

ADVANTAGES OF DSM-5 IN THE DIAGNOSIS OF INTELLECTUAL DISABILITY: REDUCED RELIANCE ON IQ CEILINGS IN *ATKINS* (DEATH PENALTY) CASES

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I. INTRODUCTION

In 1988 the Georgia legislature passed the first state statute banning the execution of capital defendants with Intellectual Disability (“ID”).¹ That same year the U.S. Congress passed legislation—affecting only criminal defendants in federal proceedings—expressly providing that a “sentence of death shall not be carried out upon a person who [is mentally retarded].”² By 2001, a total of eighteen jurisdictions enacted similar legislation. In 2002, the U.S. Supreme Court issued its opinion in *Atkins v. Virginia*,³ which categorically banned the death penalty for capital defendants who have Intellectual Disability. *Atkins* overturned the 1989 decision, *Penry v. Lynaugh*,⁴ which stated that, while mental retardation is potentially important mitigating evidence, it is not grounds for automatic exemption from capital punishment.⁵

The *Atkins* decision created a special class of defendants exempt from the death penalty, with inclusion in that class determined by a clinical diagnosis that, while suggested by testifying experts, is essentially made by a judge or (less frequently) a jury. Most of this writing has made reference to provisions contained in the fourth edition text revision of the Diagnostic and Statistical

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¹ GA. CODE ANN. §17-7-131(j) (2013).

² Federal Death Penalty Act, 18 U.S.C. § 3596(c) (2012).

³ 536 U.S. 304 (2002).

⁴ 492 U.S. 302, 337-38 (1989).

⁵ *Id.*

Manual of Mental Disorders (DSM-IV-TR) published in 2000.⁶The May 2013 publication of DSM-5 contains some major changes in the recommended approach to defining and diagnosing ID.⁷It is our belief that these changes could have significant impact on the way in which *Atkins*' proceedings are pursued and decided.

The *Atkins* decision, as well as its implementation, has become an active topic for scholars publishing in both legal⁸ and mental health⁹ journals. Many complex problems in *Atkins* litigation have been discussed in the scholarly literature over the decade following the decision. In this paper, we focus mainly on one issue, the role of IQ ceilings. However, even here we do not explore all aspects of the topic. The *Death Penalty and Intellectual Disability: A Guide* is a comprehensive guide to current scientific understanding and best practices in the forensic diagnosis of Intellectual Disability.¹⁰

In this paper, we do the following: (a) provide a brief overview of the field of ID; (b) discuss in general terms the paradigm shift which the ID section in DSM-5 represents; (c) provide a brief history of *Atkins* litigation and the issues which arise in *Atkins* cases; (d) discuss in more detail the changes in DSM-5 and give some examples about how these changes might alter the way in which *Atkins* cases are litigated and; (e) discuss possible developments in the extension of death penalty exemption to other groups, both within, and outside of, DSM-5.

A. Brief Overview of Intellectual Disability

Intellectual Disability, which, until recently, was known as Mental Retardation, is a frequently occurring disorder, affecting over one percent of the American population.¹¹It is one of two classes of defendants the U.S. Supreme Court identifies as deserving automatic exemption from the death penalty. The other group that gets automatic exemption from the death penalty contains people who are younger than eighteen years old at the time of the commission of a

⁶ AM. PSYCHIATRIC ASS'N, DIAGNOSTIC AND STATISTICAL MANUAL OF MENTAL DISORDERS, FOURTH EDITION: DSM-IV-TR (1994) [hereinafter DSM-IV-TR].

⁷ AM. PSYCHIATRIC ASS'N, DIAGNOSTIC AND STATISTICAL MANUAL OF MENTAL DISORDERS, FIFTH EDITION: DSM-5(2013) [hereinafter DSM-5].

⁸ John H. Blume, Sheri L. Johnson & Christopher Seeds, *An Empirical Look at Atkins v. Virginia and its Application in Capital Cases*, 76 TENN. L. REV. 625 (2009); Richard J. Bonnie & Katherine Gustafson, *The Challenge of Implementing Atkins v. Virginia: How Legislatures and Courts Can Promote Accurate Assessments and Adjudications of Mental Retardation in Death Penalty Cases*, 41 U. RICH. L. REV. 811, 811-60 (2007).

⁹ Stephen Greenspan & Harvey N. Switzky, *Lessons From the Atkins Decision for the Next AAMR Manual*, in WHAT IS MENTAL RETARDATION? IDEAS FOR AN EVOLVING DISABILITY IN THE 21ST CENTURY 283-300 (Harvey N. Switzky & Stephen Greenspan, eds., 2006); Gilbert S. Macvaugh & Mark D. Cunningham, *Atkins v. Virginia: Implications and Recommendations for Forensic Practice*, 37 J. PSYCH. & L. 131 (2009).

¹⁰ THE DEATH PENALTY AND INTELLECTUAL DISABILITY: A GUIDE (Edward Polloway ed., 2013).

¹¹ See MARY BEIRNE-SMITH, JAMES R. PATTON & SHANNON H. KIM, MENTAL RETARDATION: AN INTRODUCTION TO INTELLECTUAL DISABILITIES (7th ed. 2006).

homicide.¹² There is a logical connection between the two exempting decisions—*Atkins*¹³ for ID, and *Roper v. Simmons*¹⁴ for young people—in that: (a) because of impaired brain development, people with ID never progress past the level of cognitive functioning found in children or young adolescents and; (b) most people younger than eighteen years old (an age that many developmental scientists believe should be closer to twenty-one) have continued development in their frontal lobes (the region of the brain particularly involved in reflecting on, and inhibiting, one’s actions) into adulthood.¹⁵ As a result, individuals with young mental age (whether normally caused in the case of young people, or abnormally caused in the case of adults with ID) are considered by the courts to lack full criminal responsibility and, thus, are ineligible for imposition of capital punishment.¹⁶

Although the *Atkins* decision was written in 2002, the idea behind it is not new, as Sir William Blackstone, in his eighteenth century *Commentaries on the Laws of England*, characterized a sub-class of people with ID as “wild beasts” who should not be held criminally responsible.¹⁷ The difference is that Blackstone was referring to a small sub-population he described as “idiots”¹⁸ (individuals who today would be considered to have severe or profound ID, with mental age below five or six) while the vast majority of today’s successful *Atkins* petitioners then would have been characterized as “imbeciles” (who today would be considered to have mild or moderate ID, with mental age around or below eleven). In the nineteenth century, several American states and territories (such as Colorado before it acquired statehood), heavily influenced by Blackstone, enacted what were termed “Idiot Not Guilty” statutes.¹⁹ These statutes granted exemption from criminal conviction to the lowest functioning members of the ID category, who in a sense were described as having a form of “moral insanity.” Higher-functioning ID individuals (characterized in statutes as imbeciles) were explicitly not exempted from criminal punishment in such statutes, but courts were encouraged to consider ID status as a possible reason for granting a reduced sentence.²⁰

¹² Previously, people younger than sixteen years old at the time of the commission of a homicide were exempted from the death penalty.

¹³ 536 U.S. 304 (2002).

¹⁴ 543 U.S. 551 (2005).

¹⁵ Laurence Steinberg, *A Social Neuroscience Perspective on Adolescent Risk-Taking*, 28 *DEVELOPMENTAL REV.* 78, 106 (2008), available at <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2396566/pdf/nihms33852.pdf>.

¹⁶ *Roper*, supra note 14, at 569.

¹⁷ 4 WILLIAM BLACKSTONE, *COMMENTARIES* *24.

¹⁸ *Id.*

¹⁹ See, e.g., *Arridy v. People*, 82 P.2d 757, 759-60 (discussing Colorado’s statute entitled “Lunatics and Other Mental Defectives”).

²⁰ *Id.* at 759-61 (discussing the varying definitions for those individuals with what would now be deemed ID).

That, in fact, continues to be true today, as: (a) impaired intelligence is often used to argue for lesser criminal sentences in both capital and non-capital cases; and (b) when granted *Atkins* relief in capital cases, individuals found to have ID do not avoid punishment; rather, they most often end up receiving sentences of life without possibility of parole (a sentence above the maximum possible today in a majority of European countries). From a historical standpoint, therefore, what is new about *Atkins*, is that it: (a) extends exemption from punishment to the entire class of people with ID, and (b) limits exemption only to one form of punishment: execution.

When Justice Stevens wrote the decision in *Atkins*, he and the others in the majority likely assumed that determining the outcomes in ID proceedings would be easier and more straightforward than turned out to be the case. In fact, *Atkins* hearings are often highly disputatious, lengthy, and expensive proceedings, which pose intellectual challenges to judges and attorneys, few of which bring to these hearings a sophisticated understanding of the ID field or of the complex definitions and issues involved in making such a diagnosis. To understand why this has turned out to be the case, a brief recent history of the ID construct is in order.

