To: "Dr. Baruch Fischhoff - Chair, US National Academy of Sciences Committee on Improving Intelligence" <baruch@cmu.edu>
From: Lloyd Etheredge <lloyd.etheredge@policyscience.net>

Subject: 195. Red Team: Opportunity Costs and National Security in a Changing Historical Epoch; Global Enrollment Theories. The New World Politics & http://videocast.nih.gov/summary.asp?file=15228

Dear Dr. Fischhoff and Colleagues:

Production Functions and National Security Analysis

Economists analyze national security using the concept of a production function. Desired outcomes can be produced by different mixes of inputs. One of the tasks of good policy analysis is to compare the cost-effectiveness of alternative pathways.

Red Team Analysis: A Changing Historical Epoch

Today, in a changing world, it is timely for the National Academy of Sciences and social scientists to recommend a Red Team to challenge conventional thinking. We may be able to get better results by rebalancing the inherited "input mix."

The case for the project is deeper than the end of the Cold War and the new use of suicide terrorism by a small number of people. The world is exiting two historical epochs when wars were affected by economic motives and often involved physical conquests of territory and control of populations, natural resources, and related competition for trade advantages. Today, the global economy is changing and - with the vital exception of oil - some classic motivations for war (i.e., from the agricultural age and the industrial age) are abating. It is a miraculous historical change.

The 1% Marginal Adjustment/Opportunity Cost Exercise

A first step in the exercise could ask various Departments, thinktanks, scientists who are members of the National Academy of Sciences, and others what could be purchased, from their

1

perspectives on improved national security, from a 1% rebalancing of current national security budgets. Since a 1% shift could be realistic, an engaging list of creative alternatives and causal ideas about national security (including "smart" power) would be forthcoming.

As a starting point for comparisons at the margin: The current US Defense Department budget is $700 billion/year, which is more than the Defense budgets of all of the world's other nations combined. Already, nuclear arsenals and delivery systems can destroy anyone, anywhere. Re conventional "hard power" capabilities: No other nation has an all-ocean navy and America's carrier battle groups, or America's global airlift and sealift capacities, and our high-technology conventional weapons (representing many years of R&D budgets that also exceed the sum of other nations) are unmatched. No major power threatens to invade America or any of its adjacent countries who are US allies. It is a good time to think about even better (rebalancing) results by looking at the wider equations.

A New Theory of National (and Collective) Security? Capturing Imaginations?

My theory is that security is a function of enrolling people into a much better future than can be produced by violence. [We have never - before - been able to test this model on a global scale. However, there are good projects for American leadership that can test it; and, perhaps, one day it will be in the textbooks.]

Put another way: The critical New Epoch opportunities may be political - i.e., If we imagine a component of national security by thinking about America as a candidate running for elected office as a world leader, with people in all countries thinking about America's power and leadership as a force for good, that benefits their lives. [Thus: If we - now - have the capacity to capture imaginations on a global scale, we should do so. Even in the war against terrorism, the best intelligence resources are informants in communities who see better lives unfolding peace-fully and who look askance at extremists and their violent, kooky, plans.]

Global Breast Cancer, Rapid-Learning Health, and Other Opportunity Costs

For example: A global Breast Cancer initiative, developing patient registries for rapid learning to defeat the disease through improved detection and treatment methods, could begin through

NIH and - in partnerships and with leadership from women - enroll hundreds of millions of women, worldwide using simple on-line methods. <1> There also are political/humanitarian opportunities (discussed earlier, # 147) to benefit 250 million people, in all countries, within two years. Both of these initiatives would require a catalytic, startup investment from the US: afterward, costs could be shared more widely. Both initiatives also merit support as *political* initiatives.

Re global progress across the next decade: The Institute of Medicine now has a Rapid Learning Health Care System in America panel, developing bold and visionary applications for the new electronic health record data systems (EHR) to improve treatments and reduce costs across all medical conditions. The vision is ideal for a parallel global rapid learning initiative. And the global planning is timely since the President's Council of Advisers on Science and Technology (PCAST) has taken steps to assure a Universal Language for databases and information exchange. International cooperation is a logical step, since the comparison of immigrant populations with different living conditions and diets across the world's countries will help everybody to accelerate useful research.<2> A global system with inter-operable languages also creates new and exciting business opportunities for software and application developers.

Many more good ideas, boosting the political component of international security and cooperation, could be possible, and rational, within the first (1%) stage of a Red Team project.

I hope that the National Academy can follow-through and help to stimulate the creative and critical analysis of American options in a changing world.

Best wishes for the New Year,
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<1> There already is a medical prototype, supported by NIH domestically, that can quickly become global. See the remarkable videocast of Dr. Susan Love's work (UCLA) to accelerate basic and translational research at NIH, on July 21, 2009, "The Love/Avon Army of Women: A Revolutionary On-line Resource to Accelerate Research" online at http://www.videocast.nih.gov

Directly, the URL is http://videocast.nih.gov/summary.asp?file=15228

<2> The global initiative is not necessarily huge and expensive. A reference database with "everything included" of 10,000 could, with the addition of further specialty samples, generate a new world of hypotheses and discoveries. DNA samples, tumor samples, etc. can be collected and preserved for later analysis as hypotheses are generated and costs of automated analysis are reduced. Ten hospital centers in China or India could each document 1,000 cases and upgrade our global scientific capacity for rapid learning.

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