

Statement of Laurence Steinberg, Ph.D.
Senate Judiciary Public Hearing on Juvenile Lifers
Harrisburg, PA
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Senator Greenleaf, thank you for inviting me to speak today about Life Without Parole for juveniles in Pennsylvania. I am a psychologist on the faculty of Temple University, as well as the former director of the MacArthur Foundation's Research Network on Adolescent Development and Juvenile Justice. I am also the co-author, with Columbia University law professor Elizabeth Scott, of a new book called *Rethinking Juvenile Justice*, and I have a copy with me today that I will leave with Senator Greenleaf. Much of what we have written in this book is relevant to today's hearing.

For the past 30 years, I have been conducting research on various aspects of adolescent development, most recently, on the implications of research on brain development during this age period for understanding adolescents' behavior, including behavior that is harmful to themselves and others. What have scientists learned? Two important lessons stand out.

First, we now are certain that brain maturation continues long after childhood, well into the early adult years. Second, the specific nature of this change has important implications for how we view adolescent behavior under the law. So let me begin by describing how the brain changes in adolescence, and then say a few words about why it matters for today's hearing.

Three sets of brain changes take place in adolescence that are especially important. First, early in adolescence, around the time of puberty, there is a dramatic change in brain systems that govern our experience of pleasure, or reward. Receptors in the decision-making regions of the brain for dopamine, a neurotransmitter that is responsible for the sensation of reward, are more active in early adolescence than at any other time in development. This helps explain why adolescents are especially inclined toward sensation-seeking and experimentation with alcohol, tobacco, and other drugs, and why teenagers pay so much attention to the immediate and rewarding aspects of risky behavior that they often ignore its potential costs. During this same period, there are also major changes in the brain systems that process social information, which tells us why adolescents become so sensitive to the opinions of others and so susceptible to their influence.

The second major brain change is that, over the course of adolescence, there is a gradual maturation of brain regions and systems that are responsible for self-control. These systems put the brakes on impulsive behavior. They permit us to think ahead and allow us to more judiciously weigh the rewards and costs of risky decisions before acting. However, unlike the changes in reward sensitivity or social information processing, which take place early in adolescence, the maturation of the self-control system is more gradual, and not complete until the early 20s. As a consequence, middle adolescence – the period from 13 to 17 – is a period of heightened vulnerability to risky and reckless behavior, including crime and delinquency. The engines are running at full throttle, so to speak, but there is not yet a skilled driver behind the wheel.

Finally, throughout adolescence and into young adulthood, the connections between different brain regions are still maturing, allowing for the more efficient use of brain power and the better coordination of emotions and reason. The brain systems that govern complicated decision-making are easily taxed during adolescence. You've probably seen this in your own children. When 16-year-olds are in controlled environments where they have time to think before acting, and when they can turn to adults for guidance, they often demonstrate adult-like maturity. But their capacity for mature judgment is still fragile at this age, and it is easily disrupted by situations that are emotionally arousing or stressful. The very same teenager who can compose a mature and thoughtful answer to a philosophical question posed in social studies class might behave irrationally and impulsively when with his friends or in the heat of the moment. And because a large proportion of juvenile offenders have substance abuse and other mental health problems, and this may make them all the more vulnerable to lapses in self-control. There are several important implications of this brain research for juvenile justice policy and practice.

A bedrock principle of our criminal law is that offenders are punished in proportion to their level of responsibility for their behavior. Under the law, for example, people are punished less harshly when their behavior is impulsive or coerced by others, or when their actions had potential consequences that they could not have anticipated. But brain science tells us that adolescents are inherently less able than adults to control themselves, to resist peer pressure, or to think ahead – and anyone in this room who has been the parent of a teenager has seen this first hand. In a legal system like ours, which punishes in proportion to an offender's responsibility for his actions, juvenile offenders should not be punished as harshly as we punish mature adults, even when they have committed comparable crimes. The U.S. Supreme Court followed this logic a few years ago when it abolished the juvenile death penalty. Our harshest penalties, the Court ruled, should be reserved for the "worst of the worst." Individuals who are not fully responsible for what they do surely are not in this category.

Second, because we know that brain maturation continues well into the 20s, teenagers are still works in progress, and many of them do things out of youthful impetuosity that they would not do just a few years later, when their brains are more fully developed. It is therefore important that we treat adolescents who have broken the law in ways consistent with the idea that most of them will outgrow this behavior as they mature into adulthood. Studies show that more than 90 percent of adolescents who commit crimes – even very serious crimes – cease their criminal behavior by the time adolescence has ended. This finding has been reported by many researchers, and it is one that has once again emerged in our ongoing study of serious offenders here in Pennsylvania. We have not yet followed our research subjects through their 20s, but other studies show that virtually all offenders, even those whose criminal behavior persists into early adulthood, desist from crime by the time they are 30. So holding a juvenile in prison beyond his 30th birthday, at a cost of between \$50,000 and \$100,000 per year, doesn't make a lot of fiscal sense.

We have always known that adolescents behave differently than adults. Young people are more impulsive, more short-sighted, more willing to take risks, and more susceptible to the influence of their peers. Anyone who has raised a teenager, taught a teenager, counseled a teenager, or been a teenager knows this. Scientific discoveries about brain development have helped us understand *why* this is true, but they haven't changed the basic story line. Those who founded a

separate system of juvenile justice in America some 100 years ago had it right, even without the benefit of brain scans, when they made a commitment to treating young people who have violated the law differently than how we treat adults. Recent research on brain development should strengthen our commitment to this basic principle.

Juveniles are not as mature as adults, and we recognize this in many ways under the law. Individuals can not vote until they are 18 because we do not believe they are mature enough to exercise this responsibility wisely. They can not enter into legal contracts. They can not purchase alcohol or tobacco. About the only adult privilege we confer to individuals under 18 is the right to drive an automobile, and given what we are learning about brain development, many states are even questioning the wisdom of that. Our willingness to treat juveniles like adults when they commit crimes, and expose them to the same punishments as adults when they are convicted, is inconsistent with virtually every other decision we make about teenagers under federal and state law.

There are some who contend that having life without parole as a potential punishment for juveniles who commit serious offenses will serve the purpose of deterring other would-be offenders from committing crimes. If only our teenagers listened to us enough to plan ahead so well! The fact is that very same limitations that make juveniles less responsible for their acts – their impulsivity, short-sightedness, and susceptibility to peer pressure – also make them less likely to be deterred by the law or by the example of others. And in fact, scientific studies of whether the prospect of a harsh sentence deters young people from committing crimes clearly show that the answer is no.

In the final analysis, there are only two only possible rationales for sentencing juveniles to life without the possibility of parole: they deserve the most severe punishment our system has the capacity to apply or that they are so likely to be dangerous for so long that we need to incarcerate them for life to protect the community. As to the first of these rationales, I believe, as the Supreme Court ruled in the juvenile death penalty case, that by virtue of their inherent immaturity, adolescents should not be exposed to punishments we reserve for the worst of the worst. And as to issue of public safety, the data show very clearly that even the worst juvenile offenders are unlikely to pose much of a threat once they have reached the age of 30.

Juveniles who commit crimes should be held responsible for their behavior, punished for their offenses, and treated in a way that protects the community. But we have the capacity to do this without locking them up for life and wasting taxpayers' dollars unnecessarily.