

Resubmitted 7/2006

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December 23, 2002

Dr. Lloyd S. Etheredge, Director
Government Learning Project
The Policy Sciences Center, Inc.
P. O. Box 208215
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Dear Dr. Etheredge:

Thank you for your letter and thoughtful attachment. I am in complete agreement that the economic data we collect has significant deficiencies that limit our ability to understand the economy's problems and chart future policy.

We don't collect some information that is needed and gather much that we could do without. We collect other data in insufficient detail and almost always take too long to release the data for it to be useful in policy decisions.

As you know better than I, there are many reasons for this situation. What we collect and how we collect it reflects the forces at play in the first half of the last century and those forces do not want to give anything up. Congress has little interest in devoting more scarce budget resources to collect new and better information. Few economists who use the data appreciate its limitations. They have been raised on certain data sets and treat them as if they are part of the underlying environment, not subject to change. They put a premium on continuity and don't want discontinuity in the data sets they know and use.

I don't think I would be as critical as you are about CNSTAT/NCR. I don't think they would have much of an impact even if they had done the studies and made the recommendations you think warranted. Nor do I think universities (Yale or Harvard) or the Fed could make much of a dent in the problem. Rather, I think a presidential or congressional study commission is called for—one with a clear mandate and a promise that added resources will be devoted to strengthening the statistical system based on the commission's report. Unfortunately, the prospects for such an initiative rising to the top of policymakers' lists of things to do is very, very low.

Nevertheless, I wish you well in your efforts.

Sincerely,



Resubmitted
in 7/2006

[copy]

To: "Dr. Nina Fedoroff - Chair, Taskforce on Transformative Research, National Science Board" <nvf1@psu.edu>, "Dr. Droegemeier - National Science Board" <kkd@ou.edu>, "Dr. Kenneth Ford - National Science Board" <kford@uwf.edu>, "Dr. Louis J. Lanzerotti - National Science Board" <louis.j.lanzerotti@njit.edu>, "Dr. Alan I. Leshner - National Science Board" <aleshner@aaas.org>
From: Lloyd S. Etheredge <lloyd.etheredge@yale.edu>

Subject: NSF's Committee of Visitors Report & the Taskforce on Transformative Research

Dear Dr. Fedoroff:

Concerning institutional problems of the NSB/NSF system that inhibit innovative and fast discovery science, may I bring to your attention, and to the attention of members of the National Science Board's new Taskforce on Transformative Research, the following excerpts from the most recent online report of the NSF Committee of Visitors that reviewed the cluster of Economics-related programs?

The letter of transmission, signed by Dr. Charles Plott (Chair, CALTECH) reports "unanimous agreement . . . that a serious structural problem exists within the larger NSF organization." They also "found the Economics program in crisis" (p. 2). In the Executive Summary, the Committee of Visitors appears to be frustrated and angry about inaction and breakdowns of management and communications: "serious and growing problems identified by the previous Committee of Visitors . . . have not been addressed."

In part, the Committee was concerned with the growing physical science/social science imbalance of NSF's budget, that - without a scientific justification - has steadily reallocated funds to lower priority projects in the physical sciences. [By now, the NSB/NSF process has reduced the inflation-adjusted level of core funding for economics research to its 1980 levels (p. 2 Executive Summary).] Less than 20% of economics proposals are funded, and most of these are small projects. They note that "science that stretches the imagination of the scientific community," especially involving costs for the development and management of new data in the "mid-size range" (defined as only \$500,000, for social science) "is almost

impossible to fund and larger projects even harder. . .”

Re the purposes of your Taskforce: The Committee suggests a theory that the National Science Board/NSF system, itself, kills scientific innovation. It has become psychologically demoralizing and damaging to their profession and it kills scientific progress before good proposals are even submitted: “In fact such proposals [in the mid-size and above] are discouraged, given the nature of the peer review process and the profession’s widespread knowledge it is starved for basic research support . . . Those whose imaginations should be engaged have no incentive to do so. Why would people dream?” [All quotations are from the Executive Summary, [http://www.nsf.gov/od/oia/activities/cov/sbe/2004 / EDMS_Cluster_COVReport2004.doc](http://www.nsf.gov/od/oia/activities/cov/sbe/2004/EDMS_Cluster_COVReport2004.doc)].

