THE POLICY SCIENCES CENTER, INC.

127 Wall Street, Room 322

P.O. Box 208215

New Haven, Connecticut 06520-8215 U.S.A.

Tel: (203) 432-1993 • Fax: (203) 432-7247

MYRES S. McDOUGAL
Chairman (1906-1998)

W MICHAEL REISMAN
Vice Chairman

ANDREW R. WILLARD
President

Please Reply to: DR. LLOYD ETHEREDGE
7106 Bells Mill Road
Bethesda, MD 20817
Tel: (301) 365-5241
Fax: (301) 657-4214
Internet: lloyd.etheredge@yale.edu
polyscience.net

January 30, 2010

Dr. John Holdren, Co-Chair and Members
President's Council of Advisers on Science and Technology
The White House
Washington, DC 20500

Dear Dr. Holdren and PCAST Members:

I am writing to ask if PCAST will support recapitalization of the social, behavioral, and economic (SBE) sciences? For example, there has been a catastrophic failure of econometric models and data systems in the US and abroad: Before the current global crisis even the world's most prescient economists could only worry aloud and nobody predicted or understood the new inter-connections and the depth and extent of what has happened.

We have a compelling need for independent social science when the world is changing; when we must recalibrate older assumptions; and when democratic governments must respond with agility and fresh ideas to provide leadership. This submission outlines three key areas where, with PCAST's support, recapitalized social science could produce great benefits if rapid learning (and multi-disciplinary) systems are designed with new data and analysis methods in the public domain.

Three Rapid Learning Systems and National Needs

About 18 months ago, the Director of National Intelligence, who oversees a $75 billion/year budget, asked the National Academy of Sciences for advice about new social science data systems and analysis methods that would help us to monitor, understand, forecast, and make effective strategic policy beyond the water's edge.<1> Of ideas that I have submitted to the Fischhoff panel, the attached memorandum (pp. 2-4) summarizes the three recapitalization areas for rapid learning systems: The

summary is keyed to earlier memoranda with detailed discussions of the specific projects to be enabled by each investment. (These background memoranda are available online at http://www.policyscience.net at II. D.)

In each case, Admiral Blair and his staff have obligations for executive leadership and rapid learning. However, I think that national rapid learning systems are best designed by the Obama Administration as a strong evolving partnership with NSF and other agencies, academic institutions, and with data systems/analysis methods that are in the public domain.<2> And that also respect the independence of academic institutions and the NSF peer-review process for many research programs. The Obama Administration also should move quickly to build inter-disciplinary post-doc systems at the research universities that want to participate in this recapitalization.

Yours truly.

Lloyd S. Etheredge, Director
Government Learning Project; Fellow
World Academy of Art & Science

<1> These responsibilities include the National Intelligence Council, with early leadership by Professors Joseph Nye and Richard Cooper at Harvard, to integrate SBE research for effective US leadership across the arc of the next fifteen years.

<2> Re the catastrophic failure of last generation econometric models and data systems. Admiral Blair has testified to Congress about the "failures of stewardship" of American institutions and designated the CIA and Director Panetta to solve the problem.

Date: Tue, 19 Jan 2010 00:57:24 -0500
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: The Rapid Learning Systems chapter

Dear Dr. Fischhoff and Colleagues:

What do you think about recommending startup investments to create rapid learning systems for high priority lines of research? Thirty-five years ago, when I received an NSF grant to begin the interdisciplinary study of government learning rates, *hubris* and the Cold War dominated the international agendas. Today, with new data systems, analysis tools, and global Internet capabilities, dozens of useful and important lines of investigation can get underway. There are opportunities for a more secure and better future that would have been unimaginable to earlier generations of statesmen.

Admiral Blair can leverage his funds for new data systems and analysis tools; a partnership with academic institutions can achieve far more, and more quickly, than the DNI system can achieve alone. His leadership could be essential: a legacy from the Bush era is that the NSF political science budget has fallen to $19 million/year - which is pathetic - and even funds for rapid, interdisciplinary learning about the global breakdowns of economic theory and stewardship are limited in an institution (NSF) that has shifted its focus to the physical sciences, math, and engineering. Rapid learning systems will - in many areas - be a tough assignment: we need to recapitalize. Here, as a first step, is a draft of ideas for three high priority, high-impact projects that could get underway soon.

I. Fast Discovery via New Databases and Analysis Methods
For almost every new line of investigation the key barriers are data systems and analysis tools. For example: even the world's smartest economists could do little more than worry aloud before the current global economic catastrophe. To do more, they needed better data, which nobody had.

Specifically: I suggest that the DNI write sole source contracts (that respect their academic independence) with selected universities to organize new, public domain data systems and analysis tools in each area for rapid learning. (A good model is provided by the University of Michigan, which has provided core leadership for US election studies and other fields.) [Other non-profit and for-profit organizations also will be eligible if they agree to develop and maintain data systems and analytic tools in the public domain, without charge.] There will be added funds for faculty, graduate students, post-docs, initial research projects, visiting Fellows from other institutions, and online lecture series to build a critical mass and a network for fast discovery research.<1>

II. Three High-Yield Startups

I have suggested a wide range of high priority ideas in early communications (on www.policyscience.net at II.D.) From my perspective, three high yield startups - with practical insights for policy makers, and with an ability to energize research across disciplinary boundaries - might be: 1.) Content analysis; 2.) New (interdisciplinary) models of global politics, finance, and economic performance that begin with research to draw the right lessons from the current catastrophic failures of theories and institutions; 3.; Forward Observation Centers in emerging pivotal countries to help researchers from the US and other countries to develop the comparative study of psychology and political behavior; conduct more research abroad, understand regional trends, and build capacities for comparative policy analysis.

