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Determining Intellectual Disability in Death Penalty Cases: A State-by-State Analysis

Jennifer LaPrade¹
John L. Worrall²

Abstract
In Moore v. Texas (2017), the U.S. Supreme Court ruled that Texas death penalty definitions of intellectual disability were inadequate because they strayed too far from clinical definitions. This study examines how each state defines intellectual disability with regard to death penalty eligibility. It reveals a wide variation in the standards used by states, with no clear consensus on definitions of intellectual disability or who should measure it. Variations pertain to age at onset, proof of intellectual disability status at the time of the crime, burden of proof required to make the intellectual disability determination, and who makes the final decision. Implications and suggestions for the future are discussed.

Keywords
death penalty, capital punishment, intellectual disability

¹ Department of Criminology & Criminal Justice, School of Economic, Political & Policy Sciences, The University of Texas at Dallas
² Department of Criminology & Criminal Justice, School of Economic, Political & Policy Sciences, The University of Texas at Dallas
Introduction
In Atkins v. Virginia (2002), the U.S. Supreme Court ruled that executing intellectually disabled individuals violated the Eighth Amendment ban on cruel and unusual punishment. However, the Court gave little guidance to states on how to define and measure intellectual disability during a determination of eligibility for the death penalty. Therefore, each state was left to create its own standards. Recently, in Moore v. Texas (2017), the Supreme Court ruled that the standards Texas had created in response to Atkins were inadequate because they were not based on current medical standards, forcing the state to revise its definitions of intellectual disability. How do other states determine intellectual disability regarding eligibility for the death penalty? Is there a wide variation among states? Varying definitions can literally mean life or death for individuals with intellectual disabilities. Accordingly, this study examines each state’s definition of intellectual disability and the standards each uses to determine an individual’s eligibility for the death penalty.

History of Intellectual Disability and the Death Penalty
The U.S. Supreme Court began exploring whether executing individuals with intellectual disabilities violated the Eighth Amendment in the case of Penry v. Lynaugh (1988), which dealt with an intellectually disabled (then referred to as “mentally retarded”) man accused of raping and murdering a woman in Texas. Although a psychologist testified at trial that Penry possessed the “mental age of a 6½-year-old” (Penry v. Lynaugh, 1988, p. 308), Penry was still found competent to stand trial and was sentenced to death for his crimes. The Supreme Court ruled that the Texas jury should have been able to hear evidence of intellectual disability as a possible mitigating factor when considering sentencing, but at that time it did not believe executing such an individual violated the Eighth Amendment. The Court reasoned that no national consensus existed for such a ruling because at that time Georgia was the only state banning death penalty sentences for the intellectually disabled. “The clearest and most reliable objective evidence of contemporary values is the legislation enacted by the country’s legislatures,” Justice Sandra Day O’Connor wrote in her majority opinion (Penry v. Lynaugh, 1988, p. 331). Therefore, because no state legislative consensus existed and juries continued to hand down death sentences despite potential mental issues, the Court reasoned that executing the intellectually disabled was still permitted and did not violate the Eighth Amendment ban on cruel and unusual punishment.

Fourteen years later, the Supreme Court changed its position. In Atkins v. Virginia (2002), it ruled that executing intellectually disabled people did violate the Eighth Amendment, claiming that a national consensus was emerging because 16 more states had banned executions for such individuals since Penry. However, the Court did not just blindly go along with the national consensus; it examined the issue carefully.

Our independent evaluation of the issue reveals no reason to disagree with the judgment of the legislatures that have recently addressed the matter and concluded that death is not a suitable punishment for a mentally retarded criminal. We are not persuaded that the execution of mentally retarded criminals will measurably advance the deterrent or the retributive purpose of the death penalty. (Atkins v. Virginia, 2002, p. 321)
The Court argued that the purpose of the death penalty was to deter calculating criminals from committing crimes; however, because of their impairments, those with intellectual disabilities were more likely to act on impulse, making the deterrence motivation for the death penalty less relevant. Justice John Paul Stevens continued in his majority opinion by arguing that offenders with intellectual disabilities should be a protected class of individuals because of the greater likelihood of their giving false confessions (Perske, 2011), tending to seem unremorseful in the eyes of jurors, and possibly being judged more harshly on the future dangerousness scale because of their disabilities. Justice Stevens went further, noting, “Mentally retarded defendants in the aggregate face a special risk of wrongful conviction” (Atkins v. Virginia, 2002, p. 321).

In sum, the Supreme Court in Atkins v. Virginia (2002) argued that the intellectually disabled deserve special protection in the criminal justice system (see also Abeles, 2010; Macvaugh & Gilbert, 2009; Romano, 2003). How, though, should courts decide who should receive this special protection? The Supreme Court gave little guidance, simply concluding that capital punishment was banned for everyone “within the range of mentally retarded offenders about whom there is a national consensus” (Atkins v. Virginia, 2002, p. 317). The Court further declared that it was up to the states to decide how intellectual disability should be defined, concluding that “we leave to the States the task of developing appropriate ways to enforce the constitutional restriction” (Atkins v. Virginia, 2002, p. 317). Finally, the Court noted that most states with such legislation in place used clinical definitions from the American Psychological Association (APA, 2010) and the American Association on Intellectual and Developmental Disabilities (AAIDD, 2018), which generally are based on a three-pronged approach. To qualify as intellectually disabled, an individual must have (1) intellectual deficits (usually indicated by IQ scores) and (2) adaptive deficits (such as severe social and behavioral problems); furthermore, (3) these deficits must have manifested during the developmental period (usually before age 18). However, as the results of this study reveal, the freedom the Court allowed the states to develop their own definitions has resulted in some states requiring that defendants fulfill more criteria than those set forth in the clinical definitions.

Challenging State Definitions
The first major challenge to a state’s definition of intellectual disability in a capital punishment case came in the Supreme Court case of Hall v. Florida (2014). According to Florida law, an individual had to have a score of 70 or lower on an IQ test before the intellectual disability screening could continue. If a defendant scored 71 or higher, any further exploration of the issue was terminated; the defendant was deemed not to be intellectually disabled and was therefore eligible for the death penalty. However, the case of Florida defendant Robert Hall provided compelling evidence that despite an IQ score of 71, which put him just one point beyond the range of consideration, he suffered from severe intellectual impairment. The Court thus ruled that the Florida standards were too rigid and did not take into account the standard error of measurement that should always be considered when IQ tests are administered. The Hall Court clarified that although Atkins did not provide specific instructions or guidelines, it also “did not give the States unfettered discretion to define the full scope of the constitutional protection” (Hall v. Florida, 2014, p. 17). The Court claimed that Florida’s “rigid rule … creates an unacceptable risk that persons with intellectual disability will be executed and thus is unconstitutional” (Hall v. Florida, 2014, p. 22). Therefore, the Court advised states to adhere
more closely to clinical definitions; however, the Court was still unclear on how closely states must adhere to clinical definitions, thus leaving opportunities for significant differences in protections among the states (Mukherjee & Westphal, 2015).

Most recently, the Texas definition of intellectual disability in death penalty cases was challenged in Moore v. Texas (2017). After Atkins v. Virginia (2002) had declared the execution of intellectually disabled persons unconstitutional, the Texas Court of Criminal Appeals began to see many appellate cases from people on death row who claimed to be intellectually disabled. Judges on the Texas Court of Criminal Appeals had to determine whether these defendants were in fact intellectually disabled; however, the Texas legislature had not yet passed a law that specifically defined intellectual disability. Therefore, the court decided to create its own standards.

In 2004, the Texas Court of Criminal Appeals considered the appeal of Jose Garcia Briseno (Ex Parte Briseno, 2004). Briseno had been found guilty of murder and sentenced to death, but he claimed to be intellectually disabled and requested that the sentence be converted to life on the basis of Atkins v. Virginia (2002). Because the Texas legislature had not yet passed guidelines on how to determine intellectual disability following the Atkins decision, the Texas Court of Appeals elected to issue its own guidelines. It started with a three-pronged clinical approach to determine intellectual disability, following medical standards, but then added seven more factors, which became known as the Briseno factors, named after this case (Ex Parte Briseno, 2004). Under the Briseno factors, for a person to be deemed intellectually disabled, the answers to the following questions also had to be considered (Ex Parte Briseno, 2004, pp. 8-9):

1. Did those who knew the person best during the developmental stage—his family, friends, teachers, employers, authorities—think he was mentally retarded at that time, and, if so, act in accordance with that determination?
2. Has the person formulated plans and carried them through, or is his conduct impulsive?
3. Does his conduct show leadership, or does it show that he is led around by others?
4. Is his conduct in response to external stimuli rational and appropriate, regardless of whether it is socially acceptable?
5. Does he respond coherently, rationally, and on point to oral or written questions, or do his responses wander from subject to subject?
6. Can the person hide facts or lie effectively in his own or others' interests?
7. Putting aside any heinousness or gruesomeness surrounding the capital offense, did the commission of that offense require forethought, planning, and complex execution of purpose? (Ex Parte Briseno, 2004, pp. 8-9)

When developing these additional seven standards, the Texas Court of Criminal Appeals stated that its role was to “define that level and degree of mental retardation at which a consensus of Texas citizens would agree that a person should be exempted from the death penalty” (Ex Parte Briseno, 2004, p. 4). The court referred to the fictional character “Lennie” in John Steinbeck’s classic novel Of Mice and Men as an example of a person most Texans would agree should be exempt from the death penalty; it then based its additional legal criteria on that character, going
outside the definitions of the medical community. In fact, some scholars argue that these additional Briseño standards may be the cause of the low rate of success for Atkins claims in Texas, 17 percent, compared with the national success rate of 55 percent (Blume, Johnson, & Seeds, 2009).

In Moore v. Texas (2017), the constitutionality of the Texas Briseño factors in determining intellectual disability was challenged. Moore, convicted of a Texas murder, claimed to be intellectually disabled; however, on the basis of the Briseño factors, a Texas appellate court declared Moore not to be intellectually disabled partly because he was able to “live on the streets, mow lawns, and play pool for money” (Moore v. Texas, 2017, p. 12). The Supreme Court took issue with the Texas Briseño factors at least partly because they focused on an individual’s strengths, whereas the medical community determines intellectual disability by focusing on an individual’s weaknesses. The Supreme Court ruled that Texas had strayed too far from clinical definitions because its definition could make people eligible for the death penalty even though they fit clinical definitions of intellectual disability.

Justice Ruth Bader Ginsberg wrote in her opinion that many of the factors in Briseño “are an invention of the CCA [Court of Criminal Appeals] untied to any acknowledged source” (Moore v. Texas, 2017, p. 2), and that “no citation to any authority, medical or judicial, accompanied the Briseño court’s recitation of the seven factors” (Moore v. Texas, 2017, pp. 5-6). Furthermore, the Briseño factors “create an unacceptable risk that persons with intellectual disability will be executed” (Moore v. Texas, 2017, p. 14), just as the Supreme Court had noted in Hall 3 years earlier. However, even in Moore, the Court still gave latitude to the states, saying that “the views of medical experts do not dictate a court’s intellectual-disability determination” (Moore v. Texas, 2017, p. 17). Yet, the Court invalidated Texas practices in Moore because with the additional seven factors Texas had disregarded medical standards in an extreme manner (see also Crowell, 2017).

What about other states? How do they define intellectual disability? How closely do states follow clinical definitions and how much do state definitions vary? Are some states with more stringent standards for determining intellectual disability executing individuals who could avoid the death penalty in a state with less stringent standards? This study examines these questions by looking at current statutes from all states that use the death penalty. First, however, it is important that we summarize prior research in this area.

Prior Research
A number of researchers have examined the varying ways in which states define intellectual disability in regard to death penalty eligibility. Keyes and Edwards (1997) undertook a state-by-state analysis of emerging laws prohibiting capital punishment for people with intellectual disabilities. Their study was conducted before Atkins v. Virginia (2002), which banned the execution of the intellectually disabled nationally. However, following Penry v. Lynaugh (1989), states began to prohibit such executions on their own, leading to the national consensus that swayed the Court to enact a federal ban in Atkins. Keyes and Edwards found that 11 states, plus the federal government, had enacted legislation banning the execution of such persons, and they analyzed the history of the statutes in each state and the wide variation in the requirements and procedures (or lack thereof) used in determining intellectual disability.
Ceci, Scullin, and Kanaya (2003) argued that IQ tests are an inadequate and unreliable mechanism for determining intellectual disability, especially when it comes to serious issues such as death penalty eligibility (see also Gresham & Reschly, 2011; Kane, 2003; Salekin & Doane, 2009; Young, 2012). To illustrate, the researchers compared IQ scores obtained with different versions of IQ tests and found that the IQ score for one person can fluctuate by as much as 5 points, depending on the examination. In their sample, 38 percent of students with a score on the cusp of a designation of intellectual disability (just above 70) had a score below 70 on a retest, putting them in the category of intellectually disabled. The stability of IQ test results is questionable, yet they can be used to decide if a defendant in a capital case will live or die.

Ellis (2003) reviewed the Atkins v. Virginia (2002) decision and made detailed recommendations for how state legislatures should create adequate statutes, based on medical knowledge, for determining intellectual disability; factors addressed included specific definitions, burden of proof, and who should make the final determination. Similarly, Barker (2017) reviewed the decisions in Atkins v. Virginia (2002), Hall v. Florida (2014), and Moore v. Texas (2017) and concluded that a clear national consensus exists that intellectually disabled persons should be spared execution; however, there is little agreement on how to determine who falls into this category and who does not because of the Court’s lack of clarity and its insistence that state legislatures create their own standards. Barker argued that the Court’s lack of clarity has created a problem of under-inclusiveness in determinations of intellectual disability and death penalty eligibility (see also Cheung, 2013; Cooke, Delalot, & Werner, 2015; Olley, 2013).

Wood, Packman, Howell, and Bongar (2014) also analyzed how state statutes determine intellectual disability. They found significant differences in state laws and suggested that the United States implement a national gold standard for determining intellectual disability. Their study, however, was conducted before Hall v. Florida (2014), which was the first time the Supreme Court had criticized and struck down a state’s method of determining intellectual disability and instructed states to adhere more closely to the clinical definitions. Therefore, state legislatures could have altered their definitions and methods of determination on the basis of the decisions in Hall v. Florida (2014) and/or Moore v. Texas (2017). An updated analysis of state statutes would contribute to the knowledge and literature in this area, which is the rationale for the current study.

Current Study
This study examines state legislation to determine intellectual disability and death penalty eligibility after the Supreme Court’s admonition to states and new directives in Hall v. Florida (2014) and Moore v. Texas (2017). Do state statutes still vary widely? How closely are states adhering to clinical definitions? Our study examines these questions by looking at current statutes from all states that use the death penalty.

The goal of this updated study is to provide an important contribution to the literature by examining how closely the criminal justice system follows medical knowledge of and medical standards for determining intellectual disability. If the state definitions vary widely, it is possible for one state to execute a person who would be found ineligible for execution in another state on the basis of a different standard for determining intellectual disability, potentially violating Atkins v. Virginia (2002). The existence of such variations could indicate that executions of persons with a clinical definition of intellectual disability are still occurring in the United States.
Methods
This study reviews state laws to determine how definitions of intellectual disability vary in comparison with clinical definitions from one state to the next. Specifically, we used a content analysis to examine the statutes defining intellectual disability with regard to death penalty eligibility in each state. Content analysis is commonly applied in this context; it has been used frequently for examining differences in state statutes (e.g., Stearns, 2000; Boots, Bihari, & Elliott, 2009; McCann & Pimley, 2018).