ID has, of course, always been around, with references to it in Egyptian, Greek, and other ancient documents.²¹ What is relatively new, however, is what we today term “mild ID.”²² Mild ID is to some extent a twentieth century invention, which owes much to the creation of the IQ test, and to two modern developments—universal public education and the eugenics movement—which also fueled the development of IQ testing.²³ Before the advent of formal intelligence testing, people with ID were identified informally, based on whether they could survive, physically and socially, in society. Around 1905, two French educational psychologists, Alfred Binet and Theodore Simon, invented the first adequate intelligence test for the purpose of identifying children who were likely to need special help in coping with school.²⁴ For this reason, their test, and all subsequent tests (which continue to be largely modeled on their efforts) consist mainly of academic-type tasks, making them especially good at predicting academic functioning. The Binet-Simon was translated and imported to the United States (where it became known as the Stanford-Binet) by two men very active in the eugenics movement: Stanford professor Lewis Terman, and Henry H. Goddard, an early ID researcher who coined the term “moron” (a Greek word meaning “foolish”) to refer to high-functioning individuals, most of whom today

²¹ C.F. GOODEY, A CONCEPTUAL HISTORY OF INTELLIGENCE AND “INTELLECTUAL DISABILITY”: THE SHAPING OF PSYCHOLOGY IN EARLY MODERN EUROPE (2011).

²² See JAMES W. TRENT, INVENTING THE FEEBLE MIND: A HISTORY OF MENTAL RETARDATION IN THE UNITED STATES (1995).

²³ *Id.*

²⁴ THE OXFORD COMPANION TO THE MIND 88 (O.L. Zangwill & Richard L. Gregory eds., 1987).

would likely not be considered to have ID.²⁵ Goddard used the new instrument and its underlying construct of intelligence to argue for a number of popular policy initiatives (e.g., placing people with mild ID into gender-segregated large institutions, adoption of enforced sterilization laws, federal quotas that largely cut-off immigration from Eastern Europe, Southern Europe, and Asia) intended to protect the white race from pollution by those that eugenicists considered to be genetically inferior. Not surprisingly, Goddard's highly polemical and eugenics-saturated books were made required reading by the Nazis.²⁶

With the increasing availability and use of intelligence tests, ID began to be defined and diagnosed entirely based on IQ scores. The beginnings of mandated special education services in the 1950's, combined with emerging concerns about racial and socioeconomic discrimination, brought about concern over the excessive numbers of poor minority children being wrongly assigned the ID label and placed in self-contained classes.²⁷ Those concerns, and additional concerns over the very inadequate treatment of ID (then termed "mental deficiency") in DSM-II, caused the American Association on Intellectual and Developmental Disorders ("AAIDD", earlier known as "AAMD" and then "AAMR") to issue its first modern diagnostic manual in 1961. Since then, starting with DSM-III in 1980, and followed by DSM-IV in 1994, DSM-IV-TR in 2000, and (to a much lesser degree) DSM-5 in 2013, the ID section in successive editions of DSM has followed the lead pretty closely of the most recent AAIDD manual.²⁸ There have been some differences, but these (up until DSM-5) mainly reflected the fact that the DSM manuals were revised less frequently and, thus, contained provisions that were later dropped or altered in subsequent AAIDD manuals.

Starting with the 1961 AAIDD manual, and continuing through subsequent AAIDD and DSM manuals, a consistent theme (although one that has not always been explicitly articulated) has been the need to move the field of ID beyond its excessive reliance on IQ, including somewhat arbitrary IQ ceilings. In 1961, the AAIDD described the overall disorder as "Mental Retardation" and came up with the three-prong definition that is still found in current manuals and statutes: (1) a significantly impaired intellectual functioning, (2) concurrent with deficits in adaptive behavior, and (3) onset within the so-called "developmental period" (set at a ceiling age of sixteen years old, which was later raised to eighteen years old).

²⁵ Henry H. Goddard, in *Journal of Proceedings and Addresses of the National Education Association of the United States*, July 1910.

²⁶ MICHAEL L. WEHMEYER & J. DAVID SMITH, *GOOD BLOOD, BAD BLOOD: SCIENCE, NATURE, AND THE MYTH OF THE KALLIKAKS* (2012).

²⁷ JANE R. MERCER, *LABELING THE MENTALLY RETARDED* (1973).

²⁸ Stephen Greenspan & Harvey N. Switzky, *Forty-four Years of AAMR Manuals*, in *WHAT IS MENTAL RETARDATION?: IDEAS FOR AN EVOLVING DISABILITY IN THE 21ST CENTURY* 3-28 (Harvey N. Switzky ed., 2006).

Using a statistical justification, prong one was set at minus one standard deviation (fifteen points) below the population mean (one hundred), or a score of eighty-five, which in terms of the normal distribution involves the bottom seventeen percent of the population. This was obviously way too high of a ceiling (the convention back then was that ID was an appropriate diagnosis for the least intelligent three percent of the population). The idea was that prong two would bring the prevalence down to below three percent, but that expectation was not realized, mainly because prong two was, for a long time, ignored by practitioners and agencies. The solution that followed, in a 1973 revision of the AAIDD manual,²⁹ involved eliminating the “Borderline ID” sub-group (IQ between 71 and 85) by dropping the IQ ceiling score from minus one standard deviation (IQ of 85, bottom seventeen percent) to minus two standard deviations (IQ of 70, bottom two percent). As adaptive behavior was beginning to be taken seriously (in part, because instruments with population norms were now available), this switched the problem from too many false positives (people being wrongly labeled ID) to too many false negatives (people being wrongly labeled non-ID). Some questions that were never really addressed were “what is so special about IQ standard deviation units, and why should they be used to determine whether or not someone receives a disorder label?” (This question is addressed somewhat in the next section).

A number of other provisions were tried in succeeding manuals to attempt to lessen the impact of IQ scores and IQ score ceilings. These included urging psychologists to take into account the standard error of IQ tests (an average of five points, mentioned in DSM-IV-TR), then actually raising the ceiling to 75 in the 1992 AAIDD manual, and “70-to-75” in the 2002 and 2010 AAIDD manuals, and finally raising it to 75 in DSM-5 (an IQ of 75 places one at approximately the fifth percentile). Various manuals also exhorted diagnosticians to not just blindly follow IQ ceilings, and also to place equal emphasis on prong two (adaptive behavior in the AAIDD manuals, referred to as “adaptive functioning” in DSM manuals), but these two pieces of advice have generally not been followed. The common practice, in *Atkins* determinations, has been to act as if prong two comes into play only when prong one has been met, and to act as if prong one is met only when a score falls below the ceiling. The main exception is that various score adjustments are allowed in most places, especially “Flynn effect”³⁰ adjustments to correct for obsolete norms.

This adjustment, which is now recommended in DSM-5, and accepted by many (but not all) courts, is justified by the consistent finding that when the same person is given both the old and new (e.g., WAIS-III versus WAIS-IV) edition of the same IQ test (correcting for possible learning from practice by allowing

²⁹ HERBERT J. GROSSMAN, CLASSIFICATION IN MENTAL RETARDATION 14 (1983).

³⁰ Geraldine W. Young, *A More Intelligent and Just Atkins: Adjusting for the Flynn Effect in Capital Determinations of Mental Retardation or Intellectual Disability*, 65 VAND. L. REV. 615 (2012).

several months to elapse), scores will be lower on the new test. When one divides the difference in mean scores by the number of years elapsed since the older test norms were gathered, the average product will be 0.3, meaning that scores go down an average of three points per decade of IQ norm obsolescence. The only explanation for this, given that the major test publishers spare no expense in compiling normative samples representative of the most recent census, is that the U.S. population has gotten better at some of the kinds of tasks measured by the test.³¹ (Scores go down because test norms are toughened in order for the mean score [for the generally more competent population] to stay at 100).³² The reason for making adjustments in individual *Atkins* cases (essentially subtracting 0.3 points for every year of obsolescence), is, therefore, to ensure that all defendants are held to the same metric, and—to paraphrase James Flynn³³—that a judicial decision regarding capital punishment not be a crap shoot affected by the version of a test (and how old the test was) that a psychologist happened to use.³⁴

II. DSM-5 AS THE CULMINATION OF EFFORTS TO REDUCE RELIANCE ON IQ CUT-OFFS

Up until now we have not said anything about the causes of ID, but it is a topic that is critical to understanding ID and to understanding the reasoning underlying some of the changes in DSM-5. It has long been understood that ID is an outcome state that can be the result of a large number of possible causes, with the cause of an ID for one particular person (which in most cases is unknown) differing from the causes of an ID in another person. These causes, which typically contribute to abnormal or deficient brain development, can be prenatal (chromosomal abnormalities, maternal consumption of alcohol during pregnancy, infections affecting the developing fetus, detachment of the placenta, etc.), perinatal (accidents during delivery, such as a cord compressed or wrapped around the neck) or post-natal (early head trauma, brain-affecting infection, malnutrition, severe deprivation). There are several hundred known causes of (or risk factors for) ID, but in many cases, the existence of such a factor does not guarantee an abnormal outcome. For example, while Fetal Alcohol Spectrum Disorder is one of the most prevalent causes of ID, the majority of children exposed prenatally to alcohol do not develop ID, even if their later IQ scores may be somewhat lower than might otherwise have been predicted.

