

To: "Dr. Baruch Fischhoff - Chair, National Academy Committee on Improving Intelligence" <baruch@cmu.edu>, "Dr. Theda Skocpol - National Academy of Sciences and Past President, APSA" <ts@wjh.harvard.edu>, "Bill Nordhaus - National Academy of Sciences" <william.nordhaus@yale.edu>, "Dr. David Shaw - PCAST" <dshaw@blackpointgroup.com>, "Dr. Gene Rosa - Chair, AAAS Section K" <rosa@wsu.edu>, "Dr. Carole Pateman - President, APSA" <pateman@ucla.edu>, "Dr. Robert Keohane - National Academy of Sciences" <rkeohane@princeton.edu>, "Dr. Robert Axelrod - National Academy of Sciences" <axe@umich.edu>, "Dr. Jonathan Cole - CASBS" <jrc5@columbia.edu>, "Dr. Richard Atkinson - Chair - NRC/DBASSE" <rcatkinson@ucsd.edu>, "Dr. G. Bingham Powell, Jr. - APSA Vice President" <gb.powell@rochester.edu>, "Dr. Kenneth Prewitt - Chair, Committee on Social Science Evidence for Use" <kp2058@columbia.edu>, "Dr. Kwame Anthony Appiah - Chair, Exec. Committee, American Council of Learned Societies" <kappiah@Princeton.EDU>, Dean David Ellwood <david_ellwood@harvard.edu>, "Prof. Derek Bok" <derek_bok@harvard.edu>, "Dr. Mitchel B. Wallerstein - Dean" <mwaller@syrr.edu>, "Dr. Nina Fedoroff - AAAS President" <nvf1@psu.edu>
From: Lloyd Etheredge <lloyd.etheredge@policyscience.net>

Subject: 250. Red Team: The Republican "Strangle in the Cradle" strategy and its inherited legacy

Dear Dr. Fischhoff and Colleagues:

I enclose a follow up letter to the current NSF Director (3/17/2011), with further background concerning the Republican "strangle in the cradle" strategy to terminate policy-relevant initiatives. Many years of derailed proposals, dysfunctions, failures of self-correction, and coverups produced the catastrophic [uncorrected] failure of the NSF Economics program.

A Red Team should challenge the conventional wisdom about trusting NSF and monitor whether Dr. Suresh has moved quickly to solve the many problems and heal the damage that he has inherited.

LE

Dr. Lloyd S. Etheredge - Director, Government Learning Project

URL: www.policyscience.net

301-365-5241 (v); lloyd.etheredge@policyscience.net (email)

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THE POLICY SCIENCES CENTER, INC.

Project Director: DR. LLOYD ETHEREDGE
7106 Bells Mill Rd.
Bethesda, MD 20817-1204
Tel: (301)-365-5241
E-mail: lloyd.etheredge@policyscience.net

March 17, 2011

Dr. Subra Suresh, Director
National Science Foundation
&
Dr. Ray Bowen - Chair, National Science Board
4201 Wilson Blvd.
Arlington, VA 22230

Dear Dr. Suresh and Dr. Bowen:

I write to follow up my letter of March 6, 2011 to Dr. Suresh and to file a public comment for the revision of NSF's Merit Review system. My concern is that NSF should understand - and respond appropriately to - the many years of derailed proposals, dysfunctions, failures of self-correction, and coverups that produced the catastrophic failure of the NSF Economics program.

Background

I file these public comments as an observer of NSF's eroding social, behavioral, and economics (SBE) programs across more than two decades. As a scientist and Director of a foundation project I have filed written warnings, observed the results, kept contemporaneous field notes, and reformulated subsequent filings to conduct quasi-experiments and test theories about non-learning.

For example, I enclose, for the public record, a copy of a filing in 2002 with the NSF Inspector General, expressing growing scientific alarm with uncorrected breakdowns that were blocking progress, demoralizing researchers, and increasing the risk of national policy error in Economics. At the time, the Inspector General's view was that the Government Performance and Results Act (and other legislation) did not legally obligate NSF, the National Science Board, and their advisory bodies (e.g., the Committee on National Statistics for which it provided core support and supervision) to be in contact with reality, nor to address eroding performance capabilities responsibly, in any way that could be corrected by the NSF Inspector General.

Another effort to raise these issues occurred, using NSF's planning mechanisms

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URL: <http://www.policyscience.net>

for its Five Year Strategic Plan, in 2006-2007 (also documented online at www.policyscience.net at II. A.) This filing included published warnings by Nobel Prize winners in Economics, the kinds of alarms that should generate institutional program review and swift corrective action. The most deadly problems are at the highest levels of NSF and in the National Science Board itself.

