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Prospects for Developmental Evidence in Juvenile Sentencing Based on *Miller v. Alabama*

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Recent U.S. Supreme Court decisions barred mandatory life without parole for juvenile homicide (*Miller v. Alabama*, 2012) and applied *Miller* retroactively (*Montgomery v. Louisiana*, 2016). *Miller* identified several developmental factors to consider in mitigation, but left many questions unanswered about their application. The authors offer several sentencing contexts to frame the types of developmental and clinical evidence that may be relevant for *Miller* hearings under various circumstances. Within these contexts, they explore types and sources of relevant developmental evidence and raise questions about quality and limitations. Their analysis identifies areas in which appellate court clarification is needed to determine how developmental evidence will be used in *Miller* cases, and they alert developmental experts to prospects and cautions for providing relevant evidence, as well as areas in need of research.

Keywords: juvenile, sentencing, development, forensic, evidence

In four recent cases, the U.S. Supreme Court reached decisions that limited sentencing for serious crimes by juveniles. The Court set aside the death penalty for juveniles (*Roper v. Simmons*, 2005), prohibited life without parole (LWOP) for nonhomicide juvenile cases (*Graham v. Florida*, 2010), and prohibited mandatory LWOP in juvenile homicide cases (*Miller v. Alabama*, 2012). Most recently, the Court ruled that *Miller* applies retroactively, requiring resentencing for many persons now serving mandatory LWOP sentences (*Montgomery v. Louisiana*, 2016).

Developmental psychological and neuroscience research played a significant role in the Court's decisions in these four cases. Research offered evidence that adolescence is distinguished by developmental immaturity in comparison to adults in ways that offer mitigation for juveniles' culpability. *Miller* and *Montgomery* will require sentencing practices in juvenile homicide cases nationwide that take into account developmental maturation. In addition to new sentencing cases, resentencing will occur possibly for thousands of people now serving that sentence under earlier mandatory LWOP sentencing schemes.

Developmental science now faces a new challenge. Its research served well to provide normative information with which the U.S. Supreme Court distinguished adolescence as an immature class. Now we must consider what role developmental science can play when applied, case by case, to describe legally relevant developmental characteristics of young people as evidence for individual mitigation in *Miller* sentencing and resentencing cases.

This article examines the types, probable sources, and anticipated quality of developmental and clinical psychological evidence that is likely to be required in "new" *Miller* sentencing cases (for convictions subsequent to *Miller/Montgomery*) and resentencing cases (juvenile LWOP sentences given before *Miller*). After briefly reviewing the U.S. Supreme Court's opinions in *Miller* and *Montgomery*, we offer an analysis of two *Miller* "sentencing contexts" that will differ in their use of developmental evidence: (a) arguments for LWOP in new sentencing and resentencing cases, and (b) if LWOP is not appropriate, arguments offering mitigation/aggravation regarding various alternative sentences. We also consider legal ambiguities associated with the use of developmental evidence retrospectively in *Miller* resentencing cases as directed by *Montgomery*. After establishing these contexts for *Miller* cases, we examine the types of developmental evidence, as well as the sources of evidence and their limitations, relevant for each of those contexts.

Miller and *Montgomery*

The U.S. Supreme Court established in *Roper*, *Graham*, and *Miller* that adolescent offenders' immaturity requires special consideration in sentencing. The Court's three decisions were influenced in part by the convergence of recent normative research on brain development and on behavioral functioning of adolescents (for reviews, see Scott & Steinberg, 2008; Steinberg & Scott, 2003). That body of research described adolescents' immaturity compared to adults in risk-taking, sensation-seeking, and capacities for self-regulation. Other scientific evidence consistent with neurological and psychosocial changes during adolescence has identified a general desistance in risk-taking and offending with increasing maturity (e.g., Moffitt, 1993; Mulvey, Steinberg, Piquero et al., 2010; Piquero & Moffitt, 2014). In its juvenile

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sentencing cases, the U.S. Supreme Court reasoned that adolescents' immaturity indicated lesser culpability as a class and a greater potential for future behavioral change compared to adults.

Miller v. Alabama (2012) interpreted the Eighth Amendment to require that in juvenile homicide cases an LWOP sentence could not be mandatory. The Court's reasoning emphasized that "the mandatory penalty schemes at issue here prevent the sentencer from taking account of these central considerations" (mitigating factors of adolescent immaturity) and "assessing whether the law's harshest term of imprisonment proportionately punishes a juvenile offender" (*Miller v. Alabama*, 2012, p. 2466). The Court allowed LWOP to stand as a possible sentence for juvenile homicide cases but required special considerations: "We do not foreclose a sentencer's ability to make that judgment in homicide cases, [but] we require it to take into account how children are different, and how those differences counsel against irrevocably sentencing them to a lifetime in prison" (*Miller v. Alabama*, 2012, p. 2469).

After *Miller*, a number of states changed their laws and procedures for juvenile homicide sentencing. A few states went beyond *Miller* to abolish LWOP in juvenile cases (Boone, 2015; Scott, Grisso, Levick, & Steinberg, 2016). Others retained LWOP and, as described later, began determining how sentencing would incorporate *Miller's* developmental concerns.

Miller did not address whether states were required to apply its decision retroactively for people serving mandatory LWOP sentences in juvenile homicide cases tried before *Miller*. According to a nationwide survey, between 2,000 and 2,500 individuals were serving mandatory LWOP terms for juvenile homicide when *Miller* was announced, a disproportionate number concentrated in a handful of states (Mills, Dorn, & Hritz, in press). Within a few years after *Miller*, at least six state supreme courts concluded that *Miller* did not require retroactive resentencing, reasoning that *Miller* had simply provided a new rule of criminal procedure for future cases (Scott et al., 2016). Twelve states, however, decided that *Miller* established a new substantive rule of sentencing that would require resentencing of pre-*Miller* juvenile cases that had received mandatory LWOP.

Montgomery v. Louisiana (2016) settled the state courts' disagreements by deciding that *Miller* established a substantive rule nullifying all previous mandatory LWOP sentences for juvenile homicides, requiring either of two remedies. States could simply decide to provide parole hearings for all individuals currently serving mandatory LWOP for juvenile homicide. Alternatively, those cases would have to be resentenced applying *Miller*.

But *Montgomery* did much more in its emphatic descriptions of what *Miller* had said about the relevance of developmental immaturity. The Court explained that *Miller* had "established that the penological justifications for life without parole *collapse* in light of the distinctive attributes of youth" (*Montgomery v. Louisiana*, 2016, slip op., p. 16; emphasis added). *Montgomery* emphasized the anticipated rarity with which LWOP would be a proportionate punishment for a juvenile. It noted that *Miller* had limited LWOP to the "rare juvenile offender whose crime reflects irreparable corruption" (citing *Miller v. Alabama*, 2012, p. 2469; elsewhere, "irretrievably depraved," at p. 2475) and added that LWOP could be applied only to "the rarest of juvenile offenders, those whose crimes reflect permanent incorrigibility," which would exclude "the vast majority of juveniles" (*Montgomery v. Louisiana*, 2016, slip op., p. 17). So strong was the implied rarity of juveniles eligible for LWOP that Justice Scalia, in his dissent, concluded that "this whole exercise, this whole distortion of *Miller* . . . [is] just a devious way of eliminating life without parole for juvenile offenders" (*Montgomery v. Louisiana*, 2016, J. Scalia dissent, slip op., p. 14).

Neither *Miller* nor *Montgomery* defined specifically the evidence that would support "irreparable corruption" for purposes of identifying the exceptionally rare juvenile eligible for LWOP. *Miller* did, however, identify several developmental reasons that juveniles constituted a class with special protection in homicide cases. It described five characteristics or consequences of juveniles' immaturity relevant for mitigation of culpability. These five "*Miller* factors" appear in *Miller v. Alabama* (2012) at pages 2464 and 2468. The factors are reviewed in detail later but introduced here with labels borrowed from Scott et al. (2016) for ease of reference: (a) Decisional—adolescents' greater propensity for sensation-seeking, risk-taking, and poor judgment during decision making because of their developmental immaturity; (b) Dependency—their dependency and consequent lesser ability to avoid negative influences on their lives (such as family abuse and peer influences); (c) Offense Context—the potential relation of those risk-taking and dependency factors to the youth's involvement in the homicide; (d) Rehabilitation Potential—adolescents' greater potential for change in light of their developmental immaturity; and (e) Legal Competency—their lesser general capacities for making decisions in the context of their arrest (e.g., interrogations) and adjudication (e.g., capacities to assist legal counsel).

Miller's five factors were offered as the indicia of immaturity identifying juveniles as a protected class. It seems likely that these factors also will frame arguments about mitigation on a case-by-case basis in *Miller* cases, although later we will explain why this presumption may be questioned. Soon after *Miller*, Larson, DiCataldo and Kinscherff (2013) considered several alternative ways to frame immaturity criteria in *Miller* cases (e.g., using factors typically employed in a state's transfer proceedings). They concluded, however, that such options were likely to encounter arguments that they lack relevance in *Miller* cases because of *Miller's* specific identification of the five factors.

Neither *Miller* nor any other court has offered much guidance regarding application of the *Miller* factors or other developmental evidence to examine mitigation in individual cases. A recent California decision (*People v. Gutierrez*, 2014) described appellate cases in a number of states that had begun to fashion their own lists and categories of developmental factors much like *Miller's*. But those cases have not described how courts are to use or apply those developmental indicia in *Miller* sentencing or resentencing cases (Boone, 2015; Scott et al., 2016).

We propose that the first step in examining the future role of developmental evidence in *Miller* cases requires an identification of the sentencing contexts within which such evidence would be applied. In our following analysis, we describe those contexts and explain why different types and sources of developmental evidence might be required for each of them. After that analysis, we examine the courts' potential to obtain relevant and reliable information on an individual's developmental status within these various sentencing contexts.

The Sentencing Contexts in "*Miller* Cases"

We presume that *Miller* hearings will have two main objectives in states that allow LWOP sentences as an option: (a) in new sentencing and resentencing cases, to determine whether a youth manifests *Miller's* and *Montgomery's* concept of "irreparable corruption" qualifying for LWOP, and, (b) if LWOP is not appropriate, then to determine an alternative sentence. We do not imply that these are two separate legal procedures, but merely two sentencing contexts or purposes for developmental evidence within a *Miller* hearing. The following two subsections describe the potential role of developmental evidence in those two contexts. A third subsection then considers additional issues associated with developmental evidence offered in retroactive resentencing cases.

Our analysis explains how the five *Miller* factors will be applied differently in these two contexts. Regarding context (a), the possibility of LWOP (in sentencing or resentencing), the five *Miller* factors serve to establish a class that is protected from LWOP sentencing. Then only one of the factors—Rehabilitation Potential—becomes the focus of the inquiry, with an LWOP sentence requiring a categorical conclusion that the individual is the "irreparably corrupt" exception to that class, having no prospects for rehabilitation. By our analysis, the other four factors will have little or no role in arguing for LWOP. In contrast, regarding context (b) that involves consideration of alternative sentences, all five factors will be in play when weighing the degree to which this individual youth's level of maturity offers mitigation in sentencing.