A consequence of the concern decades earlier about wrongful assignment of the ID label to disadvantaged children is the assumption that in these children, IQ scores of 55 to 70 (the range of mild ID) are merely cultural artifacts, and that these scores should not be taken seriously as an indication of a truly disabling

³¹*Id.* at 624.

³²*Id.*

³³ James R. Flynn, *Tethering the Elephant: Capital Cases, IQ and the Flynn Effect*, 12 PUB. POL'Y & L. 170, 187-89 (2006).

³⁴ *Id.*

condition. In some cases, experts promote the concept of “race norming,” in which IQ points are added to artificially increase the IQ scores of poor minority children. This concept has been a significant factor in some court decisions. A common, but invalid, justification for “race norming” is the idea that an individual’s IQ score should reflect the individual’s ranking in relationship to others from their socioeconomic group. Both the AAIDD and the APA recognize that valid IQ tests are normed across the whole population and poor minorities are already represented in those normative samples. Also, current science recognizes that in most cases of ID which have a biological cause, the affected person’s IQ score falls in the mild ID range, with many falling above the arbitrary ceiling score of 70 to 75.

An example of this is Prader-Willi syndrome, a chromosomal disorder characterized by depressed (but not always below 75) intelligence, compulsive eating, and severe adaptive deficits. A strict adherence to an IQ cutoff score would cause a significant percentage of individuals with Prader-Willi syndrome to be denied ID services. However, a number of states, such as Connecticut,³⁵ have enacted laws which allow anyone with Prader-Willi syndrome (a very low incidence disorder that is diagnosed reliably by a blood test) to be given the ID label, regardless of how high their IQ score falls. There are other, much higher-incidence brain-based disorders—such as Fetal Alcohol Spectrum Disorder (FASD) and Autism Spectrum Disorder (ASD)—that are more likely than Prader-Willi to be found in criminal defendants, but which cannot be as reliably diagnosed medically. For these disorders, the same phenomenon holds: namely, IQ scores in or just below the 70 to 75 cutoff allow a diagnosis of ID for some people, but a large percentage (with identical adaptive deficits and support needs) are found to be ineligible because their scores slightly exceed the IQ cutoff. A major intent of the committee that wrote the ID section in DSM-5 was, we believe, to increase the likelihood that individuals with developmental brain-based disorders such as these will become eligible for the ID label, even when IQ scores are above artificially-set IQ ceiling scores. A feature found in DSM-5, but not in any previous DSM manual, is an explicit statement that they wish for ID to be viewed as a “disorder” rather than a “disability.”³⁶ The inspiration for this statement came from a paper published by the World Health Organization’s working group developing the ID section for the in-process eleventh edition of the International Classification of Diseases (“ICD-11”). In that paper,³⁷ the authors indicated an intention to adopt a new name for ID, which would henceforth be known as “Intellectual Developmental Disorder” (“IDD”). In fact, the ID committee in DSM-5 initially tried to rename the disorder IDD, but was forced (after strong protests from AAIDD) to back down. A compromise was

³⁵ See CONN. GEN. STAT. §§ 17a-210, 227 (Supp. 2014).

³⁶ DSM-5, *supra* note 7, at 33.

³⁷ Luis Salvador-Carulla et al., *Intellectual Developmental Disorders: Towards a New Name, Definition and Framework for “Mental Retardation/Intellectual Disability” in ICD-11*, 10 WORLD PSYCHIATRY 175 (2011).

worked out whereby the full name of the disorder in DSM-5 reads as follows: “Intellectual Disability (Intellectual Developmental Disorder),” or (“IDD”).³⁸This might seem like a mere semantic dispute, but in fact it represents something of a paradigm shift, and one that has significant implications for expert testimony in *Atkins* proceedings.

It is stated in DSM-5 that ID as conceptualized by AAIDD (which is an organization whose membership contains many state agency executives) can be described as representing a “disability” perspective. In contrast, DSM-5 is a manual of mental disorders (as reflected in the full name of the manual) and disorder is a medical concept because psychiatry is a medical specialty. ID differs from virtually all other categories covered in the DSM manuals in that it is the only one, to our knowledge, that has been defined largely on the basis of an arbitrary point in a statistical continuum. The disability approach (drawing an arbitrary dividing line at some point in a continuum) is understandable for bureaucratic purposes, particularly those involving access to finite resources. However, such an approach is less appropriate in a medical discipline (such as psychiatry) where diagnosis typically relies on integrative judgment by a qualified clinician who relies more on signs of etiology (such as an underlying brain syndrome) than on one discrete external behavior (such as performance on an IQ test).

In DSM-5, ID is a “neurodevelopmental disorder,” described as a family of brain-based conditions that arise during childhood and which are marked by limitations in cognitive development.³⁹While intellectual functioning continues to be mentioned as one of the three prongs defined in DSM-IV-TR, the DSM-5 carries an explicit statement that intellectual functioning may be assessed more reliably with comprehensive neuropsychological measures of “executive functioning” (planning, reasoning, inhibiting responses, reflecting, and other processes poorly tapped by IQ tests).⁴⁰ In addition to such an explicit statement about the need to go beyond IQ scores and to avoid IQ ceilings, the DSM-5 places greater emphasis on the role of adaptive functioning. The DSM-5 defines the severity level of Intellectual Disability (mild, moderate, severe, profound) solely using level of adaptive deficit⁴¹with a heightened focus on aspects of adaptive functioning (such as gullibility and risk-unawareness) that have a close connection to intelligence. This new focus defines ID much more broadly than a mere score on an IQ test.

In the balance of this paper, we explore DSM-5—and how it differs from DSM-IV-TR—in somewhat greater detail, beginning with a brief overview of how DSM-IV-TR has been used in *Atkins* proceedings in various jurisdictions.

B. Use and Misuse of DSM-IV-TR in *Atkins* Cases

³⁸ DSM-5, *supra* note 7, at 33.

³⁹ *Id.* at 31.

⁴⁰ *Id.*

⁴¹ *Id.* at 33.

Atkins specifically cited language from the American Association on Mental Retardation's 1992 diagnostic manual and from the American Psychiatric Association's 2000 DSM-IV-TR, as providing guidance to legislatures and courts seeking to define the disability then referred to as Mental Retardation.⁴² As already mentioned, the DSM-IV-TR definition was based on, and similar to, the AAMR's 1992 definition. Both definitions specified three criteria: (1) significant limitations in intellectual functioning, (2) significant limitations in adaptive behavior, and (3) onset of disability before eighteen years of age. These criteria have been adopted in the controlling statutes of most jurisdictions, implicitly establishing the AAIDD and American Psychiatric Association as primary sources of definition and direction in *Atkins* litigation.

The DSM-IV-TR is the most cited technical reference in *Atkins* cases, with the expectation that in the future the DSM-5 will fill that role. DSM-IV-TR defined ID imprecisely and formulated its definition based on 1992 terminology. The DSM-IV-TR provided no technical reference for clinical practitioners and no scientific guidelines for forensic practitioners. The DSM-IV-TR definition of Intellectual Disability is:

Significantly sub average general intellectual functioning (Criterion A) that is accompanied by significant limitations in adaptive functioning in at least two of the following skill 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). The onset must occur before age 18 years (Criterion C).⁴³

According to DSM-IV-TR, Criterion A, "subaverage intellectual functioning," is defined as "an IQ of about 70 or below" obtained by "one or more of the standardized, individually administered tests."⁴⁴ The DSM-IV does note that "there is a measurement error of approximately 5 points in assessing IQ" (referred to as Standard Error of Measurement, or SEM), but gives no guidance about the application of SEM. For Criterion B, DSM-IV defines "adaptive functioning" as "how effectively individuals cope with common life demands, and how well they met the standards of personal independence expected of someone in their particular age group, sociocultural background, and community setting."⁴⁵

For *Atkins* defendants, their clinical diagnosis and their future was determined in reference to the vague non-clinical definition of the DSM-IV. The DSM-IV definition has, heretofore, benefitted the government and others who

⁴² See *Atkins*, supra note 3, at 304.

⁴³ DSM-IV-TR, supra note 6, at 41.

⁴⁴ *Id.*

⁴⁵ *Id.* at 42.

espouse the Supreme Court's concern in *Atkins*: "Not all people who claim to be mentally retarded will be so impaired as to fall within the range of mentally retarded offenders about whom there is a national consensus."⁴⁶

The burden of proof of Intellectual Disability is always on the defendant or post-conviction petitioner.⁴⁷ Because Intellectual Disability is a clinical diagnosis, *Atkins* proceedings rely on expert opinion. Court opinions, transcripts, and expert reports demonstrate that judges, juries, attorneys and experts are equally baffled by the DSM-IV-TR definition of Intellectual Disability.

