Written Testimony of

BJ Casey, Ph.D.
Barnard College of Columbia University, Department of Neuroscience and Behavior

and

Arielle R. Baskin-Sommers, Ph.D.
Yale University, Department of Psychology

In Support of

S.B. 952: An Act to broaden eligibility for parole to include those individuals serving long sentences for crimes committed before the individual was twenty-five years of age, under certain circumstances.

Dear Members of the Judiciary Committee,

We are writing as tenured professors at Barnard College of Columbia University and Yale University and as experts on adolescent brain and behavioral development with over 35 years of combined research experience.

Our laboratories and others across the nation have looked rigorously at developmental differences between adolescents and adults that have implications for justice policy. A growing body of research on adolescent development from our laboratories and others confirm what any parent can tell you—that adolescents are inherently different from adults. Adolescents differ not only in their behavior, but also in the way their brains function. Our studies provide objective data on how adolescent behavior varies under social and emotional circumstances and how brain structure, function, and neurochemistry change during this time.

It is important to acknowledge first how scientists define adolescence. Court decisions often set 18 as the age demarcation between juvenile and adult. However, the point at which a person is considered mature and progresses from adolescence to adulthood varies by cultural, political, and social factors. Puberty typically marks the beginning of adolescence, but the end point is less obvious. National and international experts and policy groups acknowledge continued maturity gained well after the age of 18. The World Health Organization (WHO) (2019) defines adolescents as individuals in the age range of 10–19 years but defines youth as those 15–24 years old and young people as 10–24 years old. The United Nations also defines youth as those persons between the ages of 15 and 24 years old (U. N. Dep. Econ. Soc. Aff. 2018). These
agencies and organizations extend the end of adolescence and onset of adulthood to between 20 and 25 years.

A large developmental science literature shows that adolescents are more likely than children or adults to engage in risky behavior. Behavioral studies looking at the components of this behavior show that adolescents are typically more impulsive than adults, especially in emotionally charged situations, and more inclined to seek out novel and exciting experiences, in the presence of peers. Adolescents are less likely than adults to consider the future consequences of their acts, or to weigh the potential costs as heavily as the anticipated rewards. Importantly, risky behaviors tend to peak in late adolescence and then decline through the twenties. Long-term studies have shown that delinquency in adolescence is usually not an indication of an indelible personality trait: most adolescents, even those who commit serious crimes will age out of offending and will not become career criminals.

The once popular idea that personality emerges early in development and is a relatively stable, distinctive way of thinking, acting, feeling, and relating to the world has been called into question. There is now strong evidence to show that personality not only develops throughout childhood and adolescence but changes during the entire life course (Harris et al. 2016; Roberts & Mroczek 2008; Soto et al. 2011). On average, people show increased self-control and emotional stability as age increases, with ages 20 to 40 showing the greatest amount of change in key personality traits (Roberts & Mroczek 2008). Most of the change in traits occurs after young adulthood. Specifically, the trait of conscientiousness, characterized by being disciplined, shows substantial changes from 22 to 40 years (see also Roberts et al. 2006; Roberts & Wood 2006). Likewise, emotional stability shows the biggest change after 22 years. Thus, these findings illustrate changes in behavior and personality that extend beyond 18 years. Moreover, this work on personality development highlights that people retain the capacity to change at all ages.

It is important to highlight that not only that there are changes in personality with age, but that environment and life experiences can influence personality development. Life experiences, like the start of a new relationship or career, may place new demands on youth that result in long-lasting personality changes (Costa et al. 2019; Damian et al. 2019). These same experiences may act as turning points for serious criminal behavior, through which youth adopt new roles, responsibilities, and attitudes that lead them to desist from crime (Sampson & Laub 2005). For
youth and young adults, it is essential that opportunities for different life experiences exist to promote the development of personality. Overall, findings of personality change and development, as well as the importance of investing in the social development of youth, contradict legal arguments of youthful offenders as incorrigible, beyond reform or reentry into society, and that incarceration promotes any sort of positive change. Given that personality is constantly changing beyond 18 years, with potential for positive change even after young adulthood, to punish youthful offenders indefinitely (e.g., by sentencing them to life without parole) and place them in environments rife with violence, like prison, for actions from an earlier developmental period is not only unfounded but may stifle the potential for growth in these youth.

Over the past decade, researchers, like us, have looked closely at the neuroscience underlying adolescent behavior. What we have found is that different regions of the adolescent brain, and the functional connections among them, develop along distinct timelines, resulting in asymmetry among different brain systems. The emotional centers develop relatively early, making adolescents highly responsive to emotional and social stimuli. By contrast, brain regions that regulate self-control, such as the prefrontal cortex, take a while to catch up and continue to develop even beyond adolescence into the twenties. The differential pace of development in these systems can lead to an imbalance in communication among them, allowing those regions that support rational behavior to be overpowered by brain centers involved in emotion. This finding explains the pattern behavioral scientists had previously described: young people, especially in emotionally charged contexts or in the presence of peers, are more apt than adults in their mid-twenties and older to be impulsive, to disregard future consequences, and to take risks.

Ongoing development of the brain has another important component: plasticity, or the capacity of the brain to change in response to the environment. Because the brain is undergoing such rapid, fundamental changes at this stage of life, young people may have a heightened capacity to learn and to alter how they behave as they age out of risky behavior by the mid-twenties.

Given an environment and support appropriate to their developmental stage, most young offenders have the potential to become law-abiding adults. This work is summarized in How Should Justice Policy Treat Young Offenders? A Knowledge Brief of the MacArthur Foundation
Research Network on Law and Neuroscience, and summarized in more detail in the following articles:


Given the years of research we have committed throughout our careers to understanding adolescent brain and behavior, it is clear that lengthy and life sentences of young people contradict the scientific evidence. It is antithetical to our understanding of development to keep people who committed their crimes as youth (before their mid-twenties) in prison for long periods without an opportunity for release on parole. With proper supports and treatment, there is a great deal of research that indicates most young people, even those that commit serious crimes, will desist in criminal behavior and become law abiding citizens.