

A Developmental Perspective on Serious Juvenile Crime: When Should Juveniles Be Treated as Adults?

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DEBATES OVER how society should respond to serious juvenile crime can be framed from many vantage points. Within a moral framework, one might very reasonably raise questions about fairness and justice, and probe whether treating juvenile crime in a particular way strikes an acceptable balance between the rights of the offender, the interests of the offended, and the concerns of the community. Within a legal framework, the discussion might focus on the ways in which a given approach to juvenile crime fits within the broader compass of the law, and on the logic of the legal analysis that undergirds the proposed policy. From a political perspective, deciding how to respond to serious juvenile crime raises an entirely different set of concerns: What does the larger community want to accomplish, what sorts of social and legal policies might achieve these goals, which of the inevitable trade-offs are acceptable, and what are politicians willing to do to satisfy their constituents? And from a practical point of view, one might raise questions about the short- and long-term consequences of one set of policies versus another: Does a given approach to juvenile crime strike a satisfactory balance among the community's legitimate, but often conflicting, interests in public safety, retribution, deterrence, and rehabilitation?

Regardless of the perspective one uses to examine the issues, the fact that juvenile crimes—even very serious and very violent crimes—are committed by individuals who are not adults adds an element to the discussion that cannot be ignored. The moral, legal, political, and practical concerns that one brings to the table for a discussion of juvenile crime may be very different from those that are raised in a discussion of adult crime, simply because of the developmental status of the offender. A fair punishment for an adult may seem unfair when applied to a child who may not have understood the consequences of his actions. The ways we interpret and apply laws may rightfully vary when the specific case at hand involves a defendant whose understanding of the law is limited by immaturity. The practical and political implications of sanctioning offenders in a particu-

lar fashion may be very different when the offender is young than when he is an adult.

The purpose of this article is to add the perspective of developmental psychology to the current debate about the appropriateness of transferring serious juvenile offenders to adult court. Generally speaking, a developmental perspective examines the soundness of age-based legal policies in light of scientific research and theory on psychological development. It asks whether the distinctions we draw between people of different ages under the law are sensible in light of what we know about age differences in legally-relevant aspects of intellectual, emotional, or social functioning.

Our primary task in the pages that follow is to examine the evidence on the development of legally-relevant competencies, capacities, and capabilities and to suggest whether, on the basis of what we know about development, a jurisdictional boundary should be drawn between juveniles and adults, and if so, at what age it should be drawn. Although we shall indirectly address whether considerations of public safety, deterrence, and retribution are so compelling that they outweigh any claims that can be made on the basis of observed differences between adolescents and adults, a direct examination of this issue does not fall squarely within the bailiwick of developmental psychology. It is crucial to ask whether transferring juveniles to the adult criminal justice system in fact makes for more effective deterrence, community safety, or public confidence in the fairness of the legal system, and it is even more important to ask whether these goals are more worthwhile than preserving the legal distinction between juveniles and adults because of differences in their developmental status. Although a developmental perspective can inform the discussion of these moral, political, and practical questions, it cannot answer them.

The Science of Developmental Psychology

Developmental psychology, broadly defined, concerns the scientific study of changes in physical, intellectual, emotional, and social development over the life cycle. Developmental psychologists are mainly interested in the study of “normative” development (i.e., patterns of behavior, cognition, and emotion that are regular and predictable within the vast majority of the population of individuals of a given chronological age), but they are also interested in understanding normal individual differences in development (i.e., common variations within the range of what is

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considered normative for a given chronological age) as well as the causes and consequences of atypical or pathological development (i.e., development that departs significantly from accepted norms). To the extent that the issues under consideration in the waiver debate are framed as part of a discussion about *policy*, the focus of a developmentally-oriented discussion must be primarily on normative development, since the logic of drawing distinctions between adolescents and adults under the law must be based on age differences that characterize the population in general. As we shall make clear, differences among individuals, whether within or outside the normal range, are clearly relevant to legal practice (e.g., where a determination that an individual acted in a certain way because of mitigating circumstances or mental illness is relevant to his or her adjudication), but differences among individuals who are the same chronological age generally are not relevant to policy. From the vantage point of developmental psychology, then, one asks whether the study of normative development indicates that there are scientific reasons to warrant the differential treatment of young people and adults within the legal system.

