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Int J Offender Ther Comp Criminol published online 4 June 2010

DOI: 10.1177/0306624X10371283

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International Journal of
Offender Therapy and
Comparative Criminology
XX(X) 1–24

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DOI: 10.1177/0306624X10371283

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Abstract

In 2005, the U.S. Supreme Court held the death penalty unconstitutional as applied to juveniles in *Roper v. Simmons*. The Court reasoned that juveniles were less criminally culpable than adults because they lack maturity, they are more vulnerable to peer influence, and their character is not as well formed as that of adults. Although *Roper* addressed the imposition of the ultimate punishment of death within the context of a juvenile's moral blameworthiness for a crime of murder, this article considers the application of the Court's reasoning in *Roper* to the issue of juvenile waiver. Specifically, the author asks the question whether *Roper's* ultimate language distinguishing juveniles from adults in capital cases should apply to the conventional practice of their trial and sentencing as adults. Despite the fact that juvenile transfer is a less serious sanction than the death penalty, this inquiry confronts the traditional objective of the juvenile court system, a system of punishment that was founded on rehabilitation rather than retribution. The author questions whether the punitive objectives of deterrence and retribution are satisfied by juvenile waiver and whether the mitigating effect of adolescence negates the trial of youth as adults.

Keywords

juvenile waiver, juvenile transfer, *Roper v. Simmons*, adolescent development, juvenile recidivism, juvenile violence

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Christopher Simmons was a 17-year-old juvenile at the time he took the life of Shirley Crook, and he was an 18-year-old adult when he was sentenced to death for the murder. Prior to the homicide, Simmons callously discussed his plan with two other juveniles who were 15 and 16 years of age, respectively. He even commented to his two friends that because he was a juvenile he could not be punished as severely if he were an adult. Simmons was the instigator in the heinous crime in which he broke into a house, bound and tied the victim, and threw her over a bridge where she drowned in the waters below. After the murder, Simmons bragged to friends at school about the killing. The State of Missouri charged Simmons with capital aggravated murder citing that the murder was committed for the purpose of receiving money; was committed for the purpose of avoiding, interfering with, or preventing lawful arrest of the defendant; and involved depravity of mind and was outrageously and wantonly vile, horrible, and inhuman.

Despite the heinous nature and depravity of the homicide, Simmons's boasts about his murderous act, and the jury's recommendation of the death penalty, the U.S. Supreme Court held in *Roper v. Simmons* that the Eighth and Fourteenth Amendments prohibited the punishment of death for Simmons or any juvenile younger than 18 (at the time of the crime).

The Court's logic rested in its conviction that juveniles were different from adults in a number of areas and therefore could not be considered the "worst offenders" whom the death penalty is intended to punish. The Court considered three primary factors pertinent to the diminished moral culpability, blameworthiness, and death-worthiness of juveniles:

1. The susceptibility of juveniles to immature and irresponsible behavior means "their irresponsible conduct is not as morally reprehensible as that of an adult." The Court reasoned that because juveniles are more immature and irresponsible, they are less morally culpable for their conduct as compared to adults.
2. "Juveniles are more susceptible to negative influences and outside pressures, including peer pressure."
3. "The character of a juvenile is not as well formed as that of an adult." The personality traits of juveniles are more malleable and less fixed. The reality that juveniles still struggle to define their identity provides less support for the conclusion that even a heinous crime committed by a juvenile is evidence of irretrievably depraved character.

The Court reasoned that juveniles have less control over their behaviors and their environment and they lack the ability to remove themselves from environmental exposure to criminality and violence (Erikson, 1968; Steinberg & Scott, 2003). The Court's opinion was supported by reports from psychologists who had evaluated the defendant. The psychologists determined that the defendant was "very immature," "very impulsive," and "very susceptible to being manipulated or influenced." The Court noted that forensic psychologists and psychiatrists typically refrain from diagnosing

juveniles as having criminal personalities such as antisocial personality disorder and psychopathy (severe criminal personality) because of the need to differentiate the two groups from a developmental perspective.

When evaluating the differences between the developmental contours of adults and juveniles, the Court determined that juveniles have “diminished culpability”; in other words, they cannot be held fully morally responsible for their actions. Because juveniles struggle to define their identity, fail to escape the negative influences in their environment, are reckless, and have a greater possibility of character reform than adults, it would be imprudent to equate their failures with those of an adult.

The Court’s recognition of the diminished culpability of juveniles is also founded in its belief that the principles of punishment apply less to juveniles than adults. Specifically, the penological goals of retribution and deterrence when redressing capital crimes are not met with juveniles. The goal of retribution cannot be achieved when one’s death-worthiness and blameworthiness are diminished by youth and immaturity. Furthermore, because of juveniles’ impaired abilities in weighing the cost–benefits relevant to their behaviors, the goal of deterrence is unlikely to be met through capital punishment.

Whereas the death penalty is the most severe punishment in the criminal justice system, alternatively the concept of trying juveniles as adults (transfer or waiver) is the harshest policy in the juvenile justice system. One then may question whether the U.S. Supreme Court’s opinion in *Roper*, delineating the differences between juveniles and adults regarding punishment and culpability, can also be applied to trying juveniles as adults.

The Concept of Juvenile Transfer or Waiver

Most state legislatures have responded to increasing juvenile crime rates by instituting harshly punitive reforms focusing on punishment goals of retribution, deterrence, and incapacitation. One of the vehicles for implementing this get-tough-on-crime objective is to try juveniles as adults (juvenile waiver or transfer).

There are serious consequences to juvenile waiver, including lengthy incarceration in adult prison, increased rates in recidivism after release from prison, abuse in adult prison, and suicide in prison (Allard & Young, 2002; Fagan & Zimring, 2000). In fact, the U.S. Department of Justice examined four studies pertinent to juvenile waiver to adult courts in the 1990s, including data from South Carolina, Utah, and Pennsylvania (Snyder, Sickmund, & Poe-Yamagata, 2000). Data revealed that transfer is reserved for the most serious cases and the most serious juvenile offenders.

