

The Evolution and Future of Science Diplomacy: A U.S. Perspective

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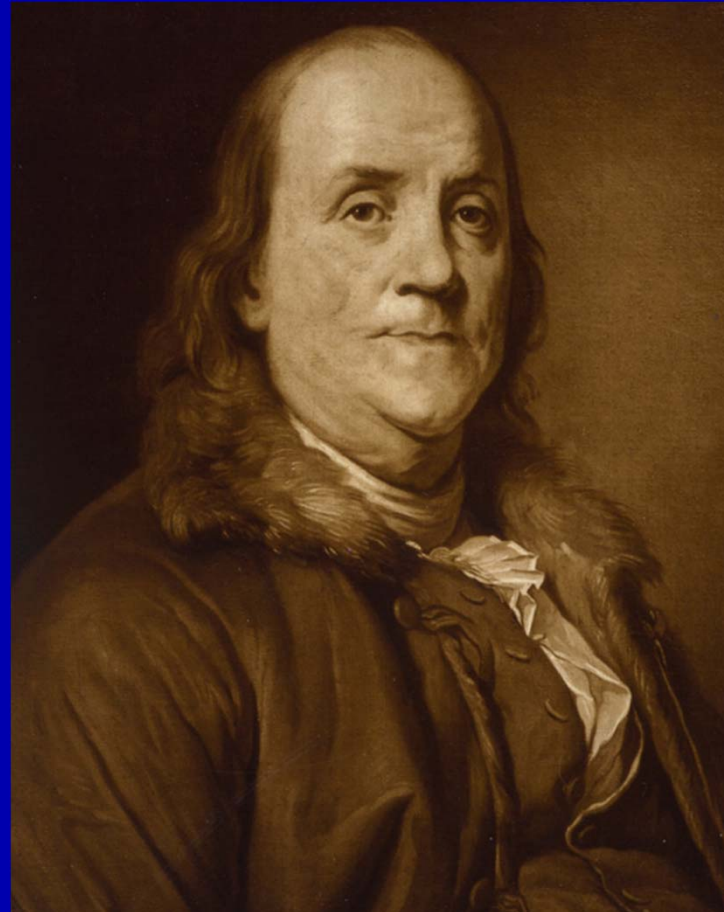
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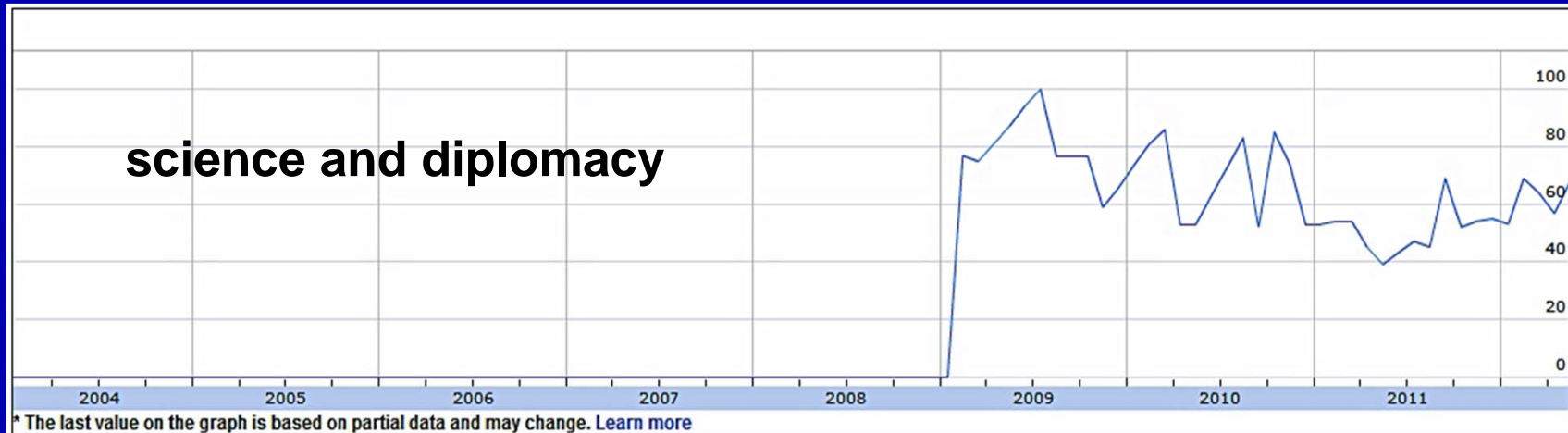
First American (Science) Diplomat

