
Reconciling the Complexity of Human Development With the Reality of Legal Policy

Reply to Fischer, Stein, and Heikkinen (2009)

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The authors respond to both the general and specific concerns raised in Fischer, Stein, and Heikkinen's (2009) commentary on their article (Steinberg, Cauffman, Woolard, Graham, & Banich, 2009), in which they drew on studies of adolescent development to justify the American Psychological Association's positions in two Supreme Court cases involving the construction of legal age boundaries. In response to Fischer et al.'s general concern that the construction of bright-line age boundaries is inconsistent with the fact that development is multifaceted, variable across individuals, and contextually conditioned, the authors argue that the only logical alternative suggested by that perspective is impractical and unhelpful in a legal context. In response to Fischer et al.'s specific concerns that their conclusion about the differential timetables of cognitive and psychosocial maturity is merely an artifact of the variables, measures, and methods they used, the authors argue that, unlike the alternatives suggested by Fischer et al., their choices are aligned with the specific capacities under consideration in the two cases. The authors reaffirm their position that there is considerable empirical evidence that adolescents demonstrate adult levels of cognitive capability several years before they evince adult levels of psychosocial maturity.

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In our article (Steinberg, Cauffman, Woolard, Graham, & Banich, 2009, this issue), we asked whether there was scientific justification for the different positions taken by the American Psychological Association (APA) in two related Supreme Court cases—*Hodgson v. Minnesota* (1990; a case concerning minors' competence to make independent decisions about abortion, in which APA argued that adolescents were just as mature as adults) and *Roper v. Simmons* (2005; a case about the constitutionality of the juvenile death penalty, in which APA argued that adolescents were not as mature as adults). On the basis of our reading of the extant literature in developmental psychology, as well as findings from a recent study of our own,

we concluded that the capabilities relevant to judging individuals' competence to make autonomous decisions about abortion reach adult levels of maturity earlier than do capabilities relevant to assessments of criminal culpability, and that it was therefore reasonable to draw different age boundaries between adolescents and adults in each instance.

In their commentary on our article, Fischer, Stein, and Heikkinen (2009, this issue) raised both general and specific objections to our conclusions. The general issue concerns how developmental evidence may or may not inform the construction and analysis of legal age boundaries. The specific issues involve the conclusions we drew from our analysis of data on age differences in cognitive capabilities and psychosocial maturity. We appreciate the opportunity to reply to both of these concerns.

When psychologists agree to provide guidance on matters of law, they must be able and willing to simultaneously plant their feet in two worlds—that of social science and that of legal policy and practice. These worlds operate on different principles and with different expectations. Social scientists are accustomed to providing complicated answers to seemingly simple questions, whereas legal professionals typically want simple answers to complicated ones. Social scientists avoid casting things in black and white, whereas legal professionals are often forced to do so.

The question at hand is whether developmental scientists can provide meaningful guidance that can help legal

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professionals decide where to draw reasonable age boundaries. Fischer et al. (2009) implied that this is not possible. They characterized our attempt to address this reality as a failure to appreciate the complexity of the issues at hand. Yet their own approach, as we shall argue, can only lead to the conclusion that the science of developmental psychology should not inform the construction of chronological boundaries under the law. In contrast, our position is that legal lines will be drawn whether social scientists weigh in or not. We believe that using science to inform the law—even in the form of educated guesses—is better than using no science at all.

In theory, *Hodgson* and *Roper* both raise interesting and broad philosophical issues about the essential nature of development in general and maturity in particular. But these were not the issues before the Supreme Court in these cases. Indeed, the legal question before the court in each case was very narrowly drawn. In *Hodgson*, the question was whether someone under 18 should be required to notify her parents before obtaining an abortion. In *Roper*, the question was even narrower: Should individuals be eligible for the death penalty for crimes they committed at the age of 16, as it was at the time of *Roper*, or should the minimum age be raised to 18? The commentary provided by Fischer et al. (2009) did not attempt to answer either of these questions.

According to Fischer et al.'s (2009) view, development is far too multifaceted, variable across individuals, and contextually conditioned to warrant generalizations about age differences in maturity. From this perspective, making legal decisions on the basis of chronological age makes no sense at all. Imagine their answer to the central question posed in *Roper*—whether the minimum age for the death penalty should be left at 16 or raised to 18. One could easily envision these authors responding that one can “not assume that people have general capabilities that somehow apply effortlessly across situations and contexts. . . . [One needs to] uncover the variety of adolescent developmental pathways and the patterns of variability across different contexts” (Fischer et al., 2009, p. 599). Or perhaps they would have responded by saying that “development . . . moves at a varying pace along multiple strands in a dynamic web across the life course” (p. 598). Astute and poetic as these observations may be, they are entirely unhelpful in a legal context.