Currently, all 50 states allow juveniles to be tried as adults (Fagan & Zimring, 2000). There are various legal mechanisms for trying an adolescent in juvenile court (Salekin, Rogers, & Ustad, 2001) including *statutory exclusion* (age of offender and crime type—serious offenses are automatically outside the jurisdiction of juvenile court), *prosecutorial direct file* (allowing prosecutors to file charges against youths in either juvenile or criminal court for certain crimes), and *discretionary waiver*

(the juvenile court judge uses his or her discretion and examines the characteristics of the offender, i.e., age, maturity, and dangerousness, with the goal of rehabilitation in the juvenile justice system).

The landmark U.S. Supreme Court case upholding juvenile waiver is *Kent v. United States* (1966). The case delineated specific factors to consider in juvenile transfer, including

1. potential risk to the community (dangerousness and violence risk);
2. nature and severity of the alleged offense;
3. whether the offense was committed in an aggressive, violent, premeditated, or willful manner;
4. whether the alleged offense was against persons or against property, greater weight being given to offenses against persons especially if personal injury resulted;
5. maturity and character of the juvenile, including sophistication and maturity;
6. consideration of the juvenile's legal history and prior response to juvenile system supervision; and
7. amenability to treatment and rehabilitation in the juvenile justice system.

Because of the psychological nature inherent in these factors, including violence risk assessment, assessing psychological functioning pertaining to the emotional development of the youth, and examining prior treatment history and attitudes toward rehabilitation, forensic psychologists assume a significant role in evaluating transfer cases (Brannen et al., 2006; Kruh & Brodsky, 1997; Salekin et al., 2001).

Notably, over the years, legislation has affected the increased likelihood that juveniles are waived to adult court. In addition to new legislative mechanisms such as automatic waiver and prosecutor direct file, issues including crime of murder, seriousness of index offense, use of weapons, severity of victim injury, increasing case load of drug and gang offenders, and the system's assessment that a greater proportion of adjudicated delinquents were no longer amenable to treatment and rehabilitation within the juvenile justice system has affected the increase in juveniles transferred to adult court (Fagan & Deschenes, 1990; Snyder et al., 2000).

It is questioned whether deterrence, one of the goals of punishment, is met by waiver legislation. Studies assessing the deterrent effect of waiver have most typically revealed that the automatic transfer of juveniles who are charged with serious crimes to adult court has not reduced violent crime once these offenders are released into the community in adulthood (Fagan, 1995; Jensen & Metsger, 1994; Singer & McDowall, 1988). In fact, many studies examining recidivism rates between comparable groups of juveniles processed by criminal or juvenile justice systems reveal increased crime rates into adulthood by juveniles who are transferred (Hahn et al., 2007; Myers, 2003; Winner, Lanza-Kaduce, Bishop, & Frazier, 1997; Wolfson, 2005).

When considering specific deterrence and whether juvenile waiver decreases the likelihood that a specific waived individual will not reoffend, studies have found higher

recidivism rates among juveniles convicted for violent crimes in criminal court than among juveniles tried in juvenile court (Redding, 2008). With respect to general deterrence and whether transfer laws deter any potential juvenile offender, the majority of the research suggests that waiver laws have little or no effect.

The analysis of recidivism rates between adolescent offenders retained in the juvenile justice system and those transferred to adult court deserves some further analysis; however, as mentioned, studies assessing general deterrence have not supported a finding that juvenile waiver laws deter would-be juvenile offenders. Jensen and Metsger (1994) followed the recidivism of 14- to 18-year-olds in Idaho between 1976 and 1986 and found a 13% increase in rates of violent crime. In contrast, between 1982 and 1986, recidivism of juveniles in Montana and Wyoming decreased. Lee and McCrary (2005) examined the effect of turning age 18 on criminal offending and found that offending rates were not decreased after individuals turned 18, suggesting that adult punishment did not serve as a deterrent. In addition, Steiner and Wright (2006) researched the effects of prosecutorial transfer law in 14 states and found that the laws had no general deterrent effect.

There have been more informative studies addressing specific deterrent effects on juvenile waiver. Lanza-Kaduce, Frazier, Lane, and Bishop (2002) examined recidivism rates between groups of juveniles who were transferred to adult court versus juveniles who were retained in the juvenile justice system in the State of Florida. The authors matched the two groups on the basis of offense, number of counts or referral charges, number of dates for previous referrals, most serious prior referral offense, age, gender, and race. Transferred youth were more likely than those tried as juveniles to engage in felony recidivism after age 18; 49.3% of those transferred recidivated after age 18; whereas 35.4% of those retained in juvenile jurisdiction recidivated after age 18. For violent offenses, 24% of transferred offenders reoffended versus 16% of the retained offenders. The transferred youth were more likely to commit a more serious felony after age 18. The authors concluded that transfer is more likely to aggravate recidivism than to curtail it.

In addition, the authors interviewed transferred youth, and their assessments found these youth perceived that the criminal court was formal and hurried, with little opportunity to be heard. They had difficulties differentiating the roles of court participants, they were mistrustful of public defenders, and they viewed the criminal proceedings as more complex than those in juvenile court.

These recent findings from Florida are similar to previous data from Florida in which groups of juveniles waived to adult court and juveniles retained in juvenile court were matched on various dimensions (Bishop, Fraxier, Lanza-Kaduce, & White, 1996). These authors found that transferred youth had a higher rate of rearrest, were rearrested for more serious offenses, and were rearrested within a shorter time than youth retained in juvenile jurisdiction. After about 6 years, the juveniles who had not been transferred had caught up with the transferred youth in terms of the proportion who had been rearrested (Winner et al., 1997). Transferred youth were rearrested more quickly and more often than the comparison group. The results also questioned the

possibility of an offense-specific difference in recidivism between transfers and non-transfers, because the former group was more likely to commit violent acts than the latter group.

