighing of risk and reward may lead them to be more likely to engage in criminal activity, as well as other kinds of risk-taking.¹⁷

Finally, juveniles differ from adults in their ability to foresee and take into account the consequences of their behavior. By definition, adolescents have less life experience on which to draw, making it less likely that

¹⁴ Halpern-Felsher & Cauffman, *supra* note 13, at 261, 264-270 (comparing 12th-graders with mean age of 17.5 to adults with mean age of 23). Even greater differences prevailed between adults and younger adolescents. *See id.*

¹⁵ Elizabeth Cauffman et al., *Age Differences in Affective Decision Making as Indexed by Performance on the Iowa Gambling Test*, *Developmental Psychol.* 1, 11, 14 (forthcoming 2009).

¹⁶ *Id.* at 14.

¹⁷ Arnett, *supra* note 4, at 344, 350-351 (noting that adolescents’ distortion of perceived risks and rewards may explain why half or more adolescents reported driving while intoxicated, engaging in sex without contraception, illegal drug use, or some form of minor criminal activity).

they will fully apprehend the potential negative consequences of their actions.¹⁸ Moreover, adolescents are less able than adults to envision and plan for the future, a capacity still developing during adolescence.¹⁹ The study of maturity of judgment, discussed above, found that adolescents' future orientation is weaker than adults': that study, which compared maturity of judgment in over 1,000 adolescents and adults, found that even 17-year-olds scored lower than adults on measures of "perspective," which encompassed "the ability to see short and long term consequences," as well as the ability to "take other people's perspectives into account."²⁰ Similarly, studies have shown that, among 15- to 17-year-olds, realism in thinking about the future increases with age, and that the skills required for future planning continue to develop until the early 20s.²¹

The ability to resist impulses and control emotions, the ability to gauge risks and benefits as an adult would, and the ability to envision the future consequences of one's actions—even in the face of environmental or peer pressures—are critical components of social and emotional maturity, necessary in order to

¹⁸ *Id.* at 351-352.

¹⁹ See, e.g., Jari-Erik Nurmi, *How Do Adolescents See Their Future? A Review of the Development of Future Orientation and Planning*, 11 *Developmental Rev.* 1, 28-29 (1991); Laurence Steinberg et al., *Age Differences in Future Orientation and Delay Discounting*, 80 *Child Dev.* 28, 30, 35-36 (2009).

²⁰ Cauffman & Steinberg, *supra* note 10, at 746, 748, 754 & tbl. 4 (comparing adults with 12th-graders with mean age of 17.5).

²¹ Nurmi, *supra* note 19, at 28-29; see also Steinberg et al., *Age Differences in Future Orientation and Delay Discounting*, *supra* note 19, at 35-36.

make mature, fully considered decisions.²² Empirical research confirms that adolescents—even older adolescents—have not fully developed these abilities and hence lack an adult’s capacity for mature judgment.²³

²² Cauffman & Steinberg, *supra* note 10, at 741, 756 (finding a correlation between “responsibility,” “temperance,” and “perspective” and mature decision-making regarding antisocial or risky behavior).

²³ The dissent in *Simmons* criticized the American Psychological Association for allegedly having taken inconsistent positions regarding adolescent maturity in *Simmons* and in a previous case, *Hodgson v. Minnesota*, 497 U.S. 417 (1990), raising the question whether parental notification posed an undue burden on a minor girl’s right to obtain an abortion. 543 U.S. at 617-618 (Scalia, J., dissenting). The Association’s briefs in *Simmons* and *Hodgson*, however, addressed different questions and accordingly focused on distinct aspects of mature judgment. *Hodgson* addressed *competence* to make medical decisions, which can be made in a relatively unhurried manner in consultation with medical professionals, and thus focused on adolescents’ *cognitive* abilities, noting that by mid-adolescence those abilities approximated those of adults. By contrast, the question in *Simmons*, as here, was the degree of adolescent *culpability* and (relatedly) adolescents’ potential reformability when they commit criminal acts, acts that often result from impulsive and ill-considered choices driven by *psychosocial* immaturity. As discussed further below, cognitive capabilities mature before an adolescent has acquired the psychosocial capacities necessary for impulse control, self-government, and mature assessment of future consequences in the face of social and emotional pressures. Laurence Steinberg et al., *Are Adolescents Less Mature Than Adults? Minors’ Access to Abortion, the Juvenile Death Penalty, and the Alleged APA “Flip-Flop”*, *Am. Psychologist* (forthcoming 2009) at 10; *see also* Elizabeth S. Scott et al., *Evaluating Adolescent Decision Making in Legal Contexts*, 19 *Law & Hum. Behav.* 221, 226-235 (1995). Moreover, because culpability and competence are distinct, adolescents’ psychosocial immaturity mitigates their culpability (and enhances their prospects of reform) even if it does not render them incompetent for all purposes. *Cf. Tennard v. Dretke*, 542 U.S. 274, 288 (2004).