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Source: Library of Congress
(http://www.americaslibrary.gov/aa/franklinb/aa_franklinb_subj_e.html)

science and diplomacy



“science diplomacy”



Source: Google Insights for Search (accessed 5/31/2012 11:00)

- Science for Diplomacy (Science Diplomacy)
 - International engagement through science to develop, sustain, or enhance relationships between countries

- Science in Diplomacy
 - Global issues with science basis and the scientific/technical aspects of formal diplomatic processes
 - E.g., Convention on Biodiversity, UN Framework Convention on Climate Change, Strategic Arms Reduction Treaty

- Diplomacy for Science
 - Formal diplomatic means to achieve scientific goals
 - E.g., ITER

-- *“New Frontiers in Science Diplomacy”*
The Royal Society and AAAS

Science Diplomacy is not just another term for International Science Cooperation?

- The motivation for International Science Cooperation is to advance science
- The motivation for Science Diplomacy is to affect relationships

- “Science and technology may be stepping into a new and more important role in the conduct of American foreign policy.”
- [The Secretary of State] “. . .thinks that Americans' ability to contribute money and run the world in the old-fashioned way is now over. What we can contribute-and what the world wants-is our technological capabilities.”

-- from Science Magazine

The Secretary of State at the Time

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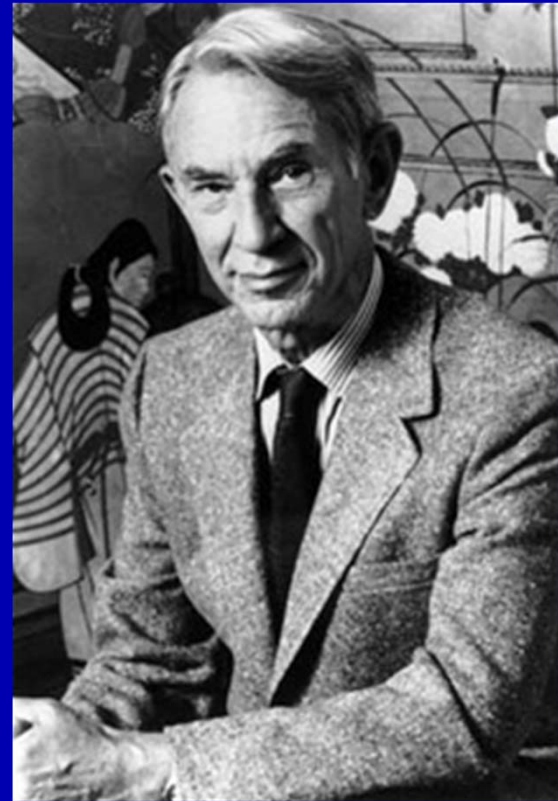


“Kissinger on Science: Making the Linkage with Diplomacy”
Science 17 May 1974

U.S. Historical Cases

- U.S. – Japan: 1960's
- U.S. – China: 1970's
- U.S. – USSR: 1970's-1980's

- Mending the “Broken Dialogue”
-- *Foreign Affairs* October 1960
- President Kennedy and PM Ikeda agree to science cooperation to bridge divide in intellectual communities



Ambassador Edwin Reischauer

U.S.-Japan Cooperative Science Program 1961

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Source: AP photo (<http://amview.japan.usembassy.gov/e/amview-e2011101-02.html>)

U.S. and Japanese Physicists Share 2008 Nobel Prize

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Makoto Kobayashi (KEK) Toshihide Maskawa (Kyoto) Yoichiro Nambu (Chicago)

- Moving the relationship beyond geopolitical
- “In early 1972, President Nixon decided to try to change the U.S. relationship with China. The diplomatic history of his visit to China ... is well known. But what is not known is the role that science may have played. The U.S. government decided that in addition to the political change that we planned to raise with the Chinese, we would offer something of direct tangible benefit, specifically cooperation in science and technology.”

