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Intelligence

Obituary
Arthur Robert Jensen, 1924–2012

Arthur (Art) Jensen was born in 1924 in San Diego where his father owned a building supplies business that provided a comfortable living for the family. His father's parents were immigrants from Denmark and his mother's parents were from Germany. As an adolescent, Art's passion was classical music, of which he had an encyclopedic knowledge. He could identify a huge number of pieces on hearing the opening chord. He intended to make his career as a musician, but came to realize he lacked the talent to reach the top of the profession, so he abandoned his musical ambitions and entered the University of California, Berkeley, where he majored in psychology.

After graduation, Art worked in a variety of jobs including his father's building supplies business, as a technician in a pharmaceutical business, social worker, higher school biology teacher and lab technician in the Zoology Department at Colombia University. In 1948 he took a master's degree at San Diego State University and then entered the PhD program at Colombia University where he worked on the Thematic Apperception Test as a measure of aggression. He obtained his PhD in 1955 and spent the years 1956–58 working with Hans Eysenck at the Institute of Psychiatry in London. In 1958 he was appointed assistant professor in the Graduate School of Education at the University of California, Berkeley, where he remained for the rest of his career.

In the 1960s Art worked on the learning abilities of Mexican-American and white children with IQs below 75. He noted that many of the Mexican-American children placed in classes for the "educable mentally retarded" seemed more normal in their play and perceptual-motor abilities than white children. To explain this, he formulated his theory of the existence of two abilities that he designated Level 1 and Level 11. Level 1 consists of the registration and reproduction of information such as digit span, while Level 11 requires mental transformation or manipulation of the input to obtain the correct solution. He concluded that many ethnic minority children were relatively strong on Level 1 abilities.

At this time, Art shared the prevailing view that the lower IQs of racial and ethnic minorities were environmentally determined. In 1966 he obtained a Guggenheim fellowship to spend a year at the Center for Advanced Study in the behavioral Sciences intending to spend his time writing a book on the adverse effects of cultural disadvantages on the intelligence of the racial and ethnic minorities. As he read and pondered the literature on this issue, he came to the conclusion that the genetic contribution to intelligence had been neglected and misrepresented in textbooks on intelligence. He published his conclusions on the difference in intelligence between blacks and whites in 1969 in which he wrote; "The preponderance of the evidence is, in my opinion, less consistent with a strictly environmental hypothesis than with a genetic hypothesis, which, of course, does not exclude the influence of environment or its interaction with genetic factors" (Jensen, 1969, p. 82).

Art's article received extensive coverage in the media including *Time*, *Newsweek* and *New York Times Magazine*. Radical groups on the Berkeley campus were outraged, demonstrated at his lectures and called for his dismissal. Armed guards were stationed outside his study to protect him from possible assault. These attacks were not confined to student radicals. In the summer of 1971 I attended a conference in Liège at which Art was scheduled to give a lecture on race differences in intelligence. As he began to speak, there were shouts of *Zeig Heil!* from the audience, but after some pleas from the chairman the shouts died down and Art was able to deliver his lecture. He gave the reasons for his conclusion that genetic factors are involved in the black–white difference in intelligence, consisting of first, when blacks and whites are matched on socioeconomic status, the normal 15 IQ point difference is slightly reduced but a 12 IQ point difference remains; second, Native American Indians have lower socioeconomic status than blacks but higher IQs; third, black–white difference is fully present in pre-school children, so cannot be attributed to educational disadvantage; fourth, the theory that low teacher expectations for blacks is a factor is not supported; fifth, there is no support for several other explanations including low motivation while taking tests, the administration of the tests by whites, or styles of child rearing; sixth, the high heritability of intelligence in both blacks and whites makes it improbable that the difference between them can be solely environmentally determined.

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Art spent the early 1970s producing two books defending and amplifying his conclusion that there is a genetic basis for some of the difference in average IQs between American blacks and whites (Jensen, 1972, 1973). His general position was that a number of converging lines of evidence point to a primarily genetic explanation of the black–white IQ difference. He concluded that "All major facts would seem to be comprehended quite well by the hypothesis that something between one-half and three-fourths of the average IQ difference between American Negroes and whites is attributable to genetic factors, and the remainder to environmental factors and their interaction with environmental factors" (Jensen, 1973, p. 363).

In the second half of the 1970s Art examined the frequent criticism that intelligence tests are biased in favor of the white middle class and against lower class whites and ethnic and racial minorities. He published his conclusions in *Bias in Mental Testing*, an 800-page exhaustive treatment of the problem in which he concluded that "most current standardized tests of mental ability yield unbiased measures for all native-born English-speaking segments of American society today, regardless of their sex or their racial and social-class background" (Jensen, 1980, p. 740).

From the early 1980s, Art devoted much of his time to the elucidation of Spearman's *g*, the general factor present in all cognitive abilities. He worked on the theory that individual differences in *g* might be a function of differences in the speed and efficiency of the neurological processing of information, and that this could be measured by reaction times. He calculated that the combination of a number of measures of reaction times yielded correlations of .6 to .7 with intelligence tests which he interpreted as support for his theory. He also showed that the neurological efficiency of the brain measured by the latency and amplitude of the evoked potential are significantly correlated with IQs (Reid & Jensen, 1993).