“[I]t is clear that important progress in the development of [social and emotional maturity] occurs sometime during late adolescence, and that these changes have a profound effect on the ability to make consistently mature decisions.”²⁴

It should be noted that the multiple abilities that contribute to mature judgment develop at different rates. Sound judgment requires both cognitive and social and emotional skills, but the former mature sooner than the latter. Studies of general cognitive capacity show an increase from pre-adolescence until about age 16, when gains in cognitive capacity begin to plateau.²⁵ As discussed above, however, social and emotional maturity continues to develop throughout adolescence. Thus, older adolescents (aged 16-17) might have logical reasoning skills that approximate those of adults, but

²⁴ Cauffman & Steinberg, *supra* note 10, at 756, 758 (finding that the most dramatic increase in psychosocial maturity occurs between the ages of 16 and 19); *see also* Halpern-Felsher & Cauffman, *supra* note 13, at 271 (“[I]mportant progress in the development of decision-making competence occurs sometime during late adolescence.”).

²⁵ *See, e.g.*, Thomas Grisso et al., *Juveniles' Competence to Stand Trial*, 27 *Law & Hum. Behav.* 333, 343-344 (2003) (16- to 17-year-olds did not differ from 18- to 24-year-old adults but performed significantly better than 14- to 15-year-olds on test of basic cognitive abilities); Daniel P. Keating, *Cognitive and Brain Development*, in *Handbook of Adolescent Psychology* 45, 64 (Richard M. Lerner & Laurence Steinberg eds., 2004) (cognitive functions exhibited robust growth at earlier ages and began to approach the limits of growth in the 14- to 16-year-old group); Steinberg et al., *Are Adolescents Less Mature Than Adults?*, *supra* note 23, at 8-9 & fig. 2 (study showed almost linear increase in cognitive abilities from age 10-11 until age 16-17, when cognitive abilities began to plateau).

nonetheless lack the abilities to exercise self-restraint, to weigh risk and reward appropriately, and to envision the future that are just as critical to mature judgment.²⁶ Younger adolescents are even less capable of mature judgment, since they may be lacking not only those social and emotional skills but basic cognitive capabilities as well.

2. Juveniles are more vulnerable to negative external influences

As *Simmons* also recognized, “juveniles are more vulnerable ... to negative influences and outside pressures, including peer pressure.” 543 U.S. at 569. Because of their developmental immaturity, adolescents are more susceptible than adults to the negative influences of their environment—and, indeed, their actions are shaped directly by family and peers in ways that adults’ are not. “Adolescents are dependent on living circumstances of their parents and families and hence are vulnerable to the impact of conditions well beyond their control.”²⁷ Both the family and the neighborhood in which an adolescent finds himself play a major role in juvenile delinquency.²⁸ Yet, precisely because of their

²⁶ Cauffman & Steinberg, *supra* note 10, at 743-745; *see also* Halpern-Felsher & Cauffman, *supra* note 13, at 264-271; Laurence Steinberg, *Adolescent Development and Juvenile Justice*, 5 *Ann. Rev. Clinical Psychol.* 47, 55-59 (2008).

²⁷ Alan E. Kazdin, *Adolescent Development, Mental Disorders, and Decision Making of Delinquent Youths*, in *Youth on Trial* 33, 47 (Thomas Grisso & Robert G. Schwartz eds., 2000).

²⁸ *Id.* at 47-48; Jeffrey Fagan, *Contexts of Choice by Adolescents in Criminal Events*, in *Youth on Trial* 371-394 (Thomas Grisso & Robert G. Schwartz eds., 2000).

legal minority, juveniles lack the freedom and autonomy to remove themselves from external influences that may exert pressure toward crime. Put simply, juveniles lack the control over themselves and over their lives that adults possess.

Juveniles not only lack control over their environment generally but are also less capable than adults of withstanding the negative influence of peer pressure—which is difficult for older juveniles to resist and even more difficult for younger juveniles to resist. Research has shown that susceptibility to peer influence, particularly in situations involving pressure to engage in anti-social behavior, increases between childhood and early adolescence, peaks at around age 14, and then declines slowly during the late adolescent years, with relatively little change after age 18.²⁹ One recent experimental study found that exposure to peers during a risk-taking task doubled the amount of risky behavior among mid-adolescents (with a mean age of 14), increased it by 50 percent among college undergraduates (with a mean age of 19), and had no impact at all among young adults.³⁰ “[T]he presence of peers makes adolescents

²⁹ Thomas J. Berndt, *Developmental Changes in Conformity to Peers and Parents*, 15 *Developmental Psychol.* 608, 612, 615-616 (1979); Laurence Steinberg & Susan B. Silverberg, *The Vicissitudes of Autonomy in Early Adolescence*, 57 *Child Dev.* 841, 848 (1986); Elizabeth S. Scott & Laurence Steinberg, *Rethinking Juvenile Justice* 38 (2008); see also Kristan Erickson et al., *A Social Process Model of Adolescent Deviance: Combining Social Control and Differential Association Perspectives*, 29 *J. Youth & Adolescence* 395, 420-421 (2000) (discussing peer influence on delinquency); Fagan, *supra* note 28, at 382-384 (discussing coercive effect of social context on adolescents).