Sins of Omission and Sins of Commission

In the early years, when David Stockman's "strangle in the cradle" [his phrase] strategy was launched against new, policy relevant initiatives in the SBE sciences, the defenders of the secret accommodation decision argued a distinction between sins of omission v. sins of commission. [The late Ernest Hilgard engaged the issue in the secret debate about Frank Press within the National Academy of Sciences and sent me a copy of his letter.] The argument was about a degree of scientific integrity, ethics, and legality that a national agenda-setting system for science (and our National Academy of Sciences) might still claim (to itself and in the eyes of the public and the scientific community) when it killed - i.e., remained silent about - worthwhile proposals if it did not dishonestly and officially discredit their scientific merits.

However, in the case of Economics, NSF's Merit Review system also has a long history of its own type of sins of commission. NSF's problems are equivalent to an NIH Director approving grants to scientists whom he knowingly supplies with contaminated chemicals, unreliable measurement instruments, and unwashed test tubes: There are too many missing variables, too many untested assumptions, too many large measurement errors, too much locked-out competition among theories and [Kuhnian] derailing of innovative, multi-disciplinary, and transformative ideas. [For example: When fitting regression equations and forecasting, missing variables can change the values, and even reverse the signs, of coefficients. Also, large measurement errors in data are scientifically unacceptable.] There has been mutual cynicism (and despair and anger even by NSF advisory committees that are pre-selected): the program itself was increasingly fraudulent and the Bush-era National Science Board and NSF Directors - despite a warning from the NSF Inspector General's review - covered-up the problems in Reports to Congress and the public.

Conflicts of Interests in the Current Review Process

Many people who remain at high levels in the current NSF/National Science Board system have a conflict of interest with the current investigation and review. One credible answer is that most of the current holdover members of the Bush era National Science Board, and Dr. Gutmann (the Assistant Director for the Social, Behavioral, and Economic sciences) should be replaced quickly. Thus, I am skeptical that this review process will credibly investigate and correct the real problems,

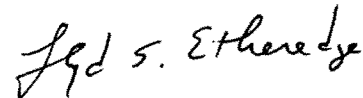
NSF's National Obligation to "Connect the Dots"

President Obama recently replaced a Director of National Intelligence with a clear, public statement that senior government Executives are - today - expected to

“connect the dots” in their areas of responsibility.

In this context, Dr. Gutmann, the Assistant NSF Director for Social, Behavioral and Economic Sciences is a relevant example of NSF’s legacy problems. Dr. Arden Bement and the Bush-era National Science Board - who selected him - can be described, at best, as negligent and indifferent to the SBE disciplines. Gutmann is not a trusted, leading edge scientific researcher facing current reality. They selected a historian who applies simple statistics to demographic data. He was not the appropriate national choice in 2009 when the national and worldwide human cost of America’s (and NSF’s) failed stewardship for reality-connected science/ Economics, and the need for fresh thinking and rapid learning, already were known.

Yours truly,



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

cc: Senator Bob Casey - Chair, Joint Economics Committee; Dr. John Holdren,
Science Advisor; Dr. Kenneth Prewitt - COSSA

Attachment:s:

- “A Breakdown Crafted by Silences: Scientific Mismanagement and National Policy Error” (September 10, 2002). The text is available online in the Attachments - Tab 3 of the filing with the Department of Justice on the Luce Commission case in September 2007; also at II. C. in the (2002) section.

- Warning letter from Dr. Reischauer, December 23, 2002.

ROBERT D. REISCHAUER
President

Direct Dial: 202-261-5400
Fax: 202-223-1335
E-mail: RReischa@ui.urban.org

December 23, 2002

Dr. Lloyd S. Etheredge, Director
Government Learning Project
The Policy Sciences Center, Inc.
P. O. Box 208215
New Haven, CT 06520-8215

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.

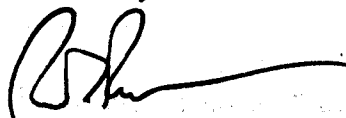
We don't collect some information that is needed and gather much that we could do without. We collect other data in insufficient detail and almost always take too long to release the data for it to be useful in policy decisions.

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,



A Breakdown Crafted by Silences:
Scientific Mismanagement and National Policy Error¹
by
Lloyd S. Etheredge

Our country is entering a period of risk because of deficient economic data and derailed progress of the social sciences in a changing world. On August 1, 2002, for example, news stories revealed serious errors in US economic data for 1999-2001 (Attachment 1). The signs of key indicators were the opposite of what policymakers, the private sector, the public, and Congress were told. Bad data apparently led Alan Greenspan and the Federal Reserve to mistime their policy interventions, mistakes that increased the damage and continuing cost of the recent recession.² I appreciate your invitation to discuss these concerns about mismanagement.