Evidence to Support Life Without Parole in New Sentencing and Re-Sentencing

In a *Miller* hearing in which LWOP is sought, defense counsel will have identified the youth's age at offense as placing her in the protected class, defining her as having rehabilitation potential under *Miller's* characterization of the class. The hearing thus begins with this presumption, as well as the expectation that exceptions to this rehabilitative presumption will be exceptionally rare (*Miller v. Alabama*, 2012; *Montgomery v. Louisiana*, 2016; see also *State v. Seats*, 2015, and *Veal v. State*, Georgia, 2016).

If this is accepted, then the youth's membership in the class creates a burden on the state to overcome the presumption. This will require showing that the youth is one of *Miller's* "rarest" of juveniles, an "irretrievably depraved," "permanently incorrigible" or—the term that we will use to represent these legal concepts—"irreparably corrupt" juvenile not capable of rehabilitation. The state seeks the court's categorical conclusion that there is no prospect for rehabilitation.

The state will be seriously limited in the type of evidence it can offer to show "irreparable corruption." The heinousness of the crime cannot by itself be offered as evidence of the character of the juvenile. *Roper v. Simmons* (2005, p. 573) explained that looking at the offense alone would present an "unacceptable likelihood . . . that the brutality or cold-blooded nature of any particular crime would overpower mitigating arguments." And *Montgomery* (2016, slip op., p. 21) affirmed that "children who commit even heinous crimes are capable of change." The youth's character cannot be judged by the crime itself.

The state might consider arguing for "irreparable corruption" using *Miller's* five developmental factors or similar indicia that might have been incorporated into local juvenile LWOP sentencing statutes (e.g., Fla. Stat. Ann, 2014). Yet whether and how the state can use those factors to support "irreparable corruption" is unclear for the following reasons.

First, legal arguments may be made that the developmental factors are not relevant in determining eligibility for LWOP. For example, less than 2 months after *Montgomery*, the Georgia Supreme Court concluded that "The *Montgomery* majority explains . . . that *Miller* meant exceptionally rare, and that determining whether a juvenile falls into that exclusive realm turns not on the sentencing court's consideration of his age and the qualities that accompany youth . . . but rather on a specific determination that he is *irreparably corrupt"* (*Veal v. State*, Georgia, 2016, slip op., pp. 21–22) (emphasis in the original). *Veal's* interpretation makes "irreparable corruption" a conclusion that *Miller's* developmental indicia do not function to decide; they establish the presumption that the youth, as a member of the class, has rehabilitation potential.

Second, if *Miller's* developmental factors could be used in considering LWOP sentences for juveniles, several courts have decided that the state cannot use them as aggravating circumstances. For example, in *State v. Null* (2013), the court interpreted *Roper* and *Miller* to caution that the very characteristics of immaturity that offer mitigation cannot be used as aggravating circumstances to seek LWOP for juveniles. Similarly, in *State v. Seats* (2015), the court reversed a juvenile LWOP sentence because the sentencing court "appeared to use Seat's family and home environment vulnerabilities together with his lack of maturity, underdeveloped sense of responsibility, and vulnerability to peer pressure as aggravating, not mitigating, factors" (p. 557).

Cases may arise in which the state claims that the absence of mitigating developmental circumstances suggests the youth's greater maturity in relation to most juveniles. For example, a particular case may offer no evidence that the youth has ever engaged in the reckless behavior typical of adolescents (Decisional factor), suggesting a calculated and especially dangerous character (and less modifiable) in light of the heinousness of the present offense committed at so young an age. In addition, we are aware of one unreported case in which the youth's legal emancipation prior to the offense was used as evidence suggesting maturity (Dependency factor). Similarly, a relatively fortunate upbringing devoid of any abuse or neglect might be used to argue a lack of mitigation. Such cases might arise, although they are likely to be quite rare in light of the usual characteristics of youths convicted of homicide. Even so, defense could use the same set of facts to support an argument for Rehabilitation Potential (e.g., less "recklessness" to treat, and less abusive damage to overcome during rehabilitation).

Therefore, if the above analysis has merit, its conclusion has a counterintuitive appearance. The *Miller* Court ordered that an LWOP sentence requires "taking account" (*Miller v. Alabama*, 2012, p. 2466) of youths' immaturity represented by *Miller*'s developmental factors. Yet our analysis suggests that courts will not be "taking account" of those factors on an individual basis when deciding on "irreparable corruption," the standard *Miller* set for LWOP. In effect, immaturity is taken into account when the individual is identified by age as a member of an immature class

that has been created on the basis of the five factors. Beyond that, the matter hinges on a categorical application of the Rehabilitation Potential factor alone to identify the individual's potential "irreparable corruption." We consider later what developmental science can offer to prove "irreparable corruption" devoid of any possibility for rehabilitation.

Before proceeding further, it is worth noting that attempts to seek LWOP in *Miller* cases may be relatively uncommon. Prosecutors might consider that the language of *Graham*, *Miller*, and *Montgomery*, as noted earlier, sets the bar extremely high for showing "irreparable corruption." In addition, the U.S. Supreme Court (*Apprendi v. New Jersey*, 2000; *Blakely v. Washington*, 2004) has interpreted the Sixth Amendment to require that any fact that increases the penalty for a crime beyond the prescribed statutory maximum, other than the fact of a prior conviction, must be submitted to a jury. Moreover, the evidence must convince the jury beyond a reasonable doubt (*U.S. v. Booker*, 2005). Courts may read the *Miller* decision to indicate that life *with* parole is the statutory maximum sentence for juveniles except in the face of additional evidence. A Michigan court recently applied these requirements to LWOP sentencing of juveniles (*People v. Skinner*, 2015; see also Russell, 2015, for an analysis applying Sixth Amendment requirements to juvenile LWOP cases). In summary, the prospects associated with jury trials, proof of categorical "irreparable corruption" beyond a reasonable doubt, and court dockets with large numbers of pending *Miller* cases may combine to discourage efforts to seek LWOP.

Evidence in Mitigation or Aggravation for Sentences Less Than LWOP

Failure of the state to provide, or attempt to provide, evidence to support LWOP in juvenile homicide cases, whether at sentencing or resentencing, will turn the *Miller* hearing to consideration of alternative available sentences. Generally the alternative sentences will include life with parole with a specified time until one is eligible to be considered for parole. At issue in some cases will be the assignment of consecutive or concurrent sentences for multiple offenses.

After *Miller*, states began fashioning alternative sentences to LWOP for juvenile homicide, and they vary considerably across states. As reviewed by Scott et al. (2016), minimum time to eligibility for consideration for parole in juvenile homicide sentencing can range from 15 or 20 years to minimums so high that they could exceed the statistical life expectancy of most juveniles convicted of homicide. Sentencing options often allow for judicial discretion in lengths of time to eligibility for parole. For example, for first degree murder in juvenile cases, Massachusetts instructs that "the court shall fix a minimum term of not less than 20 years nor more than 30 years," although the minimum must be 25 years if the court finds that the murder was committed "with deliberately premeditated malice aforethought" (Mass. Gen. Laws Ann., ch. 279, § 24). Judicial discretion and relevant mitigation will arise also when judges have the option to frame sentences for multiple convictions so that they are served consecutively or concurrently. Sometimes consecutive sentences will be longer than life. A case of this type recently led a federal appeals court to decide that a 100-year consecutive term of sentences for a juvenile with homicide plus firearms convictions was the unconstitutional equivalent of a life-without-parole sentence (*McKinley v. Butler*, 2016).

Miller's five developmental factors are most likely to come into play in shaping mitigating or aggravating arguments regarding these alternative sentencing decisions. Given that adolescents as a class demonstrate a range of degrees of maturation, evidence will focus on whether this particular youth is more mature than most adolescents, or less mature than most, in the variety of ways that the developmental factors in *Miller* recognize legally relevant developmental immaturity. Later we will examine the prospects for providing reliable evidence of this type.

It is not certain, however, that all courts will interpret *Miller* to require developmental mitigation regarding sentences *other* than LWOP. *Miller's* and *Montgomery's* description of the five developmental factors offered the Court's mitigating rationale for forming a class (juveniles) with special protection from LWOP without explicitly requiring their application to other sentences. Some federal or state courts have decided that *Miller's* developmental concerns were intended only to establish a class to set the context for decisions about LWOP (e.g., *James v. United States*, 2013; *People v. Perez*, 2013). Others, however, have ruled that the same developmental concerns raised in *Miller* apply to mitigating arguments regarding alternative life-with-parole sentences (e.g., *People v. Argeta*, 2012; *People v. Thomas*, 2012), and one state recently incorporated this presumption into its judicial guidelines for sentencing juveniles as adults (State of Delaware, 2016). An Iowa case (*State v. Lyle*, 2014) interpreted *Miller* to require that sentencing of juveniles in all cases (not only homicide) must take *Miller*'s factors into account, thus rendering mandatory minimum sentences of any kind a violation of the state's constitution when applied to juveniles. (But see *State v. Anderson*, 2016, for a rejection of *Lyle*'s reasoning.) The rationale for applying *Miller*'s factors to sentences other than LWOP was best articulated in *State v. Null* (2013), interpreting the four U.S. Supreme Court cases as having developed a constitutional principle of immaturity mitigation that is "not crime-specific" (citing *Miller v. Alabama*, 2012, p. 2465) and, therefore, is necessary to consider in all juvenile sentences, especially in light of "nearly life" sentences less than LWOP. We will follow *Null's* interpretation of this issue in our later analysis of prospects for developmental evidence relevant for alternative sentences.

Special Issues Associated With Re-Sentencing Cases

For both the LWOP context and alternative sentence context, resentencing cases will offer differences in the way developmental evidence will be acquired or applied compared to new sentencing cases. One difference, of course, will be the need to obtain developmental information on individuals as they were at original sentencing, which may be many years earlier. In some cases, defendants will have been given LWOP sentences a few years before the 2012 *Miller* or 2016 *Montgomery* cases. At the other extreme will be cases like that of Henry Montgomery himself; he was 17 years old at the time of his offense in 1963, and his successful appeal now requires a rehearing regarding the LWOP sentence that he received about 50 years earlier. Many of these cases will have been adjudicated during the 1990s, when annual juvenile homicide rates in some years were three times greater than in recent years (Sickmund & Puzzanchera, 2014). Whether a

meaningful developmental picture of an individual's juvenile years can be built retrospectively after many interim years raises numerous questions of reliability and integrity of the information, as we will discuss later.

A more fundamental question in resentencing cases is whether the information offered will be restricted to that which could have been available at the original sentencing, or whether information about the individual's current status can be admitted as well. Courts have not yet offered much guidance on the temporal boundaries of developmental evidence in *Miller* resentencing cases. Some language suggests, but does not specifically state, that the evidence offered in resentencing cases regarding "irreparable corruption" or mitigation for alternative defenses is evidence that was or could have been available at the time of the first sentencing. For example, Justice Scalia writing in *Montgomery* certainly presumed so: "Under *Miller*, bear in mind, the inquiry is whether the inmate was seen to be incorrigible when he was sentenced—not whether he has proven corrigible [at a later time] and so can safely be paroled today" (*Montgomery v. Louisiana*, 2016, J. Scalia, in dissent, slip op., p. 14). As a dissent, though, Justice Scalia's opinion does not establish requirements for lower courts.