³⁰ Margo Gardner & Laurence Steinberg, *Peer Influence on Risk Taking, Risk Preference, and Risky Decision Making in*

and youth, but not adults, more likely to take risks and more likely to make risky decisions.”³¹

Juveniles’ lesser ability to resist peer influence affects their judgment and behavior both directly and indirectly, leading juveniles to take risks that adults might not. “In some contexts, adolescents might make choices in response to direct peer pressure, as when they are coerced to take risks that they might otherwise avoid. More indirectly, adolescents’ desire for peer approval, and consequent fear of rejection, affect their choices even without direct coercion. The increased salience of peers in adolescence likely makes approval-seeking especially important in group situations.”³²

Adolescents are thus more likely than adults to alter their behavior in response to peer pressure—such as by engaging in antisocial behavior to conform to peer expectations or to achieve respect and status among their peers.³³ Juvenile crime is significantly correlated with exposure to delinquent peers.³⁴ Not surprisingly,

Adolescence and Adulthood: An Experimental Study, 41 *Developmental Psychol.* 625, 626-634 (2005); *see also* Laurence Steinberg & Kathryn C. Monahan, *Age Differences in Resistance to Peer Influence*, 43 *Developmental Psychol.* 1531, 1531 (2007) (describing Gardner and Steinberg study).

³¹ Gardner & Steinberg, *supra* note 30, at 634.

³² Scott & Steinberg, *supra* note 29, at 38-39; *see also* Moffitt, *Adolescent-Limited and Life-Course-Persistent Antisocial Behavior*, *supra* note 5, at 686; Zimring, *supra* note 12, at 280-281.

³³ *See, e.g.*, Moffitt, *Adolescent-Limited and Life-Course-Persistent Antisocial Behavior*, *supra* note 5, at 686.

³⁴ *See id.* at 687-688.

therefore, adolescents are much more likely than adults to commit crimes in groups.³⁵ “No matter the crime, if a teenager is the offender, he is usually not committing the offense alone.”³⁶ Indeed, “[m]ost adolescent decisions to break the law take place on a social stage where the immediate pressure of peers is the real motive.”³⁷ “A necessary condition for an adolescent to stay law-abiding is the ability to deflect or resist peer-pressure,” a social skill that is not fully developed in adolescents.³⁸

In short, as this Court has observed, “youth is more than a chronological fact. It is a time and condition of life when a person may be most susceptible to influence and to psychological damage.” *Eddings v. Oklahoma*, 455 U.S. 104, 115 (1982). Because juveniles’ developmental immaturity and legal minority render them both more susceptible to, and less capable of escaping, negative external pressures, they “have a greater claim than adults to be forgiven” for the criminal acts that are the result of such pressures. *Simmons*, 543 U.S. at 570.

³⁵ Scott & Steinberg, *supra* note 29, at 39; *see also* Howard N. Snyder & Melissa Sickmund, National Center for Juvenile Justice, *Juvenile Offenders and Victims: 1999 National Report* 63 (1999) (in 1997, juveniles were twice as likely as adults to commit serious violent crimes in groups).

³⁶ Zimring, *supra* note 12, at 281; *see also* Joan McCord & Kevin P. Conway, *Co-Offending and Patterns of Juvenile Crime* 9 (Dec. 2005) (finding that group offenses outnumbered solo offenses by almost 2 to 1 for those under 13, by 1.5 to 1 for 13- to 15-year-olds, and by 1.2 to 1 for 16- to 17-year-olds).

³⁷ Zimring, *supra* note 12, at 280.

³⁸ *Id.* at 280-281.

3. Juveniles’ unformed identity makes it less likely that their offenses evince a fixed bad character and more likely that they will reform

Finally, as *Simmons* recognized, juveniles differ from adults—and juvenile crime and culpability differ from adults’—because “the character of a juvenile is not as well formed as that of an adult,” and “[t]he personality traits of juveniles are more transitory, less fixed.” 543 U.S. at 570. Indeed, the defining quality of adolescence is that character is not yet fully formed. Adolescents are still in the process of forging an identity, a process that will not be complete at least until early adulthood.³⁹

Given juveniles’ relatively unformed identity, their transgressions do not necessarily indicate an entrenched “bad” character requiring permanent incapacitation. Instead, their actions often reflect the immaturity, impulsivity, and vulnerability that are the “signature qualities of youth” itself. *Simmons*, 543 U.S. at 570 (internal quotation marks omitted). And these characteristics of adolescence are transient. As this Court has recognized, for that reason, it is more

³⁹ See, e.g., Alan S. Waterman, *Identity Development from Adolescence to Adulthood*, 18 *Developmental Psychol.* 341, 355 (1982) (“The most extensive advances in identity formation occur during the time spent in college.”); Laurence Steinberg & Robert G. Schwartz, *Developmental Psychology Goes to Court, in Youth on Trial* 9, 27 (Thomas Grisso & Robert G. Schwartz eds., 2000) (“[M]ost identity development takes place during the late teens and early twenties.”); Scott & Steinberg, *supra* note 29, at 52 (coherent integration of identity does not occur until late adolescence or early adulthood; the final stages of this process often occur in the college years).

likely that juveniles’ “character deficiencies will be reformed” as the “impetuosity and recklessness” of youth subside in adulthood. *Id.* (internal quotation marks omitted). In other words, it is “the rare juvenile offender whose crime reflects irreparable corruption.” *Id.* at 573.