Law databases (LexisNexis and Westlaw) were used to identify state statutes relevant to intellectual disability and the death penalty. To locate the most current version of each statute, each state’s legislative website (found with Google) was searched by using the terms “intellectual disability,” “intellectually disabled,” “death penalty,” “mental retardation,” and “IQ score.” Only states in which the death penalty is an approved form of punishment (as of September 1, 2018) were included. Therefore, the analysis includes 31 states, plus the federal government, yielding a total of 32 jurisdictions for examination. After the statutes had been assembled, they were examined to find similarities and differences among the states. The most common similarities and differences were grouped together into categories. Unique factors included in a statute were also documented.

Clinical Definitions
Even though the Supreme Court never gave specific orders for states to use only clinical definitions when defining intellectual disability, most states do include some form of clinical definitions in their standards. Therefore, it is important to review the main clinical standards regarding intellectual disability before exploring the state definitions. The following represent the intellectual definitions of the three major psychological and psychiatric associations in the United States.

1. American Association on Intellectual and Developmental Disabilities (AAIDD, 2018): “Intellectual disability is a disability characterized by significant limitations in both intellectual functioning and in adaptive behavior, which covers many everyday social and practical skills. This disability originates before the age of 18.”

2. American Psychiatric Association (APA-MD, 2013): “Significant subaverage intellectual functioning: an IQ of approximately 70 or below on an individually administered IQ test (criterion A); concurrent deficits or impairments in present adaptive functioning in at least two of the following areas: communication, self-care, home living, social/interpersonal skills, use of community resources, self-direction, functional academic skills, work, leisure, health, and safety (criterion B); and the onset is before age 18 years (criterion C).”

3. American Psychological Association (APA, 2010): “Mental retardation refers to (a) significant limitations in general intellectual functioning; (b) significant limitations in adaptive functioning, which exist concurrently; and (c) onset of intellectual and adaptive limitations before the age of 22 years.”
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State Statutes

Table 1 shows interesting variations among the states in the standards used to determine intellectual disability and death penalty eligibility. The most common differences pertain to (1) the specificity of the definitions themselves, (2) age at onset, (3) required proof of disability during the course of the crime, (4) required IQ score, (5) who chooses the expert evaluator, and (6) the burden-of-proof standard required to prove intellectual disability. As noted earlier, only 31 states and the federal government allow the death penalty in the United States. Accordingly, they are the only jurisdictions included in the table.

<table>
<thead>
<tr>
<th>State</th>
<th>Age at Onset of Disability</th>
<th>Must Prove Disability on Date Crime Occurred</th>
<th>IQ</th>
<th>Burden of Proof Required</th>
<th>Who Chooses Expert?</th>
<th>Statute’s Definition of Intellectual Disability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alabama</td>
<td>“During the developmental period”</td>
<td>Not specified</td>
<td>None specified, states “as measured by appropriate standardized testing instruments”</td>
<td>Not specified</td>
<td>Not specified</td>
<td>Significant subaverage general intellectual functioning resulting in or associated with concurrent impairments in adaptive behavior.</td>
</tr>
<tr>
<td>Arizona</td>
<td>Before age 18, Not specified</td>
<td>70 or below</td>
<td>Clear and convincing evidence</td>
<td>Trial court</td>
<td>A condition based on a mental deficit that has resulted in significantly subaverage general intellectual functioning existing concurrently with significant limitations in adaptive functioning.</td>
<td></td>
</tr>
<tr>
<td>Arkansas</td>
<td>“In the developmental period, but no later than age eighteen (18) years of age”</td>
<td>Yes</td>
<td>65 or below</td>
<td>Preponderance of the evidence</td>
<td>Not specified</td>
<td>Significantly subaverage general intellectual functioning accompanied by significant deficits or impairments in adaptive functioning.</td>
</tr>
<tr>
<td>State</td>
<td>Age at Onset of Disability</td>
<td>Must Prove Disability on Date Crime Occurred</td>
<td>IQ</td>
<td>Burden of Proof Required</td>
<td>Who Chooses Expert?</td>
<td>Statute’s Definition of Intellectual Disability</td>
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<tr>
<td><strong>California</strong></td>
<td><strong>Before age 18</strong></td>
<td>Not specified</td>
<td>None specified</td>
<td>Preponderance of the evidence</td>
<td>Not specified</td>
<td>Significantly subaverage general intellectual functioning existing concurrently with deficits in adaptive behavior.</td>
</tr>
<tr>
<td><strong>Colorado</strong></td>
<td>“Manifested and documented during the developmental period”; no specific age given</td>
<td>Not specified</td>
<td>None specified</td>
<td>Clear and convincing evidence</td>
<td>Not specified</td>
<td>Significantly subaverage general intellectual functioning existing concurrently with substantial deficits in adaptive behavior. The requirements for documentation may be excused by the court upon a finding that extraordinary circumstances exist. (The court does not define “extraordinary circumstances.”)</td>
</tr>
<tr>
<td><strong>Florida</strong></td>
<td>“Manifested during the period from conception to age 18”</td>
<td>Not specified</td>
<td>“Two or more standard deviations from the mean score on a standardized intelligence test”</td>
<td>Clear and convincing evidence</td>
<td>Trial court</td>
<td>Significantly subaverage general intellectual functioning resulting in or associated with impairments in adaptive behavior.</td>
</tr>
<tr>
<td><strong>Georgia</strong></td>
<td>“Manifested during the developmental period”; no specific age given</td>
<td>Not specified</td>
<td>None specified</td>
<td>Beyond a reasonable doubt</td>
<td>Court-appointed, or chosen and paid by defense</td>
<td>Significantly subaverage general intellectual functioning existing concurrently with deficits in adaptive behavior.</td>
</tr>
<tr>
<td>State</td>
<td>Age at Onset of Disability</td>
<td>Must Prove Disability on Date Crime Occurred</td>
<td>IQ</td>
<td>Burden of Proof Required</td>
<td>Who Chooses Expert?</td>
<td>Statute's Definition of Intellectual Disability</td>
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<td>Idaho</td>
<td>Before age 18</td>
<td>Not specified</td>
<td>70 or below</td>
<td>Preponderance of the evidence</td>
<td>Court</td>
<td>Significantly subaverage general intellectual functioning that is accompanied by significant limitations in adaptive functioning in at least two (2) of the following skill areas: communication, self-care, home living, social or interpersonal skills, use of community resources, self-direction, functional academic skills, work, leisure, health and safety.</td>
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<tr>
<td>Idaho Code § 19-2515A (2017)</td>
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<tr>
<td>Indiana</td>
<td>Before age 22</td>
<td>Not specified</td>
<td>None specified</td>
<td>Clear and convincing evidence</td>
<td>Not specified</td>
<td>Significantly subaverage general intellectual functioning; and substantial impairment of adaptive behavior.</td>
</tr>
<tr>
<td>Kansas</td>
<td>Before age 18</td>
<td>Not specified</td>
<td>“Two or more standard deviations from the mean score on a standardized intelligence test”</td>
<td>Not specified</td>
<td>Not specified</td>
<td>Significantly subaverage general intellectual functioning existing concurrently with deficits in adaptive behavior.</td>
</tr>
<tr>
<td>Kentucky</td>
<td>“Manifested during the developmental period”</td>
<td>Not specified</td>
<td>70 or below</td>
<td>Preponderance of the evidence</td>
<td>Not specified</td>
<td>Significant subaverage intellectual functioning existing concurrently with substantial deficits in adaptive behavior.</td>
</tr>
<tr>
<td>State</td>
<td>Age at Onset of Disability</td>
<td>Must Prove Disability on Date Crime Occurred</td>
<td>IQ</td>
<td>Burden of Proof Required</td>
<td>Who Chooses Expert?</td>
<td>Statute’s Definition of Intellectual Disability</td>
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<tr>
<td>Louisiana</td>
<td>“The onset of which must occur during the developmental period”</td>
<td>Not specified</td>
<td>None specified</td>
<td>Preponderance of the evidence</td>
<td>Not specified</td>
<td>Deficits in intellectual functions such as reasoning, problem solving, planning, abstract thinking, judgment, academic learning, and learning from experience, confirmed by both clinical assessment and individualized, standardized intelligence testing. (b) Deficits in adaptive functioning that result in failure to meet developmental and sociocultural standards for personal independence and social responsibility; and that, without ongoing support, limit functioning in one or more activities of daily life including, without limitation, communication, social participation, and independent living, across multiple environments such as home, school, work, and community.</td>
</tr>
<tr>
<td>State</td>
<td>Age at Onset of Disability</td>
<td>Must Prove Disability on Date Crime Occurred</td>
<td>IQ</td>
<td>Burden of Proof Required</td>
<td>Who Chooses Expert?</td>
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<tr>
<td>Mississippi</td>
<td>Before age 18</td>
<td>Not specified</td>
<td>None specified</td>
<td>Preponderance of the evidence</td>
<td>Not specified</td>
<td>Significantly subaverage intellectual functioning, existing concurrently with related limitations in two (2) or more of the following applicable adaptive skill areas: communication, self-care, home living, social skills, community use, self-direction, health and safety, functional academics, leisure and work, and (ii) whose recent conduct is a result of having an intellectual disability and poses a substantial likelihood of physical harm to himself or others in that there has been (A) a recent attempt or threat to physically harm himself or others, or (B) a failure and inability to provide necessary food, clothing, shelter, safety, or medical care for himself.</td>
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<tr>
<td>State</td>
<td>Age at Onset of Disability</td>
<td>Must Prove Disability on Date Crime Occurred</td>
<td>IQ</td>
<td>Burden of Proof Required</td>
<td>Who Chooses Expert?</td>
<td>Statute’s Definition of Intellectual Disability</td>
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<tr>
<td>Missouri</td>
<td>“Manifested and documented before age 18”</td>
<td>Not specified</td>
<td>None specified</td>
<td>Preponderance of the evidence</td>
<td>Not specified</td>
<td>Substantial limitations in general functioning characterized by significantly subaverage intellectual functioning with continual extensive related deficits and limitations in two or more adaptive behaviors such as communication, self-care, home living, social skills, community use, self-direction, health and safety, functional academics, leisure and work.</td>
</tr>
<tr>
<td>Montana</td>
<td>Before age 18</td>
<td>Not specified</td>
<td>None specified</td>
<td>Not specified</td>
<td>Not specified</td>
<td>Disabilities attributable to intellectual disability, cerebral palsy, epilepsy, autism, or any other neurologically disabling condition closely related to intellectual disability and requiring treatment similar to that required by intellectually disabled individuals if the disability originated before the person attained age 18, has continued or can be expected to continue indefinitely, and results in the person having a substantial disability.</td>
</tr>
<tr>
<td>State</td>
<td>Age at Onset of Disability</td>
<td>Must Prove Disability on Date Crime Occurred</td>
<td>IQ</td>
<td>Burden of Proof Required</td>
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<tr>
<td>Nebraska</td>
<td>None specified</td>
<td>Not specified</td>
<td>70 or below</td>
<td>Preponderance of the evidence</td>
<td>Not specified</td>
<td>Significantly subaverage general intellectual functioning existing concurrently with deficits in adaptive behavior.</td>
</tr>
<tr>
<td>Nevada</td>
<td>“Manifested during the developmental period”</td>
<td>Not specified</td>
<td>None specified</td>
<td>Preponderance of the evidence</td>
<td>Prosecution</td>
<td>Significant subaverage general intellectual functioning which exists concurrently with deficits in adaptive behavior.</td>
</tr>
<tr>
<td>New Hampshire</td>
<td>During the developmental period</td>
<td>Not specified</td>
<td>None specified</td>
<td>Not specified</td>
<td>Not specified</td>
<td>Significantly subaverage general intellectual functioning existing concurrently with deficits in adaptive behavior.</td>
</tr>
<tr>
<td>North Carolina</td>
<td>Must provide evidence of manifestation before age 18</td>
<td>Not specified</td>
<td>70 or below</td>
<td>Clear and convincing evidence (pretrial) Preponderance of the evidence (sentencing)</td>
<td>Not specified</td>
<td>Significantly subaverage general intellectual functioning, existing concurrently with significant limitations in adaptive functioning (defined as having significant limitations in two or more of the following adaptive skill areas: communication, self-care, home living, social skills, community use, self-direction, health and safety, functional academics, leisure skills and work skills).</td>
</tr>
<tr>
<td>State</td>
<td>Age at Onset of Disability</td>
<td>Must Prove Disability on Date Crime Occurred</td>
<td>IQ</td>
<td>Burden of Proof Required</td>
<td>Who Chooses Expert?</td>
<td>Statute’s Definition of Intellectual Disability</td>
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<tr>
<td>Ohio</td>
<td>Ohio Rev. Code § 5123.01 (2017)</td>
<td>Manifested during the developmental period</td>
<td>Not specified</td>
<td>Not specified</td>
<td>Not specified</td>
<td>Significantly subaverage general intellectual functioning existing concurrently with deficiencies in adaptive behavior.</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>Okla. Stat. tit. 21, § 701.10b (2017)</td>
<td>Evidence of manifestation before age 18</td>
<td>Not specified</td>
<td>70 or below</td>
<td>Clear and convincing evidence (pretrial) Preponderance of the evidence (sentencing)</td>
<td>Not specified</td>
</tr>
<tr>
<td>Oregon</td>
<td>Or. Rev. Stat. § 427.005 (2017)</td>
<td>Before age 18</td>
<td>Yes</td>
<td>70 or below</td>
<td>Clear and convincing evidence (pretrial) Preponderance of the evidence (post-trial)</td>
<td>Not specified</td>
</tr>
<tr>
<td>State</td>
<td>Age at Onset of Disability</td>
<td>Must Prove Disability on Date Crime Occurred</td>
<td>IQ</td>
<td>Burden of Proof Required</td>
<td>Who Chooses Expert?</td>
<td>Statute’s Definition of Intellectual Disability</td>
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<tr>
<td>Pennsylvania</td>
<td>Before age 22</td>
<td>Yes</td>
<td>None specified</td>
<td>Preponderance of the evidence</td>
<td>Not specified</td>
<td>Significantly subaverage general intellectual functioning that is accompanied by significant limitations in adaptive functioning in at least two of the following skill areas: communication, self-care, home living, social and interpersonal skills, use of community resources, self-direction, functional academic skills, work, health and safety.</td>
</tr>
<tr>
<td>South Carolina</td>
<td>Manifested during the developmental period</td>
<td>Yes</td>
<td>None specified</td>
<td>Beyond a reasonable doubt</td>
<td>Trial court</td>
<td>Significantly subaverage general intellectual functioning existing concurrently with deficits in adaptive behavior.</td>
</tr>
<tr>
<td>South Dakota</td>
<td>Manifested and documented before age 18</td>
<td>Yes</td>
<td>70 or below</td>
<td>Preponderance of the evidence</td>
<td>Designated by state attorney</td>
<td>Significant subaverage general intellectual functioning existing concurrently with substantial related deficits in applicable adaptive skill areas.</td>
</tr>
<tr>
<td>Tennessee</td>
<td>“Manifested during the developmental period or by age 18”</td>
<td>Yes</td>
<td>70 or below</td>
<td>Preponderance of the evidence</td>
<td>Not specified</td>
<td>Significantly subaverage general intellectual functioning as evidenced by a functional IQ of 70 or below; deficits in adaptive behavior.</td>
</tr>
<tr>
<td>State</td>
<td>Age at Onset of Disability</td>
<td>Must Prove Disability on Date Crime Occurred</td>
<td>IQ</td>
<td>Burden of Proof Required</td>
<td>Who Chooses Expert?</td>
<td>Statute's Definition of Intellectual Disability</td>
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<tr>
<td><strong>Texas</strong></td>
<td>Before age 18</td>
<td>Not specified</td>
<td>70 or below</td>
<td>Preponderance of the evidence</td>
<td>Not specified</td>
<td>Significant subaverage general intellectual functioning existing concurrently with substantial related deficits in applicable adaptive skill areas. Plus answers to seven questions.</td>
</tr>
<tr>
<td><strong>Utah</strong></td>
<td>Before age 22</td>
<td>Not specified</td>
<td>None specified</td>
<td>Preponderance of the evidence</td>
<td>Department of Human Services must appoint at least two mental health experts to examine defendant and report to the court</td>
<td>Significant subaverage general intellectual functioning that results in and exists concurrently with significant deficiencies in adaptive functioning that exist primarily in the areas of reasoning or impulse control, or in both of these areas; and the subaverage general intellectual functioning and the significant deficiencies in adaptive functioning are both manifested prior to age 22.</td>
</tr>
<tr>
<td>Utah Code § 77-15a-102 (2017)</td>
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<tr>
<td>State</td>
<td>Age at Onset of Disability</td>
<td>Must Prove Disability on Date Crime Occurred</td>
<td>IQ</td>
<td>Burden of Proof Required</td>
<td>Who Chooses Expert?</td>
<td>Statute’s Definition of Intellectual Disability</td>
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<tr>
<td>Virginia</td>
<td>Before age 18</td>
<td>Not specified</td>
<td>At least two standard deviations below the mean</td>
<td>Preponderance of the evidence</td>
<td>Court chooses. Law specifically states defendant cannot provide an examiner.</td>
<td>(i) Significantly subaverage intellectual functioning as demonstrated by performance on a standardized measure of intellectual functioning administered in conformity with accepted professional practice, that is at least two standard deviations below the mean and (ii) significant limitations in adaptive behavior as expressed in conceptual, social and practical adaptive skills.</td>
</tr>
<tr>
<td>Virginia Va. Code § 19.2-264.3:1.1 (2017)</td>
<td>Manifested during the developmental period, defined as “the period of time between conception and the eighteenth birthday”</td>
<td>Not specified</td>
<td>70 or lower</td>
<td>Preponderance of the evidence</td>
<td>Trial court</td>
<td>The individual has (i) significantly subaverage general intellectual functioning; (ii) existing concurrently with deficits in adaptive behavior, which means the effectiveness or degree with which individuals meet the standards of personal independence and social responsibility expected for his or her age.</td>
</tr>
</tbody>
</table>
State | Age at Onset of Disability | Must Prove Disability on Date Crime Occurred | IQ | Burden of Proof Required | Who Chooses Expert? | Statute’s Definition of Intellectual Disability
---|---|---|---|---|---|---
**Wyoming**  
Wyo. Stat. § 6-2-102 (2017) | Must be documented before age 18 | Not specified | 70 or below | Not specified | Not specified | Significant subaverage general intellectual functioning existing concurrently with substantial related deficits in applicable adaptive skill areas.

