Coalition for Juvenile Justice
Applying Research to Practice

What Are the Implications of Adolescent Brain Development for Juvenile Justice?

The second in a two-part presentation of research findings with potential to inform and improve juvenile justice and delinquency prevention policy and practice.
Brain imagery now allows us to see some of the developmental milestones achieved by the human brain as it grows and matures throughout the early stages of life, confirming in pictures what parents and those who work closely with youth have long found to be true: adolescence is a period of gradual maturation. Hard science demonstrates that teenagers and young adults are not fully mature in their judgment, problem-solving and decision-making capacities.

In the spring of 2006, the Coalition for Juvenile Justice (CJJ), with grant support from the Office of Juvenile Justice and Delinquency Prevention (OJJDP) at the U.S. Department of Justice, devoted a national conference to explore how juvenile justice systems can work more effectively with youth and families in light of growing and more refined knowledge about the nuances of adolescent development and maturation. Some of the ideas about applying research to juvenile justice practice are contained in this brief report—the second of two resource papers derived from presentations and discussions held at and since the conference.
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Executive Summary

What causes adolescents to engage in unhealthy or destructive behavior? How can communities prevent a naturally rebellious age from turning into a lifetime of bad choices? And how should society respond to adolescents whose actions are harmful, destructive or violate the law?

A landmark effort to address issues of this nature led to the creation of the juvenile court system more than a hundred years ago, in 1899. The system was founded on the core belief that delinquent children—like all children—require and deserve developmentally appropriate and rehabilitative responses from the adults and adult-led systems designated to help them.

Today, a growing anthology of brain development research presents visible scientific evidence to enhance our understanding of the nature of adolescence. The findings hold implications to suggest improvements in the way our society at large, including juvenile justice professionals, practitioners and advocates, views adolescence and seeks to teach, train, manage and rehabilitate youth.

This report from the Coalition for Juvenile Justice (CJJ), produced in partnership with the Office of Juvenile Justice and Delinquency Prevention (OJJDP), emerged from the desire of state advisory group members and juvenile justice practitioners to explore and uncover a broader understanding of adolescence. We wished to look carefully at the implications inherent in the rapid growth of the brain well beyond the teenage years and into one’s 20s. We wanted to educate ourselves and others as to how such understandings may better inform and shape optimal responses to youth at risk and to youth who violate the law.

The very existence of a juvenile court system acknowledges the need for developmentally appropriate responses tailored to the amenable nature of youth. Yet, current federal, state and local laws
may take a two-pronged, often contradictory approach toward addressing adolescents. One set of laws has been crafted to recognize that youth are impressionable, immature and lacking in sound judgment. Therefore, jurisdictions prohibit youth from driving, voting, drinking, marrying or serving in the armed forces before certain designated ages, generally between ages 16 and 21. At the same time, another set of laws takes an opposing view of youth, defining maturity by the gravity of one's mistakes and proposing that young people, although clearly not yet fully mature, should serve out adult-type punishments because they are capable of the same sorts of actions as adult criminals.

Such matters of concern to our society are expressed more fully in our report and followed by recommendations for individual, systemic, family and community responses. Thank you for taking the time to delve into these matters.

Coalition for Juvenile Justice
Washington, DC
2006
What Are the Implications of Adolescent Brain Development for Juvenile Justice?

Tell an ordinary adult that adolescents can be moody, impulsive, immature and risk takers, and prepare to be met with total agreement. Many adults readily confess to having once been unruly adolescents, or they know cautionary tales of teenagers (perhaps their own) behaving badly. Aaron White, Ph.D., an assistant research professor in the Psychiatry and Behavioral Sciences Department at Duke University Medical Center, captures a general consensus on adolescents musing, “They have more gas than brakes.”

Nevertheless, consensus splinters when the topic broadens: What causes adolescents to engage in unhealthy or destructive behavior? How can communities prevent a naturally rebellious age from turning into a lifetime of bad choices? And how should society respond to adolescents whose actions are harmful, destructive or violate the law? A landmark effort to address these issues led to the creation of the juvenile court system more than a hundred years ago, in 1899. The system was founded on the principles that children require developmentally appropriate and rehabilitative responses to delinquency. In the subsequent century, new findings and schools of thought about youth development continue to further shape the juvenile court system.

Now, too, a growing anthology of brain development research presents visible scientific evidence to enhance our understanding of the nature of adolescence. The findings hold implications to
suggest improvements in the way that society at large, including juvenile justice professionals, practitioners and advocates, views adolescence and seeks to teach, train, manage and rehabilitate youth.