Fagan (1996) examined the recidivism rates of juvenile offenders in New York and New Jersey who had been charged with robbery and burglary during 1981 and 1982 and found that a higher percentage of youth who were tried for robbery in adult court were rearrested (91%) than those tried for robbery in juvenile court (73%). The transferred youth were rearrested sooner and more frequently. There were no significant differences between the two youth groups with burglary offenses. Overall, juveniles with the highest recidivism rates were those incarcerated after being tried in adult court whereas those youth adjudicated in juvenile court had a 29% lower risk of rearrest than those transferred to adult court.

In another study, Myers (2003) examined the recidivism rates of juveniles charged with robbery or aggravated assault in Pennsylvania in 1994. The author found that youth who were waived to adult court were twice as likely to be arrested and were arrested more frequently for more serious offenses within 18 months of release from incarceration than youth retained in the juvenile system.

In summary, when considering recidivism studies addressing the general and specific deterrence of juvenile transfer, empirical data confirm that there is no cause and effect between these harsh laws and deterring young offenders from future criminality. These laws seemingly have no effect on protecting the community and apparently have some impact on increasing recidivism of young offenders into adulthood. Finally, the laws may be ineffective because juveniles who are transferred may be learning how to be better criminals when housed with adult offenders in adult prison. Juvenile facilities emphasize rehabilitation more than adult prisons, and juveniles may respond to the harsh labeling of "adult criminal" with attitudes of anger and resentment given their perceptions that the system imposes unjust punishment (Myers, 2003; Redding, 2008).

Applying *Roper v. Simmons* in Waiver Proceedings

In *Roper*, the U.S. Supreme Court acknowledged that the mitigating effect of adolescence cannot be reliably assessed in individualized capital sentencing and that the moral and legal culpability is less for a juvenile than an adult. One then may question whether the mitigating effect of adolescence can be reliably processed through one of the most severe sanctions in juvenile justice, namely the trial of youth as adults. Accordingly, one could ask the question whether juvenile transfer, especially automatic and mandatory transfer by crime or age criterion, or by prosecutorial file, is constitutional under the holding in *Roper*. At least in the practice of discretionary transfer, the juvenile court judge may consider mitigating factors involving mental illness, cognitive development and impairment, intelligence, maturity, amenability, and lack of future dangerousness for an individual adolescent offender.

The core emphasis outlined in the landmark *Kent* opinion involved the juvenile court's considerable latitude in determining whether it should retain jurisdiction over

a child or waive its jurisdiction to adult court. Obviously, automatic waiver and a prosecutorial transfer policy override a judge's ability to use his or her discretion in considering the fate of a particular youth, and clash with the objective of a juvenile court: namely, rehabilitation. If juvenile courts follow the holding in *Kent*, then a particular juvenile's maturity, amenability to rehabilitative services, and dangerousness would be considered on an individual and discretionary basis.

The question of whether the holding in *Roper* expands to juvenile transfer involves both clinical and forensic psychological and neuropsychological as well as legal and public policy inquiries. Specifically, do an adolescent's developmental, psychological, and neuropathological frailties and vulnerabilities prevent him or her from being tried as an adult? Are juveniles blameworthy enough to be tried as adults, and does their lessened culpability demand that they be treated as juveniles when they commit serious offenses?

Clinical or Forensic and Neuropsychological Inquiry

When considering the first question of a clinical nature, the U.S. Supreme Court recognized in *Roper* a developmental perspective in examining questions about the criminal culpability of juveniles. The Court noted that youth may lack adult cognitive abilities, understanding, and logical reasoning when applying legal and moral rules to social situations.

In his opinion, Justice Kennedy cited a recent body of psychological, neuropsychological, and sociological scientific research representing that adolescents are more reckless and lack maturity and a sense of responsibility as compared to adults. The Court recognized the comparative immaturity and irresponsibility of juveniles when referencing states that prohibit those aged less than 18 from voting, serving on juries, or marrying without parental consent. The Court considered research that also revealed that juveniles are more vulnerable to negative influences and outside pressures, including peer pressure, than adults. Juveniles experience difficulties with controlling their environment and lack the autonomy adults have in avoiding a criminal lifestyle.

The brief for the American Psychological Association and the Missouri Psychological Association, as *Amici Curiae* (which support Simmons; American Psychological Association, 2004), is helpful in understanding behavioral studies and neuropsychological research demonstrating that juveniles are less culpable and responsible for their actions than adults. In general, the brief acknowledged that adolescence is a distinct stage of human development bearing discrete psychosocial and physiological traits that form cognition and behavior.

In particular, youth display deficits in psychosocial maturity affecting judgment and decision making. Factors relevant to judgment and decision making in youth include cognitive capacities in processing information, susceptibility to peer influence, attitudes toward and perception of risk and consequence, future orientation, and the capacity for self-management (Caffman & Steinberg, 2000; Grisso &

Schwartz, 2000; Scott, Reppucci, Antonishak, & DeGennaro, 2006; Scott, Reppucci, & Woolard, 1995; Steinberg & Cauffman, 1996).

During adolescence, youth begin to individuate from parental control and are vulnerable to peer influence. Adolescents' immature decision-making capabilities and deficits in self-identity and autonomy cause them to be more vulnerable to coercion, such as provocation and duress or threat (Steinberg & Scott, 2003). Juveniles desire peer acceptance, try to avoid rejection, and model their peers' behavior, which can be reflected by frequent group crime during adolescence.

Deficits in information processing, judgment, and decision making are also revealed by their perceptions of risk and the consequences of their behaviors (Kambam & Thompson, 2009). Adolescents discount and minimize future outcomes of their behaviors, give in to emotions when making decisions, and focus more heavily on short-term consequences pertaining to advantages and disadvantages when making choices. Juveniles focus on the immediate "now" of a situation, with the goal of instant gratification, rather than following a future orientation of potential outcomes of their behavior. In accord with the egocentric perspective of a juvenile, they also lack the ability to empathize and appreciate the perspectives of others and how their actions can harm others.

