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EDUCATING AND PUNISHING THE ADOLESCENT BRAIN

Abstract:

The American Psychological Association submitted a brief in the Supreme Court in *Hodgson v. Minnesota* (1990), arguing that given that adolescents had similar cognitive skills as adults, they should not be required to notify their parents before having an abortion. Yet, it submitted a brief in *Roper v. Simmons* (2005) arguing that since science had demonstrated that adolescent brains were not as developed as adult brains, they lacked the ability to take moral responsibility for their decisions. Many commentators found these positions inconsistent while others tried to reconcile them. We need to (1) recognize the complex interplay between the cognitive and the emotive, which has legal and educational implications; (2) more effectively integrate the cognitive capacities and so-called emotive short-comings of adolescents; (3) more seriously consider the implications of neuroscientific claims about the adolescent brain; and (4) recognize, encourage, and facilitate the cognitive capacities of people to make moral judgments at a very early age.

Keywords:

abortion, adolescents, brain development, cognitive ability, moral responsibility

Introduction

A New Yorker cartoon has a father excoriating his son: “Young man, go to your room and stay there until your cerebral cortex matures” (Smaller, 2006). Apparently, the American Psychological Association agrees with this fatherly admonition. According to its General Counsel, Nathalie Gilfoyle, “A consistent and growing body of social science and neuroscience research findings support the conclusion that juveniles are less culpable than adults, and are entitled to different treatment in sentencing in light of their immaturity, vulnerability and changeability (American Psychological Association, 2012).

1. Brain and Science

Indeed, psychological and neuroscientific research (as well as parental experience) seems to support the claim that adolescents have different brains than the rest of us. The psychological research allegedly shows that adolescents lack ability to control themselves in emotionally charged situation, have a heightened sensitivity to peer pressure, and have a decreased ability to deal with the future (National Research Council, 2012). Brain science, perhaps, provides even more compelling evidence of adolescent differences. Although the brain itself grows relatively little, critical functional growth occurs during adolescence. First, the amount of gray matter decreases while that of white matter increases. In other words, adolescent brains undergo a process of their axons becoming increasingly myelinated (myelin increases the efficiency of neural signaling), which means increased neuronal conduction speed. Further, these developments occur at different rates in different parts of the brain, with the cortical, cognitive control, regions developing last. Finally, the adolescent brain increases connectivity between the cognitive and the emotive areas.

2. Courts and Science

The courts (at least those in the US) have taken these findings quite seriously. In *Thompson v.*

Oklahoma (1988), the US Supreme Court found that execution of less than 16-year-old at time of crime violated cruel and unusual punishment provision of the 8th Amendment of the US Constitution. In *Roper v. Simmons* 125 S. Ct. 1183 (2005), execution of less than 18-year-old at time of crime violated 8th Amendment. 5 to 4 decision written by Justice Kennedy. APA amicus curiaeⁱ based on a psychology research article (Steinberg and Scott, 2003). *Graham v. Florida* (2010) life without parole of less than 18 year old at time of crime for non-homicide violated 8th Amendment. 6 to 3 decision written by Justice Kennedy. *Miller v. Alabama* 567 US (2012). Justice Kagan. Mandatory life without parole for juveniles for homicide offenders violated 8th Amendment. Open question whether non-mandatory life without parole constitutional punishment for juveniles.

The facts in these cases prove telling. All involved terrible crimes. Simmons (age 17) along with two others (aged 15 and 16) broke into Mrs. Crook's house, kidnapped, and bound her, and threw her off a bridge into a river to drown. However, it is what preceded the acts in each that erodes the adolescent brain thesis. Long before carrying out the act, Simmons, for example told others of his plan to commit. He recruited and planned out the murder of Mrs. Crook with two friends and planned it out down to the specific means, including "hog tying" the victim before throwing her off the bridge into the waters below to drown. Simmons assured his accomplices that they could get away with this heinous and hideous act.

The facts in *Graham* tell a similar story. *Graham* (17) led his two 20-year old accomplices to break into and ransack a home while they took turns holding a pistol to the victim for thirty minutes. Later that evening, the three desperadoes attempted a second robbery.

Miller consolidated two cases. In the first, Jackson (14) robbed a video store along with two other youths, one of whom shot and murdered the store clerk. In the second case, Miller (14) and his friend robbed the victim. In the ensuing fight, Miller repeatedly struck the victim with a baseball

bat telling him “I am God, I’ve come to take your life.” To cover up their “misdeeds”, they later returned to the scene of the crime and set fire to the victim’s trailer, thereby killing him.