The contrasting possibility is represented by a pre-*Montgomery* case, *State v. Ragland* (2013), decided by the Iowa Supreme Court. It upheld the decision of a lower court's *Miller* resentencing that had included very little evidence on the developmental characteristics of the individual at the time of the offense. The hearing had focused primarily on evidence that the individual was now rehabilitated and had people in the community available to assist him if he were to be paroled. (See also *People v. Lozano*, 2016.)

We anticipate that the question of current rehabilitative status as evidence in *Miller* resentencing may raise concern (and appeals) in the future. As noted by Boone (2015), excluding or including such evidence offers problems both ways. If current rehabilitation evidence is included, then individuals who have not rehabilitated themselves may be unfairly disadvantaged because their original LWOP sentence offered them little incentive to make an effort to improve. If current rehabilitation evidence is excluded, however, cases may arise in which resentencing based only on characteristics at the time of the offense supports the original LWOP sentence, yet at the time of resentencing the person has been successfully rehabilitated. (See also *People v. Gutierrez*, 2014, for a discussion of this issue.)

Similar questions might arise regarding the use of *Miller's* developmental factors in mitigation in resentencing hearings regarding alternative sentences. For example, can evidence from a current intellectual or personality evaluation of an adult prisoner be used to reflect on the individual's intellectual or clinical status during the offense in adolescence? (We will discuss later the clinical rationale for using current clinical conditions as an adult to infer conditions earlier in development.) If certain general scientific knowledge (e.g., general neuroscience findings or studies of desistance from crime) became available only in years subsequent to a youth's original sentencing, can that information be used to inform resentencing even though it could not have informed the court at the time the youth was sentenced originally?

In conclusion, much remains unknown regarding how courts will decide on the application of developmental evidence in *Miller* cases, both for new sentencing and for retrospective resentencing cases. As we wait for these matters of evidence to be sorted out, it is important for us to attend to the potential for courts to obtain relevant information regarding the individual's developmental status under various potential circumstances and within the context of various sentencing and resentencing options. What are the prospects for a relevant and reliable description of a youth's developmental characteristics that *Miller* directs the court to consider?

The next three sections examine this question. Consistent with our previous analysis, we consider first the prospects for developmental evidence regarding "irreparable corruption" in support of LWOP, then with regard to evidence for weighing *Miller's* five developmental factors when applied to alternative sentences. Both sections review evidentiary prospects for new sentencing cases only. A final section revisits the prospects for *Miller* resentencing cases.

Prospects for Evidence to Address "Irreparable Corruption" Supporting LWOP in New Sentencing Cases

In new sentencing cases in which LWOP is sought, our analysis presumes the state's burden to identify the rare youth who, unlike the protected class, cannot be rehabilitated. The state must show that the individual has been, and in great likelihood always will be, unchangeable by any means of punishment, therapeutic intervention, or course of maturation.

Graham concluded that "[I]t is difficult even for expert psychologists to differentiate between the juvenile offender whose crime reflects unfortunate yet transient immaturity, and the rare juvenile offender whose crime reflects irreparable corruption" (*Graham v. Florida*, 2010, p. 68). *Miller* cited *Graham* in agreement (*Miller v. Alabama*, 2012, p. 2469), consistent with *amici* in *Miller* (the American Psychological Association, American Psychiatric Association and National Association of Social Workers). *Amici* were even more emphatic: "There is *no reliable way* to determine that a juvenile's offenses are the result of an irredeemably corrupt character" (Brief for the American Psychological Association et al., 2012, p. 25; emphasis added).

Why were *amici* so pessimistic? As explained earlier, the claim of "irreparable corruption" cannot depend merely on the heinousness of the crime (*Roper v. Simmons*, 2005, p. 573; *Montgomery v. Louisiana*, 2016, slip op., p. 21). Some substantial part of the claim must attend to the individual's psychological character. Other commentators (e.g., Larson et al., 2013) have suggested that evidence might focus on an individual's likelihood to reoffend, such as a risk estimate of future recidivism or violent reoffending. What prosecutors must show in *Miller* cases, however, is that there is no prospect for rehabilitation. Even a relatively high likelihood of reoffending based empirically on validated methods does not tell us whether an individual's behavior can be modified, either by intervention or maturation.

The most likely psychological evidence in cases in which "irreparable corruption" is alleged is a diagnosis of psychopathy. *Psychopathy* is a personality construct consisting of traits (e.g., "callous-unemotional," "antisocial lifestyle") that are known to be associated with both disregard for the illegality of one's behavior and, like some other personality disorders, resistant to change by current psychological interventions (Frick & White, 2008; Vincent, Kimonis, & Clark, 2016). Measures of psychopathy and of traits within the concept exist for both adults (e.g., Hare, 2003) and

adolescents (e.g., Forth, Koson, & Hare, 2003; Frick & Hare, 2001).

A legal/forensic concept labeled "sophistication and maturity" has a history of use in determining transfer of juveniles to criminal court (Larson & Grisso, 2016), and it bears some similarity to the psychological concept of psychopathy. As explained by Salekin, McDougall, and Harrison (2016), "sophistication and maturity" as a concept refers to the juvenile who is (a) "mature" in the psychological developmental sense (e.g., advanced in abilities to consider consequences, manage self-control, and make careful independent judgments) yet (b) "criminally sophisticated" in the sense of using his maturity in ways that that are antisocial, consistent with traits of psychopathy.

Measures of psychopathy, however, are likely to be of little use for making "irreparable corruption" or "sophistication-maturity" judgments in most juvenile homicide cases. First, there is no evidence that measures of psychopathic traits during adolescence can estimate the likelihood that they constitute enduring and unchangeable traits when applied to individual cases (for reviews, see DeMatteo, Edens, & Hart, 2010; Vincent, Kimonis, & Clark, 2016). There is evidence that psychopathy measures during adolescence have unacceptable false positive rates when used to make individual predictions about future psychopathy in adulthood (Cauffman, Skeem, Dmitrieva, & Cavanaugh, 2016; Lynam, Caspi, Moffit, Loeber, & Stouthamer-Loeber, 2007). A recent comprehensive review of research on the use of psychopathy measures in adolescence concluded that their indicators "have not established a sufficiently high level of stability . . . to warrant testimony about whether a youth has psychopathic personality disorder" (Vincent, Kimonis, & Clark, 2016, p. 219).

Some juvenile homicide offenders, however, are no longer adolescents when they are assessed for sentencing hearings. Many homicide cases require several years for their adjudication, so that the individual who offended during adolescence might be well over age 18 when assessed. In such cases, evidence for the stability of scores on psychopathy measures is somewhat better, as reviewed by DeMatteo, Edens, and Hart (2010). Yet there are two complications in the use of psychopathy scores in such cases. First, one can question the relevance of a psychopathy score two or three years after the offense, in light of *Miller*'s language that limited LWOP to the "rare juvenile offender *whose crime reflects* irreparable corruption" (*Miller v. Alabama*, 2012, p. 2469; emphasis added). According to one perspective, the current psychopathy measure several years after the crime does not indicate that the youth was psychopathic at the time of the crime. An alternative perspective, however, would assert that the current psychopathy score (e.g., at age 19) strongly suggests that the youth had psychopathic characteristics (e.g., callous-unemotional traits) at the time of the crime (e.g., age 16) that were not merely transient adolescent developmental characteristics. The second complication, a more salient one in our opinion, was raised in the DeMatteo et al. (2010) review noted earlier, cautioning us that that current research questions the validity of psychopathy tools when used with racial and ethnic minorities. This is especially relevant for *Miller* sentencing cases, because (as described later) racial and ethnic minorities comprise the great majority of juvenile homicide offenders.

Second, even if callous-unemotional and antisocial traits are reliably identified, they need not be considered signs of intractability. Some recent studies (reviewed by Vincent, Kimonis, & Clark, 2016) have identified gains in prosocial behaviors with interventions tailored specifically for youth with psychopathic-like traits. The reviewers concluded: "There is no evidence that youths with psychopathic features are incapable of benefitting from treatment or that treatment is contraindicated" (p. 220).

One of the more promising, well-researched instruments for assessing rehabilitation potential among juveniles is the Risk-Sophistication-Treatment Inventory (Salekin, 2004). Its Amenability to Treatment scale has been validated for various uses, including its ability to predict which youth are transferred to criminal court because of courts' judgments about lesser amenability to treatment. As noted later, the instrument has potential for use in *Miller* cases when alternative sentences are considered. But a current review (Salekin et al., 2016) offers no research indicating that its scores would predict categorical failure to respond to rehabilitation efforts.

Thus, based on the most recent psychological efforts to identify adolescents with intractable criminogenic traits ("irreparable corruption"), developmental and clinical science offers little to assist the state in identifying such youths and a great deal that defense counsel can use to challenge such efforts.

Prospects for Evidence Regarding *Miller's* Five Developmental Factors in New Sentencing Cases

For reasons explained earlier in our analysis, *Miller's* five developmental factors are likely to play a key role when *Miller* sentencing cases turn to the alternative sentences less than LWOP. *Miller* found all juveniles less culpable due to immaturity, yet it recognized variability within the class in degrees of maturity, requiring individualized judgments regarding culpability and sentencing. Here we consider the prospects for obtaining and using data to describe individual youths on each of the five *Miller* factors. Our review does not offer a detailed examination of specific evaluation methods or research on them, because we focus primarily on exploring the types of data that may be relevant, general sources of those data, and cautions about their limitations.

Before proceeding, four basic points require mention. First, although we focus here on evidence about a specific individual's status on the *Miller* factors, many *Miller* cases will call also for more general testimony about developmental science itself. Such testimony can offer a framework within which to understand developmental evidence about the specific youth.

Second, *Miller's* five developmental factors are not the only way to describe adolescents' immaturity and they do not describe all the ways in which adolescents may be immature. As reviewed by Salekin et al. (2016), developmental psychology has produced several ways to conceptualize developmental maturity, and they do not always sit comfortably alongside the law's definitions (Grisso, Tomkins, & Casey, 1988; Salekin, Yff, Neuman, Leistico, & Zalot, 2002). Moreover, as reviewed in *People v. Gutierrez* (2014), a few states have begun to fashion their own lists and categories of developmental factors, some of which depart from *Miller's* specific definitions. Whatever evidence is offered, though, we presume it must at least allow consideration of the concerns represented in *Miller's* five factors.

Third, *maturity* and *immaturity* are relative terms, representing degrees on dimensions and meaningful only in reference to a

comparison group. For example, on a specific developmental factor, a particular 14-year-old might be "more mature" compared to peers of her age but relatively "immature" compared to the average for juveniles 14–18. Sometimes a youth might be compared to the general population of adolescents and at other times to a population of juveniles charged with serious crimes. All points of comparison might be relevant in various cases for various purposes. Courts and experts might avoid misunderstanding by carefully identifying their point of reference when describing a youth as relatively "mature" or "immature" on a developmental factor.

Finally, when examining sources of developmental evidence, we must keep in mind that racial minority youth comprise about 70–80% of juvenile homicide offenders. Sickmund and Puzzanchera (2014), for example, report that among juvenile homicide offenders in 2010, about 60% were black and 40% were white (including Hispanic and white non-Hispanic youth). As the following analysis notes, many of our validated assessment tools for developmental and clinical features of adolescents have been challenged regarding their validity when applied to racial and ethnic minority youth.