Indeed, youth mitigates culpability precisely because its “signature qualities” are transient: a youthful offender is not yet the person he will become in adulthood. *Simmons*, 543 U.S. at 570. Adolescent criminal conduct typically results from normative experimentation with risky behavior and not from deep-seated moral deficiency reflective of “bad” character.⁴⁰ For most juveniles, therefore, antisocial behavior is fleeting and will “cease with maturity as individual identity becomes settled.” *Simmons*, 543 U.S. at 570 (quoting Steinberg & Scott, *supra* note 13, at 1014). Only a small proportion of adolescents who experiment with illegal activities will develop an entrenched pattern of criminal behavior that persists into adulthood.⁴¹ “[T]he vast majority of adolescents who engage in criminal or delinquent behavior desist from crime as they mature.”⁴²

⁴⁰ Moffitt, *Adolescent-Limited and Life-Course-Persistent Antisocial Behavior*, *supra* note 5, at 686, 690; Steinberg & Scott, *supra* note 13, at 1015; *see also* Arnett, *supra* note 4, at 344, 366-367.

⁴¹ Moffitt, *Adolescent-Limited and Life-Course-Persistent Antisocial Behavior*, *supra* note 5, at 685-686; Steinberg & Scott, *supra* note 13, at 1014.

⁴² Steinberg & Scott, *supra* note 13, at 1015; *see also* Moffitt, *Adolescent-Limited and Life-Course-Persistent Antisocial Behavior*, *supra* note 5, at 685-686.

Moreover, juveniles' unformed selves mean that their future character and conduct cannot be reliably or accurately predicted. Researchers have consistently concluded that behavior can be identical in adolescents who will continue as criminal offenders through adulthood and those who will not.⁴³ When confronted with a delinquent adolescent, it is very difficult to predict accurately whether that individual will persist in criminal behavior or will desist from crime in adulthood, as the vast majority of delinquent adolescents do.

Indeed, as this Court concluded in *Simmons*, “[i]t is difficult even for expert psychologists to differentiate between the juvenile offender whose crime reflects unfortunate yet transient immaturity, and the rare juvenile offender whose crime reflects irreparable corruption.” 543 U.S. at 573. For similar reasons, as the Court noted, psychiatrists generally will not diagnose antisocial personality disorder—also known as psychopathy or sociopathy—before the age of 18. *Id.* (citing American Psychiatric Association, *Diagnostic and Sta-*

⁴³ Edward P. Mulvey & Elizabeth Cauffman, *The Inherent Limits of Predicting School Violence*, 56 *Am. Psychologist* 797, 799 (2001) (“Assessing adolescents ... presents the formidable challenge of trying to capture a rapidly changing process with few trustworthy markers.”); Thomas Grisso, *Double Jeopardy: Adolescent Offenders with Mental Disorders* 64-65 (2005) (discontinuity of disorders in adolescence creates “moving targets” for identification of mental disorders); John F. Edens et al., *Assessment of “Juvenile Psychopathy” and Its Association with Violence: A Critical Review*, 19 *Behav. Sci. & L.* 53, 59 (2001) (citing studies and noting difficulty of predicting juveniles' future behavior, such as antisocial conduct or psychopathy, because juveniles' social and emotional abilities are not fully developed).

tistical Manual of Mental Disorders 701-706 (4th ed. rev. 2000)).⁴⁴

In sum, juveniles are still developing their character and identity, and it is likely that a juvenile offender will desist from crime in adulthood. *Simmons*, 543 U.S. at 570. Because juvenile crime is likely to be the product of the “signature qualities of youth,” *id.*, there is no reliable way to determine that a juvenile’s offenses are the result of an irredeemably corrupt character, and no reliable way to conclude that a person deserves to die in prison—without any opportunity to demonstrate change or reform—for an offense committed as a juvenile.

