

The American Academy of Arts and Sciences

Hellman Fellowship in Science and Technology Policy

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NIH Seminar:

Fellowship Opportunities for Post Docs and Grad Students

October 27, 2009

The American Academy of Arts and Sciences

- Not the AAAS (American Association for the Advancement of Science)
- Founded in 1780
- Elected Members
 - Leaders in academic disciplines, the arts, business, and public affairs
- Independent policy research center
 - Conducts multidisciplinary studies of complex and emerging problems

The American Academy of Arts and Sciences

- Analysis of critical social and intellectual issues
 - Mass Incarceration
 - Humanities Indicators
 - Challenges to Business in the 21st Century
- Development of practical policy alternatives
- Bringing diverse perspectives to the examination of issues of common concern

Science Policy Initiatives

- Reconsidering the Rules of Space
- Science in the Liberal Arts Curriculum
- Scientists Understanding of the Public
- Federal Funding of Science – ARISE
- Global Nuclear Future
- Emerging Projects.....

Reconsidering the Rules of Space

- The development of space affects a range of government, commercial, and scientific interests around the world
- Issue: A lack of a policy framework that adequately balances these interests
- Project Goal: To examine the implications of US policy in space, and to consider the international rules and principles needed to maintain a balanced use of space over the long term.

Reconsidering the Rules of Space

■ Four Occasional Papers

The Future of Human Spaceflight:
Objectives and Policy Implications
in a Global Context



David A. Mindell, Scott A. Uebelhart,
Asif A. Siddiqi, and Slava Gerovitch

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A European Approach
to Space Security



Xavier Pasco

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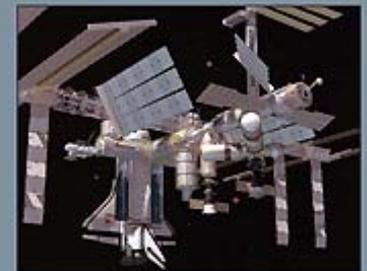
A Place for One's Mat:
China's Space Program,
1956–2003



Gregory Kalicki and Jeffrey G. Lewis

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United States Space Policy:
Challenges and Opportunities
Gone Astray



George Abbey and Neal Lane

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Reconsidering the Rules of Space

- Organize a briefing in DC for Congressional staff, policy-makers, interest groups, and journalists.
- Distribute the publications
- Write final report to grant foundation
- *Impact:* Many of the recommendations were incorporated in the Augustine Commission for NASA

Science in the Liberal Arts Curriculum

- More than two-thirds of enrolled students at U.S. colleges and universities do not major in the natural sciences, engineering, or mathematics
- Representatives of the partner institutions came together for a meeting at the Academy in August 2007
 - the course-taking habits of nonscientists,
 - discussed the goals of science requirements for nonscientists,
 - collaborated on new ideas for science education within the liberal arts curriculum.

Science in the Liberal Arts Curriculum

- A volume of essays
 - recommends a variety of strategies for higher-education institutions
 - innovative teaching methods and common barriers
- Distinguished list of authors
 - Don Randel (Andrew W. Mellon Foundation), Frank Rhodes (Cornell University), Chris Impey (University of Arizona), Eugene Levy (Rice University), Robert Hazen (George Mason University), James Trefil (George Mason University), Sally Hoskins (City College of New York), Richard A. Muller (University of California, Berkeley), Darcy Kelley (Columbia University), Martha Haynes (Cornell University), Jon Clardy (Harvard Medical School), Diane Ebert-May (Michigan State University), Jon Miller (Michigan State University), John Hildebrand (University of Arizona), and Jerry Meinwald (Cornell University)

Science in the Liberal Arts Curriculum

- Early stages of publication
 - Working with PIs to discuss content of essays
 - Working with copy-editor and authors for revisions and approvals
- Seeking additional funding
 - Working with Development to find appropriate foundations
 - Writing a Letter of Inquiry

Scientists Understanding of the Public

- Scientists have an obligation to understand the broader social and cultural context in which their work is received and to accept that sometimes the public's concerns about science stem not from ignorance but from legitimate worries

Scientists Understanding of the Public

- Four topics/meetings
 - The Next Generation of the Internet
 - Public Perceptions of Nuclear Waste Repositories
 - The Spread of Personal Genetic Information
 - Risks and Benefits of Emerging Energy Technologies

Scientists Understanding of the Public

- Bringing leading scientists and technologists together with
 - ethicists,
 - public policy experts,
 - former public officials,
 - science journalists
- To discuss how scientists can better understand the public's response to their work

Scientists Understanding of the Public

- "My attitude, and that of many other...scientists, is more focused on how scientists can change public attitudes based on their research results, rather than how we can respond to them..."

Scientists Understanding of the Public

- Organizing the meetings
 - Finding a chair
 - Identifying possible participants
 - Meeting logistics
- Writing up summary of the meeting
- Interim reports for the grant foundation

Federal Funding of Science - ARISE

- Examination of the modes and mechanisms of funding
 - Early-career scientists
 - High-risk, high-reward research
- Policy recommendations to three key audiences:
 - Federal Agencies
 - Universities
 - Private Foundations



Federal Funding of Science - ARISE

- Outreach – disseminate findings
 - Working with other organizations to bring the findings to their members
- Testimony for Congressional hearing
- Next steps
 - Working with Fellows to take on other challenges in science funding

Global Nuclear Future

- Comprehensive approach to dealing with the spread of nuclear power
- Not promoting a particular platform
- Identify and promote measures that will limit the security and proliferation risks inherent in the apparent growing global appetite for nuclear energy.

Global Nuclear Future

- Four different aspects
 - Nuclear fuel cycle
 - Physical security
 - Nonproliferation regime
 - Nuclear industry
- Workshops
 - IAEA
 - Abu Dhabi
- Disseminate findings
 - Invited by OSTP to give a briefing
 - Invited by DOE to give a briefing

Emerging Projects

- Energy Initiative, Cybersecurity, STEM Teachers
 - Fundraising: grant writing, individual donors
 - What has been done?
 - What is our special niche?

A Day in the Life of a Hellman Fellow

- Draft briefing materials and talking points
- Work with Publications Department
- Work with Communications Department
- Work with Development
- Work with Membership

Hellman Fellowship in Science and Technology Policy

- Variety of Projects
 - Broad, big-question issues
 - Non-partisan
 - Convening power
- Work on a range of aspects for each project
 - Beginning vs. end
 - Work with different departments

Hellman Fellowship in Science and Technology Policy

- Appoint for one-year term (w/possibility of renewal)
- Begin on September 1, 2010
- Stipend is competitive and commensurate with experience
- Application deadline is January 15, 2010
- www.amacad.org/hellman.aspx
- hellmanfellow@amacad.org