Decisional Factor

Miller's first immaturity factor focused on the propensity for juveniles' decisions and actions to reflect immature "recklessness, impulsivity and heedless risk-taking" (*Miller v. Alabama*, 2012, p. 2458), as well as lesser autonomy in decision making—that is, greater susceptibility to influence by others, especially peers, when making decisions. A significant body of behavioral research as well as neuroscientific studies of brain development provides a solid basis for establishing youths' greater tendency, as a class, to risk-taking and impulsive reactions (for reviews of this evidence, see Scott & Steinberg, 2008; Steinberg, 2004, 2008; Steinberg & Scott, 2003).

The point of the Decisional factor is to recognize characteristics of adolescence that make their decisional judgment developmentally different from that of adults. Many psychological functions are relevant for assessing decisional judgment from a developmental perspective: (a) developmental maturation of cognitive and intellectual capacities (e.g., capacities to think abstractly, form goals, reason about contingencies, working memory), (b) emotional characteristics and abilities for self-control (e.g., delaying gratification, regulating emotions, dealing with frustration), and (c) development of autonomous thinking (e.g., independence vs. influence by others, confidence, stability of self-identity and personal values) (Salekin et al., 2016).

Neuroscience research relied on MRI studies to document age-normed development of brain areas associated with decisional self-regulation. Although sufficient to offer reliable normative data, MRI and fMRI scans currently are not able to identify reliably an individual youth's status in terms of brain maturity (Luna & Wright, 2016; Steinberg, 2013). Evidence regarding individuals' developmental status on the Decisional factor will require behavioral measures, of which there are four types to consider.

One class of tools measures performance in laboratory tasks (e.g., Go/No-Go Association Task, Nosek & Banaji, 2001; Stroop Color and Word Test, Golden, 1978; Tower of London, Culbertson & Zillmer, 2005; Shallice, 1982) studying impulsive responding and deficiencies in self-regulation associated with adolescents' immature impulsivity and heedless risk-taking. These measures have less often been used in forensic contexts, when stresses associated with one's legal circumstances may have uncertain affective and motivational effects on performance on measures such as these. In addition, age-graded norms are not always available for these tools. There remains uncertainty also regarding their interpretation when used with forensic populations with racial and cultural proportions that often are not represented in development of the methods' norms or studies of their reliability or validity.

A second class of tools comprises "self-report" paper-and-pencil or interview measures asking youths to describe their behaviors, emotions or preferences that have conceptual relevance for maturity of decisional abilities and self-regulation. Many of these tools have been used in developmental research on age-normative decisional behavior to measure, for example, a person's consideration of short- versus long-range consequences (Consideration of Future Consequences Scale, Strathman, Gleicher, Boninger, & Edwards, 1994; Future Outlook Inventory, Cauffman & Woolard, 1999) and resistance to peer influence in decision-making (Resistance to Peer Influence; Steinberg & Monahan, 2007). A new self-report version of the Risk-Sophistication-Treatment Inventory (RSTI-Self Report: Salekin & Iselin, 2010), currently in development, includes a developmental maturity scale that assesses autonomy, cognitive skills, and emotion regulation skills in decision making. A review of the available tools of this type (Salekin et al., 2016) notes that many of them have been used primarily in research studies with either delinquent or nondelinquent samples. The reviewers urge caution regarding their use in forensic clinical cases because of questions about adequate normative data and reliability, as well as validity for comparing individual youth to relevant age, race and gender samples. The Developmental Maturity scale within the full RSTI (Salekin, 2004), which is interview-based rather than self-report, may offer a promising option given its focus on delinquent samples.

A third class of tools relevant for the Decisional factor comprises validated measures of intellectual, cognitive and achievement abilities, both generally and with regard to specific learning disabilities (Sattler, 2008). Well-validated intelligence tests, for example, include specific subscales to assess the development of capacities relevant for decisional processes, such as abstract reasoning (important for anticipating potential consequences before taking action). The field offers guidance to clinicians for interpreting these tools with minority adolescents (e.g., Valencia & Suzuki, 2000).

Finally, clinical psychology offers a significant inventory of tools for use with adolescents that identify various mental disorders and their symptoms, as well as Developmental Disability (Mash & Barkley, 2007). These are relevant in developmental analyses of adolescents' decision making because mental disorders can further reduce already immature decisional functioning. In addition, if disorders are persistent and chronic, they can delay the development of abilities relevant for the Decisional factor (Grisso, 2006; Mash & Barkley, 2014; Nagel, Guarnera, & Reppucci, 2016). The primary caution associated with the use of measures of disorders and disabilities in juvenile forensic contexts is their tendency to have been validated primarily with youth in clinical settings (Archer & Baum, 2016). Sometimes there is insufficient research to determine possible differences in their validity and

meaning in forensic settings and when applied with populations of youth with racial and ethnic minority proportions that may be different from those on which the tools were validated.

This brief survey suggests the great diversity of specific abilities, and of the tools to measure them, potentially related to "recklessness, impulsivity and heedless risk-taking" (*Miller v. Alabama*, 2012, p. 2458) in immature adolescent decision making. Many have promise for *Miller* cases, but we have noted limitations within each class of tools, offering much room for research to improve their use. Even with further research, however, experts will face a conceptual challenge precisely because of the diversity of both relevant functions and tools. There is a need for a protocol, framework, or model designed to target abilities and select assessment methods that fit conceptually the specific demands of *Miller's* Decisional factor. Currently there is no model for guiding the collection of evidence specifically for this purpose, but strategies for constructing such forensic assessment models are available (Grisso, 2003).

Structured psychological measures are not the only source of evidence regarding youths' decisional capacities or their ability to employ them. Indeed, when used alone, those measures assess performance in a context (the formal evaluation milieu) quite different from the streets, homes, schools and social peer groups in which adolescents apply their abilities. Structured tools often may be valid for assessing capacity (the extent to which a youth can achieve a level of performance on some aspect of decision making under optimal conditions). Yet they might not reflect the youth's ability to access that level of performance in real-world circumstances (e.g., due to stress, peer pressure, distractions, and lack of structure to alert them to the need to "stop and think"). Therefore, information regarding everyday decisional performance is likely to require observations from other sources. Among these are interviews with the defendant, parents, teachers or peers, as well as review of school, clinic, and other social service records that might help to identify the youth's degree of decisional maturity in everyday life in relation to peers.

As important as interviews, collateral informants and records may be, their use offers significant challenges as reliable evidence. As in many other forensic contexts, defendants and families in *Miller* cases sometimes have personal motives that influence the information they provide. In addition, the legal context of divided interests (juvenile and state) encourages selective identification and interpretation of evidence. Forensic developmental and clinical experts, of course, are not immune to such bias (Murrie, Boccaccini, Zapf, Warren, & Henderson, 2008; Neal & Brodsky, 2016; Neal & Grisso, 2014). Using both structured tools and evidence from interviews and records offers a multimethod approach that can improve accuracy by requiring evidence for any inference from more than one source of data, thus reducing error associated with any single source (Heilbrun, 2001).

Dependency Factor

Miller noted that "Children are more vulnerable to negative influences and outside pressures, including from their family and peers; they have limited control over their own environment and lack the ability to extricate themselves from horrific, crime-producing settings" (*Miller v. Alabama*, 2012, p. 2458, in part citing *Roper v. Simmons*, 2005). In addition, courts must "take into account the family and home environment that surrounds him—and from which he cannot extricate himself—no matter how brutal or dysfunctional" (*Miller v. Alabama*, 2012, p. 2458). The Court's reference to the appellant Miller provides an example of information relevant for this factor: "Miller's stepfather physically abused him; his alcoholic and drug-addicted mother neglected him; he had been in and out of foster care as a result; and he had tried to kill himself four times, the first when he should have been in kindergarten" (*Miller v. Alabama*, 2012, p. 2469).

We have found no appellate cases since *Miller* that provide guidance for identifying the structure of the Dependency factor when applied to individual cases. A straightforward attempt to make sense of it could find two dimensions.

First, the Dependency factor could be interpreted to refer to *adverse conditions of childhood and adolescence* over which youth have little or no control because of developmental lack of autonomy (dependency). By inference, those adverse conditions might create a burden contributing to the youth's likelihood of becoming criminally involved, warranting lesser culpability for offending because the adverse influences could not personally be avoided. If interpreted in this way, inquiry would focus primarily on the degree to which the youth's family and social environment exposed the youth to damaging, criminogenic conditions (e.g., the trauma of abuse, and conditions of neglect or other environmental circumstances).

The second possible meaning is quite different. If "limited control" and "lack of ability to extricate themselves" are taken as conditional terms that can vary across adolescents, then *degree of autonomy* becomes a potential dimension within the Dependency factor. If that is accepted, then the Dependency factor turns in part on the youth's capacity for autonomy, control, or ability to "self-extricate" from the adverse conditions. Certainly that personal control will be meager in preadolescent years by the mere nature of children's inability to fend for themselves or seek and find ways to remove themselves from abusive conditions. Yet *Miller's* reference to "lack[ing] the ability to extricate themselves from horrific, crime-producing settings" could be taken to refer not only to a child's inability to avoid the familial abuse that produced propensity to crime, but also to the adolescent's ability (or inability) to resist specific crime settings as they unfolded. Considered in the latter way, the Dependency question would call for evidence about the youth's maturity or immaturity for autonomous choice in decision making (overlapping in this sense with the autonomy component of the Decisional factor).

Without legal authority to clarify these two interpretations of the Dependency factor, we can only speculate regarding evidence relevant for its consideration in *Miller* cases. The first interpretation, "adverse conditions," would likely hinge primarily on historical records and interview evidence of familial abuse/neglect and criminal influences, as well as neighborhood and other environmental circumstances of the youth's childhood that might have had a traumatizing effect. Developmental psychology has accumulated foundational research on the prevalence of trauma among delinquent adolescents (e.g., Abram et al., 2004; Dierkhising et al., 2013), as well as the relation of delinquency to traumas arising in early childhood and adolescence (for a review, see Zelechoski, 2016). Evidence for the effects of those traumatizing conditions might be acquired with methods to evaluate whether such conditions have had lasting emotional consequences (e.g., clinical mea-

sures of trauma-related anxiety disorders; see, e.g., Strand, Sarmiento, & Pasquale, 2005; Wevodau, 2016). Many of these methods have been used successfully with delinquent populations.

The second interpretation, "degree of personal autonomy," could not rest merely on evidence about the youth's relative independence from family, because adolescents living outside the home may remain quite dependent on others (e.g., criminal adults, delinquent peers) in ways that influence their offending (Tatar, Cavanagh, & Cauffman, 2016). Evidence of autonomy "to extricate oneself from crime-producing settings" might require a type of information considered earlier regarding the Decisional factor, referring to degree of capacity for independent judgment versus influence by others, self-confidence, and stability of self-identity and personal values. That information might be derived from structured instruments (described in the Decisional Factor section) as well as records and observations of the quality of a youth's independent judgment, compared to other juveniles, in past situations. As noted in the Decisional factor discussion, the Dependency factor also is in need of a model for systematic collection of relevant data.