With regard to public policy in general, and to the transfer debate in particular, the period from 12 to 17 is an extremely important age range, for three interrelated reasons. The first and most important is that this age is an inherently transitional time, during which there are rapid and dramatic changes in individuals' physical, intellectual, emotional, and social capabilities. Indeed, other than infancy, there is probably no period of human development characterized by more rapid or pervasive transformations in individual competencies, capabilities, and capacities. There is therefore good reason to believe that individuals at the point of entry into adolescence are very different from individuals who are making the transition out of adolescence.

A second feature of adolescence that makes it relevant to the transfer debate is that it is a period of potential malleability, during which experiences in the family, peer group, school, and other settings still have a chance to influence the course of development. Unlike infancy, during which much of development is dictated by biology and influenced only by extreme environmental variations, and unlike adulthood, by which time most intellectual, physical, emotional, and social development is more or less complete, adolescence, like childhood, is a period of potential plasticity in response to changes in the environment. To the extent that this plasticity is great, transferring juveniles into a criminal justice system that precludes a rehabilitative response may not be very sensible public policy. To the extent that plasticity is limited, however, transfer is less worrisome.

Finally, adolescence is an important formative period, during which many developmental trajectories become firmly established and increasingly difficult to alter. Events that occur in adolescence often cascade into adulthood, particularly in the realms of education and work, but also in the domains of mental and physical health, family formation, and interpersonal relationships. As a consequence, many adolescent experiences have a tremendous cumulative

impact. The importance of this fact for the present discussion is that bad decisions or poorly formulated policies pertaining to juvenile offenders may have unforeseen and possibly iatrogenic consequences that are very hard to undo.

The transitional, malleable, and formative nature of adolescence provides a sound rationale for focusing on this age as the age period during which we might attempt to establish legally defined age-related boundaries between developmentally immature and developmentally mature individuals. Indeed, if developmental psychology were able to point to a given age at which individuals made the shift from immaturity to maturity, it would make the designation of a jurisdictional boundary that much easier. Unfortunately, adolescence does not lend itself to such a precise partitioning on the basis of chronological age, for several reasons.

First, adolescence is a period of tremendous intra-individual variability. Within any given individual, the developmental timetable of different aspects of maturation may vary markedly, such that a given teenager may be mature physically but immature emotionally, socially precocious but an intellectual late bloomer. In addition, development rarely follows a straight line during adolescence—periods of progress often alternate with periods of regression. This intra-individual variability makes it difficult, if not impossible, to make generalizations about an adolescent's level of maturity on the basis of any one indicator alone. A tall, physically mature juvenile with an adult appearance may very well have the decision-making abilities of a child. An adolescent who carries himself like an adult today may act like a child tomorrow.

Variability *between* individuals in their biological, cognitive, emotional, and social characteristics is more important still, for it means that it is difficult to draw generalizations about the psychological capabilities of individuals who share the same chronological age. Unlike infancy and most of childhood, for example, during which developmental maturity and chronological age are closely linked, most research suggests that from early adolescence on, chronological age is a very poor marker for developmental maturity—as a visit to any junior high school will surely attest. Another way to put this is that differences *within* a given age group—differences among 14-year-olds, for example—are likely to be greater than differences between this age group and the adjacent ones (i.e., differences between 14-year-olds and either 13-year-olds or 15-year-olds). The psychological heterogeneity of the adolescent population makes it difficult to develop policies, including transfer policies, that are based on bright-line distinctions made on the basis of age.

The highly variable nature of development during adolescence makes it a fuzzily bounded, confusing, and moving target for policy-makers. It calls for caution on the part of developmental experts with regard to the sorts of generalizations one can make about adolescents of a given age. Nevertheless, an approach that focuses on age-related changes in legally-relevant competencies, capacities, and capabilities can help to articulate the inherently develop-

mental nature of the questions at the very core of the transfer debate. Even if it is not determinative, developmental evidence can provide a sensible backdrop against which various legal, policy, and pragmatic considerations can be raised, analyzed, argued, and decided upon. Several years ago, the authors of this article, along with a number of other members of the MacArthur Foundation Research Network on Adolescent Development and Juvenile Justice, initiated a series of conceptual analyses and empirical research projects designed to integrate developmental considerations into analyses of transfer policies. What follows is a summary of our thinking to date.