**U.S. Government**  
18 U.S. Code § 3596 (2017) | None specified | Not specified | None specified | Not specified | Not specified | The statute states that a sentence of death shall not be carried out upon a person who has mental retardation. The statute does not define mental retardation, or discuss at what stage in the criminal proceedings the determination of mental retardation must be made.

**Definitions.** The initial definitions of intellectual disability in the state statutes are similar and seem to follow the clinical definitions closely, for the most part. The APA, APA-MD, and AAIDD all use similar language and criteria to define intellectual disability: (1) significant subaverage general intellectual functioning existing concurrently with (2) substantial deficits in adaptive functioning. Most state statutes require both of these criteria to be met if a defendant is to be deemed intellectually disabled. As Table 1 shows, most states include language very similar to that of the clinical definitions (30 of the 32 jurisdictions). As an exception, the federal government does not specifically define intellectual disability, simply stating that “a sentence of death shall not be carried out upon a person who has mental retardation,” with no further clarifications. Montana (Mont. Code Ann. § 53-20-202) also differs from the other states, with a unique definition (discussed further below).

Most state statutes define the “intellectual functioning” criterion as a below-average IQ score (with variation discussed below); however, some states do not go any further to define what this means or how it is measured. Colorado has a unique addition in its statute, stating that the requirement for documentation to prove “significantly subaverage general intellectual functioning” may be waived by the court “upon a finding that extraordinary circumstances exist”; however, “extraordinary circumstances” is not defined (Colo. Rev. Stat. § 18-1.3-1402). Louisiana
also has a unique definition for intellectual functioning, stating that it refers to “reasoning, problem solving, planning, abstract thinking, judgment, academic learning, and learning from experience, confirmed by both clinical assessment and individualized, standardized intelligence testing” (La. Code Crim. Proc. art. 905.5.1). Alabama simply states that intellectual disability is determined by using “appropriate standardized testing instruments,” but does not specify further (Ala. Code § 15-24-2).

The second criterion, regarding “adaptive functioning,” also gets little further definition or explanation in most states; however, a few states do provide further clarification. Virginia states that limited adaptive behavior is “expressed in conceptual, social and practical adaptive skills” (Va. Code § 19.2-264.3:1.1). Louisiana states that it consists of “deficits in adaptive functioning that result in failure to meet developmental and sociocultural standards for personal independence and social responsibility; and that, without ongoing support, limit functioning in one or more activities of daily living including, without limitation, communication, social participation, and independent living, across multiple environments such as home, school, work, and community” (La. Code Crim. Proc. art. 905.5.1).

Utah defines “significant deficiencies in adaptive functioning” as “exist[ing] primarily in the areas of reasoning or impulse control, or in both of these areas” (Utah Code § 77–15a–102). The Oregon and Washington laws state that “adaptive functioning” means “the effectiveness or degree with which individuals meet the standards of personal independence and social responsibility expected for his or her age” (Or. Rev. Stat. § 427.005; Wash. Rev. Code § 10.95.030). Mississippi, Missouri, North Carolina, Idaho, Oklahoma, Pennsylvania, South Carolina, and South Dakota all state that deficits or impairments in present adaptive functioning must be present in at least two of the following areas: communication, self-care, home living, social/interpersonal skills, use of community resources, self-direction, functional academic skills, work, leisure, health, and safety (Miss. Code § 41-21-61; Mo. Rev. Stat. § 565.030; N.C. Gen. Stat. § 15A-2005; Idaho Code § 19-2515A; Okla. Stat. tit. 21, § 701.10b; Pa. C.S. § 50:4102; S.C. Code § 16-3-20; S.D. Codified Laws § 23A-27A-26.2). All other jurisdictions (17 states) give no further definition for deficiencies in adaptive functioning.

Other than the federal government, Montana is the only jurisdiction that includes basic definitions that stray from the commonly used clinical definitions. Montana defines developmental disabilities as “attributable to intellectual disability, cerebral palsy, epilepsy, autism, or any other neurologically disabling condition closely related to intellectual disability and requiring treatment similar to that required by intellectually disabled individuals ... if the disability has continued or can be expected to continue indefinitely, and results in the person having a substantial disability” (Mont. Code Ann. § 53-20-202). “Substantial disability” is not further defined.

**Age at onset.** Many states (18) specifically include in their statutes that evidence of intellectual disability must have occurred before the age of 18 years for the defendant to be classified as ineligible for the death penalty. In contrast, Indiana, Pennsylvania, and Utah use a later age at onset: 22 years old (Ind. Code § 35-36-9-2; Pa. C.S. § 50:4102; Utah Code § 77–15a–102). Therefore, in these three states any evidence of intellectual disability occurring between the ages of 18 and 22 is applicable, whereas it is not applicable in the other 18 states. Alabama, Colorado, Georgia, Kentucky, Louisiana, Missouri, Nevada, Ohio, and South Carolina do not give a specific
age; instead, they say that the intellectual disability must have “manifested during the developmental period,” but no definition of “developmental period” is provided ( Ala. Code § 15-24-2; Colo. Rev. Stat. § 18-1.3-1402; Ga. Code § 17-7-131; Ky. Rev. Stat. § 532.130; La. Code Crim. Proc. art. 905.5.1; Mo. Rev. Stat. § 565.030; Nev. Rev. Stat. § 174.098; Ohio Rev. Code § 5123.01; S.C. Code §16-3-20). Louisiana has similar but slightly different language: “the onset of which must occur during the developmental period” ( La. Code Crim. Proc. art. 905.5.1). Florida and Washington include interesting language that the intellectual disability must have “manifested during the period from conception to age 18” (Florida) and “between conception and the eighteenth birthday” (Washington); no other states mention conception in their statutes (Fla. Stat. § 921.137; Wash. Rev. Code § 10.95.030).

Tennessee has a slight variation that the intellectual disability must have “manifested during the developmental period or by age 18,” hinting that the developmental period may not include the later teenage years (Tenn. Code § 39-13-203). Wyoming, South Dakota, Missouri, North Carolina, Oklahoma, and Colorado specifically say that the disability must have been “documented” during the developmental period or before age 18 (Wyo. Stat. § 6-2-102; S.D. Codified Laws § 23A-27A-26.2; Mo. Rev. Stat. § 565.030; N.C. Gen. Stat. § 15A–2005; Okla. Stat. tit. 21, § 701.10b; Colo. Rev. Stat. §18-1.3-1402). However, as mentioned previously, Colorado says the documentation requirement can be waived for “extraordinary circumstances.” No other state mentions the requirement of documentation during a specific time of the defendant’s life. Nebraska and the federal government are the only two jurisdictions without official age or lifetime period requirements (Neb. Rev. Stat. § 28-105.01; 18 U.S. Code § 3596).

During Course of the Crime. Most states do not specifically say the intellectual disability must be proven to have existed at the time of the crime; however, according to state statutes, Arkansas, Oregon, Pennsylvania, South Carolina, South Dakota, and Tennessee defendants must prove that the intellectual disability existed at the time the crime in question occurred if they are to be ineligible for the death penalty (Ark. Code Ann. § 5-4-618; Or. Rev. Stat. § 427.005; Pa. C.S. § 50:4102 S.C. Code § 16-3-20; S.D. Codified Laws § 23A-27A-26.3; Tenn. Code § 39-13-203). The other 26 jurisdictions do not have that requirement.

IQ scores. Most states determine “significant subaverage intellectual functioning” by administering an IQ test. However, according to state statutes, the qualifying scores differ by state. Twelve states define an IQ score of “70 or below” as evidence of limited intellectual functioning. Sixteen jurisdictions (including the federal government) do not indicate a specific IQ score in their statutes. Virginia, Florida, and Kansas have unique language indicating that the score must be “at least two standard deviations below the mean,” (Va. Code § 19.2-264.3:1.1) or “two or more standard deviations from the mean score” (Fla. Stat. § 921.137; Kan. Stat. § 76-12b01), but no specific number is given. Arkansas has a more stringent standard to prove intellectual disability, in that the IQ score must be 65 or below (Ark. Code Ann. § 5-4-618). Arkansas is the only state with this specific requirement. South Dakota includes very specific language stating that if an IQ score is above 70, that alone is evidence that no intellectual disability exists and nothing else is relevant (S.D. Codified Laws § 23A-27A-26.2), whereas Alabama states simply that intellectual disability is “measured by appropriate standardized
testing instruments” but does not provide more details or even mention IQ testing ( Ala. Code § 15-24-2).

**Expert Evaluator Choice.** Eight states specifically include in their statutes that the expert evaluating a defendant’s intellectual disability can be appointed only by the government, in the form of the trial court (Arizona, Florida, Idaho, South Carolina, Virginia, and Washington) or the prosecution (Nevada and South Dakota) (Ariz. Rev. Stat. § 13-753; Fla. Stat. § 921.137; Idaho Code § 19–2515A; S.C. Code § 16-3-20; Va. Code § 19.2-264.3:1.1; Wash. Rev. Code § 10.95.030; Nev. Rev. Stat § 174.098; S.D. Codified Laws § 23A-27A-26.2). Utah law requires that the state’s “Department of Human Services must appoint at least two mental health experts to examine defendant and report to the court” (Utah Code § 77-15a-102). In Georgia, the expert evaluation can be “court-appointed or defense can pay for the experts they choose” (Ga. Code § 17-7-131). In Idaho, the “court is authorized to appoint at least one (1) expert at public expense upon a showing by an indigent defendant that there is a need to inquire into questions of the defendant’s mental retardation. The defendant shall pay the costs of examination if he is financially able” (Idaho Code §19–2515A). In all other jurisdictions (20 states and the federal government), the statutes do not specifically say whether the defense can choose the evaluator or whether the government has the right to choose who performs the expert evaluation to determine intellectual disability.

**Burden of Proof Required.** The burden of proof required can also significantly influence any determination of a defendant’s intellectual disability during a consideration of death penalty eligibility under Atkins v. Virginia (2002). As Table 1 shows, the standards regarding burden of proof also vary by state. Sixteen states use the standard of preponderance of the evidence, which means a judge or jury must find, according to the evidence, that it is more likely than not that a defendant meets the state requirements for a determination of intellectual disability and therefore is ineligible for the death penalty. Four states (Arizona, Colorado, Florida, and Indiana) use the much higher standard of “clear and convincing evidence,” which means the defendant must present evidence that leaves the judge or jury with “a firm belief or conviction that it is highly probable that the factual contentions of the claim or defense are true” (Ariz. Rev. Stat. § 13-753; Colo. Rev. Stat. § 18-1.3-1402; Fla. Stat. § 921.137; Ind. Code § 35-36-9-2; Colorado v. New Mexico, 1984).

Georgia and South Carolina are the only states with the highest standard possible to determine intellectual disability—beyond a reasonable doubt (Ga. Code § 17-7-131; S.C. Code §16-3-20). This means the defense must present evidence that leaves little to no reasonable doubt in a judge or juror’s mind that the defendant meets the state’s requirements for a determination of intellectual disability. If the defense does not meet the highest possible standard, the defendant is eligible for the death penalty. Georgia refers to its intellectual disability statute as the “guilty but mentally retarded” (GBMR) statute. In one analysis, it was noted that during more than 30 years following the enactment of this statute, no Georgia defendant facing the death penalty was ever found intellectually disabled, and this high standard for burden of proof was identified as the cause (Lucas, 2017). An example of a defendant who was adversely affected by Georgia’s standard of proof was Warren Hill. He was executed by the state of Georgia in 2015 despite experts’ claims that he was intellectually disabled. The state
judge said that Hill would meet the standard of preponderance of the evidence used in most states, but because he had a job, he did not meet the standard of “beyond a reasonable doubt,” which is the standard judges in Georgia must use according to that state’s laws (Lucas, 2017).


Discussion and Conclusion

Even though the Supreme Court continues to give states the discretion to craft their own intellectual disability laws regarding death penalty eligibility, in Atkins the Court emphasized “consistency in the direction of change” (Atkins v. Virginia, 2002, p. 327). Accordingly, we examined the current status of state statutes for determining intellectual disability and death penalty eligibility. The key finding is that little consistency exists. Key differences are noted across states, usually regarding age at onset, burden of proof required, IQ score standard, who chooses the evaluator, and whether intellectual disability during the course of the crime must be specifically proven.