Atkins yielded no clarifying definition of Intellectual Disability. Nor did it institute any due process requirements for the factual determination of Intellectual Disability. "[W]e leave to the State[s] the task of developing appropriate ways to enforce the constitutional restriction upon [their] execution of sentences."⁴⁸ The result was an evidentiary free-for-all.

In early cases (and still today), courts and counsel were overwhelmed by basic statistical concepts of error of measurement, test norming, test validity and reliability. If an IQ score was too low, prosecutors often claimed that it was due to malingering. If an IQ score was too high, defense attorneys claimed that it was due to aging test norms (in some cases, both explanations would be applied). When the court didn't understand the concept of measurement of intellectual functioning, the court would apply non-quantifiable measures for intellectual functioning such as anecdotal evidence of the ability to understand information or the ability to communicate to determine whether intellectual deficits exist. If the defendant or petitioner could not prove deficits in Intellectual Functioning, the case was typically over.

In early cases, Criterion B—adaptive functioning—was largely thrown by the wayside. The DSM-IV-TR made no mention of standardized measurements of adaptive functioning. The intrinsic connection between adaptive functioning and intellectual functioning was lost in the shadow of IQ. If a defendant met Criterion A, but he was able to brush his teeth, to comb his hair, to have sex, and to engage in criminal activity, it was argued that he didn't have adaptive deficits and, thus, could not have Intellectual Disability.

The examples of judicial misunderstanding in early *Atkins* cases abound. In *Ex Parte Perkins*,⁴⁹ the first Alabama case after *Atkins*, the Supreme Court cited the DSM-IV-TR language as being "the most common definitions of mental retardation."⁵⁰ With no discussion of IQ testing, adaptive functioning or age of onset, the court supported a finding of "no indication in the record that Perkins is mentally retarded," noting the fact that the defendant had "interpersonal relationships."⁵¹ In *Ingram v. State*,⁵² the petitioner was denied a post-conviction

⁴⁶*Atkins*, supra note 3, at 317.

⁴⁷*See, e.g.*, *Clark v. Arizona*, 548 U.S. 735 (2006).

⁴⁸*Id.* at 317 (quoting *Ford v. Wainwright*, 477 U.S. 339, 416 (1986)).

⁴⁹ 851 So.2d 453, 457 (Ala. 2002).

⁵⁰*Id.*

⁵¹*Id.*

Atkins hearing due to an IQ of 81 obtained with the Kaufman Brief Intelligence test (DSM and AAIDD both state that non-comprehensive brief tests as well as group-administered tests should never be used diagnostically). The court ignored the DSM-IV-TR's requirement that IQ be obtained with a gold-standard standardized intelligence test and, Criterion B, adaptive functioning, was not assessed at all.⁵³ In *Anderson v. State*,⁵⁴ the defendant was convicted by a jury and sentenced to death. The same jury found that the defendant did not have Intellectual Disability, despite an IQ score of 65.⁵⁵

In *Murphy v. State*,⁵⁶ the state of Oklahoma announced that the Intellectual Functioning criteria was met

If he or she functions at a significantly sub-average intellectual level that substantially limits his or her ability to understand and process information, to communicate, to learn from experience or mistakes, to engage in logical reasoning, to control impulses, and to understand the reactions of others.⁵⁷

The defendant was interviewed for two hours and was tested with the Wechsler Abbreviated Scale of Intelligence ("WASI"). The WASI score was 67. The court determined that "the record does not indicate his intelligence is substantially limited, separate and apart from his excessive alcohol consumption."

In *Howell v. State*,⁵⁸ with IQ scores of 62, 63, and 73, the defendant was found not to have adequate deficits in intellectual functioning because other evidence, besides testing scores, suggested that Howell was not limited in his abilities to understand and process information, not limited in communications skills, was able to learn from experiences or mistakes, was able to engage in logical reasoning, and was able to understand the reactions of others. *Howell* imposed a bright-line IQ cutoff of 70 (with a bright line standard, no recognition is given to the possibility that a given score might be subject to error).⁵⁹ In *Black v. State*,⁶⁰ the defendant had Flynn-adjusted scores of 69 and 71. The court rejected consideration of SEM. Citing *Howell*, "The statute should not be interpreted to make allowance for any standard error of measurement or other circumstances whereby a person with an IQ above seventy could be considered mentally retarded."⁶¹

⁵² 360 Ark. 140, 200 S.W.3d 367 (Ark. 2004).

⁵³ *Id.*

⁵⁴ 357 Ark. 180, 163 S.W.3d 333 (Ark. 2004).

⁵⁵ *Id.* at 216-19.

⁵⁶ 2002 OK 32, 54 P.3d 556 (Okla. Crim. App. 2002), *aff'd*, 2003 OK CR 6, 66 P.3d 456 (Okla. Crim. App. 2003), *overruled on other grounds*.

⁵⁷ *Id.* at 567.

⁵⁸ 151 S.W.3d 450, 457-58 (Tenn. 2004).

⁵⁹ *Id.* at 457.

⁶⁰ *Black v. State*, 2005 Tenn. Crim. App. LEXIS 1129 (Tenn. Crim. App. 2005).

⁶¹ *Id.* (quoting *Howell v. State*, 151 S.W.3d 450, 456 (Tenn. 2004)).

III.COMPARISON OF THE ID PROVISIONS IN DSM-IV-TR AND DSM-5

For *Atkins* purposes, the DSM-5⁶² should guide judicial determinations by bringing greater clinical specificity to the diagnosis of Intellectual Disability. The DSM-5 should circumscribe expert testimony and limit opinions that are not based on science. This table encapsulates critical revisions relevant to *Atkins* cases.

Table 1—A Comparison of ID Provisions in DSM-5 and DSM-IV-TR

DSM-5 pp. 33-41 ⁶³	DSM-IV pp. 41-49 ⁶⁴
<p>Criteria A – what are examples of deficits in intellectual functioning? 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.</p>	<p>Criteria A – how to determine if there are deficits in intellectual functioning: General Intellectual Functioning is defined by the IQ or IQ equivalent obtained by assessment with one or more standardized, individually administered intelligence tests (WISC, SB, KABC). Significantly sub-average intellectual functioning is defined as a IQ of about 70 or below (approx. 2 std. dev. below the mean).</p>
<p>Criteria B – what are deficits in adaptive functioning for a diagnosis of ID? Deficits in adaptive functioning that result in failure to meet developmental and sociocultural standards for personal independence and social responsibility. Without ongoing support, the adaptive deficits limit functioning in one or more activities of daily life, such as communication, social participation, and independent living, across multiple environments, such as home, school, work, and community.</p>	<p>Criteria B – what is adaptive functioning? Adaptive functioning refers to how effectively individuals cope with common life demands and how well they meet the standards of personal independence expected of someone in their particular age group, sociocultural background, and community setting. Adaptive functioning may be influenced by various factors, including education, motivation, personality characteristics, social and vocational opportunities, and the mental disorders and general medical conditions that may co-exist</p>

⁶² Note that the American Psychiatric Association, which publishes the DSM manuals, made a switch from Roman to Arabic numerals with its fifth edition.

⁶³ DSM-5, *supra* note 7, at 33-41.

⁶⁴ *Id.* at 41-49.

	with Intellectual Disability.
Criteria C: when does ID originate? Onset of intellectual and adaptive deficits during the developmental period.	Criteria C: when does ID originate? Onset must occur before age 18 years.
Severity: Mild, Moderate, Severe, Profound Level of severity is defined on the basis of adaptive functioning, and not IQ score because adaptive functioning determines the level of supports required. IQ measures are less valid in the lower end of the IQ range.	Severity: Mild, Moderate, Severe, Profound Degrees of severity of ID can be specified, reflecting the level of intellectual impairment: Mild – IQ 50-55 to approximately 70 Moderate – IQ level 35-40 to 50-55 Severe – IQ 20-25 to 35-40 Profound – less than 20-25
Severity Level Mild Conceptual Domain pre-school—may be no conceptual differences school-age—difficulties in learning academic skills involving reading, writing, math, time or money. Support is needed in one or more areas to meet age-related expectations adult—abstract thinking, executive functioning, short-term memory and functional use of academic skills are impaired Social Domain immature in social interaction compared with same-age peers. Communication, conversation and language are more concrete or immature than expected for age. Possible difficulties regulating emotion and behavior. Difficulties are noticed by peers. Limited understanding of risk; social judgment is immature for age, and the person is at risk of being manipulated. Practical Domain May function age-appropriately in personal care. Individuals need some support with complex daily living tasks compared to peers. Typically requires support in grocery shopping, transportation, home and child-	Severity Level Mild Roughly equivalent to “educable.” The largest segment (85%) of those with ID Develop social and communication during preschool, have minimal impairment in sensorimotor areas, often are not distinguishable from non-ID children until later age. Can acquire academic skills up to approximately 6 th grade level As adults, achieve social and vocational skills adequate for minimum self-support but may need supervision. With appropriate supports, individuals with Mild ID can live successfully in the community, either independently or in supervised settings.