The position taken by Fischer et al. (2009) can only lead to the conclusion that when deciding whether an adolescent should, or should not, be treated as an adult—for abortion decisions, the death penalty, or anything else regulated by law—one must make an individualized assessment of the individual's capabilities, taking into account the person's developmental history, life experiences, cultural background, and current circumstances, not to mention the “many skills that develop along complex pathways from infancy through adulthood” (Fischer et al., 2009, p. 599). And while it is possible that an individualized approach *might* result in more accurate decisions about individuals' levels of maturity, such an approach is impossible impractical (Woolard & Scott, 2009).¹ Imagine a

world in which individualized assessments were necessary to decide who is allowed to drive, vote, purchase alcohol, face criminal court adjudication, or see R-rated movies, to name just a handful of the behaviors that are currently regulated on the basis of age. Perhaps, as Fischer et al. implied, under a system of individualized assessment, decisions would be more accurate than they presently are, but the lines at the Division of Motor Vehicles, the voting booth, and the multiplex would be awfully long. The social psychologist Kurt Lewin famously said that “there is nothing so practical as a good theory” (Lewin, 1951, p. 169), but Fischer et al. surely proved the exception to Lewin's maxim. Indeed, one of the most striking features of the Fischer et al. commentary is the complete absence of *any* practical contribution to the legal debates that created the controversy our article addressed.

Now to the specifics. While agreeing with our basic argument that different developmental capabilities are relevant to the analysis of different legal age boundaries, Fischer et al. (2009) contended that our conclusion about the different developmental timetables of cognitive and psychosocial development was wrong for two reasons: the choice of the capabilities we examined (especially in the realm of cognitive development) and the questionable validity of the measures we used (especially in the realm of psychosocial maturity). Had we chosen other attributes to analyze, they argued, we would have come to different conclusions about where to draw boundaries between adolescents and adults. And of course they are correct. If, for example, we had chosen understanding the meaning of intentionality as the criterion for adult criminal culpability, our analysis would have led us to conclude that 9-year-olds should be eligible for the death penalty. Had we chosen the resolution of the midlife crisis as the proper prerequisite for autonomous medical decision making, we would have concluded that 40-year-olds should be required to confer with their parents before consulting a physician.

But understanding intentionality and achieving middle-aged serenity were not the criteria we used. Instead, we chose to analyze age differences in the specific capacities that were the focus of the legal opinions produced in each Supreme Court case. For example, our choice of impulse control and susceptibility to peer pressure as the targets of our analysis in our examination of APA's stance in *Roper* was anything but arbitrary. As we noted in our article, these were two of the central capabilities discussed by Justice Kennedy in his majority opinion for the court (*Roper v. Simmons*, 2005). Kennedy did not mention the “development of attachment relationships” (Fischer et al., 2009, p. 598) in the mix of relevant capacities, perhaps because the age range during which this psychosocial achievement occurs was thankfully not in play in the court's deliberation about which individuals might be subject to execution.

¹ We emphasize “might” because legitimate concerns have been raised about evaluators' ability to make judgments about maturity that are free from racial and other types of bias (Graham & Lowery, 2004).

Fischer et al. (2009) were on somewhat firmer ground when they criticized the indices of cognitive development we used in reaching the conclusion that differences in cognitive capability between adolescents and adults are negligible. They argued that the abilities we assessed were too simple and that our analyses relied on measures that had a strong ceiling effect. We agree entirely that capacities such as working memory and verbal fluency alone do not capture the cognitive skills necessary to make informed decisions about abortion (although the mere fact that no age differences appear on these tests after age 15 is by itself not evidence of a ceiling effect).

Indeed, it was precisely because we recognized that the tests included in our study's cognitive battery were only partially relevant to abortion decision making that we included in our article other evidence about the comparability of adolescent and adult thinking, evidence that Fischer et al. (2009) overlooked. We presented findings from our earlier study of competence to stand trial (Grisso et al., 2003), which showed no significant age differences after 15 years in the abilities specified under the law as relevant to adjudicative competence, such as the ability to comprehend courtroom procedures or identify and reason with relevant facts. As we noted, "This general pattern, indicating that adolescents attain adult levels of competence to stand trial somewhere around age 15, has been reported in similar studies of decision making across a wide variety of domains . . . and in many studies of age differences in individuals' competence to provide informed consent" (Steinberg, Cauffman, et al., 2009, pp. 586–587). In fact, the finding of no age differences beyond age 15 was observed in studies that looked specifically at competence to consent to abortion (e.g., Ambuel & Rappaport, 1992). It has also been seen in a wide range of *advanced* cognitive capabilities, including logical reasoning (Overton, 1990), self-monitoring and strategic planning (Luciana, Conklin, Hooper, & Yarger, 2005), and the advanced understanding of mathematical operations under optimal learning conditions (Fischer, Kenny, & Pipp, 1990).