**UNDERSTANDING ADOLESCENCE—A PERIOD OF CHANGE AND GROWTH**

When delving into the nature of brain maturation, it is important to understand the wider stage of adolescence on which neurological changes in the brain take place. Most people recognize adolescence as the transition between childhood and adulthood. Yet, the complexities of the transition are often underestimated.

Adolescence is an intense period of physical, emotional, intellectual and social development. Like puberty, adolescence does not begin and end at the same age for everyone, but typically runs its course between the ages of ten and 25 years. Physiological changes revealed in cracking voices and acne are visible, yet the neurological, cognitive and emotional changes of adolescence cannot be identified so visibly.

The largely invisible, internal components of adolescence are critically important. According to Marilyn Benoit, M.D., a child and adolescent psychiatrist and medical director of the Devereux Foundation’s Chesapeake Network, healthy adolescent development leads young people to work toward five key areas of maturity:

1) **Self efficacy**: one’s perceived ability to shape the events and outcomes in his or her life;
2) **Self agency**: one’s capacity to control his or her thoughts, motivations and actions;
3) **Identity**: the qualities and preferences that represent one’s being;
4) **Autonomy**: the degree of freedom one has to govern oneself; and
5) **Significant intimate relationships**: a network of people concerned about one’s well being.

Maturing in these five areas requires judgment, impulse control and emotional stability—all of which are regulated by the brain. It also compels an adolescent to set and test new boundaries. As White points out, “We want some of this exploration to happen. It needs to. We just want it to be healthy.”

**INSIDE THE ADOLESCENT BRAIN**

Brain development in infancy and early childhood is well documented largely because the changes during this period of life are so apparent and enjoyable. At birth, the brain is a quarter of the physical size it will be when fully developed. Within 18 months, it is half as big as it will ever be, and between the ages of five and six, the brain has reached its full dimensions. In addition, the brain demonstrates its enormous developmental potential as young children strive to master motor skills, learn language (or languages), develop memory and contend with growing social and emotional awareness.

Brain maturation during adolescence is also dramatic and crucial. Today, advancements in neuron-imagery, such as Functional Magnetic Resonance Imaging (fMRI), coupled with targeted research, enable us to take a look at the actual physical development and transformation of the brain at all stages of life. During adolescence, several areas of the brain go through their final developmental stages and develop greater complexity, which in turn affects thinking, behavior and potential for learning and rehabilitation.

**Dopamine**

One of the key developmental changes has to do with shifting levels of dopamine in the brain. Dopamine is a chemical produced by the body that affects memory, concentration, problem solving
and mental associations connecting actions and pleasure in the frontal lobe of the brain.\(^3\) Dopamine is akin to adrenaline in its quality to “rev-up” one’s sense of excitement.

The shifting levels of dopamine production during adolescence are closely associated with reward-deficiency syndrome, a condition often linked with addiction and compulsive behavior in adults. Since dopamine helps to link actions to sensations of pleasure, its redistribution can raise the threshold for stimulation. This means that activities that once caused excitement can cease to provide such thrills. The same child that once lived to skateboard or play softball, may at age 15 simply and abruptly drop the sports altogether and take on riskier behaviors to seek the same level of sensation. Commonly, adolescents experiencing reward-deficiency syndrome engage in increasingly riskier behaviors in an effort to experience heightened levels of excitement.\(^4\)

**During adolescence, several areas of the brain go through their final developmental stages and develop greater complexity, which in turn affects thinking, behavior and potential for learning and rehabilitation.**\(^2\)

**The Limbic System**

Another key development underway in the brain during adolescence involves the limbic system. The limbic system comprises the nucleus accumbens, hippocampus, hypothalamus and several other structures located under the cerebrum. The limbic system is associated with processing and managing emotion and motivation. When operating at full capacity, the limbic system is a gauge that keeps people from “overheating” or losing control of their behavior. Yet, in adolescence, the limbic system is gradually maturing. It has not yet reached its full capacity when it is concomitantly pressed into service as a command center for processing the emotions linked to an adolescent’s decisions and actions. Because the frontal regions of the brain are not yet mature and equipped
enough to do so, the limbic system “stands in” for immature executive functions and, as a result, adolescents are more prone than adults to mood swings, over- or under-reaction and impulsive behavior.\(^5\)