Because of your responsibilities, I also want to bring to your attention Attachment 2, which provides information about the role of the Committee on National Statistics

¹ Briefing for the Inspector General's staff, National Science Foundation, September 10, 2002. This testimony partly reflects work as Director of the Government Learning Project at the Policy Sciences Center Inc. in New Haven CT, a public foundation. Dr. Etheredge's background includes teaching research design and statistics at the graduate level at MIT and Yale. Comments welcome: lloyd.etheredge@yale.edu; URL: www.policyscience.net.

² Alan Greenspan still maintained, in the spring of 2001, that his policies were working and that a recession could be avoided, when we now know that the economy already was in recession. The monetary policy error is discussed in David Leonhardt, "New Report Shows U. S. Economy Slowed Significantly for Quarter." The New York Times, August 1, 2002, C1, C7. Alan Krueger reports that fiscal policy "could well have been different" with timely and accurate data, especially the back end of the \$1.4 trillion tax cut: Alan B. Krueger, "When the Economy Hits a Turnaround, Conspiracy Theories Abound," The New York Times, August 22, 2002. Online at www.nytimes.com.

(CNSTAT), which NSF oversees for a consortium of government agencies. This Committee was established in 1972 to assure state-of-the-art national data systems, supervised by our best scientific minds, and rapid scientific progress for evidence-based economic and social policy. Dr. Bruce Alberts et al. at the National Research Council run and (poorly) supervise CNSTAT for you: the description in Attachment 2, from its website, accurately describes the role that the Committee is supposed to play, with references to its broad mandate, the expectation for initiative, and the role to monitor federal data systems. The system designed in 1972 is broken.

The Importance of Fixing the System

I have the highest regard for the National Science Foundation's leadership and effectiveness in the physical sciences. However, there have been serious problems with the social sciences. While they are a small fraction of the NSF budget with marginal representation on the National Science Board, and a minute fraction of the national science budget, the impact of breakdowns in the management of a \$10 trillion economy can be brutal and damaging to people and institutions throughout the country. These problems of mismanagement need to be fixed quickly.

For example, the recent recession has been affecting businesses, individual lives and investments (including retirement assets) throughout the country, with devastating effects in the communications and computer industry. Dr. Colwell's home state of Maryland now faces a \$1 billion shortfall in revenue and the requirement to defer many projects in the public interest. Every member of the National Science Board will view similar stories of continuing costs in their local newspapers.

I. Background

My Observational Viewpoint

As a professional social scientist, let me begin by explaining my observational viewpoint and the steps that bring me to this meeting.

In the late 1970s, as a junior faculty member at MIT, I received an NSF grant to begin the study of government learning and develop options to accelerate learning rates in public policy. During this original NSF grant I used my background in political psychology to develop a new framework to understand and engage ideological disagreements. The new framework was exciting because it outlined better measures that could evaluate competing assumptions, and support evidence-based dialogue that was likely to improve social and economic policy.³ This new framework came before national agenda-setting committees operated by the National Research Council in the mid 1980s and again in 1990. It created political panic and door-slamming; these agenda-setting committees also were in the process of crafting civically-withdrawn/politically neutered research priorities.

Subsequently, Dr. David Hamburg organized an off-the-record session of the Carnegie Commission on Science, Technology and Government where former national science advisers and several of our most distinguished research scientists met with the bad actors to urge that the National Research Council continue to support honest broker research and the social integrity of science. Later, I contacted Presidents and Provosts at our leading research

³ The new measures of the distribution and properties of vivid hierarchical images are discussed in documents on www.policyscience.net. Reaganomics became an immediate focus, but there are a broader range of new measures for the potential insights/validity of liberal, radical, authoritarian (etc.) ideas.

universities and testified to the (Ryan) U. S. Commission on Research Integrity; Jack Peltason, head of the University of California system, contacted the Clinton White House to express concern about the neutered role and damage to our national research capabilities.⁴

I include the history here because earlier corrective efforts failed. As I will discuss below, there is an established pattern of restricting data that are scientifically (mathematically) required for economic forecasting - and the same door slammers continue to control the non-agendas of CNSTAT.⁵ Also, because of Establishment continuity, there are members of the National Science Board who know part of this inner-circle history at first-hand, and who can discuss their estimates with their colleagues.⁶

Given my background and professional interests in science-based policy learning, my comments today will have, in part, the character of field notes. There are more compact summaries of the behavior I will describe (Plato, The Republic, Book VII: 514-520 - a reference for political science and humanities students) and perhaps - someday, by someone else - there will be a book-length study detailing how a happy ending was achieved for the nation and for science. Today, however, the immediate next step in resolving this breakdown is the investigation and report of your office as advisers to Dr. Colwell and the National Science Board, and I will be pleased to help in any way that I can.

⁴ Part of this history will be known to you, via earlier submissions and discussions with Dr. Catherine Ball.

⁵ These activities are under the control of the Commission on Behavioral and Social Sciences and Education (now, a Division). The names of the participants are included in earlier material in the possession of NSF.