Offense Context Factor

This factor calls for consideration of "the circumstances of the homicide offense, including the extent of his participation in the conduct and the way familial and peer pressures may have affected him" (*Miller v. Alabama*, 2012, p. 2468). The Court seemed to anticipate using data on the youth's Decisional and Dependency status to analyze the offense circumstances, examining the nature of the youth's involvement as this might or might not offer mitigation. How planned or impulsive was the youth's participation? To what extent was the youth's decision making prior to and during the offense related to past abuses or present peer influences? The quality of developmental evidence for this analysis requires two considerations: (a) the data that are obtained to inform inferences about the "circumstances of the homicide" and (b) the inferential process itself.

Regarding data, we refer to concrete evidence on which inferences will be made about how the offense unfolded and about the emotions, thoughts and intentions that were at play. In *Miller*, for example, the Court reflected on Miller's coappellant Jackson, noting that he "learned on the way to the video store that his friend Shields was carrying a gun, but his age could well have affected his calculation of the risk that posed, as well as his willingness to walk away at that point" (*Miller v. Alabama*, 2012, p. 2468). Similarly, in a recent case of which we are aware, a juvenile was a younger "employee" of an older "boss." The circumstances of the crime, gleaned from police records, were consistent with an interpretation that the more dependent character of the youth caused him to be easily influenced by the older peer, offering an argument for his lesser culpability. In such analyses, though, how will attorneys and experts obtain the factual evidence to infer what a youth "knew" or "learned" as the offense unfolded, his "calculation of the risk" during the process, his more "dependent" role in relation to cohorts, and the evidence of his degree of "willingness" to alter the course of the event?

Any factual evidence (data) for making inferences about how the offense event may have unfolded is likely to be of two kinds: (a) the abilities, characteristics, and history of the youth as assessed for the Decisional and Dependency factor, and (b) what is said by observers (including those who observed the youth before, during or after the offense), officers responding to the offense and questioning the youth subsequently, the defendant's cohorts if there were any, and the defendant. The quality of the evidence from any of these sources will depend not only on the informants, but substantially on the efforts and expertise of those who elicit it.

Although much could be said about the quality of evidence from all these sources, developmental considerations about quality of the data are relevant especially with regard to what the defendant and any cohorts (if they are juveniles) can provide. This is because the same age-related factors of immaturity with which *Miller* was concerned (reviewed in relation to the Decisional and Dependency factors) may influence the quality of evidence obtained from the defendant and juvenile cohorts regarding the emotions, thoughts, and intentions that were at play in the offense. For example, if questioning of youths about planning of the offense is performed without care to developmental concerns, questioning might elicit a clear "plan" from the defendant or cohorts that could be construed as "intention," yet without any consideration of whether their planning included an awareness not only of short-term but also long-term potential consequences (LaVigne & Rybroek, 2013). Similarly, a youth's immaturity might impair her ability to recognize the effects of peer pressures during the event, or her immature wish to be perceived as self-assured might make her reluctant to acknowledge peer influences. Thus the quality of evidence obtained from defendants and their adolescent peers may suffer because of the very developmental factors that examiners seek to assess.

Regarding the inferential process, clinical forensic experts have engaged in offense analyses of this type in various other forensic circumstances. They engage in clinical analyses of the role of defendants' mental disorders in insanity cases (Packer, 2009; Rogers, 1984) and adolescents' roles in offenses that might offer mitigation or aggravation regarding their transfer to criminal court (Grisso, 2013). As Packer (2009) has noted, both structured and unstructured methods for making causal inferences about offense circumstances rely on the fact that "logic employed in scientific reasoning can be applied to the data" (p. 127). Yet scientific reasoning often allows for competing views of causation that can lead to disparate conclusions. Moreover, recent research has found less than satisfactory agreement between forensic examiners when drawing conclusions about the role of mental disorders in offenses in insanity cases (Gowensmith, Murrie, & Boccaccini, 2013, finding that independent insanity opinions of triads of examiners had three-way agreement in 55% of cases).

This is not to say that forensic developmental and clinical experts have nothing to offer when assisting courts to understand the relevance of Decisional and Dependency factors in the context of the offense. For example, research supports a theoretical role for adolescents' trauma symptoms (related to the Dependency factor) as mediators that result in deficits in self-regulation during decision-making in emotionally charged circumstances (related to the Decisional factor; e.g., Ford, 2005; Ford & Blaustein, 2013; Maschi, Bradley, & Morgen, 2008). Other examples include research that can guide offense analyses regarding the effects of peers on behavior (Chein et al., 2011; Steinberg & Monahan, 2007) or the effects of specific symptoms of disorders (e.g., dissociative symptoms related to posttraumatic stress disorder;

American Psychiatric Association, 2013). Experts' use of such empirically based concepts in offense analyses may or may not make their conclusions more correct. But they can assist courts to identify science-based developmental and clinical characteristics (not within the usual grasp of nonexperts) that are relevant for making inferences about the circumstances of the offense (Bonnie & Slobogin, 1980).

Rehabilitation Potential Factor

The fourth factor refers to the potential for a juvenile's rehabilitation. "A child's character," the Court said, citing *Graham*, "is not as well formed as an adult's; his traits are less fixed" (*Miller v. Alabama*, 2012, p. 2458) and "Life without parole forswears altogether the rehabilitative ideal [and is] at odds with a child's capacity for change" (*Miller v. Alabama*, 2012, p. 2465). The Court referred to evidence that most juveniles with delinquency records do not continue their offending into adulthood, but rather desist as they mature beyond adolescence (Moffitt, 1993; see also Monahan, Steinberg, Cauffman, & Mulvey, 2009; Mulvey et al., 2010). When applied as a variable to describe a specific youth, this factor suggests the need for evidence to compare a youth to other youths on a *continuum* of rehabilitation potential. This is different from the question of "irreparable corruption" supporting LWOP, which requires a categorical conclusion that a youth cannot be rehabilitated.

Developmental and clinical examiners in juvenile forensic cases have some well-considered guidelines and strategies for collecting theoretically relevant data to make judgments about degree of "amenability to treatment" (e.g., Grisso, 2013; Kinscherff, 2016). These guidelines may be helpful when bringing together case information derived from a range of sources (e.g., interviews, records, others' observations). Their empirical reliability and validity, however, are largely unknown.

Recent years have seen substantial advances in the use of structured, validated tools to assess juveniles' risk of recidivism (for reviews, see DeMatteo, Wobransky, & LaDuke, 2016; Edens, Campbell, & Weir, 2007). Indices of risk of recidivism, however, are likely to be of little practical relevance in *Miller* cases. The available tools typically have been validated only for recidivism while in the community and for projected time periods of about 3 or 4 years (DeMatteo, Edens, & Hart, 2010). In contrast, alternative sentences in juvenile homicide cases are likely to involve incarceration for at least a decade (Scott et al., 2016). Moreover, as noted earlier, an estimate of risk of recidivism offers little direct evidence regarding rehabilitation potential.

A structured assessment tool noted earlier, the Risk-Sophistication-Treatment Inventory (Salekin, 2004), has a Treatment Amenability scale with sufficient validation to assist in judgments about whether a youth is more or less likely, compared to other youths, to respond to rehabilitation efforts (Salekin et al., 2016). In addition, some risk tools for adolescents do more than merely estimate risk of recidivism and may have considerable relevance for assessing rehabilitation potential. For example, the Youth Level of Services/Case Management Inventory (YLS/CMI; Hoge & Andrews, 2010) assesses risk of recidivism but also identifies specific needs associated with the youth's criminal behavior, facilitating a description of the types of intervention that may be required and the challenges posed by the extent of need. The YLS/CMI also has strength-based indicators of the youth's likely "responsivity" to rehabilitation efforts, which can be translated to offer further information on prospects for rehabilitation. (See also the Structured Assessment for Violence Risk in Youth, or SAVRY; Borum et al., 2010). Many homicide cases require several years to adjudicate, so that the individual who offended during adolescence might be over age 18 by the time of assessment for the sentencing hearing. Depending in part on how much above age 18 the individual is, experts might use the above tools or various adult versions with needs, responsivity and rehabilitation potential features; for example, Level of Services/Case Management Inventory (LS/CMI; Andrews, Bonta, & Wormith, 2004) and Inventory of Offender Risks, Needs, and Strengths (IORNS; Miller, 2006).

Clinical conditions of adolescents may also be relevant for the Rehabilitation Potential factor. Researchers are uncertain about the role mental disorders play in delinquency rehabilitation (e.g., Skeem et al., 2014). Mental disorder appears not to provide unique predictive value for estimating risk of recidivism among adolescents (Schubert, Mulvey, & Glasheen, 2011). Yet when an adolescent has a serious and chronic mental disorder, its description would seem to be relevant for evaluating rehabilitation prospects, because some symptoms of mental disorders may impair broader rehabilitation efforts. Thus the likelihood that a youth's symptoms would respond to treatment may be an important part of the rehabilitation potential analysis. In clinical (nonforensic) practice, experts routinely prescribe specific psychosocial or pharmacological treatments and consider their probable lengths of time to succeed with a reasonable degree of medical certainty. But child pharmacology experts recognize that this level of certainty is not "certain," often requiring experimentation and titration in the process of adjusting their clinical judgment (American Psychological Association, 2006). Courts seeking Rehabilitation Potential evidence sometimes may require greater confidence, in light of the gravity of their sentencing decisions in *Miller* cases.

Some youths with previous offenses will have records of services or programs that were provided to them. In *Miller* cases, records of earlier efforts to reform or treat the individual (together with the individual's current homicide) may be offered as evidence for a poor likelihood to respond to rehabilitation in the future. Yet sometimes a lack of past rehabilitation success may be less a matter of the youth's amenability to rehabilitation than parents' failure to have complied with courts' rehabilitation orders (Dependency factor) or the questionable quality of services or programs that were provided. Youths' chances of rehabilitation are less if the programs or services they experience fail to match the specific criminogenic factors (in type or number) that contribute to the youth's delinquency (e.g., Singh et al., 2014; Vieira et al., 2009). Inappropriate program assignments, as well as variable quality of the programs themselves at the time the youth encountered them (Greenwood, 2006; Grisso, 2013), offer reasons for rehabilitation failures or successes apart from youths' degree of amenability.

Legal Competency Factor

Miller recognized that "[Mandatory sentencing] ignores that he might have been charged and convicted of a lesser offense if not for incompetencies associated with youth—for example, his inability to deal with police officers or prosecutors (including a plea agreement) or his incapacity to assist his own attorneys" (*Miller v.*

Alabama, 2012, p. 2468, citing *Graham*). The Court's concern was with immature characteristics of adolescence that create a disadvantage for adolescents during the adjudicative process, potentially placing them in the position of eligibility for a lengthy sentence they might not otherwise have faced.

The Legal Competency factor offers a different type of mitigation than the other *Miller* factors. It pertains not to the effects of immaturity on juveniles' offending or rehabilitation, but to potential developmentally related errors in their legal processing. There is much research demonstrating adolescents' lesser capacities on average compared to adults in the context of police interrogations (e.g., Goldstein et al., 2003; Grisso, 1981; Kassin et al., 2010), pleading and attorney collaboration (e.g., Peterson-Badali & Abramovitch, 1993; Richardson, Gudjonsson, & Kelly, 1995; Viljoen, Klaver, & Roesch, 2005), and understanding and decision making in the trial process (e.g., Abramovitch, Higgins-Bliss, & Bliss, 1993; Abramovitch, Peterson-Badali, & Rohan, 1995; Grisso et al., 2003). The relevant research regarding juveniles' competencies of these types has been reviewed by Kruh and Grisso (2009) for juveniles' competence to stand trial and Goldstein et al. (2016) for waiver of *Miranda* rights. The studies reviewed in these sources offer substantial evidence for the potential effects of immaturity on youths' capacities, compared to adults' capacities, creating a greater risk of error during legal processing. *Miller's* concerns are warranted.