The Prefrontal Cortex

The brain’s frontal region, or prefrontal cortex to be more specific, governs a person’s executive functions of reasoning, advanced thought and impulse control. Once fully developed, the prefrontal cortex houses the sensibilities and behavioral controls of adulthood. But, it is critical to remember that the prefrontal cortex is the very last area of the human brain to mature.\(^6\)

Among the many changes in the prefrontal cortex during adolescence is synaptic pruning. Synapses link neurons, facilitating the transmission and receipt of messages between the brain and body. There are trillions of synapses in the brain. The ones that are used frequently become stronger and more refined throughout life; those that go unused are pruned. An adolescent who frequently uses a computer at home, for example, will strengthen and refine the synapses related to computer usage. Conversely, an adolescent who seldom uses a computer will undergo synaptic pruning related to computer usage. The principle of synaptic pruning is far-reaching, applying in areas ranging from the behavioral—such as coping under stress or mediating an argument—to the physical—such as dancing or playing a sport. With fMRI, it has become possible to see signs of the prefrontal cortex’s maturation and synaptic pruning which continue into a person’s early to mid-twenties.\(^7\)
If brain maturation runs smoothly, at its conclusion stands a responsible and reasonable young adult, ready to fully benefit from life experiences. Yet, this is not always the case. Tens of thousands of adolescents experience neurological trauma, drug, alcohol and/or substance use and dependence, behavioral and mental health problems, family and social disruptions, as well as court-involvement and delinquency. According to Rebecca McNamee, Ph.D., an assistant research professor in the Pharmaceutical Sciences and the Bioengineering Departments at the University of Pittsburgh, fMRI shows us that emotional trauma during childhood, such as failure to bond, as well as physical trauma caused by fetal drug exposure or abuse and neglect, may inhibit or delay certain features of brain development and maturation.

As the connection between brain maturation and adolescent development is clarified and expanded, society can now explore and develop better methods for guiding young people toward positive, productive and safe choices during adolescence and as they take on adult roles and responsibilities. The task for juvenile justice and youth-serving professionals, practitioners and advocates is to allow youth to do what is developmentally expected of them—while ensuring and creating environments and opportunities that give youth healthy and safe ways to explore decision-making, judgment and the testing of their own limits, personal power and/or influence. Moreover, for professionals, practitioners, advocates and policy makers in juvenile justice and delinquency prevention, such information compels us to re-evaluate how we hold delinquent youth accountable for transgressions, as well as how to most effectively serve and support them and their families, in terms of treatment and rehabilitation.

**Responding to the Brain Under Construction**

Adults, rightly proud when a boy gets a few facial hairs or a girl grows a couple inches taller, can find themselves unprepared to manage the normal course of adolescent behavior that arises from
simultaneous rapid brain growth and enormous hormonal changes. Such physiological changes occur during a period of life characterized by exploring one's independence, testing limits and positioning oneself with peers. Rebelliousness and other difficult behaviors presented by average adolescents are not purely attempts to annoy adults; they are inherent bumps that provide necessary learning opportunities on the road to maturity. Such behaviors should be checked and steered, but they cannot be completely suppressed. Moreover, many of the erratic and seemingly defiant choices made during adolescence share a common origin: a brain under construction.

Adults’ sincere desire to protect youth from harm and bad decisions can easily devolve into control battles. Adults’ legitimate need to hold adolescents accountable for their actions may turn into overly severe and unconstructive punishment. McNamee suggests that productive responses to adolescent behavior are nuanced and must go beyond simply exercising authority to supporting learning through responsibility and accountability to others. She says the message adults ought to convey is, “You’re responsible for your actions, and the next time you come to this point, here are some alternatives.” Brian Meyer, Ph.D., an assistant professor of psychology at Virginia Commonwealth University (VCU) and executive director of the Virginia Children’s Treatment Center at VCU, advises adults caring for adolescents to recognize the appropriate limits of their influence, while helping adolescents to develop decision-making skills, responsibility for their own actions and accountability to others. He reminds adults, “You are much more of a consultant than a controller,” when it comes to productive contact with adolescents.

Naturally, no one advocates that adults be permissive or allow...
adolescents to become destructive toward themselves or others. What is widely acknowledged, however, is that adolescents need to have some say in their own lives and repeated, constructive opportunities to learn to make decisions and express their individuality in healthy ways. For instance, talking through and role-playing appropriate and effective actions can be immensely helpful to adolescents.