<p>care organizing, nutritious food preparation, banking and money management. Recreational skills resemble those of age-mates. Employment is available in jobs that do not emphasize conceptual skills. Need support to make health care decisions and legal decisions, and to learn a skilled vocation competently. Support is typically needed to raise a family.</p>	
<p style="text-align: center;">Diagnostic Features</p>	
<p>Essential features are deficits in general mental abilities (Criterion A) and impairment in everyday adaptive functioning, in comparison to an individual's age-, gender-, and socioculturally matched peers (Criterion B), with onset during the developmental period (Criterion C). A diagnosis is based on both clinical assessment and standardized testing of intellectual and adaptive functions.</p>	<p>The essential feature of Mental Retardation is significantly sub-average general intellectual functioning (Criterion A) that is accompanied by significant limitations in adaptive functioning in at least two of the following skill 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). The onset must occur before age 18 years (Criterion C).</p>
<p>Criterion A (refers to intellectual functions that involve reasoning, problem solving, planning, abstract thinking, judgment, learning from instructions and experience, and practical understanding.) Critical components include</p> <ul style="list-style-type: none"> Verbal comprehension Working memory Perceptual reasoning Quantitative reasoning Abstract thought Cognitive efficacy 	
<p>Measurement of Intellectual Functioning Intellectual functioning is measured with individually administered, psychometrically valid, comprehensive, culturally appropriate, psychometrically sound tests of intelligence. Score must be 2 std. dev. below the population mean. Clinical</p>	<p>Measurement of Intellectual Functioning General Intellectual Functioning is defined by the IQ or IQ equivalent obtained by assessment with one or more standardized, individually administered intelligence tests (WISC, SB, KABC). Significantly sub-average intellectual functioning is defined as a</p>

<p>Training and judgment are required to interpret test results and assess intellectual performance.</p>	<p>IQ of about 70 or below (approx. 2 std. dev. Below the mean).</p>
<p>Test factors affecting test scores: Practice effect Flynn effect Invalid scores from screening tests Instruments must be normed for sociocultural background and native language. Individual cognitive profiles based on neuro-psych testing may be more useful for understanding IQ than a single IQ score. IQ tests are approximations of conceptual functioning but may be insufficient to assess reasoning in real-life situations and mastery of practical tasks.</p>	<p>Test factors affecting test scores: There is a measurement error of approximately 5 points in assessing IQ, though this may vary from instrument to instrument (e.g. Weschler IQ of 70 is considered to represent a range 65-75.) Interpretation of results should take into account factors that may limit test performance Sociocultural background Native language Communicative, motor and sensory handicaps When there is significant subtest scatter, strengths and weaknesses, rather than the mathematically derived FSIQ will more accurately reflect the person's learning abilities. Averaging IQ scores can be misleading. Care should be taken to ensure that intellectual testing procedures reflect adequate attention to the individual's ethnic, cultural, or linguistic background. This is usually accomplished by using tests in which the individual's relevant characteristics are represented in the standardization sample of the test. Individualized testing is always required to make the diagnosis of ID.</p>
<p>Criterion B refers to how well a person meets community standards of personal independence and social responsibility, in comparison to others of similar age and sociocultural background. Adaptive functioning involves reasoning in three domains. Conceptual (academic) domain competence in memory, language, reading, writing, math reasoning, acquisition of practical knowledge, problem solving, and judgment in novel situations.</p>	<p>Criterion B refers to how effectively individuals cope with common life demands and how well they meet the standards of personal independence expected of someone in their particular group, sociocultural background and community setting. Adaptive functioning may be influenced by various factors, including education, motivation, personality characteristics, social and vocational opportunities, and the mental disorders and general medical conditions that may coexist</p>

<p>Social domain— Involves awareness of others' thoughts, feelings, and experiences; empathy; interpersonal communication skills; friendship abilities; and social judgment.</p> <p>Practical domain—involves learning and self-management across life settings, including personal care, job responsibilities, money management, recreation, self-management of behavior, and school and work task organization.</p> <p>Intellectual capacity, education, motivation, socialization, personality features, vocational opportunity, cultural experience, and coexisting medical conditions or mental disorders influence adaptive functioning.</p>	<p>with Mental Retardation.</p>
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<p>Measurement of Adaptive Functioning assessed using both clinical evaluation and individualized culturally appropriate, psychometrically sound measures. Standardized measures are used with knowledgeable informants (e.g., parent or other family member; teacher; counselor; care provider) And, with the individual to the extent possible Additional sources: educational, developmental, medical, and mental health evaluations Scores from standardized measures must be interpreted using clinical judgment. Adaptive functioning may be difficult to assess in a controlled setting (e.g. prison, detention center). Corroborative information reflecting functioning outside those settings should be obtained. Criterion B is met when at least one domain of adaptive functioning is sufficiently impaired that ongoing support is needed in order for the person to perform adequately in one or more life settings at school, at work, at home, or in the community. To meet diagnostic criteria for Intellectual Disability, the deficits in adaptive functioning must be directly related to the intellectual impairments described in Criterion A.</p>	<p>Measurement of Adaptive Functioning It is useful to gather evidence for deficits in adaptive functioning from one or more reliable independent sources (e.g., teacher evaluation and education, developmental and medical history). ABAS and AAIDD Adaptive Behavior Scales have been designed to measure adaptive functioning. These scales provide a score that is a composite of performance in a number of adaptive skill domains. Consideration should be given to the suitability of the instrument to the person's sociocultural background, education, associated handicaps, motivation, and cooperation. Behaviors that would normally be considered maladaptive (e.g., dependency, passivity) may be evidence of good adaptation in the context of a particular individual's life (e.g., in some institutional settings.)</p>
<p>Criterion C, onset during the developmental period, is satisfied when there is recognition that the intellectual and adaptive deficits are present during childhood or adolescence.</p>	
<p>Cause: ID is a heterogeneous condition with multiple causes.</p>	<p>Cause: Mental Retardation has many different etiologies and may be seen as a final common pathway of various pathological processes that affect the functioning of the central nervous system.</p>

<p>Associated Features</p> <p>Difficulties in social judgment, assessment of risk, self-management of behavior, emotions, or interpersonal relations.</p> <p>Lack of motivation in school or work environments.</p> <p>Lack of communications skills may predispose to disruptive and aggressive behaviors.</p> <p>Gullibility is often a feature, involving naiveté in social situations and a tendency to be easily led by others.</p> <p>Gullibility and lack of awareness of risk may result in exploitation, victimization, fraud, unintentional criminal involvement, false confession and risk for physical/sexual abuse.</p>	<p>Associated Features</p> <p>No specific personality and behavioral features are uniquely associated with ID. Some with ID are passive, place, and dependent, whereas others can be aggressive and impulsive.</p> <p>Lack of communication skills may predispose to disruptive and aggressive behaviors that substitute for communicative language.</p> <p>Some general medical conditions associated with ID are characterized by behavioral symptoms.</p> <p>May be vulnerable to exploitation by others.</p> <p>Have a prevalence of comorbid mental disorders</p> <p>Deficits in communication skills may result in an inability to provide an adequate history</p>
<p>Development and Course</p> <p>Onset is in the developmental period.</p> <p>Delayed motor, language, and social milestones may be identifiable within the first 2 years of life among those with more severe ID</p> <p>Mild ID may not be identifiable until school age when difficulty in academic skills becomes apparent.</p> <p>When ID is associated with genetic syndrome, there may be characteristic physical appearance or behavioral phenotype.</p> <p>Acquired ID may result from illness or head trauma during the developmental period.</p> <p>When ID involves a loss of previously acquired cognitive skills, the diagnoses of ID and neurocognitive disorder may both be assigned.</p> <p>After early childhood, ID is lifelong, Severity may change over time.</p>	<p>Development and Course</p> <p>Problems in adaptation are more likely to improve with remedial efforts than is the cognitive IQ, which tends to remain a more stable attribution.</p> <p>Age and onset depend on etiology and severity</p> <p>Mild ID is generally noticed later</p> <p>ID is not necessarily a lifelong disorder. Individuals who had Mild ID earlier in their lives manifested by failure in academic learning tasks may, <i>with appropriate training and opportunities</i>, develop good adaptive skills in other domains and may no longer have the level of impairment required for a diagnosis of ID.</p>
<p>Early and ongoing interventions may</p>	

