

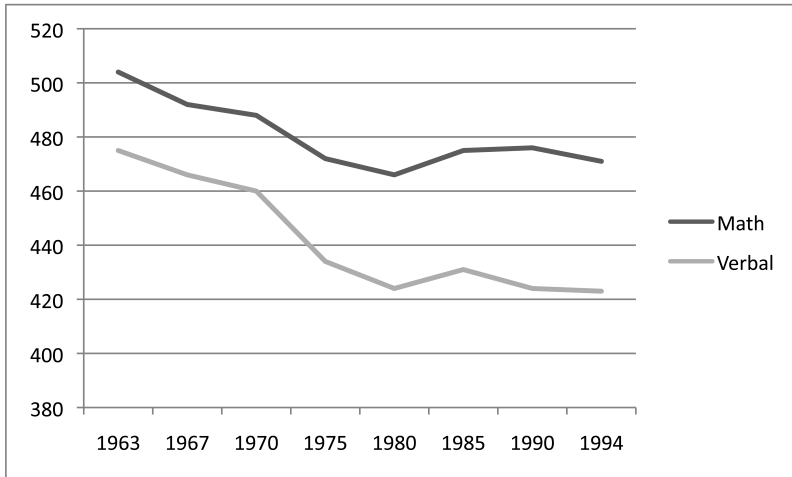


Notes from the Dismal Science:

IS AMERICA SMART ENOUGH TO LEAD THE WORLD?

Sherm Folland

The answer to the title question is “no, but we could be.” The issue matters greatly. Our democracy runs on the fuel provided by the average citizen. Our elites may seem to be in charge, but in truth the “elites” shudder at every turn of the polls, and the polls reflect the average citizen. Suppose you favor a policy proposal to curb global warming more effectively than alternative proposals, and you write your Congressman thinking that he is the main person to persuade. Think again. The person you really need to persuade is the average American, who may believe some pretty crazy things. The Gallup/Harris Poll reports that 35% of Americans believe we are visited by UFO aliens, who perhaps walk about, and 39% believe that God created the universe 6,000 years ago, about the time that the Sumerians invented beer. A poorly educated populace can and has led us into ill-conceived policies, such as ill-conceived wars, handicapped foreign health aid, and foolish debates over health care reform. It is a good time to talk about this because it doesn’t have to be this way; we are on the cusp of being able to do something constructive about it.



SAT Trend Between 1963 and 1994

Figure 1. Trends in SAT Math and Verbal Scores

Reading, Writing and 'Rithmetic

The problem lies in a lack of willingness to learn, not in a lack of ability to learn. General intelligence, which psychologists call “small g” and measure with IQ tests, has tended to rise over time in the United States and other developed countries, the so-called Flynn Effect. Measures of “smart” more relevant to the present purpose are the achievement tests such as SAT, ACT, GRE and so on. Figure 1 shows the historical patterns of SAT-Math and SAT-Verbal, adjusted for changes in test design and including one extrapolated pair of numbers. When the newspapers and magazines depict the history of SATs they typically go back only to 1980. But ironically it is the steep decline during the 17 years from the peak in 1963 to 1980 that contains the real drama. This decline became fresh in the public mind when a national commission published a cautionary book, *A Nation at Risk*, in 1982; it indicted our educational system and likened its failure to abject surrender during a time of war.

Note, too, that the verbal score sank the most precipitously and exhibited little or no recovery by 1994. A hypothesis: verbal ability is synergistic with math/science, and the national loss of verbal skills may be the most essential skill needed for reasoning sensibly through policy issues. At the secondary level, national policy places the greater educational emphasis on math and science, but it is not clear that math and science offer the biggest bang for the buck. The most societal gain per invested dollar will come from increased emphasis on reading and writing, especially the writing of college papers such as term papers. The main value of college reading and writing probably comes less from literature appreciation than from the acquired ability to study a dozen or more varied sources each with errors and idiosyncrasies and come up with a valid synthesis.

Since my view is non-subtly different from the prevailing view, which emphasizes math and science, let me explain. Like others in my field, I teach *inter alia* some algebra and some calculus, and certainly I wish that my students knew their math better. I am also not immune to feelings of frustration at student math essays that look more like bewildered guessing than any real understanding. But student dis-ease with math isn't a sufficient reason to teach more of it. In economics we find that it is best to invest in the alternative that gives the most gain for the dollar invested. To me this means reading and writing. OU students draw more on these skills throughout their lives.