It is unclear, however, what role this factor will play when applied to individual cases to weigh mitigation in *Miller* sentencing. Would a lesser sentence be warranted, given evidence that a youth had disabilities that *might* have impaired her capacity to manage police interrogation or to make a reasoned decision about a plea or plea agreement? If so, that would require identifying the risk of prior errors in legal processing, based on evidence of the youth's deficient abilities and earlier courts' lack of attention to them. If this were applied as mitigation, it would seem to be a sort of judicial correction for a risk of earlier due process oversights.

We are uncertain whether there is legal precedent for using "potential legal incompetence" as evidence for mitigation in a sentencing hearing. We note only that if assessments of youths' abilities related to the various legal competencies are needed in *Miller* cases, experts have resources for framing legal competency evaluations of juveniles and selecting appropriate tools (for reviews, see Goldstein et al., 2016; Grisso, 2013; Kruh & Grisso, 2009; Warren, Jackson, & Coburn, 2016).

Prospects for Developmental Evidence in *Miller* Re-Sentencing Cases

As explained earlier, courts have yet to sort out whether evidence in *Miller* resentencing will be constrained to information that was (or could have been) available at the time of the original sentencing or may include information about the current status of the individual. Those ambiguities allow only tentative observations about developmental evidence in *Miller* resentencing hearings. Here we review the implications for offering developmental evidence in resentencing cases, first to address "irreparable corruption" and eligibility for LWOP, then regarding alternative sentences.

Evidence for "Irreparable Corruption" to Support LWOP at Re-Sentencing

Some states may decide (as did Iowa in *State v. Ragland*, 2013) that current evidence of the degree of rehabilitation of the prisoner will be admissible in resentencing cases. Writing in the *Minnesota Law Review* pre-*Montgomery*, Boone (2015) proposed a "hybrid" model for *Miller* resentencing cases in such circumstances. That model would combine evidence of current rehabilitation typical for parole hearings along with considerations of mitigating characteristics of youthfulness at the time of the offense.

Were this the objective at *Miller* resentencing, and if expert evidence is needed, it could include whatever information experts provide when assisting in adult parole hearings. Of relevance would be assessments of recent performance in prison, evaluation for psychopathic traits, and assessments of risk of recidivism and prospects for case management during parole (perhaps using risk, needs and responsivity tools described earlier). The state would have difficulty simply using a prisoner's misbehavior during incarceration to suggest intractable psychopathic traits (or "irreparable corruption"). Research suggests that prison misbehavior derives from many different causes, offering little value in identifying psychopathy (DeMatteo, Edens, & Hart, 2010). If an expert's structured evaluation of an adult nonrehabilitated prisoner arrives at a diagnosis of psychopathy (e.g., with the Psychopathy Checklist—Revised; Hare, 2003), prosecution could argue that the original LWOP sentence was not mistakenly presumptive about "irreparable corruption." This argument, however, would not be immune to the counterclaim that even prisoners diagnosed with psychopathy might be influenced by the fact that their original LWOP sentence offered them little incentive to make an effort to improve.

Note that most of the matters of evidence we have just described require no developmental expertise. The search is for evidence, based on the adult prisoner's current rehabilitation status, to determine whether the individual was correctly identified as "irreparably corrupt" at the time of resentencing. A developmental perspective might become relevant, however, in cases in which a present *lack* of rehabilitation is used to reflect on "irreparable corruption." Juveniles serving LWOP often are disadvantaged in prison by lack of services to meet their developmental needs and by victimization because of their immaturity (Kaba et al., 2014; Lambie & Randell, 2013). Developmental expertise, then, might be helpful to examine the nonrehabilitated individual's prison history framed within this context. Expert opinion regarding the effects on a specific prisoner, however, often would be speculative unless supported by records of the prisoner's mental status throughout the period of incarceration.

Alternatively, some courts eventually might require *Miller* resentencing to use only information that was, or could have been, available at the time of original sentencing. The prospects for obtaining evidence of "irreparable corruption" in such circumstances would be no better than we described earlier in our analysis of new sentencing cases, reflecting on the difficulty in showing categorical intractability. Indeed, the prospects would be even more discouraging because of (a) problems associated with reconstructing a youth's adolescent status years later and (b) the obvious inability to assess the "juvenile in vivo," as we address in the next discussion.

Developmental Evidence for Alternative-Sentence Mitigation at Re-Sentencing

Applying the five *Miller* factors in mitigation regarding alternative (non-LWOP) sentences in resentencing cases raises many of the prospects and ambiguities already reviewed for new sentencing cases. Here we focus only on additional questions associated with the retrospective nature of resentencing cases.

If the individual's current status may be used as evidence for resentencing, the individual's current clinical (mental health) status sometimes might provide evidence relevant for inferring clinical status during adolescence (or at the time of the offense). When diagnosed in adulthood, a number of clinical conditions have known etiologies and typical courses that strongly support or suggest their probable existence during the individual's childhood or adolescence. Among these, for example, are the neurodevelopmental disorders (e.g., intellectual disabilities, attention-deficit/hyperactivity disorder, specific learning disorder), some schizophrenia spectrum disorders, and some personality disorders (American Psychiatric Association, 2013). Their potential relevance is of two types. First, they suggest that as an adolescent, the individual might have had a disorder with symptoms that could have impaired decisional- or dependency-related abilities, generally or especially in stressful situations. Second, the earlier presence of many of these disorders can be argued to have delayed the individual's development during adolescence, increasing her immaturity in relation to adolescents in general.

Whether or not evidence from current evaluation of the prisoner is allowed in resentencing, the chief difficulty in applying *Miller's* five developmental factors will be the obvious unavailability of the "juvenile in vivo" for direct observation of the developmental characteristics in question. Largely the evidence must rely on a reconstruction of those abilities from records, documents and interviews.

Records and documents in some cases will offer rich information from health, mental health and education sources. Some records might provide teachers' descriptions of the youth's school behavior and performance, results of psychological testing and clinical evaluations, and descriptions of treatment efforts and outcomes. Police and probation records sometimes yield substantial information, including offense descriptions during original investigations. Documented evidence can be supplemented by information from interviews with legal professionals, relatives and acquaintances regarding their recollections of the individual as an adolescent, as well as the prisoner's own reflections on past events.

The difficulties in relying on these sources of retrospective information will be (a) their degree of availability in cases that occurred many years ago, (b) their questionable reliability, and (c) their susceptibility to interest-based bias in their interpretation. These difficulties are obvious and need little explanation. Availability will vary considerably, depending on the time since the original sentencing, the care with which documents have been preserved, and the resources expended in the search for them. Reliability will depend on the quality of the educational or clinical documents at the time they were produced, as well as the expertise of individuals who produced them. Because interpretations will not be guided by structured and standardized data collection methods, they will be more susceptible to all sources of interest-based bias created by diverse allegiances as well as heuristic error (Neal & Brodsky, 2016; Neal & Grisso, 2014).

Whether developmental experts can interpret retrospective documents and interviews any better or more reliably than lay persons can be questioned. The chief reason that developmental or clinical experts have something to offer, however, is their special knowledge of adolescent development and psychopathology. This allows them to process the retrospective information within the framework of developmental science and clinical expertise, offering empirically guided insights that would not necessarily be grasped by others without this special knowledge. Whether this offers a benefit to the courts in *Miller* resentencing cases, however, will depend on experts' adherence to their professional obligations. They must go no further in their expression of confidence in their interpretations than the reliability of their data and the scientific foundation of their opinion can support (American Psychological Association, 2013).

Conclusions

Developmental science has successfully provided the research evidence that the law needed to make its normative decisions about juveniles' lesser maturity and culpability. We now face the task of creating models and methods to provide relevant developmental and clinical data about individuals in cases involving *Miller* sentencing and resentencing.

The present analysis has identified many current ambiguities in the law's future application of developmental evidence in *Miller* cases. We are entering a post-*Miller/Montgomery* period when we are likely to see much legislative and appellate activity to clarify the types and relevance of developmental evidence required in juvenile homicide sentencing and resentencing. As appellate cases evolve, we must give them close scrutiny from a developmental science perspective, offering scholarly analyses as guidance for the courts' efforts to identify the proper use of developmental evidence. In addition, some researchers may find opportunities to study individuals released from LWOP by way of *Miller/Montgomery* cases, offering data that might generate hypotheses about rehabilitation potential under adverse prison conditions.

As we watch for legal clarification, there is much we can do to increase our ability to provide relevant developmental evidence in *Miller/Montgomery* cases. Perhaps of greatest importance is the creation of psychological measures of developmental abilities related to *Miller*'s Decisional and Dependency factors. For example, the research tools that produced the evidence for adolescents' decisional immaturity offer prototypes that could be refined, validated and normed for clinical forensic use. In addition, much more research is needed on the characteristics of adolescents associated with rehabilitation potential. Finally, the field needs structured models to guide the collection of developmental evidence in *Miller* cases involving both new sentencing and resentencing.

Borrowing the syntax of Wigmore's (1909) response to Münsterberg (1908), when the courts are ready for developmental experts in *Miller* cases, developmental experts (we hope) will be ready for the courts. We can best ready ourselves if we move quickly in our research on appropriate ways to assess developmental characteristics related to *Miller's* five factors and, until the law is more settled, not so much quickly as cautiously in our presumptions as experts.

References

Abram, K. M., Teplin, L. A., Charles, D. R., Longworth, S. L., McClelland, G. M., & Dulcan, M. K. (2004). Posttraumatic stress disorder and trauma in youth in juvenile detention. *Archives of General Psychiatry, 61,* 403–410. http://dx.doi.org/10.1001/archpsyc.61.4.403

Abramovitch, R., Higgins-Bliss, K., & Bliss, S. (1993). Young persons' comprehension of waivers in criminal proceedings. *Canadian Journal of Criminology, 35,* 309–322.

Abramovitch, R., Peterson-Badali, M., & Rohan, M. (1995). Young people's understanding and assertion of rights to silence and legal counsel. *Canadian Journal of Criminology, 37,* 1–18.

American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). Washington, DC: Author.

American Psychological Association. (2006). *Report of the working group on psychotropic medications for children and adolescents*. Washington, DC: Author.

American Psychological Association. (2013). Specialty guidelines for forensic psychology. *American Psychologist, 68,* 7–19. http://dx.doi.org/10.1037/a0029889

Andrews, D., Bonta, J., & Wormith, S. (2004). *The Level of Service/Case Management Inventory (LS/CMI*). Toronto, Canada: Multi-Health Systems.

Apprendi v. New Jersey, 530 U.S. 466 (2000).

Archer, R., & Baum, L. (2016). Forensic uses of clinical assessment instruments. In K. Heilbrun, D. DeMatteo, & N. Goldstein (Eds.), *APA handbook of psychology and juvenile justice* (pp. 425–443). Washington, DC: American Psychological Association. http://dx.doi.org/10.1037/14643-020

Blakely v. Washington, 542 U.S. 296 (2004).