B. Juveniles’ Psychosocial Immaturity Is Consistent With Emerging Research Regarding Brain Development

Emerging research shows that the brain is still developing during adolescence in ways consistent with adolescents’ demonstrated psychosocial immaturity. Specifically, adolescent brains are not yet fully devel-

⁴⁴ The difficulty in predicting an adolescent’s future character and conduct is particularly acute in attempting to identify individuals with psychopathy. Although some emerging research has suggested that some psychopathic traits might be more stable over time than previously thought, even these studies demonstrate that the predictive power of juvenile psychopathy assessments is quite weak. For example, one study found that if diagnostic scores on a measure of juvenile psychopathy were used to predict adult psychopathy, the prediction that juveniles who scored in the top 20 percent of psychopathic traits at age 13 would be psychopathic at age 24 would be wrong in 86 percent of cases. Donald R. Lynam et al., *Longitudinal Evidence That Psychopathy Scores in Early Adolescence Predict Adult Psychopathy*, 116 *J. Abnormal Psychol.* 155, 160, 162 (2007).

oped in regions related to risk evaluation, emotional regulation, and impulse control. “[O]ur emerging understanding of adolescent brain maturation ... suggests that brain systems responsible for logical reasoning and basic information processing mature earlier than those that undergird more advanced executive functions and the coordination of affect and cognition necessary for psychosocial maturity.”⁴⁵ As discussed above, mature judgment requires both cognitive and psychosocial skills—as well as the ability to coordinate the two. Recent neurobiological research suggests that the brain systems that govern many aspects of social and emotional maturity, such as impulse control, weighing risks and rewards, planning ahead, and simultaneously considering multiple sources of information, as well as the coordination of emotion and cognition, continue to mature throughout adolescence.⁴⁶

Advances in magnetic resonance imaging (MRI) have contributed to scientists’ greater understanding of

⁴⁵ Steinberg et al., *Are Adolescents Less Mature Than Adults?*, *supra* note 23, at 10; *see also* Neir Eshel et al., *Neural Substrates of Choice Selection in Adults and Adolescents: Development of the Ventrolateral Prefrontal and Anterior Cingulate Cortices*, 45 *Neuropsychologia* 1270, 1270-1271 (2007) (prefrontal brain areas associated with higher-order cognition and emotional regulation are some of the last to mature; this lag in maturation in areas associated with reward values and control of behavior may explain why adolescents demonstrate poor decision-making); Laurence Steinberg, *A Social Neuroscience Perspective on Adolescent Risk-Taking*, 28 *Developmental Rev.* 78, 93 (2008).

⁴⁶ *See, e.g.*, Eshel et al., *supra* note 45, at 1270-1271; Kathryn Modecki, *Addressing Gaps in the Maturity of Judgment Literature: Age Differences and Delinquency*, 32 *Law & Hum. Behav.* 78, 79-80 (2008); Steinberg et al., *Age Differences in Sensation Seeking and Impulsivity*, *supra* note 11, at 1765.

adolescent brain development. Research using MRI technology (available only since the 1990s) has allowed scientists to examine brain activity while an individual performs tasks involving speech, perception, reasoning, and decision-making. In addition, scientists have been able to study developmental changes in the structure of the brain during childhood and adolescence, by examining the same individuals over time at periodic intervals.⁴⁷

The frontal lobes—and in particular the prefrontal cortex—of the brain play an essential part in higher-order cognitive functions. These regions of the brain are central to the process of planning and decision-making, including the evaluation of future consequences and the weighing of risk and reward.⁴⁸ They

⁴⁷ See, e.g., Kenneth K. Kwong et al., *Dynamic Magnetic Resonance Imaging of Human Brain Activity During Primary Sensory Stimulation*, 89 Proc. Nat'l Acad. Sci. 5675, 5676-5678 (1992) (describing MRI mapping of brain activity); Jay N. Giedd et al., *Brain Development During Childhood and Adolescence: A Longitudinal MRI Study*, 2 Nature Neurosci. 861, 861 (1999) (describing study of 145 children and adolescents scanned up to five times over approximately ten years); Tomáš Paus, *Brain Development*, in *Handbook of Adolescent Psychology* 95, 97-98 (Richard M. Lerner & Laurence Steinberg eds., 2009); Linda Spear, *The Behavioral Neuroscience of Adolescence* 108-111 (forthcoming 2009).

⁴⁸ Antoine Bechara et al., *Characterization of the Decision-Making Deficit of Patients with Ventromedial Prefrontal Cortex Lesions*, 123 Brain 2189, 2198-2200 (2000) (patients with lesions in the prefrontal cortex suffered from impairments in the ability to make real-life decisions because of an insensitivity to future consequences, whether reward or punishment); Antoine Bechara et al., *Dissociation of Working Memory from Decision Making Within the Human Prefrontal Cortex*, 18 J. Neurosci. 428, 428, 434 (1998) (prefrontal cortex is necessary for decision-making in tasks involv-

are also essential to the ability to control emotions and inhibit impulses.⁴⁹ In short, fully developed and properly functioning frontal lobes play a critical role in a person's capacity to be a rational moral actor, capable of mature decision-making.