The implications of adolescent brain maturation underscore that some traditional approaches to dealing with teens and adolescents set the stage for unproductive conflict. For example, trying to prove a point or passionately out-yell an emotionally overwrought teenager only results in a loud argument, or expecting blind obedience to authority and rules from an adolescent developmentally programmed to question and test boundaries creates conflict.

**While brain development research should not excuse wrongdoing, ignore the legitimate need for rules and laws or free adolescents from discipline and responsibility, brain development research may provide greater understanding of how to most effectively interact with adolescents, especially when they have made serious mistakes.**

Benoit and others remind us that the medical profession has long recognized that adolescence has developmental features that distinguish it from adulthood—therefore, doctors are trained to specialize in adolescent medicine and adolescent psychiatry. Moreover, youth are more malleable and receptive than adults to learning new behaviors, as well as new modes of thought and values, key ingredients in effective rehabilitation.

McNamee recommends educating adolescents about what is going on inside their heads and how it affects them. She says, “We should teach them about what’s happening to them. Why not? We do so with puberty.” The goal is to alleviate confusion and feelings of isolation for adolescents, advising them as to how to avoid natural pitfalls and vulnerabilities while their brains mature. Such
information could be shared in a range of settings (home, school, a
doctor’s office, an after school program, during treatment or
probation counseling, etc.), engaging parents, teachers, medical
professionals, youth development workers and juvenile justice
professionals in learning new ways to describe to youth the invis-
ible aspects of adolescent development that parallel the more
visible changes associated with puberty about which they already
learn. In addition, youth need to be encouraged to channel nega-
tive emotions and restlessness into healthy outlets—art, sports,
volunteerism, etc. Benoit reminds us, “Every adolescent has
motivations. They may not be motivated to do what we want them
to do, [but] it’s our job to tap into their motivations.”

**Adolescence Under the Law**

Before the juvenile court came into existence in 1899 there were
only adult criminal courts. Therefore, children age six or older
could be charged, tried and punished as if they were full-fledged
adults. The very existence of a juvenile court system acknowl-
dges the need for developmentally appropriate responses that
cater to the amenable nature of youth. Yet, current federal, state and
local laws may take a two-pronged, often contradictory, approach
toward addressing adolescents. One set of laws has been crafted to
recognize that youth are impressionable, immature and lacking in
sound judgment. Therefore, jurisdictions prohibit youth from
driving, voting, drinking, marrying or serving in the armed forces
before certain designated ages, generally between the ages of 16
and 21. At the same time, another set of laws takes an opposing
view of youth—defining maturity by the gravity of one’s mistakes.
The rationale appears to be that if a youth is capable of committing
an offense with the same severity as an adult, then he/she is deserv-
ing of receiving an adult punishment. This rationale—often re-
ferred to by the phrase “adult time for adult crime”—is based on
societal fear rather than science.

A more rational approach to dealing with youth that break the law
is to evaluate them individually, taking into account what’s known about their current and past offenses as well as brain maturation, adolescent development, the young offender’s life circumstances and family-social context. With these factors in mind, measures may be taken to hold young offenders accountable, to rehabilitate them with services and supports tailored to their needs and those of their parents/guardians, and to help them successfully reenter home, school and community life. As part of such an evaluation, culpability or blameworthiness ought to be considered.

The MacArthur Foundation Research Network on Adolescent Development and Juvenile Justice has explored the matter of criminal blameworthiness or culpability as it manifests in adolescence, as compared with adulthood. Culpability (or blameworthiness) has to do with how well a person understands the likely ramifications of one’s own actions and the degree of control one has to counteract impulses and peer pressure. According to the MacArthur researchers, when it comes to culpability, young offenders are too susceptible to outside influences and vulnerable to their own developmental weaknesses to be considered as blameworthy or culpable as adults.

Network researchers point out that our nation’s courts have long held that criminal punishment should be based on mitigating factors when considering a defendant’s culpability, including:

- Whether or not one has impaired decision-making capacity;
- Whether a crime was committed under duress;
- An individual’s personal character and whether it suggests a low-risk of continuing crime.
MacArthur researchers therefore posit that the courts may wish to consider the notion that individuals are “less guilty by reason of adolescence”\textsuperscript{10} and suggest that it may be more logical and efficient to treat adolescents as a special legal category, referring the vast majority of offenders under the age of 18—or even 21—to the juvenile court.