The Committee members appear to be serious and thoughtful people, and several have held responsible government positions. In addition to Dr. Plott, the concurring members included Glenn Hubbard (Columbia and a former Chairman of the President’s Council of Economic Advisers, and current Dean of the Graduate School of Business at Columbia), Janet Yellen (UCB and a former Chairman of the President’s Council of Economic Advisers and current President and CEO of the Federal Reserve Bank of San Francisco), Irwin Feller (AAAS), and Edward Montgomery (U. of MD and a former Deputy Secretary and Chief Economist at the Department of Labor). The Report was pursuant to the Government Performance and Results Act.

June 21, 2005

Cc: "Dr. Michael Crosby" <mcrosby@nsf.gov>, "Dr. Robert Groves - Chair, NSF/SBE Advisory Committee" <bgroves@isr.umich.edu>, "Dr. Warren Washington - Chair, National Science Board" <wmw@ucar.edu>

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January 10, 2007

Dr. Steven Beering, Chair
National Science Board & President-emeritus
Purdue University
Office of the President
West Lafayette, IN 47907

Dear Dr. Beering:

You and other members of the National Science Board might be interested in the deeper issues raised by Louis Uchitelle's enclosed story, "Encouraging More Reality in Economics," The New York Times (1/6/2007). The story underscores my concern that Dr. Bement and NSF are not reporting candidly and accurately to the National Science Board about these issues; nor are they reporting candidly and accurately to Congress. Loud alarms should already be ringing.

It ought to be alarming when a respected scientist (Yale, MIT, Berkeley), and the President of his professional association, says publicly that the major scientific models developed by his profession (and relied upon for public policy) are "based on false assumptions." I do not know of any NSF-supported scientific field, with such fundamental importance to the welfare of the nation and democratic decision making, that has been managed so badly.

Obviously, many specialists in the academic world will not be surprised by Akerlof's concern about the scientific limitations of economics, ("So, what else is new?"). But many members of the National Science Board - and most members of Congress - probably had other assumptions and expectations.

If Congress Receives Candid and Accurate Reports

If Congress receives candid and accurate reports, fundamental consequences may follow: for rebalancing the NSF budget and five-year strategic plan; and,

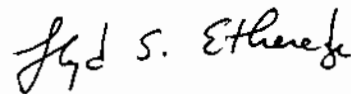
perhaps, for major personnel changes and restructuring.

Two False Excuses

NSF has two instinctive, institutional, defenses: "We do peer reviewed science. Sometimes it works, sometimes it doesn't" and the justification for a hands-off policy that "this is the price that we pay for academic freedom." These hypotheses are worth testing. However, I doubt that Dr. Bement, or the NSB's TaskForce on Transformative Research, has done the homework and research that is necessary to understand why the NSF economics research program has worked so badly, compared with most other fields within NSF's purview.

My perception is that the self-governance of science, like the self-government of democracy, can work well or poorly. It can become corrupt. Highly ambitious and self-interested people - who do arrogant, stupid, and self-serving things - can be attracted to power. There can - as Kuhn documented in The Structure of Scientific Revolutions - be scientific Establishments who

Sincerely,



(Dr.) Lloyd S. Etheredge, Director
Government Learning Project

January 6, 2007. The New York Times.

Encouraging More Reality In Economics

By LOUIS UCHITELLE

The annual meeting of the American Economic Association, which opened here on Friday, is usually a pretty esoteric affair.

But this year it could resonate much more broadly as the departing president of the organization, which represents most of the nation's academic economists, tries to push prevailing economic theory further away from the free market approach that has generally held sway for the last four decades.

The protagonist in this drama is George A. Akerlof, a Nobel laureate, who is using the same platform that the late Milton Friedman adopted in 1968. As president of the A.E.A. back then, Friedman laid out new theoretical justifications for a market system that he argued performs most favorably for nearly everyone when the government avoids tinkering with its operation.

