

The Impact of Adolescent Developmental & Brain Research on Juvenile Justice Reform

An Overview with a Focus on Ohio and Cuyahoga County

Since the creation of the first juvenile court in 1899, the United States has gone through cycles of how it treats children who commit criminal offenses from more treatment-oriented to more punitive, depending on the political sentiment and social conditions at the time. One of the most significant impacts on U.S. courts approach children accused of committing crimes has been the introduction of research on adolescent development and neuroscience in the early 2000s.¹ This brief presents:

- 1 An overview of the juvenile justice system in the U.S. and Ohio
- 2 Key adolescent behavioral and cognitive developmental attributes
- 3 How this research on adolescence has shaped law
- 4 How a developmental approach continues to inform law and policy impacting children and youth

An Introduction to Juvenile Justice

Established in 1902, the Cuyahoga County Juvenile Court is the second oldest juvenile court in the country.² (the first was in 1899 in Chicago, Illinois) With a focus on rehabilitation and individualized care rather than punishment, the juvenile court was intended to be less formal with fewer legal protections. However, it became increasingly evident that children received the “worst of both worlds...neither the protection accorded to adults nor the solicitous care...for children.” (Kent v. U.S., 383 U.S. 541[1966]). Sixty-eight years after the creation of juvenile court, the U.S. Supreme Court established a child’s right to an attorney, along with other critical due process protections (In re Gault, 387 U.S. 1[1967]). Subsequent case law and federal and state policy has swung between more protections for youth – such as the creation of the Juvenile Justice and Delinquency Prevention Act of 1974 urging the deinstitutionalization of children committed for status offenses and the separation of adjudicated youth from adult offenders – to increasingly punitive “get tough on crime” laws – like expanding eligibility for criminal court, sentencing youth to adult corrections, and reducing confidentiality protections.³

LOCAL CUYAHOGA COUNTY SNAPSHOT

- Cuyahoga County accounts for the highest number of juvenile felony adjudications (512 in 2022), and youth commitments to juvenile correctional facilities (75 youth in 2022) in Ohio.⁵
- The Cuyahoga County juvenile detention center admitted 684 youth, with an average daily population of 139 in 2021.⁸
- Cuyahoga county also transfers more youth to adult court than any other county in the state. In 2022, Cuyahoga alone accounted for 42.5% of all bindover cases (mandatory and discretionary) in Ohio, more than the next highest six counties combined. More than 88% of the Cuyahoga bindover cases involved Black youth despite Black youth making up less than 40% of the county’s youth population.^{9, 10}
- The harms of incarcerating youth with adults are significant. Not only do children have significantly less access to treatment and educational opportunities in adult prisons, but they are also more likely to be violently victimized, sexually assaulted, to commit suicide¹¹ and more likely to reoffend.¹²

In the mid-1990s, just as criminologists were predicting a juvenile crime wave that never materialized, juvenile crime rates in the U.S. and Ohio peaked and began dropping; they remain low today. In fact, after a high of 15,857 juvenile felony adjudications in Ohio in 1996,⁴ felony adjudications have dropped steadily to 3,182 in 2022.⁵ Nevertheless, Ohio, like most states, seized on the false “super-predator” narrative and passed laws that increasingly treated children more like adults. Expanding “bindover” laws that transferred youth charged with more serious cases to adult court, and increasing mandatory sentencing criteria are among these more punitive laws. Indeed, it would not be until 2011, nearly 20 years since the adoption of RECLAIM in 1993⁶ that Ohio passed a law⁷ that increased legal protections and access to treatment for youth, based in part on the teen brain research discussed below.

What Developmental and Neuroscience Research Says About the Unique Period of Adolescence

The main developmental feature that makes teenagers distinct from adults is the transient nature of their immaturity, including their still-forming sense of identity and personality. This evolving character of adolescents, as understood through developmental science, supports the finding that children are less culpable than adults and thus warrant differential, proportional treatment under the law.^{1,13} The three areas of developmental research that, taken together, have led to transformational legal and policy change for children and youth are in the cognitive, psychosocial and neurobiological sciences, as briefly described below.

