"YOU'RE ON THE RIGHT TRACK!" USING GRADUATED RESPONSE SYSTEMS TO ADDRESS IMMATURITY OF JUDGMENT AND ENHANCE YOUTHS' CAPACITIES TO SUCCESSFULLY COMPLETE PROBATION

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INTRODUCTION

The Supreme Court has repeatedly recognized that adolescents' immaturity warrants special protections under the law. In a series of cases over the past decade, the Court has specifically referenced the legal relevance of adolescents' reduced culpability, compromised legal decision making, and greater amenability to rehabilitation relative to adults.[1] According to the Court, adolescents are both less culpable than adults and more in need of procedural protections.[2]

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1. *See* Miller v. Alabama, 132 S. Ct. 2455 (2012); J.D.B. v. North Carolina, 564 U.S. 261 (2011); Graham v. Florida, 560 U.S. 48 (2010); Roper v. Simmons, 543 U.S. 551 (2005).

2. *See, e.g.*, *Graham*, 560 U.S. at 72 ("Because juveniles' 'lack of maturity and underdeveloped

In the wake of these seminal Supreme Court opinions, popular support for using adolescent development research to inform juvenile justice system practices and policies continues to grow. However, the connection between developmental research and probation practices is underexplored, despite the fact that the majority of youths in the juvenile justice system receive some form of probation prior to final discharge. This lack of research is particularly problematic given that many youths on probation fail to comply with their court-imposed requirements, which can result in placement in secure facilities and other serious consequences.

After describing the current state of juvenile probation in the United States, this Article proposes a developmentally informed probation model utilizing existing research on adolescent development and behavior modification. It then considers the broader legal and policy contexts of such a model: How can a model geared toward changing youths' behavior be constructed to ensure adequate due process, support family involvement, and avoid unintended consequences (e.g., net widening, racial and ethnic disparities)?

I. JUVENILE PROBATION BASICS

For at least eighty-five years, probation has been the most widely utilized disposition for justice-involved youth.[3] Today, approximately sixty percent of youth adjudicated delinquent each year receive formal probation as an initial disposition.[4] At first blush, community-based probation seems to allow justice-involved youth to avoid the detrimental effects of confinement. Unfortunately, however, about half of juveniles on probation fail to comply with their requirements at some time while under court supervision.[5] In response to such noncompliance, judges may revoke probation and commit youth to residential juvenile justice facilities—the very outcome a probation disposition is meant to avoid. Across the country, the structure of the juvenile probation system largely

sense of responsibility . . . often result in impetuous and ill-considered actions and decisions,' they are less likely to take a possible punishment into consideration when making decisions." (omission in original) (quoting Johnson v. Texas, 509 U.S. 350, 367 (1993))).

3. Patricia M. Torbet, *Juvenile Probation: The Workhorse of the Juvenile Justice System*, *in* JUVENILE PROBATION ADMINISTRATORS' DESKTOP GUIDE 13, 13 (1997), http://www.ncjj.org/PDF/desktop.pdf.

4. *See* SARAH HOCKENBERRY & CHARLES PUZZANCHERA, U.S. DEP'T OF JUSTICE, DELINQUENCY CASES IN JUVENILE COURT, 2011, at 4 (2014), http://www.ojjdp.gov/pubs/248409.pdf (reporting that 64% of youth adjudicated delinquent receive probation as their initial disposition). Additionally, nearly 200,000 more youth receive some type of probation without first having been adjudicated (e.g., as an option for preadjudicatory diversion). *Id.*

5. *See* Amanda NeMoyer et al., *Predictors of Juveniles' Noncompliance with Probation Requirements*, 38 LAW & HUM. BEHAV. 580, 583 (2014) (finding that approximately 52 percent of youth in one urban jurisdiction failed to comply with at least one probation requirement while under court supervision); *see also* SHARYN B. ADAMS ET AL., ILL. CRIMINAL JUSTICE INFO. AUTH., RESULTS FROM THE 2000 ILLINOIS JUVENILE PROBATION OUTCOME STUDY 24 (2002), http://www.icjia.org/assets/pdf/ResearchReports/2000Probation%20Outcome%20Study.pdf (finding that 40 percent of all juvenile probationers in Illinois engaged in some form of probation noncompliance during their supervision periods).

parallels that of the adult probation system, with expectations that youths will remember and comply with several requirements over long periods of time, and with an emphasis on sanctions for less-than-perfect compliance. This approach fails to recognize decades of empirical research on youths' development and decision-making capacities and, thus, could benefit from a developmentally informed update.

This Article focuses on how probation should be structured when imposed by the courts. It does not address a related problem—the overuse of the juvenile justice system, particularly for black, Latino, and Native American youths living in poverty. It is worth noting, however, that youths of color are drastically more likely to be brought into the juvenile justice system than white youth, even for the same behavior, and even controlling for a variety of background characteristics.[6] Research also suggests that a vast majority of youth desist from offending behaviors over time, even without any system interventions.[7] Thus, the recommendations in this Article should be paired with a careful assessment of when probation supervision is necessary, and with research and practice changes aimed at applying probation equitably to youth of differing racial, ethnic, and economic backgrounds.

A. Delinquency and Probation

Although rates of juvenile court referrals have declined over the past several years, more than one million delinquency cases are still filed in United States' juvenile justice systems each year, and a consistent thirty-six percent of youth in those cases receive probation as their most severe disposition.[8]

6. *See* ANNIE E. CASEY FOUND., UNEQUAL OPPORTUNITIES FOR JUVENILE JUSTICE (2006), http://viablefuturescenter.org/racemattersinstitute/wp-content/uploads/2015/06/fact_sheet12.pdf ("When compared to White youth committing comparable offenses, African American Latino/a, and Native American youth experience more punitive treatment in terms of arrests, referral to juvenile court, detention, formal processing, waiver to adult court, incarceration in juvenile facilities, and incarceration in adult facilities. Further, while White youth engage in unlawful behaviors more than their African American and Latino/a counterparts, such as fighting, weapons possession crimes, and using and selling drugs, data show that White youth are more than twice as likely not to be arrested."); SENTENCING PROJECT, DISPROPORTIONATE MINORITY CONTACT IN THE JUVENILE JUSTICE SYSTEM 5 (2014), http://www.sentencingproject.org/doc/publications/jj_Disproportionate%20Minority%20Contact.pdf (noting that African American and Latino youth are more likely to be arrested, referred to juvenile court, and processed in the system than their white peers and that, although black youth use drugs at rates roughly similar to white youth, "[b]y 1991, a black juvenile was 579 percent more likely to be arrested for a drug offense than a white teenager").

7. As youth grow, their self-management skills, long-term planning, judgment and decision making, regulation of emotion, and evaluation of risk and reward likewise improve. *See* Laurence Steinberg & Elizabeth S. Scott, *Less Guilty by Reason of Adolescence*, 58 AM. PSYCHOLOGIST 1009, 1011 (2003). As a result, "[f]or most teens, [risky or antisocial] behaviors are fleeting; they cease with maturity as individual identity becomes settled." *Id.* at 1014.

8. *See* JULIE FURDELLA & CHARLES PUZZANCHERA, U.S. DEP'T OF JUSTICE, DELINQUENCY CASES IN JUVENILE COURT, 2013, at 1 (2014), http://www.ojjdp.gov/pubs/248899.pdf; SARAH HOCKENBERRY & CHARLES PUZZANCHERA, U.S. DEP'T OF JUSTICE, DELINQUENCY CASES IN JUVENILE COURT, 2011, at 1 (2014), http://www.ojjdp.gov/pubs/248409.pdf; SARAH LIVSEY, U.S. DEP'T OF JUSTICE, JUVENILE DELINQUENCY PROBATION CASELOAD, 2009, at 1 (2012), http://www.ojjdp.gov/

Thousands of additional youths receive initial probation dispositions but later have probation revoked for noncompliance, and thousands more transition to aftercare probation following release from residential correctional facilities. As a result, a considerable number of justice-involved youth experience some form of probation—during which they must obey certain court-imposed requirements (e.g., pass frequent drug tests, abide by curfews), often for undetermined periods of time—prior to discharge from court supervision.

Youths on probation typically remain in their communities, attending school and/or working; thus, probation dispositions provide a mechanism by which juvenile court judges can abide by state policies mandating that youths receive the least restrictive dispositions needed to ensure public safety.[9] Substantial empirical evidence supports such policies; several serious, negative consequences are associated with youths' residential facility placement. Confinement removes youths from family, friends, religious leaders, and other community members who might serve as protective factors against continued offending and, instead, surrounds them with sometimes violent and dangerous peers.[10] Correctional confinement also has been linked to increases in prevalence of mood and anxiety disorders in youth, and juvenile justice facilities routinely lack the capacity to provide the youths in their care with adequate mental health treatment.[11] Finally, youth confinement often fails to achieve long-

pubs/239082.pdf (noting that 541,400 juvenile delinquency cases—about one-third of all cases handled in the juvenile justice system—received probation as the most severe disposition); CHARLES PUZZANCHERA & CRYSTAL ROBSON, U.S. DEP'T OF JUSTICE, DELINQUENCY CASES IN JUVENILE COURT, 2010, at 3 (2014), http://www.ojjdp.gov/pubs/243041.pdf. This statistic does not include the thousands of youth whose probation dispositions are later revoked in favor of residential correctional placements, nor does it include the thousands of youths who transition to aftercare probation following release from such a facility.

9. *See* ANNIE BALCK, NAT'L JUVENILE JUSTICE NETWORK, ADVANCES IN JUVENILE JUSTICE REFORM: 2009–2011, at 5–6, 8, 21–22, 36 (2012); *see also* 42 PA. STAT. AND CONS. STAT. ANN. § 6301(b)(3)(i) (West 2016) (encouraging use of "the least restrictive intervention that is consistent with the protection of the community, the imposition of accountability for offenses committed and the rehabilitation, supervision and treatment needs of the child").

10. *See* Peter J. Ashkar & Dianna T. Kenny, *Views from the Inside: Young Offenders' Subjective Experiences of Incarceration*, 52 INT'L J. OFFENDER THERAPY & COMP. CRIMINOLOGY 584, 595–96 (2008); Matt DeLisi et al., *The Road to Murder: The Enduring Criminogenic Effects of Juvenile Confinement Among a Sample of Adult Career Criminals*, 9 YOUTH VIOLENCE & JUV. JUST. 207, 215–17 (2011); Ian Lambie & Isabel Randell, *The Impact of Incarceration on Juvenile Offenders*, 33 CLINICAL PSYCHOL. REV. 448, 456 (2013). Understaffing and overcrowding of these facilities often contribute to neglect from staff members, or worse, facilitate abusive conditions, including repeated use of excessive force, physical abuse, and sexual victimization of confined youth. BARRY HOLMAN & JASON ZIEDENBERG, JUSTICE POLICY INST., THE DANGERS OF DETENTION: THE IMPACT OF INCARCERATING YOUTH IN DETENTION AND OTHER SECURE FACILITIES 2 (2006), http://www.justicepolicy.org/uploads/justicepolicy/documents/dangers_of_detention.pdf; RICHARD A. MENDEL, ANNIE E. CASEY FOUND., NO PLACE FOR KIDS: THE CASE FOR REDUCING JUVENILE INCARCERATION 25 (2011), http://files.eric.ed.gov/fulltext/ED527944.pdf.

11. *See* MENDEL, *supra* note 10, at 22; *see also* Karen M. Abram et al., *Suicidal Ideation and Behaviors Among Youth in Juvenile Detention*, 47 J. AM. ACAD. CHILD & ADOLESCENT PSYCHIATRY 291, 291 (2008) ("[P]revalence rates of completed suicide are between two and four times higher among youths in custody than among youths in the community."); Carl S. Taylor, *Growing Up Behind*

term community protection goals. Research links facility commitment with increased aggression and delinquent behavior; it does not significantly reduce the likelihood of future arrest, juvenile adjudication, adult conviction, or confinement.[12]

Given the serious detrimental effects of youth correctional facility placement, it makes sense to utilize a community-based alternative like probation with adolescents and young adults. However, not all youths who receive probation dispositions avoid facility commitment while under court supervision. Instead, many youths fail to successfully complete probation under the adultlike practices described in the following Part and therefore end up in correctional placements, facing these same negative consequences of incarceration.

B. Typical Structure of Juvenile Probation

Probation evolved from an early method of rehabilitating offenders—both juvenile and adult.[13] Over time, however, emphasis on probation as a tool for community protection has grown such that probation officers are now expected to pursue both rehabilitation and community protection simultaneously, despite the tensions that may exist between these goals.[14] Although empirical evidence

Bars: Confinement, Youth Development, and Crime, *in* THE UNINTENDED CONSEQUENCES OF INCARCERATION 41, 44 (1996) ("[T]he most alarming and prevalent problems in juvenile facilities involved living space, security, control of suicidal behavior, and health care—four areas that directly impact positive youth development.").

12. *See, e.g.*, AMANDA PETTERUTI ET AL., JUSTICE POLICY INST., THE COSTS OF CONFINEMENT: WHY GOOD JUVENILE JUSTICE POLICIES MAKE GOOD FISCAL SENSE (2009), http://www.justicepolicy.org/images/upload/09_05_rep_costsofconfinement_jj_ps.pdf; Uberto Gatti et al., *Iatrogenic Effect of Juvenile Justice*, 50 J. CHILD PSYCHOL. & PSYCHIATRY 991, 994 (2009). A report summarizing available research on the topic noted that 70%–80% of youth discharged from juvenile correctional facilities are rearrested within two or three years of release, 45%–72% are found guilty of new offenses in juvenile or criminal court within three years of release, and 26%–62% of youth are re-incarcerated on new charges within three years of release. *See* MENDEL, *supra* note 10, at 10–11. More strikingly, another study found that, even when controlling for several demographic and offense history factors, juvenile confinement significantly predicted charges of murder as an adult. *See* DeLisi et al., *supra* note 10, at 213–15.