The hundreds of economists who listened that day to Mr. Friedman's memorable speech did not immediately embrace his ideas. Keynesian economics, with a big role for government, still held sway.

But over time the Friedman approach took hold, eventually having profound effects on politics and government policy far beyond the ivory tower. This was partly because of Mr. Friedman's insistent, larger-than-life personality, and partly because Keynesian economics failed to adequately explain and respond to the simultaneous outbreak of higher inflation and rising unemployment that emerged in the 1970s.

Mr. Akerlof's style, in contrast, is more diffident and modest. But he has already contributed significantly to a revamping of the economic theory that Mr. Friedman championed. Now, at 66, he is hoping to spread that debate by taking on some of the profession's most sacred cows.

And he is doing so at the moment when income inequality, more concentrated wealth and upheavals from expanded globalization are straining faith in a relatively unfettered market system.

"I am trying to effect a return to sensible economics," Mr. Akerlof said in an interview. "And what is sensible economics? It is very pragmatic. You think about problems in the world and you ask: can government do something about that? At the same time, you maintain your skepticism that government is often inefficient."

This challenge is not from some outsider in economics. Mr. Akerlof -- educated at Yale and the Massachusetts Institute of Technology, and currently a professor at the University of California, Berkeley -- is at the heart of the academic establishment. His wife, Janet Yellen, a top economist in the Clinton administration, is president of the Federal Reserve Bank of San Francisco. Their son, Robert, is a Ph.D. candidate in economics at Harvard.

The stakes are considerable. Keynesians, for example, argued that the government could use changes in taxes and spending to help push the economy to full employment without running the risk of excessive inflation. Friedman, by contrast, described a "natural rate" of unemployment below which the nation could not go without causing wages and prices to spiral upward.

In the text of his speech to be delivered on Saturday afternoon, Mr. Akerlof argues that the Friedman approach is based on false assumptions about human behavior.

For example, he says, people don't automatically insist on raises that keep their pay on par with inflation. They often are happy with smaller raises, considering them a compliment from the boss for valued work.

That makes pressure for higher pay less inflationary than the Friedman approach would assume.

A result, Mr. Akerlof says, is misleading theory and misguided policy.

Mr. Akerlof is facing considerable criticism for his view that standard economics leaves out too much actual human motivation. What Mr. Akerlof sees as missing content, Mark Gertler, a New York University economist, describes as "frictions" that distort accurate theory.

"What Akerlof is doing is stepping out of line," said Mr. Gertler, who did research with Ben S. Bernanke before Mr. Bernanke became chairman of the Federal Reserve. "A lot of people are correctly taking rational behavior as a baseline and are adding frictions, such as constraints on borrowing, that can lead to temporarily inefficient markets."

More than most economists, Mr. Akerlof goes far afield to gather information that he considers to be played down or ignored in ways that leave mainstream economics divorced from real life.

In his speech, he encourages others to follow his lead, rejecting the focus on what he calls "parsimonious modeling" inspired by Friedman. Everyday experience and observation must be returned to a prominent place in the profession, he argues.

"The early Keynesians got a great deal of the workings of the economic system right in ways that are now denied," Mr. Akerlof said in a study newly posted on the Internet that closely tracks the text of his speech. "They based their models, as Keynes put it, on 'our knowledge of human nature and from the detailed facts of experience.' "

A lot of what Mr. Akerlof advocates in his speech is already under way, with Mr. Akerlof himself a major contributor. He shared a Nobel in economics in 2001 for his work on imperfect information, concluding, for example, that economic outcomes are altered when a used-car salesman knows more about the condition of a vehicle he is selling than the buyer. It was an imbalance that helped to produce state "lemon laws" that protect buyers.

He was an early participant in behavioral economics, another assault on the rational, fully-informed behavior that Mr. Friedman counted on to make markets work efficiently without regulation or intervention.

People often do not behave rationally, the behaviorists found in their experiments. Most do not bother to sign up for a voluntary 401(k) plan, for example, but do not pull out of such a plan if an employer signs them up automatically.

Now Mr. Akerlof is taking a big step on his own. His speech is based on more than a year of research, much of it done with Rachel Kranton, a University of Maryland economist. They are trying to incorporate into theory, as Keynes once did, the great variety of "norms" that determine human behavior.