**The Juvenile Court is Just That: Juvenile**

A growing number of juvenile justice professionals voice the belief that today’s juvenile justice systems too closely mirror adult criminal court systems. Judge B. Thomas Leahy, who has served in the New Jersey juvenile courts for more than 40 years, cites the 1967 U.S. Supreme Court decision *In re Gault* as a major turning point. The case involved a 15-year-old boy, Gerald Gault, who while on probation made several obscene phone calls and was brought before the Arizona juvenile court. Gault’s juvenile court proceeding was held without regard to the protections of the 14th Amendment (right to counsel, right to confront and cross-examine witnesses, etc.) and Gault was sentenced to spend the next six years in a juvenile corrections facility. The Superior Court of Arizona and the Arizona Supreme Court denied the writ of habeas corpus filed by Gault’s lawyers. However, the U.S. Supreme Court decided differently.

*In re Gault* stipulated that the juvenile justice system has to institute due process under the 14th Amendment, thereby mirroring the adult criminal system. In his lone dissent, Justice Potter Stewart explained why he felt imposing such changes on the juvenile justice system was improper:

“Juvenile proceedings are not criminal trials. They are not civil trials. They are simply not adversary proceedings. Whether treating with a delinquent child, a neglected child, a defective child, or a dependent child, a juvenile proceeding's whole
Purpose and mission is the very opposite of the mission and purpose of a prosecution in a criminal court. The object of the one is correction of a condition. The object of the other is conviction and punishment for a criminal act.”

Before In re Gault, Judge Leahy describes juvenile courts as informal but dedicated to correcting wrongdoing and preventing further delinquency. Since In re Gault, he asserts that the juvenile justice system has become more adversarial and bureaucratic. “The system is struggling under its own weight, with speeded up hearings and more plea bargaining,” he adds.

What these two approaches to juvenile sentencing (the majority finding in In re Gault and Judge Stewart’s dissent) share is the sense that a line has to be drawn somewhere to define a reasonable boundary that serves to protect children and youth due to their immaturity, yet holds them accountable for their actions and respects their integrity as human beings on the pathway to adulthood. Both use age, albeit somewhat arbitrarily, to draw the line.

Presently, more than a dozen states consider children as young as age 10 to be competent and responsible enough to be placed on trial in juvenile court. Forty-four states and the District of Columbia allow for children as young as 14 to be tried and sentenced as adults for the most serious of offenses. According to James Rieland, M.P.A., the director of probation services for the Court of Common Pleas of Allegheny County (PA), the juvenile justice system has been transformed in recent decades by widespread passage of state and local statutes that have increased the number,
type and made more punitive the sanctions for juvenile offenders. In the late 1980s and throughout the 1990s, increases in juvenile violent crime arrest rates coupled with highly publicized and tragic shootings in schools, fueled public fear about so-called “juvenile super predators” and generated broad support for “zero tolerance” laws. As a result, there has been a significant increase in the number of minors arrested for a broader range of crimes, particularly those related to drug and weapons possession. The severity of sanctions has also significantly increased, even to the level of allowing for life sentences without the possibility of parole for juveniles and removing youth more frequently from the jurisdiction of the juvenile justice court system and sending them into the adult criminal court system.¹⁴

To date, policy makers’ approaches to more severe and more frequent punishment for juvenile delinquency have only been reversed in one key area: the abolition of the juvenile death penalty. In March 2005, the U.S. Supreme Court decision in *Roper v. Simmons* outlawed executing offenders convicted for crimes committed under the age of 18. Yet, even this watershed ruling was fixed in its scope. The judgment does not rest squarely on recognition of the developmental differences between youth and adults. Marsha Levick, co-founder of the Juvenile Law Center and an adjunct professor at University of Pennsylvania Law School and Temple University Beasley School of Law, points out that a leading basis for the high court’s decision was state consensus on the matter. Thirty-eight states already expressly forbade the juvenile death penalty before *Roper v. Simmons* reached the U.S. Supreme Court.

While *Simmons* is arguably the most important decision in juvenile justice in 30 years, and reaffirms historic justification for juvenile rehabilitation, including individualized assessments and

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**Simmons underscores the importance of further using science to evaluate sentencing, age of jurisdiction/transfer, potential defenses, culpability and competency.**
approaches, further efforts to expand the implications of the ruling based on brain development have failed thus far. In authoring the majority opinion, Justice Anthony Kennedy noted that “juveniles are more vulnerable or susceptible [than adults] to negative influences and outside pressures, including peer pressure.” However, findings related to adolescent brain maturation were not mentioned; the ruling keeps juveniles offenders off of death row, but not out of the adult criminal system. Nonetheless, Simmons underscores the importance of further using science to evaluate sentencing, age of jurisdiction/transfer, potential defenses, culpability and competency.

