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

Subject: 156. A New Era: Wars Fought on the Basis of Assumptions of Behavioral Science; Beyond Beltway Bandits and Proprietary Data; Fwd: Friedman on Permanent Threat Analysis Industries

Dr. Fischhoff and members:

It might be worth noting that America is in a new era in which wars are, increasingly, fought on the basis of assumptions of behavioral science.

We need behavioral science - and your recommendations! - to be sure that we get the assumptions right, that we develop the best policy implications, and that we learn as we gain experience and as the world and key phenomena (probably) adapt and change.

Could I also raise a deeper, institutional, issue related to Thomas Friedman's recent column?

Better Science. The Economic Incentives of a For-Profit Behavioral Science/War Industry?

There are grounds to caution the DNI about spending \$75 billion/year via the substantial use of (proprietary) contract research about behavioral science/threat issues. Science, as a mostly-public institution, can do a better job of subjecting alleged findings to peer review and/or replication and further learning if proprietary data systems are moved into the public domain.

The Beltway Bandit Business Model. The typical business plan of Beltway Bandits is to use government contracts to develop proprietary databases. Then, they make a living by repackaging and re-analyzing, selling additional analysis, extending them, etc. But it is hard to know if this is first rate science. And it is not easy to replicate or extend or reinterpret the findings. Or even for people with opposing views or different data to know what the DNI is receiving or might be receiving. Or even for the DNI to know what he is getting.

If all of the now-proprietary data, paid for by the DNI system and the US taxpayer, moves into the public domain, the DNI will get much more for its money. And we may learn important lessons, faster.

The NIH Model

Yes, some data must be secret. But there is a difference between data that must be secret for national security purposes and data that only are proprietary. We have established a much better idea at NIH, where research data acquired by public funds must be made public. We also are in the process of requiring that all data acquired in clinical trials for new drugs be placed in public depositories. And, already, any scientific publications based on genome mapping must be supported by depositing the genomic decoding in curated, on-line data bases.

Conceptually, the NIH Model is the better model for behavioral science and the behavioral science components of the DNI's \$75 billion/year system.

Also: One of the alarming findings re government contract research & behavioral science - from the era of program evaluation studies and the Great Society - is how little of it cumulated or was done well enough, rigorously enough, to help with scientific progress and policy learning.

Economic Incentives: The National Security-Behavioral Science Complex?

I am attaching a column by Thomas Friedman and draw your attention to the following (Washington-based) comment:

"I was recently at a Washington Nationals baseball game. While waiting for a hot dog, I overheard the conversation behind me. A management consultant for a big national firm was telling his colleagues that his job was to "market products to the Department of Homeland Security." I thought to myself: "Oh, my! Inventing studies about terrorist threats and selling them to the U.S. government, is that an industry now?""

The National Academy of Sciences should warn the DNI, and all of us, to be mindful about spending so much money, for so many years, for unknown science. The science in physical products - expensive and impressive new weapons, for example - can be evaluated directly by users - Can the missile hit its target? The economic incentives - now that part of the US system seems to be shifting to a multi-generational threat assessment and permanent, institutionalized, large income streams - need to be evaluated thoughtfully. And, putting all of the data - to the maximum extent - into curated public domain systems (e.g., DALLAS) is, conceptually, the wisest policy.

Practical Questions

I agree that there could be stiff political resistance from the industry. And claims about requirements for dataset restrictions in the name of national security secrecy: However, it is a new era: I doubt that people fighting in the hills of rural Afghanistan are interested to read US behavioral science.

At this point, the National Academy also might wish to suggest a follow-on study of creative solutions to problems that must be solved to achieve maximum release. It might be reasonable - for example - for a company to receive continuing income for curating and updating its data

system in DALLAS. It also might be permitted to charge a user fee that reflects value added by the company from other contracts with other entities. The government may not be able to guarantee traditional monopoly rents for behavioral science data systems - nor should it - but there could be a degree of flexibility that is consistent with retaining market incentives for for-profit research while supporting rapid-learning science and the public interest.

