



Thank you, Arthur Jensen (August 24, 1923–October 22, 2012)

During his life, Arthur Jensen was one of the most reviled personalities in the press and among a faction of academics. Among most of those who study intelligence, he was a greatly admired scholar. Those who did not live through the period of his popular infamy may wonder at this contrast. To fully appreciate his contributions, one must understand the times in which his early contributions were made.

Prof. Jensen received his doctoral degree in 1956 from Columbia University and then spent two formative years at the University of London. It is not surprising that a person who studied at institutions where James McKeen Cattell, Edward L. Thorndike, and Francis Galton and their students had once walked the halls should become interested in individual differences. On his return to the US in 1958, he accepted a job at University of California, Berkley and set about studying differences in cognitive ability in children from disadvantaged backgrounds.

The decade of the 1960's was a turbulent time in the US both socially and in the science of psychology. One may think that the current period is unsettled but it is relatively calm compared to the 1960's in the US. In the 1960's, there were numerous social movements that evoked incredibly strong emotions from supporters and opponents alike. These included the civil rights movements for racial equality (Civil Rights Act, 1964) and for gender equality (Betty Friedan, *The Feminine Mystique*, 1963), and protests against the war in Viet Nam. There were constant street protests during the decade for or against these movements. The world seemed to be coming apart and horrific events reinforced that conclusion. During the 1960's, John F. Kennedy, Malcolm X, Martin Luther King, and Robert F. Kennedy were assassinated. Political events were equally disturbing: the Berlin Wall, the Bay of Pigs, the Cuban Missile Crisis, troops sent to Viet Nam, the My Lai Massacre, the Los Angeles race riots, and protests on campuses where buildings were burned and students shot. Even events that are currently remembered with nostalgia (e.g., Woodstock, 1969) were, at the time, seen by many as signs of social disintegration. Even those on the frontline of social change attending Woodstock were offended when Bob Dylan played an electric guitar instead of an acoustic guitar taking it as a sign that he had abandoned the folk music tradition. Timothy Leary

urged young people to “turn on, tune in, drop out” and many “hippies” traveled the country seeking freedom from social constraints. There was also greater sexual freedom partly due to the recent availability of birth control spawning what was called the sexual revolution. Opposition to all of these changes was determined and persistent and came from conservative portions of government, the church, and other social institutions. People on both sides thought the world they knew could be destroyed at any time and, in a sense, it was. I remember a student in a class I taught around this time who began every question with “When the revolution comes, . . .”.

The dominant and prevailing movement in the social sciences in the US was behaviorism begun by John B. Watson who made the famous statement that he could make anything out of any child given the right environmental conditions. B. F. Skinner was Watson's heir and argued that a behavioral science must confine itself to observable behavior putting thinking and cognition out of reach of psychology. Environmental differences fully explained differences in general intelligence as best typified by J. McViker Hunt's *Intelligence and Experience* (1961). One behaviorist even suggested that all intellectual disability could be cured solely by controlling environmental contingencies.

But the lock hold that behaviorists and environmentalists had on psychology was beginning to crumble. In 1963, Erlenmeyer-Kimling and Jarvik published a survey in *Science* of the behavioral genetic studies done over the previous 50 years including 52 acceptable studies of 30,000 subjects. They commented that, “A parallel between genetic individuality and psychologic individuality has rarely been drawn because the usual assumption has been, as recently noted in these pages, that the organisms intervening between stimulus and response are equivalent “black boxes”, which react in uniform ways to given stimuli (p. 1477).” Some found the evidence in that review that intelligence scores were at least partially heritable shocking and disturbing.

In addition to the introduction of a genetic contribution, Flavell (1963) published “The Developmental Psychology of Jean Piaget” which made Piaget's work on intelligence accessible to English speakers. Piaget's work was cognitive and postulated unseen mental processes supported by observations

of behavior. Later, Ulrich Neisser (1965) published *Cognitive Psychology* which compiled cognitive research posing models of mental functioning speculatively including unobserved processes. While such speculations were forbidden in behaviorism, a growing number were becoming dissatisfied with the lack of explanatory power behaviorism provided.

Into this cauldron of social and scientific confusion, Arthur Jensen (1969) published a paper in *Harvard Educational Review* entitled, “How much can we boost IQ and scholastic achievement?” According to rumors, the paper was based on a talk given at a meeting of the American Association for Educational Research and editors of the *Harvard Educational Review* invited the paper and perhaps even sought to make it more controversial than the original submission. When the paper came to press, the results were explosive.

A brief synopsis of the paper is that this more than 120 page paper presented evidence bearing on the title question—is it possible to boost scholastic achievement and IQ through environmental intervention. Jensen’s answer to the question was that it may not be possible to boost either IQ or academic achievement through environmental interventions because both have a substantial heritable component and are highly correlated with each other. Not more than a few pages of the paper dealt with race and intelligence but given the frequently observed mean IQ differences between groups, there was some inevitable discussion of these differences. The basic thesis of the majority of the paper was that it may not be possible to raise IQ and subsequent academic achievement through environmental interventions.