Competency to Proceed

Competency to proceed, a legal benchmark of long standing, requires that a person must be able to recognize the functions and motivations of the people they encounter in the legal system, to appreciate the nature and purpose of legal proceedings and to assist in protecting their own rights and interests. Yet, recent studies by the MacArthur Research Network have found that fully one-third of youth ages 11-13 and one-fifth of youth ages 14-15 appear to lack competency.¹⁵

Concluding that youth, especially those under age 15, are “likely unable to participate competently in their own trials, either in an adult or juvenile court, owing to developmental immaturity,”¹⁶ the network’s research illustrates the direct influence such developmental immaturity can have on court proceedings:

- When questioned about the intent and nature of the adjudication process, nearly one-third of children ages 11-13 and one-fifth of teenagers ages 14-15 had both reasoning skills and an understanding of the process that were weak enough to seriously call into question their ability to stand trial;
- When asked to imagine being interrogated by police for a crime they had committed, youth were given
three options: 1) confess to the police; 2) deny the offense; or 3) refuse to speak. More than 50% of children ages 11-13 and more than 40% of teenagers ages 14-15 chose to confess and “to endorse decisions that comply with what an authority seemed to want.”\(^\text{17}\)

- Children and young teenagers were found to be significantly less likely than older teenagers (older than 16) and adults to recognize the risks of their legal defense decisions and the likely outcome of those decisions.\(^\text{18}\)

Better understanding of such deficiencies, coupled with policy and practice responses that strive to recognize differentiated levels of competence, are essential to the effective implementation of the court and its attendant functions and services.

**Juvenile Services**

While in the courtroom, there has been a shift away from the tenets of a separate court for juveniles versus adults, such a distinction is also lacking in juvenile services, treatment and confinement settings. Vincent Schiraldi, director of the Department of Youth Rehabilitation Services for the District of Columbia, says that all too commonly juvenile detention facilities operate with an adult motto: “dominate, beat down and control.”

Schiraldi also notes that there are operational issues that compound the problem. For example, he states that the average tenure of a juvenile detention administrator is 2.3 years. Therefore, constant turnover at the top undermines innovative reforms. “Instead,” Schiraldi says, “there is just

“When did we decide that the criminal court was effective? After all, youth in adult prisons are five times more likely to be assaulted and eight times more likely to commit suicide than young offenders in juvenile detention.”\(^\text{19}\)
constant pressure to keep things from getting worse.” In a juvenile detention facility where direct care workers receive limited training and preparation, and often feel they can do little more than struggle to maintain order, he says that youth become “targets” as opposed to participants in their own rehabilitation.

Not every juvenile court and detention facility is run like a miniature version of the adult criminal system. But, the compulsion to turn in that direction is pervasive. Rieland, too, questions the “adultification of the juvenile court” and its significant shift toward punishment versus rehabilitation. He asks, “When did we decide that the criminal court was effective? After all, youth in adult prisons are five times more likely to be assaulted and eight times more likely to commit suicide than young offenders in juvenile detention.”

The MacArthur Research Network is clear in its issue briefs and studies that its findings are not meant to absolve young offenders from being held accountable and punished when they break the law. Instead, the researchers’ findings, and positions presented by the experts cited in this monograph, argue in favor of returning the juvenile court system to its progressive roots: young offenders need to be tried, sentenced and rehabilitated in a system that fully recognizes their developmental shortcomings and stronger-than-adult potential to be rehabilitated. Moreover, since brain development does not conclude until around age 24, the juvenile court system should consider ways to extend or strengthen efforts already in place to extend juvenile jurisdiction to more appropriately address the needs of young offenders (pre-teen to the mid-20s) developmentally unsuited to adult criminal proceedings or treatment.
RECOMMENDATIONS FOR A NEW FRAMEWORK

“The greatest cure of delinquency is maturation,” asserts Judge Paul H. Lawrence, 2006 CJJ National Chair and presiding juvenile court judge in Goffstown District Court (NH). The validity of this phrase is evident in criminal justice research which clearly demonstrates, year after year, that arrest rates drop precipitously after the age of 30. Consequently, the juvenile justice system has a great tool at its disposal as the implications of adolescent brain development become better understood and applied.