Interestingly, adolescents' future orientation may have something to do with their limited life experience and time on earth, because a 15-year-old's consideration of 5 years into the future is much different from that of a 45-year-old. Furthermore, if a youth has been shot at and is a victim of community violence, he or she may perceive that taking risks is less costly because of his or her smaller stake in the future (Gardner & Herman, 1990).

Similarly, the trait of temperance (ability to limit impulsivity and display self-management and evaluate situations and consequences before acting) is deficient during adolescence. Temperance can be considered within both a framework of cognition and behavior. When considering the temperance of juveniles, one must contemplate psychological and neuropsychological developmental perspectives pertaining to behavioral control and decision making.

Neuroscience research has indicated that the adolescent brain does not mature until early adulthood (American Bar Association, 2004a; Aronson, 2007; Giedd et al., 1999; Gotgay et al., 2004; Gur, 2005; Kwong et al., 1992; Lewis, Yeager, Blake, Bard, & Strenziok, 2004). Structural brain anatomical studies have revealed that various sections of the brain become fully myelinated and pruned at different times, with those brain regions responsible for basic life process and sensory perception maturing earliest (Kambam & Thompson, 2009; Yakovlev & Lecours, 1967).

The frontal lobes of the brain, and especially the prefrontal cortex, are considered to play a critical role in the "higher order" functions of the brain, that is, abstraction and reasoning; understanding others' reactions; planning; organizing; controlling impulses; emotional regulation; understanding, processing, and communicating information; establishing, changing, and maintaining a mental set; handling sequential behavior; using knowledge to regulate behavior; and exhibiting empathy regarding how behavior affects others. In juveniles, the prefrontal cortex is not completely developed during

adolescence (Golden, Jackson, Peterson-Rohne, & Gontkovsky, 1996) and is the last region of the brain to mature (American Bar Association, 2004b). Subsequently, in adolescents, it is hypothesized that they process emotional information through the amygdala, or as "lower order" responses (emotional center of the brain). The amygdala neural system is impulsive and based on immediate emotional responses and the prospects of an option (Fabian, 2009a).

It is proposed that willful behavior is the product of a healthy interaction between these two separate and interactive neural circuits, and an impaired process may have its roots in a hyperactive impulsive amygdala system that overhauls a dysfunctional reflective cortex system (Fabian, 2009a). Therefore, if the adolescent's brain is not fully developed concerning sophisticated executive functioning systems, he or she is likely to process emotionally stimulating information differently than adults. Specifically, adolescents are more likely to misinterpret the emotions of others in stressful situations, lack ability to weigh options and calculate risks, are impulsive and act inappropriately as a result, with little empathy or understanding as to how their behaviors affect others (Ferguson, 2004).

In fact, brain imaging research has revealed that adolescents overutilize their emotional centers of the brain and misidentify the emotions of others (Public Broadcasting Service/Frontline, n.d.). Researchers have found that when asking test subjects attempting to correctly identify the emotion of fear, all subjects older than 18 were able to do so, whereas only about half of those younger than 18 were able to do so (Public Broadcasting Service/Frontline, n.d.). These data lend credence to the view that juveniles process emotional information differently than adults; therefore, their responsive behaviors to emotionally stimulating events may also be different.

These deficits in development can affect an adolescent's behavior concerning impulsivity and self-regulation, attention and concentration, decision making, susceptibility to psychosocial influence, and the desire to satisfy immediate goals without considering consequences. Although these deficits may be associated in some way with aggressive and violent acts and crimes (Brower & Price, 2001), the relationship between brain structure and behavior is tenuous.

Evidence from neuropsychological, neurological, and brain-imaging studies has revealed that prefrontal structural and functional deficits are related to antisocial and aggressive behavior throughout the life span (Raine, 2002). Raine (2002) has theorized that the social and executive function demands of late adolescence overload the late-developing prefrontal cortex, giving rise to prefrontal dysfunction and a lack of inhibitory control over antisocial and violent behavior that peaks during adolescence. Similarly, it has been proposed that risky behaviors may be more prevalent in adolescents with increased accumbens (a component of the limbic and socioemotional systems) activity (Galvan, Hare, Voss, Glover, & Casey, 2007; Steinberg, 2008).

A variety of developmental disorders with psychopathological and neuropathological roots may also be related to aggression and violence in adolescents, especially when the youth are exposed to other environmental risk factors. Juvenile delinquents have been repeatedly found to have low IQs, especially in the area of verbal and language

development (Henry & Moffitt, 1997), and deficits in executive functioning in comparison to their nonjuvenile delinquent counterparts.

Verbal deficits have suggested left hemispheric damage in delinquents, resulting in low verbal IQ, learning disabilities, and general academic problems. The pattern of these neuropsychological profiles suggests that many delinquents demonstrate verbal dysfunction that impairs abilities in problem solving, self-control, mediating verbal situations, learning new information, and appropriately interpreting social cues (Barkley, 1990; Teichner et al., 2000). In fact, the most certain conclusion that might be drawn from the adult literature is that *persistent adult criminals* show the same general impairments on IQ tests and neuropsychological test batteries as do juvenile delinquents (Henry & Moffitt, 1997).

The question as to whether offenders and their violent acts are associated with neuropsychological deficits has been addressed more significantly with adults than juveniles (Teichner et al., 2000). A review of the literature (Teichner et al., 2000) indicates certain limitations in the delinquent and neuropsychological literature because it suffers from methodological problems, biased sampling methods, small samples of subjects, and poor control groups. In summary, a varied pattern of neuropsychological impairments is displayed across studies.