What Mr. Akerlof is trying to do, with Ms. Kranton's help, is to reflect the variety of motivations that come from the sense people have of "what they are and how they should behave," as Ms. Kranton put it.

Among the examples they cite:

A teacher in good standing among the parents of her students puts the preservation of that reputation ahead of attempts to maximize her pay.

A change in income will permanently alter a worker's spending, a view that challenges the more common belief that spending matches a worker's lifetime income and savings, evening out over time.

Workers resist wage cuts even when unemployment is rising, despite standard theory that they will accept less pay to save their jobs.

The variations in norms and behavior are numerous and Mr. Akerlof, in his speech, calls on economists to incorporate this diversity into standard economic theory.

"If there is a difference between real behavior and behavior derived from abstract preferences, New Classical economics has no way to pick up those preferences," Mr. Akerlof asserts. "A macroeconomics that incorporates observations regarding how people think they should behave combines the best of the two approaches."

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December 17, 2006

Dr. Steven Beering, Chair
National Science Board & Pres. Emeritus
Purdue University
c/o Purdue Research Foundation
West Lafayette, IN 47907

Dear Dr. Beering:

I enclose an article, "Five Macroeconomic Myths" by Dr. Edward C. Prescott, published in the Wall Street Journal of December 11, 2006 (p. A18). Dr. Prescott was a co-recipient of the 2004 Nobel Prize in Economics.

Dr. Prescott has discovered serious errors and missing variables in the data used for NSF-funded macroeconomics research and policy making. In the late 1990s, for example, the decisions of government, corporations, private investors, and the financial and stock markets were based on data that underestimated GDP growth by 4%. His re-analysis, beginning in 1978, has discovered that monetary policy does not operate as NSF-supported economics research has told the government that it does.

Such damaging mistakes are what we get when NSF and our national scientific Establishment accommodate to an era of mindlessness.

These mistakes are likely to be only a small fraction of the serious errors, missing variables, and wrong conclusions: I enclose a reminder copy of a warning letter from Dr. Robert Reischauer, former head of CBO, about the negligence of continuing NSF economics research based on incomplete, faulty, and conceptually constrained data.^{1,2}

Implications for the NSF Budget

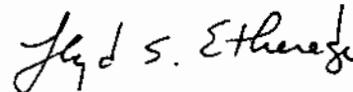
The results underscore the urgent requirement to revise NSF's five-year strategic plan and budget. We must have data systems that make it easy to

challenge orthodoxy and include the full range of missing variables.

Implications for transparency, accountability, and institutional reform

Dr. Prescott's findings also underscore the urgency for the National Science Board to order full disclosure concerning the flawed NSF/NAS/NRC decision processes and the suppression of honest scientific advice by your contractors. Without full transparency and accountability about the breakdowns in many social science fields, Dr. Bement cannot know how to correct the NSF system. Nor can the National Science Board, or Congress, or the social science community be assured that Dr. Bement and NSF's reformed advisers/contractors (who have very little remaining innocence about what they have done) will restore a healthy, trustworthy, and fast-discovery future for the social sciences.

Sincerely,



(Dr.) Lloyd S. Etheredge, Director
Government Learning Project

cc: Members, National Science Board

1. In economics, the scientific backlog also includes good faith measuring and controlling for the important psychological and cultural variables that Republican Administrations try to use.

2. In a background paper for NSF's Inspector General ("A Breakdown Crafted by Silences: Scientific Mismanagement and National Policy Error," September 10, 2002) I warned: "It is a fundamental rule of science to wash test tubes and - of regression analysis - that the results are uninterpretable (you do not know the true values of coefficients) until you measure and include the missing variables." (p. 13). [Dr. Prescott's results confirm this rule of good science which NSF does not uphold.]

The background paper also warned against NSF's lax scientific standards concerning measurement errors: "... which do not 'even out' in regression analysis. In the bivariate case, for example, even random measurement error in the independent variable always biases estimated coefficients toward zero. Regression analysis can be highly sensitive to measurement errors." (p. 13).