Jensen had hit every exposed nerve of the time and immediately became a lightning rod for those against the ideas he presented which seemed to be nearly everyone. Heritable differences between groups were repugnant to psychological environmentalists, to communists, and to those who misinterpreted the fundamental concept of democracy that “all people are created equal” (instead of equal under the law). His thesis was also difficult to accept for those who believed that all differences between people could and should be accounted for by environmental differences.

The press reporting paid, at best, scant attention to the majority of the paper and, instead, focused on racial differences. Even discussing the possibility of racial differences seemed to be antithetical to the strong current of the time for racial equality that had been the basis for the Civil Rights Act and subsequent civil rights movement. There were a lot of different reasons that a lot of different people found what Jensen was saying offensive. Further, some felt entitled, justified, and even compelled to criticize what he had said in the most extreme terms imaginable. It sometimes seemed to me, that people had not even read the paper but were simply responding to what they believed it said. The paper was an easy target and the criticism was supported by a majority of the media establishment at the time.

In some cases, the criticism went far beyond what is acceptable in academic debate. There were bomb threats and death threats. Presentations had to be cancelled due to heckler’s protests. For a time Prof. Jensen required security. There were attempts to have Jensen removed from his job. He was called a racist by people who had never met him.

Jensen is certainly not the only intelligence researcher given this treatment to a greater or lesser degree. Any of those who

have can tell you that it is not a pleasant experience. Those who know Jensen well say that he was largely oblivious to these mostly empirically unsupported attacks. He may have been the perfect person for fate to pick for this assignment. He was confident of his facts, extremely well informed, and a very careful scholar in all important respects. And he seemed impervious to ad hominem attacks because he had a firm conviction about who he was and what he believed. He was single-mindedly devoted to finding the truth about the issues he raised and not to the turmoil that surged around him. He often referred to himself as an agnostic on many important issues and was eager to find the correct answer regardless if he, personally, was right or wrong. He served as a role model for many who have gone through similar experiences.

Was it worth it? Some think that those who study intelligence would be better off if the entire “Jensenism” episode had never happened. I strongly disagree. Jensen brought an appreciation for research on intelligence much as Julia Child, who became famous in the US during this same period, brought an appreciation of good food to Americans despite their strong cultural resistance to it. Over the time since this episode, the press and the population at large have a better, more critical conception of intelligence. Many of the ad hominem critics have been silenced because of the lack of validity of their arguments. Debates that take place now are much more reasoned and reasonable. An exceptional example is the high respect that Arthur Jensen and James Flynn have had for each other even though they have very different opinions about major issues. One certainty is that both would like to see major issues in the field resolved empirically.

Before Jensen, misunderstandings about intelligence abounded. There were people who believed that intelligence was totally environmentally determined. Jensen’s early understanding of genetic influences helped change that. There are few today who would not admit to genetic influences on intelligence. Interestingly, the place where Jensen has had the least impact is where he aimed his original argument: education. Very little educational research appreciates the substantial variance accounted for by student variables even though such variables have been identified at least since the Coleman report (Coleman et al., 1966).

There were people who believed that there were no differences in IQ between groups. Jensen relentlessly pointed out the differences. The fact of differences is seldom debated now. There is a vigorous debate about the causes of these differences but the very fact that this debate can be carried on also owes a debt to Jensen and the scholarly way he approached the issue.

It was frequently suggested that all differences between groups were due to biased tests. One infrequently hears that argument today thanks to *Bias in Mental Testing* (Jensen, 1980). It is more frequent today to hear someone wish that tests contained biased items so they could better understand differences between groups.

The importance of the general factor was not fully appreciated but is now thanks, in part, to *The g Factor* (Jensen, 1998). This was a feat that Spearman was unable to accomplish though he devoted his entire life to it. No one today argues much about the importance of *g*.

Though not fully realized, perhaps Jensen’s greatest contribution will be that the testing of intelligence must eventually

be done using a ratio scale of measurement as he argued in *Clocking the Mind* (Jensen, 2006). This will avoid many of the methodological confusions the field suffers today. Time will tell if the field moves in that direction. Based on Jensen's past record, I think it probably will.

For all of these things, the field owes Arthur Jensen a huge debt. I am sure that there are some who would disagree with this statement and would argue that the negative attention from the popular press was not worth the price of what we have gained. It is certainly not the case that he did all of this alone. Many others have participated and moved the field forward. It is always difficult to disentangle if great accomplishment shapes events or is shaped by them. For Arthur Jensen, this task is particularly difficult and the answer will probably depend on who you ask.

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Douglas K. Detterman
Case Western Reserve University, United States
E-mail address: Detterman@case.edu.

27 November 2012