Strikingly, each case finds the perpetrators engaged in considerable, albeit flawed, rational deliberation. None of them match the classical picture of impulsive, immediate, reckless, overly emotional reactions. None parallel the situation where the husband comes home to find his wife having intercourse with a lover. But wait. Even many of the jilted husband cases do not fit the situation where emotions suddenly and completely take over, drowning out all logic. Take *State v. Thornton* 730 S.W. 2nd 309 (Tenn. 1987), where the estranged husband goes elsewhere to retrieve his camera and pistol after sneaking around his house and peeping into the windows to find his wife’s lover inside. Male judges classify these cases as crimes of passion and like the adolescent brain cases accept a defense of diminished capacity. Apparently, a husband finding his wife in *flagrante delicto* differs markedly from a robber losing control when discovered and shooting.

3. Science and Law

The adolescent brain hypothesis has a number of flaws, often raised by judges. First, the science relies on group studies and not individual assessments. Neuroimaging studies are averaged over some subjects. Experts did not examine the brains of Simmons, Graham, Jackson, and Miller. Compare these situations to the case of *People v. Weinstein* 156 Misc. 2d 34 (N.Y. Sup. Ct. 1992). Herbert Weinstein strangled his wife and threw her body from a 12th story window. Doctors found a brain tumor, whose removal correlated with the stopping of his child molesting behaviors. Second, the evidence from developmental psychology shows increased proclivity towards risky behavior of [American] adolescents. That evidence, as pointed out by Justice Thomas, has not been shown to correlate with tendencies to engage in violent behavior. Third, one should always remain suspicious of any research that assumes distinct stages. Adolescents, at best, seem, to differ more in degree than in kind from adults as noted by Justice O’Connor. Then, of course, one

finds telling critiques of the entire neuroimaging “science.” The images do not reveal (as EEGs do) direct brain activity; instead, they track blood flow.

Justice Scalia voiced one of the more telling objections. In *Hodgson v. Minnesota* 497 US 417 (1990), the APA also filed an amicus curiae brief, but there it argued that juveniles were mature enough to make their own decisions about having an abortion without the state requiring parental consent. The APA asserted (and Justice Scalia cited in *Roper*): “[B]y middle adolescence (age 14-15) young people develop abilities similar to adults in reasoning about moral dilemmas.” This seems completely inconsistent with the APA’s position in *Roper*.

Laurence Steinberg, coincidentally the main author of the APA brief in *Roper*, offers a clever resolution to the inconsistency (Steinberg, 2009). He makes a distinction between cognitive capacity and emotional control. Adolescents apparently have the former needed for abortion decisions but lack the later, used in crime decisions.

Steinberg’s position assumes a questionable model, typically found in folk psychology. In Plato’s infamous metaphor for the human soul, the charioteer (Reason) struggles mightily to keep the unruly horses of Emotion and Desire under control. This model, which separates reason from emotion, became highly influential and dominant in many areas to this day. Yet, even the ancient Greeks questioned it. Aristotle found emotions important for the development of moral virtues. In modern philosophy, Hume saw reason as the slave of passion. The controversy continues, most notably led by Solomon and Nussbaum, who find a rational, appraisive component to emotions.

Fortunately, we do have to resolve the reason-emotion dispute, an especially onerous task since we do not have any generally acceptable theory of emotions. Education shines a clarifying light on the adolescent brain controversy. If the adolescent brain so radically from the adult brain, why

do educators assume a marked similarity between the two? Apparently, the adolescent brain reaches a level quite early where it can handle mathematical reasoning and historical analysis. It can even use reason and emotion interactively through literature.

Yet, as a counterargument, we need to consider that educators and psychologists separate the cognitive from the emotive. Teens lead two separate lives: one engaged in cognitive pursuits and the other prone to risky (hopefully, outside school) behaviors. After all, developmental psychologists have proven this. Or, at least, they might have empirical data of American adolescents. I challenge anyone to find similar studies of Chinese or any other Asian adolescents. This, of course, does not settle the matter. For, perhaps, Asian societies suppress these natural adolescent tendencies towards risky behavior. This means that the claim is unfalsifiable.

Conclusion

Most critically, the light shone by education need to reflect back on education. The controversy raises a serious problem with education. We simply do not teach young people how to think critically, especially about moral problems. In the name of inculcating good values, we tell them what to think about morality. Engaging students in critical moral thinking can begin at a very early age, say in elementary school.

Not only does the adolescent brain hypothesis have many flaws, but also it poses real dangers. It opens the door more widely to treating adolescents as alien others. It makes it more difficult to introduce practical affairs into the academic curriculum. Finally, it has given US courts a convenient way to bypass the critical questions about criminal punishment in general. The Court can lessen the severity of punishment under the guise of the adolescent brain thesis instead of engaging in a wholesale critique of criminal punishment.

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ⁱ Brief for the American Psychological Association and the Missouri Psychological Association as Amici Curiae Supporting Respondent, July 2004.