A18 WSD 12/11/2006

Five Macroeconomic Myths

by Edward C. Prescott

The sky is not falling. No need to panic and start playing around with all sorts of policy responses. Despite the impression created by some economic pundits, the U.S. economy is not a delicate little machine that needs to be fine-tuned with exact precision by benevolent policymakers to keep from breaking down. Rather, it is large and complex, with millions of people making billions of decisions every day to improve their lives, the lives of their families and the health of their businesses.

On the one hand, it's difficult to screw up all these well-intentioned people by crafting bad policy, but, on the other hand, it is of course entirely possible to do so. And once things are broken, they are much harder to fix. For example, all those doom-sayers predicting a recession will get their wish if taxes are suddenly raised, new productivity-strangling regulations are enacted, the U.S. turns against free trade, or some combination thereof. Otherwise, we should expect 3% real growth, based on 2% increases in productivity and 1% population growth. This economy is fundamentally sound.

So we have to be careful that we don't believe everything we read in the papers. Things are never as bad as the last data that was released, nor are they as good. Likewise, policy should not be revised at every turn, nor rules changed by political whim. Meaning, we should be careful about accepting conventional wisdom as, well, being wise. One of the great disciplines of economics is that it challenges us to question status quo thinking. So let's take a look at five pillars of contemporary conventional wisdom that have current standing, and see how well they hold up.

Myth No. 1: Monetary policy causes booms and busts. Greg Mankiw, former chairman of the Council of Economic Advisers, wrote the following in a 2002 paper: "No aspect of U.S. policy in the 1990s is more widely hailed as a success than monetary policy. Fed Chairman Alan Greenspan is often viewed as a miracle worker." Or, as Mr. Mankiw later asks, was Mr. Greenspan just lucky?

One of the mysteries of the 1990s is how to explain the economic boom when the increase in capital investments—as measured by the national accounts—grew at a subdued pace. The numbers simply don't add up. However, it turns out that something special happened in the 1990s, and it wasn't monetary policy. In a recent paper, Minneapolis Fed senior economist Ellen McGrattan and I show that intangible capital investment—including R&D, developing new markets, building new business organizations and clientele—was above normal by 4% of GDP in the late 1990s.

This difference is key to understanding growth rates in the 1990s: Output, correctly measured, increased 8% relative to trend between 1991 and 1999, which is much bigger than the U.S. national accounts number of 4%. Associated with this boom in unmeasured investment is the huge amount of unmeasured savings that showed up in the wealth statistics as capital gains. This was the people's boom, the risk-takers' boom. We should hang gold medals around these entrepreneurs' necks. So indeed, it does seem that Mr. Greenspan was lucky in that a boom happened under his watch; but we can at least say that he did a pretty good job of keeping inflation in check. Here's hoping for the same performance from our current chairman.

What about busts? Let's begin with the assumption that tight monetary policy caused the recession of 1978-1982. This myth is so firmly entrenched that I could have called this downturn the "Volcker recession" and readers would have understood my reference. To accept the myth, you have to accept a consistent relationship between monetary policy and economic activity—and as we've just seen, this relationship is simply not evident in the data.

Between 1975 and 1980, the inflation-corrected federal funds rate was low; at the same time, output trended upward until late 1978. So far, things look somewhat promising for the

mythmakers. But looking closer at the data we see that output began its downward trend in late 1979 while monetary policy was still easy through most of 1980. Also, output continued its decline through 1982, when it began to climb at a time when monetary policy remained tight.

These facts do not square with conventional wisdom. Our obsession with monetary policy in the conduct of the real economy is misplaced.

One caveat: I am not saying that there are no real costs to inflation—there certainly are. And if we get too much inflation we can exact high costs on an economy (witness Argentina as an example). However, I am talking here of the vast majority of industrialized countries who live in a low-inflation regime and who are in no danger of slipping into hyperinflation. It is simply impossible to make a grave mistake when we're talking about movements of 25 basis points.

How well does contemporary conventional wisdom hold up?