Adjudicating Adolescents as Adults: A Developmental Perspective

In our view, transferring a juvenile to criminal court has three sets of implications that lend themselves to a developmental analysis: those that involve the legal process, those that involve legal standards, and those that involve the possible outcomes of an adjudication. First, transfer to adult court alters the legal process by which a minor is tried. Although there are certainly exceptions to the rule, criminal court is based on an adversarial model, while juvenile court has been based, at least in theory, on a more cooperative model. This difference in the climates of juvenile versus adult courts is significant because, as we shall discuss later, it is unclear at what age individuals have sufficient understanding of the ramifications of the adversarial process and the different vested interests of prosecutors, defense attorneys, and judges.

Second, the legal standards applied in adult and juvenile courts are different in a number of ways. Although the standards for due process protections are clearer in criminal court than in juvenile court, it is not clear whether the protections afforded in adult court are adequate for juvenile defendants. For example, competence to stand trial is presumed among adult defendants unless they suffer from a serious mental illness or substantial mental retardation. We do not know if the presumption of adjudicative competence holds for juveniles, who, even in the absence of mental retardation or mental illness, may lack sufficient competence to participate in the adjudicative process (Grisso & Schwartz, in press). Standards for judging culpability (that is, the extent to which an individual can be held accountable or blameworthy for damage or injury he or she causes) may be different in juvenile and adult courts as well. Again, in the absence of mental illness or substantial deficiency, adults are presumed to be responsible for their own behavior. We do not know the extent to which this presumption applies to juveniles, or whether the validity of this presumption differs as a function of the juvenile's age.

Finally, the choice of trying a young offender in adult versus juvenile court determines the possible outcomes of the adjudication. In adult court, the outcome of being found guilty of a serious crime is nearly always some sort of punishment within a correctional facility designed for adults. In

juvenile court, the outcome of being found delinquent may be some sort of punishment, but juvenile courts typically retain the option of a rehabilitative disposition, in and of itself or in combination with some sort of punishment. The difference between possible rehabilitation and certain punishment for the minor who is waived to adult court has two significant ramifications. The first is that the stakes of the adjudication are raised substantially. Rather than face a limited amount of time in a training school, the juvenile on trial in adult court for a serious offense faces the very real possibility of a long period of incarceration in prison, with potential iatrogenic consequences and increased risk of recidivism after release (Fagan & Zimring, in press). Although this argument may not carry weight with those who favor harsh consequences for young offenders for purposes of retribution, from a utilitarian perspective, a punishment that ultimately results in increased offending does not make very much sense. Thus, even if one were to argue that adolescents have the competencies necessary to participate in an adversarial court proceeding and to be held culpable for their actions, one could still question the wisdom of imposing adult-like sanctions on young offenders. The second consequence concerns the presumption of amenability. In juvenile court, offenders generally are presumed amenable unless the prosecutor demonstrates otherwise. In adult court, however, amenability is not presumed, and must instead be demonstrated by the defendant's counsel.

Our argument, then, is that the significance of having a jurisdictional boundary inheres in the different *presumptions* about age and its relation to development that decision-makers within the juvenile and criminal justice systems bring to the table, because different procedures and options derive from these presumptions. The juvenile court operates under the presumption that offenders are immature, in three different senses of the word: their development is incomplete, their judgment is callow, and their character is still maturing. The adult court, in contrast, presumes that defendants are mature: competent, responsible, and unlikely to change.

Viewing the Transfer Question Through a Developmental Lens

In our view, because transfer has implications for the legal procedures, standards, and outcomes a juvenile defendant will encounter, the key developmental questions concern differences between juveniles and adults with respect to their competence, culpability, and amenability to treatment. In particular:

1. *When do individuals become competent to be adjudicated in an adversarial court context?* Adjudicative competence, broadly defined, refers to participation in a criminal proceeding and includes the ability to assist counsel in preparing a defense, to enter pleas, to retain or dismiss counsel, to consider plea agreements, and so forth. In *Garutt*, it was argued that as long as one was subject to adult-like (i.e. punitive) penalties, even if administered by a juvenile court, one had the due process rights of adults as well, an

argument that can be extended to other competence-relevant issues (e.g., providing confessions, entering pleas, etc.). Given the adversarial nature of criminal court proceedings, at what age are adolescents likely to possess the skills necessary to protect their own interests in the courtroom and participate effectively in their own defense?