⁶ For example, President Peltason spoke with Dr. Joyce Justus at OSTP who was, if my memory is correct, the deputy of Dr. M. R.C. Greenwood, one of the current members.

II. Discussion

“All three groups of forecasters - CBO, the Administration, and the *Blue Chip* survey - made exceptionally large mis-estimates when forecasting for periods that included turning points in the business cycle [recessions] and for the past few years . . . ”

- Congressional Budget Office (2002)⁷

” . . . the uncertainty about the next few years may be larger than indicated by the average mis-estimates of the past two decades.”

- *ibid.*⁸

Repairing this science advising system quickly is urgent. There are two problems: a.) bad descriptive data of reality, and b.) CNSTAT’s bottleneck performance in limiting data for scientific progress, especially forecasting.

A. Urgency and bad data

- We must assume, unless there is contradictory evidence, that current economic data are as unreliable as the 1999-2001 data. Possibly, the 1999-2001 data errors were extreme outliers - but we cannot prudently make the assumption.⁹ We cannot assume that our best

⁷ “CBO’s Economic Forecasting Record” (February, 2002) online at www.cbo.gov/showdoc.cfm?index=3285&sequence=0, p. 6 (Attachment 4).

⁸ p. 2.

⁹ An unsettling rate of data error (e.g., esp. recessions/turning points) has been characteristic of this system.

scientists are monitoring the system and taking initiatives - Attachment 3 shows the agendas of the mismanaged CNSTAT in recent years and their disengagement from these issues.

Government professionals at the Congressional Budget Office (CBO) have noted their concern with the unreliability of current government data and the limited (and worsening) capacity of existing models to forecast economic variables for policy making. (See, for example, the summary of CBO's data analysis at the beginning of this section, p. 5, above. and the complete study, Attachment 4.) CBO also expresses the view (p. 5, above) that the composition and behavior of the American and world economies are changing more quickly than new theory and new theory-derived measures are becoming available. Other thoughtful observers of the economy made similar points 18 months ago: Alan Greenspan recommended (in March, 2001) that it was time to get new kinds of data, rather than seek to understand the current functioning of the economy by the diminishing returns of more intensive analyses of established statistical datasets.¹⁰ Richard Berner, President of the National Association of Business Economists, testified to Congress in April, 2001 and expressed the perception of his members that reality is changing and we need better thinking to give us new data: "research and development are sorely needed to expand the scope and improve the quality of our statistics so they remain relevant to a rapidly changing economy."¹¹

¹⁰ Quoted in J. Steven Landefeld, "Importance of BEA Data," online at www.nabe.com/publib/stat0110.htm, p. 1

¹¹ Richard B. Berner, "Testimony" (April 5, 2001). Online at www.nabe.com/publib/bernertest.html. Among other changes, electronic connectivity may make some markets adjust faster; the causal economic impact of knowledge may be poorly modeled; and there are structural changes in the domestic and international economy.

- There also is urgency because, in America, everyone - all government agencies and CEA, Congress and CBO, the private sector, academic researchers - relies upon a single source of basic data. I.e., whose standards for state-of-the-art scientific design, reliability, and steady improvement were entrusted to NSF/CNSTAT thirty years ago.

- I also draw to your attention the work of Prof. Paul Krugman at Princeton (and a New York Times columnist). Krugman - who has been ignored by CNSTAT's agenda-setters - believes that key coefficients that affect policymaking also may be changing.¹² If so, getting new measures online quickly is essential: economists use linear regression analysis of quarterly time series data to estimate (historically averaged) coefficients for forecasting. If key coefficients are changing, new (and more creative) types of convergent measures will be required to detect the changes and estimate their magnitude.

- Urgency also arises from another direction. In an electronically-connected world, financial markets react quickly. We have seen recent meltdowns in Asia and among several large American corporations as bad accounting became known. Right now foreign journalists are being non-alarmist about the fact that US economic policy makers have been out-of-touch with reality. Yet this could change quickly, especially if there is an impression that the system is broken and nobody has acted quickly and responsibly to correct the problems.

I think most scientists would agree that the problem of timely and accurate data can be solved. NSF-supported astronomers secure data on a cosmic scale from distances of millions of light years, and NSF-supported physicists have designed, recommended, and constructed

¹² The suggestion is based on recent experience of the Japanese Central Bank. See "Japan: still trapped" on www.wws.princeton.edu/~pkrugman/

instruments to measure reality on a subatomic level, both with astonishing precision many places to the right of a decimal point. The unreliability of economic data for policy making surely is the worst of any NSF-supported scientific field. I think you will find that Dr. Alberts et al. have the brainpower to design and recommend a measurement system that is timely and accurate - but have failed to do so.¹³

B. Limited Data/Neutered Scientific Progress

Let me turn to a second requirement for good government data systems: (reliable) data must be available to evaluate relevant variables, to permit a creative process, and to develop better theories to improve understanding, forecasting, public discussion, and policy.

