June 12, 2006

Theoretically You Can't Teach Adults to Read and Write: But Just Keep On Doing It

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Why is it so hard to get funding for adult literacy education? Innumerable studies, reports, TV shows, and statistical surveys in most of the industrialized nations of the world declare that their nation is being brought to its economic knees because of widespread low basic skills (literacy, numeracy) amongst the adult population. But repeated calls for funding commensurate with the size of the problem go unanswered. Why?

Beneath the popular pronouncements of educators, industry leaders, and government officials about the importance of adult basic skills development there flows an undercurrent of disbelief about the abilities of illiterates or the poorly literate to ever improve much above their present learning.

This was encountered close to a hundred years ago when Cora Wilson Stewart started the Moonlight Schools of Kentucky in 1911. Her claim that adults could learn to read and write met with skepticism. As she reported,

"Some educators, however, declared preposterous the claims we made that grown people were learning to read and write. It was contrary to the principles of psychology, they said."

Today that undercurrent of disbelief still flows, but today it carries with it the flotsam and jetsam of "scientific facts" from genetics science, brain science, and psychological science. Look here at objects snatched from the undercurrent of disbelief stretching back for just a decade and a half.

2006. Ann Coulter is a major voice in the conservative political arena. In her new book, *Godless: The Church of Liberalism* (Chapter 7 The Left's War on Science: Burning Books to Advance "Science" pages 172-174) she clearly defends the ideas given in Murray & Hernstein's book *The Bell Curve* regarding the genetic basis of intelligence. By extension, since *The Bell Curve* uses reading and math tests in the Armed Forces Qualification Test (AFQT), Coulter is discussing the genetic basis of literacy and numeracy.

In her book she says about *The Bell Curve* book:

"Contrary to the party line denying that such a thing as IQ existed, the book methodically demonstrated that IQ exists, it is easily measured, it is heritable, and it is extremely important. …Among many other things, IQ is a better predictor than socioeconomic status of poverty, unemployment, criminality, divorce, single motherhood, workplace injuries, and high school dropout rates. …Although other factors influence IQ, such as a good environment and nutrition, The Bell Curve authors estimated that IQ was about 40 to 80 percent genetic." (p. 173)

Coulter goes on to discuss the misuse of science in the same chapter in relation to AIDS and homosexuality, feminism, trial-lawyers law suits, DDT and environmentalists, abortion and stem cell research, and other topics that are controversial among large segments of the population but of mainstream concern in the far right conservative base in the United States.

Because of her position as a best-selling author and spokesperson for conservative groups, Ann Coulter's ideas about the genetic basis of intelligence and high school dropouts can have a profound impact upon political thinking about basic skills education among adults who have not achieved well.

2005. The Nobel Prize winning economist James J. Heckman in an interview at the Federal Reserve Bank region in Chicago discussed his ideas about cognitive skills and their malleability in later life with members of a presidential commission consisting of former U.S. senators, heads of federal agencies, tax attorneys and academic economists. Later in his interview he discusses what Adam Smith, in his *The Wealth of Nations* said and why he, Heckman, disagrees with Smith.

According to Heckman, Adam Smith said,

"… people are basically born the same and at age 8 one can't really see much difference among them. But then starting at age 8, 9, 10, they pursue different fields, they specialize and they diverge. In his mind, the butcher and the lawyer and the journalist and the professor and the mechanic, all are basically the same person at age 8."

Heckman disagrees with this and says:

"This is wrong. IQ is basically formed by age 8, and there are huge differences in IQ among people. Smith was right that people specialize after 8, but they started specializing before 8. On the early formation of human skill, I think Smith was wrong, although he was right about many other things. … I think these observations on human skill formation are exactly why the job training programs aren't working in the United States and why many remediation programs directed toward disadvantaged young adults are so ineffective. And that's why the distinction between cognitive and noncognitive skill is so important, because a lot of the problem with children from disadvantaged homes is their values, attitudes and motivations. …Cognitive skills such as IQ can't really be changed much after ages 8 to 10. But with noncognitive skills there's much more malleability. That's the point I was making earlier when talking about the prefrontal cortex. It remains fluid and adaptable until the early 20s.

That's why adolescent mentoring programs are as effective as they are. Take a 13-year-old. You're not going to raise the IQ of a 13-year-old, but you can talk the 13-year-old out of dropping out of school. Up to a point you can provide surrogate parenting."