Yet, as MRI studies have shown, the prefrontal cortex is one of the last regions of the brain to mature.⁵⁰ During childhood and adolescence, the brain is maturing in at least two major ways relevant here. First, the brain undergoes myelination, the process through which the neural pathways connecting different parts of the brain become insulated with white fatty tissue called myelin.⁵¹ That insulation "speeds ... neural signal transmission," making "communication between dif-

ing evaluation of risk and reward); Antonio R. Damasio & Steven W. Anderson, *The Frontal Lobes*, in *Clinical Neuropsychology* 404, 434 (Kenneth M. Heilman & Edward Valenstein eds., 4th ed. 2003) (one "hallmark of frontal lobe dysfunction is difficulty making decisions that are in the long-term best interests" of the individual); see also Elizabeth R. Sowell et al., *In Vivo Evidence for Post-Adolescent Brain Maturation in Frontal and Striatal Regions*, 2 *Nature Neurosci.* 859, 860 (1999) (frontal lobes are essential for planning and organization).

⁴⁹ See, e.g., Elkhonon Goldberg, *The Executive Brain: Frontal Lobes and the Civilized Mind* 23, 24, 141 (2001); see also B.J. Casey et al., *Structural and Functional Brain Development and its Relation to Cognitive Development*, 54 *Biological Psychol.* 241, 244-246 (2000).

⁵⁰ Nitin Gogtay et al., *Dynamic Mapping of Human Cortical Development During Childhood Through Early Adulthood*, 101 *Proc. Nat'l Acad. Sci.* 8174, 8177 (2004); Casey et al., *supra* note 49, at 243; Spear, *supra* note 47, at 87-88.

⁵¹ See, e.g., Goldberg, *supra* note 49, at 144.

ferent parts of the brain faster and more reliable.”⁵² Myelination improves both neural connections within the prefrontal cortex itself and the neural connections between the prefrontal cortex and subcortical regions that are important for the processing of emotions and social information.⁵³

Second, during childhood and adolescence, the brain is undergoing “pruning”—the paring away of unused synapses, leading to more efficient neural connections.⁵⁴ During adolescence, synaptic pruning is more characteristic of the prefrontal cortex than other brain regions, consistent with the observation that adolescence is a time of marked improvement in executive functions.⁵⁵

Through myelination and pruning, the brain’s frontal lobes change, with “white matter”—the tissue that

⁵² *Id.*

⁵³ See, e.g., Casey et al., *supra* note 49, at 245-246; Allan L. Reiss et al., *Brain Development, Gender and IQ in Children: A Volumetric Imaging Study*, 119 *Brain* 1763, 1770 (1996); Elizabeth R. Sowell et al., *Mapping Continued Brain Growth and Gray Matter Density Reduction in Dorsal Frontal Cortex: Inverse Relationships During Postadolescent Brain Maturation*, 21 *J. Neurosci.* 8819, 8828 (2001); Steinberg, *A Social Neuroscience Perspective on Adolescent Risk-Taking*, *supra* note 45, at 93-99.

⁵⁴ Casey et al., *supra* note 49, at 242-243; Gogtay et al., *supra* note 50, at 8175; Sowell et al., *Mapping Continued Brain Growth and Gray Matter Density Reduction*, *supra* note 53, at 8828; Spear, *supra* note 47, at 81-90; Peter R. Huttenlocher, *Neural Plasticity: The Effects of Environment on the Development of the Cerebral Cortex* 41, 46-47, 52-58, 67 (2002).

⁵⁵ Eshel et al., *supra* note 45, at 1270-1271; Spear, *supra* note 47, at 87-90.

forms pathways among different parts of the brain—increasing, and “gray matter”—the neurons that are the building blocks of the brain—decreasing.⁵⁶ These changes in the brain’s composition are thought to help the brain work faster and more efficiently, improving the “executive” functions of the frontal lobes, including impulse control and risk evaluation.⁵⁷ This shift in the brain’s composition continues throughout adolescence; indeed, studies indicate that myelination continues into young adulthood.⁵⁸

Although the precise underlying mechanisms of brain development continue to be studied, it is clear that, in late adolescence, important aspects of brain maturation remain incomplete, particularly those involving the brain’s executive functions and the coordinated activity of regions involved in emotion and cognition.⁵⁹ In short, the part of the brain that is critical for control of impulses and emotions and mature, considered decision-making is still developing during adolescence, consistent with the demonstrated behavioral and psychosocial immaturity of juveniles.

⁵⁶ See, e.g., Casey et al., *supra* note 49, at 243; Goldberg, *supra* note 49, at 27.

⁵⁷ See, e.g., Sowell et al., *Mapping Continued Brain Growth and Gray Matter Density Reduction*, *supra* note 53, at 8828; Casey et al., *supra* note 49, at 245-246; Reiss et al., *supra* note 53, at 1770.

⁵⁸ Huttenlocher, *supra* note 54, at 62; see also Giedd et al., *supra* note 47, at 861, 862 (longitudinal MRI study documenting an increase in white matter until age 22); Reiss et al., *supra* note 53, at 1770 (observing increase in white matter in prefrontal region of the brain throughout adolescence and into young adulthood).