13. *See* Benjamin Steiner et al., *Legally Prescribed Functions of Adult and Juvenile Probation Officers: Worlds Apart?*, 39 J. OFFENDER REHABILITATION 47, 48 (2004); *see also* Sarah Vidal & Jennifer L. Skeem, *Effect of Psychopathy, Abuse, and Ethnicity on Juvenile Probation Officers' Decision-Making and Supervision Strategies*, 31 LAW & HUM. BEHAV. 479, 479 (2007) ("Juvenile probation is founded on the premise that youthful offenders may, through intervention, become prosocial and productive members of the community.").

14. Vera Lopez & Margaret Russell, *Examining the Predictors of Juvenile Probation Officers' Rehabilitation Orientation*, 36 J. CRIM. JUST. 381, 386 (2008); Geoff Ward & Aaron Kupchik, *What Drives Juvenile Probation Officers? Relating Organizational Contexts, Status Characteristics, and Personal Convictions to Treatment and Punishment Orientations*, 56 CRIME & DELINQ. 35, 37 (2010) ("[P]robation officers occupy a position that regularly requires reconciling the dual treatment and punishment purposes of the juvenile court."). Examples of rehabilitation goals might include counseling a child and identifying appropriate services; law enforcement goals would likely include reporting a child's probation noncompliance and making arrests. *See generally* Steiner et al., *supra* note 13.

supports the "hybrid" officer model (i.e., one in which probation officers value both roles equally and reconcile their conflict),[15] the majority of probation departments prioritize surveillance and control of probationers.[16] This characterization applies both to adult and juvenile probation, as an examination of relevant probation statutes from all fifty states revealed "no appreciable differences" between the types of tasks adult and juvenile probation officers are mandated to perform by state law.[17]

The typical structure of juvenile probation also mimics that of adult probation. For example, upon receiving a probation disposition, a youth is usually expected to comply with several court-imposed conditions for an extended time period,[18] often about six to nine months.[19] As the youth attempts to comply with these requirements, he or she must regularly review progress with an assigned probation officer during supervision meetings, and the probation officer may check in with the child's family members, school, and employer for updates and compliance verification.[20] Although scheduled with less frequency than meetings with the probation officer, a youth probationer must also typically attend review hearings before a juvenile court judge; at these hearings, the probation officer reports on the child's progress, including compliance or

15. Jennifer L. Skeem & Sarah Manchak, *Back to the Future: From Klockars' Model of Effective Supervision to Evidence-Based Practice in Probation*, 47 J. OFFENDER REHABILITATION 220, 221, 226 (2008).

16. *See* David M. Altschuler, *Issues and Challenges in the Community Supervision of Juvenile Offenders*, 23 S. ILL. U. L.J. 469, 472 (1999) ("It remains abundantly clear that in practice most intermediate sanction programs . . . are first and foremost, surveillance- and control-oriented.").

17. Steiner et al., *supra* note 13, at 63–64 (finding that more than ninety percent of states mandated twice as many law enforcement tasks as rehabilitation tasks for performance by both adult and juvenile probation officers). Further, many adult probation departments and officers are responsible for also supervising juvenile probationers in their jurisdictions, perhaps providing some understanding for why youth probationers are often treated similarly to adult probationers. Joan Petersilia, *Probation in the United States*, 22 CRIME & JUST. 149, 167 (1997) (noting that "half of all U.S. adult probation departments also have responsibility for supervising juveniles").

18. *See* NeMoyer et al., *supra* note 5, at 584 (finding that, on average, youth were made to comply with four probation requirements at once, with a maximum of nine requirements at one time).

19. *See, e.g.*, *Community Control*, GREENE COUNTY, http://www.co.greene.oh.us/index.aspx?NID=434 (last visited June 1, 2016) ("When an offender in this court is placed on probation, it is for an unspecified period of time; however, the average length of supervision is six to nine months."); PA. JUVENILE COURT JUDGES' COMM'N, STATEWIDE OUTCOME MEASURES 4 (2014), http://www.jcjc.pa.gov/Publications/Documents/2013%20Pennsylvania%20Juvenile%20Justice%20Outcome%20Measures%20Report.pdf (identifying the median length of juvenile probation supervision in Pennsylvania as about nine months); WASHTENAW CTY. TRIAL COURT, JUVENILE DIVISION REPORT CARD 9 (2010), http://washtenawtrialcourt.org/juvenile/Probation%20Report%202010.pdf (noting that the average length of juvenile probation supervision in a Michigan county was about 6.83 months).

20. Youths' meetings with probation officers typically range from weekly to monthly, and many probation departments also require youth to be generally available for probation officer contacts, including unannounced visits at school, work, or home. *See* Jodi Lane et al., *Evaluating an Experimental Intensive Juvenile Probation Program: Supervision and Official Outcomes*, 51 CRIME & DELINQ. 26, 32 (2005); Angela A. Robertson et al., *A Short-Run Cost-Benefit Analysis of Community-Based Interventions for Juvenile Offenders*, 47 CRIME & DELINQ. 265, 269 (2001).

noncompliance with probation requirements.[21] Standard probation methods emphasize perfect adherence to probation conditions, allowing a presiding judge to revoke probation upon learning of a youth's noncompliance and commit the child to a residential facility.[22] Additionally, the vast majority of juvenile probation systems—like adult probation systems—emphasize probationers' failures to comply with requirements rather than attending to compliant behaviors; this approach fails to recognize the power of positive reinforcement in shaping behavior over time. Typically, the sole form of potential reinforcement for compliance is the long-term promise of eventual discharge from supervision; few opportunities exist within the typical probation structure to provide intermediate reinforcement of shorter-term, probation-compliant behaviors.

As we discuss in the following Section, applying probation structures and expectations from the adult system to youth ignores several important principles of adolescent development. An adjusted form of probation that takes adolescent development into account would likely facilitate better success rates for probation completion, reducing the number of youths facing the harsh, long-term consequences of facility commitment.[23]

II. ADOLESCENT DEVELOPMENT

Adolescence is a transitional period characterized by the development of cognitive, emotional, and psychosocial capacities critical to decision making and behavioral regulation. Development of these capacities parallels brain development during these transitional years and occurs gradually throughout adolescence and into early adulthood. Youths acquire cognitive and emotional skills—as well as the ability to successfully integrate thoughts and feelings into behavioral decision making—at uneven rates, such that some fifteen-year-olds appear to behave more like children and other fifteen-year-olds appear to

21. *See* NAT'L COUNCIL OF JUVENILE & FAMILY COURT JUDGES, JUVENILE DELINQUENCY GUIDELINES: IMPROVING COURT PRACTICE IN JUVENILE DELINQUENCY CASES 144, 165–73 (2005).

22. It is important to note that judges have discretion in choosing to revoke probation and, instead, may choose to issue a warning or provide a sanction or sanctions—without revoking probation—to address noncompliant behavior.

23. Perhaps in part because of its perception as a better alternative to incarceration, little research examining the success rates of youth probationers exists; those studies that have attempted to discover this information indicate that a considerable percentage of youths on probation fail to comply with their requirements at least once. *E.g.*, ADAMS ET AL., *supra* note 5, at 583; NeMoyer et al., *supra* note 5, at 587–588; Hilary Smith et al., *Race, Ethnicity, Class, and Noncompliance with Juvenile Court Supervision*, 623 ANNALS AM. ACAD. POL. & SOC. SCI. 108, 118 (2009). It is important to note that, for many youths, noncompliance occurs in the form of technical probation violations—actions in breach of imposed requirements, but not otherwise illegal acts—especially in intensive probation programs, given the associated increase in officer monitoring. *See* Don Kurtz & Travis Linnemann, *Improving Probation Through Client Strengths: Evaluating Strength Based Treatments for at Risk Youth*, 7 W. CRIMINOLOGY REV. 9, 10 (2006); Petersilia, *supra* note 17, at 192–93 ("[W]hat purpose is served by monitoring and revoking persons for technical violations, and is the benefit worth the cost?"); Michael J. Leiber & Jennifer H. Peck, *Probation Violations and Juvenile Justice Decision Making: Implications for Blacks and Hispanics*, 11 YOUTH VIOLENCE & JUV. JUST. 60, 61–62 (2013).

behave more like adults.[24] Additionally, because individuals tend to develop some skills more quickly than others, a child may be mature in some areas, like abstract reasoning, but immature in other areas, such as emotion regulation.[25] Further, contextual variables, such as presence of peers,[26] use of substances,[27] situational stress,[28] and mental health problems,[29] can interfere with adolescents' effective use of these skills, even if the capacities have been acquired and previously demonstrated.

This Section will first summarize key features of adolescent brain development. Although an imperfect relationship exists between neuropsychological development and functioning,[30] structural and chemical changes in and across brain regions often parallel important changes in brain functioning and behavior. As a result, the Section will also review the developmentally related cognitive, socio-emotional, and psychosocial immaturity observed in adolescents, relative to adults, that impacts decision making and behavioral regulation skills—focusing on those skills most relevant to youths' capacities to successfully complete the terms of probation.

A. Brain Development in Adolescence: Cognitive Functioning Correlates

Differences in adolescent and adult brain anatomy and physiology have been identified through post-mortem studies of humans and animals, as well as through brain imaging technologies (e.g., magnetic resonance imaging, functional magnetic resonance imaging).[31] Such tools have been useful in linking changes in the developing brain during adolescence with functional limitations that impact behavior.[32] For example, the prefrontal cortex—a part of the frontal

24. Laurence Steinberg et al., *Are Adolescents Less Mature than Adults? Minors' Access to Abortion, the Juvenile Death Penalty, and the Alleged APA "Flip-Flop*," 64 AM. PSYCHOLOGIST 583, 587 (2009) [hereinafter Steinberg et al., *Are Adolescents Less Mature than Adults?*].

25. Laurence Steinberg, *Adolescent Development and Juvenile Justice*, 5 ANN. REV. CLINICAL PSYCHOL. 459, 467 (2009) [hereinafter Steinberg, *Adolescent Development and Juvenile Justice*].

26. *Id.* at 468.

27. Jungmeen Kim-Spoon et al., *Risky Decision Making in a Laboratory Driving Task Is Associated with Health Risk Behaviors During Late Adolescence but Not Adulthood*, 40 INT'L J. BEHAV. DEV. 58 (2016).

28. Graeme Fairchild et al., *Decision Making and Executive Function in Male Adolescents with Early-Onset or Adolescence-Onset Conduct Disorder and Control Subjects*, 66 BIOLOGICAL PSYCHIATRY 162 (2009).

29. Jennifer S. Silk, Laurence Steinberg & Amanda Sheffield Morris, *Adolescents' Emotion Regulation in Daily Life: Links to Depressive Symptoms and Problem Behavior*, 74 CHILD DEV. 1869 (2003).

30. *See, e.g.*, B.J. Casey et al., *The Adolescent Brain*, 1124 ANNALS N.Y. ACAD. SCI. 111, 117 (2008); 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, 1271 (2007).

31. *E.g.*, Francine M. Benes et al., *Myelination of a Key Relay Zone in the Hippocampal Formation Occurs in the Human Brain During Childhood, Adolescence, and Adulthood*, 51 ARCHIVES GEN. PSYCHIATRY 477, 480–82 (1994); Tomáš Paus, *Mapping Brain Maturation and Cognitive Development During Adolescence,* 9 TRENDS COGNITIVE SCI. 60, 63–64 (2005).

32. *E.g.*, Paus, *supra* note 31, at 60–61.

lobe that plays a major role in executive functioning, which are a set of higher-level cognitive processes important for the orchestration of complex behaviors, such as anticipating consequences, controlling impulses, reasoning, planning, and problem solving—continues to develop throughout the adolescent years and into early adulthood.[33] The volume of gray matter in the cortex, which is associated with thinking and planning, peaks around the time of puberty and then declines during adolescence and into the early twenties. Experts believe this decrease in gray matter volume reflects synaptic pruning, the paring down of unused connections between neurons to make neural networks more efficient and thus better able to support complicated planning, organizing, reasoning, and decision making.[34]

Myelination (i.e., the process by which neurons are "insulated" with a fatty sheath known as myelin) during adolescence and young adulthood further enhances these networks, facilitating transmission of signals from neuron to neuron and between distant brain networks.[35] Over time, adolescents' experiences can shape which neural connections survive and flourish, thus providing a neural foundation for complicated thoughts and behaviors.[36] Together, these changes contribute to the development of higher-level cognitive skills (e.g., working memory, information processing, logical reasoning), many of which reach adultlike status by about age sixteen.[37]

Although basic cognitive functioning skills frequently reach adult levels by late adolescence, the more complex executive functioning abilities of the prefrontal cortex continue to develop into adulthood.[38] Compared to adults, adolescents exhibit specific deficits in behavioral planning, decision making, and response inhibition; the severity of these deficits increases with the complexity of the cognitive skills required.[39] In laboratory studies, adolescents perform similarly to adults in simple tasks that require maintaining goals in working

33. Deborah Yurgelun-Todd, *Emotional and Cognitive Changes During Adolescence*, 17 CURRENT OPINION NEUROBIOLOGY 251, 251 (2007).

34. *E.g.*, Paus, *supra* note 31, at 64.

35. R. Andrew Chambers et al., *Developmental Neurocircuitry of Motivation in Adolescence: A Critical Period of Addiction Vulnerability*, 160 AM. J. PSYCHIATRY 1041, 1047–48 (2003).

36. *Id.*

37. Steinberg, *Adolescent Development and Juvenile Justice*, *supra* note 25, at 468. However, other important structures in the brain are still developing during this formative adolescent period, resulting in poorer executive functioning skills relative to adults, but also presenting an opportunity to shape neurological maturation and behavior during a period of rapid change. Bernd Figner et al., *Affective and Deliberative Processes in Risky Choice: Age Differences in Risk Taking in the Columbia Card Task*, 35 J. EXPERIMENTAL PSYCHOL. 709, 710 (2009); Beatriz Luna et al., *Maturation of Cognitive Processes from Late Childhood to Adulthood*, 75 CHILD DEV. 1357, 1368 (2004).