-- Norman Neureiter

“Science as a gateway to understanding” 2008

U.S.-China 1979 S&T Agreement

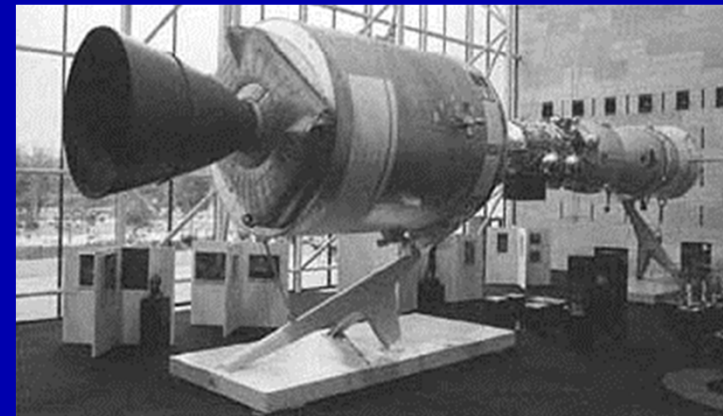
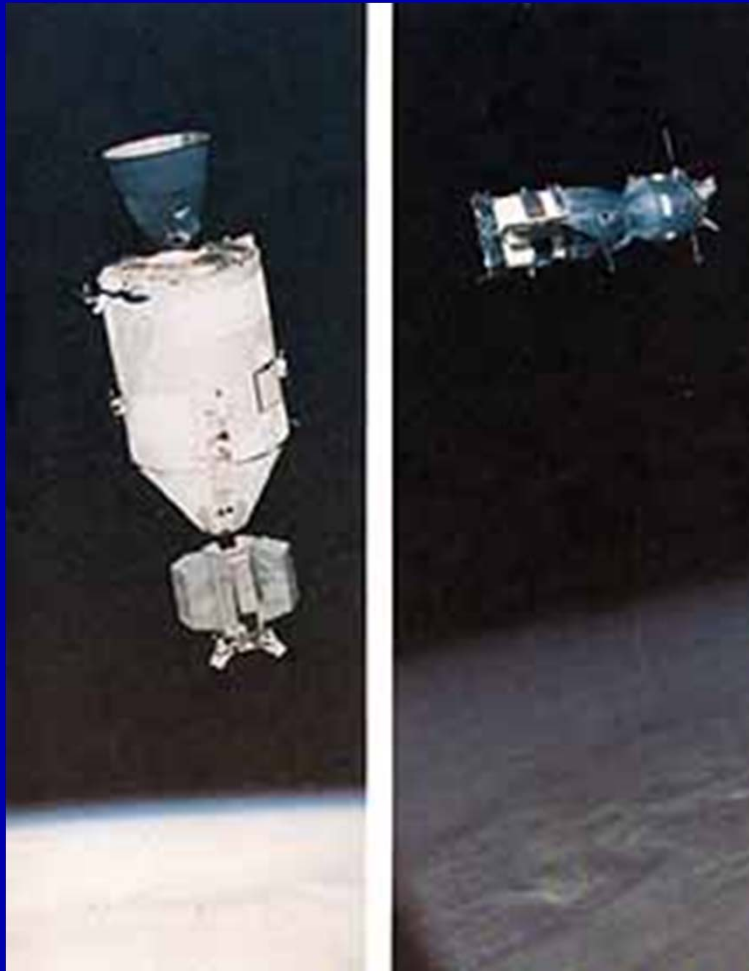


Source: National Archives (<http://research.archives.gov/description/183298>)

- Establishing a relationship and dialogue during time of official political strain
- “. . .we cannot forget that we are dealing with a closed society, and that these exchanges often give us the only access to significant circles in that society with whom we would otherwise have little or no contact. It would be short-sighted of us not to recognize that it is in our national interest to seek to expand scientific cooperation with the Soviet Union.”