The Decline of the Well-Read American

Conservative pundits often claim that the Sixties campus unrest was an important cause for what they further claim is the decline of college education. Leftist student unrest and the search for "relevance" of the Sixties they say, brought the watering down of textbooks and the rise of the "frivolous" student of today. Susan Jacoby, in her book, *The Age of American Unreason*, has a better idea. The real change, she says, was the rise of

youth-oriented culture and its corresponding explosion of youth marketing. Leftist student unrest of the Sixties, was mainly a reaction to an unpopular war, and it died out when the war in Vietnam ended. Polls of students today reveal neither leftist nor frivolous persons but instead students focused on their own income prospects and the things that they will buy.

My favorite chapter in Jacoby's book was the account of the dumbing down of the media. What made her credible was her rich and successful experience in writing magazine articles. The most measureable change over the years, she says, is that editors demand shorter articles. Women's magazine editors used to assume that women like to read, she says.

She adds:

Anyone who has written for print media of any kind since the late 1980s has had to cope with relentless editorial demands to tell the story in one fourth to one half of the space allotted for similar articles in the sixties or seventies. (p. 257)

When [Helen Gurley] Brown was replaced as editor of *Cosmopolitan* I had several articles in inventory, and one of the new editors informed me that my first task would be to cut the pieces in half. "Words, words, words," she said in an exasperated tone. (p. 258)

In her book, Ms. Jacoby also tells stories of the miseries experienced by others: a classical music critic in Minneapolis wasn't fired exactly, his job was fired; there were book reviewers who were lost their jobs because the newspaper's book review pages were cut back or eliminated.

USA Today forms a good example of the trend she finds. Their short pieces are tightly written but offer very little depth or background material. They are much like the printed version of sound bites, or as a friend of mine called it, "McNewspaper."

The post-60s years generated many consequential social changes, and not the least of these was a sharp drop in read-

**Table 1. *Survey of Public Participation in the Arts:*
Percentage of People Who Read Literature Outside of
School Assignments by Year and by Age Group**

	1982	1992	2002
18–24 year olds	59.8	53.3	42.8
25–34 year olds	62.1	54.6	47.7
35–44 year olds	59.7	58.9	46.6
45–54 year olds	54.9	56.9	51.6
55–64 year olds	52.8	52.9	48.9
65–74 year olds	47.2	50.8	45.3

Source: Mark Bauerlein, *The Dumbest Generation*, (New York Penguin Group, 2008), p. 46.

ing. Mark Bauerlein, in his book, *The Dumbest Generation*, documents this decline. Despite his gimmicky title, Bauerlein, having served as Director of Research and Analysis at the National Endowment for the Arts, is well positioned to measure the nation's reading habits. Table 1 shows the declines in the percentages of people who report reading literature, grouped by age category. It reveals that the sharpest declines are for the youngest age groups and for the most recent pair of years.

Many would attribute this to not just the growth of youth culture but also the advent of TV and, later on, the explosion of internet entertainments. Some media essayists who focus on computers and the internet claim that this change is not to be regretted because it is merely a shift from reading books, magazines and newspapers to reading on-line newspapers and blogs. Putting the lie to this optimistic alternative interpretation is the across-the-board shortening of virtually all forms of written communication. We no longer exert the energy to read deeply enough to understand the issues.

American Religion and the Paranormal

Historians, such as Robert Fogel (*The Fourth Great Awakening and the Future of Egalitarianism*), identify recurring eras of religious intensity in American history. These include our own era, roughly from the sixties to the present, the Fourth Great Awakening. During this era, we elected two presidents who said they were born-again Christians; the Christian right came to dominate the Republican Party; TV preachers were treated as serious politicians; and candidates, sometimes ludicrously, feigned religiosity so as not to offend the voters.

Thomas Jefferson once advised his countrymen that he would tolerate any religion so long as “it neither picks my pocket nor breaks my leg.” But in our era, faith-based initiatives have intruded into the public sphere, “breaking our leg.” These include proscriptions against foreign aid that promotes birth control or protection from disease, proscriptions against stem cell research, as well as active pressure to teach creationism in the high schools. Such approaches attack scientific reasoning and evidence head on, equating them with imaginative religious metaphysics. Given this intellectual soup, it’s not surprising that many American students treat serious argument as just a toss-up; it’s what one guy says and then what the other guy says. Apparently you win if you get to talk longest.