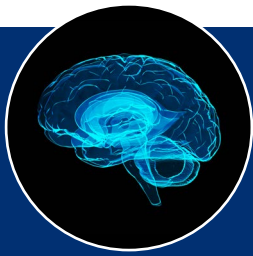
1. **Cognitive functions** include working memory, perspective taking and logical reasoning. These functions enable teens to think critically, plan, and make more informed decisions under “cold cognition” (meaning neutral or non-emotionally charged) conditions but are impaired under stressful or “hot cognition” situations.¹⁴
2. **Psychosocial maturity** includes various aspects of self-regulation, including impulse control, risk assessment, resistance to coercive influence, and attentiveness to the future consequences of one’s decisions. Compared to adults, adolescents have heightened sensitivity to immediate rewards (they put greater value on perceived rewards versus possible risks), susceptibility to peer influence, and sensitivity to emotional arousal coupled with lower levels of self-regulation and impulse control, which leads to impulsive and sensation-seeking behaviors. Psychosocial maturity develops into late adolescence and early adulthood.¹
3. **Neurobiological science** reveals the imbalance between the maturity of a teenager’s limbic system (a

set of structures in the brain that include the amygdala and deals with emotions, memories and arousal) and their prefrontal cortex (which affects executive function, such as judgement and impulse control). While the brain is close to adult size by early adolescence, the structures and the connections between those structures are still developing through a process of myelination and synaptic pruning to increase the efficiency of the connectivity. While the limbic system matures significantly around puberty, the prefrontal cortex is still developing into one’s early to mid-twenties; this imbalance in adolescence impedes decision-making and self-regulation, especially in the context of stressful and other emotionally arousing situations (i.e. when a teen perceives that they are being watched by other peers). Brain imaging advances in neuroscience is consistent with observations of adolescent behavior.¹

A Developmental Approach to Law & Policy Reforms

Researchers concluded, and the Supreme Court of the United States (SCOTUS) agreed, that the distinct developmental differences in adolescence collectively mitigate their culpability in criminal acts.^{1,13} This reasoning was the basis of the SCOTUS outlawing the death penalty for children under 18 years of age in 2005, noting that youth could not be considered among the “worst offenders” because they are immature and thus “their irresponsible conduct is not as morally reprehensible as that of an adult”, and also because they still struggle to define their own identity; “it is less supportable to conclude that even a heinous crime committed by a juvenile is evidence of irretrievably depraved character.” (Roper v. Simmons, 125 S.Ct. at 1186 [2005]). Roper was followed by a subsequent line of landmark SCOTUS cases relying on developmental science to:

- Outlaw the use of life without parole (LWOP) for youth under 18 convicted of non-homicide offenses, finding youth were entitled to “some meaningful opportunity” for release in 2010. (Graham v. Florida, 560 U.S. 48)
- Require that the age of a young suspect must be a factor in determining custody for purposes of assessing voluntariness in police questioning in 2011 (J.D.B. v. North Carolina, 564 U.S. 261)
- Prohibit mandatory LWOP for youth under 18 even in cases of homicide in 2012, finding their “incomplete physiological and psychological development made them less likely to be irredeemable.” (Miller v. Alabama, 567 U.S. 460)
- Entitle youth sentenced to LWOP before Miller to a parole hearing to consider whether their crime reflected “irreparable corruption” and that LWOP should be “exceedingly rare.” (Montgomery v. Louisiana, 577 U.S. 190 [2016])



The National Research Council Committee on Assessing Juvenile Justice Reform defines a **developmental approach to juvenile justice** as one that “recognizes that illegal acts committed by adolescents occur in the context of a distinct period of human development, a time of life when individuals are more likely to exercise poor judgement, take risks, and pursue thrills and excitement. This naturally results in a higher incidence of illegal behavior. Most young people involved with the juvenile justice system will desist from criminal behavior simply as a result of maturation, although the timing and trajectories of desistance vary considerably.”³ As found in the Pathways to Desistance research, consistent with other studies, less than 10% of youth offenders are chronic offenders.¹⁵

Ohio has expressly adopted the holdings of *Graham* and *Miller* since the United States Supreme Court issued those decisions. First, the Supreme Court of Ohio found that the 8th amendment’s prohibition against LWOP for non-homicide offenses committed by youth applies to term-of-year sentences that aren’t expressly labeled as “juvenile-life-without-parole” sentences but are in effect the same. (State v. Moore, 149 Ohio St.3d 557, 2016-Ohio-8288, 76

N.E.3d 1127). Further, the Court has held that a minor’s youthfulness must be considered prior to the imposition of a life sentence in homicide offenses. (State v. Patrick, 164 Ohio St.3d 309, 2020-Ohio-6803).