A.) **Content Analysis**. The quantitative analysis of mass communication was launched by Lasswell and others in the 1930s. The pioneers set their methods aside, with a message-in-a-bottle volume in 1959, foreseeing the day when digital input and astonishingly powerful computers and online storage/analysis capabilities could realize their dream of observing and deeply understand social and political dynamics on a global scale. The technology is here. In memoranda # 15, 11, 3, 46, 58, 66, 67, 80, 82, 85, 93, 104 and others I have outlined how we can create rapid learning systems to improve forecasts of political unrest and violence; youth cohorts; global cultural change and the development of social capital; the adaptations of newspapers and the political consequences in an era of changing economic viabilities; the shaping of emotional consensus and the dynamics of the psychological warfare being orchestrated by jihadist cults and engaged (so far, with partial success) by the US government; and much else. We can bring the dream of social

2

science to a new level.

Although there are tough interdisciplinary challenges for many fields - including computer software to manage large reference databases for different languages and areas of discourse - it is worth doing if a startup institution is available. The DNI/NSA system can accelerate the process by sharing reference and research databases and analysis tools. Once underway, new reference databases and software tools should empower a universe of new research and commercial applications.

B.) <u>Global Finance, Politics, and Economic Forecasting</u>.
There is an urgent need for fast discovery research to understand how the global economic/financial system has changed (memoranda # 17, 7, 19, 47, 71, 76, 79, 81, 97, 105 and elsewhere.). At the beginning, the investment might be several Centers with funds for released time, multi-disciplinary post-docs and research support, visiting academic Fellows and investigative reporters/journalists, and planning groups to recommend new R&D data systems for a new generation of hybrid macro-economic + financial + political models. The comparative study of wealth and political influence will be part of the agenda to map the new world of complex, adaptive systems. It might be wise to create Centers in several leading countries - US, UK, China, Japan, perhaps in Qatar for the Arab oil states - to accelerate creative thinking and agreement about new national/international data systems and competing models.

C.) <u>Forward (Regional) Observation Centers, with survey research and other capabilities</u>. We have recognized, for more than thirty-five years since Gergen's pioneering article, that much of American social science could be merely an insular analysis of American culture; and, specifically, of the psychology of college undergraduates who have been convenient subjects. Sears (whose contribution I discussed, with Gergen's, in memo # 12) has underscored the range of ethnocentric biases that might obscure our understanding and ability to forecast political behavior in other cultures. It is time to build new global capabilities and address these problems (with triple benefits - for social science, for policy insight, and to prepare American undergraduates for a more pluralist world than they can recognize through our social science textbooks.)

My suggestion is to build this capacity by a marriage with new forward ob-

3

servations Centers abroad, informed by the forecast of emerging pivotal states by the diplomatic historian Paul Kennedy and his colleagues (memorandum # 13). These Centers at twelve locations - e.g., Turkey, Egypt, Indonesia, South Africa, Brazil - will build partnerships between leading American research institutions and local universities. They will have funds for comparative social science (the Gergen and Sears agendas from memo # 12 , the study of emotional consensus from # 85 and comparative survey research questions of inter-group relations (memos # 9 and # 55 re Lasswell's proposal of observatories)); for understanding national/regional influence networks (# 10 and # 39) and regional policy research (e.g., # 49 and the regional Trilateral Commission model). They also will build capacity for international collaboration in social science by new opportunities for graduate students and researchers from a range of countries to live and work abroad and to strengthen their language skills and cultural/political knowledge. With a good plan for international funding, it should be possible to build rapid learning networks across cultures - for example, by bringing Chinese, Japanese, and American researchers to a Center in Turkey to study regional politics.<2>   We might also learn useful lessons about foreign misperceptions of America and American foreign policy (# 6) and the reverse (# 1 and aspects of #3). These Centers could become hubs in their regions, and (as the new technologies are available) the home of regional content analysis and survey research capabilities.

This bold vision is likely to require several planning mechanisms. A first step might be a request to the Center for Advanced Study in the Behavioral Sciences to assemble a working group to review the competing theories raised by Gergen and Sears and develop an intellectual strategy for rapid learning about (possible) major cultural/neuropsychology differences affecting social and political psychology.

III. A Cautionary Note: Admiral Blair's Commitment is Needed
For these, and other rapid learning networks, to succeed I think that there has to be a commitment to initial funding by the DNI (just as NIH makes when it creates rapid learning networks for specific diseases). American social sciences have become so demoralized and frustrated that there is unlikely to be a critical mass of people to commit several years of their lives to a bold vision of rapid learning, and many hours of writing and submitting plans and paperwork, unless there is a recapitalization/rapid learning commitment from a high level in the Obama Administration. And organizing international linkups will require additional investments of

4

professional time and are especially unlikely without prior agreement to fund visions of trusted institutions.

Lloyd Etheredge

<1> Kennedy's forecasting is very suggestive, but the Grand Strategy and selection of sites are likely to evolve in light of practical discussions and the interests of US universities to build specific ties. For example, the interest of Georgetown might suggest that a key Middle Eastern Center be located at their campus in Qatar. Or the University of Wisconsin's ties in India could suggest an initial center for multi-cultural social science be developed in India.

<2> In the long term, if appropriate appointments to the National Science Board can be made, additional growth might be funded via peer review processes at NSF.

Dr. Lloyd S. Etheredge - Fellow, World Academy of Art & Science
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)