*-- Ambassador John Negroponte
September 1987*

Apollo-Soyuz “Handshake” Test Project 1975



Source: NASA (<http://www.hq.nasa.gov/office/pao/History/SP-4209/toc.htm>)

Current Context of U.S. Science Diplomacy

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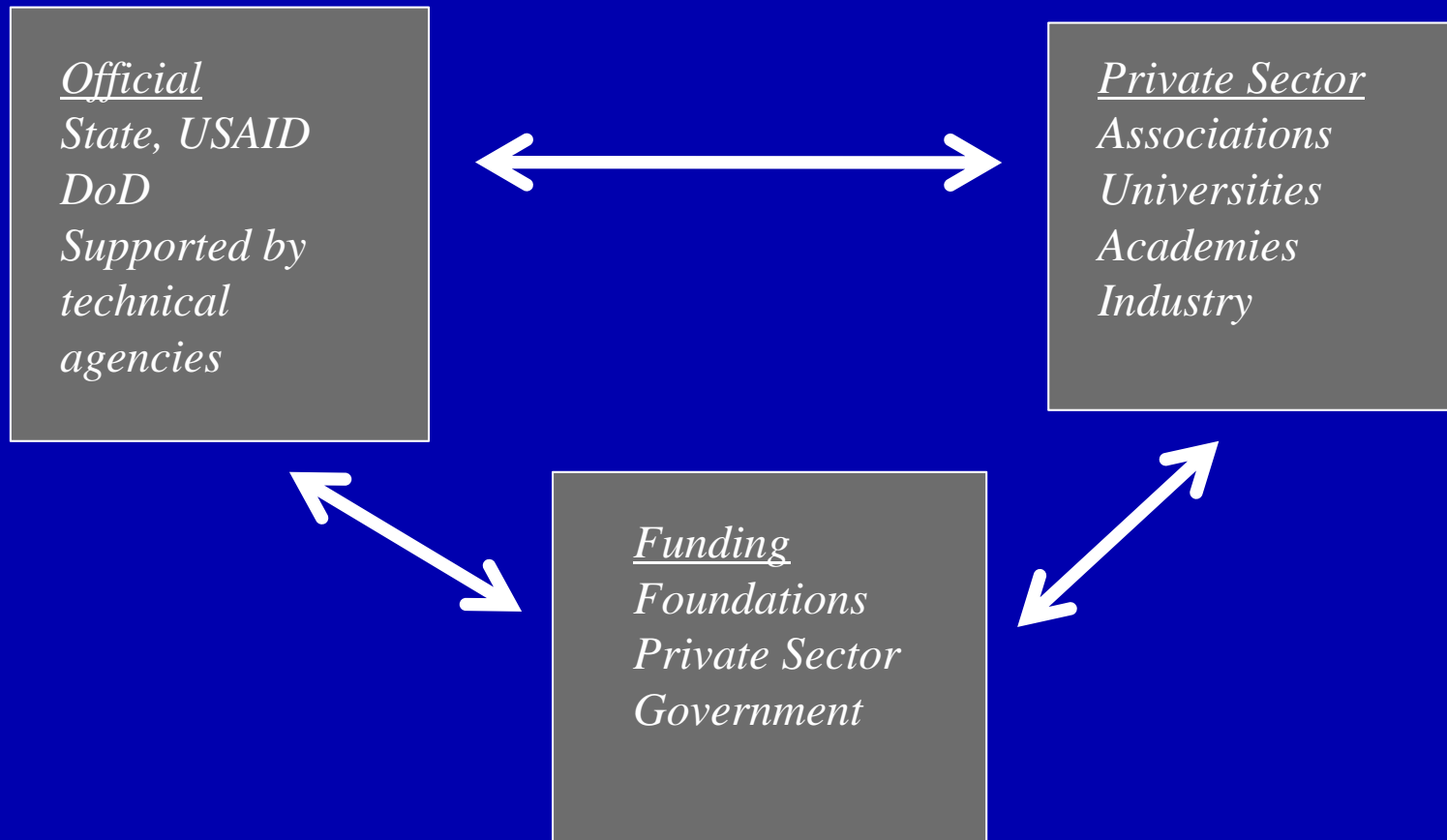


- Science Diplomacy becoming an ever more important element of official US Foreign Policy
- New initiatives (2012) – Networks of Diasporas in Engineering and Science (NODES) and Science, Technology and Innovation Expert Partnership (STIEP) look to take advantage of interaction between State Department and U.S. science organizations

- President Obama Cairo Speech
 - Centers of Excellence in Science and Technology
 - Science Envoys



Who Does Science Diplomacy in the United States?