The developmental approach adopted in this line of legal cases has not only driven juvenile court decisions and state court caselaw but has influenced key legislative and policy reforms with changes to sentencing statutes, juvenile justice system operations and the overall treatment of youth,^{3,16} nationally and in Ohio. In addition to increasing state and local investments in community and evidence-based programming and diversion, examples of Ohio legislation and policy reforms include:

- Passage of Ohio HB 86 and HB 153 in 2011 which, among other things included relaxing some juvenile sentencing provisions, extending early release opportunities for youth, creating a reverse bindover (also called “transfer” to adult court) option, adopting a new juvenile competency standard, and realigning juvenile correctional funds into funding for evidence-based community programming for youth.^{17, 18}
- Passage of SB 337 in 2012 which expanded credit for time served by youth and created a presumption to keep youth who turn 18 or youth who are subject to bindover, in a juvenile detention center rather than being detained in an adult jail.¹⁹
- Abolishing juvenile LWOP with the passage of Ohio SB 256 in 2021.²⁰
- Adoption of a statewide law enforcement standard requiring “developmentally appropriate policing and positive youth interactions” and promoting developmentally-appropriate police training in 2022.²¹

CONCLUSION

Despite the important, research-based advancements in the juvenile justice system, challenges remain to ensure policy and practice is informed by what works with children and young people. While there have been further efforts to reduce adult criminal consequences for behaviors in adolescence and emerging adulthood based on the now settled understanding that key brain functions are still developing into one’s mid-twenties (e.g. expanding juvenile court jurisdiction beyond 18 years of age, piloting a “young adult court” for 18-25 year-olds in the adult system) , there have been setbacks as well. Conducting further research to deepen our knowledge of this transitional age group and continuing to educate policymakers, court stakeholders and the public about effective interventions for youth can help to improve outcomes for youth and our communities.