<p>improve adaptive functioning throughout childhood and adulthood. In some cases, these result in significant improvement of intellectual functioning, so that the diagnosis of ID is no longer appropriate.</p> <p>For older children and adults, the extent of support provided may allow for full participation in all activities of daily living and improved adaptive function.</p>	
<p>Risk Factors Prenatal: genetics, environmental influences (e.g. alcohol, other drugs, toxins, teratogens.) Perinatal: labor and delivery events. Postnatal: hypoxic ischemic injury, traumatic brain injury, infections, seizure disorders, severe and chronic social deprivation, toxic metabolic syndromes and intoxications</p>	<p>Predisposing Factors The majority of pre-disposing factors include: Heredity Early alterations in embryonic development (toxins, alcohol, infections) Environmental influences—deprivation of nurturance and social, linguistic and other stimulation Mental disorders: ASD, PDD Pre-natal: Fetal malnutrition, prematurity, hypoxia, viral and other infections, and trauma Medical conditions: infections, traumas and poisoning</p>
<p>Diagnostic Markers A comprehensive evaluation includes an assessment of intellectual capacity and adaptive functioning; identification of genetic and non-genetic etiologies; associated medical conditions, and co-occurring mental, emotional and behavioral disorders.</p> <p>Components of the evaluation include pre- and perinatal medical history, three generational family pedigree, physical examination, genetic evaluation and metabolic screening and neuroimaging assessment.</p>	
<p>Differential Diagnosis A diagnosis of ID should be made whenever Criteria A, B, and C are met. ID is a neurodevelopmental disorder,</p>	<p>Differential Diagnosis The diagnostic criteria for Intellectual Disability do not include an exclusion criterion; therefore, the diagnosis should be</p>

<p>not a neurocognitive disorder which is characterized by loss of cognitive functioning. In some cases, a diagnosis of ID and neurocognitive disorder may both be given.</p> <p>ID is a disorder of deficits in intellectual and adaptive behavior. Communication disorders and Learning Disorder are specific to the communication and learning domains.</p> <p>ID is common in individuals with autism spectrum disorder.</p>	<p>made whenever the diagnostic criteria are met, regardless of and in addition to the presence of another disorder.</p> <p>In Learning Disorders or Communication Disorders (unassociated with ID), the development in a specific area (e.g., reading, expressive language) is impaired but there is no generalized impairment in intellectual development and adaptive functioning.</p>
<p>Comorbidity Co-occurring mental, neurodevelopmental and physical conditions are frequent in ID.</p> <p>The most common co-occurring disorders are attention-deficit/hyperactivity disorder; depressive and bipolar disorder, anxiety disorder, autism spectrum disorder; stereotypic movement disorder; impulse-control disorders; and major neurocognitive disorder.</p>	<p>Comorbidity The diagnostic criteria for Intellectual Disability do not include an exclusion criterion; therefore, the diagnosis should be made whenever the diagnostic criteria are met, regardless of and in addition to the presence of another disorder.</p> <p>The most common associated mental disorders are ADHD, Mood Disorders, PDD, Stereotypic Movement Disorder, and Mental Disorders due to a General Medical Condition.</p>

A perusal of the above Table shows that while there is much overlap between DSM-IV-TR and DSM-5, there are also significant differences. For the most part, these changes are intended to make for greater flexibility in basing diagnoses on clinical judgment, with less emphasis on IQ scores, and IQ ceilings. The DSM-5 links deficits in adaptive functioning with co-occurring deficits in intellectual functioning and requires a careful examination of adaptive behavior for reliable interpretation of IQ scores. The increased role of clinical judgment should expand get *Atkins* relief for brain-disordered individuals whose IQ scores do not fit perfectly in the DSM-IV-TR construct. Implementation of this framework depends, of course, on the training, competence and objectivity of individual experts and, of course, judges.

To illustrate the possible impact of DSM-5's recommended more flexible approach to possible judicial determinations of ID, the case of *Butler v.*

Quarterman,⁶⁵ demonstrates considerable difference in the rationale of the court and the guidelines of the DSM-5.

Steven Anthony Butler was convicted in a 1986 robbery-murder and sentenced to death. In 2007 his claim of *Atkins* exclusion went to trial. Testimony showed that Butler had a poor academic history, was labeled “educably mentally retarded,” and, had speech skills consistent with people having mild Intellectual Disability. He had a range of IQ test scores including those from IQ tests normed decades before their administration, all in the mild range of Intellectual Disability. Butler had very low Verbal IQ. Butler had been diagnosed as having severe mental illness, so severe in fact, that trial counsel declared a doubt as to his competence to stand trial.

The defense presented testimony of several mental health experts. The state presented testimony of George Denkowski, Ph.D.⁶⁶ Both parties presented testimony of lay witnesses.

The court, after fourteen days of testimony, decided that Butler did not have Intellectual Disability. Butler relied in large part on the testimony of the state’s expert. Among Denkowski’s opinions were: (1) the IQ test scores are unreliable and the petitioner’s low IQ score is due to poor education; (2) the Flynn Effect cannot be applied to all old WISC scores, but that the extent to which a score is inflated varied and must be determined on a case-by-case basis; (3) the petitioner could tell time from a watch with no numbers on its dial and could correctly state his social security number, he played sports, and maintained his hygiene;⁶⁷ (4) the petitioner was never placed in special education and that his family and friends neither considered nor treated him as mentally retarded, therefore he couldn’t have Intellectual Disability; and (5) the petitioner’s communication deficits were the result of severe mental illness. The court declined to consider the results of any of the three standardized adaptive functioning tests which were administered.

Direction from the DSM-5 could have grounded expert testimony in current scientific thinking, which could have affected the outcome of the case. For example, and in direct contradiction to the state expert’s testimony, the DSM-5 describes those with mild intellectual disability as having “difficulties in learning academic skills involving reading, writing, [and] arithmetic. . . the individual may function age-appropriately in personal care. . . [and] recreational skills resemble those of age-mates.”⁶⁸ Those with mild intellectual disabilities have deficits in academic learning.⁶⁹ The Flynn Effect is a factor that must be considered in the

⁶⁵ See *Butler v. Quarterman*, 576 F.Supp.2d 805 (S.D.Tex. 2008).

⁶⁶ Note that in 2012 Denkowski was sanctioned for “unscientific practices,” his license was reprimanded, and he was banned from further involvement in *Atkins* cases.

⁶⁷ These skills were characterized as “highly atypical skills for a mentally retarded person.” *Id.* at 812.

⁶⁸ DSM-5, *supra* note 7, at 34.

⁶⁹ *Id.* at 33.

interpretation of test scores.⁷⁰Co-occurring mental illness is frequent in Intellectual Disability; co-occurring disorders that affect communications and language may affect test scores.⁷¹Adaptive functioning should be assessed using individualized, standardized measurement instruments, with knowledgeable informants.⁷²The trial court's finding that Butler did not have Intellectual Disability was upheld on appeal.

IV. LEGAL DEVELOPMENTS IN *ATKINS* IMPLEMENTATION

In the remaining pages, we address legal developments in death penalty exemption, and *Atkins*' implementation in particular, with a focus mainly on prong one. These issues are: (a) the persistence of a "bright line" (inflexible IQ numbers) standard in a small number of states; (b) the so-called "Lennie" standard in Texas (which redefines ID for *Atkins* purposes as moderate or severe ID); (c) the existence of at least one state (California) in which there is no IQ ceiling barrier to being found to have ID; (d) the possibility and applicability for criminal justice ID determinations of applying a broader "developmental disability" standard; and (e) the implications of DSM-5, and new knowledge about disability, for opening up automatic exemption, both within and outside of *Atkins*, to a broader class of defendants.

A. The Bright Line Issue

Legislative and judicial definitions of Intellectual Disability vary from state to state. Most states recognize the intrinsic statistical nature of psychological testing, and in interpreting an IQ score, allow consideration of the basic statistical concept of standard error or measurement ("SEM"). Some states allow consideration of the Flynn Effect, which explains that the administration of older psychological tests will result in higher test scores. However, some states deviate greatly from the language and the intent of the AAIDD and DSM, narrowing the margins for a diagnosis of Intellectual Disability by setting a specific maximum IQ cutoff score of 70 for a legal determination of Intellectual Disability. Although a clinical diagnosis of ID takes into account a spectrum of deficits—intellectual, conceptual, practical and social—whose severity exists on a continuum, in these so-called "bright line test" states a legal finding of ID when an IQ score exceeds that specified numeric value is prohibited. As pointed out by Young,⁷³ this conception of an IQ score as an absolute number not subject to error or interpretation: (a) defies current scientific understanding of intelligence

⁷⁰ *Id.* at 37.

⁷¹ *Id.* at 40.

⁷² *Id.* at 37.

⁷³ Young, *supra* note 30.

and test development and (b) ignores the US Supreme Court's statement that courts should rely on the authoritative recommendations contained in the AAIDD and DSM manuals.