Neuropsychological impairment in delinquents has been researched and reviewed with samples that are usually incarcerated or referred for court-ordered psychiatric evaluations (Otnow-Lewis et al., 1985). Studies by Lewis, Shanok, Pincus, and Glaser (1979) examining violent juveniles and studies by Otnow-Lewis et al. (1985) assessing adolescent murderers found that these groups were more likely to experience a history of childhood physical abuse, neurological soft signs and impairment, and paranoid and psychotic symptoms. The literature also cites the years between 15 and 24 as the most susceptible to reckless behavior and head injury (Lezak, Howieson, & Loring, 2004). In fact, Levine, Karniski, Palfrey, Meltzer, and Fenton (1985) found that not only were delinquents more likely to experience head injuries than nondelinquents but the former group also experienced deficits in language and visual processing, attention problems, and learning disabilities.

Other studies have examined neuropsychological deficits in juvenile delinquent groups. For example, Denno (1990) examined delinquents and nondelinquents from low socioeconomic areas and found that the former group had more evidence of lower scores of verbal intelligence, academic achievement, selective attention, and immediate auditory memory than the nondelinquent sample. Brickman, McManus, Grapentine, and Alessi (1984) utilized the Luria-Nebraska Neuropsychological Battery with incarcerated delinquents with one or more violent acts and found that they were more likely to exhibit organic brain impairment than nondelinquents. Elevations were most prominent on scales measuring temporal sequencing, visual integration, expressive speech, math abilities, and general intelligence. These findings suggest that violent youth display greater expressive speech and memory deficits than nondelinquents as well as overall scores of brain damage.

Moffitt (1990) reviewed the literature and found that delinquents are more likely to experience deficits in both executive and verbal functions. These deficits existed in the areas of abstract reasoning and concept formation, sustaining attention and concentration, planning abilities, the formulation of goals, initiating purposive sequences of behavior, inhibiting impulsive behaviors, and self-monitoring. Less consistent findings were observed for visuospatial, sensory, and motor deficits. However, Moffitt's studies have been criticized because of poor study designs, lack of control groups, and small sample sizes of delinquents (Teichner et al., 2000).

These investigations provide some support to the hypothesis that neurological and neuropsychological impairment, physical abuse, and paranoid or psychotic thought processes may contribute to violent behavior. It should be highlighted that these factors play an integrative and cumulative effect on the etiology of violence (Fabian, 2009b). Both the adult and adolescent literatures suggest that neuropsychological and cognitive impairment is a significant predictor of aggressive behavior in some individuals. Although neuropsychological deficits do not always lead to violent behavior, it appears that many individuals who display aggressive behavior suffer from brain damage (Teichner et al., 2000).

When considering brain and behavior relationships and violence, the frontal lobe and executive functioning deficits have been associated with criminality and aggression, primarily in adults (Fabian, 2009a). As mentioned, executive functioning in the domain of the frontal lobe region is responsible for higher order mental processing, including the following:

- Attention and concentration
- Understanding, processing, and communicating information
- Planning, organizing, and initiating thoughts and behavior
- Understanding others' reactions
- Abstracting and reasoning
- Controlling impulses, stopping behavior, and emotional regulation
- Inhibiting unsuccessful, inappropriate, or impulsive behaviors
- Using knowledge to regulate behavior
- Behavioral flexibility to changing contingencies
- Modulating behavior in light of expected consequences
- Distraction from persisting with appropriate behavior
- Lacking appreciation of impact of behaviors onto others
- Manipulation of learned and stored information when making decisions

Studies have reflected deficits in the frontal lobes and have associated delinquency with the results of various neuropsychological tests, including category tests, trail-making tests, mazes, word-association tasks, and card-sorting tests (Berman & Siegal, 1976; Lueger & Gill, 1990; Skoff & Libon, 1987; Wolff, Waber, Bauermeister, Cohen, & Ferber, 1982; Yeudall, Fromm-Auch, & Davies, 1982).

Moffitt's (1988) landmark study examined a complete cohort of delinquent children, and when specific cognitive functions were assessed, this group scored more poorly on verbal IQ, performance IQ, language-based neuropsychological tests, and memory tests, but not on non-language-based tests. Group differences for the composite frontal lobe measure were not significant.

Overall, the literature examining frontal lobe deficits and delinquency have been inconsistent and subject to methodological and sampling critiques. Yet the take-home point yields a relationship between delinquency and deficits in skills involving attention and concentration, concept formation, abstract reasoning, cognitive flexibility, planning abilities, formulating goals, and inhibiting impulsive behaviors. Less consistently noted are findings observed for visuospatial, sensory, and motor deficits in juvenile delinquent samples.

Importantly, attention deficit hyperactivity disorder (ADHD), a condition of attentional and prefrontal lobe executive dysfunction, is significantly associated with delinquency and early aggression (Eme, 2008; Fabian, 2009a). Some data reveal that approximately 55% of delinquents qualify for ADHD (Zagar, Arbit, Hughes, Bussel, & Busch, 1989), suggesting that juveniles who qualify for ADHD are at greater risk to engage in adult criminality than those without ADHD (Farrington, 1990; Young, Gudjonsson, Ball, & Lam, 2003). Adolescents with a condition of ADHD are also significantly more at risk to develop substance abuse problems during adolescence and adulthood (Biederman, 2006; Wilens, 2004). Adolescent substance abuse may lead to additional susceptibility to peer pressure as well as criminal acts and aggression.

The aforementioned risk factors affecting psychological and neuropsychological development are enhanced when youth are exposed to environmental risk factors such as family dysfunction; abuse and neglect; parental psychopathology, criminality, and substance abuse; poverty; maternal teenage pregnancy; and community violent victimization (Fabian, 2009b; Mallett, 2003).

The preceding risk factors for adolescent criminality, such as deficits in psychosocial maturity affecting judgment and decision making; susceptibility to peer influence; attitudes toward and perception of risk; lack of future orientation; ongoing development of neurological structures and function; effects of ADHD on executive functioning and behavior; effects of verbal IQ on decision making, problem solving, and behavior; and the susceptibility to substance abuse, for example, should be considered by a forensic psychologist in waiver evaluations given the holding in *Kent*.