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Their Moon Shot and Ours. 9/25/2010, The New York Times
By THOMAS L. FRIEDMAN

China is doing moon shots. Yes, that's plural. When I say "moon shots" I mean big, multibillion-dollar, 25-year-horizon, game-changing investments. China has at least four going now: one is building a network of ultramodern airports; another is building a web of high-speed trains connecting major cities; a third is in bioscience, where the Beijing Genomics Institute this year ordered 128 DNA sequencers — from America — giving China the largest number in the world in one institute to launch its own stem cell/genetic engineering industry; and, finally, Beijing just announced that it was providing \$15 billion in seed money for the country's leading auto and battery companies to create an electric car industry, starting in 20 pilot cities. In essence, China Inc. just named its dream team of 16-state-owned enterprises to move China off oil and into the next industrial growth engine: electric cars.

Not to worry. America today also has its own multibillion-dollar, 25-year-horizon, game-changing moon shot: fixing Afghanistan.

This contrast is not good. I was recently at a Washington Nationals baseball game. While waiting for a hot dog, I overheard the conversation behind me. A management consultant for a big national firm was telling his colleagues that his job was to "market products to the Department of Homeland Security." I thought to myself: "Oh, my! Inventing studies about terrorist threats and selling them to the U.S. government, is that an industry now?"

We're out of balance — the balance between security and prosperity. We need to be in a race with China, not just Al Qaeda. Let's start with electric cars.

The electric car industry is pivotal for three reasons, argues Shai Agassi, the C.E.O. of Better Place, a global electric car company that next year will begin operating national electric car networks in Israel and Denmark. First, the auto industry was the foundation for America's manufacturing middle class. Second, the country that replaces gasoline-powered vehicles with electric-powered vehicles — in an age of steadily rising oil prices and steadily falling battery prices — will have a huge cost advantage and independence from imported oil. Third, electric cars are full of power electronics and software. "Think of the applications industry that will be spun out from electric cars," says Agassi. It will be the iPhone on steroids.

Europe is using \$7-a-gallon gasoline to stimulate the market for electric cars; China is using \$5-a-gallon and naming electric cars as one of the industrial pillars for its five-year growth plan. And America? President Obama has directed stimulus money at electric cars, but he is unwilling to do the one thing that would create the sustained consumer pull required to grow an electric car industry here: raise taxes on gasoline. Price matters. Sure, the Moore's Law of electric cars — "the cost per mile of the electric car battery will be cut in half every 18 months" — will steadily drive the cost down, says Agassi, but only once we get scale production going. U.S. companies can do that on their own or in collaboration with Chinese ones. But God save us if we don't do it at all.

Two weeks ago, I visited the Coda Automotive battery facility in Tianjin, China — a joint venture between U.S. innovators and investors, China's Lishen battery company and China National Offshore Oil Company. Yes, China's oil company is using profits to develop batteries.

Kevin Czinger, Coda's C.E.O., who drove me around Manhattan in his company's soon-to-be-in-production electric car last week, laid out what is going on. The backbone of the modern U.S. economy was locally made cars powered by locally produced oil. It started us on a huge growth spurt. In recent decades, though, that industry was supplanted by foreign-made cars run on foreign oil, so "now every time we buy a car we're exporting \$15,000 of capital, paying for it with borrowed money and running it on foreign energy sources," says Czinger. "We've gone from autos being a middle-class-making-machine to a middle-class-destroying-machine." A U.S. electric car/battery industry would reverse that.

The Coda, 14,000 of which will be on the road in California over the next year and can travel 100 miles on one overnight charge, is a combination of Chinese-made batteries and complex American-system electronics — all final-assembled in Oakland (price: \$37,000). It is a win-win start-up for both countries.

If we both now create the market incentives for consumers to buy electric cars, and the plug-in infrastructure for people to drive them everywhere, it will be a win-win moon shot for both countries. The electric car industry will flourish in the U.S. and China, and together we'll tackle the next challenge: using auto battery innovations to build big storage batteries for wind and solar. However, if only China puts the gasoline prices and infrastructure in place, the industry will gravitate there. It will be a moon shot for them, a hobby for us, and you'll import your new electric car from China just like you're now importing your oil from Saudi Arabia.

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