Here Heckman seems to think of the IQ as something relatively fixed at an early age and not likely to be changed later in life. But if IQ is measured in *The Bell Curve*, a book in which Heckman found some merit, using the AFQT, which in turn is a literacy and numeracy test, then this would imply that Heckman thinks the latter may not be

very malleable in later life. This seems consistent with his belief that remediation programs for adults are ineffective and do not make very wise investments.

2000. It is easy to slip from talking about adults with low literacy ability to talking about adults with low intelligence. On October 2, 2000, Dan Seligman, columnist at *Forbes* magazine, wrote about the findings of the National Adult Literacy Survey (NALS) of 1993 and said,

"But note that what's being measured here is not what you've been thinking all your life as "literacy. " The cluster of abilities being examined is obviously a proxy for plain old "intelligence."

He then goes on to argue that government programs won't do much about this problem of low intelligence, and, by extension, of low literacy.

These types of popular press articles can stymie funding for adult literacy education. That is one reason why it is critical that when national assessments of cognitive skills, including literacy, are administered, we need to be certain about just what it is we are measuring. Unfortunately, that is not the case with the 1993 NALS or the more recent 2003 National Assessment of Adult Literacy (NAAL). These assessments leave open the possibility of being called "intelligence" tests leading some, like Seligman, to the general conclusion that the less literate are simply the less intelligent and society might as well cast them off – their "intelligence genes" will not permit them to ever reach Level 3 or any other levels at the high end of cognitive tests.

1998. Dr. G. Reid Lyon of the National Institute of Child Health and Human Development provided an *Overview of Reading and Literacy Initiatives* to the U. S. Congress Committee on Labor and Human Resources on April 28, 1998. In his testimony he stated that in learning to read it is important for children to possess good abilities in phonemic analysis. He stated:

"Difficulties in developing phoneme awareness can have genetic and neurobiological origins or can be attributable to a lack of exposure to language patterns and usage during the preschool years…. It is for this reason that the National Institute of Child Health and Human Development (NICHD) within the National Institutes of Health (NIH) considers reading failure to reflect not only an educational problem, but a significant public health problem as well. Within this context, a large research network consisting of 41 research sites in North America, Europe, and Asia are working hard to identify (1) the critical environmental, experiential, cognitive, genetic, neurobiological, and instructional conditions that foster strong reading development; (2) the risk factors that predispose youngsters to reading failure; and (3) the instructional procedures that can be applied to ameliorate reading deficits at the earliest possible time."

Discussing why some children may have difficulties learning to read, Lyon went on to say:

"Children raised in poverty, youngsters with limited proficiency in English, children with speech and hearing impairments, and children from homes where the parent's reading levels are low are relatively predisposed to reading failure. Likewise,

youngsters with sub-average intellectual capabilities have difficulties learning to read, particularly in the reading comprehension domain."

Taken together, these statements by a senior government scientist advisor to both the President and the Congress of the United States indicates that the NICHD considers that in some cases low literacy may result from genetic, neurological, sub-average intellectual capability or a combination of these and other factors. Again, this may contribute to wide-spread beliefs that adults with low literacy may possess faulty genes, brains, and/or intellectual abilities and are unlikely to benefit from adult literacy education programs. From a policy perspective, then, policymakers may think that funding such programs may be regarded as a poor use of public funds.

1997. In a January 7, 1997 article in the *Washington Times*, a prominent newspaper published in Washington DC and read by many members of Congress, columnist Ken Adelman wrote:

"The age-old nature vs. nurture debate assumes immediacy as the new Congress and new administration gin up to address such issues as poverty, crime, drugs, etc. …This, the most intellectually intriguing debate around, is moving far toward nature (and far from nurture) with new evidence presented by an odd pair - gay activist Chandler Burr and conservative scholar Charles Murray. …In brief, their new findings show that 1) homosexuality and 2) educational-economic achievement are each largely a matter of genes – not of upbringing. …If true, as appears so, the scope of effective government programs narrows. Fate, working through chromosomes, bestows both sexual orientation and brainpower, which shape one's life and success. Little can be altered - besides fostering tolerance and helping in any narrow window left open - through even an ideally designed public program. (page B-6)"

The juxtaposition of homosexuals and those of lower educational and economic achievement is an obvious rhetorical device meant to stir negative emotions about both groups, This is a rhetorical device brought back into play by Coulter in her 2006 book cited above.

