

Public Service: Not just for Politicians and Bureaucrats Anymore

Talk presented

by

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Associate Vice President for Federal Relations

Association of American Universities

MIT Federal Agency Career Workshop

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Who am I?

- First Came to Washington through the U. Mich. Public Service Intern Program
- Spent a summer as an Intern on Capitol Hill
- 3 years on Capitol Hill as legislative aide
 - MA in Legislative Affairs
- 7 Years in the MIT Washington Office
- 3 Years in the U. Mich. Washington Office
- Now at AAU



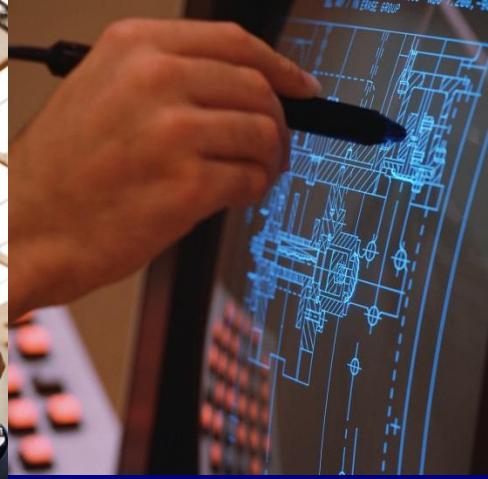
What is my Job?

- Associate Vice President of Federal Relations
- Federal Research Funding & Science Policy Issues
- “Cross cultural communications”
 - The business of making the work of scientists and engineers relevant to the “average person”*

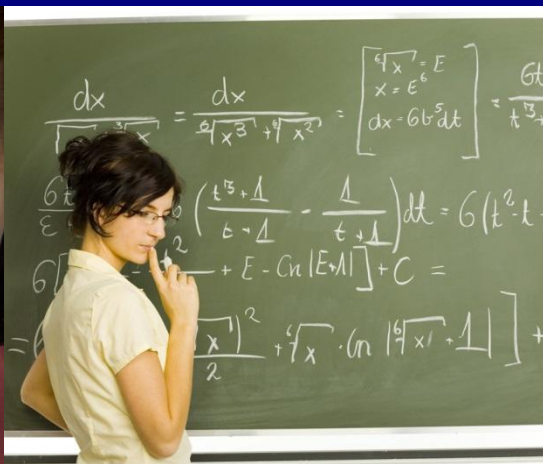


After I graduate... What's Next?





The proportion of MIT undergraduates who went on to graduate school was **45 percent**, while the proportion who took jobs was **44 percent**.



Top Employment Sectors for MIT Graduates

	Undergrads	Masters	PhDs
Aerospace/defense	8%	4%	1%
Biological science	4%	1%	9%
Computer technologies	14%	17%	14%
Consulting	14%	19%	6%
Education	3%	2%	37%
Finance	29%	18%	6%
Other engineering	7%	8%	11%

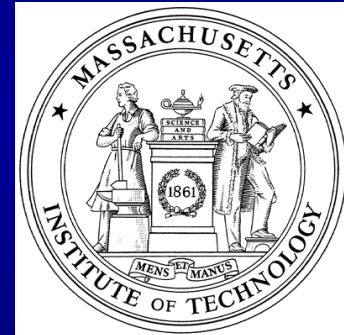
The top five employers in 2008

1. McKinsey&Company

2.



3.



4. Morgan Stanley

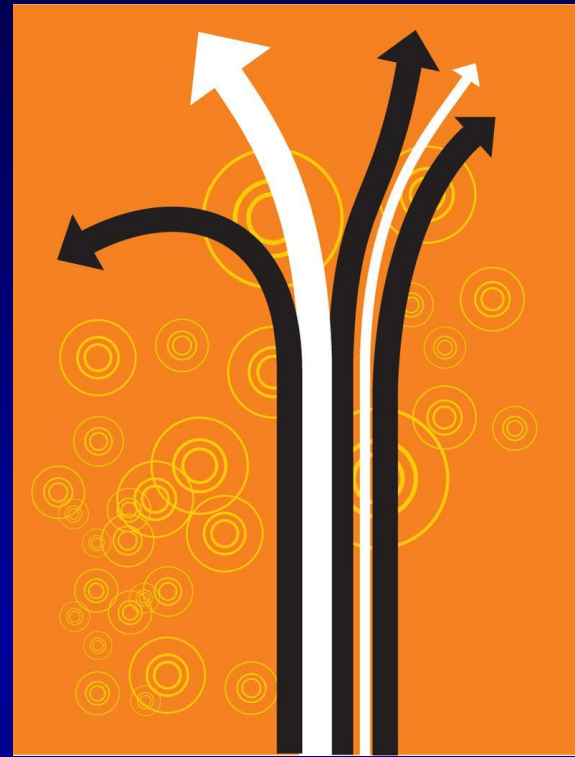


5.