Bonnie, R., & Slobogin, C. (1980). The role of mental health professionals in the criminal process: The case for informed speculation. *Virginia Law Review, 66,* 427–522. http://dx.doi.org/10.2307/1072659

Boone, B. (2015). Treating adults like children: Re-Sentencing adult juvenile lifers after Miller v. Alabama. *Minnesota Law Review, 99,* 1159–1194.

Borum, R., Bartel, P., & Forth, A. (2010). *Manual for the Structured Assessment for Violence Risk in Youth (SAVRY)*. Odessa, FL: Psychological Assessment Resources.

Brief for the American Psychological Association, American Psychiatric Association, and National Association of Social Workers as Amici Curiae in Support of Petitioners. *Evan Miller v. State of Alabama* and *Kuntrell Jackson v. Ray Hobbs*, Nos 10-9646 and 10-9647 (January 17, 2012). In the Supreme Court of the United States. WL 174239.

Cauffman, E., Skeem, J., Dmitrieva, J., & Cavanaugh, C. (2016). Comparing the stability of psychopathy scores in adolescence and adulthood: How often is "fledgling psychopathy" misdiagnosed? *Psychology, Public Policy, and Law, 22,* 77–91. http://dx.doi.org/10.1037/law0000078

Cauffman, E., & Woolard, J. (1999). *The Future Outlook Inventory*. Unpublished manuscript.

Chein, J., Albert, D., O'Brien, L., Uckert, U., & Steinberg, L. (2011). Peers increase adolescent risk taking by enhancing activity in the brain's reward circuitry. *Developmental Science, 14,* F1–F10. http://dx.doi.org/10.1111/j.1467-7687.2010.01035.x

Culbertson, W., & Zillmer, E. (2005). *Tower of London* (2nd ed.). Lutz, FL: Psychological Assessment Resources.

DeMatteo, D., Edens, J., & Hart, A. (2010). The use of measures of psychopathy in violence risk assessment. In R. Otto & K. Douglas (Eds.), *Handbook of violence risk assessment* (pp. 19–40). New York, NY: Rutledge, Taylor and Francis.

DeMatteo, D., Wobransky, M., & LaDuke, C. (2016). Risk assessment with juveniles. In K. Heilbrun, D. DeMatteo, & N. Goldstein (Eds.), *APA handbook of psychology and juvenile justice* (pp. 365–384). Washington, DC: American Psychological Association. http://dx.doi.org/10.1037/14643-017

Dierkhising, C. B., Ko, S. J., Woods-Jaeger, B., Briggs, E. C., Lee, R., & Pynoos, R. S. (2013). Trauma histories among justice-involved youth: Findings from the National Child Traumatic Stress Network. *European Journal of Psychotraumatology, 4,* 1–12. http://dx.doi.org/10.3402/ejpt.v4i0.20274

Edens, J. F., Campbell, J. S., & Weir, J. M. (2007). Youth psychopathy and criminal recidivism: A meta-analysis of the psychopathy checklist measures. *Law and Human Behavior, 31,* 53–75. http://dx.doi.org/10.1007/s10979-006-9019-y

Fla. Stat. Ann. § 921.1401 and § 921.1402 (West 2014).

Ford, J. (2005). Implications for psychiatric treatment of altered neurobiology, affect regulation, and information processing after child maltreatment. *Psychiatric Annals, 35,* 410–419.

Ford, J., & Blaustein, M. (2013). Systemic self-regulation: A framework for trauma-informed services in residential juvenile justice programs. *Journal of Family Violence, 28,* 665–677. http://dx.doi.org/10.1007/s10896-013-9538-5

Forth, A., Kosson, D., & Hare, R. (2003). *The Psychopathy Checklist: Youth Version manual*. Toronto, Canada: Multi-Health Systems.

Frick, P., & Hare, R. (2001). *The antisocial process screening device*. Toronto, Canada: Multi-Health Systems.

Frick, P. J., & White, S. F. (2008). Research review: The importance of callous-unemotional traits for developmental models of aggressive and antisocial behavior. *Journal of Child Psychology and Psychiatry, 49,* 359–375. http://dx.doi.org/10.1111/j.1469-7610.2007.01862.x

Golden, C. (1978). *Stroop Color and Word Test: Manual for clinical and experimental uses*. Chicago, IL: Stoetling.

Goldstein, N. E., Condie, L. O., Kalbeitzer, R., Osman, D., & Geier, J. L. (2003). Juvenile offenders' Miranda rights comprehension and self-reported likelihood of offering false confessions. *Assessment, 10,* 359–369. http://dx.doi.org/10.1177/1073191103259535

Goldstein, N., Kelley, S., Peterson, L., Brogan, L., Zelle, H., & Romaine, C. (2016). Evaluation of Miranda waiver capacity. In K. Heilbrun, D. DeMatteo, & N. Goldstein (Eds.), *APA handbook of psychology and juvenile justice* (pp. 467–488). Washington, DC: American Psychological Association. http://dx.doi.org/10.1037/14643-022

Gowensmith, W. N., Murrie, D. C., & Boccaccini, M. T. (2013). How reliable are forensic evaluations of legal sanity? *Law and Human Behavior, 37,* 98–106. http://dx.doi.org/10.1037/lhb0000001

Graham v. Florida, 130 S. Ct. 2011 (2010).

Greenwood, P. (2006). *Changing lives: Delinquency prevention and crime-control policy*. Chicago, IL: University of Chicago Press.

Grisso, T. (1981). *Juveniles' waiver of rights: Legal and psychological competence*. New York, NY: Plenum Press. http://dx.doi.org/10.1007/978-1-4684-3815-4

Grisso, T. (2003). *Evaluating competencies: Forensic assessments and instruments* (2nd ed.). New York, NY: Kluwer Academic/Plenum Press Publishers.

Grisso, T. (2006). Adolescents' decision making: A developmental perspective on constitutional provisions in delinquency cases. *New England Journal on Criminal and Civil Confinement, 32,* 3–14.

Grisso, T. (2013). *Forensic evaluation of juveniles* (2nd ed.). Sarasota, FL: Professional Resource Press.

Grisso, T., Steinberg, L., Woolard, J., Cauffman, E., Scott, E., Graham, S., . . . Schwartz, R. (2003). Juveniles' competence to stand trial: A comparison of adolescents' and adults' capacities as trial defendants. *Law and Human Behavior, 27,* 333–363.

Grisso, T., Tomkins, A., & Casey, P. (1988). Psychosocial concepts in juvenile law. *Law and Human Behavior, 12,* 403–437. http://dx.doi.org/10.1007/BF01044626

Hare, R. (2003). *The Hare Psychopathy Checklist—Revised*. Toronto, Canada: Multi-Health Systems.

Heilbrun, K. (2001). *Principles of forensic mental health assessment*. New York, NY: Kluwer Academic/Plenum Press Publishers.

Hoge, R., & Andrews, D. (2010). *Youth level of Service/Case Management Inventory 2.0 (YLS/CMI) users' manual*. North Tonawanda, NY: Multi-Health Systems.

James v. United States, 59 A. 3d 1233 (D. C. 2013).

Kaba, F., Lewis, A., Glowa-Kollisch, S., Hadler, J., Lee, D., Alper, H., . . . Venters, H. (2014). Solitary confinement and risk of self-harm among jail inmates. *American Journal of Public Health, 104*, 442–447. http://dx.doi.org/10.2105/AJPH.2013.301742

Kassin, S. M., Drizin, S. A., Grisso, T., Gudjonsson, G. H., Leo, R. A., & Redlich, A. D. (2010). Police-induced confessions: Risk factors and recommendations. *Law and Human Behavior, 34*, 3–38.

Kinscherff, R. (2016). Distinguishing and assessing treatment needs and amenability to rehabilitation. In K. Heilbrun, D. DeMatteo, & N. Goldstein (Eds.), *APA handbook of psychology and juvenile justice* (pp. 385–404). Washington, DC: American Psychological Association. http://dx.doi.org/10.1037/14643-018

Kruh, I., & Grisso, T. (2009). Evaluation of juveniles' competence to stand trial. New York, NY: Oxford.

Lambie, I., & Randell, I. (2013). The impact of incarceration on juvenile offenders. *Clinical Psychology Review, 33*, 448–459. http://dx.doi.org/10.1016/j.cpr.2013.01.007

Larson, K., DiCataldo, F., & Kinscherff, R. (2013). Miller v. Alabama: Implications for forensic mental health assessment at the intersection of social science and the law. *New England Journal of Civil and Criminal Confinement, 39*, 319–345.

Larson, K., & Grisso, T. (2016). Transfer and commitment of youth in the United States: Law, policy, and forensic practice. In K. Heilbrun, D. DeMatteo, & N. Goldstein (Eds.), *APA handbook of psychology and juvenile justice* (pp. 445–466). Washington, DC: American Psychological Association. http://dx.doi.org/10.1037/14643-021

LaVigne, M., & Rybroek, G. (2013). "He got in my face so I shot him:" How defendants' language impairments impair attorney-client relationships. *City University of New York Law Review, 17*, 69–111.

Luna, B., & Wright, C. (2016). Adolescent brain development: Implications for the juvenile criminal justice system. In K. Heilbrun, D. DeMatteo, & N. Goldstein (Eds.), *APA handbook of psychology and juvenile justice* (pp. 91–116). Washington, DC: American Psychological Association. http://dx.doi.org/10.1037/14643-005

Lynam, D. R., Caspi, A., Moffitt, T. E., Loeber, R., & Stouthamer-Loeber, M. (2007). Longitudinal evidence that psychopathy scores in early adolescence predict adult psychopathy. *Journal of Abnormal Psychology, 116*, 155–165. http://dx.doi.org/10.1037/0021-843X.116.1.155

Maschi, T., Bradley, C., & Morgen, K. (2008). Unraveling the link between trauma and delinquency. *Youth Violence and Juvenile Justice, 6*, 136–157. http://dx.doi.org/10.1177/1541204007305527

Mash, E., & Barkley, R. (2007). *Assessment of childhood disorders*. New York, NY: Guilford Press.

Mash, E., & Barkely, R. (Eds.). (2014). *Child psychopathology* (third edition). New York: NY, Guilford.

McKinley v. Butler, 7th Circuit Court of Appeals Case No. 14–1944, 1/4/16 (2016).

Miller, H. (2006). *Inventory of Offender Risks, Needs, and Strengths (IORNS*). Lutz, FL: Professional Assessment Resources.

Miller v. Alabama, 132 S. Ct. 2455 (2012).

Mills, J., Dorn, A., & Hritz, A. (in press). Juvenile life without parole in law and practice: The end of superpredator era sentencing. *American University Law Review*. Retrieved from http://papers.ssrn.com/sol3/Delivery.cfm/SSRN_ID2663834_code1143552.pdf?abstractid&eq;2663834

Moffitt, T. E. (1993). Adolescence-limited and life-course-persistent antisocial behavior: A developmental taxonomy. *Psychological Review, 100*, 674–701. http://dx.doi.org/10.1037/0033-295X.100.4.674

Monahan, K. C., Steinberg, L., Cauffman, E., & Mulvey, E. P. (2009). Trajectories of antisocial behavior and psychosocial maturity from adolescence to young adulthood. *Developmental Psychology, 45*, 1654–1668. http://dx.doi.org/10.1037/a0015862

Montgomery v. Louisiana, 577 U.S. No. 14-280 (2016). slip op., U.S. Supreme Court.