Important policy implications are connected to our findings. Although most states do include language from clinical definitions in their statutes, wide variations make it likely that one person could be found intellectually disabled in one state but not in another state, creating potential violations of Atkins v. Virginia (2002) and the Eighth Amendment. Imprecise and unclear definitions of intellectual disability by states can literally have life-or-death consequences. For example, in Texas, Robert Sparks was convicted of murdering family members because he heard voices that told him those family members were planning to kill him. Evidence was presented showing that Sparks suffered from severe mental illness: diagnoses of delusional psychosis and schizoaffective disorder, which includes hallucinations. A psychologist testified that Sparks “meets the full criteria for a diagnosis” of intellectual disability. However, because the state definition differed from clinical definitions, Sparks was not deemed intellectually disabled by a court and was executed on September 29, 2019 (McCullough, 2019).

States should rely on the clinical community to craft proper and precise definitions for determining intellectual disability in death penalty cases (Cheung, 2013; French, 2005). Ideally, states should more uniformly define intellectual disability and how to determine such in the criminal justice system if they are to lessen the likelihood of executions of intellectually disabled persons. Future research should follow this evolution of state statutes and intellectual disability determination in the criminal justice system.
Cases and Statutes


References


Corresponding Author:
Jennifer LaPrade, MA
Department of Criminology & Criminal Justice
School of Economic, Political & Policy Sciences
The University of Texas at Dallas
800 W. Campbell Road, GR2.510
Richardson, TX 75080
Email: jennifer.laprade@utdallas.edu

Jennifer LaPrade is a doctoral candidate in the Department of Criminology & Criminal Justice at the University of Texas at Dallas. She holds a master’s degree in political science, with an emphasis on constitutional law, and a bachelor’s degree in political science, both from the University of Texas at Dallas. Her research interests include courts, policing, and cybercrime.

Dr. John L. Worrall, PhD, is a professor of criminology & criminal justice at the University of Texas at Dallas. He has published articles and book chapters on a variety of topics ranging from legal issues in policing to crime measurement. He is also the author of several books, including the popular Crime Control in America: What Works? He currently serves as editor of the journal
Police Quarterly and as executive director of the Academy of Criminal Justice Sciences. He received his doctoral degree from Washington State University.
The Life-Course of Juvenile Lifers: Understanding Maturation and Development as Miller and Its Progeny Guide Juvenile Life Sentence Release Decisions

Robert Johnson¹
Margaret E. Leigey²

Abstract
The U.S. Supreme Court anticipated that most juveniles sentenced to life-without-parole prison terms might well “mature and develop” over the course of their lives in confinement. As a result, the Court maintained that they should be given the opportunity to demonstrate their changed characters and earn a chance at release from prison. In this article, we rely on the research on life sentence prisoner adjustment, together with our experience as experts in juvenile life-without-parole re-sentencing cases. We trace the maturation and development of juveniles sentenced to life terms, a multifaceted process that ultimately leads most juveniles sentenced to life to become solid citizens of the prison community who desist from misconduct, secure regular employment, participate in programs, and develop prosocial identities and reference groups that make them good candidates for release in due course. A caveat is that maturation in prison often entails a self-defensive hardening of emotions that will need to be addressed in reentry programs.

Keywords
Juvenile life without parole; life course theory; maturation and development; reentry

Introduction
When discussing juvenile life-without-parole (LWOP) sentences, the U.S. Supreme Court in Miller v. Alabama (2012) and related decisions anticipated that juveniles sentenced to life prison terms might well “mature and develop” over the course of their lives in confinement. The exceptions—the depraved, those beyond reform—would remain unregenerate and therefore deserving of permanent imprisonment. But nearly all juveniles, the Court presumed, could and

¹ Department of Justice, Law and Criminology, American University, Washington, DC
² Department of Criminology, The College of New Jersey, Ewing, New Jersey
might well change. These persons should be given the opportunity to demonstrate their changed characters and earn a chance at release from prison.

Maturation and development, when they occur, indicate that an individual today is not the person he or she was at the time of the crime. Juveniles who have matured and developed over the course of their lives in prison can say, with noted scholar Hans Toch (2010, p. 4), “I am not now who I used to be then.” They become adults in both chronological and emotional terms and are no longer the impulsive adolescents whose rash behavior landed them behind bars for life. Maturation and development are central to U.S. Supreme Court juvenile LWOP decisions and are also primary themes in age-graded life course theory as it relates to desistance (Laub & Sampson, 2003; Sampson & Laub, 1993; for a recent literature review, see Weaver, 2019). This study bridges these bodies of criminological scholarship and judicial opinions to understand more deeply how these processes occur for juveniles sentenced to life terms, who will die in prison unless they are offered a revised sentence that allows them to demonstrate change and thereby earn a second chance at life.

**Miller v. Alabama and Its Progeny**

Before the 1980s, juveniles rarely received sentences of LWOP, sometimes called death by incarceration (Human Rights Watch and Amnesty International, 2005; Johnson & McGunigall-Smith, 2008). The rise in juvenile LWOP sentences corresponded to the overall “tough on crime” movement that permeated U.S. criminal justice policies beginning in the 1970s and continuing into the 21st century, which contributed to the overall increase in the number of individuals serving LWOP sentences (53,290 at last count; see Cullen & Jonson, 2017; Nellis, 2017). The expansion of juvenile LWOP sentencing was particularly pronounced from 1992 to 1999, during the height of the juvenile super-predator hysteria (Mills, Dorn, & Hritz, 2016).

The central holding in Miller v. Alabama (2012) is that juveniles cannot be sentenced to terms of LWOP on a mandatory basis. The Court reasoned that if judges were to impose mandatory life sentences, they would be failing to consider factors that distinguish juvenile offenders from adults, namely (p. 8):

> Children have a “lack of maturity and an underdeveloped sense of responsibility,” leading to recklessness, impulsivity, and heedless risk-taking. Second, 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. And third, a child’s character is not as “well formed” as an adult’s; his traits are “less fixed” and his actions less likely to be “evidence of irretrievable depravity.”

While some states determined that this holding applied to juveniles who were already serving mandatory terms of LWOP, other states rejected that argument. In Montgomery v. Louisiana (2016), the U.S. Supreme Court clarified that Miller v. Alabama (2012) did in fact apply retroactively. Juveniles sentenced to life on a mandatory basis—the vast bulk of the population at the time of Miller—must be given the opportunity to establish that they have matured and developed (Nellis, 2017). As articulated in Miller and Montgomery, juvenile LWOP arbitrarily
presumes that juveniles are beyond reform and redemption; as a remedy, individual assessments must be made of each person’s capacity to mature and develop over the course of his or her life before a sentence is passed. Across the country, parole boards and courts are now in the process of assessing the maturation and development of roughly 2,000 cases of juveniles sentenced to life terms on a mandatory basis. In these hearings, the deciding body must consider mitigating factors that, had they been examined at sentencing, would likely have reduced the culpability of juvenile defendants for the original crime. These factors include immaturity, susceptibility to negative influence, and the potential for rehabilitation. Central to our analysis, deciding bodies are enjoined to consider prison behavior that suggests maturation and development.

The presumptions underlying the Court’s ruling in Miller (ϮϬϭϮ) and Montgomery (ϮϬϭϲ) are borne out by research on maturation in prison (Crewe, Hulley, & Wright, 2020; Johnson, Rocheleau, & Martin, 2017; Maruna, 2001). As a general rule, prisoners cope better and mature over time: “with time and experience, there is a tendency among inmates to adopt coping strategies that contain the seeds of ‘mature coping’” (Leban, Cardwell, Copes, & Brezina, 2016, p. 957; see generally, Zamble 1990, 1992). Improved coping over time is especially evident among life-sentence prisoners, colloquially known as lifers (Crewe et al., 2020; Johnson & Dobrzanska, 2005; Leigey, 2015); improved coping over time is a general finding in the body of work that comprises life-course criminology (Sullivan, Piquero, & Cullen, 2012). In this article, we will examine the maturation and development of juvenile lifers as an example of the general life-course adjustment of life-sentence prisoners.

A central premise of life-course theory is that “informal social bonds in adulthood … explain changes in criminality over the life span” (Sampson & Laub, 1993, p. 7). At first glance, the theory might seem a poor fit to apply to life-sentence inmates. Often, life-course research focuses on pre- or post-punishment experiences; it rarely focuses on changes that occur while punishment is ongoing. Additionally, as Sampson (2016) notes, the traditional turning points that are associated with life-course criminology are not always or obviously applicable to released lifers (e.g., marriage, family, and employment), and these turning points may be even more cumbersome to apply to confined lifers as the informal social control exerted from these traditional sources of social control are more removed (i.e., prisoners are separated from their loved ones) or modified (i.e., employment opportunities in prison are limited). However, most lifers attempt to develop a meaningful and law-abiding life behind bars—as seen in a body of actuarial and statistical studies on prison rule infractions among life-sentence prisoners (Sorensen & Marquart, 2003; Sorensen & Wrinkle, 1998)—although the barriers they face are substantial and the resources at their disposal are meager. In our experience as experts in juvenile LWOP resentencing hearings, we see a growing commitment to work and programs as law-abiding careers evolve among lifers. As we shall suggest, available evidence allows us to apply life-course theory to confined lifers in ways that offer insight into rehabilitation, and, for some, redemption.

A key feature of maturation in prison is the ability to live a law-abiding and productive life, which as a practical matter, amounts to a low rate of infractions, a high rate of activity in prosocial activities and programs, and the acquisition of varying degrees of self-efficacy or autonomy so that one can deal directly and effectively with problems in daily living (see Johnson, 1987, 1996, 2002; Johnson et al., 2017). Lifers often start their confinement in a state of turmoil marked by high rates of rule violations, low rates of program involvement, and overriding impulsivity and anger that result in frequent rule violations, some violent, and occasional stints in solitary confinement (see
Over time, lifers adjust, settling in and settling down, all the while growing in the process. In this essay, then, we describe what might be called the desistance process for life-sentence inmates. For many, this process reflects a profound metamorphosis in key areas of desistance: cognition, behavior, and ultimately identity (Nugent & Schinkel, 2016; see generally, Weaver, 2019).

In the Deep

The initial phase of confinement, whether it be in jail awaiting case outcome or upon prison admission, is a stressful time for most inmates, and especially for lifers, who are entering a new world from which there is no obvious escape. Wright, Crewe, and Hulley (2017, p. 226) offer a moving account of the “entry shock, temporal vertigo and intrusive recollections [emphasis in original]” that are common at intake. At the start of his life sentence, one individual described the difficulty in accepting his present situation (Crewe et al., 2020, p. 81): “I felt that the whole experience wasn’t real - like it was still a dream. ... I’m just sitting in this cell, and I’m looking at these walls, and it’s just not registering. Shock. Meltdown.” Shock gives way to a panoply of stresses that encompass “almost all of the problems of long-term imprisonment” with great severity at the outset of the sentence. “In particular, early-stage [life-sentence] prisoners struggled to absorb the fact that the futures that they had anticipated had, in effect, been cancelled” (Crewe et al., 2020, p. 90). And, indeed, significant others moved on with their lives. As one prisoner told Crewe et al. (2020, p. 93), “When you have a longer sentence, people do forget about you,” leaving prisoners alone to deal with “their initial sense of shock, numbness and dissociation,” which soon give way to “an avalanche of affective reactions, among which ‘anger’ was primary” (Crewe et al., 2020, p. 94).

In our experience, reinforced in the seminal research reported in Crewe et al. (2020), anger undergirds the early periods of imprisonment marked by rule violations and other disruptive behavior (e.g., drug and alcohol abuse), as well as the widespread suicidal ideation and social withdrawal found among juveniles serving life prison terms. Crewe et al. (2020, p. 110) see this as a “general sense of nihilism among many early-stage prisoners,” reflected in such declarations as “not giving a shit” or having “nothing to live for at all.” These relatively common early oppositional adjustments may explain why some young lifers build an impressive record of rule violations, which, in our experience, they later contemplate with something approaching shame once they have established more stable and constructive adaptations that allow them to make the most of the grim situation in which they find themselves.

The pressures associated with the early stages of confinement are especially magnified for juvenile lifers because of their age and corresponding developmental stage. These susceptibilities are compounded by the pressures experienced by juveniles serving life sentences in adult prisons; our interviews, and a body of research on adolescent development (see Scott & Steinberg, 2008), suggest that youth is associated with emotional and cognitive vulnerabilities that accentuate the standard pains of imprisonment, giving added weight to such stressors as loss of freedom (felt sharply as a consequence of adolescent impulsivity), separation from family (felt sharply because of dependency on family), and the accompanying risks associated with incarceration, such as vulnerability to predators, who are often on the hunt for young and inexperienced victims (see George, 2010; Hassine, 1996; Paluch, 2004). The inability to appreciate the enormity of a life term, an indeterminate sentence with no fixed boundaries beyond death (itself incompressible to
adolescents), may be the greatest pain that juvenile lifers face, especially during the early years of their confinement (Crewe et al., 2020; Leigey, 2015). The sentence, often working in tandem with the underlying conviction for a grave offense (usually murder), “compounded and intensified the standard ‘pains of imprisonment’” and comprise “a grave existential intervention into a biography in the making” (Bereswill, 2020, p. 60). The result is a “shattering experience for a person’s self-perception and orientations for actions” because the now-imprisoned juvenile has to “cope with the restrictive everyday world in a robustly authoritarian institution” that promotes widespread “feelings of anxiety, powerlessness, and rage” (Bereswill, 2020, p. 59).

A female lifer, who had been incarcerated for 13 years for a crime she committed at 16 years of age, recalled her initial lack of understanding of the ramifications of the punishment (Human Rights Watch & Amnesty International, 2005, pp. 4-5):

I didn’t understand “life without” … [that] to have “life without,” you were locked down forever. You know it really dawned on me when [after several years in prison, a journalist] came and … he asked me, “Do you realize that you’re gonna be in prison for the rest of your life?” And I said, “Do you really think that?” … “For the rest of my life? Do you think that God will leave me in prison for the rest of my life?”

At the outset of the sentence, young people almost certainly do not fully appreciate the gravity of the punishment; the prospect of “doing life” for decades to come is, likewise, an almost incomprehensible challenge (Crewe et al., 2020). The following statement by a juvenile lifer articulates this sentiment: “[M]y life in prison has been like living in hell. It’s like living and dying at the same time, and with my sentence the misery never ends. Life in prison is no life at all. It is a mere existence” (Human Rights Watch & Amnesty International, 2005, p. 53).

As a result of the austere existence during confinement, depression, anxiety, and suicidal ideation occur with regularity (Crewe et al., 2020). A lifer who entered prison at the age of 16, for a crime he committed 2 years earlier, shared the following recollection of his suicidal thoughts: “I can’t do no life sentence here at that age. And so I thought of that [killing himself]. Gotta end it, gotta end it. … I’ve got so many cuts on me” (Human Rights Watch & Amnesty International, 2005, p. 64). In addition to mental distress, inmate misconduct is another manifestation of stress. Lifers may act out and rebel against the institution’s rules and the officers tasked with enforcing them, and juveniles can be an especially unruly population to manage during the early years of their confinement. In the most comprehensive examination of juvenile lifers in the United States to date, Nellis (2012) surveyed 1,579 juvenile lifers, representing 68% of the entire LWOP population at that time, and found that nearly all (98.4%) had committed at least one disciplinary infraction since prison admission. Common infractions were failure to follow an order, possession of contraband, drug test failure, and fighting.