LEHMAN BROTHERS



**Is there an
alternative career
path for me
besides academia
or industry?**



Yes!
How about
government or
public service

What's Is Public Service?



The “New Public Sector”

“The ‘new public sector’ refers to the complex network of relationships among organizations that has emerged over the past thirty years in response to the realities of today's public policy and public administration needs. Whereas a public service career once meant government employment, we now recognize the connections between governments, nonprofits, NGOs the private sector, and universities. Persons employed in any of these types of organizations can have highly productive careers that contribute directly the public good...Anyone involved in [public service] must be prepared to work effectively across the sectors.”

The “New Public Sector” Cont.

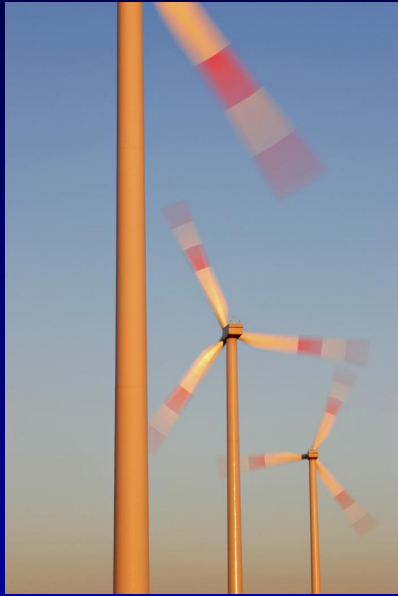
“Professional public service today thus offers many career opportunities including those in governments at all levels, in nonprofit organizations and NGOs, in higher education, and in private sector companies that work under contract to governments. These opportunities provide good pay and benefits, numerous choices of where to work in the United States and around the world, and resources for further training and education.”

--www.publicservice.org

What makes a professional career in public service so unique is the emphasis on tackling global challenges. Here are just a few of the global challenges:

- Managing global climate change and controlling its underlying causes such as carbon emissions
- Supplying food, energy and clean water to the growing populations in developing countries
- Securing the United States and other countries against the possibility of chemical, biological and nuclear terrorism
- Redeveloping older urban areas that have lost their economic base in manufacturing
- Transitioning recently incarcerated persons into productive, nonviolent lives in society
- Ending the epidemic of HIV infection in developed and developing countries.
- Providing quality education and health care to children living in poverty.

Source: PublicServiceCareers.org



Health Care



National Security



Energy Shortages

Global Warming

These global issues will require the best and the brightest minds and it will especially require those with strong scientific and technical backgrounds.



In reality, work for the government
can have a high impact, be very
dynamic and often occurs outside the
partisan battlefields.