2. *When do individuals meet the criteria for adult blameworthiness? Put differently, is there an age before which individuals, by virtue of "normal" psychological immaturity, should be considered to be of "diminished culpability" and therefore held less accountable, and proportionately less punishable, for their actions?* The longstanding "infancy defense" holds that individuals under the age of 6 are incapable of forming criminal intent and are therefore not culpable for any offenses in which they are involved. Less clear is how the development of accountability progresses between the ages of 6 and adulthood, however. We know that under certain conditions—for instance, in cases in which a defendant is diagnosed as mentally ill—an individual's culpability may be viewed as inherently diminished by virtue of deficiencies in cognitive or emotional functioning. Analogous concerns have seldom been raised about deficiencies in cognitive or emotional functioning that are *developmentally normative* but that have no less an impact on an individual's behavior or decision-making. Thus, it is reasonable to ask at what age one can expect a person to have the maturity and perspective to differentiate between wrong and right, foresee the consequences of his decisions, and appreciate the effects of his decisions on other people.

3. *Is there a point in development at which individuals cease to be good candidates for rehabilitation, by virtue of the diminished likelihood of change in the psychological and behavioral characteristics thought to affect criminal behavior or because of diminished amenability to treatment?* A fundamental tenet of the juvenile justice system is that juveniles can be rehabilitated, because their characters are not yet fully formed. Amenability is therefore a factor in most waiver determinations, because if an individual is deemed to be unlikely to change or not amenable to treatment, a rehabilitative disposition will serve no useful purpose. In general, children are presumed to be more malleable than adults, but is there a predictable timetable along which individuals change from relatively changeable to relatively unchangeable?

In several other articles, we have reviewed the empirical and theoretical evidence regarding the development of competence, culpability, and amenability. Here, we summarize the results of these analyses. We begin with an examination of the development of adjudicative competence and the capabilities presumed to underlie it.

Research and Theory on Adjudicative Competence

Numerous cognitive and social-cognitive competencies change during the adolescent years that likely underlie the development of adjudicative competence, among them the ability to engage in hypothetical and logical decision-mak-

ing (in order to weigh the costs and benefits of different pleas), demonstrate reliable episodic memory (in order to provide accurate information about the offense in question), extend thinking into the future (in order to envision the consequences of different pleas), engage in advanced social perspective-taking (in order to understand the roles and motives of different participants in the adversarial process), and understand and articulate one's own motives and psychological state (in order to assist counsel in mounting a defense). Developmental research indicates that these abilities emerge at somewhat different ages, but that it would be highly unlikely for an individual to satisfy all of these criteria much before the age of 12. At the other extreme, research suggests that the majority of individuals have these abilities by age 16 (for analyses of these and other relevant abilities, see Grisso, 1997; Scott, Reppucci, & Woolard, 1995; Steinberg & Cauffman, 1996).

Although direct research regarding adolescents' understanding of court proceedings is fairly limited, there is ample evidence to raise concerns regarding the competence of adolescents under age 15 to participate in criminal trials. Among individuals age 15 and younger, scores on standardized competence measures generally fall short of the thresholds below which competence is deemed questionable by experts. General knowledge regarding trials and the roles of various participants, however, appears to be fairly well developed by age 13, although increases in familiarity with courtroom concepts continue beyond that age. Even at age 15, a significant fraction of adolescents should not be assumed competent to protect their own interests in adversarial legal settings (Grisso, 1997).

It is our view, therefore, that the available evidence regarding the development of capabilities relevant to adjudicative competence indicates that no youngster under the age of 13 should be tried in adult court. On the other hand, although more research is needed, especially on samples of poor and nonwhite youth, it is likely that the majority of individuals older than 16 would satisfy broad criteria for adjudicative competence. On the basis of this evidence, it seems reasonable to recommend that individuals who are between the ages of 13 and 16 should be evaluated to determine their adjudicative competence before a waiver decision is made (similar conclusions were reached by Grisso, 1997).

Research and Theory on Culpability

The adult justice system presumes that defendants who are found guilty are responsible for their own actions, and should be held accountable and punished accordingly. Historically, those who are guilty but less responsible for their actions (e.g., because of one or more mitigating factors) receive proportionately less punishment (Zimring, forthcoming). It is therefore worth considering whether, because of the relative immaturity of minors, it may be justified to view them as being less blameworthy than adults for the very same infractions—that is, whether developmental immaturity should be viewed as a relevant mitigating

factor. If, for example, adolescents below a certain age cannot foresee the consequences of their actions, or cannot control their impulses, one should not hold them as culpable for their actions as one would hold an adult.