Concerning this second requirement, CNSTAT has been operated as an institution that, by its silences and (designed) lack of initiative, has slowed scientific progress and undercut the scientific integrity of forecasting.¹⁴ Evidence for the lack of progress (and recent erosion) in forecasting models is available from CBO (cited above and Attachment 4.)¹⁵ In brief, the

¹³ For comparison, our national banking system processes the transactions for the entire economy (not merely samples) with minimal lag. Our largest retailer, Wal-Mart, has complete and detailed, product-by-product, national sales data within 24 hours.

¹⁴ Other government agencies are not equipped to be innovative research scientists, but are consumers of existing datasets.

¹⁵ E.g., www.cbo.gov and “CBO’s Economic Forecasting Record” online at www.cbo.gov/showdoc.cfm?index=3285&sequence=0, op. cit. Note that CBO also believes that shared inaccuracies “probably reflected limitations that confronted all forecasters.” p. 1. Orthodox economic theory also defines/constrains the data which government collects, and all forecasters use the same theory-derived data, ibid.

In observing economic forecasting errors, one should keep in mind that a reported 1% error is a very large number for a \$10 trillion dollar economy, and that the difference between a 1% prediction by a model and a 1.9% result is a 90% error. There are not enough data points (e.g., for N=24, 2-year forecasts), relying upon annual data, to learn a great deal

scientific ability of economic models to make reliable longer-term forecasts of most key dependent variables remains lackluster and has been getting worse in recent years. Even the short-term forecasts to foresee a recession in time for optimal counter-cyclic policy miss the recessions - the leading Wall Street/New York forecasting models, for example, missed all of the past three recessions. And - again - the world now may be changing because of unmeasured variables that are a common constraint on all data users: several days ago, for example, the Congressional Budget Office suddenly shifted its forecast of government deficits through 2005 from the prediction of a surplus to a prediction of big deficits, in part because tax revenues unexpectedly dropped 6.6% below forecast, the largest one-year drop in nearly half a century. ("Nobody knows why," taking known and currently-measured variables into account, according to the Director of CBO.)¹⁶

To any alert observer, an obvious hypothesis is that, as Establishment economists have spent several decades working & reworking the same orthodox model and its limited set of orthodoxy-specified variables, and are not getting better scientific (and/or policy-relevant) results - perhaps you should investigate if there are other variables and causal mechanisms at work?

I want to discuss three elements of this mismanagement of scientific progress in more detail: 1.) The bottleneck role of CNSTAT; 2.) Establishment capture and imposed stagnation; and 3.) Missing variables and disregard for basic scientific integrity.

about forecasting error via time series analysis - i.e., without new and different kinds of data to triangulate upon the true value of key coefficients and to control for missing variables.

¹⁶ Edmund L. Andrews, "Budget Office Forecasts Shift From Surplus to Big Deficits," The New York Times, August 28, 2002. Online at www.nytimes.com.

1.) The Bottleneck of CNSTAT

To understand the deadly bottleneck/stasis-maintaining role played by CNSTAT it is important to understand the sociology of the economics profession. Usually, economists do not study the world apart from government-created datasets. Scientists from other fields might make the mistaken assumption that the scientific study of economic behavior operates by “keen observation and shrewd generalization,” in a phrase used by the economist Robert Solow¹⁷ - but that is precisely, as Solow records, what does not occur. Rather economists are only “modelers,” using the statistical data developed via the Committee on National Statistics. By now, Solow observes, “people are recruited whose talent is for just these activities, whose interest is more in method than in substance.”¹⁸ Unless new thinking and measures are in the government datasets, they are not in the models or the research literature. When CNSTAT is silent and does not recommend new measures/ideas, there is no competition, and no progress.

The managers of CNSTAT also play a wider inhibiting role to kill the creative contribution of other social sciences. While it might seem that individual social scientists could apply to NSF to secure funds and develop new ideas and better models, this is not a realistic option. In psychology, for example, an individual researcher working alone - even if assured of funding - might need to spend a decade to assure that a single new measure was sufficiently reliable.¹⁹ Even if measures are available, national sampling frames are expensive - in

¹⁷ Robert M. Solow, “How Did Economics Get That Way and What Way Did It Get?” Daedalus 126:1 (Winter, 1997), pp. 39-58, p. 56.

¹⁸ op. cit., p. 57.

¹⁹ This is the amount of time involved for the Kohlberg moral reasoning scales and the Loevinger ego development scales, for example.

political science, for example, there are sufficient funds only for one, and the funds are owned de facto by the American electoral politics field. Congress and NSF recognized these economic restraints on innovation thirty years ago when they created CNSTAT as a mechanism for the scientific community to develop data systems.

2.) Establishment Capture and Imposed Stagnation.