38. Steinberg, *Adolescent Development and Juvenile Justice*, *supra* note 25, at 467.

39. *See, e.g.*, Dustin Albert & Laurence Steinberg, *Age Differences in Strategic Planning as Indexed by the Tower of London*, 82 CHILD DEV. 1501, 1513 (2011); Bonnie L. Halpern-Felsher & Elizabeth Cauffman, *Costs and Benefits of a Decision: Decision-Making Competence in Adolescents and Adults*, 22 APPLIED DEVELOPMENTAL PSYCHOL. 257, 268 (2001); Matthias L. Schroeter et al., *Prefrontal Activation Due to Stroop Interference Increases During Development—An Event-Related fNIRS Study*, 23 NEUROIMAGE 1317, 1317 (2004).

memory, conforming behavior to these goals, and inhibiting simple responses over a relatively short time period;[40] however, when distracting stimuli are introduced into these tasks, adolescents commit more errors than adults, are less able to monitor their errors, and are less likely to learn from the errors and integrate this learning into future behavior.[41]

Immaturity in the application of executive control to behavior is also evident in legally relevant contexts. For instance, even when adolescents sufficiently recognize the meaning of their rights to silence and counsel during custodial interrogations, they demonstrate greater difficulty than adults in appreciating the significance of these rights and applying them to legal scenarios.[42] Adolescents also fail to incorporate this legal knowledge into their decision making about waiving rights,[43] and even when they experience arrest after providing statements to police, they fail to recognize the impact of their waiver decisions on their subsequent justice involvement.[44]

Juvenile probation dispositions place even more complicated demands on adolescents' executive functioning abilities, and over much longer time periods than juvenile interrogations. Probation dispositions require youths to (1) readily access multiple probation requirements from memory over the course of several months to years; (2) understand these requirements, their significance, and the implications of fulfilling or violating them; (3) repeatedly make probation-compliant behavioral decisions when faced with complex situations involving real-life distracting stimuli; (4) inhibit noncompliant behaviors; and (5) learn quickly from errors and apply that learning to future compliance with requirements, if the court provides them with such opportunities. Extant research on youth development suggests that, even if youths' cognitive functioning skills were sufficiently developed to assist them in identifying appropriate probation compliant behaviors (e.g., refraining from substance use) while meeting with probation officers, many of these youths would possess insufficient executive functioning abilities to effectively adhere to their probation requirements while in the community. They would be less able to inhibit noncompliant behaviors when confronted with complicated situations and adapt their behavioral plans as needed—particularly when faced with distracting social or emotional situations.

40. *E.g.*, Matthew C. Davidson et al., *Development of Cognitive Control and Executive Functions from 4 to 13 Years: Evidence from Manipulations of Memory, Inhibition, and Task Switching*, 44 NEUROPSYCHOLOGIA 2037, 2037 (2006).

41. *E.g.*, *id.*

42. *See, e.g.*, Jodi L. Viljoen & Ronald Roesch, *Competence to Waive Interrogation Rights and Adjudicative Competence in Adolescent Defendants: Cognitive Development, Attorney Contact, and Psychological Symptoms*, 29 LAW & HUM. BEHAV. 723, 736–39 (2005); Sharon L. Kelley, Addressing Relative Criteria for *Miranda* Waivers: A Comparison of Juvenile Justice Youths' and Adult Offenders' Understanding and Appreciation of the Rights to Silence and Legal Counsel During Police Interrogations (May 2014) (unpublished Ph.D. dissertation, Drexel University), https://idea.library.drexel.edu/islandora/object/idea%3A6033/datastream/OBJ/download/Addressing_relative_criteria_for_Miranda_waivers.pdf.

43. Viljoen & Roesch, *supra* note 42, at 737.

44. *Id.* at 737–38.

B. Brain Development in Adolescence: Socio-Emotional Functioning Correlates

Research regarding the development of the limbic system—the center of the socio-emotional system that includes structures such as the hippocampus, amygdala, and nucleus accumbens—during adolescence contributes to current understanding of adolescents' demonstrated emotional reactivity, intolerance for negative emotions, and difficulty using sufficiently developed cognitive skills when emotionally aroused.[45] Additionally, compared to both children and adults, adolescents demonstrate elevated activity in the nucleus accumbens—a region of the brain responsible for processing rewarding and reinforcing stimuli—when anticipating rewards.[46] This exaggerated elevation in adolescents suggests that immediate rewards are more powerful for youth and may partially explain the increase in risky behaviors among adolescents, particularly in socio-emotional situations. Considering limbic system development in combination with other aspects of brain maturation and functioning reveals that development of this brain system typically precedes prefrontal cortex maturation, resulting in an imbalance between the emotional system and executive controls.[47] As a result, it has been suggested that the emotionally driven reactions of an adolescent's more developed limbic system often prevail over the rational reasoning of his or her underdeveloped prefrontal cortex during socially or emotionally charged situations.[48] Similarly, the structural connection between the prefrontal cortex and amygdala continues to develop into early adulthood; during this development, less efficient communication exists between these regions, and, as a result, youths' cognitive control systems are less able to inhibit and modulate emotional responses.[49] Puberty also results in augmented availability of estrogen and testosterone in the brain, which has been associated with increasing gray matter in the amygdala of boys, potentially contributing to decision making that is highly influenced by emotions, especially among young men.[50]

45. *E.g.*, Todd A. Hare et al., *Biological Substrates of Emotional Reactivity and Regulation in Adolescence During an Emotional Go-Nogo Task*, 63 BIOLOGICAL PSYCHIATRY 927, 932 (2008). Although the subcortical components of the limbic system, particularly within structures associated with reward processing and emotional learning, appear to be developed during adolescence, further refinement of these brain regions continues to take place via synaptic pruning into adulthood. Martin H. Teicher et al., *Evidence for Dopamine Receptor Pruning Between Adolescence and Adulthood in Striatum but Not Nucleus Accumbens*, 89 DEVELOPMENTAL BRAIN RES. 167, 171 (1995); Julia L. Zehr et al., *Dendritic Pruning of the Medial Amygdala During Pubertal Development of the Male Syrian Hamster*, 66 J. NEUROBIOLOGY 578, 586 (2006).

46. Casey et al., *supra* note 30, at 117.

47. Hare et al., *supra* note 45, at 927.

48. Casey et al., *supra* note 30, at 117, 122.

49. Miles Gregory Cunningham et al., *Amygdalo-Cortical Sprouting Continues into Early Adulthood: Implications for the Development of Normal and Abnormal Function During Adolescence*, 453 J. COMP. NEUROLOGY 116, 128–29 (2002); Leah H. Somerville et al., *A Time of Change: Behavioral and Neural Correlates of Adolescent Sensitivity to Appetitive and Aversive Environmental Cues*, 72 BRAIN & COGNITION 124, 127–28 (2010).

50. Megan M. Herting et al., *The Role of Testosterone and Estradiol in Brain Volume Changes Across Adolescence: A Longitudinal Structural MRI Study*, 35 HUM. BRAIN MAPPING 5633, 5641–43

Development of social awareness, emotion regulation, sensation seeking, and risk-taking has been linked to pubertal development of the gonadal system, which regulates certain neurotransmitters (e.g., dopamine, serotonin) and increases the availability of dopamine in the adolescent brain, heightening the sensitivity of the dopaminergic system, implicated in the processing of pleasure, reinforcement, and rewards.[51] Given its contributions to reward processing, adolescents' heightened dopaminergic system sensitivity can make certain behaviors and responses—like risk-taking and peer approval—particularly reinforcing and can lead youths to engage in more risky activities and other reward-seeking behaviors.[52] Further, not only do dopaminergic neurons respond to the *provision* of rewards, but they also respond to the *anticipation* of rewards—particularly when those potential rewards are powerful and salient.[53]

Continued development of the limbic system, increasing connectivity between the amygdala and prefrontal cortex, and maturation of the gonadal system all seemingly relate to adolescents' social and emotional processing immaturity relative to adults. Throughout their adolescent years, youths seek to establish their identities and to bond with peers, but their capacities to accurately read social situations are impeded by social information processing limitations related to their development.[54] These years are characterized by increased socialization, with peers increasingly influencing self-concept and behavior, and the power of parents and other adults diminishing.[55] This period, also consisting of heightened sensitivity to real and imagined peer influence, is accompanied by incomplete emotional development demonstrated by affective lability,[56] increased sensitivity to anticipated rewards,[57] and intolerance of negative

(2014).

51. *See*, *e.g.*, Roshan Cools, *Role of Dopamine in the Motivational and Cognitive Control of Behavior*, 14 NEUROSCIENTIST 381, 383 (2008); Eric E. Nelson et al., *The Social Re-Orientation of Adolescence: A Neuroscience Perspective on the Process and Its Relation to Psychopathology*, 35 PSYCHOL. MED. 163, 165–66 (2005); Erika E. Forbes et al., *Healthy Adolescents' Neural Response to Reward: Associations with Puberty, Positive Affect, and Depressive Symptoms*, 49 J. AM. ACAD. CHILD & ADOLESCENT PSYCHIATRY 162, 165–66 (2010).

52. Laurence Steinberg, *A Social Neuroscience Perspective on Adolescent Risk-Taking*, 28 DEVELOPMENTAL REV. 78, 84 (2008) [hereinafter Steinberg, *A Social Neuroscience Perspective*].

53. Björn H. Schott et al., *Mesolimbic Functional Magnetic Resonance Imaging Activations During Reward Anticipation Correlate with Reward-Related Ventral Striatal Dopamine Release*, 28 J. NEUROSCIENCE 14311, 14316 (2008). Additionally, dopamine is critical for communication between the prefrontal cortex and limbic system, implicating the power of anticipated rewards in the balance between cognitive controls and emotional reactivity in behavioral regulation. Stan B. Floresco & Maric T. Tse, *Dopaminergic Regulation of Inhibitory and Excitatory Transmission in the Basolateral Amygdala-Prefrontal Cortical Pathway*, 27 J. NEUROSCIENCE 2045, 2055 (2007).

54. Suparna Choudhury et al., *Social Cognitive Development During Adolescence*, 1 SOC. COGNITIVE & AFFECTIVE NEUROSCIENCE 165, 167, 171 (2006).

55. Judith G. Smetana et al., *Adolescent Development in Interpersonal and Societal Contexts*, 57 ANN. REV. PSYCHOL. 255, 267 (2006).

56. Jeffrey Jensen Arnett, *Adolescent Storm and Stress, Reconsidered*, 54 AM. PSYCHOLOGIST 317, 319 (1999); Monique Ernst et al., *Triadic Model of the Neurobiology of Motivated Behavior in Adolescence*, 36 PSYCHOL. MED. 299, 300 (2006); Somerville et al., *supra* note 49, at 126.

57. Elizabeth Cauffman et al., *Age Differences in Affective Decision Making as Indexed by*

emotions.[58] Compared to adults, adolescents demonstrate elevated susceptibility to boredom and increased drive toward novel experiences that produce intense sensations.[59]

As a result of in-progress limbic and dopaminergic system development, adolescents demonstrate less mature decision-making abilities relative to adults—especially during socially and emotionally charged situations. For instance, during simulated driving scenarios in the research laboratory, adolescents and adults perform equally well when driving alone; however, adolescent drivers crash at much higher rates when other youths are in the car, whereas adults' crash rates are not affected by the presence of others.[60] The functional correlates of this ongoing socio-emotional development may impact legally relevant decisions as well. For example, youths facing delinquency charges may make plea decisions based upon the advice of peers in an attempt to earn social approval rather than upon the advice of their attorneys—potentially making decisions against their own best interests.[61] Similarly, the prospect of peer approval exerts significant influence on adolescents' decisions to use nicotine, alcohol, and other substances, but adults' decisions to use substances are less affected by others' real or imagined responses.[62] Taken together, these differences in socio-emotional development help explain why youths are particularly prone to taking risks—especially in the presence of peers or when so emotionally aroused that cognitive controls cannot inhibit the affective reactions of the more developed limbic structures.[63] Such risk-taking behavior is discussed in greater detail below within the context of psychosocial maturity.

Juvenile probation requirements frequently place demands on youth that tax their capacities to resist peer pressure and refrain from reward- and sensation-seeking behavior. Common probation requirements include perfect school attendance, consistent compliance with curfew, refraining from substance

Performance on the Iowa Gambling Task, 46 DEVELOPMENTAL PSYCHOL. 193, 205 (2010).

58. Ernst et al., *supra* note 56, at 301; Somerville et al., *supra* note 49, at 126.

59. Pallav Pokhrel et al., *Adolescent Neurocognitive Development, Self-Regulation, and School-Based Drug Use Prevention*, 14 PREVENTION SCI. 218, 220 (2013).

60. Jason Chein et al., *Peers Increase Adolescent Risk Taking by Enhancing Activity in the Brain's Reward Circuitry*, 14 DEVELOPMENTAL SCI. F1, F8 (2011); s*ee also* Margo Gardner & Laurence Steinberg, *Peer Influence on Risk Taking, Risk Preference, and Risky Decision Making in Adolescence and Adulthood: An Experimental Study*, 41 DEVELOPMENTAL PSYCHOL. 625, 630 (2005) (finding that adolescent and young adult participants—unlike adult participants—engaged in more risky driving behaviors when peers were present).

61. Praveen Kambam & Christopher Thompson, *The Development of Decision-Making Capacities in Children and Adolescents: Psychological and Neurological Perspectives and Their Implications for Juvenile Defendants*, 27 BEHAV. SCI. & L. 173, 183 (2009); Jodi L. Viljoen et al., *Legal Decisions of Preadolescent and Adolescent Defendants: Predictors of Confessions, Pleas, Communication with Attorneys, and Appeals*, 29 LAW & HUM. BEHAV. 253, 272 (2005).

62. Studies using fMRI technology have demonstrated that areas of the brain associated with reward processing activated in juvenile participants when they were told that peers were watching their task performance, suggesting that social approval serves as a powerful motivator for adolescents—one that often outweighs any identified potential risks. *See* Chein et al., *supra* note 60, at F7; Steinberg, *A Social Neuroscience Perspective*, *supra* note 52, at 90–92.