On the other hand, to extrapolate that these factors are so linked with violence that one's moral culpability is significantly reduced and juvenile waiver is unjust may be tenuous. For example, in the aftermath of the *Roper* decision, some scholars have questioned the scientific shortcomings of the social and behavioral science literature associating adolescence and violence and justifying the legal distinction between juveniles and adults (Denno, 2006; Maroney, 2009). Specifically, critics have questioned the limitations including reliability, validity, and outdated information relied on by the Court in its decision. From a practical standpoint, it can be argued that many youth experiment with substances and even develop substance abuse problems whereas others experience chronic forms of ADHD, yet they do not commit crimes.

Although it is beyond the scope of this article to delve into the issue of risk assessment and personality constructs of serious violent juvenile offenders, it should be noted that there is a growing body of literature that condones extending the label of psychopathy to juveniles and attempts to link the construct with heightened juvenile recidivism (Frick, O'Brien, Wooten, & McBurnett, 1994; Gretton, Hare, & Catchpole, 2004; Lynam, Caspi, Moffitt, Loeber, & Stouthamer-Loeber, 2007; Lynam, Miller, Vachon, Loeber, & Stouthamer-Loeber, 2009). Relevant to this article, some of this literature has revealed that juvenile psychopathy is an important risk factor pertaining to future antisocial and violent behavior in adulthood (Lynam et al., 2009).

This evidence may indicate that certain high-risk juvenile offenders, perhaps those like Christopher Simmons, do in fact possess significant antisocial and psychopathic traits that leave them at risk to commit markedly violent premeditated acts with little remorse. Although it is true that the majority of juveniles are morally immature, even though they know right from wrong, in all fairness, there are some delinquent youth who, as true psychopaths, disregard social morality by placing themselves above it. These juveniles perhaps should be individually assessed and some moral tests should be devised for that purpose. Consequently, many of these psychopathic youths should be tried as adults.

Legal and Public Policy Inquiry

Given the developmental differences between adolescents and adults embraced by the holding in *Roper*, it may be necessary to reevaluate our justice system's treatment of juveniles in order to make sure that legislative remedies are consistent with the *Roper* holding. Fittingly, to try a juvenile as an adult implies that the child has the same moral and legal culpability as an adult. The manifest weight of evidence from scientific, legal, and psychological communities, however, may demand that youth be treated as children in every context because children *are* children in every context.

Although the U.S. Supreme Court has not yet established any significant changes in the past 43 years in juvenile waiver law since *Kent*, states have made profound changes to their legislation in this area. Yet a review of current state and District of Columbia statutes demonstrates that they genuinely embrace punitive objectives on juvenile crime, fail to reflect the holding in *Roper* pertaining to juvenile offender culpability issues, and do not comply with various *Kent* factors (Mallett, 2007). For example, no current state recognizes adolescents' malleable personality and character in its waiver criteria. About 27.5% of states consider the youth's mental and/or emotional condition and about 46% consider the youth's likelihood of successful rehabilitation. A youth's maturity is considered by half of the states and vulnerability to peer pressure is considered in two states. Only about 15% of states require a review of information regarding the youth's mental, physical, educational, and social history (Mallett, 2007). Therefore, most state laws do not follow the spirit of *Kent* in how they deal with juvenile waiver criteria, including issues such as maturity and rehabilitation, deficiencies in maturity, susceptibility to peer influences, and the general malleability of adolescents' personality and neurological development.

The United States juvenile justice policy was traditionally founded on the rehabilitative and protective model of justice (Fagan & Zimring, 2000; Grisso, 1996; Grisso & Schwartz, 2000). Yet as society has progressed and a greater number of juveniles have committed adult-like violent crimes, juvenile justice legislative initiatives have emphasized adult-like punishment. These policies have focused on retributive and punitive justice with the goal of protecting society from perceived high-risk or dangerous youth. Although these objectives are noble, they cloud the progressive and rehabilitative goal of juvenile court and neglect the developmental framework of youthful offending.

The purposes of punishment in individualized sentencing schemes include retribution and deterrence. The objective of retribution is based on the principle of moral culpability. Juveniles are less morally culpable than adults because, as pointed out in *Roper*, their blameworthiness is diminished by reason of youth and immaturity. The punitive goal of deterrence also failed in *Roper* because the juvenile offender is not likely to engage in the same cost-benefit analysis of possible punishments, such as the death penalty, before he or she commits a crime (citing *Oklahoma v. Thompson*, 1988). Similarly, adolescents who experience impulsivity, low frustration tolerance, an inability to properly consider the consequences of their actions, susceptibility to peer influence, and those who hold to beliefs in their own invincibility are not threatened as much by the potential consequences of a less severe sanction such as juvenile waiver (American Bar Association, 2004a). The ultimate threat of being tried as an adult might not serve as a meaningful deterrent to adolescents.

The transfer of an adolescent to adult court may not on its face comport with the traditional objectives of juvenile court justice. When considering the protection of children, studies have shown that juveniles who enter the adult system are subjected to conditions much harsher than what would be found in the juvenile system (Austin, Johnson, & Gregoriou, 2000). According to this report, juveniles in adult facilities were 8 times more likely to commit suicide than other adolescents in juvenile detention facilities. In addition, juveniles in adult facilities were more likely to be violently victimized, beaten by the staff, attacked with weapons, and sexually assaulted than were youth who remained in juvenile facilities.

When considering the objective of rehabilitation and the mental and physical development of children and adolescents, the majority of adult facilities that detain juveniles do not have rehabilitation programs specifically tailored to juveniles. The focus of the adult correctional facility is retribution and incapacitation rather than rehabilitation; consequently, juveniles are rarely provided psychosocial relapse prevention intervention, for example. Instead, they likely learn further antisocial practices and lifestyles from their incarcerated criminal peers.