⁵⁹ See, e.g., Steinberg, *A Social Neuroscience Perspective on Adolescent Risk-Taking*, *supra* note 45, at 93-99.

II. SENTENCING THE JUVENILE OFFENDERS IN THESE CASES TO DIE IN PRISON WITH NO OPPORTUNITY TO DEMONSTRATE REFORM IS A DISPROPORTIONATE PUNISHMENT

As this Court recognized in *Simmons*, juveniles' immaturity, vulnerability, and changeability—while they in no way excuse juveniles' crimes—substantially lessen their culpability and undermine any justification for definitively ending their free lives. “The susceptibility of juveniles to immature and irresponsible behavior means ‘their irresponsible conduct is not as morally reprehensible as that of an adult.’” 543 U.S. at 570 (quoting *Thompson v. Oklahoma*, 487 U.S. 815, 835 (1988)). “Their own vulnerability and comparative lack of control over their immediate surroundings mean juveniles have a greater claim than adults to be forgiven for failing to escape negative influences in their whole environment.” *Id.* And “[t]he reality that juveniles still struggle to define their identity means it is less supportable to conclude that even a heinous crime committed by a juvenile is evidence of irretrievably depraved character.” *Id.* For those reasons, “the death penalty is a disproportionate punishment for offenders under 18.” *Id.* at 575. Those same mitigating characteristics support the conclusion that condemning a juvenile to die in prison for the offenses at issue here is a constitutionally disproportionate punishment.

This Court has held that, in light of death's finality and irreversibility, capital punishment warrants especially close scrutiny, and necessitates procedural protections not otherwise required, in order to ensure that its imposition complies with the Eighth Amendment's dictates. *See, e.g., Harmelin v. Michigan*, 501 U.S. 957, 1006 (1991) (Kennedy, J., concurring in part and concurring in the judgment); *Eddings*, 455 U.S. at 110;

Lockett v. Ohio, 438 U.S. 586, 605 (1978) (plurality opinion). Yet it has consistently held that “[t]he Eighth Amendment proportionality principle also applies to noncapital sentences,” *Harmelin*, 501 U.S. at 997 (Kennedy, J., concurring in part and concurring in the judgment), and that the Eighth Amendment forbids any punishment that is “grossly disproportionate” to the crime, *id.* at 1001 (internal quotation marks omitted).

The Court has recognized that, under certain circumstances, the punishment of life in prison without parole may be grossly disproportionate in light of the gravity of the offense and the blameworthiness of the offender. See *Solem v. Helm*, 463 U.S. 277, 290-294 (1983). In particular, the *Solem* Court explained that it was appropriate to examine not merely the nature of the crime, but also the “culpability of the offender,” including the offender’s level of participation in the crime and his intent or motive in committing it. *Id.* at 293. The Court concluded that a sentence of life without parole was an unconstitutionally disproportionate punishment for a seventh non-violent felony committed by an adult offender. See *id.* at 303.

The Court has subsequently rejected Eighth Amendment challenges to a sentence of life without parole for possession by an adult of a large quantity of cocaine, see *Harmelin*, 501 U.S. at 994-996, and to lengthy sentences of terms of years with the possibility of eventual parole imposed on adults for repeated felony offenses that included serious or violent felonies, see *Lockyer v. Andrade*, 538 U.S. 63 (2003); *Ewing v. California*, 538 U.S. 11, 29-31 (2003) (plurality opinion). But it has reaffirmed *Solem*’s basic holding that the imposition of a sentence of imprisonment is constrained by a requirement of proportionality to the offense and the offender. See *Harmelin*, 501 U.S. at 997-998, 1001

(Kennedy, J., concurring in part and in the judgment); *Lockyer*, 538 U.S. at 72, 74; *Ewing*, 538 U.S. at 22-24. This Court has never yet had occasion to examine the constitutionality of the rare sentence at issue here: a sentence of life without the possibility of parole imposed on a juvenile for a non-homicide crime. But the principles articulated in this Court's Eighth Amendment jurisprudence support the conclusion that such a sentence is grossly disproportionate.

As an initial matter, while a sentence of death unquestionably differs from a sentence of imprisonment, imprisonment for life without the possibility of parole, like death, is in a very real sense final and irrevocable. It condemns the offender to live out his entire life and die in prison, precluding release regardless of anything he may do to redeem himself or demonstrate a changed character. Such a sentence is particularly harsh when imposed on a juvenile, who will spend his entire life in prison as a result of a crime committed as a minor, without ever experiencing adulthood—or the ability “to attain a mature understanding of his own humanity,” *Simmons*, 543 U.S. at 574—as a free person.