Economists have achieved a brilliant and interconnected mathematical framework, sometimes called the neoclassical synthesis, that functions like the too-simple but elegant Bohr model of the atom in the history of physics. In physics, however, anomalous data have forced intellectual movement beyond this model, with a continuing quest to understand complex real-world processes and develop a new general theory.

The mathematical elegance of the neoclassical model depends upon a restrictive assumption of rational and autonomous individuals with maximum motivation for profit. However, as a practical matter, most politicians - probably, most Americans - are more psychological in their thinking about life and the economy than these stylized mathematical caricatures. President Reagan, for example, wanted to cut back and change what he imagined to be a psychology of the welfare state that produced too much dependency, passivity, and shifting of personal responsibility to the government. But, as I suggested above, the National Research Council's hierarchy via CNSTAT stonewalls any new measures of processes and variables: it is a continuing problem of "missing variables" in the datasets, as all Administrations (including the Bush Administration) and members of Congress are drawn to use a wide range of psychological ideas/mechanisms to affect economic behavior.^{20 21}

²⁰ The Republican perception that social scientists are liberal, and their partisan mistrust, partly is a misperception: orthodox economists have stonewalled all competing ideas. While it is true that social scientists tend to be politically liberal, and most would

- By “Establishment Capture” I refer to a well-known phenomenon of blocked paradigm shifts, analyzed by Thomas Kuhn in his The Structure of Scientific Revolutions and others.²² Initiative - for better data, scientific competition and creative ferment, and better theory - has been unwisely handed-over, de facto, to a set of the most distinguished scientists (members of the National Academy of Sciences, who are part of the self-governing process of the National Research Council) who built their careers and status within the old neoclassical paradigm and are satisfied with the monopoly and have no motivation for change (thus, silence.)²³

probably have preferred Reaganomics to be wrong, the actual empirical work has been honest (for example, the findings that evidence did not support the effectiveness of many Great Society programs to solve social problems.)

²¹ For example, efforts to calm or reassure investors/financial markets; beliefs that self-confident, optimistic and/or liberal activist Presidential leadership energizes the economy; the (partially measured) beliefs that consumer confidence plays an important role; arguments that a “traditional values” cultural values package is mutually reinforcing - work ethic, “family values,” more old-fashioned teenage music, religious faith, etc. There is an extraordinary and interesting list, which would enrich our understanding of how a pluralist society actually works, whether or not findings become (through democratic processes) bases for public policy.

²² Thomas S. Kuhn, The Structure of Scientific Revolutions (Chicago, University of Chicago Press, 1996). Originally published in 1970.

²³ It is likely that a serious research program with alert, motivated researchers could begin to identify new variables quickly. Professional economic forecasters appear to know or sense more about the economy than they are yet able to articulate within their mathematical models. For example, even when models predict continued growth, an “anxiety index” reporting modelers’ subjective concerns that their model could be wrong, appears since 1968 to be an excellent predictor of a forthcoming recession - i.e., far superior to the orthodox models themselves - when the computed index passes 30%. This appears to be true despite bad data. See David Leonhardt, “Forecast Too Sunny? Try the Anxious Index,” New York Times, September 1, 2002. Online at www.nytimes.com

3.) Missing variables: Disregard for scientific integrity

Regression analysis of time series data is the foundation of economic forecasting. As Dr. Alberts et al. know, it is always deficient science to fail to control relevant variables in a causal analysis. But it destroys the integrity of a regression analysis to accept bureaucratic stonewalling, ignore missing variables since the 1980s, and trust the validity of the coefficients that are being estimated.²⁴ The technology partitions variances due to the missing variables and their interactions, as best it can, among the independent variables available. Thus, the true values of coefficients may be larger, smaller, or even of a different sign (and the forecasting errors will become larger.) 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.²⁵

Thus, by excluding any larger list of measures of relevant variables - (in this case, “relevant” being established when the Administration itself, with a loud megaphone, and Congress seek to use such variables as the main effects for macroeconomic policy) - the imposed silences and credibility of CNSTAT have functioned to destroy the integrity of economic research for future years and created an upper bound for the accuracy and reliability of forecasts for the US economy. I.e., as a consequence of mismanagement by Dr.

²⁴ The question of missing variables has been raised periodically across different political climates (e.g., with NCR/DBSS&E professional staff and correspondence on www.policyscience.net). So far as I am aware, Dr. Alberts et al. have never permitted the question of statistical controls to appear on the agenda of CNSTAT, where I would expect the professional statisticians to assign it a high priority. It may be unfair for NSF to attribute deficient performance of CNSTAT to its members.

²⁵ I should make a similar point about 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.

Alberts et al., the current forecasting coefficients estimated from the past twenty years of data are uninterpretable.