Examples of public service sectors

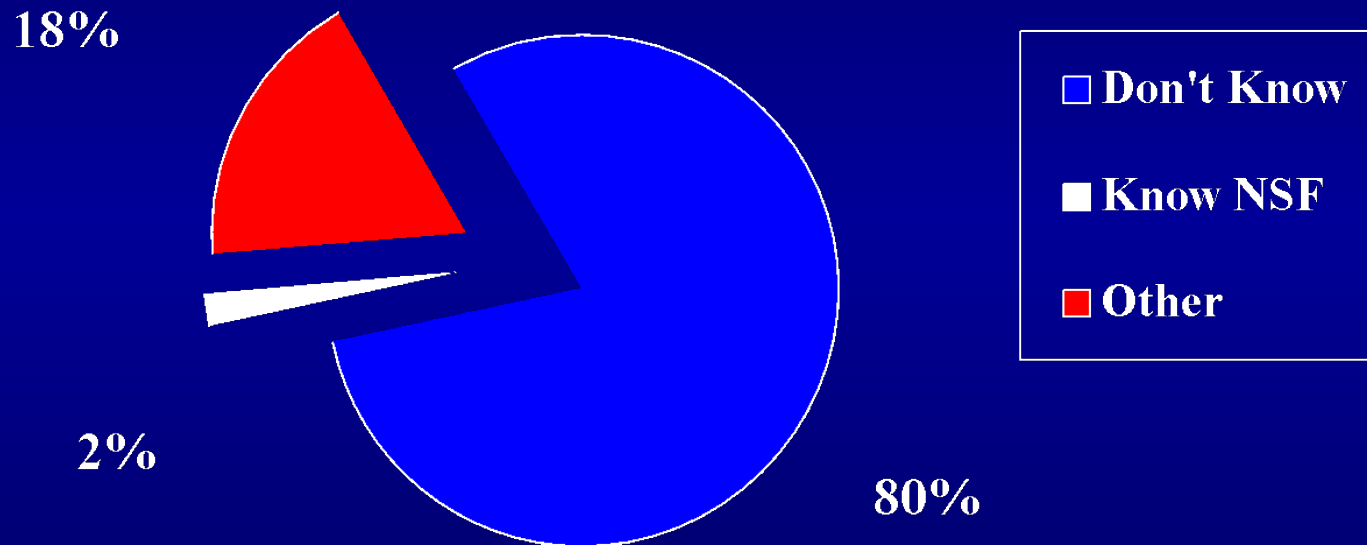
- Civil Rights
- Community Development
- Education
- Energy/Environment
- Foundations
- Health care
- Homeland Security
- Housing and the Homeless
- International Aid
- Law Enforcement
- Legal Services
- Defense
- Media
- Museums and Libraries
- Parks and Recreation
- Police service
- Public Transportation
- Religion
- Scientific Research
- Social Security
- Telecommunications
- Urban planning
- Waste management
- Water services

Why do we need more people with science and engineering backgrounds in policymaking and government?

- Public does not understand science
- Policymakers do not understand science
- Journalists do not understand science
- Scientists are not good at communicating with these groups
- Scientists *don't* communicate with these groups
- Government scientists and engineers are retiring

Most Do Not Recognize NSF

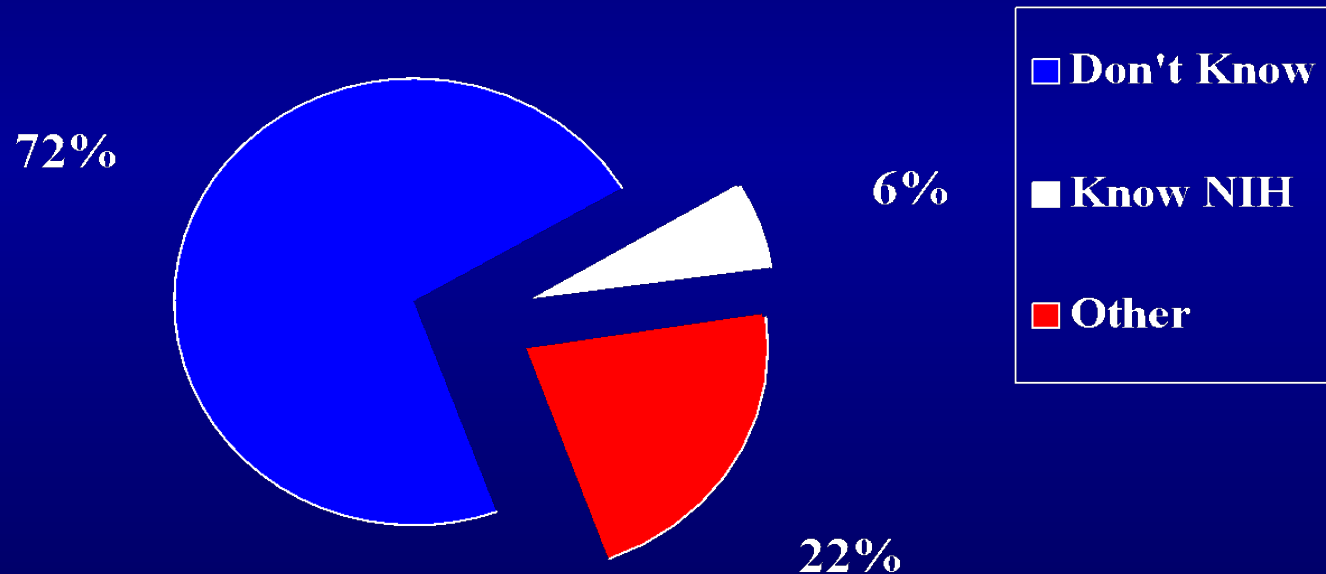
What is the name of the government agency that funds most of the basic research and educational programming in the sciences, mathematics and engineering in this country?