1991. One of the beliefs in our culture is that the brain and its intellectual capacity is developed in early childhood. There is a widespread belief that if children's early childhood development is not properly stimulated, then there is likely to be intellectual underdevelopment leading to academic failures, low aptitude, and social problems such as criminal activity, teenage pregnancy and welfare. It will be difficult if not impossible to overcome the disadvantages of deficiencies in early childhood stimulation later in adulthood. So why invest much in adult education? We need instead to put billions of dollars into early childhood education.

That these beliefs about the consequence of early childhood development are widespread is revealed by articles written by prominent journalists in major newspapers. For instance, on Sunday, October 13, 1991 the *San Diego Union* newspaper reprinted an article by Joan Beck, a columnist for the *Chicago Tribune* , that argued for early childhood education because,

"Half of adult intellectual capacity is already present by age 4 and 80 percent by age 8, ... the opportunity to influence [a child's] basic intelligence - considered to be a stable characteristic by age 17 – is greatest in early life."

A year earlier in the same newspaper on October 14, 1990 an adult family literacy educator was quoted as saying,

"Between the ages of zero to 4 we have learned half of everything we'll ever learn in our lives. Most of that has to do with language, imagination, and inquisitiveness."

This doesn't hold out much hope for the adults in family literacy programs.

Joan Beck was quoting research by Benjamin Bloom in the 1960s. But Bloom did not show that half of one's intellect was achieved by age 4. Rather, he argued that IQ at age 4 was correlated +.70 with IQ at age 17. Since the square of .7 is .49, Bloom stated that half of the variance among a group of adults' IQ scores at age 17 could be predicted from their group of scores at age 4. But half of the variability among a group of people's IQ scores is a long way from the idea that half of a given person's IQ is developed by age 4. This is not even conceptually possible because for one thing there is no universally agreed to understanding of what "intelligence" is. Further, even if we could agree on what "intelligence" is, there is no such thing as "half of one's intellect" because no one knows what 0 or 100 percent intelligence is. Without knowing the beginning and end of something we can't know when we have half of it.

1990. A report by the Department of Defense shows how these beliefs about the possibility of doing much for adults can affect government policy. After studying the job performance and post-service lives of "lower aptitude," less literate personnel, the report claimed that they had been failures both in and out of the military. Then, on February 24, 1990, the Director of Accession Policy of the Department of Defense commented in the *Washington Post* newspaper,

"The lesson is that low-aptitude people, whether in the military or not, are always going to be at a disadvantage. That's a sad conclusion."

A similar report of the Department of Defense study was carried in the *New York Times* of March 12, 1990. Then on April 8, 1990 Jack Anderson's column in the *Washington Post* quoted one of the Department of Defense researchers saying,

"...by the age of 18 or 19, it's too late. The school system in early childhood is the only place to really help, and that involves heavy participation by the parents. "

Regarding the news articles about the Department of Defense studies of "low aptitude" troops, the conclusions were based on analyses of the job performance of hundreds of thousands of personnel in both the 1960s and 1980s with Armed Forces Qualification Test (AFQT) scores between the 10th and the 30th percentiles, the range of scores which the Department of Defense studies called "low aptitude."

But contrary to what the Department of Defense researchers and accession policy maker stated, the actual data show that in both time periods, while the low aptitude personnel did not perform quite as well as those personnel with aptitudes above the 30th percentile, over 80 percent of the low aptitude personnel did, in fact, perform satisfactorily and many performed in an outstanding manner. As veterans they had employment rates and earnings far exceeding their rates and earnings at the beginning of the study. Further investigation by the media would have revealed

these discrepancies between what the Department of Defense's researchers said and what the actual findings were. But as it stands, these popular media types of stories reinforce the stereotypes about adults with who score low on intelligence or aptitude tests and perform poorly on tests of the basic skills of literacy and numeracy.

We can find these pieces of scientific debris all the way back to the Moonlight Schools of 1911. Following her account of those educators and academics who declared that teaching grown people to read and write was contrary to the principles of psychology, Cora Wilson Stewart said,

"While they went around saying it couldn't be done, we went on doing it. We asked the doubters this question, "When a fact disputes a theory, is it not time to discard the theory? There was no reply."

Today when we ask why the funding for adult literacy education is so little so late, there is still no reply. So we just keep on teaching adults to read and write. And we do it on the cheap, even though it is theoretically impossible.

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