The same characteristics of juveniles that this Court has already recognized mitigate their culpability and render a sentence of death an unconstitutionally disproportionate response to their offenses are relevant to the constitutionality of a sentence of life without parole. As discussed above, even older juveniles are significantly less capable than adults of mature, considered judgment. And the susceptibility of even late adolescents “to immature and irresponsible behavior means ‘their irresponsible conduct is not as morally reprehensible as that of an adult.’” 543 U.S. at 570 (quoting *Thompson*, 487 U.S. at 835). Younger juveniles are still less able to make mature decisions, as

their basic cognitive capacities may not yet be fully developed—a particularly compelling factor mitigating culpability. See *Atkins v. Virginia*, 536 U.S. 304, 318 (2002). In short, because juveniles “have less capacity [than adults] to control their conduct and to think in long-range terms,” juveniles “deserve less punishment” for their crimes. *Eddings*, 455 U.S. at 115 n.11 (internal quotation marks omitted).

Similarly, juveniles’ vulnerability to negative influences that may be beyond their control “mean[s] juveniles have a greater claim than adults to be forgiven for failing to escape negative influences in their whole environment.” *Simmons*, 543 U.S. at 570. Because of their developmental immaturity, adolescents are more susceptible to the influence of the family and environment that produced them. Yet, because of their legal minority, juveniles “lack the freedom that adults have to extricate themselves from a criminogenic setting.” *Id.* at 569 (quoting Steinberg & Scott, *supra* note 13, at 1014). Juveniles’ susceptibility to peer pressure also leads them to make unwise choices they would not be likely to make as adults and leads directly or indirectly to a significant proportion of juvenile crime. Because a key element of culpability is the notion that the criminal actor, exercising self-determination, made a choice to offend, juveniles’ greater vulnerability to their environment and peers further mitigates their culpability. *Cf. Morissette v. United States*, 342 U.S. 246, 250 (1952) (culpability based on intentional conduct is rooted in our belief in the “freedom of the human will and a consequent ability and duty of the normal individual to choose between good and evil”).

Finally, the transitory nature of adolescence itself, and the fact that juveniles’ character is still being formed, means that juveniles’ criminal conduct cannot

be morally equated with that of adults: “The reality that juveniles still struggle to define their identity means it is less supportable to conclude that even a heinous crime committed by a juvenile is evidence of irretrievably depraved character. From a moral standpoint it would be misguided to equate the failings of a minor with those of an adult, for a greater possibility exists that a minor’s character deficiencies will be reformed.” *Simmons*, 543 U.S. at 570.

The penological justifications for a sentence of life imprisonment without parole—like a sentence of death—are thus significantly weaker when applied to juveniles. The retributive purpose of such a punishment has substantially less force when applied to those “whose culpability or blameworthiness is diminished, to a substantial degree, by reason of youth and immaturity.” *Simmons*, 543 U.S. at 571. Likewise, the same characteristics of juveniles that render them less culpable—their impulsivity, rash decision-making, biased attention to the anticipated immediate rewards of a choice rather than its potential longer-term costs, and lesser ability to consider and evaluate the future consequences of their actions—substantially weaken the deterrence justification for such punishment. *Id.*⁶⁰ And

⁶⁰ Indeed, empirical studies evaluating the deterrent effect of laws mandating that juvenile offenders be transferred to the adult criminal justice system for certain crimes have concluded that the threat of adult criminal sanctions had no measurable effect on juvenile crime. Simon I. Singer & David McDowall, *Criminalizing Delinquency: The Deterrent Effect of the New York Juvenile Offender Law*, 22 *Law & Soc’y Rev.* 521, 526-531 (1988) (comparing juvenile arrest statistics for four years prior to enactment of New York’s transfer legislation with juvenile arrest statistics in the six-year period after enactment and finding little measurable impact on serious juvenile crime); Eric L. Jensen & Linda K. Metsger, A

while life without parole will unquestionably incapacitate a juvenile offender, life imprisonment with the possibility of parole would also serve that function, while allowing for the significant possibility that a juvenile will change and develop a moral character as an adult.

By contrast, condemning an offender to die in prison for a crime committed as a juvenile forecloses that possibility. As discussed above, and as *Simmons* recognized, adolescence is transitory, and adolescents change. Indeed, most adolescents who commit crimes will desist from criminal activity in adulthood. Because the adolescent self is not yet fully formed, there is no way reliably to conclude that an adolescent's crime is the expression of an entrenched and irredeemably malign character that might justify permanent incarceration, and no way to distinguish the hypothetical juvenile offender who is a hardened criminal from the offender whose crime is a product of the transient influences of adolescence itself. Sentencing a juvenile to die in prison, without any possibility of release, thus cannot rest on the conclusion that he is incapable of change or redemption. That simply cannot be said with any confidence of juveniles.

For all these reasons, sentencing an immature and less culpable juvenile to die in prison, particularly for the non-homicide offenses at issue here, is a grossly disproportionate punishment.

Test of the Deterrent Effect of Legislative Waiver on Violent Juvenile Crime, 40 *Crime & Delinq.* 96, 100-102 (1994) (comparing juvenile arrest statistics for the five-year periods before and after enactment of Idaho's transfer legislation and finding no deterrent effect on violent juvenile crime).

CONCLUSION

The judgments below should be reversed.

Respectfully submitted.

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