Juveniles may act out for many reasons. Usually, they arrive at an institution with anger that they do not know how to manage effectively. Alcohol and drugs, frequently used on the outside as flawed adjustment strategies, continue to prove ineffective in the face of the harsh realities of prison life. A lifer convicted of felony murder for a crime he committed at 17 years of age explained (Human Rights Watch & Amnesty International, 2005, p. 64):

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I started doing drugs [when I first came to prison]. I mean I always smoked weed [marijuana], but then I started doing like heroin and stuff. Sometimes I try to escape. I went to mental health one time and they put me on a pain killer. I told them I was starting to have suicidal thoughts ... and they said that was normal and just go back to my cell. I cut my wrist [shows his wrist with multiple scars to a researcher]. ... Well, I thought that drugs helped me to escape. But then reality is still here when I wake up.

Younger individuals, including juvenile lifers, struggle to see how they can construct a semblance of a life in prison (Crewe et al., 2020). This theme is reflected in several interviews reported by Crewe and his associates and is vividly reflected in the following comment by a lifer who was 14 years of age at the time of the offense (Human Rights Watch & Amnesty International, 2005, pp. 57-58):

Because you know I couldn’t deal with it, I couldn’t deal with doing all that time, having that time, being so young, I couldn’t deal with it. And it caused me a lotta problems when I first came to the penitentiary because I had the mentality, “I have a life sentence. I don’t care about nothing, I got a life sentence, why should I care about anything?” So there wasn’t nothing I wouldn’t do. Wasn’t no fight I would back down from. Even with the officers ... so that caused a lot of problems. [I] fought on officers, [I was] stabbin officers with knives. ... You know, fought on inmates, ‘cause of that mentality, ‘cause of having that time. ... I haven’t [killed] but I’ve beat on inmates. ... Yeah, I used locks, knives, pipes, lead pipes, you know?

In the predatory prison environment, juveniles experience heightened confusion and fear. One lifer, who committed his offense at the age of 16, described his initial impressions of prison in the following terms: “It was disorienting and scary, like a fish thrown in water not knowing how to swim. Everyone seemed big and dangerous and threatening” (Human Rights Watch & Amnesty International, 2005, p. 79). In response to the fear of physical or sexual violence, juveniles may feel compelled to use violence to ward off victimization. A representative comment from a young lifer reflects how concern for safety could lead to violence: “I end up in prison and now, I got to fight my way through this food chain, the prison food chain. And immediately I’m getting subjected to sexual predators and what I did was I fought ‘em off, literally, fought them off” (Irwin, 2009, p. 72). Many juveniles receive adult prison terms for perpetrating a crime of violence, and then they are at an increased risk for becoming victims of physical and sexual violence themselves as they serve out their punishments (Beck, Berzofsky, Caspar, & Krebs, 2013; Beck & Harrison, 2006, 2007; Forst, Fagan, & Vivona, 1989). In fact, nearly all of the juvenile lifers interviewed by Human Rights Watch and Amnesty International (2005) reported at least one instance of victimization since prison admission.

Juvenile lifers may be reluctant to report assaults because doing so could cause them to be labeled “snitches” or “rats” for life. These labels, in turn, will likely lead to subsequent attacks. Moreover, if they are placed in protective custody, essentially solitary confinement, they will experience a greatly reduced quality of life for years or even decades to come. An individual who
was 16 years of age at the time of the crime described the pressures faced by a person who is victimized in prison: “On several occasions I have been physically assaulted. I reported the first assault, but from that point forward I deduced that it was best to remain silent as I cannot afford to be labeled [an informant] in my current circumstances” (Human Rights Watch & Amnesty International, 2005, p. 74). Female juvenile lifers also experience victimization in the prison environment. One, who was also 16 years of age when the offense occurred, described the uncertainty and anxiety of not knowing when an attack might take place: “It’s scary to wake up every morning and not know what will happen ... I’ve gotten beaten up by women who just don’t like me for whatever their reasons” (Human Rights Watch & Amnesty International, 2005, p. 75).

Deterred from reporting victimization to prison officials, juvenile lifers may join prison gangs as a source of protection, but their involvement in these groups often leads to an escalation of misconduct (Fischer, 2002; Gaes, Wallace, Gilman, Klein-Saffran, & Suppa, 2002; Griffin, 2007; Griffin & Hepburn, 2006; Huebner, 2003; Krienert & Fleisher, 2001; Shelden, 1991; Sorensen, Cunningham, Vigen, & Woods, 2011). A Colorado prison official offered a biopsychosocial explanation of why juveniles join gangs and, as a consequence of misconduct, are placed in solitary confinement:

One [factor] is age—when you come in at a young age with life without [parole], there’s not a whole lot of light at the end of the tunnel. Also, it’s kind of a guy thing: The young ones come in with a lot of fear, anxiety, paranoia, and they want to make a name for themselves—so they have a tendency to act out. And if they are part of a gang, they are almost required to act out ... any of the young guys, they see it as a feather in their cap to work themselves to [a super-maximum facility] ... and they don’t think about the repercussions. ...They say [to themselves], “I’ve got to impress everyone with what a bad-ass I am.” (Human Rights Watch & Amnesty International, 2005, p. 58)

Any affiliation with a gang—however reasonable that choice may seem in the face of prison adjustment pressures, and even if the individual has not been actively involved in years—is a formidable obstacle for lifers to overcome in the sentence modification process when they attempt to establish that they have developed and matured.

Some lifers remain in a loop of disruptive and violent behavior, and a few evolve into serious predators who continue to pose risks to other inmates and prison staff— the persisters. In the well-known study of Marquart and Sorensen (1988) of the prison and post-release behaviors of Furman-commuted inmates, one of the 47 commuted inmates in the sample was responsible for 29% of the sample’s serious rule violations. However, much of the research on life-sentence inmates indicates that serious misconduct, especially violence, is largely limited to the early days of incarceration (Crewe et al., 2020; Johnson & Dobrzanska, 2005; Sorensen & Wrinkle, 1996; Sorensen, Wrinkle, & Gutierrez, 1998; Zamble, 1992). Although it is difficult to identify a precise number, our research and field experiences, together with actuarial and other statistical studies of life-prisoner behavior over time, have led us to believe that the great majority of lifers, after struggling through the haze of pressure that overshadows the early days of confinement, pressure that may last months or even years, come to reflect on their difficult and discouraging lives to date,
and ultimately decide, with varying degrees of specificity and success, to seek a new and more promising course of adjustment for the future.

Turning Points, Awakenings, and Maturation

A turning point is an incident or idea that produces a new course of action enduring long enough to indicate that a stable change has taken place (Irwin, 2009; Liem, 2016). Retrospection is needed, a vantage point from which an individual looks back on his or her life in an attempt to pinpoint the impetus for change. In addition to the passage of time, self-awareness is also a necessary criterion. Irwin characterized this new self-awareness as the “awakening” that many lifers undergo: Awakening “begins when lifers fully appreciate that there has been something fundamentally wrong with their former behavior. They realize that their [emphasis in the original] actions have brought them to this disastrous end” (Irwin, 2009, p. 66). A single event, the “thunder strike,” as coined by Irwin, can precipitate the change.

Turning points that lead to personal evaluation and ultimately transformation, as seen in the research literature and in our clinical experience, can include the death of a loved one, the suicide of a fellow prisoner, exposure to an inspirational program or role model, or lonely stints in segregation that force prisoners to think critically about their lives. One juvenile lifer, who has served 30 years for fatally shooting a teenager when he fired a gun into a crowd, described the effect that a conversation with the victim’s mother had on him: “She asked me to promise her that when I was finally released that I wouldn’t let her and my family down. … It was a turning point in my life” (Cohen, 2017, para 26). Since this meeting, he has completed college courses and served as a mentor to younger inmates.

Informal social control is the bedrock of life-course theory, and although it may take a different shape in prison, it is nonetheless a powerful motivator for change. Despite the fact that lifers have been separated from their families for years or even decades, the ties to their loved ones can encourage positive behavior. For Seb, one of the men featured in Life Imprisonment from Young Adulthood (Crewe et al., 2020), his realization of how his poor behavior was negatively affecting his mother brought him to the doorway of desistance. Lifers may also be motivated to change to honor the memory of a recently deceased loved one. They avoid misconduct, which leads to restrictions, so that they are able to maximize contact with their loved ones; with good behavior, they earn additional opportunities to connect with loved ones (e.g., family picnics), and thus a positive cycle is established in which good behavior promotes rewards that produce more good behavior. Nellis (2012) found that approximately half of her sample (n=1,579) of juvenile lifers (47.9%) reported that their families lived some distance from their prison. The geographical distance and challenges to remaining in contact with family serve to reinforce why juvenile lifers would want to behave well—to preserve their already limited opportunities to engage with their parents, siblings, and other loved ones.

In addition to the influence of informal social control, sheer self-interest is a powerful motivator of change. Although the amount of time it takes to appreciate where one’s self-interest lies can vary widely across individuals, the vast majority of lifers ultimately come to understand that prison is home and that self-interest encourages them to create a new life for themselves in this involuntary home if they are to secure a life worth living behind bars (Johnson & Dobrzanska, 2005; Leigey, 2015). Stakes in conformity develop that make engaging in misconduct too costly. Lifers do not want to jeopardize a preferred housing assignment or a valued work assignment or
to spend empty time in solitary confinement. Education and vocation classes, when lifers are eligible to participate in them, provide opportunities for learning, accomplishment, and a sense of purpose. In the study by Nellis (2012), two-thirds of juvenile lifers (n=1,579) earned a general education diploma (GED) or a high school diploma while they were incarcerated, and nearly all the remaining individuals reported plans to obtain a degree. Work gives structure to the day and is a source of pride; in time, many lifers become supervisors or advance to respected work assignments. Therapeutic and religious programs, when available, can allow self-awareness, insight into earlier behaviors, and expression of remorse and guilt for past crimes, and they can aid lifers to overcome widely shared traumas that mark and mar their lives. For example, approximately one-fifth of juvenile lifers (n=1,579) reported sexual abuse and one-half reported physical abuse in their lifetime, and fully three-quarters of girls and women in the sample reported physical or sexual abuse (Nellis, 2012).

Hope of release—a chance to leave prison one day, however remote in objective terms, and however grim an individual’s prison life may be—also encourages good behavior. One lifer explained how such hope allowed him to keep going in his self-described cage:

The only reason I don’t kill myself is ‘cause there’s still hope. I mean at least if you got a dog that you know is never going to get adopted, that’s never going to live free again, I mean they kill it. They put it to sleep. That’s more humane than keeping him in this cage the next twenty years, making him live with his own shit and his own piss. I came in here at seventeen years old and what are they going to do, keep me for sixty or seventy years? I mean c’mon now ... that’s a long time! (Human Rights Watch & Amnesty International, 2005, p. 64)

Lifers hope to be released so that they can reunite with their families, atone for previous bad decisions, and once again be a part of society. As one lifer explained, “I would like to be able to live again and see all those things I miss from being lock [sic] up because the world has grown up so fast and I mess [sic] out on it” (Human Rights Watch & Amnesty International, 2005, p. 62). Consequently, lifers who nurture hope set their sights on the improbable outcome of one day earning release.

As a result of the interplay of the informal social control exerted by loved ones, self-interest, and hope of release, a new identity is established that shapes behavior. Lifers can live for decades as the now decent, law-abiding persons they believe themselves to be, associating with like-minded prisoners, eschewing former friends associated with disruptive behavior, avoiding infractions, and staying out of trouble. In her national sample of juvenile lifers (n=1,579), Nellis (2012) found a clear pattern of desistence. Among the respondents who had served less than a decade in prison, most (81.5%) had received a disciplinary write-up in the previous 3 years. Among those who had served at least 10 years, the proportion decreased to approximately two-thirds (65.4%). Among those who had been incarcerated for at least 30 years, the percentage dropped to 29% (Nellis, 2012). It is notable, and perhaps even remarkable, that lifers not only desist while confined but also adopt improved coping styles to negotiate life’s stressors while incarcerated, showing the hallmarks of mature coping: “dealing with life’s problems like a responsive and responsible adult, one who seeks autonomy without violating the rights of others, security without
resort to deception or violence, and relatedness to others as the finest and fullest expression of human identity” (Johnson, 1987, as cited in Johnson & Dobrzanska, 2005, p. 8).

In conjunction with a mature coping style, many individuals are able to carve out a life for themselves and report improved mental health and functioning, even if the pressures of long-term incarceration are never fully surmounted and some problematic adjustments, notably the hardening of feelings central to definitions of toughness and savvy in the prison community, linger on (Crewe et al., 2020; Leigey, 2015; MacKenzie & Goodstein, 1985; Zamble, 1992).

At the point of resentencing in their cases, juvenile lifers under consideration for release are in actuality juveniles in name only. Over the years, they have grown into men and women who have spent more than half their lives incarcerated. Montgomery, the petitioner in the eponymous juvenile LWOP case, was 17 at the time of his crime. He is now in his seventies. In their final years in the carceral environment, lifers lead a more solitary existence. No programs in which they can participate may be left, either because they have exhausted them or because they are ineligible as a result of their sentence (Human Rights Watch & Amnesty International, 2005; Leigey, 2015; Nellis, 2012). A female lifer remarked, “[S]ince I am serving LWOP, I’m not eligible. I guess they think since I am going to die in prison anyway, why educate us?” (Human Rights Watch & Amnesty International, 2005, p. 70). Involvement in formal prison activities is further reduced as lifers may be forced to retire from their prison jobs because of medical issues. Through the years, their ties to the outside world weaken. They grieve for loved ones who have died while they continue to be imprisoned. One lifer, who entered prison at the age of 17 and had served 29 years, stated: “My situation for the last twenty some years has been very hard on me because I have seen most of my family members pass away on me … just last year I lost my mother” (Human Rights Watch & Amnesty International, 2005, p. 62). Instead of release to live their final days free and in the company of surviving loved ones, many lifers remain incarcerated. For some, after numerous rejections of appeals or commutation applications, the hope of release that sustained them is exhausted, and a few take their own lives (see Johnson & Tabriz, 2010). Others succumb to medical conditions. A good death, however we wish to define it, is rare among lifers in the United States (Fleury-Steiner, 2015).

On Second Chances

“All I want is a chance,” pleaded a juvenile lifer, who was 15 years of age at the time of his crime. “I’ve come a long way as far as who I am and what I want in life. … I’ve really changed” (Human Rights Watch & Amnesty International, 2005, p. 84). Because of Miller (2012) and Montgomery (2016), this individual and many others will get that chance. As the Court acknowledged in these decisions, the imposition of an LWOP sentence should be rare. More common, the Miller Court reasoned, was “that children who commit even heinous crimes are capable of change” (p. 21). In point of fact, Miller’s case illustrates the substantial changes that many lifers undergo, from troubled teens to victimized inmates and on to honors prison housing with a panoply of possibilities (Smith, 2016, 2017). Currently, Miller is awaiting a decision in his resentencing case. His case also reveals a conflict between correctional policy and judicial principles. The Montgomery Court offered several criteria that judges and correctional officials could use to evaluate rehabilitation, among them were disciplinary history and program participation. As previously explained, desistance from institutional misconduct is the common path for most lifers, including juveniles. However, because of their sentences, lifers may be barred
from participating in certain programs or have to join long waiting lists to secure a program placement. This creates an irrationality—lifers may face formidable barriers to participating in programs, yet the Court recommends involvement in programs as evidence of rehabilitation (Nellis, 2018).