63. Steinberg, *Adolescent Development and Juvenile Justice*, *supra* note 25, at 466.

use, and avoiding association with negative peers and others involved with the justice system.[64] Although these are reasonable requirements that address criminogenic needs and risk of future offending,[65] judges and probation officers might fail to recognize the powerful influence of certain rewards for youth, such as peer approval, positive affect produced by exciting behaviors, and strong emotions generated by novel and risky situations. Juvenile justice personnel might assume that youths' cognitive evaluations of risk alone drive their compliance or noncompliance with probation conditions and, consequently, discuss risks of probation violations in the abstract rather than (1) giving youths potential tools for resisting noncompliance with requirements when confronted by socially or emotionally charged situations, (2) providing engaging, prosocial activities as alternatives to the prohibited behaviors, and (3) providing rewards to reinforce compliance with probation stipulations.

C. Brain Development in Adolescence: Psychosocial (Im)maturity Correlates

The interplay between the cognitive, social, and emotional correlates of adolescence described above is reflected in youths' psychosocial maturity, which refers to their abilities to control impulses, delay gratification, consider long-term consequences of behavior, view situations from others' perspectives, and resist peer influence.[66] On average, adolescents lack the psychosocial maturity of adults, even past the ages at which their cognitive maturity meets adultlike expectations.[67] Researchers have extensively evaluated the implications of youths' psychosocial immaturity on behavioral judgment and decision making within the contexts of risk-taking, legal decision making, legal competencies, and criminal responsibility.[68] The Supreme Court has used psychosocial maturity research to inform decisions regarding school-based custodial interrogations[69] and adolescent sentencing.[70] The effects of psychosocial immaturity on adolescents' probation-related decision making have not been empirically examined or referenced in case law; however, by drawing on findings in related areas, we can delineate the potential impact of these still-developing psychosocial abilities on probation-related judgment and decision making.

Adolescents typically demonstrate poorer behavioral judgment and increased risk-taking tendencies relative to adults. More specifically, compared

64. *See* NeMoyer et al., *supra* note 5, at 581.

65. Cindy C. Cottle et al., *The Prediction of Criminal Recidivism in Juveniles: A Meta-Analysis*, 28 CRIM. JUST. & BEHAV. 367, 371 (2001).

66. Laurence Steinberg et al., *Psychosocial Maturity and Desistance from Crime in a Sample of Serious Juvenile Offenders*, JUV. JUST. BULL., Mar. 2012, at 1, 1–2, http://www.ojjdp.gov/pubs/248391.pdf.

67. Steinberg et al., *Are Adolescents Less Mature than Adults?*, *supra* note 24, at 587.

68. *See*, *e.g.*, Kathryn L. Modecki, *"It's a Rush": Psychosocial Content of Antisocial Decision Making*, 33 LAW & HUM. BEHAV. 183 (2009); Elizabeth S. Scott et al., *Public Attitudes About the Culpability and Punishment of Young Offenders*, 24 BEHAV. SCI. & L. 815 (2006);

69. *See, e.g.*, J.D.B. v. North Carolina, 131 S. Ct. 2394 (2011).

70. *See, e.g.*, Miller v. Alabama, 132 S. Ct. 2455 (2012); Graham v. Florida, 560 U.S. 48 (2010); Roper v. Simmons, 543 U.S. 551 (2005).

with adults, adolescents demonstrate reduced consideration of future consequences of their behaviors, increased sensitivity to potential rewards for their behaviors, heightened impulsivity, greater susceptibility to peer influence, and greater difficulty regulating emotions[71]—all of which, taken together, may explain adolescents' higher rates of risk-taking behaviors. Increased propensity toward risk-taking is normative during adolescence.[72] However, unique collateral consequences exist for youths on probation, whose behavior is restricted and closely monitored, and for whom risk-taking can result in probation violations, probation revocations, and residential placements.[73]

Regarding consideration of future consequences, adolescents demonstrate greater difficulties than adults in a number of critical domains. First, they have greater difficulty setting longer-term goals and working toward attainment of those goals, particularly when those goals are externally imposed by authority figures.[74] Second, adolescents are more shortsighted than adults, focusing their attention on the short-term outcomes of behaviors rather than on the potential long-term consequences.[75] Third, adolescents tend to weigh potential positive outcomes more heavily in their decision making than they do risks of possible negative outcomes.[76]

Adolescents' limited abilities to consider future consequences have direct implications for probation-related decision making. Youths on probation in traditional systems are instructed by authority figures (i.e., judges and probation officers) to (1) continuously work toward the long-term goal of completing all probation requirements over a period of months or years, (2) consistently prioritize the long-term objective of successful probation completion over the immediate gratification of tempting behaviors, and (3) repeatedly value the risks of probation violation over the social and emotional rewards of risky behaviors. Such approaches fail to account for youths' natural tendency to impulsively focus on and value potential short-term, positive outcomes rather than long-term, negative consequences—particularly when confronted with high intensity

71. Cauffman et al., *supra* note 57, at 204–05; Laurence Steinberg et al., *Age Differences in Future Orientation and Delay Discounting*, 80 CHILD DEV. 28, 28 (2009); Laurence Steinberg & Kathryn C. Monahan, *Age Differences in Resistance to Peer Influence*, 43 DEVELOPMENTAL PSYCHOL. 1531, 1541 (2007).

72. 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, 1776 (2008).

73. *See generally* Amanda NeMoyer et al., *Predicting Probation Revocation and Facility Placement at Juvenile Probation Review Hearings: Youth-Specific and Hearing-Specific Factors*, 40 LAW & HUM. BEHAV. 97 (2016).

74. Bart Soenens et al., *Conceptualizing Parental Autonomy Support: Adolescent Perceptions of Promotion of Independence Versus Promotion of Volitional Functioning*, 43 DEVELOPMENTAL PSYCHOL. 633, 643 (2007).

75. Steinberg, *Adolescent Development and Juvenile Justice*, *supra* note 25, at 472.

76. Cauffman et al., *supra* note 53, at 206. Although, from a cognitive perspective, adolescents and adults can similarly identify the risk level of a given behavior, adolescents' heightened sensitivity to rewards contributes to their overvaluation of short-term positive outcomes and undervaluation of long-term negative outcomes. Pokhrel et al., *supra* note 59, at 219.

situations or the presence of peers.

D. Implications of Adolescent Development on Probation-Related Decision Making

To summarize, normative characteristics of adolescence, relative to adulthood, include incomplete brain development, relatively immature executive functioning abilities, ongoing identity formation, increased valuation of peers, emotional reactivity, heightened sensitivity to rewards, and psychosocial immaturity. These characteristics heighten youths' propensities for risk-taking behavior, particularly in socially and emotionally charged situations. Relevant to juvenile probation, adolescents' neural immaturity likely interferes with their capacities to keep their probation requirements accessible in active memory while in the community—even if they can recall them accurately while in the relatively low-intensity setting of probation supervision meetings. Further, even if and when adolescents are able to keep their probation requirements in the forefronts of their minds, they are still likely to demonstrate compromised behavioral decision making that could affect compliance or noncompliance with probation conditions.[77]

It is important to note that all neural, cognitive, socio-emotional, and psychosocial processes reviewed up to this point characterize normal adolescent development. However, the characteristics of normative adolescent development that increase propensity toward risky decision making are often compounded by learning disabilities and mental health symptoms,[78] which are common challenges among justice-involved youth.[79] Additionally, though non-justice-involved youths face their own risks associated with their normal, but impulsive and reward-driven, behavioral decision making, these characteristics are associated with unique implications for youths on probation—as their behaviors are restricted to a narrower-than-normal range and they are more closely monitored.[80]

77. For example, if a juvenile probation officer discusses probation stipulations with a youth during supervision meetings, the child may correctly identify the risks (e.g., "I could get locked up.") associated with various behaviors (e.g., substance use, staying out past curfew). However, when confronted with the opportunity for noncompliance while in the community, data on normative adolescent development suggest that, even if the youth is recalling probation requirements in that moment, he or she is more likely to be influenced by the possibility of immediate, positive outcomes (e.g., "Pot calms me down."; "I'm having fun tonight with friends.") than by long-term, negative consequences (e.g., "If I smoke pot, it will show up in my drug screen on Monday."; "If I'm late for curfew tonight, I will get in trouble at my supervision meeting in two weeks."; "My probation might be revoked at my court date next month.").

78. John McNamara et al., *Learning Disabilities and Risk-Taking Behavior in Adolescents: A Comparison of Those with and Without Comorbid Attention-Deficit/Hyperactivity Disorder*, 41 J. LEARNING DISABILITIES 561, 572–73 (2008); Lilach Shalev et al., *Attention Functioning Among Adolescents with Multiple Learning, Attentional, Behavioral, and Emotional Difficulties*, J. LEARNING DISABILITIES, April 2015, at 1, 1.

79. Karen M. Abram et al., *Comorbid Psychiatric Disorders in Youth in Juvenile Detention*, 60 ARCHIVES GEN. PSYCHIATRY 1097, 1097 (2003).

80. Although all adolescents, regardless of justice involvement, are typically slower to learn

Unfortunately, the current structure of most juvenile probation systems fails to recognize the unique characteristics of adolescent development, and thus, many youths likely fail to comply with probation, facing harsh consequences. Revising juvenile probation approaches to incorporate knowledge on adolescent development and behavioral decision making would (1) help youths understand, appreciate, and remember their probation requirements; (2) emphasize short-term, positive outcomes for probation compliant behaviors; (3) deliver sanctions for noncompliant behaviors in ways that enable youths to learn from their mistakes and modify their behaviors in the future; and (4) promote affiliation with positive peers.

III. GRADUATED RESPONSE SYSTEMS

In an effort to foster youths' abilities to successfully complete probation, some jurisdictions are developing and implementing graduated response systems.[81] Grounded in research on adolescent development and behavior change, these structured behavioral management systems provide consistent, predictable, and proportionate responses to youths' behavior. Such responses include creating incentives to reinforce increasingly compliant, positive behaviors and escalating sanctions to respond to increasingly negative, noncompliant behaviors.[82]

A. Conceptual Underpinnings of Graduated Response Systems

The theoretical foundation for graduated response systems relies primarily on the principles of operant conditioning described by B. F. Skinner more than half a century ago.[83] According to the tenets of operant conditioning, reinforcing desired behaviors typically increases the likelihood that such behaviors will occur again,[84] and punishing undesired behaviors will reduce the frequency of these behaviors over time.[85] Reinforcement—commonly referred to as *incentives* in

from errors than adults, non-justice-involved youth are provided with multiple opportunities to learn from their mistakes and to improve their behaviors in the future. For example, youth without justice involvement typically experience repeated, relatively minor consequences for repeated mistakes—such as multiple parental groundings for missed curfews or hangovers from excessive drinking. In contrast, traditional probation approaches rarely allow for repeated mistakes, providing serious consequences for noncompliant behaviors and restricting freedom and behavior to such a degree that youths no longer have opportunities to make different behavioral choices in the future.

81. CTR. FOR CHILDREN'S LAW & POLICY, DEVELOPING A SYSTEM OF GRADUATED RESPONSES FOR YOUTH SUPERVISED BY THE JUVENILE JUSTICE SYSTEM 2 (2012), http://www.modelsforchange.net/publications/540.

82. *Id.* at 1–2.

83. *See, e.g.*, B. F. SKINNER, SCIENCE AND HUMAN BEHAVIOR 62–66 (1953) (detailing the principles of operant conditioning).

84. *See id.* at 65–66; *see e.g.*, THOMAS J. POWER ET AL., HOMEWORK SUCCESS FOR CHILDREN WITH ADHD: A FAMILY-SCHOOL INTERVENTION PROGRAM 70 (2001).

85. ALAN E. KAZDIN, BEHAVIOR MODIFICATION IN APPLIED SETTINGS 68 (1975) [hereinafter KAZDIN, BEHAVIOR MODIFICATION]; ALAN E. KAZDIN, PARENT MANAGEMENT TRAINING: TREATMENT FOR OPPOSITIONAL, AGGRESSIVE, AND ANTISOCIAL BEHAVIOR IN CHILDREN AND ADOLESCENTS 93 (2005) [hereinafter KAZDIN, PARENT TRAINING].

graduated response systems—can be provided in tangible (e.g., public transit tokens, tickets to a sporting event) and nontangible (e.g., praise, reduced frequency of supervision meetings) ways;[86] punishment, or unwanted consequences—commonly referred to as *sanctions* when discussing graduated responses—can be administered by removing something pleasing (e.g., losing a specific privilege) or by imposing something displeasing (e.g., imposing an earlier curfew, adding to a required number of community service hours).[87] Although juvenile probation has traditionally relied on the use of sanctions to respond to noncompliant behavior,[88] incentives have been recognized as an important component of systems promoting young people's compliance with court requirements.[89]

Rooted in learning theory, incentives are an important component of behavioral management systems because they help youths learn and implement new, desired behaviors.[90] In contrast, although applying punishment often results in a reduction or suppression of certain conduct, this technique only *inhibits* undesired behaviors; it does not *replace* them with desired ones.[91] Punishment also tends to lose its effectiveness over time, as youths become accustomed to

86. *See* KAZDIN, PARENT TRAINING, *supra* note 85, at 67.

87. *See id.* at 93 (discussing different kinds of consequences, often called punishment in behavior modification literature).

88. David M. Altschuler, *Policy and Program Perspectives on the Transition to Adulthood for Adolescents in the Juvenile Justice System*, *in* ON YOUR OWN WITHOUT A NET: THE TRANSITION TO ADULTHOOD FOR VULNERABLE POPULATIONS 92, 106 (D. Wayne Osgood et al. eds., 2005) ("Probation and parole are much more accustomed to sanctions than to using positive incentives."); *see* DAVID M. ALTSCHULER & TROY L. ARMSTRONG, U.S. DEP'T OF JUSTICE, INTENSIVE AFTERCARE FOR HIGH-RISK JUVENILES: POLICIES AND PROCEDURES 18–19 (1994), https://www.ncjrs.gov/pdffiles/juvcc.pdf.