Source: Aggregate 2001
Charlton Research Company for Research!America

Most Do Not Recognize NIH

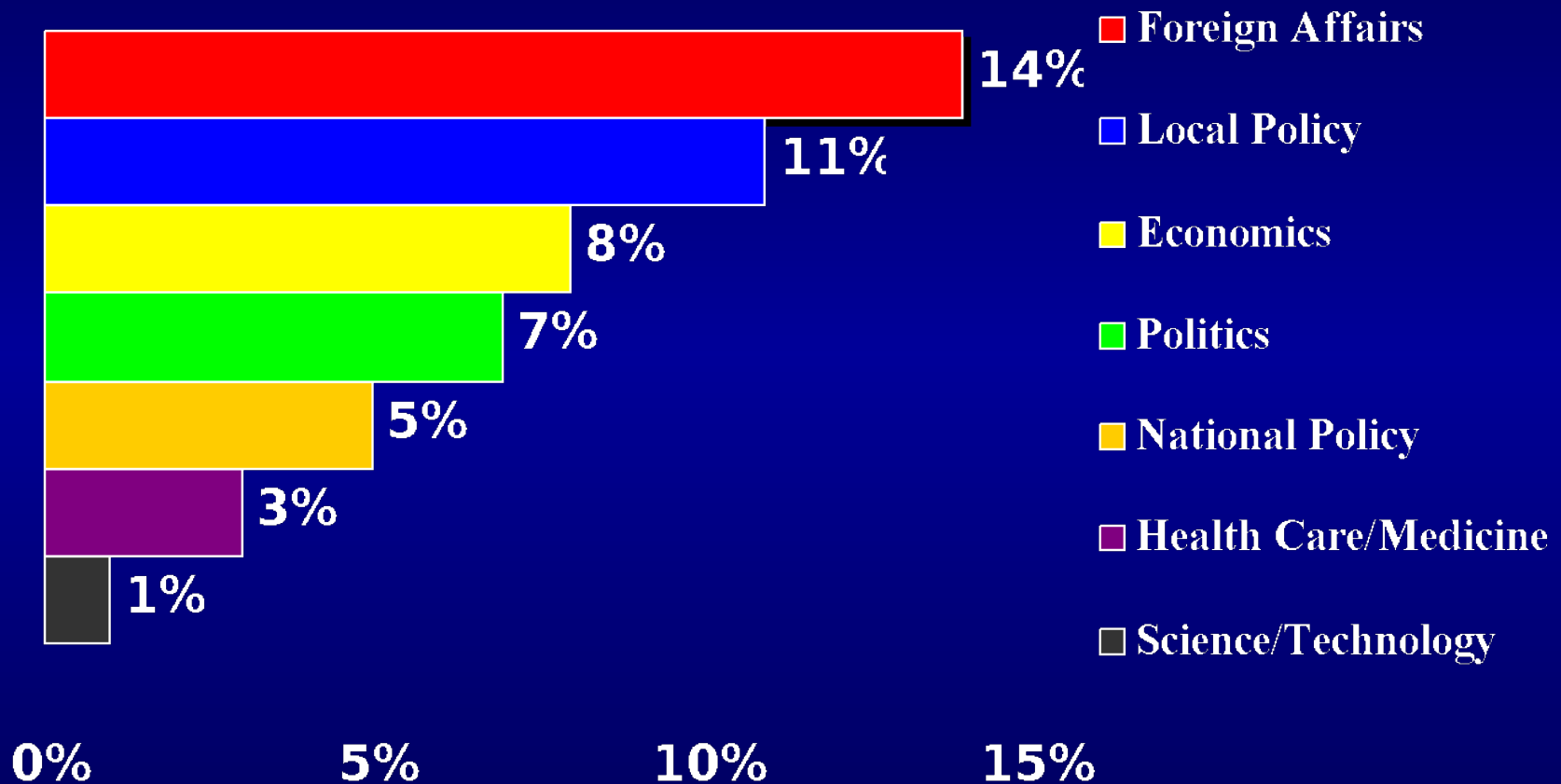
What is the name of the government agency that funds most of the medical research paid for by taxpayers in this country?