III. Implications

Let me make three concluding comments and discuss three implications:²⁶

A. Concluding Comments

1.) A Single Standard for NSF

As this is a written document, on the public record, may I express my hope that NSF will deal with the mismanagement issues of NRC/CNSTAT in at least the same way in which it would deal with a lower-status grantee with this record of negligence, or that did not wash test tubes? Arguably, Dr. Alberts et al., should be held to a higher standard. Regardless, the standard affirmed by the handling of this breakdown will establish a public precedent.

Equally, I hope that you will expect the same high standards from social science researchers as you expect from the natural sciences. If the federal government spent thirty years trying to send a probe to Mars and kept missing by hundreds of millions of miles - because of bad data and poor models²⁷ - I think you would make sharp judgments about Dr. Alberts et al. as the supervisors of the project. I hope you will apply the same standards as if Dr.

²⁶ May I also suggest that you review which economic research, underwritten by NSF, should be redone in light of seriously erroneous data from 1999-2001? (I think the National Science Board might find it informative to review whether significant errors in the estimated coefficients of these NSF-supported studies actually make enough difference that they should be redone.)

²⁷ And if (the CBO, quoted above, p. 5) their results are getting worse.

Alberts et al. received funds to monitor and accelerate AIDS research but decided - for whatever reason - not to control for relevant variables or wash test tubes, and persisted despite blunt private warnings from leading scientists; and continued medical (policy) errors that damaged patients (the nation) through negligence.

2.) The Professional Staff is Unlikely to Be the Problem

I am prepared to believe that the professional staff at the NRC and CNSTAT are perfectly agreeable people who will write capable, inoffensive literature reviews about whatever topics are requested and paid for by others. And the panel members appear to be fine statisticians. The problems of mismanagement arise at a higher, agenda-setting level, and the powerful evidence of mismanagement are the silences: failures of initiative, monitoring, and engagement of our best scientific minds. And a broken system that does not produce good results for its broader intended purposes. You are witnessing a system crafted by silences.

3.) On Being Too Close to Washington

One of the deeper concerns, especially for institutions and researchers outside Washington, is the likelihood that the senior management circle of the National Research Council is too close to Washington, with its work affected by political action moods rather than the requirements for rapid and sustained scientific accomplishment. This is a failure of public management: sociologists will tell you that societies often create specialized institutions to embody their better judgments and instincts and/or for specific tasks and expect these institutions to do these jobs while other institutions are preoccupied elsewhere. [Even if most Americans are satisfied with their quality of health care, Congress nevertheless establishes and funds scientific institutions and biomedical research to improve it. Even if most Americans are indifferent to the quality of data necessary to monitor and engage issues

of global warming - and some ideologues want to treat the issue as a conspiracy of the political Left - NSF is funded to conduct the research.]

There can be a slight drunkenness to political behavior, and it is a reasonable hypothesis that Dr. Alberts et al. have been contaminated by the temporary preoccupations (and indifferences) of Washington-based legislative politics and moods and forgotten their independent responsibilities. So long as Dr. Alberts et al. receive NSF/public funds for initiatives, monitoring, and their best scientific advice for accomplishing evidence-based economic policy, this is the standard for the advice they should be giving.²⁸

B. Implications

1. Is NSF Part of the Problem?

NSF has the responsibility to supervise, and the authority to correct, breakdowns of scientific integrity and mismanagement. It should not be necessary for the Carnegie

²⁸ CNSTAT was created with a double guarantee of political independence, administered via NSF and also through the NRC system operated by the self-governing National Academy of Sciences and other two Academies. These organizations, in turn, have the strongest safeguards of political independence that we can create, with the right to select their own lifetime members without outside review. Painfully, in the case of the social sciences, there has been selective and uncorrected mismanagement/abandonment of this honest broker role of giving politically independent scientific advice.

A basic point from Civics 101: Notwithstanding that politicians are engaged in political arguments and political activity, they also have a strong and consistent desire to know the best, independent scientific advice even if they respond to and adjudicate a range of other considerations. The Congressional Budget Office, for example, was created to assure reliable, non-partisan advice and the Bureau of Economic Analysis in the Commerce Department (which collects data) has always been expected to be non-partisan. More to the point, the Federal Reserve System was established as an independent agency to operate in the best interest of the economy, on the basis of the best data available, without being enmeshed in the political moods and preoccupations with which elected politicians deal professionally.

Commission to do NSF's job; nor for the head of the University of CA system; nor - if I may say - should it be my job. It should not require mistimed government policy and a damaging recession to repair breakdowns when alert reading of newspapers forewarns of perpetually-unreliable and perpetually-revised data and perpetually-unreliable forecasting models.

Part of the problem may be that NSF's management information system has disconnected the alarms. It permits glowing reports for the National Science Board, and others, without mentioning the derailment, mismanagement, and failures of progress in economics and other social sciences.