89. On its website, the National Council of Juvenile and Family Court Judges (NCJFC) provides links to publications advocating for the use of incentives and sanctions, particularly in juvenile drug courts. *See, e.g.*, *Goal-Oriented Incentives and Sanctions*, NAT'L COUNCIL JUV. & FAM. CT. JUDGES, http://www.ncjfcj.org/goal-oriented-incentives-and-sanctions (last visited June 1, 2016); *see also* NAT'L COUNCIL OF JUVENILE & FAMILY COURT JUDGES, JUVENILE JUSTICE MODEL COURTS, http://www.ncjfcj.org/sites/default/files/Juvenile%20Justice%20Model%20Courts%20Brochure.pdf (last visited June 1, 2016) ("Juvenile delinquency court judges should ensure court dispositions are individualized and include graduated responses, both sanctions and incentives."); NAT'L COUNCIL OF JUVENILE & FAMILY COURT JUDGES, INCENTIVES & SANCTION PROGRAM WORKBOOK (2012), http://www.ncjfcj.org/sites/default/files/JDCTeamI%26SWorkbook_0.pdf.

90. *See* KAZDIN, PARENT TRAINING, *supra* note 85, at 66–67.

91. *See* Albert Bandura, *Punishment Revisited*, 26 J. CONSULTING PSYCHOL. 298, 299 (1962); Linda J. Pfiffner & George J. DuPaul, *Treatment of ADHD in School Settings*, *in* ATTENTION-DEFICIT HYPERACTIVITY DISORDER: A HANDBOOK FOR DIAGNOSIS AND TREATMENT 596, 611 (Russell A. Barkley ed., 4th ed. 2015) ("Teachers who frequently use punishment to the exclusion of positive consequences may be less effective in managing children's behavior, due to a decrease in their own reinforcing value and/or due to the children's having satiated or adapted to the punishment."); Robert E. Larzelere & Brett R. Kuhn, *Comparing Child Outcomes of Physical Punishment and Alternative Disciplinary Tactics: A Meta-Analysis* 8 CLINICAL CHILD & FAM. PSYCHOL. REV. 1, 28 (2005) ("[P]hysical punishment, like other forms of punishment, does not enhance positive development, but only inhibits inappropriate behavior, such as defiance and antisocial behavior.").

the negative experiences.[92] In some situations (e.g., when it is overly punitive),[93] the use of punishment can even unintentionally create new *negative* behaviors.[94] Further, when people repeatedly have negative experiences in situations over which they have no perceived control, they often come to believe the negative consequences are unavoidable and, subsequently, fail to respond appropriately to similar events in the future—an effect known as learned helplessness.[95] Recognizing punishment's limited utility in producing desired positive behaviors in young people,[96] modern juvenile probation reform efforts advocate for the delivery of reinforcement of youths' positive behaviors in addition to the administration of negative consequences for their misbehaviors.[97]

B. Application of Operant Conditioning Principles in Applied Settings

Principles of operant conditioning have been used in a variety of applied settings to encourage youths' positive behaviors and reduce their misbehaviors. Perhaps the most robust empirical support comes from behavior modification research conducted in classrooms. Findings from decades of research conducted in schools suggest that contingency management systems (i.e., systematic use of reinforcement and predictable use of appropriate punishment) are effective in producing changes in children's classroom behaviors—for example, increasing prosocial behaviors and decreasing off-task, disruptive behaviors.[98] Importantly,

92. *See* ALTSCHULER & ARMSTRONG, *supra* note 88, at 20 ("Many IAP youth may be conditioned to punishment, and overused sanctions may scarcely be noticed and have little, if any, effect."); KAZDIN, PARENT TRAINING, *supra* note 85, at 104; Pfiffner & DuPaul, *supra* note 91, at 609–12 (discussing negative consequences); Elery L. Phillips et al., *Achievement Place: Modification of the Behaviors of Pre-Delinquent Boys Within a Token Economy*, 4 J. APPLIED BEHAV. ANALYSIS 45, 47 (1971) (noting that youth typically acclimated to the threat of punishment and stopped performing the desired behavior).

93. *See* KAZDIN, PARENT TRAINING, *supra* note 85, at 104–07 (discussing adaptations to increasing punishment); SKINNER, *supra* note 83 at 190–91 (discussing "byproducts" of severe punishment).

94. Meta-analyses have indicated that corporal punishment was related to negative outcomes for youth. *See, e.g.*, MENDEL, *supra* note 10 (identifying several negative outcomes associated with youth confinement); Elizabeth Thompson Gershoff, *Corporal Punishment by Parents and Associated Child Behaviors and Experiences: A Meta-Analytic and Theoretical Review*, 128 PSYCHOL. BULL. 539, 544, 547 (2002); Larzelere & Kuhn, *supra* note 91, at 24, 26 (suggesting that overly punitive physical responses were related to negative outcomes); Pfiffner & DuPaul, *supra* note 91, at 611.

95. *See* Steven F. Maier & Martin E. P. Seligman, *Learned Helplessness: Theory and Evidence*, 105 J. EXPERIMENTAL PSYCHOL. 3, 16–19 (1976) (discussing learned helplessness); *see also* CTR. FOR CHILDREN'S LAW & POLICY, *supra* note 81, at 2 (discussing learned helplessness in the context of receiving sanctions in juvenile probation); Douglas B. Marlowe & Conrad J. Wong, *Contingency Management in Adult Drug Courts*, *in* CONTINGENCY MANAGEMENT IN SUBSTANCE ABUSE TREATMENT 334, 343–44 (Stephen T. Higgins et al., eds. 2008) (discussing learned helplessness in the context of adult drug courts).

96. *See* KAZDIN, PARENT TRAINING, *supra* note 85, at 92–97.

97. *See* Altschuler, *supra* note 88, at 106 ("Therefore, a graduated response that can encourage compliance (i.e., using incentives and positive motivators) and penalize noncompliance (i.e., using a sanction) is critical.").

98. *See, e.g.*, K. DANIEL O'LEARY & SUSAN G. O'LEARY, CLASSROOM MANAGEMENT: THE SUCCESSFUL USE OF BEHAVIOR MODIFICATION (2d ed. 1977) (discussing similar strategies for

the combination of reinforcement of desired behaviors *and* punishment of undesired behaviors appears to be a critical component of successful behavioral management interventions.[99] Consequences for off-task behavior delivered immediately,[100] consistently,[101] and proportionately[102] were found to be most effective in decreasing children's disruptive behaviors. Further, research has demonstrated that the use of immediate and consistent positive attention for *on-task behaviors* (e.g., "You did a great job following instructions.") can serve as a

managing youths' behavior in the classroom); Christopher Doll et al., *The Token Economy: A Recent Review and Evaluation*, 2 INT'L J. BASIC & APPLIED SCI. 131 *passim* (2013) (summarizing extant research on token economies); Brandi Simonsen et al., *Evidence-Based Practices in Classroom Management: Considerations for Research to Practice*, 31 EDUC. & TREATMENT CHILD. 351, 352–66 (2008) (reviewing evidence-based strategies).

99. Many schools across the country use these principles to increase youths' positive behaviors and decrease negative behaviors through the implementation of positive behavior interventions and support systems. For a discussion of the empirical support for these systems, see generally Robert H. Horner et al., *Examining the Evidence Base for School-Wide Positive Behavior Support*, FOCUS EXCEPTIONAL CHILD., Apr. 2010, at 1; Rob H. Horner et al., *Research*, POSITIVE BEHAV. INTERVENTIONS & SUPPORTS (Apr. 2015), https://www.pbis.org/Common/Cms/files/pbisresources/2014%2007-07%20Evidence%20base%20for%20SWPBS.doc. *See also* Charles H. Madsen, Jr. et al., *Rules, Praise, and Ignoring: Elements of Elementary Classroom Control*, 1 J. APPLIED BEHAV. ANALYSIS 139, 148 (1968) ("[T]he main results indicate: (a) that Rules alone had little effect in improving classroom behavior, (b) the functional status of Ignoring Inappropriate Behavior needs further clarification, (c) the combination of Ignoring and Praising was very effective in achieving better classroom behavior, and (d) Praise for Appropriate Behaviors was probably the key teacher behavior in achieving effective classroom management."); Linda J. Pfiffner & Susan G. O'Leary, *The Efficacy of All-Positive Management as a Function of the Prior Use of Negative Consequences*, 20 J. APPLIED BEHAV. ANALYSIS 265, 270 (1987) (finding that teachers' responses to both undesired and desired behaviors from youth were important for classroom management and that a decrease in the use of negative consequences occurred once students learned what was expected of them); Lee A. Rosén et al., *The Importance of Prudent Negative Consequences for Maintaining the Appropriate Behavior of Hyperactive Students*, 12 J. ABNORMAL CHILD PSYCHOL. 581, 588 (1984) ("The results indicate that the use of a combination of positive and negative consequences was effective in maintaining good classroom behavior."). Rosén and colleagues also suggest that responding to behavior in an appropriate manner is important to classroom management; they found that "imprudent" negative consequences were related to decreased on-task behavior. *Id.* at 595–97; *see also* Russell A. Barkley, *Eight Principles to Guide ADHD Children*, ADDHELPLINE, http://www.addhelpline.org/8_principles.htm (last visited June 1, 2016) ("Mild punishment, when used in conjunction with an incentive program, and when kept in balance such that only one punishment is being dispensed for every two to three instances of praise and reward, can be a powerful means of effecting behavior change.").

100. *E.g.*, Ann J. Abramowitz & Susan G. O'Leary, *Effectiveness of Delayed Punishment in an Applied Setting*, 21 BEHAV. THERAPY 231, 237 (1990); Rosén et al., *supra* note 99, at 601.

101. *E.g.*, Maureen M. Acker & Susan G. O'Leary, *Effects of Consistent and Inconsistent Feedback on Inappropriate Child Behavior*, 19 BEHAV. THERAPY 619, 622–24 (1988); Joel T. Sherrill et al., *When Reprimand Consistency May and May Not Matter*, 20 BEHAV. MODIFICATION 226, 233–34 (1996).

102. *E.g.*, K. Daniel O'Leary & Wesley C. Becker, *The Effects of the Intensity of a Teacher's Reprimands on Children's Behavior*, 7 J. SCH. PSYCHOL. 8, 10–11 (1968) (finding that teachers' loud verbal admonishments increased disruptive behaviors, whereas admonishments made so that only the child displaying the disruptive behaviors could hear resulted in decreases in disruptive behavior); K. Daniel O'Leary et al., *The Effects of Loud and Soft Reprimands on the Behavior of Disruptive Children*, 27 EXCEPTIONAL CHILD. 145, 154–55 (1970) (replicating O'Leary & Becker's findings).

powerful motivator for children and adolescents.[103] For example, positive feedback has been associated with greater on-task behavior,[104] increased intrinsic motivation,[105] and decreased disruptive behavior.[106]

Both in and out of the school environment, operant conditioning principles have also been used to promote positive behaviors among youths with attention and behavior concerns. Specifically, these strategies have been employed to increase desired behaviors (e.g., remaining on task, completing homework) among youths with attention-deficit/hyperactivity disorder (ADHD)[107] and to decrease antisocial and disruptive behaviors among youths with conduct and oppositional behavior problems.[108] Paralleling empirical findings from classroom settings, researchers have advocated for the use of effective strategies for encouraging appropriate behavior among these populations, such that responses are meaningful to youth,[109] provided immediately after target behaviors occur,[110] and provided often.[111] For example, a program designed specifically for youths

103. For discussion of the use of praise, see Madsen, Jr. et al., *supra* note 99, at 148–50; Kevin S. Sutherland et al., *Effect of Varying Rates of Behavior-Specific Praise on the On-Task Behavior of Students with EBD*, 8 J. EMOTIONAL & BEHAV. DISORDERS 2, 5–7 (2000). *See also* Stephen Ray Flora, *Praise's Magic Reinforcement Ratio: Five to One Gets the Job Done*, 1 BEHAV. ANALYST TODAY 64, 64–68 (2000); Tara C. Moore Partin et al., *Using Teacher Praise and Opportunities to Respond to Promote Appropriate Student Behavior*, 54 PREVENTING SCH. FAILURE 172, 173–74 (2009). For discussions of the use and impact of positive feedback, see Patrick C. Friman et al., *Decreasing Disruptive Behavior by Adolescent Boys in Residential Care by Increasing Their Positive to Negative Interactional Ratios*, 21 BEHAV. MODIFICATION 470, 479–84 (1997); Robert J. Vallerand & Greg Reid, *On the Causal Effects of Perceived Competence on Intrinsic Motivation: A Test of Cognitive Evaluation Theory*, 6 J. SPORT PSYCHOL. 94, 98–99 (1984) (exploring the relationships between and among positive feedback, feelings of competence, and intrinsic motivation); Robert J. Vallerand & Greg Reid, *On the Relative Effects of Positive and Negative Verbal Feedback on Males' and Females' Intrinsic Motivation*, 20 CANADIAN J. BEHAV. SCI. 239, 245–47 (1988).

104. *E.g.*, Sutherland et al., *supra* note 103, at 5–7 (finding that providing behavior-specific praise increased children's on-task behaviors).

105. *E.g.*, Judy Cameron & W. David Pierce, *Reinforcement, Reward, and Intrinsic Motivation: A Meta-Analysis*, 64 REV. EDUC. RES. 363, 397 (1994) ("The present [meta-analysis] findings suggest that verbal praise and positive feedback enhance people's intrinsic interest.").

106. *E.g.*, Friman et al., *supra* note 103 (finding that an increase in positive feedback was associated with a decrease in the amount of disruptive behavior).

107. *See, e.g.*, POWER ET AL., *supra* note 84, at 68–77 (describing a specific homework intervention); George J. DuPaul et al., *The Effects of School-Based Interventions for Attention Deficit Hyperactivity Disorder: A Meta-Analysis 1996–2010*, 41 SCH. PSYCHOL. REV. 387, 406–07 (2012); Pfiffner & DuPaul, *supra* note 91, at 604–09 (discussing school-based considerations).

108. *See, e.g.*, Clinton E. Field et al., *A Modification of the Token Economy for Nonresponsive Youth in Family-Style Residential Care*, 28 BEHAV. MODIFICATION 438, 451–55 (2004); *see also* KAZDIN, PARENT TRAINING, *supra* note 85, at 41–49 (describing parent management training for working with youth who exhibit oppositional, aggressive, and antisocial behavioral problems).

