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To: "Dr. Baruch Fischhoff - Chair, National Academy Committee on Improving Intelligence" <baruch@cmu.edu>, "Dr. Richard Atkinson - Chair - NRC/DBASSE" <rcatkinson@ucsd.edu>, "Dr. Robert E. Hall - AEA President and National Academy of Sciences" <rehall@stanford.edu>

From: Lloyd Etheredge <lloyd.etheredge@policyscience.net>

Subject: 175. Forecasting Global Competition: DNI Upgrades and US Policies. Another (Alleged) Gathering Storm (Category 5)

Dear Dr. Fischhoff and Colleagues:

Everybody may agree that scientific progress and US international competitiveness should be high priority goals: This has been the defining theme across (now) a series of three volumes of national advice from the National Academy of Sciences/National Research Council system - the latest lobbying report being Rising Above the Gathering Storm, Revisited: Rapidly Approaching Category 5 (2010). The coalition of interest groups agrees in recommending more money to all of its members (ranging from doubling federal funding for the physical sciences, engineering and mathematics; more money for K-12 education in these fields, and huge (permanent) R&D tax subsidies for Exxon and other US corporations (whose senior management and Board members were prominently represented on the panel).

A Better Economics/Behavioral Science Foundation

At issue is that these national goals can be addressed far better, and with less waste and inefficiency, if the DNI system can provide a better behavioral science/economics foundation for understanding and forecasting these problems and the President's options.

The original Gathering Storm Report sounded a loud alarm, a public "scare" about the alleged 600,000 scientists and engineers being graduated, annually, in China and India. Later, it turned out that an astonishing number of high-profile members of the National Academy of Sciences study panel did not understand very much about the educational systems in China and

India or how to interpret the numbers. <1> Nor - as it turned out - did the panel have a good social science model of US competitiveness, across different sectors, in the globalizing economy. For example: a key test for any modern, scientifically-based policy analysis (v. a lobbying document) is the use of numerators and denominators [that Secretary McNamara introduced for management and decision making at the Department of Defense fifty years ago]. "Spend more money to get more and better inputs, across all inputs in the production function" is, as even undergraduates taking Economics 101 understand, a crude analysis.<2>

The DNI & the Need for Post-Sound-Bite Thinking: Two Brief Examples

Two brief examples will illustrate the post-sound-bite intelligence and analysis that should be available to President Obama as a scientific counterweight - i.e., now that the current National Academy of Sciences/National Academy of Engineering leadership is (sometimes) turning their organizations into lobbying institutions and sending advisory Reports that perpetuate Republican-Era mindlessness.

1.) The fact that seems to alarm the National Academy [at least when it issues Reports in its lobbying mode] that 4 out of 5 products sold by Wal-Mart come from China is actual evidence (for example) of lower labor costs in China, and a *positive* indication of Wal-Mart's competitiveness.<3> It does not follow that this (allegedly alarming) "Gathering Storm problem" can be solved by catch-up funding so that the physical sciences, engineering, and mathematics Departments at US universities (i.e., interest groups) can have the same doubling as the biomedical sciences have been awarded.

2.) The experience of recent years suggests that shortfalls in behavioral science R&D might be usefully remedied as a high priority: The trillions of dollars for prolonged wars in Iraq and Afghanistan, and the truly dangerous national + global economic crisis and slower-than-anticipated recovery suggest that US government decisions have not been in contact with a changing world.

America should be ahead of the game, across all important areas. I hope that you can identify what is missing.

Lloyd Etheredge

<1> Details are discussed at II.A. at www.policyscience.net. The historic case eventually involved the AAAS and questions, before the Department of Justice, about breakdowns of scientific integrity and whether unreliable lobbying documents should be issued as reliable scientific Reports by the National Academy of Sciences.

All 53 economist members of the National Academy of Sciences were excluded as reviewers of the Report and they still seem to have been excluded in the preparation of this third "Gathering Storm" document, which repeats the earlier recommendations. Many of the recommendations are too crude or (in the case of the billions of tax credits to Exxon and other large R&D corporation) too controversial to meet the higher standards of the nation's behavioral scientists.

<2> America should be competitive, and a competitive leader in scientific innovation. But the Gathering Storm analytic models do not yet show the most cost-effective ways to spend government money, at the margin, to get better results.

Perhaps the key problem is that we already know how to get lower-cost/higher performance results equivalent to Japan in K-12 science education - i.e., simply turn America into Japan. My point (I do *not* support turning America into Japan) is that the American system tries to solve problems by spending money in every direction because it seems, often, an easier way to change behavior or institutions. But large sums of additional cash are not inherently required for better performance. If - across many areas (e.g., health costs, or the salaries paid to automobile industry or other Executives) - American institutions can spend vastly more money than in other nations, without better results, the National Academy's "scientific" thinking may be headed in the wrong direction. The DNI system needs the expertise to challenge this analysis of America's global future and bring thoughtful alternative advice to the President.

<3> Plus real benefits to American consumers, including many at lower and middle income levels

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