A central premise of life-course theory is that offenders are capable of change (Sampson & Laub, 1993). History does not always repeat itself. However, a life-sentence, in which an individual’s criminal record is heavily weighted in any release decision, does not recognize offender transformation. A lifer in New York, who had served 40 years for a crime he committed as a juvenile, remarked on how criminal history is prioritized over more recent indicators of behavior (in his case, few disciplinary infractions and the obtainment of a college degree):

Because you committed a crime when you were an adolescent, this means you are prone to criminality for the rest of your entire life? You’re saying that that this person is beyond redemption, beyond change, that you can somehow read this person’s entire mind and foretell his future like you’ve got a crystal ball. (Quandt, 2018, para 22)

Another juvenile lifer in New York, at the time 54 years of age, described to the parole board how he had changed in his nearly 40 years of confinement: “Today, I’m compassionate. … I’m more able to think. I’m educated. I’m able to distinguish exactly what I couldn’t distinguish then.” He implored the parole board to “please consider my application for the person I am today and not the kid I was then. I hope I can give back” (Quandt, 2018, para 5). Failure to recognize the maturation and development of juvenile lifers expressly contradicts not only the tenets of life-course theory but also the sentiments of the U.S. Supreme Court.

Since Montgomery (2016), major reforms have occurred. Before Miller (2012), only four states prohibited juvenile LWOP. Now, 22 states and the District of Columbia have abolished the punishment, most recently Washington and Oregon (The Campaign for the Fair Sentencing of Youth, 2019). Other states—for example, Pennsylvania, which at the time of Miller had the highest population of juvenile lifers—have increased the standards required to impose the penalty. Per Commonwealth v. Batts (2017), Pennsylvania courts will presume that a sentence of juvenile LWOP is unlawful, and to impose the punishment, prosecutors must demonstrate beyond a reasonable doubt that the juvenile cannot be rehabilitated (Associated Press, 2017). As of October 2019, of the 521 individuals who had been serving juvenile LWOP in Pennsylvania, 450 had been resentenced and 216 had been released (Pennsylvania Department of Corrections, 2019). Importantly, only one of the released individuals has been convicted of a new crime, contempt (Ewing & Melamed, 2018). In many of the remaining states, legislation has been proposed or passed that would provide juvenile lifers the opportunity to be released after serving a specific number of years, typically 25 to 30 (Associated Press, 2017). Efforts are underway to avoid “de facto” life sentences—that is, term sentences that amount to a life sentence because they extend beyond a juvenile’s life expectancy (Ripper & Johnson, 2020). Further, in blurring the legal distinction between a child and an adult, some states and lower-level federal courts are extending the legal provisions provided to minors in Miller to young adults. In Illinois, mandatory LWOP sentencing is prohibited for defendants who are 18 or 19 years of age. A federal judge in Connecticut determined that mandatory LWOP sentencing should be prohibited for 18-year-olds
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As of January 2019, the juvenile LWOP population has declined to about 1,100, and approximately 400 juvenile lifers across the country have been released (J. K. Lavy, personal communication, January 25, 2019).

These trends are encouraging and important, but they seem remote and unreliable to many lifers. On the worst part of being a juvenile serving life in prison in America, one man remarked, “It’s like you never get to the place where other people are at” (Human Rights Watch & Amnesty International, 2005, p. 82). The “place where other people are at,” to explore this lifer’s observation, is a justice system marked by a universal appreciation of the transitory nature of adolescence and the folly of making permanent judgments about lives that are works in progress. The United States, which now stands as the only country in the world to allow juvenile LWOP sentencing in any form—a permanent judgment of breathtaking proportions—continues to grapple with how to punish juveniles. Recent court decisions and a growing appreciation of the lives and life-course experiences of juveniles serving life sentences suggest that more juvenile offenders once sentenced to terms of LWOP will now get a second chance. This second chance, we have argued, is well-deserved, as the culmination of what we have described as a growth process marked by changes in identity, behavior, and relations with others. We can hope that few, if any, will be condemned to die in prison for crimes they committed in their youth.

Summary and Implications

Patterns of maturation and development among juveniles sentenced to life prison are in most cases pronounced and consistent, but they may be missed or misunderstood by decision makers because they unfold over time, sometimes very long periods of time, requiring a close look at the prison adjustment history and personal development of each individual. The general pattern, as seen in the research and in our case work, can be summarized as follows: The initial phase of confinement, a stressful period evidenced by increased institutional misconduct, chronic anger, and assorted mental health problems, gives way to turning points that lead to changed identities and behaviors. These turning points and associated changes can occur months, years, or even, in one case, decades into the person’s prison life. Change typically occurs as the consequence of incidents or cumulative experiences that spark cognitive transformations. Those transformations, in turn, open up a new view of one’s self and one’s prospects; a changed self then leads to what are seen as rational and even self-evident decisions to make changes in one’s peer group, one’s social routines, and one’s daily behavior (in particular, conforming to prison rules and regulations and staying out of trouble). Note that this sequence is very much in line with the work of Giordano, Cernkovich, and Rudolph (2002) and culminates in act-related, identity-related, and relational desistance (see Nugent & Schinkel, 2016). In time, then, most life-sentence inmates transform into persons who, utterly unlike the persons they were when younger, are able to lead law-abiding, responsible, and productive lives in prison. Consistent with recent U.S. Supreme Court decisions and the tenets of life-course theory, courts and correctional bodies entrusted with release decisions should prioritize these indicators of maturation and development over the troubled lives and troubling criminal behavior that led these young offenders to prison (Haney, 2020; Johnson, 2017).

Although the changes in conduct and character that we have reviewed are typically substantial, prisoners granted release must be offered transitional support to translate hard-won maturity in the prison world into constructive lives in the free world. As with all transitional support
efforts with former prisoners, attention must be paid to the residual effects of incarceration, seen
among even the best-adjusted inmates. In the case of lifers, evidence provided by Crewe and
associates suggests that prison maturity comes with two relational deficits that will complicate
reentry. First, prisoners who had coped maturely with prison life clearly lacked the “life
progression” one sees over the life-course of individuals in the free world and, critically, “the kind
of emotional growth that occurs through relational intimacy” in the free world—evidenced, for
example, by marrying and raising a family, key life-course events for which we are aware of no
credible evidence pointing to substitutes available in prison (Crewe et al., 2020, p. 317; Jewkes,
2005). Second, prison maturity was shown to feature an almost universal hardening of emotions,
an adaptation that is common and effective in the prison world but is likely to be an impediment
to adjustment in the free world (Crewe et al., 2020).

Hans Toch (1975) long ago reminded us that stunted emotions are collateral damage wrought
by notions of manliness found in prison, where facades of toughness and imperviousness to
feelings have currency with all prisoners to some degree (see also Johnson, 1979). These
quintessential prison-bred distortions of good character are almost certain to be dysfunctional in
most free-world situations. The subjects of the research of Crewe et al. on young prisoners serving
long prison terms showed an awareness that “their maturity was contextual” and hence that
“maturity and development meant different things in prison and in the community” (Crewe et al.,
2020, p. 310). (We saw some of this awareness in our cases, in which apprehension about
successful reentry was often quite pronounced.) The key deficit, the subjects of Crewe et al.
understood, has to do with the control of feelings so essential to daily prison adjustment, which
comes at a high price: “to avoid being overwhelmed with distress, and to deal with the enduring
demands of the environment, prisoners learnt to ‘shut down’ and ‘detach their feelings’ … in ways
that reshaped them significantly” (Crewe et al., 2020, p. 314). This is seen in the key finding that
lifers at all stages of their sentences “talked of having become ‘numb,’ … ‘hardened,’ …
desensitized,” and ‘distanced from their emotions’” (Crewe et al., 2020, p. 314). This defensive
hardening of emotions must be acknowledged in reentry plans and addressed in reentry programs
that promote the emotional enrichment necessary to establishing and maintaining fulfilling
relationships. That said, if the dynamics of the adjustment of juvenile lifers tells us anything of
enduring value, it is this: upon release, they will continue to grow and mature in society, slowly
but surely adapting themselves to a world more open to feelings of trust and acceptance.

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Corresponding author:

Robert Johnson
Department of Justice, Law and Criminology
Kerwin 270
American University
Washington, D.C. 20016
Email: robert.johnson@american.edu

Robert Johnson is Professor of Justice, Law and Criminology at American University, editor and publisher of BleakHouse Publishing, and an award-winning author of books, book chapters, and journal articles on crime and punishment, including works of social science, law, poetry, and fiction. He has testified or provided expert affidavits in capital and other criminal cases in many venues, including U.S. state and federal courts, the U.S. Congress, and the European Commission of Human Rights. He is best known for his books, Hard Time, Condemned to Die, and Death Work, the latter of which won the Outstanding Book Award of the Academy of Criminal Justice Sciences. Johnson holds a BA degree in psychology from Fairfield University and MA and PhD degrees in criminal justice from the School of Criminal Justice, Nelson A. Rockefeller College of Public Affairs.
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& Policy, University at Albany, State University of New York, where he has been designated a
distinguished alumnus.

Margaret E. Leigey is Professor and Chair of the Department of Criminology at The College of New
Jersey in Ewing, New Jersey. Her research focuses on the carceral experiences of special
populations of prisoners, including long-term and older prisoners, women, and minors. Published
by Rutgers University Press in 2015, her book, The Forgotten Men, examines the experiences of
aging inmates serving life sentences without the possibility of parole. Her research has also been
International Journal of Offender Therapy and Comparative Criminology, Criminal Justice Policy
Review, and Drug and Alcohol Dependence. She received a BA degree in criminology/pre-law from
Indiana University of Pennsylvania and MA and PhD degrees in criminology from the University of
Delaware.

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Jillian R. Yarbrough

Abstract
Humans have a strong “truth” default, meaning that when processing incoming information, they will passively believe statements made by others. However, idle acceptance can put people at risk for deception (Levine, 2019). Research shows that 60% of people lie during a typical 10-minute conversation (Bradberry, 2017). Considering the pervasiveness of lying, it is easy to recognize deception as a challenge for individuals involved in law enforcement because they are expected to distinguish between truth and lies daily. If deception detection is an essential component of law enforcement, are techniques available that law enforcement can apply during interrogations to improve the chances of effective deception detection? This paper will examine deception detection in the law enforcement interrogation process. Specifically, it will provide an overview of the problem and five strategies law enforcement might use to detect deception, discusses the strengths and challenges of each technique, and offers recommendations to support efficient deception detection techniques in an interrogation.

1 Department of Business Management, West Texas A&M University, Canyon, Texas
Introduction

Humans have a strong “truth” default when processing incoming information, and their tendency to believe others passively puts them at risk for falling victim to deceptions (Levine, 2019). Deception occurs when one person acts in a way that causes another person to accept as truth something that is false or invalid. This is a concern because deception is a pervasive problem in human behavior (McHaney, George, & Gupta, 2018). Not only is lying pervasive, but most people struggle to detect lies. Lie detection research has shown that observers who rely on cues alone correctly classify on average 54% of truths or lies (Vrij, Meissner, & Kassin, 2015). The accuracy of passive deception detection is just a little better than chance, and active detection, which requires gathering information, fact-checking communication content, strategically prompting deception cues, encouraging honest admissions, and discouraging continued deceit (Levine, Fiske, Borgida, & Major, 2014), is not much more effective. Even with gathering facts, research suggests that most people are still unsuccessful at distinguishing truths from lies at a level significantly greater than chance (Bradford & Goodman-Delahunty, 2008). Clearly, detecting deception is arduous.

The importance of the ability to detect deception is amplified in forensic contexts, in which the consequences of detection have significant implications (Bradford & Goodman-Delahunty, 2008). Consider that research indicates that police officers believe they can detect deception during interviews of suspects (Hill & Moston, 2011), and research also indicates that police, generally, cannot determine any better than laypersons whether suspects are being honest (Kassin, 2008a). This dichotomy is of concern because officers may believe their ability to detect deception is heightened, and this perception can be a catalyst for making errors in an investigation. Just one error in an assessment of deception can lead to significant consequences for law enforcement, such as loss of time, loss of resources, and even false confessions. Recognizing that law enforcement must use interrogations to determine if a person being interviewed is a witness or a suspect and then piece together events, the need to be able to identify deception emphasizes the importance of ongoing training in deception detection. Detecting deception in the interrogation process is difficult and enhanced, as is a realistic assessment of the ability to detect deception; therefore, training in deception detection strategies and techniques can support the goal of police investigation. These strategies must be studied to be used correctly, and they must be used in conjunction with fact gathering and a transparent assessment of information if deceit is to be detected effectively.

To encourage awareness and ongoing training, this paper will examine deception detection in the interrogation process, providing specifically an overview of the problem, a discussion of five strategies law enforcement might use to detect deception, a discussion of the strengths and challenges of each of the five described techniques within the interrogation process, and finally recommendations to support efficient deception detection techniques that may be beneficial to law enforcement conducting interrogations.

Overview of the Problem

Interrogations begin as an interview process with the intent of gathering information. As the police ask questions and the interviewee provides answers, the police are determining in their
minds if the interviewee is an innocent bystander or a suspect. Although an interrogation can begin with the purpose of gathering information, if the information is incriminating, is not supported by facts, or does make sense, law enforcement may decide the individual being interrogated is guilty. If officers determine that a suspect is guilty, they may develop “tunnel vision,” which obscures other possibilities, and ultimately they will seek confirmation of their ideas (Rossmo & Pollock, 2014). Once a conclusion has been developed, people rarely pay attention to any evidence that might be contradictory (Rossmo & Pollock, 2014). This occurrence, a confirmation bias, can cause an interrogation process to shift from seeking information to seeking a confession. When efforts shift to building a case against a suspect, ignoring or minimizing countervailing evidence and interpreting ambiguous evidence in a way that supports the initial conclusions, potential errors can create an environment that supports false confessions and wrongful convictions (Rossmo & Pollock, 2014; Sullum, 2019).

Picture the following scenario: A suspect is seated in an interrogation room. Police have spent hours working to identify and bring this individual in for questioning. One police officer is in the room, with other officers watching at a distance. As the interview progresses, it becomes clear that the suspect is going to maintain the claim that he has no information about a store theft early in the week. Yet two witnesses are certain they saw the suspect not only at the store but also stealing an item. The police officer recognizes the amount of law enforcement time and energy that has been spent identifying this suspect, and the officer knows it is important that these efforts pay off. The officer asks one more time, “Were you at the store?” The suspect sighs, looks away, squints, and then looks down at his hands. The police officer thinks, “We got him,” because the officer interprets the gaze aversion as a definite indication of deception. With his internal confirmation, the officer prepares to dig in and intensify the interrogation tactics.

The officer’s interpretations are a significant concern because interpretations may guide the investigation. A study by Hill and Moston (2011) determined that most police officers believe they can detect deception. In a sample of 2,800 police officers, the researchers found that 88.1% of the officers believed they could detect deception during suspect interviews, and 67.9% of the officers were making their assumptions on the basis of observations of nonverbal behavior. These findings are common. Stromwall and Granhag (2001) also found that most police officers believe there is a strong relationship between deceptive behavior and gaze aversion and body movements. However, despite special training on how to conduct interviews, police cannot tell any better than laypersons whether a suspect is lying or telling the truth (Kassin, 2008a). In fact, some literature has concluded that the accuracy of police deception detection may be below average. Garrido, Masip, & Herrero. (2004) reported that police officers’ overall accuracy with deception detection was approximately 47%, whereas law observers obtained an overall accuracy rate of 59%.

Some police officers’ ability to detect deception may be below average for several reasons. First, a liar’s testimony can be more persuasive than a truth teller’s (Talbot, 2007; Gordon, 2018). Second, different individuals may act differently when they are lying, and attempts to categorize these differences are not reliable (DePaulo, 2013). Third, confirmation bias, group think, publicity, and incentives to identify a perpetrator quickly may lead police to target innocent people for interrogation on the basis of erroneous judgments, and innocent people are sometimes induced to confess as a function of police interrogation tactics (Rossmo & Pollock, 2014; Kassin, n.d.).