The evidence of this problem lies in what Americans commonly say they believe. The Pew Forum on Religion and Public Life regularly surveys popular opinion. Here is a sample of what they find: two thirds of Americans want both creationism and evolution taught in public schools. Only 48 percent accept evolution in any form. Sixty-eight percent of white evangelical Christians believe that the Bible should shape U.S. policy, not the will of the people, never mind the philosophical quandary of who gets to interpret the Bible. During the past decade, we were the only developed country whose leader doubted Darwinian evolution. Despite the scholarship of Bible historians, over 50 percent of American adults believe that all or some of the Bible is the word of God, while nearly 90 percent of born-

again Christians do. Given these numbers it seems odd that only 23 percent of adults believe that the Torah is the word of God—perhaps they don't know what the Torah is. However, if you recall reading the sheer cruelty in Deuteronomy, you may hope it's not the word of God.

Both the Gallup and Harris polls tend to group religious supernatural beliefs with the so-called paranormal beliefs. For example, they say that among American adults: 82 percent believe in God; 75 percent believe in heaven; 62 percent believe in hell; 42 percent believe in Darwinian evolution; 39 percent believe in creationism; 35 percent believe in UFOs; and 31 percent believe in witches.

International Comparisons

Cross-national comparisons of school children's competence at math and science are available through the *Trends in International Mathematics and Science Survey* (TIMSS) 1995. The quality of these data is protected by the participation of several U.S. universities. The most recent large sampling of 12th graders was in 1995, and, when it was made public, it proved shocking. Table 2 reports raw scores and rankings for the 20 participating countries studied in the first column. We nearly hit bottom with only Lithuania, Cyprus and South Africa having lower average scores.

This debacle was frequently reported in the media. But what the media didn't frequently report is found by comparing the second column, which shows comparable data for 4th graders. Our 4th graders nearly attained the top, ranking third out of 17 countries. Although it didn't fit on the table, the data for 8th graders continues the pattern. Our 8th grader scores and ranking lie in the middle between our 4th and 12th graders. The pattern clearly showed that the more one studies in the U.S. educational system, the less one knows.

A case can be made that 12th grade data are the most relevant to us, because 12th graders will soon matriculate into col-

lege. However, there has been no comparable TIMSS 12th grade since 1995. Table 3 investigates 4th and 8th grade progress by comparing the 1995 with the 2007 TIMSS study. Unfortunately in both cases the raw science scores dropped moderately and their rankings dropped slightly or stagnated.

The Problem in a Nutshell

A fair question to ask is: why is all this really a problem? Families are various—smarter/dumber, religious/secular, sensible/wacky—but generally they manage. There is no theorem I know of that tells at what point we are in danger. Of course, it is important which voices are being heard. With a few examples, I will try to make the case that these problems have serious consequences in America.

1. The Iraq War: in the buildup to the Iraq War, available media broadcast ample evidence that something was funny and doubtful about the administration's account.

2. Global Warming: too many believe the skeptics but the skeptics often seem to ignore the massive case made by the climate scientists. You can remain a popular pundit without needing to take science seriously—e.g. George Will and Tom Sowell.

3. The Health Bill debate: populist nonsense was aided and abetted by several members of Congress. “Death panels,” “massive government takeover,” “keep your big government hands off my Medicare.”

4. Treatment of Homosexuals: the opponents of gay marriage harkened back to moral expressions in scriptures that were over two to three thousand years old and existed in a socially harsher and cruder time, back when stoning was a common punishment for adultery and when victors in battle claimed the right slay all men, women and children of their opponent's tribe.

These four harms are serious and they were prominent in

Table 2. TIMSS Cross-National Comparisons of Students on Math and Science (with Rankings), 1995

Country	Math/Sci, 12th grade	Country	Sci. 4th Grade
Netherlands	559 (1)	Korea	597 (1)
Sweden	555 (2)	Japan	574 (2)
Iceland	541 (3)	United States	565 (3)
Norway	536 (4)	Czech Republic	557 (4)
Switzerland	531 (5)	England	551 (5)
Denmark	528 (6)	Canada	549 (6)
Canada	526 (7)	Singapore	547 (7)
New Zealand	525 (8)	Ireland	539 (8)
Australia	525 (9)	Scotland	536 (9)
Austria	519 (10)	Hong Kong	533 (10)
France	505 (11)	New Zealand	531 (11)
Germany	496 (12)	Norway	530 (12)
Hungary	477 (13)	Iceland	505 (13)
Russian Federation	476 (14)	Greece	497 (14)
Czech Republic	476 (15)	Portugal	480 (15)
Italy	475 (16)	Cyprus	475 (16)
United States	471 (17)	Iran	416 (17)
Lithuania	465 (18)		
Cyprus	447 (19)		
South Africa	352 (20)		