One objective of juvenile waiver may be to incapacitate offenders and therefore restrain their opportunity to reoffend if they are incarcerated. Empirical evidence clearly reveals that youth who are transferred to the adult system are more likely to commit future criminal and violent offenses once they are released into the community as adults (Fagan, 1996; Hahn et al., 2007; Winner et al., 1997; Wolfson, 2005). Despite these apparent failures in punitive objectives, juvenile transfer legislation stands firm in juvenile courts throughout America.

The juvenile court's traditional interest in fulfilling the role of *parens patriae*, offering juvenile offenders rehabilitation and treatment, may not be met in juvenile waiver statutes either. In fact, the *parens patriae* doctrine applied in juvenile court is seen in a number of contexts other than for sanction. For instance, the U.S. Supreme Court used a totality of the circumstances test, which included the consideration of age, education, and maturity when a child was thought to have voluntarily confessed or waived his or her *Miranda* rights (*Fare v. Michael C.*, 1979). In addition, in recognition of juveniles' lack of maturity, all states impose age limitations for activities such as driving, voting, military service, consenting to have sex, marriage, obtaining an abortion, consenting to contract, and consumption of alcohol. This evidence may supply credibility for the concept that state legislatures perceive children and adults differently and seek to provide greater protection to children. Accordingly, the reasons that juveniles are not trusted with the privileges and responsibilities of an adult also explain why their irresponsible conduct is not as morally reprehensible as that of an adult (*Johnson v. Texas*, 1993).

Despite some of these positions, both judicial opinions and social science research seem to argue that some serious and violent juveniles should in fact be transferred to adult court when they have displayed evidence of premeditation, planning, lack of remorse, and psychopathy. These high-risk youth may be unsalvageable in the juvenile justice system.

In that regard, the dissent in *Roper* included Justice O'Connor's reference to her opinion in *Thompson*, stating that the Court "had before us no evidence that 15-year-olds as a class are inherently incapable of being deterred from major crimes by the prospect of the death penalty" (*Roper*, p. 591). O'Connor continued, suggesting that "a rare case might arise in which a juvenile offender has sufficient psychological maturity, and at the same time demonstrates sufficient depravity, to merit a sentence of death" (*Roper*, p. 598). O'Connor specifically observes, "the fact that juveniles are generally less culpable for their misconduct than adults does not necessarily mean that a 17-year-old murderer cannot be sufficiently culpable to merit the death penalty. . . . The relevant differences between 'adults' and 'juveniles' appear to be a matter of degree, rather than of kind. It follows that a legislature may reasonably conclude that at least some 17-year-olds can act with sufficient moral culpability, and can be sufficiently deterred by the threat of execution, that capital punishment may be warranted in an appropriate case" (*Roper*, p. 600).

Justice O'Connor explains her rationale by describing the nature of the murder committed by Simmons, noting that Simmons vocalized his desire to kill someone well before the crime and predicted that he could commit a murder without severe punishment because he was less than 18 years of age ("we can get away with it"; *Roper*, p. 600). Arguably, this particular youth could perceive risks and consider consequences prior to the commission of a premeditated murder. O'Connor reasoned that Simmons could be deterred from such behavior and was as morally culpable for such a crime as an adult. "Based on this evidence, the sentencing jury certainly had reasonable grounds for concluding that, despite Simmons' youth, he 'ha[d] sufficient psychological maturity' when he committed this horrific murder, and 'at the same time

demonstrate[d] sufficient depravity, to merit a sentence of death” (*Roper*, p. 601). O’Connor noted the fine line between adolescence (17 years of age) and adulthood (18 years of age), and observed that these differences in maturity between groups are not “universal enough and significant enough to justify a bright-line prophylactic rule against capital punishment of the former” (*Roper*, p. 601). The Court’s analysis is premised on differences in the aggregate between juveniles and adults, which frequently do not hold true when comparing individuals.

Although it may be that many 17-year-old murderers lack sufficient maturity to deserve the death penalty, some juvenile murderers may be quite mature. Chronological age is not an unfailing measure of psychological development, and common experience suggests that many 17-year-olds are more mature than the average young adult. (*Roper*, p. 601)

Writing for the dissent in *Roper*, Justice Scalia also offers insightful thought about why juveniles are as morally culpable as adults and are mature enough for execution. He remarked, “the American Psychological Association (APA), which claims in this case that scientific evidence shows persons under 18 lack the ability to take moral responsibility for their decisions, has previously taken precisely the opposite position before this very Court. In its brief in *Hodgson v. Minnesota*, 497 U.S. 417 (1990), the APA found a ‘rich body of research’ showing that juveniles are mature enough to decide whether to obtain an abortion without parental involvement. . . . The APA brief, citing psychology treatises and studies too numerous to list here, asserted: ‘[B]y middle adolescence (age 14-15) young people develop abilities similar to adults in reasoning about moral dilemmas, understanding social rules and laws, [and] reasoning about interpersonal relationships and interpersonal problems’” (*Roper*, pp. 617-618). Consequently, Scalia questioned which studies cited by the APA regarding adolescent development and maturity the Court should consider: “Not one of the cited studies opines that all individuals under 18 are unable to appreciate the nature of their crimes” (*Roper*, p. 618).

Interestingly, Scalia acknowledges a difference in culpability for murder and other crimes when considering research on juvenile delinquents. However, there was no reason to believe juvenile culpability could not extend to murder: “The cited studies describe only adolescents who engage in risky or antisocial behavior, as many young people do. Murder, however, is more than just risky or antisocial behavior. It is entirely consistent to believe that young people often act impetuously and lack judgment, but, at the same time, to believe that those who commit premeditated murder are—at least sometimes—just as culpable as adults” (*Roper*, p. 618). Like O’Connor, Justice Scalia continued to note Simmons’s chillingly premeditated, cold-blooded, and callously murderous behavior when considering his moral culpability and death-worthiness.