The adoption of a bright-line IQ cutoff has allowed many defendants, who for clinical purposes would likely be diagnosed with Intellectual Disability, to fall through the cracks of the constitutional protection that *Atkins* presumptively affords to all defendants with Intellectual Disability. A bright-line IQ cutoff ignores the predictable and quantifiable existence of test error. For Intellectual Functioning assessment, ten states have a bright-line IQ cutoff and disallow consideration of SEM. Six states have a bright-line cut-off but allow consideration of SEM. Sixteen states do not have a statutorily imposed bright-line cutoff and apply the SEM. The state of Tennessee until recently had a bright line standard, but in 2011 the state's high court abandoned such a rigid approach to IQ numbers, recognizing its lack of scientific justification.^{74,75}

It is widely acknowledged in the psychology field that norms on intelligence tests are toughened when tests are revised, causing scores on older tests to be higher than they would be if a more current test was used. The Flynn Effect, which has achieved common acceptance in the scientific community, quantifies this phenomenon as an increase of three IQ points for each decade after the IQ test was published. Applying the Flynn Effect, obtained IQ test scores should be reduced by 0.3 points for each year since the test norms were collected. Some courts understand and accept the scientific proof for the Flynn effect. Other courts seem confused and rely on uninformed testimony to the effort that "the Flynn Effect is not scientifically valid." Even when accepting the Flynn Effect and SEM, quirky decisions based on unscientific testimony can be found. Two examples are (a) when a U.S. District Court for the Eastern District of New York determined that the SEM for the WAIS-IV should be 2.12 points rather than the 5 points specified by both AAIDD and DSM-5,⁷⁶ and (b) when a Superior Court in California decided that the Flynn Effect should be .234 points per year, rather than the universally accepted and scientifically derived correction of 0.3 points per year.⁷⁷

The Tenth Circuit Court of Appeals recently rejected the Flynn Effect in entirety,⁷⁸ asserting that "the Flynn Effect, whatever its validity, is not a relevant

⁷⁴ *Coleman v. State*, 341 S.W.3d 221, 240 (Tenn. 2011).

⁷⁵ Note: On October 21, 2013, the U.S. Supreme Court granted certiorari in *Freddie Lee Hall v. Florida*, No. 12-10882. The single issue presented in *Hall* is whether Florida's bright-line IQ cutoff of 70 violates Mr. Hall's constitutional protection against capital punishment recognized in *Atkins v. Virginia*. A decision in favor of the petitioner can have significant effect for petitioners in those states where a bright-line IQ cutoff has been the sole basis for denial of a finding of Intellectual Disability.

⁷⁶ *U.S. v. Wilson*, 2013 U.S. Dist. LEXIS 16872at*69 (E.D.N.Y. 2013).

⁷⁷ *In re Melvin Turner* (S146120), Referee's Report to the Supreme Court, February 19, 2013. "Due to the problems associated with the Flynn Effect and the inability to explain why the Flynn Effect occurs, I have chosen a coefficient of .234 per year."

⁷⁸ *Hooks v. Workman*, 689 F.3d 1148, 1170 (10th Cir. 2012).

consideration in the mental retardation determination for capital defendants . . . *Atkins* does not mandate an adjustment for the Flynn Effect. Moreover, there is no scientific consensus on its validity.”

This statement is grossly inaccurate and this rejection of the Flynn Effect, in combination with the use of scientifically unjustified bright-line IQ cutoff scores, causes artificially high IQ scores, thus denying defendants a fair determination of intellectual functioning for *Atkins* purposes.⁷⁹

B. The Lennie Standard

As mentioned, the *Atkins* decision did not specify a definition of ID but left it to each state to come up with its own definition. In most instances, states passed laws that met that purpose, and such statutory definitions usually are taken almost verbatim from either DSM or AAIDD (one can tell which by whether the term used for prong two is “adaptive behavior” [AAIDD] or “adaptive functioning” [DSM]). In jurisdictions where there is no criminal statutory definition, the practice has been to go straight to the clinical manuals for guidance (an example is the Federal court system) or to refer to the definition contained in a state’s legislation determining eligibility for developmental services (an example is Ohio), and such definitions also are very similar to the ones in the two clinical manuals. Both pathways end up with basically the same definition, with the main variation being that some states (e.g., Georgia) do not specify an IQ ceiling, while some states (e.g., Alabama) specify a “bright line” number of 70, which allows no room for consideration of measurement error.

Texas is an example of a state that does not have a criminal statutory definition of ID but does have such a definition (which, as usual, is identical to the DSM/AAIDD definition) in legislation that determines eligibility for developmental services. However, instead of following the usual course of using the national standard, the Texas Court of Criminal Appeals chose a different path, which we are terming the “Lennie standard.” In 2004, the Texas high court ruled in the first *Atkins* case to come before it, *Ex parte Jose GarciaBriseño*.⁸⁰ In its decision, the court made reference to Lennie Small, the fictional central character in John Steinbeck’s 1937 novella *Of Mice and Men*. The court stated that someone as severely and obviously impaired as Lennie (who was lynched for the unintentional killing of a young woman) “might” be eligible for *Atkins* relief, but that petitioners not as severely impaired should not be, even if they met the diagnostic standards for ID services through the state’s developmental disabilities agency. Because the U.S. Supreme Court did not mandate a specific definition of ID, the court felt an obligation to the people of Texas to make access to the ID label harder to obtain when a death penalty is at stake than when access to

⁷⁹ Note that *Hall v. Florida* does not raise the issue of applicability of the Flynn Effect to IQ test scores.

⁸⁰ See *Ex Parte Briseño*, 135 S.W.3d 1 (Tex. Crim. App. 2004).

supportive services is at stake (some would argue the court had this exactly backwards).

Furthermore, the Briseño ruling is a departure from the national clinical approach to prong two (adaptive functioning). In what is now referred to as the “Briseño factors,” the court vaguely specified seven behaviors (e.g., planning in general and in the commission of a crime, normal-appearing conversation, ability to lie, etc.) which the court believed could be used to rule out a diagnosis of ID.⁸¹ The list, for which no scientific justification was given, represents a reversal of the AAIDD and DSM approach to prong two, which is based on the idea that people with ID can do many things. No particular accomplishment, whether it is real or not (and quite often, upon closer scrutiny, what looks like an accomplishment may turn out not to be), can be used to rule out the diagnosis of ID.

The Lennie Small prototype along with the Briseño factors can be viewed as an effort by the Texas Court of Criminal Appeals to take “mild ID” (IQ between 55 and 75)—where impairment, while significant, is not necessarily global or immediately obvious—out of the equation. By defining ID in relation to Lennie, who falls in the range of “moderate” or “severe” ID (IQs below 55), the court moved against the trend in *Atkins* litigation to raise the IQ ceiling for ID and to allow greater inclusion in the class.

C. Absence of IQ Ceiling

Some state criminal statutory definitions of ID do not state a specific IQ ceiling, but provide a constitutive (rather than operational) formulation for prong one along the lines of “significant impairments in intellectual functioning.” Interpretations by each state’s high court have generally adopted IQ ceilings (usually flexibly interpreted to allow for SEM, Flynn effect and other considerations of test error). A notable exception has been California, whose Supreme Court, in its standard-setting 2005 *Hawthorne*⁸² decision, explicitly stated that there would be no fixed requirement of an IQ score that would rule out a finding of ID if exceeded.

Less than two years later, the court’s resolve on this issue was tested when it ruled in 2007 on the appeal of Jorge Junior Vidal,⁸³ who had raised an *Atkins* claim in spite of several full-scale IQ scores (one as high as 92) that were substantially above the usual 70-75 ceiling. The defense experts argued that where there is very substantial discrepancy between Verbal and Performance IQ scores (in the case of the above score, the scatter was 42 points), full-scale scores are unreliable (this point was also made in DSM-IV-TR) and one should rely on the lowest sub-scale. The trial judge bought this argument and also noted other

⁸¹ *Id.* at 8.

⁸² *In re Hawthorne*, 105 P.3d 552, 557-58 (Cal. 2005).

⁸³ *See People v. Superior Court*, 155 P.3d 259 (Cal. 2007).

(e.g., executive functioning) qualifying indices of prong ID, along with substantial prong two deficits such as extreme gullibility. His finding that Mr. Vidal has ID was upheld by the state's Supreme Court, which restated its *Hawthorne* opposition to automatically-disqualifying IQ scores. In asserting that a judge could use a whole-person approach relying on other indices of prong one deficit rather than IQ, the California Supreme Court anticipated DSM-5 and provided a model for how *Atkins* determinations could be done in a flexible and fair manner.

