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To: "Dr. Baruch Fischhoff - Chair, National Academy of Sciences Study on Social & Behavioral Science and Improving Intelligence for National Security" <baruch@cmu.edu>

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

Subject: Better Forecasts: Meta-Rules for uncertain futures and three other suggestions

Dear Dr. Fischhoff and Colleagues:

Other social scientists know more than I do about forecasting. However after thinking about the professional examples of the National Intelligence Council's four (fifteen-year) forecasts beginning with Richard Cooper's original project (& most recently Global 2025) here are several ideas that the National Academy might wish to convey:

Background

As background, the National Academy Report might recognize that the US government's intelligence community and academic social scientists are if different - although related - lines of work. Published, official estimates by the US government might usefully include self-defeating and self-fulfilling prophecies: as Ithiel Pool once noted, every evidence-based sign that reads: "Dangerous Curve Ahead" is designed to be a self-defeating prophecy. Similarly, there can be a scientific language about American arrogance that - while it names the variables and psychological mechanism accurately and is appropriate to Stephen Walt's Taming American Power: The Global Response to US Primacy (NY: Norton, 2005) - might only be addressed in more oblique language (about multilateralism) in a US government report. And there are some forecasts that are important to discuss - for example, the rise of an unprecedented global surveillance system with access to almost all information in digital form and probabilities of misuse - that might be predictably under-analyzed in official government forecasts.

Four Alternative Perspectives

I am not suggesting that these brief notes (below) derive from a superior knowledge of right answers. They are, however, alternatives. They also suggest that it might be better to commission a range of independent forecasts rather than seek

one, consensus, forecast:

- **From Linearity to Dialectics**

The NIC forecasting traditions are rooted in the linear econometric traditions of regression analysis. But dialectical models - of actions producing reactions - deserve attention. For example Walt's book (cited above) develops implications of classic balance of power theory for a (temporarily) unipolar world where the US is perceived to wield its power for its own agendas. And the dialectical response may be invoked even by failures of stewardship in the current global economic crisis - e.g., as Japan, China, and other governments perceive American negligence about their welfare.

More broadly, Alker's thoughtful work beginning with "The Long Road to International Relations Theory: Problems of Statistical Nonadditivity" in World Politics (July 1966), pp. 623-655 provides other useful cautions about these earlier-generation data analysis methods.

- **Majorities and Mainstream Trends v. Intense, Focused Minorities**

In a democratic culture, we are inclined to think that majorities decide futures. But this is almost never the case when the future involves important changes. These originate with specific leaders and small groups; they are created by intense, purposive, organized minorities. Barack Obama running for President, Osama bin Laden, Bill Gates inventing Microsoft (and eventually changing the future for IBM) Tim Berners-Lee inventing the World-Wide Web, the leaders of major hedge funds and investment banks securing deregulation of financial markets. You can't forecast these systemic-level changes via simple linear-additive forecasting models based on past mainstream trends.

- **Better Thinking about Creative Internet Applications**

The US government's forecasts are not yet very good about the impact of the Internet, and especially about bold and creative uses that can accelerate global change.

I do not have a ready explanation for these lacunae. However, if the US government did a better job of focusing on communication-related technologies, flows, and changes, I think that it would do a better job of recognizing both new dangers and opportunities. For example, the huge changes of global finance (e.g., hedge funds) adapting global computerized trading to apply new probability mod-

els and take advantage of deregulation. Or the upside potentials of a rapid learning international health system, applying breakthroughs in biomedical knowledge, via electronic health records, for a new era of fast discovery *in silico* research and US-led benefits to people in all countries.

- Meta-Rules for Uncertain Futures: Rapid Progress for Professional Diplomacy in other Countries

In 1954 President Eisenhower was briefed by CIA Director Allen Dulles about a CIA plan to overthrow a Leftist government in Guatemala. It was bold, imaginative, and combined psychological elements with several old airplanes and about 110 ground troops. Afterward, Ike took Allen Dulles (with whom he had a relationship extending back to WWII) aside and asked him what he forecast as the probability of success for this scheme? "About 20%," Dulles replied. Eisenhower nodded, gave his assent, and then said to Dulles: "Allen, I am glad you said that. If you had given me a much higher number, I would have had a much more difficult decision."

High-confidence predictions may not be the best/only goal for DNI/NIC work: I would like to see the NIC forecasts strengthened by a final chapter, "**Meta-Rules for Uncertain Futures.**" Rather than seek confident, consensus forecasts - as if we were viewing the behavior of physical systems or betting in Las Vegas - we might want the DNI/NIC to develop a new universe of tracking systems to monitor many alternatives [an idea, that I discussed in an earlier message, and that is part of modern Scenario-building methods used by large multi-national corporations]. Another "Meta-Rule" is expressed in the phrase: "**The Best Way to Forecast the Future is to Create It.**" We might develop and pursue projects to reduce variances and create likely futures *by agreements*, and by norms associated with agreement-created futures (e.g., integrity; keeping promises and commitments).

Specifically, re "missing ingredients that could make a long-term difference": one of the best investments that might flow from this "Meta-Rules" chapter is to strengthen professional diplomacy in other countries [alongside Davos and Trilateral-like initiatives]. The better future, for a multilateral world, may include the preventive diplomacy and professional look-ahead capacities of many emerging global and regional players - China and Turkey, Brazil and Indonesia, India and Egypt, Jordan and South Africa. There has been interesting leadership from www.apsia.org (an organization that I knew in its pre-Internet days) and especially from Georgetown University's Qatar campus project. And, now, the further inter-

nationalization of US higher education. One of the several implications of ideas in this Meta-Rules chapter [and I am only beginning to think about the problem] might be a special NIC study, perhaps with the US Institute of Peace, of identifying and supporting such creative initiatives.

Lloyd Etheredge - Fellow, World Academy of Art & Science

Dr. Lloyd S. Etheredge
Policy Sciences Center Inc.
127 Wall St., Room 322 - Box 208215
New Haven, CT 06520-8215
URL: www.policyscience.net
301-365-5241 (v); lloyd.etheredge@policyscience.net (email)