This third issue is especially significant; not only is the idea that officers may compel an innocent person to confess to a crime on the basis of erroneous judgments scary, but the
consequences of these actions can be significant, overwhelming, and possibly insurmountable. Leo (1996) and Cassell and Hayman (1996) found that suspects who provided incriminating information in their interrogations were more likely to be charged, plead guilty, and be found guilty. Leo and Ofshe (1998) conducted a study of 60 false confessions and found that 73% of those false confessors whose cases went to trial were convicted. Drizin and Leo (2004) conducted a similar study, and the conviction rate increased from 73% to 81% among 125 false confessions.

Awareness regarding false confessions has been growing for nearly 100 years. In 1936, Brown v. Mississippi was the first case in which the U.S. Supreme Court excluded a confession from a state court prosecution because the three suspects had been tortured for days during their interrogations (Gross & Possley, 2016). Reforms to the American courts and the criminal justice system and the development of the Miranda warning reduced torture in the interrogation process and supported a shift toward interrogation methods like isolation and exhaustion (Gross & Possley, 2016). Certainly, these are improvements; however, police-induced false confessions remain the leading cause of wrongful convictions (Facts and Figures, 2009).

**Interrogation Errors**

Police interrogators make three kinds of errors—misclassification, coercion, and contamination—that can lead to false confessions (Leo & Drizin, 2010).

- **Misclassification error:** Police mistakenly believe an innocent person is guilty.
- **Coercion error:** During the interrogation process, the police use techniques that break down a suspect’s resistance to guilt. These can include lying about the existence of evidence and telling the suspect that punishment will be harsher if he or she does not confess.
- **Contamination error:** Police shape the suspect’s statements and add details to the confession to make the statements more persuasive.

On the basis of these errors, police may experience confirmation bias, and innocent people can be induced to confess through the police interrogation process. Suspects may make a statement of guilt to escape from a stressful interrogation process, avoid punishment, or gain a promised or implied reward (Kassin, 2008b).

Because we cannot accurately quantify the number of false confessions, the true number is unknown, but we can identify that with advancing technologies, more people are being exonerated of crimes for which they received convictions but did not commit. The National Registry of Exonerations (NRE) found that between 1989 and 2017, a total of 2,161 exonerations occurred in the United States (The Innocence Staff, 2018). This information indicates that incorrect assessments of a witness’s credibility and/or truthfulness can lead to miscarriages of justice (Wagenaar, Van Koppen, & Crombag, 1993; Wells et al., 2000).

Incorrect assessments of a witness’s credibility and truthfulness can lead police to make errors in the interrogation process. Two of these errors will be discussed. First, some police may inaccurately believe they are better at deception detection than other people. Second, some police may fail to conduct proper interrogations.
Police Believe They Are Better at Deception Detection Than Other People

The literature shows that police believe they are better at deception detection than other people (Elaad, 2003). It does seem reasonable that people with more experience detecting deception, like seasoned law enforcement, should be better than others, maybe even experts, in deception detection. However, research indicates that experts in lie detection do not exist; in fact, no reliable differences in deception detection accuracy are found when “experts” are compared with novices in lie detection.

Henderson and Hess (1982) (as quoted in DePaulo and Pfeiffer, 1986) and DePaulo, Ruben, & Milner (1987) found that experienced detectives were no more accurate than college students at detecting deception on the basis of verbal and nonverbal cues. Masip and Herrero (2015) conducted a study to determine the validity of behavioral deception questions. In this study, police officers and community members were compared, and both groups indicated that they believed behavioral cues were reliable indicators of deception. Relative to the community members, the officers provided more cues and referred more often to verbal contradictions and active detection strategies when asked about their beliefs. Throughout the study, all the participants held to their beliefs that they could detect deception cues. Masip and Herrero (2015) concluded that it is important for people to shift from seeking cues to active detection, in which the interviewer is taking contextual information into account.

Elaad (2003) also studied police officers and found that they tend to overestimate their capacity to detect lying. In this study, 60 police officers engaged in a lie detection task and were asked to assess their accuracy in detecting lies. The officers performed below the chance level, yet they evaluated their accuracy as high. Interestingly, when the officers received confirmation of the effectiveness of their deception detection, their notion of their abilities increased, whereas after negative feedback, the officers rated their lie detection abilities lower. On a practical level, the tendency of police interrogators to overestimate their ability to detect deception can change suspicion into certainty and increase the risk for a false confession.

Several studies have asked police to view videos of people and detect deception. Kohnken (1987) asked police officers to watch videotaped statements of witnesses—some truthful, some lies. The study showed the mean accuracy of the officers to be .47, with .5 being chance, .36 false statements, and .63 truthful statements. Vrij (1992) examined experienced detectives’ ability to detect deception within the context of the police interview. In this study, officers saw video tapes showing behavioral differences between liars and truth tellers. The detectives had to determine whether the participants were telling the truth, and their overall accuracy was .49. Finally, Garrido et al. (1997) conducted a study in which police recruits and undergraduate college students were asked to judge whether a videotaped female subject was telling truths or lies. The police officers and the students were equally accurate at detecting lies, but the officers were less accurate at identifying truthful statements, displaying a lie bias.

The study of Garrido et al. (1997) was not the first to compare police officers’ ability to detect lies with that of undergraduate students. DePaulo and Pfeiffer (1986) asked experienced officers, new recruits, and undergraduates to judge several types of audio tapes with the intent of determining truths and lies. The raters indicated whether they thought each response was truthful or deceptive, in addition to their degree of confidence in each judgment. The officers were no more accurate than the students in their judgments about truths and lies. Additionally, the accuracy rates of the experienced and novice officers did not differ significantly; they were 54.3%
for the students, 52.9% for the new recruits, and 52.3% for the experienced officers. Both the experienced and the inexperienced police officers were more confident than the students about their judgments. The experienced officers were more confident about their judgments regarding the lies than about their judgments regarding the truths, whereas the students displayed the reverse pattern.

Ekman and O’Sullivan (1991) studied seven groups of people: members of the U.S. Secret Service, federal polygraphers, police officers, judges, psychiatrists, lay people, and students. All the groups viewed 10 videotaped samples, each showing a girl answering questions about how she felt regarding a film she was watching. Participants had to say whether each of the samples was honest or deceptive. The Secret Service group was more accurate than any of the other six groups. The researchers found a relationship between experience and accuracy only for the Secret Service; none of the groups were effective lie detectors, nor were the officers better lie detectors than nonofficers.

In this brief review of the literature, police officers report confidence in their ability to detect deception, yet in many research studies, the officers score average to below average. If an officer who is conducting an interrogation believes he or she can tell lies from truths, the chances that a suspect will be erroneously identified and convicted of a crime may be increased.

**Interrogations Must Follow Proper Procedures**

While police display normal human limitations in terms of deception detection, they at the same time carry a significant responsibility in terms of conducting fair and legal interrogations. Just as an erroneous assumption on the part of an officer can lead to errors in conviction, so can inaccuracies in the interrogation process. Errors in the interrogation process can create a scenario in which police are more likely to rely on their assumptions than on details, information, and policies. Most notably, interrogation errors may violate the Fifth and Sixth Amendments of the U.S. Constitution.

The Fifth Amendment protections include the right to remain silent and avoid self-incrimination. The Fifth Amendment involves Miranda rights and concerns the following:

- Individuals have the right to remain silent.
- Anything they say can and will be used against them in a court of law.
- Individuals have the right to speak to an attorney.
- If they cannot afford an attorney, one will be appointed for them.

Before an interrogation, suspects must be informed of these rights, and they must be allowed access to a lawyer when one is requested.

The Sixth Amendment protections stop a police interrogation and give people the right to a jury trial, a speedy trial, and other court procedural rules. They also prevent police from questioning suspects without an attorney present once charges have been filed. Any statements made to police without an attorney present after charges have been filed should be suppressed.

Although police usually follow constitutional law in the interrogation process, they do not always follow psychological recommendations. Concerns regarding police interrogations and false confessions have brought together scholars and practitioners in social psychology, cognitive psychology, developmental psychology, and clinical-forensic psychology (Lassiter & Meissner,
To minimize concerns about false confessions, it is important that psychological recommendations regarding inducements and impediments within the interrogation process be examined and implemented by law enforcement (Lassiter & Meissner, 2010).

**Deception Detection Techniques**

Many factors contribute to false confessions, such as a lengthy interrogation, the manufacturing of evidence, the minimization of information, an officer’s belief in his or her ability to detect deception, and the use of torture. Although all are important, an officer’s belief that a suspect is guilty creates a scenario in which the interrogation is conducted with the goal of obtaining a confession. This is a concern because the literature shows that an officer’s ability to detect deception is generally consistent with that of chance. Some specific deception detection techniques that officers may use to enhance their capacity to detect deception include the following: monitoring of true/false intentions, examination of cues, group detection methods, advanced individual skills like detection wizardry, and finally polygraphy/functional magnetic resonance imaging (fMRI). Each of these detection methods will be discussed, with a definition of the technique and a consideration of its potential strengths and challenges in regard to application in interrogations.

**True/False Intentions**

One strategy that detectives may use to determine deception in an interrogation process is an analysis of true/false intentions. This concept suggests that the mental representations and communication patterns of true intentions will differ from those of false intentions. For example, psychologically distant tasks, unlikely tasks, are more abstractly represented than psychologically proximal tasks, likely tasks. According to this idea, in an interrogation, false intentions should be more abstractly represented than true intentions (Calderon, 2019). Kleinberg, Nahari, Arntz, & Verschuere (2017) conducted a study to examine deception detection, comparing statements about someone’s past events and someone’s intentions for the future. Their research was based on the verbal deception detection paradigm, which states that truthful statements differ from false declarations in quality and content because the processes through which the statements are produced are different (Fornaciari & Poesio, 2013). For example, truthful statements may contain more references to persons, events, and locations than deceptive statements. On the basis of this idea, the researchers expected that truth tellers’ accounts would contain more detailed information than those of liars. Two hundred twenty-two participants were asked to lie or tell the truth about their upcoming travel plans, either providing as much information as possible or being as specific as possible. Data were collected via a custom-made Web app that performed an automated verbal content analysis of the participants’ written answers with Linguistic Inquiry and Word Count software. The computer-automated verbal content analysis attempted to differentiate between participants who provided truthful statements and those who gave deceptive statements about an upcoming flight. Interestingly, differences in verbal content were not revealed between the participants’ truthful or deceptive statements about their upcoming flight—that is, true/false intentions were not detectable.

In regard to interrogation, the strengths of this study include examining deception from two perspectives—one recognizing that past memories can help someone devise deceptive statements because real memories can offer context for the lies, and the other recognizing that technology...
may eventually be able to help analyze and identify deception. The study presents challenges for
deception detection in interrogations, concluding that currently, Linguistic Inquiry and Word Count
software technology—automated analysis—does not have the capability to detect lies.

In the study of Calderon, Mac Giolla, Ask, and Granhag (2018) on deception detection, the
researchers examined how people mentally represent and depict true and false statements about
their future. For this study, true intentions were defined as alleged future actions that were
genuinely intended to be carried out, and false intentions were defined as alleged future actions
that were not intended to be carried out. The researchers asked one set of participants to draw
mental images accompanying either true or false intentions, and then a second set of participants
was asked to rate the drawings for level of abstraction. On the basis of construal level theory (CTL),
which suggests that one’s psychological distance from an event will influence how abstractly or
concretely the event is mentally construed, the researchers expected that the drawings with false
intentions would be rated as more abstract. One hundred seventeen participants rated the
previously prepared drawings on a Likert scale of 1 to 7. The results showed a high level of
agreement among the participants as to which drawings were abstract and which drawings were
concrete, with the false intention drawings receiving more ratings of abstraction than the true
intention drawings.

A consideration of this study as it relates to the interrogation process reveals some strengths
and some weaknesses. A strength is that it might be helpful for officers to be aware that lies tend
to include relatively abstract descriptions and that abstraction may suggest deceit. The study used
drawings to communicate information. Another strength might be to have officers ask a suspect
to draw what was seen or experienced, then evaluate the suspect’s drawing for an abstract or
concrete appearance. Calderon et al. (2018) also introduced a potential challenge for officers
attempting to detect deception in an interrogation. The researchers added a caveat to their study,
stating, “In real-life situations, where people’s motivation to be believed is naturally stronger than
in a laboratory setting, liars may try harder to provide concrete drawings as a strategy to appear
credible” (Calderon et al., 2018, p. 521). In other words, concrete drawings may indicate a truth
teller, or they may indicate a strategic liar who has added detail to be believed.

**Examination of Cues**

When relying on cues, one can examine and identify clusters of verbal and nonverbal displays
in the interrogation process and compare these displays against a baseline of established verbal
and nonverbal cues offered at a time when people have no reason to lie (Schafer, 2017). Deviations
from the baseline may indicate deception. Research by Calderon et al. (2018) not only looked at
true/false intentions but also identified that abstraction with false or true intentions may be a cue
to deception. Looking for indications or cues in words or behaviors is a common deception
detection technique. A great deal of research has been conducted on examining cues as signals of
active deception.

Levine et al. (2014) examined the effectiveness of analyzing cues to detect deception. The
researchers found that active deception detection requires three things: gathering information to
fact-check the communication content, strategically prompting deception cues, and encouraging
honest admissions and discouraging continued deceit. With active deception detection many
dynamic factors are involved, and not all active deception detection techniques are equally
effective. As an example, judgments made after direct interaction with a potential liar can produce
outcomes similar to those of passive observation absent of any interaction (52.8% vs. 52.6%; Bond & DePaulo, 2006). The presence or absence of probing questions is unrelated to accuracy (Levine &McCormack, 2001), and no correlation is found between interview duration and detection accuracy (Levine, Blair, & Clare, 2014; Levine, Shaw, & Shulman, 2010). In other words, merely interacting with or questioning a suspect will not provide more conclusive information for understanding cues than simple passive observation. However, an active interrogation approach focusing on communication, content, and persuasion may yield better results when the suspect’s answers are understood in the context of gathered facts.

This article offers several strengths for officers working to detect deception in an interrogation situation. First, it emphasizes the importance of active deception detection, which includes paying attention to information and gathering facts, both of which should be used in conjunction with the observation of cues to understand a suspect. The article also presents some challenges to officers in the interrogation process, as it emphasizes that not all active deception detection techniques will be effective. In other words, no fail-proof method of deception detection exists.

An article by Dunbar, Jensen, Harvell-Bowman, Kelley, and Burgoon (2017) also examines the effectiveness of cues in deception detection. This research evaluated an alternative type of deception detection training called rapid judgment (RJ) coding, first proposed by Vrij, Evans, Akehurst, and Mann (2004). With RJ coding, lie detection judges are trained to focus on indirect accurate indicators of deceit, such as the amount of detail given and certain exhibited verbal and nonverbal differences, rather than to make direct credibility judgements. To test the effectiveness of RJ coding for lie detection, the researchers first prepared training materials on seven specific RJ codes and then offered coders training based on the descriptions found in Vrij et al. (2004). The RJ approach to coding suggests that when people are asked to pay attention to verbal and nonverbal cues, rather than to detect deceit, they are more accurate in their judgments (DePaulo & Morris, 2004).