Notes: Available at IEA Third International Mathematics and Science Study (TIMSS), 19945, at [HTTP://timss.bc.edu](http://timss.bc.edu), downloaded on May 14, 2010. The table reports the countries that qualified according to TIMSS as meeting methodological standards of sampling.

Table 3. Progress (?) in Our Scores from 1995 to 2007.

Category	Grade level	TIMSS 1995	TIMSS 2007
International Average	4th Graders	528.4	535.9
International Average	8th Graders	527.0	520.0
United States Average	4th Graders	565.0 (3)	539.0 (8)
United States Average	8th Graders	534.0 (12)	520.0 (11)

America in large part by a population who on average did not either read deeply or widely and in this sense were not “smart.”

America Never Quits

This headline may seem ironic or overly bold, but there is a truth to it, which many recognize. When I worked in Freiburg i Breisgau, my German colleagues loved to point out America’s flaws: the homeless, Detroit . . . But one said that there is something about which Germans remain in awe of America: when we are in trouble we always seem to revive ourselves. There are four reasons why this may be true for American education.

First, research by Eric Hanushek and by Caroline Hoxby showed that in K12 it is the individual teachers who count the most. This presents an opportunity and incentive to get the best teachers promoted. A hopeful sign is that vigorous reformers like Michelle Rhee in Washington DC are having success in taking on vested and entrenched interests. Promoting this policy with judicious fairness is still something we have to learn.

Second, had we the collective will, we could extend both the school day and the school year. The “inefficiency” of our public schools is true but overstated. More school would help our kids catch up to countries who already do this. Our international competition uses this approach.

Third, charter schools may help. So far the charter school movement has been successful in New York State but unsuccessful in the main elsewhere. I am still hopeful, because most charter schools today are still not mature versions, they often just mimic the public school offerings. The rate at which charter schools today outperform or underperform public schools is largely irrelevant as long as charters come to offer a true alternative to the publics and in doing so come to offer a true “competitive effect.” For example, suppose that 30 years from now the public school students score higher than the charter school students, but suppose, too, that both sets of students score much higher than before. This could be attributed to a competitive effect that would rightly be called a success of the charter school movement.

Finally and most importantly, America’s conception of intelligence is changing. An excellent recent book by Richard Nisbett, *Intelligence, And How To Get It*, meticulously enlists recent research to show, contrary to the old view, that intelligence gains can be achieved by dozens of means, including more schooling. The old view, exemplified by Murray and Herrnstein in the *Bell Curve* is that IQ is fixed at an early age and there is little that can be done about it. In this view, there was little to admire in the high IQ nerd. The new facts *a la* Nisbett offer a reinvigorating view. I think it will eventually change America’s understanding of the value of education.

Last Words

We don’t criticize people for things they can do nothing about. It would be rude if not also cruel. We don’t criticize people for having cancer or getting polio. But we do criticize ourselves and our fellow Americans for being overweight, not exercising enough, smoking or drinking to excess. We ought to criticize ourselves and our fellow Americans when we are not “smart” about policy. There is no longer any excuse for not knowing that Medicare is a government program or not know-

ing that a local snowstorm has little or no relevance for global warming. This can be boiled down to two reasons.

One is the message from Nisbett that even the ability to learn quickly can be developed and extended. He says that even the IQ elite groups can be upended. Rather than a genetically fixed attribute, like the color of one's eyes, intelligence is plastic. Two, high IQ itself is neither a necessary nor a sufficient condition for a person to become informed about the issues. To a large extent "smart" is not something you are, but something you do. Even someone who sees himself as modestly educated can learn background on issues by talking with friends, subscribing to a few good magazines, and debating issues over the dinner table. It's a free country, and those who don't wish to bother have a right to become un-smart on issues. But they ought to be criticized for it as much or more than we criticize fellow Americans who smoke, overeat or exercise too little. Unlike people who overeat, deliberately staying ignorant of issues that affect the country has substantial spillover effects on the rest of us. Ignorance isn't a birth defect—it is something you do.

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