109. *E.g.*, Arthur L. Robin, *Training Families of Adolescents with ADHD*, *in* ATTENTION-DEFICIT HYPERACTIVITY DISORDER: A HANDBOOK FOR DIAGNOSIS AND TREATMENT 439, 537, 543–44 (Russell A. Barkley ed., 3d ed. 2006); Barkley, *supra* note 99.

110. *See, e.g.*, KAZDIN, PARENT TRAINING, *supra* note 85, at 72–75; SKINNER, *supra* note 83, at 96; Abramowitz & O'Leary, *supra* 100, at 237; Barkley, *supra* note 99.

111. *E.g.*, Robin, *supra* note 109, at 543–44; Barkley, *supra* note 99. Additionally, research indicates that, when using admonishments to discourage undesired behavior, short reprimands are

with ADHD encourages parents to use a "CISS-4" framework by providing responses that have consistency, immediacy, specificity, and saliency.[112] Experts also recommend providing a greater number of reinforcing responses to youths' behaviors than punishing responses.[113]

Although few juvenile justice systems have attempted to systematically apply these evidence-based behavior modification techniques, their utility has been widely acknowledged in the criminal justice system—for example, in drug courts,[114] adult probation,[115] and prisons.[116] Experts have also encouraged criminal justice systems to adopt the four-to-one incentive to sanction ratios that mimic the recommendations for working with youths with attentional difficulties.[117] Further, incentives have been recognized as an important behavioral management tool within some residential *juvenile* justice settings.[118] Additionally, investigators have examined the effectiveness of contingency management programs in adolescent outpatient substance use treatment and

more effective than long ones. *See* Ann J. Abramowitz et al., *The Relative Impact of Long and Short Reprimands on Children's Off-Task Behavior in the Classroom*, 19 BEHAV. THERAPY 243, 247 (1988).

112. POWER ET AL., *supra* note 84, at 76, 196–97.

113. Specifically, the CISS-4 framework advocates for the delivery of four positive responses for every one negative response. *Id.*; *see also* Barkley, *supra* note 99 ("Mild punishment, when used in conjunction with an incentive program, and when kept in balance such that only one punishment is being dispensed for every two to three instances of praise and reward, can be a powerful means of effecting behavior change.").

114. *See* Douglas B. Marlowe, *Strategies for Administering Rewards and Sanctions*, *in* DRUG COURTS 317, 317 (James E. Lessenger & Glade F. Roper eds., 2007); Douglas B. Marlowe & Kimberly C. Kirby, *Effective Use of Sanctions in Drug Courts: Lessons from Behavioral Research*, 2 NAT'L DRUG CT. INST. REV. 11 (1999).

115. *See generally* AM. PROBATION & PAROLE ASS'N ET AL., EFFECTIVE RESPONSES TO OFFENDER BEHAVIOR: LESSONS LEARNED FOR PROBATION AND PAROLE SUPERVISION (2012), https://www.appa-net.org/eWeb/docs/APPA/pubs/EROBLLPPS-Report.pdf.

116. Faye S. Taxman et al., *Graduated Sanctions: Stepping into Accountable Systems and Offenders*, 79 PRISON J. 182 (1999).

117. *See, e.g.*, Paul Gendreau et al., *Making Prisoners Accountable: Are Contingency Management Programs the Answer?,* 41 CRIM. JUST. & BEHAV. 1079, 1088 (2014); Eric J. Wodahl et al., *Utilizing Behavioral Interventions to Improve Supervision Outcomes in Community-Based Corrections*, 38 CRIM. JUST. & BEHAV. 386, 400 (2011) (finding that adults in intensive supervision programs were more likely to successfully complete probation when they received both incentives and sanctions and when there was a greater ratio of incentives to sanctions).

118. *See, e.g.*, Russell A. Barkley et al., *Evaluation of a Token System for Juvenile Delinquents in a Residential Setting*, 7 J. BEHAV. THERAPY & EXPERIMENTAL PSYCHIATRY 227, 228–30 (1976) (finding that juvenile delinquents were more likely to complete daily chores, less likely to litter, and more likely to perform well in school with the use of positive reinforcements); Richard L. Bednar et al., *Operant Conditioning Principles in the Treatment of Learning and Behavior Problems with Delinquent Boys*, 17 J. COUNSELING PSYCHOL. 492, 496–97 (1970) (finding that monetary reinforcement was effective for increasing reading proficiency and general classroom behavior among delinquent boys); Donald H. Meichenbaum et al., *Modification of Classroom Behavior of Institutionalized Female Adolescent Offenders*, 6 BEHAV. RES. & THERAPY 343, 349, 351–53 (1968) (finding that delinquent girls responded positively to monetary reinforcements); Gaylord L. Thorne et al., *Behavior Modification Techniques: New Tools for Probation Officers*, 31 FED. PROBATION 21, 21–23 (1967) (suggesting that operant conditioning principles were useful tools for juvenile probation officers).

smoking cessation programs, with results indicating a positive relationship between the delivery of incentives and youth compliance with program requirements.[119]

The above findings underscore the importance of incorporating reinforcement into behavioral management systems rather than focusing solely on punishment. Consequently, developmentally informed graduated response systems for juvenile probation should provide incentives for youths' compliant behaviors in addition to gradually escalating sanctions for noncompliant behaviors.

C. Recommended Structure of Graduated Response Systems

As foundational evidence supporting the use of graduated response systems to promote youths' compliance with probation requirements continues to grow, it is important to consider the ways in which the conceptual elements of these structured, predictable frameworks can be translated into practice.[120] To that end, this Part provides recommendations for implementing developmentally informed graduated response systems, designed to foster youths' successful completion of probation.

119. *E.g.*, Suchitra Krishnan-Sarin et al., *Contingency Management for Smoking Cessation in Adolescent Smokers*, 14 EXPERIMENTAL & CLINICAL PSYCHOPHARMACOLOGY 306, 309 (2006); David C. Lott & Simon Jencius, *Effectiveness of Very Low-Cost Contingency Management in a Community Adolescent Treatment Program*, 102 DRUG & ALCOHOL DEPENDENCE 162, 163–64 (2009); Catherine Stanger et al., *A Randomized Trial of Contingency Management for Adolescent Marijuana Abuse and Dependence*, 105 DRUG & ALCOHOL DEPENDENCE 240, 245–46 (2009).

120. For examples of graduated response grids and rationales for behavioral conditioning strategies in Alabama, Minnesota, Washington D.C., and across the country, see DEP'T OF YOUTH REHABILITATION SERVS., GRADUATED RESPONSES: RESPONDING TO POSITIVE AND NEGATIVE BEHAVIOR OF YOUTH PLACED IN THE COMMUNITY (2012) [hereinafter CCLP GRADUATED RESPONSE GRID], http://www.cclp.org/documents/DMC/PM/DYRS.pdf (describing work with the District of Columbia's Department of Youth Rehabilitation Services); CENT. & E. OR. JUVENILE JUSTICE CONSORTIUM, A GRADUATED SYSTEM OF INCENTIVES, INTERVENTIONS, AND SANCTIONS FOR YOUTH OFFENDERS ON PROBATION (2008), http://www.jdaihelpdesk.org/specialprob/A%20Graduated%20System%20of%20Incentives%20Interventions%20and%20Sanctions.pdf (recommending the use of incentives and positive reinforcements to modify behavior for juveniles on probation); VANESSA JONES, USING JDAI STRATEGIES TO REDUCE THE DETENTION OF GIRLS: LESSONS FROM THE FIELD (2012), http://www.jdaihelpdesk.org/intersiteconf2012/Using%20JDAI%20Strategies%20to%20Reduce%20the%20Detention%20of%20Girls%20Lessons%20from%20the%20Field%20-%20Jefferson%20AL%20(2012%20Conference).pdf (reporting examples of using behavioral strategies in Jefferson County, Alabama); JERALD A. MOORE, HENNEPIN COUNTY JUVENILE PROBATION RESPONSE GRID (2013), http://www.jdaihelpdesk.org/intersiteconference2013/Response%20and%20Incentives%20Grid%20%20Hennepin%20County%20MN%20%282013%20Conference%29.pdf (presenting examples of JDAI's graduated response efforts in Hennepin County, Minnesota); *JDAI Tools*, RAMSEY COUNTY, MINN. JUV. DETENTION ALTERNATIVES INITIATIVE, http://www.ramseyjdai.org/tools.shtml (last visited June 1, 2016) (explaining methods used to interact with delinquent juveniles in Ramsey County, Minnesota); *Special Detention Cases*, JDAI HELPDESK, http://www.jdaihelpdesk.org/SitePages/specialdetentioncases.aspx (last visited June 1, 2016) (providing links to graduated response efforts occurring across the country); *Ramsey County Response Grid*, RAMSEY COUNTY, MINN. JUV. DETENTION ALTERNATIVES INITIATIVE, http://www.ramseyjdai.org/pdf/reports/sanctions-grid-final.pdf (last visited June 1, 2016).

1. Help Youths Understand, Remember, and Appreciate Their Probation Requirements.

An important element of structured graduated response approaches is the systematic promotion of youths' understanding, appreciation, and memory of their probation requirements. To identify youths' initial grasp of a court's expectations upon receipt of their dispositions and after review by juvenile probation officers (JPOs), JPOs might provide a brief screening tool. Such a tool could include questions targeting not only youths' understanding of *what* they are being asked to do (e.g., "How many community service hours do you have to complete?"), but also *how* they are expected to fulfill their requirements (e.g., "Whom do you need to talk to about arranging your community service activities?"; "Where will you go to complete your community service hours?"; "How will you get to your community service location?"). Systematically identifying areas of satisfactory understanding and appreciation of probation requirements—as well as those areas that require further explanation—could provide JPOs with insight into youths' conceptualizations of their requirements. In this way, JPOs could guide discussions with their supervisees regarding fulfillment of probation requirements toward the individual needs of the youth during supervision meetings.

In addition to the initial assessment of youths' understanding and appreciation of court stipulations, JPOs should continually discuss probation requirements (e.g., the number of requirements, the specific requirements, what must be done to fulfill these requirements, and the details of how fulfillment will be accomplished) with their supervisees to help them remember their assigned conditions. This review should be a consistent, ongoing dialogue throughout the course of probation rather than a one-time discussion during the initial supervision meeting.[121] Although best practice might require imposition of one requirement at a time, many youths probationers are expected to comply with multiple requirements simultaneously. In such situations, if JPOs consistently check in with supervisees about each condition during supervision meetings, youth probationers may better encode and subsequently recall this information, thereby improving their ability to remember and follow their probation requirements. Checklists of court stipulations might also be used during

121. We suggest such ongoing review because repetition of tasks, behaviors, or concepts is an important part of learning. *See, e.g.*, KAZDIN, BEHAVIOR MODIFICATION, *supra* note 85, at 53–54 (discussing the importance of practice opportunities when learning a new behavior or habit). Research also suggests that "spaced practice," or repetition over multiple time points, is important for learning. As a result, young people who have the opportunity to review their probation requirements more than once—for example, during multiple supervision meetings—should be more likely to remember their requirements over time and, therefore, be better positioned to comply with them. *See, e.g.*, Henry L. Roediger, III et al., *Applications of Cognitive Science to Education*, *in* NEUROSCIENCE IN EDUCATION: THE GOOD, THE BAD, AND THE UGLY 128, 133 (Sergio Della Sala & Mike Anderson eds., 2012) ("The spacing effect is the robust finding that distributing practice, by spacing out several study episodes over time rather than massing them all at once, can substantially boost long-term learning."); Haley A. Vlach & Catherine M. Sandhofer, *Distributing Learning over Time: The Spacing Effect in Children's Acquisition and Generalization of Science Concepts*, 83 CHILD DEV. 1137, 1137–38 (2012).

supervision meetings so that JPOs are able to easily review youths' progress toward fulfilling each requirement in a systematic, predictable way.

Additionally, providing youths with a rationale for *why* they should follow each probation stipulation may contribute to their appreciation of their probation requirements and place probation compliance within a broader and more meaningful context. For instance, rather than merely knowing that they must refrain from marijuana use, young people might better appreciate this requirement and be more committed to following it if they recognize that judges are concerned about disinhibition and increased impulsivity while under the influence of substances, as well as potential illegal behaviors associated with obtaining money for substances, purchasing drugs, and consuming drugs. In addition, youths may be more willing to comply with a requirement to avoid certain other youths if JPOs engage them in discussion about the reasoning behind the stipulation—for example, pointing out how peer influence impacts adolescents' decision-making capabilities, particularly in the context of risky behaviors.[122] Such discussion also may help youths appreciate the consequences of complying or failing to comply with probation requirements, both in the short term (e.g., "If you don't return home by the court imposed curfew, the judge might think you are out getting into trouble and, therefore, put you on in-home detention at your next review hearing.") and the long term (e.g., "Noncompliance could mean you stay on probation for a year instead of six months.").

2. Emphasize Short-Term, Positive Outcomes for Probation-Compliant Behaviors.

Graduated response systems should be designed in such a way that enables youths to experience success almost immediately.[123] Although perfect

122. Scholars argue that perceptions of legitimacy regarding the legal system are related to compliant behavior. *See, e.g.*, Jeffrey Fagan & Tom R. Tyler, *Legal Socialization of Children and Adolescents*, 18 SOC. JUST. RES. 217, 234–36 (2005). Procedural justice principles suggest that youth would be more likely to adhere to their probation requirements if they felt conditions were imposed for legitimate reasons, rather than for arbitrary ones. For a discussion of the relationship between the presence of procedural justice elements in family conflict resolution and adolescents' self-reported offending behavior, see Shelly Jackson & Mark Fondacaro, *Procedural Justice in Resolving Family Conflict: Implications for Youth Violence Prevention*, 21 LAW & POL'Y 101, 120 (1999) ("Overall, adolescents who reported that their parents treated them with personal respect and as valued members of the family engaged in less deviant and antisocial behavior outside the family context."); Emily S. Kuhn et al., *Compliance with Parents' Rules: Between-Person and Within-Person Predictions*, 43 J. YOUTH & ADOLESCENCE 245, 255 (2014) ("Children transitioning into adolescence are more compliant when they feel that parental authority is legitimate . . . .").

