



F53 Full-Scale Intelligence Quotient Test Scores and the Impropriety of “Ethnic (or Socio-Economic) Adjustment” in *Atkins* Cases

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After attending this presentation, attendees will gain new information regarding developments in epigenetics which relate to the validity of Full-Scale Intelligence Quotient (FSIQ) scores in determining intellectual disability for the purpose of eligibility of a criminal defendant to be executed if otherwise subject to the death penalty.

This presentation will impact the forensic science community by squarely challenging the scientific validity of testimony accepted by the courts — most recently, the California Supreme Court — to the effect that the FSIQ scores of African American defendants should be “ethnically adjusted” to make such defendants eligible to be executed.

In certain capital cases, a defendant who qualifies as “intellectually disabled” (“mentally retarded”) cannot be executed under the Constitution as held by the United States Supreme Court in the *Atkins* case. The first criterion of the legal definition of “intellectual disability” is a limitation in intellectual ability, primarily as measured by standardized tests of the person’s FSIQ. If the FSIQ score is two standard deviations below the norm and if the person meets the other two criteria (deficits in adaptive functioning and onset before age 18), the person cannot be executed. Failure to meet any of the criteria, including this first criterion based on FSIQ, generally means that the person will not qualify as “intellectually disabled” and, if otherwise subject to the death penalty, can be executed.

In cases in which the defendant is African American, prosecutors have recently proffered “expert” testimony that the defendant’s scores should be “ethnically adjusted.” The “adjustment” adds five to 15 points to the defendant’s FSIQ. In stark terms, this means that given two identically situated defendants with identical FSIQ scores, one Black and the other White, the government can execute the Black defendant and not the White defendant. This process of “ethnically adjusting” the FSIQ scores of African Americans has been accepted by some courts including, most recently, the Supreme Court of California.

This presentation will establish that “ethnic adjustment” is not supported by the scientific evidence. Deviations from the norm of various cohorts — specifically considered here, those of African Americans — are not explained by “ethnicity.” Instead, established research shows that the deviation from the norm is related to socio-economic deprivation which has an unfortunate sociological correlation with race. In other words, race in this context is a proxy for socio-economic deprivation.

That fact has not ended the controversy. Instead, certain prosecution experts have modified their testimony to claim that there should still be an upward adjustment for defendants (disproportionately African American) who lived in poor socio-economic circumstances. This argument is based on the contention that such defendants are “poor test takers” and that the deficit in the FSIQ score is learned/behavioral, not phenotypical/biological and therefore not a limitation. The result, according to these experts, is to add the five to 15 points which, again, permits the government to execute such defendants.

This presentation will review significant scientific evidence that supports the hypothesis that the lower IQ scores of the cohort of people who have suffered childhood abuse, neglect, stress, poverty, and trauma are epigenetic. In fact, exposure to such factors may engender multigenerational epigenetic effects. The lower IQ scores of the cohort of people who have suffered childhood abuse, neglect, stress, poverty, and trauma have a biological basis and therefore a physical limitation on intellectual disability, not a transient behavioral impairment in test taking.

This presentation will discuss the scientific literature documenting epigenetic effects of abuse, neglect, stress, poverty, and trauma resulting in changes in the pattern of gene expression. Longitudinal studies have shown that these effects are heritable to children and even grandchildren. These changes are in addition to other adverse biological influences like exposure to toxins in poorer environments and to the effects of fetal alcohol spectrum disorder and other insults to the fetus *in utero*.

Based on the scientific evidence, it is not proper to “ethnically” or “socio-economically” adjust the FSIQ scores of defendants. Epigenetic effects on genomic imprinting biologically alter cell development which can contribute to the intellectual disability reflected in FSIQ scores within the meaning of the *Atkins* case, preventing execution of the intellectually disabled. This presentation suggests that further research needs to be done; however, what is known right now specifically conflicts with the hypothesis of “ethnic (or socio-economic) adjustment.”

Death Penalty, FSIQ, *Atkins*