The rehabilitative ideal of the juvenile court argues against adjudicating a juvenile who is characterized by sufficiently diminished responsibility in a criminal court whose only response can be punitive. The argument for keeping juveniles in the juvenile system is that rehabilitation is a more reasonable disposition than punishment for a less than fully accountable individual. This argument hinges on two assumptions, however: (1) that juveniles are less blameworthy than adults; and (2) that the juvenile court inherently has more or better mechanisms for meting out a proportionately less severe punishment than does the criminal court. Our interest, as developmental psychologists, is in the first of these assumptions—that there are age differences in blameworthiness that are substantial enough to affect legal judgments about culpability.

Some of the same cognitive and social-cognitive capabilities relevant to the assessment of blameworthiness are also relevant to the assessment of adjudicative competence. In order to be fully accountable for an act, for example, a person must commit the act voluntarily, knowingly, and with some ability to form reasonable expectations of the likely or potential consequences of the act (Scott & Grisso, 1997). In this respect, logical decision-making and ability to foresee the future ramifications of one's decisions are important in determining blameworthiness, just as they are in determining adjudicative competence. As we indicated earlier, it is reasonable to assume that the average individual would be unlikely to have developed these abilities before age 12, but that the average individual would have developed these abilities by age 16.

There also has been some research examining age differences in decision-making, in an effort to see whether adolescents and adults differ with respect to their judgment (e.g., Fischhoff, 1992). These investigations find few cognitive differences between adolescents as young as 12 or 13 and adults, consistent with both developmental theory and research on the development of logical reasoning (e.g., Office of Technology Assessment, 1991; Ward and Overton, 1990). In addition to these cognitive abilities, however, culpability implies certain capabilities that are more interpersonal or emotional in nature, among them, the ability to control one's impulses, to manage one's behavior in the face of pressure from others to violate the law, or to extricate oneself from a potentially problematic situation. Deficiencies in these realms would likely interfere with individuals' abilities to act in ways that demonstrate mature enough decision-making to qualify for adult-like accountability (e.g., Cauffman & Steinberg, in press; Scott, Reppucci, & Woolard, 1995; Steinberg & Cauffman, 1996). Although less is known about the development of these social and emotional competencies, it does appear that few individuals demonstrate adult-like psychosocial maturity and, consequently, adult-like judgment much before age 12. Indeed, many individuals

do not demonstrate adult-like psychosocial maturity or judgment even at age 17.

Because research on psychological development makes it quite clear that children as young as 9 have the capacity for intentional behavior and know the difference between right and wrong (Rest, 1983), there is no reason why children of this age should be held blameless for their conduct. At the same time, it is also clear that the vast majority of individuals below the age of 13 lack certain intellectual and psychosocial capabilities that need to be present in order to hold someone *fully* accountable for his or her actions *under certain circumstances*. These circumstances include situations that call for logical decision-making, situations in which the ultimate consequences of one's actions are not evident unless one has actually tried to foresee them, and situations in which sound judgment may be compromised by competing stimuli, such as very strong peer pressure to violate the law. Once individuals have reached a certain age—17 or so—it is reasonable to expect that they possess the intellectual and psychosocial capacities that permit the exercise of good judgment, even under difficult circumstances.

When a juvenile offender under consideration is younger than 17, developmentally-normative immaturity should be added to the list of *possible* mitigating factors, along with the more typical ones of self-defense, mental state, and extenuating circumstances. Whether developmental immaturity is enough of a mitigating factor in a specific offender's case to diminish his or her blameworthiness cannot be determined without having additional information about the circumstances of the case. Nevertheless, the need for this additional information argues for a more individualized approach to both transfer and sentencing of juveniles, and argues against policies that do not permit such flexibility, such as transfer via legislative exclusion.

Research and Theory on Amenability

In legal practice, amenability refers to the likelihood of an individual desisting from crime and/or being rehabilitated when treated with some sort of intervention. To developmental psychologists, however, amenability refers to the extent to which an individual's nature has the possibility of changing, regardless of his or her exposure to an intervention, and regardless of the type of intervention that is applied.

Although these different definitions of amenability are similar, they present different standards by which to judge an individual's likelihood of desistance. An offender may be at a point in development where he or she is still malleable, but may have little likelihood of desisting from crime given the individual's life circumstances (e.g., the individual lives in a community with few opportunities for legal employment). Thus, an offender may be developmentally malleable but may be unlikely to desist from crime unless exposed to an intensive intervention.

Although some understanding of age differences in malleability is useful in describing general developmental trends in amenability, it is impossible to evaluate a specific

individual's amenability without considering the nature of the intervention to which he or she is going to be exposed and whether there is reason to believe that this particular intervention will be effective for this particular individual. Rather than make amenability judgments on the basis of age, therefore, developmental research would indicate that such judgments should be made on the basis of past experience. A youngster who has been exposed to certain types of interventions in the past and who has not responded to them effectively is relatively unlikely to respond to them in the future.