The research on RJ coding does introduce strengths and challenges into the process of deception detection in interrogations. One strength is the idea that detectives and officers can be trained to pay attention to verbal and nonverbal cues to improve the accuracy of their judgments. However, the authors also communicate that using RJ effectively is much more challenging than engaging in a simple conversation or observing actions (Giordano, George, Marett, & Keane, 2011).

**Group Detection Methods**

Research certainly indicates that for individuals, detecting deception is very challenging. With this idea in mind, experts have examined if groups are more effective than individuals at detecting deception. Specifically, group deception detection focuses on the design and use of groups and group processes to aid deception detection (Deokar & Madhusudan, 2005). McHaney et al. (2018) used three independent groups to examine the effectiveness of group deception detection; participants were classified as individuals, members of an ad hoc group, or members of an established group. The participants in each group watched a series of eight video clips taken from recorded face-to-face interviews and then answered questions about true or false information entered on a scholarship application. The research participants were instructed to indicate their assessment of the level of deception used by the video subjects on a 7-point Likert scale. The individual participants made accurate choices 53% of the time, members of the ad hoc group specifically created for the study were accurate 53% of the time, and members of the established
The researchers drew two conclusions: first, preexisting groups may be more accurate than individuals in the detection of deception; second, group effectiveness correlates with the strength of the relational links, and stronger links are associated with more effective group information exchange (Warkentin, Sayeed, & Hightower, 1997).

This research offers information that can help officers detect deception and highlights some challenges that may arise in the deception detection process. First, it indicates that deception detection may be improved when the members of an established group work collectively to uncover deception. The article also highlights that deception detection through a group process may be challenged if the group is dysfunctional.

In a study by Zhou, Zhang, and Sung (2013), the researchers proposed that group factors, including diversity and familiarity, will influence the effectiveness of deception detection. On the basis of data collected from real-world online communities, the study concluded that familiarity of the members of a group with fellow members’ behaviors positively affects the ability of the group to detect deception. Further, gender diversity has a negative effect on the ability of a group to detect deception.

The study offers valuable insights that may strengthen deception detection in the interrogation process and highlights some potential challenges for effective detection. According to the research, creating a group whose members are familiar with fellow group members’ behaviors can have a positive effect on deception detection. The study also emphasizes that deception detection may be challenging for groups with gender diversity, possibly because gender diversity creates a less homogeneous group, which in turn results in a lower degree of behavioral familiarity.

Detection Wizards

Researchers have considered whether any tools or strategies can facilitate the identification of deception. Researchers have also examined whether some people are naturally more effective at identifying deceit. The idea of detection wizards was introduced by O’Sullivan and Ekman in 2004, and these two researchers believed that a few special individuals could achieve above-average accuracy in detection deception. They suggested not only that detection wizards exist, but that they are particularly effective at detecting deception because of their high degree of emotional intelligence. This allows them to identify nonverbal cues of deception more accurately than others (O’Sullivan & Ekman, 2004). In the interrogation process, the inclusion of wizards, individuals who are exceptionally good at detecting deception, could be beneficial for officers seeking to discern deceit.

Multiple researchers have considered and reviewed the work of O’Sullivan and Ekman (2004). Two such studies will be discussed. First, Roulin and Ternes (2019) examined the concept of deception detection wizards and argued that they likely are nonexistent. In their study, the authors challenged the idea of detection wizards by measuring deception detection in two different approaches (in-person and video-based) and two different contexts (social interaction and job interview). Results showed that individuals with a high degree of emotional intelligence do rely more than others on nonverbal information, and that the use of nonverbal cues is not related to deception detection. Combined with the findings of earlier studies raising methodological and statistical issues associated with the wizard hypothesis (Bond, 2008; Bond & Uysal, 2007), the findings of this study provide additional evidence that detection wizards are likely a myth.
This research offers strengths, providing strategies for supporting deception detection, and challenges, highlighting areas that make deception detection in interrogations difficult. The strengths include an emphasis on the complications associated with detection, which can help police understand that deception detection is unlikely to be easy. This is valuable information that can encourage officers to rely on facts and reality rather than assumptions. The article also includes a challenge for effective deception detection, stating that not enough information is currently available to allow a determination of whether or not detection wizards exist. This conclusion may leave room for some officers to consider themselves detection wizards.

In a later study, Bond and Uysal (2007) explored the previous research of O’Sullivan and Ekman (2004). Bond and Uysal offered a statistical critique of detection wizardry claims and concluded that no convincing evidence supports the idea that lie detection wizards have ever existed. The article is helpful for deception detection because it communicates clearly that detection wizards do not exist. This information can encourage detectives to rely on data and facts in their interrogations rather than assumptions of their own deception detection skill. The article presents challenges for deception detection by emphasizing that no clear evidence supports the existence of detection wizards, and it again underscores that detecting deception is very difficult and that no deception detection experts are likely to exist.

**Polygraphy and fMRI**

While some researchers have examined cues, intentions, and collaboration as support for deception detection, others have considered the use of technology, like polygraphy and fMRI. A polygraph measures the activity of the peripheral nervous system, which is used to gauge truthfulness (Langleben & Moriarty, 2013), and fMRI measures small and variable changes in the ratio of oxygenated to deoxygenated blood in the brain (Langleben, 2008). In theory, such changes may serve to indicate deception. Detectives may seek to use technology to scan physical responses and determine whether statements are true or false. Technology in the interrogation process not only influences officers but also may have an undue effect on jury decisions. Reliance on polygraphy results can cause significant problems (Han, 2016).

This literature review emphasizes that polygraphy is both a strength and a challenge in deception detection. The polygraph test is of different value to different people in different states and in different capacities. It is helpful for law enforcement to understand that whereas a polygraph test may offer strength as an additional tool that provides further information, it simultaneously creates challenges for deception detection because it is not viewed as reliable by all experts and is not admissible in court. If officers use a polygraph in the interrogation process, might the tool not simply encourage them to make decisions based on inadmissible information rather than on facts and details?

In another polygraph study, Meijer and Verschuere (2017) considered the use of brain imaging, fMRI, for the detection of deception. This method has attracted attention because it may overcome some of the shortcomings of polygraphy. However, the researchers identify that no unique physiological response and no particular brain region are associated with deception. Decisions are determined by logical inferences, and deception is inferred from cognitive control. Critics voice concerns about the test and argue that it can be used in only a small number of cases. The article provides valuable information, explaining the strengths and challenges of the application of fMRI in deception detection. As a strength, police can feel confident that more and
more forms of technology are being examined for their potential value in identifying deceit. In terms of challenges, the article concludes that at this time, fMRI, will not help officers detect deception.

Summary of Deception Detection Techniques in the Literature

On the basis of the literature review provided in this paper, a few conclusions can be drawn. First, deception detection is difficult, and all the literature confirms this idea. Second, assumptions about deception by others are generally not reliable, and factors like experience and the observation of body language do not necessarily enhance one’s ability to detect deception. Third, deception detection technology, such as polygraphy and even fMRI, is not reliable and not admissible in court. Finally, the literature does support that active, engaged deception detection that involves gathering facts, listening, asking questions, and collaborating with other engaged professionals may make it possible to identify gaps in information about suspects. The literature review is summarized in Table 1 (Appendix).

Recommendations

Challenges with deception detection are particularly concerning for police and detectives, who must conduct interrogations to determine if a suspect should be detained, questioned further, or let go. Some officers may believe they are effective at detecting deception because of enhanced training, experience with deception detection, and awareness of behavioral cues. However, throughout the literature, research shows that police officers are about as effective as chance at identifying deception. Most concerning is that under some circumstances, police were less effective than chance. An officer’s ability to be effective in the interrogation process is critical. The facts are established during the interview, and therefore the need to discern whether someone is lying or not is truly compelling. Clearly, police errors in detection deception result in long-term, significant consequence for individuals, communities, law enforcement, the legal system, and justice within the United States. With this in mind, two recommendations to support effective and efficient interrogation procedures will be offered: increased training for law enforcement specifically addressing deception detection and mandatory recording of the entire interrogation processes.

Increased Forensic Psychologist–Based Training

It is important for police to be aware of the ongoing psychological research regarding interrogation procedures and police effectiveness in deception detection. It is equally important that police be given training, tools, and methods to use in conjunction with the interrogation process to maximize their accuracy and efficiency in detecting deceit. The author proposes that police continue to receive training about deception. In addition to training, police should receive ongoing access to research that communicates the likelihood of accurate deception detection, the consequences of false confessions, and strategies for collecting information and aligning the responses of suspects in interrogations with collected information to find gaps requiring further exploration.

One way to support improved training and learning about proper interrogation practices is to increase forensic psychologist involvement in the interrogation process. Forensic psychologists may provide training to police interrogators about deception detection, false confessions, and
confirmation bias. They may also give expert opinion to law enforcement after examining videotaped interrogations. Finally, in support of effective legal procedures, forensic psychologists can provide information helping law enforcement, judges, and jurors understand the coercive nature of the interrogation process and its effect on suspects’ behavior (Alarez-Toro & Lopez-Morales, 2018).

Policy Reform: Mandatory Videotaping of the Entire Interrogation Process

In addition to ongoing training regarding deception detection, interrogation-related policies can benefit from other reform. One recommended reform is to mandate videotaping of the entire interrogation process. Dr. Saul Kassin, Distinguished Professor at the John Jay College of Criminal Justice, has pioneered the scientific study of police interrogations and false confessions. He has identified one critical reform: “Without equivocation, our most essential recommendation is to lift the veil of secrecy from the interrogation process in favor of the principle of transparency” (Kassin, Drizin, Grisso, Gudjonsson, Leo, & Redlich, 2010, p. 25). Dr. Kassin recommends that police be required to videotape all interrogations in their entirety, not just the final confession. Mandatory recordings may “deter police from using egregious interrogation tactics, inhibit frivolous defense claims of coercion, and make judges and juries more accurate fact finders of confession evidence” (American Psychological Association, 2019). The policy to mandate recording is supported by the American Bar Association (2004), the American Psychological Association (2014), Buckley & Jayne (2005), and The Justice Project (2007). In addition, police from hundreds of departments that record entire custodial interrogations consistently report benefits and fully embrace the practice (Sullivan, 2004). Identified benefits of recording entire interrogations include allowing detectives to focus on the suspect rather than on note taking, creating a record for later review, lessening the need for detectives to defend their interrogation practices in court, and enhancing public trust (Sullivan, Vail, & Anderson, 2008). According to The Innocents Staff (2020), about half of the states, in addition to the District of Columbia, currently require recording during a custodial interrogation: Alaska, Colorado, Connecticut, Illinois, Indiana, Kansas, Maine, Maryland, Massachusetts, Michigan, Minnesota, Missouri, Montana, Nebraska, Nevada, New Jersey, New Mexico, New York, North Carolina, Oklahoma, Oregon, Texas, Utah, Vermont, and Wisconsin. It is recommended that all states consider recording interrogation processes in their entirety.

Conclusions

Psychological theory and research show that harsh interrogation methods are ineffective; they increase resistance by the subject rather than facilitate cooperation, reduce the retrieval of information from memory, and make lie detection difficult (Vrij et al., 2017). It is interesting to consider the significant contrast between the findings of psychological research and the assumptions of officers. Throughout the literature, researchers emphasize that there is no sure way to detect deception, and the literature also supports the idea that law enforcement professionals believe they are effective at detecting lies. The contrast is significant because of the authority and responsibility that law enforcement officers carry every day.

Aware of this contrast, numerous researchers have tested deception detection techniques that might enhance an officer’s ability to identify lies, such as true/false intentions, examination of cues, group work for detection analysis, use of detection wizards, and polygraphy/fMRI. Throughout the studies, the researchers find some strengths, information that will enhance
effective deception detection, and uncover some challenges, issues that make detection deception difficult. Regardless of the deception detection method, the researchers emphasize that no human being and no current technology can detect deception 100% of the time. At best, during interrogations, detectives can gather information, ask questions, seek corroboration, use experts, and seek to understand the suspect. Police should avoid trying to induce confessions or base conclusions on assumptions. The consequences of even one error in police judgment regarding innocence or guilt can be significant, and these consequences create a negative ripple effect that is amplified at each level, beginning with the individual suspect and then reaching communities, cities, states, and ultimately the entire judicial system.

With such responsibility, law enforcement officers should be offered substantial support, current and advanced training, a plethora of tools for gathering and assessing information, ongoing access to forensic psychologists, and policies that support effective interrogation procedures. With support, training, resources, and policy reform, observations and communications in the interrogation process can become a part of the suspect’s story rather than the entire picture, ultimately allowing officers to rely on the big picture and gaps in information rather than on assumptions. Although no one can become a deception detection expert, we can become aware of confirmation bias and guard against forming a conclusion about an issue without further exploration of and attention to any and all evidence that might be contradictory.

References


**Corresponding author:**
Jillian Yarbrough, PhD
Classroom Center, Room 336G
West Texas A&M University
Canyon, TX 79016
Email: jryarbrough@mail.wtamu.edu

Jillian R. Yarbrough is a clinical assistant and Virginia Engler Professor of Business Management at West Texas A&M University. With more than 20 years of experience in distance learning and professional technology training, she has developed a unique teaching style in which academic discussion takes place within an entertaining and dynamic team forum. Yarbrough earned a BS degree from Texas Christian University and MS, MBA, and PhD degrees from Texas A&M University. Her interests include social psychology and employees, strategic alignment between employees and organizational goals, creative compensation, corporate training and development, and human relations.

**Appendix**

**Table 1. Summary of Review of the Literature on Deception Detection**

The following table summarizes the literature review and categorizes key concepts as strengths or weakness of deception detection in the interrogation process.

<table>
<thead>
<tr>
<th>Strengths</th>
<th>Weaknesses</th>
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<tr>
<td><strong>True/False Intentions</strong></td>
<td>1. Past memories can help someone offer deceptive statements as real memories can offer context for the lies. 2. Lies may be more abstract and abstraction may be a potential cue of deceit.</td>
</tr>
<tr>
<td>Strengths</td>
<td>Weaknesses</td>
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</tbody>
</table>
| **Cues**  | 1. Active deception detection is important and includes paying attention to information and gathering facts, both of which should be used in conjunction with cues to understand a suspect.  
2. Officers can be trained to use rapid judgments (RJs) and to pay attention to verbal and nonverbal cues. |
| **Group Methods** | 1. The article presents some challenges to officers, emphasizing that not all active deception detection will be effective and that there is no fail-proof method of deception detection.  
2. RJs do not discriminate between truth and deception, and the research reinforces that deception detection is challenging, requiring the monitoring of vocal and nonverbal cues as well as an examination of the verbal content of a statement for logical inconsistencies. |
| **Detection Wizards** | 1. Deception detection may be improved when an established group that is cohesive and satisfied works collectively to uncover deception.  
2. Creating a group that is familiar with group members’ behaviors can have a positive effect on deception detection. |
| **Polygraphy** | 1. Deception detection is challenged by group dysfunction.  
2. Gender diversity can have a negative effect on deception detection. |
| **Detection** | 1. Most people cannot effectively detect lies.  
2. Deception detection wizards do not exist. |
| **Methods** | 1. Current information is insufficient to be conclusive about whether or not detection wizards exist.  
2. Challenges exist not only in detecting deception by suspects but also in detecting deception by forensic professionals. |
| **Wizards** | 1. The polygraph is valued by some as offering insight into deception.  
2. Functional magnetic resonance imaging (fMRI) is a new tool with the potential to examine internal individual responses so that decisions are not based on assumptions. |
| **Polygraphs** | 1. Polygraphs are not admissible in court, and they are discounted by many people  
2. Researchers conclude that fMRI has done little to overcome the problems associated with deception. |
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