Taking stock of such implications, Jeffrey Butts, Ph.D., research fellow at Chapin Hall Center for Children at the University of Chicago, cites the elements that researchers have identified as promotors of key developmental assets. He suggests that these hallmarks of positive youth development be applied to and strengthened wherever possible in juvenile justice and delinquency prevention practice:

- **Family communication**: open and honest dialogue between parents and children that encourages development, celebrates achievement and works through difficulties;
- **Non-parental adult role models**: a network of responsible adults that guide youth through advice and by example;
- **Peer role models**: a circle of friends that offer support, share safe interests and contribute to emotional growth;
- **Good health practices**: a lifestyle that includes regular exercise and meets nutritional needs;
- **Time spent in group activities**: a connection to an organization or league, be it religious, artistic or athletic that fosters a sense of belonging through a personal interest;
- **Community involvement**: an attachment to society that sparks engagement in its affairs;
- **Responsible choices**: ability to judge situations, evaluate risks and make decisions with positive long-term consequences; and
- **Aspirations for the future**: a vision of one’s destiny and a belief that one’s goals can be achieved.
Butts contends that programs and practices which build and stabilize key developmental assets need to be integrated into all aspects of juvenile justice, as well as the gateway systems that serve youth before and during court-involvement, such as schools. Such systems provide the touchstones where youth have contact with caring adults as they might accelerate into—or conversely decelerate away from—destructive behavior and delinquency.

Butts envisions a juvenile justice and delinquency prevention system that places a premium on strong bonds between youth, families, adults and their larger communities. He stresses, however, that the juvenile justice system would have to abandon its present culture and predisposition toward punitive sanctioning and confinement. “A juvenile justice system that is true to positive youth development would gradually move the responsibility of contact for these kids outside the system,” says Butts. “The idea is that the system gradually removes its hands to let community, family and youth themselves positively take charge.”

In order to achieve such a transformation, all branches of the juvenile justice system would have to be “tuned in” and trained to better understand and strengthen programs and practices to promote developmental assets. Such opportunities are evident even before youth enter a courtroom. The majority of juvenile delinquency cases are referred into the juvenile justice system by law enforcement. When youth are arrested, law enforcement has the option to divert cases away from the court system, most often into alternative programs. Yet, just 15-20 percent of all juveniles arrested are handled within the police department. Similarly,
juvenile referrals to secure detention before adjudication continue to soar despite declines in juvenile offending, even with strong evidence that such referrals could emphasize the least restrictive, and most health- and growth-inducing, care for a young person with no compromise of public safety. Once a case is referred into juvenile court, there are further opportunities for judges, defense counsel and prosecutors to evaluate choices based on the potential to help a young person toward an optimally positive and productive future, by maximizing developmental assets.

*Primum non nocere*

Moreover, states Judge Lawrence, the juvenile justice system would need to adopt a new primary commitment much like the Hippocratic Oath which guides the ethical practice of medicine: *Primum non nocere*: first, do no harm. Lawrence explains that much like doctors who aim to avoid invasive and painful procedures when treating patients, juvenile justice professionals need to keep their interactions with young offenders from contributing to turmoil in the youths’ lives. A mission to do no harm harkens back to the juvenile justice system’s less adversarial days, when all parties involved aimed to steer young offenders toward becoming healthy and productive citizens. Ideally, when an adolescent comes into contact with the juvenile justice system, the contact should last only long enough to evaluate the youth’s development and facilitate a successful re-connection with home and community life. Brain development findings could inform the evaluation stage and positive youth development principles could guide and facilitate the process of re-connection and building developmental assets.
KEY RECOMMENDATIONS

Educate Yourself and Raise Awareness:

- Learn about youth development and ways that juvenile services can be improved through adherence to youth development principles. Resources include: Centers for Disease Control; Chapin Hall Center for Children at the University of Chicago; Coalition for Juvenile Justice; Forum for Youth Investment; Helping America’s Youth; MacArthur Foundation Research Network on Adolescent Development and Juvenile Justice; National Youth Development Information Center; Office of Juvenile Justice and Delinquency Prevention; Oklahoma Institute for Child Advocacy; Physicians for Human Rights; Search Institute; Wisconsin Council on Children and Families; and others.

- Educate broadly about what brain development research tells us about the nature of adolescence and human pathways into the early-to-mid-20s. Reach out broadly to discuss new understandings with juvenile justice and court professionals, families, youth service providers, policy makers, advocates and others.