Myth No. 2: GDP growth was extraordinary in the 1990s. Even though I referred to the expansion of the '90s as a boom, inasmuch as it was a period of above-trend growth, and I noted the strong gains due to unmeasured investment, we have to put things into historical context. So let's return to the data. GDP growth relative to trend in the early 1960s was 12%, and in the famous 1980s boom (from the end of 1982 to mid-1989) it was a very impressive 9.7%.

And how about the boom from the previous decade? From 1996 to 1999, GDP grew 3.8%, about in line with the 3.5% growth of the early 1970s and less than the 5.5% growth of the mid-1970s expansion. Even when we account for unmeasured investment and add four percentage points, the 1990s growth spurt—fueled by rapid growth in tech industries—still falls short of the 1980s boom and does not approach the 1960s, both of which were fueled by tax cuts.



So we have to be careful about mythologizing the 1990s and drawing misguided policy lessons; yes, it was a boom, and it was better than we think, but let's keep that boom in perspective.

Myth No. 3: Americans don't save. This is a persistent misconception owing to a misunderstanding of what it means to save. To get a complete picture of savings we need to investigate economic wealth relative to income. Our traditional measures of savings and investment, the national accounts, do not include savings associated with tangible investments made by businesses and funded by retained earnings, government investments (like roads and schools) and business intangible investments.

If we want to know how much people are saving, we need to look at how much wealth they have. People invest themselves in many and varied ways beyond their traditional savings accounts. Viewing the full picture—economic wealth—Americans save as much as they always have; otherwise, their wealth relative to income would fall. We're saving the right amount.

Myth No. 4: The U.S. government debt is big. The key measure here is privately held interest-bearing federal government debt, which includes debt held by foreign central banks, and does not include debt held by the Fed or government debt held by the government. So let's turn to the historical data once again.

Privately held interest-bearing debt relative to income peaked during World War II, fell through the early 1970s, rose again through the early 1990s, and then fell again until 2003. Even though that number has been rising in recent years (except for the most recent one), it is still at levels similar to the early 1960s, and lower than levels in most of the 1980s and 1990s. This debt level was not alarming then, and it is not alarming now. From a historical perspective, the current U.S. government debt is not large.

Myth No. 5: Government debt is a burden on our grandchildren. There's no better way to get people worked up about something than to call on their sympathies for their beloved grandkids. The last thing that I want to do is to burden my own grandchildren with the sins of profligacy. But we should stop feeling guilty—at least about government debt—because we are in better shape than conventional wisdom suggests.

Theory and practice tell us that the optimal amount of public debt that maximizes the welfare of new generations of entrants into the workforce is two times gross national income, or GDP. This assumes 1% population growth, 2% productivity growth, 4% real after-tax return on investments, and that people work to age 63 and live to age 85. Currently, privately held public debt is about 0.3 times GDP, and if we include our Social Security obligations, it is 1.6 times GDP. In either case, we could argue that we have too little debt.

What's going on here? There are not enough productive assets—tangible and intangible assets alike—to meet the investment needs of our forthcoming retirees. The problem is that the rate of return on investment—creating more productive assets—decreases as the stock of these assets increases. An excessive stock of these productive assets leads to inefficiencies.

Total savings by everyone is equal to the sum of productive assets and government debt, and if there is an imbalance in this equation it does not mean we have too little or too many productive assets. The fix comes from getting the proper amount of government debt. When people did not enjoy long retirements and population growth was rapid, the optimal amount of government debt was zero. However, the world has changed, and we in fact require some government debt if we care about our grandchildren and their grandchildren.

If we should worry about our grandchildren, we shouldn't about the amount of debt we are leaving them. We may even have to increase that debt a bit to ensure that we are adequately prepared for our own retirements.

There are at least three lessons here. First: Context matters. Take what you read in the paper with a many grains of historical salt. Second: Current data often provide poor guidance for effective policy-making. To make forward-looking policies you have to understand the past. Finally: Establish good rules, change them infrequently and judiciously, and turn the people loose upon the economy. Booms will follow.

Mr. Prescott is senior monetary adviser at the Federal Reserve Bank of Minneapolis and professor of economics at the W.P. Carey School of Business at Arizona State University. He is a co-recipient of the 2004 Nobel Prize in economics.