The Three-E's of Science Diplomacy

- Science Diplomacy to:
 - Expressing national power or influence,
 - Equipping decision makers with information to support policy, and
 - Enhancing bilateral and multilateral relations.

Expressing National Power and Influence

- “As a small nation we must compete hard to maintain our relevance in a world where we can easily be forgotten. We have to demonstrate that small countries can indeed, make a difference.

-- Sir Peter Gluckman, February 2011

Equipping Decision Makers with Information to Support Policy

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THE PERVASIVE ROLE OF SCIENCE, TECHNOLOGY, AND HEALTH IN FOREIGN POLICY

Imperatives for the
Department of State



NATIONAL RESEARCH COUNCIL

1999

- Recommends new science adviser to the U.S. Secretary of State
- Increased science capacity and knowledge



"The Binary Pulsar Experiment and Related Matters"

Prof. Joseph Taylor
Nobel Laureate in Physics, 1993
Professor, Physics Department, Princeton University

Speech: The Binary Pulsar Experiment and Related Matters



Organized by:

Sharif University of Technology

Date: Tuesday, October 16th, 2007 – Mehr 24th, 1386

Place: Sharif University of Technology, Jaber-ebn Haian auditorium

15:00-16:00 Speech by Prof. Joseph H. Taylor

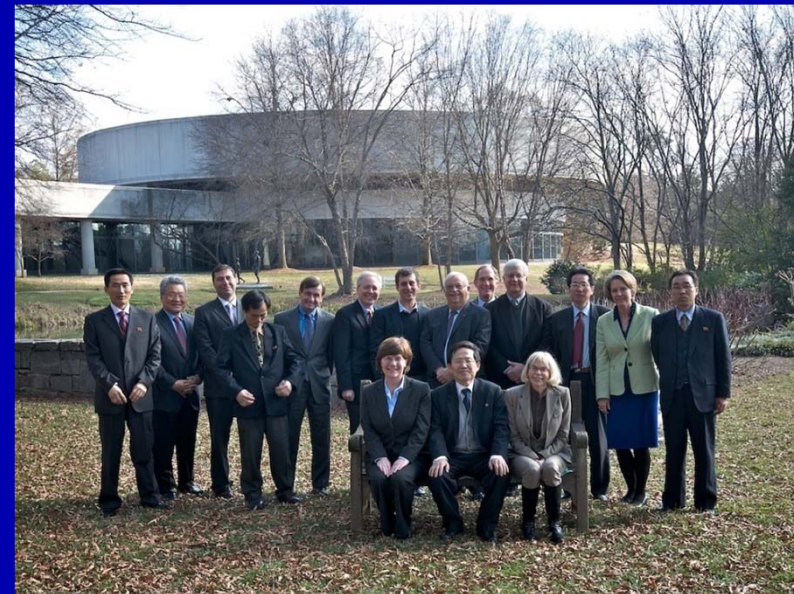
16:00-17:00 Question and answer

- Established in July 2008, during Congressional testimony
- Focuses on three foci of activities
 - Informational
 - Operational
 - Intellectual
- Mandate
“Advancing science, its methods and applications through international cooperation with the goal of establishing or enhancing societal relationships, especially when official relations are limited or strained.”