After reviewing the holding and dissents in *Roper*, the question remains whether the argument for abolishing the death penalty for juveniles is applicable to trying juveniles as adults. Zimring and Fagan (2000) offer that the U.S. Supreme Court in *Roper* utilized developmental cognitive research to draw its bright line in abolishing the

death penalty for juveniles (Pagnanelli, 2007). Yet the authors suggest that the evidence on juvenile development cited in *Roper* to diminish moral culpability of adolescent offenders has limited impact on juvenile waiver statutes. They reason that there is no single cognitive, social, or behavioral explanation in the developmental research on criminal responsibility of juveniles. Simply put, behavioral science research has its limitations in guiding legislative policy on juvenile punishment.

It is this author's premise that although the literature regarding adolescent cognitive development is the principle behind the holding and reasoning in *Roper*, legislatures and courts will view the death penalty as the ultimate and most severe sanction against juveniles and therefore will accord less weight and credence to this literature when applied to juvenile transfer. Judicial responses to adolescent brain science will tend to reflect the disconnect between the questions asked by law and those answered by science (Maroney, 2009). In addition, many view that certain juvenile offenders who have a history of serious, frequent, and violent acts are the worst of the worst, may not be amenable to rehabilitation, are frequently psychopathic, and too dangerous as a group. Thus, they are basically unsalvageable and therefore should be sent to adult court, rather than be protected as a group.

Conclusion

The U.S. Supreme Court recognized in *Roper v. Simmons* that the fundamental differences between a juvenile and an adult mitigate a juvenile's culpability for purposes of the death penalty. It may appear illogical to then ignore these differences in other serious legal contexts that differentiate juveniles and adults, one such context being juvenile waiver.

Prior to the *Roper* decision, there had been forces driving toward harsh punitive reforms in juvenile justice legislation, especially in the area of trying youth as adults. These society's fears included, for example, society's fear of serious juvenile crime, the perceived need for retribution against those who commit violent offenses, the perception that rehabilitation does not assist violent youth and diminish recidivism, the expansion of due process rights for violent juvenile offenders, and the perception that juvenile courts are ineffective in protecting the public.

In contrast, public attitudes and recent research about the culpability and punishment of youthful offenders have embraced perceptions of adolescent offenders as less developmentally and cognitively mature and criminally responsible than adults, with the result that they need rehabilitation and treatment (Kambam & Thompson, 2009; Scott et al., 2006). Although this observation is true in some respects, there is a gap in the research that formally compares cognitive abilities pertaining to skills in reasoning, judgment, maturity, etc., between violent criminals who are 17 years of age as compared to those who are 18 when they commit capital crimes.

Furthermore, there is a growing sentiment that the decision in *Roper* relied too heavily on limited social and behavioral science research, with the caution that the theoretical and advocative uses of adolescent brain and developmental science should mirror only the level of generality that the science can support (Maroney, 2009).

If one is to endorse the position that the *Roper* decision is germane to all areas of juvenile justice, including waiver, then the selling argument is that juveniles are insufficiently culpable to be the target of retribution and insufficiently developed to be rehabilitated by or deterred within the adult criminal justice system (Pagnanelli, 2007).

Even if we accept that juvenile waiver will survive a legal challenge, and that we must send an albeit transparent message to youth that “if you do the adult crime you must do the adult time,” what policies must we consider to respect the U.S. Supreme Court’s landmark holdings in *Kent* and *Roper*?

In *Kent*, the Court demanded that youth be afforded heightened rights because of the severe legal and psychological consequences of being tried as an adult. Specifically, the Court held that a juvenile court must accompany its waiver order with a statement of the reasons or considerations and that the statement be sufficient to demonstrate that the statutory requirement of a full investigation has been met, and that the question has received the careful consideration of the juvenile court, and it must set forth the basis for the order with sufficient specificity to permit meaningful review. One might question then whether an automatic and mandatory waiver based on the severity of a crime, for example, recognizes the holding in *Kent*. The *Roper* decision advocates at least a national legislative demand and initiative that juvenile waivers should all be discretionary in nature and process.

In particular, when considering the holding in *Roper* acknowledging that youth are different from adults in respect to cognition, behavior, and decision making, does not the opinion in *Roper* suggest that discretionary waivers respect these differences? Why is society expected to believe that the best predictor of recidivism or rehabilitative potential is based on offense seriousness that embraces the automatic and mandatory waiver process when the research does not support such a finding? (Redding, 1997).

In *Roper v. Simmons*, the U.S. Supreme Court outlined a trend in the psychological literature acknowledging psychological and neuropsychological differences between juveniles and adults. When considering the efficacy of juvenile waiver law while embracing U.S. Supreme Court precedent, juvenile justice must strive for thorough and empirical evaluation of the factors outlined in *Kent* and *Roper*. Specifically, forensic psychologist evaluators must consider assessing the requirements in *Kent* that include whether a youth is amenable to treatment, their level of risk for placement in juvenile facilities versus adult corrections, their amenability to rehabilitation within the juvenile system, their specific needs and disorders, pertaining to future placements and past successes and failures (did they get the right treatment modality in the past and what kind of treatment do they need now?), as well as their level of sophistication and maturity. When considering the holding in *Roper*, examiners must assess psychological and emotional functioning and neuropsychological function and dysfunction, including IQ, language and verbal abilities, ADHD and executive functioning, substance abuse disorders, and the contexts and patterns of their criminality when assessing these domains. At least then there will be some focus as to the empirical underpinnings of juvenile offending and the risk of recidivism.

Despite this fact, developmental forces that lend themselves to the onset and persistence of juvenile criminality and violence are not well understood. Yet the law set out in *Roper* and *Kent* informs and demands that the biopsychosocial factors inherent in juvenile criminality be thoroughly assessed because of the mitigating nature of a juvenile offender's moral and legal culpability as compared to that of an adult.

Declaration of Conflicting Interests

The author(s) declared no conflicts of interests with respect to the authorship and/or publication of this article.

Funding

The author(s) received no financial support for the research and/or authorship of this article.

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