Source: Aggregate 2001
Charlton Research Company for Research!America

General Topics of Op-Eds

(approximate Percentage based on >500 op-eds reviewed)

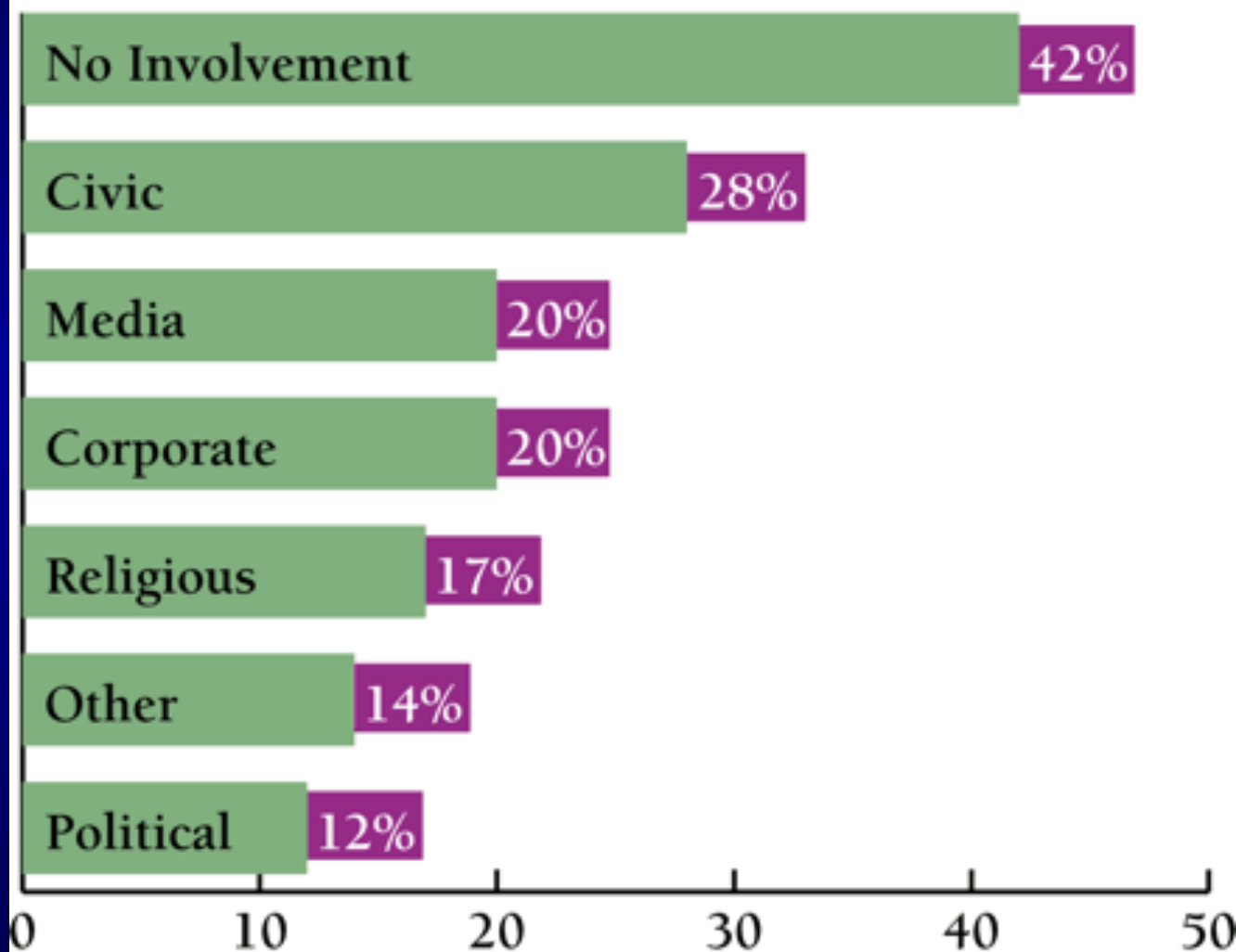


Source: Who is Writing Op-Eds?