Fischer et al.'s (2009) concerns about our analysis of the evidence on psychosocial maturity are harder to fathom. We argued that the evidence indicates that the developmental course of psychosocial maturity is relatively flat in early adolescence but very steep between the ages of 15 and 30. Fischer et al. had no problem with the second part of our assertion (it fits with their view of development as fluid and dynamic), but they disagreed with the first part. (Notably, however, whether psychosocial functioning improves between ages 10 and 15 is irrelevant to the legal debate at hand, because it had been decided well before *Roper* that the death penalty was unconstitutional for crimes committed before age 16 and because very few girls younger than 16 seek abortions.) They questioned, on principle, the validity of self-report measures of impulsivity, sensation-seeking, susceptibility to peer influence, future orientation, and risk perception, which we used to construct our measure of psychosocial maturity. As we noted in some detail, the self-report measures we used (whether developed previously by others or in our research program) have

been validated with behavioral measures of comparable constructs (Steinberg et al., 2008; Steinberg, Graham, et al., 2009; Steinberg & Monahan, 2007). Moreover, these and other studies show that performance on behavioral tasks designed to assess similar aspects of psychosocial maturity follows a developmental pattern similar to that seen on self-report measures.

The bottom line is that Fischer et al. (2009) provided no evidence that the developmental course of the capabilities we analyzed is different than what we reported. Instead, they described an assortment of other capabilities, different from those we discussed, that follow developmental trajectories different from those that we described. More important, the developmental phenomena on which Fischer et al. chose to focus generally are not germane to the legal questions at hand. In our article, we presented justifications for how the domains we considered were relevant to the legal questions under consideration, cited numerous independent studies of related constructs in addition to our own, and drew our conclusions on the basis of patterns observed across these various studies. The only rationale Fischer et al. provided for considering domains we neglected, in contrast, seems to be that they followed different developmental patterns than the ones we did consider.

A particularly puzzling (but ironically telling) part of Fischer et al.'s (2009) critique involves their description of a fictional 17-year-old, Sally, to illustrate the complex and multifaceted nature of maturity during adolescence:

Sally is *both* immature and mature depending on both the context she is in and the measuring instruments used. At school, Sally scores high on some measures of cognitive capability, as reflected in her strong performance in her courses; but she is still years away from sophisticated reasoning about reflective judgment (the bases of knowledge about complicated issues). At home during the heat of an argument with her mother, Sally does not take multiple perspectives, as she does during school, but focuses primarily on her own immediate feelings. But when she is serving as a peer mediator, she effectively takes her peers' perspective. What is required is a rich portrait of her capabilities in different contexts and for different goals.

Sally's story is typical, not unusual. (p. 598)

Sally's abilities indeed appear to be "typical" for her age, in precisely the ways that are relevant to the legal questions under discussion. She has the cognitive ability to analyze the problems of others as a peer counselor acting as a detached observer. However, she reacts impulsively and cannot control her emotions during arguments with her mother. In our article, we noted that most 17-year-olds perform cognitive tasks and make deliberative decisions similarly to young adults but that 17-year-olds also are more prone to impulsive behavior, especially in contexts that do not inspire reasoned deliberation. Despite Fischer et al.'s (2009) rejection of our measures, methods, and message, their prototypical teenager nicely fits the profile we derived from the extant scientific evidence.

Fischer et al.'s (2009) critique failed to distinguish between questions that are interesting to developmental scientists and those that are important for legal policy and practice in the specific instances of *Hodgson* and *Roper*. Legal policymakers and practitioners want answers that get

right to the point. Yes, development is complicated, multidimensional, and dependent on the context in which it occurs. But this pronouncement is little more than a cliché, and an unhelpful one at that. The fact of the matter is that on many of the cognitive capabilities relevant to making an informed choice about whether to have an abortion, adolescents do not look all that different from adults. But on many of the psychosocial capacities relevant under the law for judging criminal responsibility, adolescents lag behind adults. And this is why we believe that APA provided sound, scientifically based advice to the Supreme Court on two distinct issues requiring consideration of different developmental capacities. The issues and the science are complex. But a key responsibility of scientists who are interested in informing policy discussions is to boil down this complexity into accessible, data-informed messages that are useful to policymakers and lawmakers seeking practical solutions to real-world legal problems.

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