Operational: U.S. – Cuba



Operational: U.S. - DPRK



Operational: U.S. – Burma (Myanmar)



- AAAS aims to serve as the intellectual hub for issues at the interface of science and foreign policy
- We do this through publications, research and scholars, meetings and workshops

- “New Frontiers in Science Diplomacy” international workshop at the Royal Society in London
- U.S. – India Workshop on Science Diplomacy

(http://diplomacy.aaas.org/files/IndoUS_Workshop_ExecutiveSummary.pdf)



New Policy Quarterly Launched March 2012

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www.sciencediplomacy.org/welcome

- Elements of a Science Diplomacy System
 - More and more countries are interested in integrating science into their conduct of foreign policy
- Diplomats and policy-makers sensitive to the world of science
 - Important role for universities and institutes
- Mechanisms that facilitate international science cooperation
- Coordination between the foreign policy and international science apparatus
- New ideas
 - There are lots of issues that are being raised in the context of science and diplomacy – and we are seeing them in our journal

Issues in Science Diplomacy: Science as a Tool for National Influence

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- “Science Diplomacy as a Defining Role for Canada in the Twenty-First Century” by [Alan Bernstein](#) - 06.10.2013
- “The Rise of Science and Technology Diplomacy in Japan” by [Atsushi Sunami](#), [Tomoko Hamachi](#), [Shigeru Kitaba](#) - 03.14.2013
- “South African Science Diplomacy: Fostering Global Partnerships and Advancing the African Agenda” by [Naledi Pandor](#) - 03.09.2012
- “How a Small Country Can Use Science Diplomacy: A View from New Zealand” by [Peter D. Gluckman](#), [Stephen L. Goldson](#), [Alan S. Beedle](#) - 05.24.2012

Issues in Science Diplomacy: Large Scale Projects

- “International Fusion Energy Cooperation: ITER as a Case Study in Science and Diplomacy” by [Todd K. Harding](#), [Melanie J. Khanna](#), [Raymond L. Orbach](#) - 03.09.2012
- “Research and Diplomacy 350 Kilometers above the Earth: Lessons from the International Space Station” by [Julie Payette](#) - 12.10.2012
- “Synchrotron Light and the Middle East: Bringing the Region’s Scientific Communities Together through SESAME” by [Chris Llewellyn Smith](#) - 11.16.2012

Issues in Science Diplomacy: Mechanisms for Science Diplomacy

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- “SAFARI 2000: A Southern African Example of Science Diplomacy” by [Harold J. Annegarn](#), [Robert J. Swap](#) - 11.27.2012
- “Building a National Science Diplomacy System” by [Vaughan C. Turekian](#) - 12.10.2012
- “Science and Technology Agreements as Tools for Science Diplomacy: A U.S. Case Study” by [Bridget M. Dolan](#) - 12.10.2012
- “Nunn-Lugar: Science Cooperation Essential for Nonproliferation Efforts” by [Richard G. Lugar](#) - 03.09.2012

Issues in Science Diplomacy: Science to Build Bridges

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- “Bringing Health Research to the Renewed U.S.-Myanmar Relationship” by [Ronald Daniels](#), [Pe Thet Khin](#), [Peter C. Agre](#) - 06.21.2012
- “The United States and Iran: Gaining and Sharing Scientific Knowledge through Collaboration” by [Irene Anne Jilson](#) - 03.18.2013
- “The Latent Power of Health Cooperation in U.S.-Russian Relations” by [Matthew Rojansky](#), [Izabella Tabarovsky](#) - 05.08.2013

- “Academic Tribes and Transboundary Water Management Water in the Israeli-Palestinian Peace Process” by [Julie Trotter](#), [David B. Brooks](#) - 05.28.2013
- “Biodiversity without Borders: Advancing U.S.-Cuba Cooperation through Environmental Research” by [Brian M. Boom](#) - 08.14.2012
- “Rediscovering Eastern Europe for Science Diplomacy” by [Marek Konarzewski](#), [Grażyna Żebrowska](#) - 03.09.2012

Science is Effective for the Foreign Policy Community

- Promotes sustained and ongoing interactions with often influential people in or critical people to society
- Encourages collaboration, building partnership and trust
- Focuses on understanding or addressing problems with importance to society
- Depends on following a methodological approach consistent with other goals of diplomacy
 - Transparency
 - Meritocracy and Peer Review
 - Data sharing

Some Unanswered Questions

- Transferring technology/knowledge to competitors
- Creating partnerships where there is asymmetry in scientific capabilities
- Mitigating the misuse of science
- Role of the private sector/industrial R&D
- Globalization of science and the (potential) erosion of the common “language” of science