123. *See* Graduated Response Workgroup, Graduated Response Guiding Principles and Protocol Development (June 9, 2015) (unpublished guidelines) (on file with authors). Across settings, consensus exists among experts that behavior change in youth occurs in stages. *See* VINCENT B. VAN HASSELT & MICHEL HERSEN, HANDBOOK OF PSYCHOLOGICAL TREATMENT PROTOCOLS FOR CHILDREN AND ADOLESCENTS 210 (Irving B. Weiner ed., 1998) ("The notion of taking gradual steps and setting realistic goals in changing eating and exercise behaviors is germane to pediatric weight control programs, because behavior change is an incremental process. Goals should initially be set so that the participant is likely to succeed and the changed behavior is reinforced. These goals can

performance (e.g., consistently attending school five days per week) should be conceptualized as a long-term goal, courts and juvenile probation departments should identify achievable, short-term goals that allow youths to earn incentives after initial successes.[124] Recognizing and reinforcing early compliance—such as attending school more frequently, attending a supervision meeting, initiating community service work, and making a payment toward court fees or restitution—should help strengthen youths' understanding of the connection between fulfilling probation requirements and positive outcomes; reinforcement should also increase the probability of future compliance. After this initial phase and throughout the probation period, graduated response systems should emphasize effort and improvement over perfect compliance with probation requirements (e.g., attending more school days, even if not yet attending five days a week).

The described framework aligns with behavior-shaping principles such that youths receive reinforcement for initial behaviors that approximate final target behaviors.[125] Over time, incentives are provided only for behaviors that increasingly approach the target behavior, until only demonstration of the target behavior itself earns an incentive.[126] In addition, court personnel must balance standard approaches, which typically aim to address all probation-relevant behaviors at the same time, with principles of effective behavior change, which suggest that fewer behaviors (i.e., one or two) should be addressed at a time.[127]

gradually increase in difficulty with the child's developing success."); *see also* ALAN E. KAZDIN, THE KAZDIN METHOD FOR PARENTING THE DEFIANT CHILD 33–34 (2008) (discussing the process of shaping behavior and emphasizing the importance of recognizing partial success).

124. *Cf.* ALAN E. KAZDIN, THE EVERYDAY PARENTING TOOLKIT: THE KAZDIN METHOD FOR EASY, STEP-BY-STEP, LASTING CHANGE FOR YOU AND YOUR CHILD 47 (2013) ("The process, rather than the outcome in isolation, builds the desired behaviors."); *id.* at 158 ("Praise for approximations of the behavior is important for shaping. Praise for trying and for partial success is also good."); Graduated Response Workgroup, *supra* note 123.

125. *See* KAZDIN, PARENT TRAINING, *supra* note 85, at 45–47; ALAN O. ROSS, CHILD BEHAVIOR THERAPY: PRINCIPLES, PROCEDURES AND EMPIRICAL BASIS 16–17 (1981); SKINNER, *supra* note 83, at 91–95; Kathryn M. Obenchain & Shanon S. Taylor, *Behavior Management: Making It Work in Middle and Secondary Schools*, 79 CLEARING HOUSE 7, 10 (2005).

126. *See* KAZDIN, PARENT TRAINING, *supra* note 85, at 49–50; ROSS, *supra* note 125, at 14–15.

127. The importance of changing fewer rather than greater numbers of behaviors at a time has been recognized in a variety of settings, including when working with children with anxiety and when working with children with attention disorders. *See* GRAD L. FLICK, MANAGING ADHD IN THE K-8 CLASSROOM 160 (3d ed. 2010) ("[T]eachers should focus on one or perhaps two problems at a time, breaking larger tasks into smaller units, and they should prioritize problem behaviors."); KATHARINA MANASSIS, KEYS TO PARENTING YOUR ANXIOUS CHILD 39 (2d ed. 2008) ("Most effective systems focus on one or two behaviors at a time. Anything more than that gets too complicated for the child."); Desmond Kelly et al., *Evaluating and Managing Attention Deficit Disorder in Children Who Are Deaf or Hard of Hearing*, 138 AM. ANNALS DEAF 349, 354 (1993) ("The initial phase of developing a management program may include consulting with a social worker or other professional. This person can help prioritize behaviors that are most critical to the parents and the child. It is important to focus on one or two behaviors at a time."); Daniel T. Moore, *The Importance of Consistency and Patience While Changing Your Child's Misbehavior with Behavior Modification*, YOUR FAM. CLINIC (2000), http://www.yourfamilyclinic.com/adhd/bmod.html ("When using behavior modification, only apply it to one or two behaviors you wish to change. Trying to change too many behaviors at once usually

To achieve this balance, judges may choose to limit the number of stipulations to only those viewed as most critical, or they may choose to impose probation requirements sequentially, so that youths are asked to comply with only one new requirement at a time.[128] If it is infeasible to limit the number of requirements simultaneously imposed, JPOs might monitor youths' compliance with all court-ordered conditions using a brief checklist while also collaborating with supervisees to select a single goal on which to focus between meetings (e.g., to complete five hours of community service over the next week).

3. Deliver Sanctions that Enable Youths to Learn from Their Noncompliant Behaviors.

Graduated response systems should provide predictable, proportionate, and fair sanctions for noncompliant behaviors. To ensure that responses are predictable, JPOs should discuss sanctions for undesired behavior at the outset of probation (i.e., before misbehavior occurs) so that youths are aware of how their noncompliant behaviors will be addressed.[129] Sanctions should also be proportionate to the observed misbehavior. For example, arriving home an hour past curfew one night might be best addressed with a verbal warning by the JPO or a weekend of JPO-imposed early curfew, rather than with probation revocation, electronic monitoring, or even several weeks of early curfew. Extant research suggests that disproportionate (i.e., overly punitive) responses to noncompliant behavior are *not* more effective than proportionate responses.[130] Instead, graduated response frameworks should provide youths with opportunities to learn from their noncompliant behaviors so that they are able to make different choices the next time they face a similar situation (e.g., "The last time I got in a fight after school, my curfew was moved an hour earlier. To avoid that outcome, I'll walk away this time."), rather than removing youths from the community and, thus, also removing them from opportunities to revisit past

causes confusion. When your child has mastered one correct behavior, you can then move onto another. Dealing with one behavior at a time and using patience and consistency, you will be able to resolve many behavior problems through behavior modification.").

128. However, it is important to balance developmental considerations favoring limited numbers of simultaneous requirements, potentially by imposing them sequentially, with policy considerations that disfavor using these strategies as justification for prolonged court supervision.

129. Consistent, predictable responses provide youth with a better understanding of how they are expected to behave and with knowledge of the consequences for engaging in misbehavior (e.g., skipping school will result in increased monitoring from your JPO). Graduated Response Workgroup, *supra* note 123; *see also* Acker & O'Leary, *supra* note 101, at 622–24; Sherrill et al., *supra* note 101, at 233–34.

130. *E.g.*, Graduated Response Workgroup, *supra* note 123. As noted above, corporal punishment has been associated with negative outcomes for youth. *See* Gershoff, *supra* note 94, at 549–50 (reviewing eighty-eight studies and concluding that corporal punishment is associated with ten undesirable constructs); Larzelere & Kuhn, *supra* note 91, at 26 (suggesting that overly punitive physical responses were related to negative outcomes); *see also* Pfiffner & DuPaul, *supra* note 91, at 611 ("Teachers who frequently use punishment to the exclusion of positive consequences may be less effective in managing children's behavior, due to a decrease in their own reinforcing values and/or because children are satiated or have adapted to the punishment.").

choices and make better decisions in similar scenarios in the near future.

Finally, graduated response systems should *fairly* sanction misbehavior, incorporating elements of procedural justice—the idea that individuals' perceptions of the legitimacy and fairness of the law and legal entities (e.g., police officers, judges, probation officers) influence their rule-following behaviors.[131] More specifically, research exploring the relationship between procedural justice and offending behavior among youth—with particular focus on the ways in which adolescents come to understand and perceive the law (i.e., legal socialization)—suggests that youths who endorse a greater perception of legitimacy in the legal system also report engaging in fewer delinquent behaviors.[132] Graduated response systems seek to deliver fair responses to youths' misbehavior by providing consistent, predictable, and proportionate consequences. Responding to misbehavior in this way can help to promote perceptions among youths that sanctions were delivered justly—rather than arbitrarily or inequitably—and may help to strengthen the perceived connection between their behaviors and the corresponding consequences.[133] As described earlier, the work to introduce graduated sanctions should be done hand in hand with work to reduce racial disparities in the system; youths will be more likely to perceive the system as fair if it is applied equitably to individuals of different races, ethnicities, and economic backgrounds.

4. Promote Affiliation with Positive Peers.

Graduated response frameworks should provide youths with opportunities to take part in prosocial activities and engage with positive peers (e.g., playing in a sports league, taking art classes). In addition to a link between negative peer

131. *See* TOM R. TYLER & YUEN J. HUO, TRUST IN THE LAW: ENCOURAGING PUBLIC COOPERATION WITH THE POLICE AND COURTS xiv–xv (2002); Tom R. Tyler, *Procedural Fairness and Compliance with the Law*, 133 SWISS J. ECON. & STAT. 219, 236 (1997); Tom R. Tyler, *Procedural Justice, Legitimacy, and the Effective Rule of Law*, 30 CRIME & JUST. 283, 292 (2003) (discussing procedural justice principles and a review of research). Empirical support for the link between perceptions of procedural justice and reoffending has emerged among justice-involved adults such that, when arrested individuals report being treated in a just manner by police, they are less likely than arrested individuals who did not believe they were treated fairly to engage in similar behaviors in the future. *See* Raymond Paternoster et al., *Do Fair Procedures Matter? The Effect of Procedural Justice on Spouse Assault*, 31 LAW & SOC'Y REV. 163, 190, 192 (1997) (finding that rates of documented reoffending behavior were similar between suspects who had not been arrested—those who received only a warning—and those who had been arrested and felt they had been treated in a just manner).

132. *See, e.g.*, Jeffrey Fagan & Alex R. Piquero, *Rational Choice and Developmental Influences on Recidivism Among Adolescent Felony Offenders*, 4 J. EMPIRICAL LEGAL STUD. 715, 734–41 (2007); Jeffrey Fagan & Tom R. Tyler, *Legal Socialization of Children and Adolescents*, 18 SOC. JUST. RES. 217, 231–37 (2005); Lyn Hinds, *Building Police—Youth Relationships: The Importance of Procedural Justice*, 7 YOUTH JUST. 195, 201–03, 205 (2007); Alex R. Piquero et al., *Developmental Trajectories of Legal Socialization Among Serious Adolescent Offenders*, 96 J. CRIM. L. & CRIMINOLOGY 267, 295–298 (2005); Erika K. Penner et al., *Procedural Justice Versus Risk Factors for Offending: Predicting Recidivism in Youth*, 38 LAW & HUM. BEHAV. 225, 232–33 (2014). *But see* Erika K. Penner et al., *supra*, at 228–30 (finding a relationship between procedural justice and self-reported offending behavior over a three-month time frame, but not a six-month time frame).

133. *See* CTR. FOR CHILDREN'S LAW & POLICY, *supra* note 81, at 2.

group association and continued antisocial behavior,[134] research suggests that interventions for justice-involved youths that separate them from prosocial peers can actually *increase,* rather than decrease, the frequency and intensity of negative behaviors.[135] Facilitating youths' engagement with positive peers and activities limits their opportunities to engage with antisocial peers' activities, thus addressing a risk factor for future reoffending and promoting long-term positive outcomes for youth.[136] Although court-imposed probation requirements should reflect the importance of engaging in prosocial activities to address criminogenic needs, within graduated response systems, incentives also can provide opportunities to promote positive interactions with non-justice-involved youths in contexts appealing to youth. For instance, by improving compliance with probation requirements, youths might earn a membership to a local gym or credit for dance or music classes—experiences they may not have been afforded previously. Prosocial activities provide youths with positive alternatives to afterschool or evening activities that frequently result in negative consequences, helping to promote positive development among court-involved young people, as well as enhancing their capacities to successfully complete probation.

D. Implementation and Evaluation of Graduated Response Systems

A growing number of jurisdictions nationwide are implementing developmentally informed graduated response systems in their juvenile justice departments.[137] The expansion of such frameworks in juvenile probation has prompted policymakers to create guidelines for program development and implementation to assist juvenile probation departments that are in the process of creating their own graduated response systems (e.g., District of Columbia).[138]

134. *See generally* Thomas J. Dishion, *When Interventions Harm: Peer Groups and Problem Behavior*, 54 AM. PSYCHOLOGIST 755 (1999).

135. *See, e.g.*, Kenneth A. Dodge et al., *Deviant Peer Influences in Intervention and Public Policy for Youth*, 20 SOC. POL'Y REP. 3, 15 (2006) ("It is now becoming known that well-intentioned adults and government programs may also exacerbate deviant peer influences by placing deviant youth into programs and settings that are populated by other deviant youth. Perversely, much of what we do as public policy is to segregate deviant youth from their mainstream peers and assign them to settings with other deviant youth."); Leslie D. Leve & Patricia Chamberlain, *Association with Delinquent Peers: Intervention Effects for Youth in the Juvenile Justice System*, 33 J. ABNORMAL CHILD PSYCHOL. 339, 345–46 (2005).

136. *See* Cottle et al., *supra* note 65 at 386–87 (finding that negative peer association is a youth-specific risk factor for recidivism).

137. For example, Ramsey County, Minnesota's JDAI website provides its graduated response grid along with the rationale behind it. *Ramsey County Response Grid, supra* note 120. The Fairfax County, Virginia website also provides its graduated response grid and the rationale for its use. FAIRFAX CTY., VA., STRUCTURED DECISION MAKING, http://www.fairfaxcounty.gov/courts/jdr/documents/sdmsummary.pdf. The website for the Center for Children's Law and Policy (CCLP), a nonprofit advocacy organization, features a document discussing the organization's work with the District of Columbia Department of Youth Rehabilitation Services (DYRS) and provides a rationale for the graduated response approach and example grids. *See* CCLP GRADUATED RESPONSE GRID, *supra* note 120.