D. The Developmental Disability Option

When the American Association on Mental Retardation changed its name to AAIDD and substituted the term ID for MR, there was significant opposition from local and state agency directors. The opposition focused on the belief that ID was a broader and more inclusive term, and its use would require agencies (which already had substantial waiting lists) to serve a larger and more diverse group of people with neurodevelopmental impairments, who deserved services but were denied them because of IQ scores that were too high. The AAIDD gave assurances that the name change was purely semantic, involved no change in definition, and would have no impact on prevalence rates. The resolution was a contested issue largely because the AAIDD took a "scientific" approach (use of numbers to create a false impression of rigor), which relied on standard deviation units to reduce ID's IQ ceiling from 85 to 70, leaving out many deserving individuals who needed supports, services and protections, including legal protections

The civil codes of many states are ahead of the criminal codes when it comes to redressing the problem of false negatives due to artificially low IQ ceiling barriers.⁸⁴ Some jurisdictions use a categorical approach supplementing the definition of ID to include one or more brain-based conditions, which produce significant deficits in thinking and adaptive functioning, but where the IQ scores may exceed the 70-75 IQ ceiling.⁸⁵ Other jurisdictions supplemented

⁸⁴ Natalie Novick-Brown, Stephen Greenspan & William J. Edwards, *Attaining Developmental Services Through the Side Door: A Survey of State Eligibility Exceptions to Intelligence Ceilings* (2013) (unpublished manuscript)(Seattle, Washington).

⁸⁵ An example of the categorical add-on approach is a 2006 intake and eligibility document published by the (then-named) Connecticut Department of Mental Retardation: "An application for eligibility determination may be made by: "someone . . . who is, appears to be, or believes him/herself to be a person with mental retardation, as defined in Connecticut General Statutes 1-1g or Prader-Willi Syndrome . . ." Prader-Willi is an add-on in numerous state eligibility guidelines, as is Autism/ASD, while a smaller number of states have add-ons for Traumatic Brain Injury, Fetal Alcohol Syndrome, Epilepsy, Cerebral Palsy, and Spina-Bifida. All these conditions (except for TBI) are congenital brain-based. They are often comorbid in people with ID, involve major adaptive deficits, and are associated with IQ scores which straddle the 70-75 ceiling. The correlation with ID, however, is much stronger for some added-on conditions (e.g., FASD, Autism) than for others (e.g., Cerebral Palsy, Epilepsy).

the definition allowing eligibility to people whose functional limitations and needs are the same as those manifested by individuals with IQ scores in the ID range.

The category of “Developmental Disabilities” (“DD”) grew out of the landmark Federal Kennedy ID legislation of the early 1960’s which resulted in the development of programs and facilities for research, planning, and advocacy for those with Intellectual Disability. In 1975, Congress substituted DD as its defining term. Initially, DD was defined categorically as MR plus add-ons such as autism, cerebral palsy, epilepsy and other neurological conditions originating prior to age eighteen, and which “are expected to continue indefinitely, and that constitute a substantial handicap.” In 1978, the Federal DD Act⁸⁶ was amended to include individuals who have a “severe chronic disability” that “is manifested before the individual attain age 22,”⁸⁷ which is “likely to continue indefinitely” and which “results in substantial functional limitations in 3 or more of the following areas of major life activity: (I) Self-care, (II) Receptive and expressive language, (III) Learning, (IV) Mobility, (V) Self-direction, (VI) Capacity for independent living,[and] (VII) Economic self-sufficiency” This list was never intended to be used diagnostically but can today be found in at least one *Atkins* state statute and is the basis for a number of state ID-service eligibility statutes and regulations.

The DSM-5’s newly-coined category of “Neurodevelopmental Disorders” can be thought of as a substitute for the term “Developmental Disabilities,” in that it includes ID and several other brain-based and early-onset disorders (such as Autism and Fetal Alcohol Spectrum Disorders) which are closely related to mental retardation or to require services similar to those required for individuals with mental retardation. This approach, intended to correct for the distorting effects caused by the excessive reliance on IQ and standard deviation-based IQ ceilings, appears to be an equitable and justifiable basis for extending *Atkins* coverage to that population of defendants who function in the world with serious intellectual impairments.

E.Implications for Other Disorders

Up until now we have discussed implications of DSM-5 for expanding *Atkins* within the framework of neurodevelopmental (early onset) disorders, by: (a) raising, eliminating or giving lesser weight to IQ and IQ ceilings, and/or (b) recognizing that other neurodevelopmental “developmental disabilities,” such as FASD and ASD, create similar limitations in a person’s adaptive functioning. The DSM-5 suggests that “neurocognitive” (adult-onset disorders) such as Traumatic Brain Injuries (TBI) and severe and chronic mental illnesses,

⁸⁶ Developmental Disabilities Act of 1984, 42 U.S.C. § 6000 (1984).

⁸⁷ This explains why some states define the age of onset as twenty-two years rather than eighteen years.

particularly schizophrenia, may result in comparable limitations in adaptive functioning. The age-of-onset criteria for ID has profound impact, as it excludes those whose functioning is as impaired as those who qualify for a legal diagnosis of ID.

F. Adult-Onset Brain Disorder

A practical question for *Atkins* assessment is, “at what point in a defendant’s life span is intellectual functioning most important for establishing an *Atkins* claim?” There are three general possible answers: (a) during childhood or adolescence; (b) as close as possible to the time of the crime (which, according to *Roper*, is after the age of eighteen); or (c) at the time that the *Atkins* claim is made, which in *habeas* cases could be when a petitioner is in his forties or fifties. The most logical answer is “b,” for the simple reason that it is the age that most reflects on moral culpability and the ability of the person to reflect on and control his alleged or proven criminal conduct. This is not the position of the majority of jurisdictions.

There are capital defendants who, at the time of their crime or trial, manifest very significant deficits in prongs one (intellectual functioning) and two (adaptive functioning) but who fail to meet prong three (developmental onset) because their cognitive and adaptive deficits were a result of an accident (such as a motorcycle accident) or event (such as a bar fight) which occurred after age eighteen but before the crime. From a functional standpoint, such a person’s competence profile and support needs at the time of the crime may be identical to someone whose disability occurred before the age of eighteen. It has been argued⁸⁸ that from a constitutional (not to mention clinical) standpoint, the *Atkins* exclusion should exist for any defendant who meets prong one and prong two at the time of the crime.

G. Severe Mental Illness

People with schizophrenia and other chronic psychotic disorders are typically very disabled, meaning that they have severe deficits in adaptive functioning (which, in the schizophrenia literature, are typically referred to as deficits in “functional skills”). In some ways these deficits, including gullibility and lack of risk-awareness, parallel the deficits of those with ID. Prong three (onset before age eighteen) is not as obviously present in mental illness as it is in ID, although a careful examination of the social history of people with adult-onset schizophrenia will typically show many early manifestations of emotional disturbance, along with disordered and defective thinking. Evidence of severe mental illness is typically brought in as a mitigating factor in the penalty phase of

⁸⁸ Steven J. Mulroy, *Execution by Accident: Evidentiary and Constitutional Problems with the “Childhood Onset” Requirement in Atkins Claims*, 37 VT. L. REV. 591 (2012).

a capital trial, but one could make a case that it has the same impact as does ID on one's ability to reflect on criminal behavior.

V. CONCLUSION

Courts strive to implement "the plain language of the law." However, a determination of Intellectual Disability based on an arbitrary IQ cutoff does a disservice to the spirit of the holding in *Atkins v. Virginia*. A fair determination of Intellectual Disability, grounded in current scientific knowledge, does not lend itself to absolutes. There is no set of simple rules for a clinically based diagnosis of Intellectual Disability. There is no magic IQ test score which serves to properly separate the defendants who "have" ID from those defendants who "do not have" it.

A diagnosis of ID does not lend itself to a rigid quantitative approach. The complexity of a competent, thorough diagnosis of ID requires: (a) acknowledgement that new scientific understanding recognizes that full-scale IQ is an imprecise window into the quality of a defendant's cognitive functioning,⁸⁹ and (b) current scientific practice understands that strict IQ cutoff scores, regardless of their basis in standard deviation units, do not enable us to understand the full extent of a defendant's ability or inability to reflect on his criminal conduct.⁹⁰

When *Atkins* established a constitutional exemption from capital punishment there was little appreciation of the necessity for deep consideration of the extent of a defendant's intellectual limitations and the impact of those limitations on his criminal conduct. Over time some courts have realized that: (a) establishing a legal diagnosis of ID is a complex scientific process; (b) there is no discrete dividing line between ID and other developmental forms of cognitive impairment,⁹¹ and (c) criminal culpability may be as compromised in defendants who meet the rigid legal definitions of ID, as in those who, because of IQ cut-offs, are not currently eligible for the diagnosis.

Intellectual Disability, as discussed in the DSM-5, reflects a new knowledge about the nature of ID and related disorders and an acknowledgement that other methods and measures besides full-scale IQ can and should be used for a competent determination of *Atkins* eligibility. In this paper, we have covered some of the problems with the reliance on IQ cut-offs, and introduced legal rationales for addressing these problems.

⁸⁹ DSM-5, *supra* note 7, at 37.

⁹⁰ Kevin S. McGrew & Barbara J. Wendling, *Cattell-Horn-Carroll Cognitive-Achievement Relations: What We Have Learned from the Past 20 Years of Research*, 47 PSYCHOL. IN THE SCHS. 651 (2010).

⁹¹ DSM-5, *supra* note 7, at 40.