The first book I ever read about education was Postman and Weingarten’s 1969 classic *Teaching as a Subversive Activity*, and one of the points that’s stayed with me is their discussion of the libel-label fallacy – the notion that once we confer a name on something we deceive ourselves by thinking we understand it completely. Scientifically Based Research and the Achievement Gap come to mind. Fast forward 40 years, and I find myself trying to understand what happened to the U.S. economy. Not surprisingly, the same libel-label fallacy impairs understanding. Collateralized Debt Obligation and Default Swaps come to mind.

In an attempt to make sense of my disappearing 401K, I happened across an article “Our Epistemological Depression,” by Jerry Z. Muller, in, of all places, the *Journal of the American Enterprise Institute*. Amazingly, his analysis – designed to explicate what went wrong with the economy – is a very accurate description (change only one or two words) of some of the things that are wrong with our education system. What follows are the two key paragraphs of Muller’s paper (with my changes or explications in *italics*).

The cult of “accountability” was related to diversification. As companies *(school systems)* grew larger and more diverse in their holdings *(offerings and services)*, new layers of management were needed to supervise and coordinate their disparate units. From the point of view of top management *(supervisors, school boards)*, the diversity of operations means that executives were managing assets and services with which they have little familiarity. This has lead to the spread of pseudo-objectivity: the search for standardized measures of achievement across large and disparate organizations. Its implicit premises were these: that information which is numerically measurable is the only sort of knowledge necessary; that numerical data can substitute for other forms of inquiry; and that numerical acumen can substitute for practical knowledge about the underlying assets and services *(we can replace the formative assessment of an experienced teacher with some standardized test)*.

A good deal of our current economic *(educational)* travails can be traced to this increasing valuation of purportedly objective criteria, so denoted because they can be expressed and manipulated in mathematical form by people who may be skilled at such manipulation, but who lack “concrete” knowledge or experience of the things being made or traded *(or of students being taught)*. As Niall Ferguson has put it, “Those whom the gods want to destroy they first teach math . . . .” Attaching a number creates a belief that the information is more solid than is actually the case. That is what I mean by “pseudo-objectivity.” In each case, it is
a response to what (to recoin a phrase) one might call alienation from the means of production (the distance between the experiences of teachers and students and the administrators making budget and curriculum decisions), the attempt to substitute abstract and quantitative knowledge for concrete and qualitative knowledge.

The libel-label fallacy has been reborn as the pseudo-objectivity fallacy, and this time it is more dangerous. First, because sheer quantification carries with it the impress of authority (think of all those commercials which use the patina of numbers to sell everything from Cheerios and Quaker Oats to automobiles and equity home loans); and second, because most Americans simply don’t have the quantitative skills to fully understand the latest NAEP results, or the results of their own child’s end of year standardized test scores. Working to make sure that this fallacy does no more damage (in economics, education, and other areas of modern life) will require both top down and bottom up efforts. Those of us who are quantitatively sophisticated (scientists, mathematicians, statisticians, economists, others) need to be more modest about claims where numbers (or formulas) are used to describe real world phenomena. We need to remember that wisdom proceeds up a five step pyramid: Facts (isolated bits), Data (multiple bits), Information (interpreted data), Knowledge (contextualized information) and Understanding (valued knowledge). Moving from any one step up to the next requires more than quantitative skills. It requires judgment, an attribute that simply cannot be replaced by a formula. Ask the principals at Long Term Capital Management. The claim here is not that numbers and formulas have no role to play in helping us understand education, economics, and so much more; the claim is simply that we need to better understand their role and acknowledge their limitations.

For the bulk of Americans, those whose first response to anything quantitative is the snappy rejoinder, “I hate math”, get over it. Mathematics and science have a more than proven track record when it comes to predicting and explaining the universe. What negative message are we sending to our kids when any discussion of mathematics, numbers, and science is silenced by a derisive snort? Yes, America needs more trained mathematicians and scientists, but most of all it needs folks who are numerate (see John Allen Paulos) and who respect the work of mathematicians and mathematics teachers. The pseudo-objectivity fallacy played a major role in bringing our economy down; it is playing a similar, unwanted role in education where high stakes, state and national tests are driving out careful, local attempts at student assessment. Understanding quantification’s proper role in societal decision making is everyone’s responsibility.