138. For example, CCLP has created guidelines to help policymakers formulate their graduated response systems. *See* CTR. FOR CHILDREN'S LAW & POLICY, *supra* note 81. For additional suggestions

These guides suggest that policymakers attempt to understand existing approaches to probation, develop lists of desired and undesired behaviors and corresponding incentives and sanctions, provide staff with training on the new graduated response policies and procedures, and, finally, implement and evaluate the system.[139] Organizations advocating for reform have identified ongoing program evaluation as a critical element of the implementation process,[140] as it allows jurisdictions to determine whether graduated response systems are, indeed, promoting youths' abilities to successfully complete probation and reducing rates of detention and placements, particularly for technical violations of probation.[141] Although empirical information on the effectiveness of these programs is scant, several jurisdictions are currently developing mechanisms for program evaluation.[142]

Tools for evaluating graduated response systems should include data-tracking mechanisms to enable information collection at the individual case management level, as well as at the broader system level.[143] For individual cases, ongoing tracking and data collection would enable JPOs to monitor information specific to each youth over time, such as the frequency of responses provided (e.g., "Are incentives delivered more frequently than sanctions, as recommended?"), the types of incentives and sanctions delivered, whether those responses are delivered as intended to that specific probationer, and probation-related behaviors that follow receipt of incentives and sanctions.[144] Real-time review of these data would assist in identifying whether the administered incentives and sanctions are effective in helping to shape the behavior of a particular youth, whether the target behaviors need to be better specified,

on implementing graduated response systems, see NAT'L JUVENILE JUSTICE NETWORK, IMPLEMENTING AN EFFECTIVE GRADUATED RESPONSES SYSTEM, http://njjn.org/uploads/digital-library/Implementing-Effective-Graduated-Responses-System.docx (last visited June 1, 2016).

139. *See, e.g.*, NAT'L JUVENILE JUSTICE NETWORK, *supra* note 138, at 5–10 (outlining eleven steps necessary for the successful development and implementation of graduated response systems).

140. *E.g.,* THERESA L. BOHANNAN & CRYSTAL DUARTE, NAT'L COUNCIL JUVENILE & FAMILY COURT JUDGES, SEEN, HEARD, AND ENGAGED: A PROCESS EVALUATION FOR CHILDREN IN COURT PROGRAMS 2–5 (2013), http://www.ncjfcj.org/sites/default/files/children_in_court_programs_final.pdf; PAUL DEMURO, ANNIE E. CASEY FOUND., PATHWAYS TO JUVENILE DETENTION REFORM: CONSIDER THE ALTERNATIVES 41–42 (1999), http://www.yapinc.org/Portals/0/Documents/Resources/Pathways%20-DeMuro.pdf; MARK W. LIPSEY ET AL., CTR. FOR JUVENILE JUSTICE REFORM, IMPROVING THE EFFECTIVENESS OF JUVENILE JUSTICE PROGRAMS: A NEW PERSPECTIVE ON EVIDENCE-BASED PRACTICE 17–18 (2010), http://cjjr.georgetown.edu/wp-content/uploads/2015/03/ImprovingEffectiveness_December2010.pdf.

141. *See, e.g.*, CTR. FOR CHILDREN'S LAW & POLICY, *supra* note 81, at 7; NAT'L JUVENILE JUSTICE NETWORK, *supra* note 138.

142. *See, e.g.*, Naomi Goldstein, *Advancing a Well-being Framework in Philadelphia's Youth Justice System*, STONELEIGH FOUND., http://stoneleighfoundation.org/content/advancing-well-being-framework-philadelphias-youth-justice-system-0 (last visited June 1, 2016).

143. *See* NAT'L JUVENILE JUSTICE NETWORK, *supra* note 138, at 9 (urging officials to consider how data can be used to evaluate graduated response systems).

144. For example, CCLP states that data tracking could provide insight into whether responses are delivered consistently and immediately, two important characteristics of responses within behavior modification programs. *See* CTR. FOR CHILDREN'S LAW & POLICY, *supra* note 81, at 7.

whether more meaningful incentives and sanctions need to be identified for that youth, or whether the incentives and sanctions may need to be administered in a more timely manner.

At the system level, real-time review of tracking data can help identify needed areas of improvement during the early implementation phase of a graduated response system and allow for more prompt adjustment of policies and procedures.[145] Continuous data collection also would allow evaluators to investigate key questions about the effectiveness of the program as a whole.[146] For instance, are incentives and sanctions promoting youths' compliance with probation requirements? Are graduated responses promoting youths' successful completion of probation?

To collect meaningful data that can be used for program evaluation purposes, relevant policymakers should generate operational definitions of target variables and outcomes while developing graduated response systems.[147] For example, if youths' compliance with probation requirements serves as an outcome of interest, departments must decide how to define and measure "compliance." They might choose to measure compliance by examining (1) the number of JPO-reported violations, (2) the number of violations youths self-report to a neutral third-party researcher, (3) the number of incentives versus sanctions administered, (4) the number of times youths are rearrested, and/or (5) the number of times youths' probation dispositions are revoked. The likelihood of a meaningful program evaluation increases when target outcomes are clearly defined prior to program implementation so that they can be accurately measured via ongoing data collection.

Finally, given that JPOs often have large caseloads that require considerable amounts of paperwork, it is essential to create a data collection system that minimizes additional work for participating JPOs. As a result, data-tracking mechanisms should be incorporated into JPOs' existing case management practices—for example, data collection for evaluation purposes could pull information from existing case management paperwork rather than require creation of additional and, perhaps, repetitive documents for JPOs to complete. Such considerations should minimize the additional burden placed on JPOs and would, therefore, likely increase the probability that they complete the documentation needed for program evaluation purposes.

145. CCLP's guidelines suggest that feedback from youth, families, and staff can be used to amend policies and procedures. *Id.*

146. CCLP recommends that agency officials "gather quantitative information to help inform their work." CTR. FOR CHILDREN'S LAW & POLICY, GRADUATED RESPONSES TOOLKIT: NEW RESOURCES AND INSIGHTS TO HELP YOUTH SUCCEED ON PROBATION 31–37 (2016), http://www.cclp.org/documents/Graduated%20Responses%20Toolkit.pdf (identifying several ways to utilize data to inform, track, and improve graduated response programs and outcomes).

147. Specifically, policymakers should ask themselves: "How will the agency measure whether the reform has achieved its goals?"

IV. POLICY CONSIDERATIONS: CAUTIONS AND CONTEXT

The juvenile justice system has a history of seemingly positive intentions—such as a focus on rehabilitation—applied without sufficient constitutional or other procedural protections. Thus, in the name of rehabilitation, young people in some cases have faced long, harsh sentences far beyond what adults would have received.[148] Moreover, from its inception, the system has applied consequences disparately to youth of color and poor youth.[149] As a result, we contextualize our proposal for developmentally informed probation practices within an analysis of constitutional issues and policy considerations. We consider how to ensure due process protections while still granting a probation department sufficient flexibility to impose graduated sanctions. We also suggest that involving youths and their families in developing probation goals and identifying incentives and sanctions may help reduce probation violations and also minimize disparities along lines of race and class. Finally, we highlight the importance of ongoing data collection to ensure that the system is improving outcomes, preventing juvenile incarceration, and reducing racial disparities for young people in the juvenile justice system.

The United States Supreme Court has held that probationers are entitled to hearings prior to probation revocation—given the severe loss of liberty at issue[150]—and that they must be afforded the right to counsel at such hearings.[151] At these hearings, right to counsel is particularly important for children, as they have more difficulty than adults in understanding, let alone navigating, legal proceedings without a lawyer.[152] Additionally, children's susceptibility to coercion heightens the risk of unfairness in legal proceedings.[153] Finally, the rehabilitative goals of the juvenile justice system, including vesting children with a belief in the fairness of the system, is enhanced when children have counsel.[154]

Young people have a right to the assistance of counsel at probation revocation hearings; the degree of due process required at other modifications of probation terms is less settled. The Wisconsin Court of Appeals, for example, concluded that although adult probationers are not entitled to the full panoply of due process rights at probation modification, they are entitled to a hearing, notice, the right to be present, the right to present evidence and cross-examine witnesses, and the right to have conditions of probation modified on the basis of

148. *See, e.g., In re* Gault, 387 U.S. 1, 29 (1967).

149. NELL BERNSTEIN, BURNING DOWN THE HOUSE: THE END OF JUVENILE PRISON 45, 59–61 (2014).

150. Gagnon v. Scarpelli, 411 U.S. 778, 781–82 (1973).

151. Mempa v. Rhay, 389 U.S. 128, 137 (1967).

152. *Gault*, 387 U.S. at 38–39 n.65; s*ee also* Powell v. Alabama, 287 U.S. 45, 57–58, 71 (1932) (recognizing that defendants were "young, ignorant, [and] illiterate," which contributed to the devastating impact of their denial of effective assistance of counsel).

153. *See Gault*, 387 U.S. at 39 (recognizing that counsel for juveniles is necessary "wherever coercive action is a possibility" (quoting PRESIDENT'S COMM'N ON LAW ENFORCEMENT & ADMIN. OF JUSTICE, THE CHALLENGE OF CRIME IN A FREE SOCIETY 86–87 (1967))).

154. *Id.* at 26.

true and correct information.[155] However, the Court of Criminal Appeals of Texas concluded that due process was not violated when a probationer's terms were modified without a hearing because the Texas statute permitted such modifications, the terms were reasonable, and the new terms could have been included in the original probation terms.[156] Similarly, state case law in some jurisdictions has established that probation departments may implement and support probation conditions set by a judge, but may not add new conditions in accordance with the separation of powers doctrine.[157]

To ensure due process while still allowing the flexibility needed to effectively implement graduated sanctions, probation terms should be set at a hearing with counsel. The terms should specify which array of sanctions may be imposed, the length of probation, and the authority of the probation officer to adapt the terms within those specifications. A young person should then be afforded an additional hearing with counsel if probation may be revoked or if the probation officer wishes to impose any term not explicitly listed in the order. This arrangement allows for the involvement of counsel in ensuring that probation terms are compatible with the needs and developmental status of the young person, but still enables JPOs to operate with the flexibility they need to successfully use graduated responses.

From the inception of the juvenile court, the role of the JPO has been complex and often conflicted. Under the original juvenile court act in Illinois, in 1899, a JPO was obligated to "represent the interests of the child when the case is heard; to furnish to the court such information and assistance as the judge may require; and to take such charge of any child before and after trial as may be directed by the court."[158] Thus, the probation officer had duties to both the court and the child. Though our statutes and our juvenile justice systems are more sophisticated today, conflicts persist. JPOs are obligated to report a youth's violations of probation to the court. At the same time, the most effective probation officers often play a supportive role with the young people under their supervision. Using developmentally appropriate graduated sanctions, in addition to positive incentives, may heighten the confusion, as young people may increasingly see probation officers as mentors or supporters. Moreover, to the extent that JPOs seek more detailed information to inform selections of sanctions and incentives, that information may be subject to reporting to the court. To mitigate these problems, probation officers should be required to make clear their role, and their duty to report to the court, with all young people under their supervision. Policies should also ensure any needed counseling or therapy is provided by an independent therapist with full confidentiality protections in place to ensure that information disclosed in sessions is not shared with the probation officer or the court without the young person's consent.

In a similar vein, problems may emerge if graduated response programs

155. State v. Hays, 496 N.W.2d 645, 650 (Wis. Ct. App. 1992).

156. Sanchez v. State, 603 S.W.2d 869, 870 (Tex. Crim. App. 1980).

157. *See, e.g.,* State v. Stevens, 646 S.E.2d 870, 871–72 (S.C. 2007).

158. Illinois Juvenile Court Act § 6, 1899 Ill. Laws 133 (repealed 1965).

involve increased monitoring of youths' behavior, which in turn, may lead to heightened sanctions. Careful data collection should be designed to identify whether this becomes a problem, and policies should clarify that corrective action will be taken if the existing graduated response program is having unintended, negative consequences, such as use of increased, rather than decreased, placement. Such data should specifically track outcomes and interventions by race, class, and ethnicity to ensure that sanctions and incentives are applied equitably and that any disparities are addressed immediately.

Often, the juvenile justice system intervenes with young people without fully involving families. In recent years, policymakers have begun recognizing the importance of working closely with families, especially parents, to develop successful interventions for youth.[159] Parents are often the best sources to identify children's strengths and weaknesses. Working with parents also increases the chance that young people will receive consistent messages from multiple adults in their lives.

Finally, graduated response approaches to probation risk net widening in the justice system, bringing young people who would not otherwise be under juvenile justice supervision into the system because judges, probation officers, teachers, or even families believe they will benefit from the services provided. Although graduated responses may provide a means for positive intervention in youths' lives, these interventions should not take the place of supports from schools, families, and communities. Sanctions should be used within the juvenile justice system only in the relatively rare cases in which youths cannot be served informally in their communities by their schools, families, or other programs and services. Moreover, as described earlier, work to improve probation practices should be done hand in hand with efforts to address excessive reliance on the justice system, racial disparities within the system, and overincarceration.

159. *See, e.g.,* CTR. FOR JUVENILE JUSTICE REFORM, SAFETY, FAIRNESS & STABILITY FOR YOUTH & FAMILIES—RECOMMENDATIONS TO STRENGTHEN FEDERAL AGENCY SUPPORT OF FAMILY ENGAGEMENT EFFORTS (2011), http://cjjr.georgetown.edu/wp-content/uploads/2015/03/FamilyEngagement_September2011.pdf; OFFICE OF JUVENILE JUSTICE & DELINQUENCY PREVENTION, FAMILY LISTENING SESSIONS EXECUTIVE SUMMARY (2013), http://www.ojjdp.gov/pubs/241379.pdf.