- Educate adolescents about what is going on “inside their heads” and how it affects them. Engage parents, teachers, medical professionals, youth development workers and juvenile justice professionals in learning new ways to describe to youth the invisible aspects of adolescent development that parallel the more visible changes associated with puberty about which they already learn.
Incorporate Youth Development Principles and Practices into Juvenile Justice and Delinquency Prevention Services:

- Ensure that the juvenile court recognizes youths’ developmental immaturity, as well as ways to strengthen and build developmental assets. Evaluate juvenile offenders individually, taking into account what is known about their current and past offenses as well as brain maturation, adolescent development, and the young offender’s life circumstances and family-social context.

- Use science to ensure comprehensive evaluation of culpability, competence to proceed, sentencing, age of jurisdiction or transfer, and defenses that can be asserted for juveniles accused of offenses.

- Once youth are committed to juvenile court jurisdiction, strive to define the work with youth and families as helping adolescents to build their own strengths and means to contribute to society, their interests and sense of mastery/competence in school, work, home life and recreational activities.

- Forge meaningful and guiding bonds between youth and adults by allowing youth to do what is developmentally expected of them—while ensuring and creating environments and opportunities that give youth healthy and safe ways to explore decision-making, judgment and the testing of their own limits, personal power and/or influence.

- Because brain development does not conclude until around the age of 24, the juvenile court system should consider ways to expand its jurisdiction, or strengthen current efforts to extend juvenile jurisdiction, to address all young offenders (preteens to mid-20s) who are developmentally unsuitable for the adult criminal system.
Youth development organizations, child advocacy groups, and the courts need to **reevaluate their positions, practices and policies related to issues such as transfer and waiver of juveniles to adult criminal court, or life without the possibility of parole for juveniles**, in light of research that proves the brain does not fully mature until one’s mid-20s.

**Provide State Advisory Group (SAG) Leadership:**

- State advisory groups (SAGs) on juvenile justice ought to **incorporate into the State Three-Year Plans for delinquency prevention major efforts to raise awareness about adolescent brain research** and positive youth development within the juvenile justice system, as well as in the broader community.

- SAGs are in an ideal position to **fund programs that utilize effective or promising approaches based on positive youth development and adolescent brain development research**. Through grant-making, SAGs can strengthen community-based programs that help young offenders to stay connected to individuals and organizations that promote youth development—whether schools, after school programs, counseling, peer support networks, mentoring initiatives or the many evidenced-based practices that build developmental assets. In addition, SAGs can suggest that federal juvenile justice grant funds further support initiatives that strive to limit court involvement and out-of-home placement or confinement.

- SAGs and their national association, CJJ, can **provide leadership to reevaluate and reform state statutes regarding the age of juvenile jurisdiction, juvenile transfer to adult criminal court, and life without the possibility of parole for juveniles**, in light of research that
clearly demonstrates that the human brain does not fully mature until one’s mid-20s. In doing so, SAGs can unite as a national voice to advocate for incorporating brain science findings into current and prospective juvenile justice policies.

□ SAGs can also spread the philosophy and practice of “do no harm” through their work on compliance with standards for care and custody of court-involved youth, and through their support of programs and practices—both within the system and in the community.
ACKNOWLEDGEMENTS

The Coalition for Juvenile Justice wishes to acknowledge and thank the following advisors for their expert assistance with this document: Michelle Ayesh, L.C.S.W., Physicians for Human Rights; Steven Berkowitz, M.D., Yale Child Study Center; Wendy Paget Henderson, Wisconsin Council on Children and Families; Robin Jenkins, Ph.D., Coalition for Juvenile Justice 2006 Vice-Chair/Chair-Elect; The Honorable Paul Lawrence, Coalition for Juvenile Justice 2006 National Chair; and Chyrl Penn, State Relations and Assistance Division, Office of Juvenile Justice and Delinquency Prevention, Office of Justice Programs, U.S. Department of Justice. We also wish to acknowledge the work of the consulting author for the Coalition for Juvenile Justice, C. Rasheed Newson; the editor/project manager, Nancy Gannon Hornberger, Coalition for Juvenile Justice; and the editorial assistant, Katherine Rose McCarthy, Coalition for Juvenile Justice.

This document is a product of the Coalition for Juvenile Justice (Washington, DC) and supported by Grant #2006-51178-DC-JF from the Office of Juvenile Justice and Delinquency Prevention (OJJDP), Office of Justice Programs, U.S. Department of Justice. The points of view or opinions expressed are those of the authors and do not necessarily represent official positions or policies of OJJDP or the U.S. Department of Justice.


4 Ibid.


17 Ibid.


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