In essence, it is not possible to draw reliable generalizations about differences in amenability as a function of an offender's age. As a consequence, we cannot recommend the implementation of age-based policies regarding the treatment of serious juvenile offenders solely on the basis of research and theory on amenability. More specifically, it is incorrect to suggest that there is an age below which individuals should be treated as juveniles because they are especially likely to be amenable to change, or an age beyond which we should assume that individuals are too hardened to be helped. Amenability decisions should be made on a case-by-case basis and should focus on the prior history, rather than the chronological age, of the offender.

A Developmental Perspective on Transfer

A developmental perspective can inform, but cannot answer, the transfer debate. Even setting aside the weighty political, practical, and moral questions that impinge on the discussion, the developmental analysis we have presented here does not point to any one age that politicians and practitioners should use in formulating transfer policies or practices. Instead, we encourage those engaged in the debate to view young offenders as falling into three broad categories: juveniles (individuals under 13), who should not be adjudicated in adult court; adults (individuals 17 and older), who should; and youths (individuals between the ages of 13 and 16), who may or may not be developmentally appropriate candidates for transfer depending on their individual characteristics and circumstances.

In general, it appears to us appropriate to raise serious concerns based on developmental evidence about the transfer of individuals 12 and under to adult court owing to their limited adjudicative competence as well as the very real possibility that most individuals this young will not prove sufficiently blameworthy to warrant exposure to the harsh con-

sequences of a criminal court adjudication; individuals 12 and under should continue to be viewed as juveniles, regardless of the nature of their offense. At the other end of the continuum, it appears appropriate to conclude from a developmental perspective that the vast majority of individuals older than 16 are not appreciably different from adults in ways that would prohibit their fair adjudication within the criminal justice system. Our sense is that variability among individuals older than 12 but younger than 17 requires that some sort of individualized assessment of an offender's competence to stand trial, blameworthiness, and likely amenability to treatment be made before reaching a transfer decision.

The irony of employing a developmental perspective in the analysis of transfer policy is that the exercise reveals the inherent inadequacy of policies that draw bright-line, age-based distinctions between adolescence and adulthood. Indeed, an analysis of the developmental literature indicates that variability among adolescents of a given chronological age is the rule, not the exception. In order to be true to what we know about development, a fair transfer policy must be able to accommodate this variability.

REFERENCES

- Cauffman, E. & Steinberg, L. (in press). (Im)maturity of judgment in adolescence: Why adolescents may be less culpable than adults. *Behavioral Sciences and the Law*.
- Fagan, J., & Zimring, F. (in press). *The changing borders of juvenile justice: Transfer of adolescents to the criminal court*. Chicago: University of Chicago Press.
- Fischhoff, B. (1992). Risk taking: A developmental perspective. In J. Yates (Ed.), *Risk-taking behavior*. Pp. 133-162. New York: Wiley.
- Grisso, T. (1997). The competence of adolescents as trial defendants. *Psychology, Public Policy, and Law*, 3, 3-32.
- Grisso, T. & Schwartz, B. (in press). (Eds.). *Adolescent development and juvenile justice: The competence and culpability of youth*. Chicago: University of Chicago Press.
- Office of Technology Assessment (November, 1991). *Adolescent Health—Vol. 2: Background and the effectiveness of selected prevention and treatment services*. Washington, DC: U.S. Government Printing Office.
- Rest, J. (1983) Morality. In J. Flavell & E. Markman (Eds.), *Handbook of child psychology, Volume 3: Cognitive development*. New York: Wiley.
- Scott, E., & Grisso, T. (1997). The evolution of adolescence: A developmental perspective on juvenile justice reform. *Journal of Criminal Law and Criminology*, 88, 137-189.
- Scott, E., Reppucci, N., and Woolard, J. 1995. Evaluating adolescent decision making in legal contexts. *Law and Human Behavior*, 19, 221-244.
- Steinberg, L. and Cauffman, E. 1996. Maturity of judgment in adolescence: Psychosocial factors in adolescent decision-making. *Law and Human Behavior*, 20, 249-272.
- Ward, S. & Overton, W. (1990). Semantic familiarity, relevance, and the development of deductive reasoning. *Developmental Psychology*, 26, 488-493.