All government agencies select management systems, and these often change with Administration. Examples include Planning, Programming, Budgeting (PPB), Zero-Based Budgeting (ZBB), and Management By Objectives (MBO). During the Clinton-Gore Reinvention process NSF adopted its own system, which might be called Management-Of-Process (MOP). This seeks to measure success by proxy indicators of how efficiently paperwork and grant-making (etc.) proceed.

Like any management system, there are strengths and risks that depend, in critical ways, on the nature of the organization and people, the tasks, and - often - the sociology of other institutions and systems in society. The MOP system does not produce progress in the social sciences, nor in their applications to public policy.²⁹ And using this system, another step

²⁹ In the case of economics, there are obvious goals that could be managed: the accuracy of data, the new ideas (and ideas that shape public debate) that are tested to improve forecasting R^2 and accuracy, etc. See, for example, CBO, "Measuring the Quality of Forecasts" in its report, cited above, pp. 5-6

down this road, NSF Program Officers can “forget” that NSF is supposed to achieve higher-level results.

2.) Democratic Accountability and Public Hearings

Second, I doubt the problem can be solved without public hearings by the National Science Board. There is a broader system-level breakdown, damage to the country, and, alongside the wider information that can be learned by public hearings, there needs to be a public process by which elites decide whether to reconstitute a commitment to the social sciences.

I emphasize the need for public hearings because none of the problems we are discussing would have occurred if Washington-based institutions truly thought that the social sciences should be online and making rapid progress to inform public policy. One working hypothesis, I think, is that Washington-based institutions perceive an emotional consensus to marginalize the social sciences and impose a “Do Not Disturb” constraint on innovation.

Public hearings also are essential, in my view, to get the full story onto the public record and reestablish democratic accountability. For example, to a political scientist the tenacity with which Dr. Bruce Alberts and the governance structure of the National Academy of Sciences/National Research Council have used their positions to constrain social science, including enforcement of the tawdry “no test tube washing/ignore missing variables” regime, is astonishing. It suggests that there were unwise agreements between a core group of our science Establishment and David Stockman in the early Reagan years to produce this neutralization, at a time when David Stockman and his Deputy, Don Moran, sowed fear by

their clever strategy to launch a pre-emptive strike to zero-out all behavioral research funds in the federal budget. Such an agreement, if it were made and enforced, would likely have been illegal - for example, the National Academy of Sciences/National Research Council does not have the legal right to decide the civic role of our research universities without public knowledge and due process - and a great deal of legitimate public controversy. Such an agreement would have implicated NAS/NRC in a de facto conspiracy to deprive many research scientists of due process rights.³⁰ I think that the National Science Board and the public need open hearings to begin to learn the truth. Are Dr. Alberts et al. still living in their past?

3.) The Virtue of Competitive Grants

An unsettling phrase that I have heard is “I Am Sure That Everybody Would Like to Help the Social Sciences, But . . .” There are abundant problems within the social sciences, but one of the most damaging effects has been underlying demoralization, cynicism, and despair that have resulted from top-down Washington decisions, using NRC/CNSTAT mechanisms, to block research that informs the public and public policy.

Usually, NSF gets good results from competitive grants. It is not my purpose here to outline the several solutions that I think might be needed, or to substitute a technical solution for the more powerful sociological benefits of well-prepared public hearings. Yet

³⁰ The unresponsive letters written to foundations that added financial support to the original Luce-Smelser/NSF project, and later raised critical questions, suggest that lawyers have become involved. Legal issues may be one reason that Dr. Alberts et al. do not participate in civic or scientific dialogues about these issues - for example, they declined to appear before the Ryan Commission when concern about their conduct was on the agenda. This withdrawal from civic and scientific accountability, with advice from lawyers, would be added reason that a public inquiry is required by the National Science Board.

the bad outcomes have occurred by using noncompetitive mechanisms, like giving the National Research Council a monopoly contract. I think that a good working hypothesis is that the breakdown and Establishment Capture/neutering of CNSTAT also reflect a prestigious institution that has enjoyed a monopoly for thirty years, without competing centers that can outperform them, and without any need to face outside review panels who can hear criticisms.³¹

³¹ The ability to develop innovative Centers might be especially attractive if the grants supported national sampling frames for each Center's researchers.

Attachments

1. News stories

- Peronet Despeignes, “Data Show US Recession Was More Severe Than First Thought,” Financial Times, August 1, 2002, p.3.
- David Leonhardt, “New Report Shows U. S. Economy Slowed Significantly for Quarter,” The New York Times, August 1, 2002, pp. C1, C7. Online.

2. CNSTAT - Mandate and Role (from www.nas.edu Website)

- About CNSTAT
- Committee on National Statistics (CNSTAT) (description from Alphabetical Listing)
- About DBSSAE (the Division which manages CNSTAT)

3. CNSTAT - Activities (from www.nas.edu Website)

- Current Projects and Current Joint Projects
- CNSTAT Completed Projects

4. “CBO’s Economic Forecasting Record” (February, 2002)