SOURCES

- ¹ Steinberg, L. (2017). Adolescent brain science and juvenile justice policymaking. *Psychology, Public Policy, and Law*, 23(4), 410–420. <https://doi.org/10.1037/law000128>
- ² Cuyahoga County Juvenile Court | Encyclopedia of Cleveland History | Case Western Reserve University. (2019, May 31). <https://case.edu/ech/articles/c/cuyahoga-county-juvenile-court>
- ³ National Research Council. (2013). *Reforming Juvenile Justice: A Developmental Approach*. Committee on Assessing Juvenile Justice Reform, Richard J. Bonnie, Robert L. Johnson, Betty M. Chemers, and Julie A. Schuck, Eds. Committee on Law and Justice, Division of Behavioral and Social Sciences and Education. Washington, DC: The National Academy Press.
- ⁴ Celeste, G. (2015). *Getting It Right: Realigning Juvenile Corrections in Ohio to Reinvest in What Works*. Schubert Center for Child Studies, Case Western Reserve University. https://case.edu/schubertcenter/sites/default/files/2020-04/Getting_it_Right.Ohio_Juvenile_Corrections.Final_.pdf
- ⁵ Youth Adjudicated or Committed for Felony Offense | DataOhio. (n.d.). Retrieved February 14, 2024, from <https://data.ohio.gov/wps/portal/gov/data/view/youth-adjudicated-or-committed-for-felony-offense>
- ⁶ RECLAIM (Reasoned and Equitable Community and Local Alternatives to the Incarceration of Minors) was a first of its kind funding initiative to treat many adjudicated youth locally in community based programs rather than being committed to state correctional facilities. For details, see <https://dys.ohio.gov/courts-and-community/reclaim>
- ⁷ Ohio House of Representatives 129th General Assembly (2011). http://archives.legislature.state.oh.us/bills.cfm?ID=129_HB_86
- ⁸ 2022 Annual Report. (2023). Cuyahoga County Court of Common Pleas, Juvenile Division. http://juvenile.cuyahogacounty.us/pdf_juvenile/en-US/AnnualReports/2022AnnualReportFinal.pdf
- ⁹ Ohio Department of Youth Services. (n.d.). Youth Transferred to Adult Court | DataOhio [dataset]. Retrieved February 14, 2024, from <https://data.ohio.gov/wps/portal/gov/data/view/youth-transferred-to-adult-court>
- ¹⁰ U.S. Census Bureau (2022) S0901: Children Characteristics. Retrieved January 22, 2024, <https://data.census.gov/table/ACSST1Y2022.S0901?q=children&t=Age%20and%20Sex:Populations%20and%20People&g=050XX00US39035&d=ACS%201-Year%20Estimates%20Subject%20Tables>
- ¹¹ Jailing Juveniles: A campaign for youth justice report. (2007). <http://www.campaignforyouthjustice.org/cfyj-reports/item/jailing-juveniles>
- ¹² Redding, R. E. (2010). Juvenile Transfer Laws: An Effective Deterrent to Delinquency? <https://ojjdp.ojp.gov/library/publications/juvenile-transfer-laws-effective-deterrent-delinquency>
- ¹³ Steinberg, L., & Scott, E. S. (2003). Less Guilty by Reason of Adolescence: Developmental Immaturity, Diminished Responsibility, and the Juvenile Death Penalty. *American Psychologist*, 58(12), 1009–1018. <https://doi.org/10.1037/0003-066X.58.12.1009>
- ¹⁴ Steinberg, L., & Icenogle, G. (2019). Using Developmental Science to Distinguish Adolescents and Adults Under the Law. *Annual Review of Developmental Psychology*, 1(1), 21–40. <https://doi.org/10.1146/annurev-devpsych-121318-085105>
- ¹⁵ Steinberg, L., Cauffman, E. & Monahan, K.C. (2015) Psychosocial Maturity and Desistance From Crime in a Sample of Serious Juvenile Offenders. *OJJDP*. <https://www.courts.ca.gov/documents/BTB24-2M-5.pdf>
- ¹⁶ MacArthur Foundation. (2015) “JJ in a Developmental Framework: A 2015 Status Report”. https://www.macfound.org/media/files/macarthur_foundation_2015_status_report.pdf
- ¹⁷ Ohio House of Representatives 129th General Assembly (2011). http://archives.legislature.state.oh.us/bills.cfm?ID=129_HB_86 and http://archives.legislature.state.oh.us/bills.cfm?ID=129_HB_153
- ¹⁸ Celeste, G. (2013). *Bridge to Somewhere: How Research Made its Way into Legislative Juvenile Justice Reform in Ohio*. Schubert Center for Child Studies, Case Western Reserve University. https://case.edu/schubertcenter/sites/default/files/2020-04/Schubert_JJR_CaseStudyrevised_0123_13-4_reducedsize.pdf
- ¹⁹ SB337. Ohio Senate 129th General Assembly (2012). http://archives.legislature.state.oh.us/bills.cfm?ID=129_SB_337
- ²⁰ SB256. Ohio Senate 133rd General Assembly (2021). <https://www.legislature.ohio.gov/legislation/133/sb256>
- ²¹ Developmentally Appropriate Policing & Positive Youth Interactions | Office of Criminal Justice Services. (n.d.) <https://ocjs.ohio.gov/law-enforcement-services/ohio-collaborative-community-police-advisory-board/state-of-ohio-standards-for-law-enforcement/developmentally-appropriate-policing-and-positive-youth-interactions>
- ²² See examples at <https://www.eajustice.org/recent-reforms> and Orange County, CA’s YAC pilot at <https://www.occourts.org/system/files/youngadultcourtsummary.pdf>

SCHUBERT CENTER FOR CHILD STUDIES

11635 Euclid Avenue | Cleveland Hearing and Speech | Rm 407 | Cleveland, Ohio 44106-7179
P 216.368.0540 | schubertcenter@case.edu | schubert.case.edu

Director | Anastasia Dimitropoulos, PhD
Policy Director | Gabriella Celeste, JD
Research Director | Sonia Minnes, PhD
Program and Evaluation Manager | Rachel Perovsek
Administrator | Ann Ghazy



**CASE WESTERN RESERVE
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