Art concluded that not all intelligence tests are equally good measures of Spearman's *g*. Tests of reasoning and problem solving are the best measures of Spearman's *g*, while tests of simpler cognitive processes such as short term memory for digits, are poorer measures. In his book *The g Factor* (Jensen, 1998) he presented evidence showing that the extent to which tests are measures of Spearman's *g* is related to their heritability, their correlation with the brain's evoked electrical potentials, their correlation with brain size, and the extent to which test scores are reduced by inbreeding. From this he concluded that the *g* factor reflects the biological basis of differences in mental ability. He also concluded that the black–white difference in intelligence is largely a function of a difference in *g*. This hypothesis was first advanced by Charles Spearman on account of which Art designated it Spearman's hypothesis.

Art's conclusions received significant support in 1994 from a study carried out by Waldman, Weinberg, and Scarr (1994). This was designed to show that when black infants are adopted by white parents they would have the same IQs as whites and therefore the black–white IQ difference is wholly environmentally determined. The authors of this study examined groups of black, white, and interracial babies adopted by white middle class couples. They found that at the age of 17 the IQs were 89 for the blacks, 98 for the interracial, and 106 for the white. Thus, a 17 IQ point difference between blacks and whites remained when they were reared in the same conditions. However, the IQ of 89 of the blacks seemed to show that they had gained 4 IQ points over the IQ of 85 for the general black population. From this the authors of the study concluded that "we feel that the balance of the evidence, although not conclusive, favors a predominantly environmental etiology underlying racial differences in intelligence and that the burden of proof is on researchers who argue for the predominance of genetic racial differences" (Waldman et al., 1994, p. 43), but their use of the term "predominantly environmental etiology" conceded that they accepted that genetic factors are also present. Even this interpretation of the results was shown to be incorrect when it was pointed out that the IQ of 89 of the black children was the same as that of blacks in the north central states from which the infants came and thus being raised by white adoptive parents had no advantageous effects on their intelligence (Lynn, 1994). Scarr (1995) later conceded this and was so shattered that she abandoned work on intelligence and retired to one of the remote islands of the Hawaiian archipelago.

In the twenty-first century Art continued to publish papers, jointly with Phil Rushton, supporting his position on the evidence for a genetic basis for a 50% to 80% genetic contribution to the black–white IQ difference (Rushton & Jensen, 2005). In 2010 they reviewed the evidence showing that there has been no narrowing of the 15 IQ point black–white IQ difference from 1918 up to 2008, as might be expected from the improvements in the environmental conditions of blacks, and therefore providing further evidence for the largely genetic explanation of the difference (Rushton & Jensen, 2010).

By the end of the first decade of the twenty-first century Art's conclusion that there is a substantial genetic basis for the difference in average IQs between American blacks and whites had become increasingly accepted. Linda Gottfredson (2005, p. 316) concluded that "Rushton and Jensen have presented a compelling case that their 50%–50% hereditarian hypothesis is more plausible than the culture only hypothesis. In fact, the evidence is so consistent and so uniform that the truth may like closer to 70%–80% genetic." Art's case was still not universally accepted but supporters of a wholly environmental explanation had become a dwindling band among whom the most prominent is Richard Nisbett (2009). It was something of a milestone in this controversy when Earl Hunt (2011, p. 434) in his authoritative textbook concluded that "Rushton and Jensen and Lynn are correct in saying that the 100% environmental hypothesis cannot be maintained. Nisbett's extreme statement has virtually no chance of being true".

Art's conclusions received recognition when in 2003 he was awarded the Lifetime Achievement Award from the International Society for Intelligence Research and the Kistler Prize from the Foundation for the Future.

Art's last work was concerned with reaction times as measures of intelligence. He developed an apparatus that distinguished between reaction time and movement time and showed that only reaction time is associated with intelligence. He advanced the theory that intelligence is the periodicity of neural oscillation in the action potentials of the brain and central nervous system in his last book *Clocking the mind: Mental chronometry and individual differences* (Jensen, 2006).

In personality, Art was exceptionally indifferent to group pressure for social conformity. He once told me that when he was eight years old he attended Sunday school, but he said

"The stuff they were telling us about miracles and the like just didn't make any kind of sense, so I kept raising objections and eventually they expelled me for asking too many questions."

On another occasion I asked him why he was one of the very few who worked on race differences and what was different about him that led him to work on this controversial topic that generated such animosity towards him. He replied that he thought the explanation was that he didn't mind being disliked by a lot of people. Most people, he said, have a dread of being disliked, but this was not something that bothered him. On yet another occasion, he told me that he had never had any interest in team sports. This is likely attributable to Art's lack of identification with groups and is a further expression of his independence of mind.

Another feature of Art's personality was that he was an amusing raconteur. I once heard someone ask him how he met his wife Barbara. He said he'd noticed her when he was a post-grad at Berkeley and she was working as an assistant looking after the monkeys in the animal house. He said "She seemed to be good at it, so I reckoned if she could look after monkeys she could look after me". He said that when they first got together she was keen on social life but "I soon cured her of that". Like most dedicated academics, he had little time for small talk at social functions. On another occasion he recounted how he first met William Shockley, the Nobel prize-winning physicist who had taken up the issue of race differences in intelligence. He attended a talk Shockley was giving and when it was over he went up to Shockley and said he would like to talk to him about these issues. Shockley gave him an appointment and when he arrived at his office, Shockley said "Now Jensen, I don't waste my time talking with fools, so before I give you any of my time I'm going to give you an intelligence test." Art reflected that he'd never talked with a Nobel prize-winner so he'd go along with this. Evidently he acquitted himself adequately because Shockley was willing to see him on that and a number of subsequent occasions. Art's verdict on Shockley was that he had negative charisma.

In 2004, Art developed Parkinson's Disease. He bore the disease with fortitude and continued to work and publish with barely diminished energy up to the last year of his life. He died from the disease on 22 October, 2012. His wife Barbara predeceased him and he is survived by a daughter.

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