Mulvey, E. P., Steinberg, L., Piquero, A. R., Besana, M., Fagan, J., Schubert, C., & Cauffman, E. (2010). Trajectories of desistance and continuity in antisocial behavior following court adjudication among serious adolescent offenders. *Development and Psychopathology, 22*, 453–475. http://dx.doi.org/10.1017/S0954579410000179

Münsterberg, H. (1908). *On the witness stand*. New York, NY: McClure Company. http://dx.doi.org/10.1037/a0013578

Murrie, D., Boccaccini, J., Zapf, P., Warren, J., & Henderson, C. (2008). Clinician variation in findings of competence to stand trial. *Psychology, Public Policy, and Law, 14*, 177–193. http://dx.doi.org/10.1037/a0013578

Nagel, A., Guarnera, L., & Reppucci, N. (2016). Adolescent development, mental disorders, and decision making in delinquent youths. In K. Heilbrun, D. DeMatteo, & N. Goldstein (Eds.), *APA handbook of psychology and juvenile justice* (pp. 117–138). Washington, DC: American Psychological Association. http://dx.doi.org/10.1037/14643-006

Neal, T., & Brodsky, S. (2016). Forensic psychologists' perceptions of bias and potential correction strategies in forensic mental health evaluations. *Psychology, Public Policy, and Law, 22*, 58–76. http://dx.doi.org/10.1037/law0000077

Neal, T., & Grisso, T. (2014). The cognitive underpinnings of bias in forensic mental health evaluations. *Psychology, Public Policy, and Law, 20*, 200–211. http://dx.doi.org/10.1037/a0035824

Nosek, B., & Banaji, M. R. (2001). The go/no-go association task. *Social Cognition, 19*, 161–176.

Packer, I. (2009). *Evaluation of criminal responsibility*. New York, NY: Oxford.

People v. Argeta, 149 Cal. Rptr. 3d 243 (Ct. App. 2012).

People v. Gutierrez, 324 P. 3d 245 (Cal. 2014).

People v. Lozano, 2nd Appellate District, Los Angeles County Super. Ct. No. NA023984 (2016).

People v. Perez, 154 Cal. Rptr. 3d 114 (Ct. App. 2013).

People v. Skinner, WL 4945986 (Mich. Ct. App. Aug. 20, 2015).

People v. Thomas, 150 Cal. Rptr. 3d 361 (Ct. App. 2012).

Peterson-Badali, M., & Abramovitch, R. (1993). Grade-related changes in young people's reasoning about plea decisions. *Law and Human Behavior, 17*, 537–552. http://dx.doi.org/10.1007/BF01045072

Piquero, A., & Moffitt, T. (2014). Moffitt's developmental taxonomy of antisocial behavior. In G. Bruinsma & D. Weisburd (Eds.), *Encyclopedia of criminology and criminal justice* (pp. 3121–3127). New York, NY: Springer. http://dx.doi.org/10.1007/978-1-4614-5690-2_506

Richardson, G., Gudjonsson, G., & Kelly, T. (1995). Interrogative suggestibility in an adolescent forensic population. *Journal of Adolescence, 18*, 211–216. http://dx.doi.org/10.1006/jado.1995.1014

Rogers, R. (1984). *Rogers Criminal Responsibility Assessment Scales and test manual*. Odessa, FL: Psychological Assessment Resources.

Roper v. Simmons, 125 S. Ct. 1183 (2005).

Russell, S. (2015). Jury sentencing and juveniles: Eighth Amendment and Sixth Amendment rights. *Boston College Law Review Boston College Law School, 56*, 553–615.

Salekin, R. (2004). *Risk-Sophistication-Treatment Inventory*. Lutz, FL: Psychological Assessment Resources.

Salekin, R., & Iselin, A. (2010). *The Risk-Sophistication-Treatment Inventory—Self Report*. Unpublished manuscript, University of Alabama.

Salekin, R., MacDougall, E., & Harrison, N. (2016). Developmental maturity and sophistication-maturity: Learning more about its purpose and assessment. In K. Heilbrun, D. DeMatteo, & N. Goldstein (Eds.), *APA handbook of psychology and juvenile justice* (pp. 405–424). Washington, DC: American Psychological Association. http://dx.doi.org/10.1037/14643-019

Salekin, R., Yff, R., Neumann, C., Leistico, A., & Zalot, A. (2002). Juvenile transfer to adult court: A look at the prototypes for dangerousness, sophistication-maturity, and amenability to treatment through a legal lens. *Psychology, Public Policy, and Law, 8,* 373–410. http://dx.doi.org/10.1037/1076-8971.8.4.373

Sattler, J. (2008). *Assessment of children: Cognitive foundations*. La Mesa, CA: Sattler Publisher.

Schubert, C. A., Mulvey, E. P., & Glasheen, C. (2011). Influence of mental health and substance use problems and criminogenic risk on outcomes in serious juvenile offenders. *Journal of the American Academy of Child & Adolescent Psychiatry, 50,* 925–937. http://dx.doi.org/10.1016/j.jaac.2011.06.006

Scott, E., Grisso, T., Levick, M., & Steinberg, L. (2016). *The Supreme Court and the transformation of juvenile sentencing*. Chicago, IL: John D. and Catherine T. MacArthur Foundation.

Scott, E., & Steinberg, L. (2008). *Rethinking juvenile justice*. Cambridge, MA: Harvard University Press.

Shallice, T. (1982). Specific impairments of planning. *Philosophical Transactions of the Royal Society of London, 298,* 199–209. http://dx.doi.org/10.1098/rstb.1982.0082

Sickmund, M., & Puzzanchera, C. (Eds.). (2014). *Juvenile offenders and victims: 2014 national report*. Pittsburgh, PA: National Center for Juvenile Justice.

Singh, J. P., Desmarais, S. L., Sellers, B. G., Hylton, T., Tirotti, M., & Van Dorn, R. A. (2014). From risk assessment to risk management: Matching interventions to adolescent offenders' strengths and vulnerabilities. *Children and Youth Services Review, 47,* 1–9. http://dx.doi.org/10.1016/j.childyouth.2013.09.015

Skeem, J. L., Winter, E., Kennealy, P. J., Louden, J. E., & Tatar, J. R., II. (2014). Offenders with mental illness have criminogenic needs, too: Toward recidivism reduction. *Law and Human Behavior, 38,* 212–224. http://dx.doi.org/10.1037/lhb0000054

State of Delaware. (2016). *Delaware Sentencing Accountability Commission benchbook*. Retrieved from http://cjc.delaware.gov/sentac/2016_BenchbookRevision_1_80615_OrigRevised_011416_SDH_FINAL_FINAL_FINAL.pdf

State v. Anderson, Appell. Case 26525, January 15, 2016 (Ohio 2nd District Court of Appeals).

State v. Lyle, 854 N. W. 2d 378 (Iowa 2014).

State v. Null, 836 N. W. 2d 41 (Iowa 2013).

State v. Ragland, 836 N. W. 2d 107 (Iowa 2013).

State v. Seats, 865 N. W. 2d 545 (Iowa 2015).

Steinberg, L. (2004). Risk-taking in adolescence: What changes, and why? *Annals of the New York Academy of Sciences, 1021,* 51–58. http://dx.doi.org/10.1196/anals.1308.005

Steinberg, L. (2008). A social neuroscience perspective on adolescent risk-taking. *Developmental Review, 28,* 78–106. http://dx.doi.org/10.1016/j.dr.2007.08.002

Steinberg, L. (2013). The influence of neuroscience on US Supreme Court decisions about adolescents' criminal culpability. *Nature Reviews Neuroscience, 14,* 513–518. http://dx.doi.org/10.1038/nrn3509

Steinberg, L., & Monahan, K. C. (2007). Age differences in resistance to peer influence. *Developmental Psychology, 43,* 1531–1543. http://dx.doi.org/10.1037/0012-1649.43.6.1531

Steinberg, L., & Scott, E. S. (2003). Less guilty by reason of adolescence: Developmental immaturity, diminished responsibility, and the juvenile death penalty. *American Psychologist, 58,* 1009–1018. http://dx.doi.org/10.1037/0003-066X.58.12.1009

Strand, V. C., Sarmiento, T. L., & Pasquale, L. E. (2005). Assessment and screening tools for trauma in children and adolescents: A review. *Trauma, Violence & Abuse, 6,* 55–78. http://dx.doi.org/10.1177/1524838004272559

Strathman, A., Gleicher, F., Boninger, D., & Edwards, C. (1994). The consideration of future consequences: Weighing immediate and distance outcomes of behavior. *Journal of Personality and Social Psychology, 66,* 742–752. http://dx.doi.org/10.1037/0022-3514.4.742

Tatar, J., Cavanagh, C., & Cauffman, E. (2016). The importance of (anti)social influence in serious juvenile offenders with psychopathic traits. *Psychology, Public Policy and Law, 22,* 92–104. http://dx.doi.org/10.1037/law0000074

United States v. Booker, 543 U.S. 220 (2005).

Valencia, R., & Suzuki, L. (2000). *Intelligence testing and minority students: Foundations, performance factors, and assessment issues*. New York, NY: Sage.

Veal v. State, Supreme Court of Georgia No. S15A1721 (2016).

Vieira, T., Skilling, T., & Peterson-Badali, M. (2009). Matching court-ordered services with youths' treatment needs: Predicting treatment success with young offenders. *Criminal Justice and Behavior, 36,* 385–401. http://dx.doi.org/10.1177/0093854808331249

Viljoen, J. L., Klaver, J., & Roesch, R. (2005). Legal decisions of preadolescent and adolescent defendants: Predictors of confessions, pleas, communication with attorneys, and appeals. *Law and Human Behavior, 29,* 253–277. http://dx.doi.org/10.1007/s10979-005-3613-2

Vincent, G., Kimonis, E., & Clark, A. (2016). Juvenile psychopathy: Appropriate and inappropriate uses in legal proceedings. In K. Heilbrun, D. DeMatteo, & N. Goldstein (Eds.), *APA handbook of psychology and juvenile justice* (pp. 197–232). Washington, DC: American Psychological Association. http://dx.doi.org/10.1037/14643-010

Warren, J., Jackson, S., & Coburn, J. (2016). Evaluation and restoration of competency to stand trial. In K. Heilbrun, D. DeMatteo, & N. Goldstein (Eds.), *APA handbook of psychology and juvenile justice* (pp. 489–514). Washington, DC: American Psychological Association. http://dx.doi.org/10.1037/14643-023

Wevodau, A. (2016). Review of trauma screening tools for children and adolescents. Retrieved from http://www.nysap.us/Products.html

Wigmore, J. (1909). Professor Muensterberg and the psychology of testimony being a report of the case of Cokestone v. Muensterberg. *Illinois Law Review, 3,* 399–445.

Zelechoski, A. (2016). Trauma, adverse experience, and offending. In K. Heilbrun, D. DeMatteo, & N. Goldstein (Eds.), *APA handbook of psychology and juvenile justice* (pp. 325–342). Washington, DC: American Psychological Association. http://dx.doi.org/10.1037/14643-015

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