Sanford Institute National Opinion Page Survey, Duke University - 1999

Many Scientists Not involved in Outreach

In which of the following venues have you been involved in outreach in the past twelve months? (total responses)



Source: Sigma Xi Membership Poll (Texas) in Cooperation with Research!America, 2001

Scientists' Involvement In Public Outreach

Perceived reasons why more scientists aren't more involved in changing/supporting public policy. (total mentions)



Source: Sigma Xi Membership Poll (AK, DE, OH & TX)
in Cooperation with Research!America, 2000

Few Members of Congress come from Science & Engineering Backgrounds

- Less than 5 percent have backgrounds in science and engineering.
- According to CRS, there are three chemists, three physicists, a biomedical engineer, and a microbiologist among the 535 members of Congress.
- Only 22 Members of the House and Senate have PhDs.
- 11 have engineering degrees and 13 hold medical degrees.
- 237 Members of Congress have law degrees.

Science Policy Careers in Washington D.C.

- Legislative Aide
 - Committee Staff
 - Personal Staff
- CRS/Library of Congress
- OMB/White House
- National Academies of Science
- Federal Agencies
 - NSF, NIH, DOE, NASA, DOD, DHS, EPA, NIST, NOAA, USGS, DoED, DOT, Dept. of State & more...
- Smithsonian Institution
- Washington Think Tanks
 - e.g. Brookings, Rand, AEI, Heritage Foundation, CSIS



Science Policy Careers in Washington D.C. Cont.



Science Press and Technical Writing

- Science
- Nature
- NPR
- Popular Press



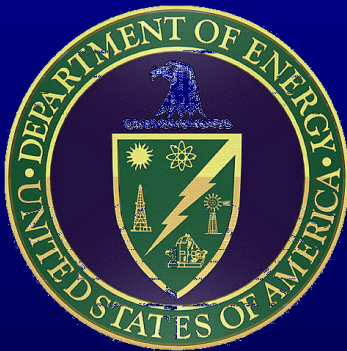
In What Kind of Activities do Science Policy Professionals Engage

- Administrative and Management roles
 - Agency Program Managers/Directors
 - Budget Examiners
- Quantitative Analysis
 - Beltway Bandits
 - Think Tanks
 - GAO
- Policy Research
 - Innovation Theory
 - Methods
 - Long term empirical studies
- Political
 - Congressional Chief of Staff or Legislative Aide
 - Committee staff



Real People that Have Done It

- Mike Telson, Former CFO, U.S. Dept. of Energy
- Elizabeth Robinson, Director, Office of Budget Review, OMB, Former Deputy Director, CBO
- Kathy Olsen, Deputy Director, National Science Foundation, Former Assoc. Director for Science, OSTP



Real People from MIT that Have Done it

- Sheila Widnall, Former Secretary of the Air Force
- Samuel Bodman, Secretary of Energy
- Charles M. Vest, president of the National Academy of Engineering
- Alicia Jackson, MRS/OSA Congressional Science Fellow, Senate Committee on Energy and Natural Resources
- Ernest J. Moniz, Former Associate Director, OSTP and Undersecretary, U.S. Department of Energy





Members of Congress with Science Backgrounds

- Rep. Vernon Ehlers (R-MI)
- Rep. Rush Holt (D-NJ)
- Rep. Bill Foster (D-IL)
- Rep. Roscoe Bartlett (R-MD)
- Rep. John Olver (D-MA)

So you have an interest in Science Policy/Public Service


WHAT SHOULD YOU DO?

- Join a scientific society
- Join the AAAS
- Take a class in science policy
- Do an internship or fellowship
- Consider Masters or PhD in a Science & Technology Policy Degree Program




*There are many routes into science policy.
Take the one that most appeals to you.*


PublicServiceCareers.org




Your Source for Professional Jobs in the New Public Sector




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EMPLOYERS: POST A JOB



CAREER ADVICE & RESOURCES



WHY PUBLIC SERVICE?



DEGREES: BA, M

Upcoming Events

GMU's School of Public Policy October Open House
Event Date: 10/22/2008
[More Info...](#)

WEB 2.0 seminar
Event Date: 10/22/2008
[More Info...](#)

Results-Based Management for Government
Event Date: 11/3/2008
[More Info...](#)

[View All Events](#)

Click on a listing to view its full details.

[Global Health Policy Analyst](#)
Washington, DC - Kaiser Family Foundation


[Senior Faculty](#)
St. Louis, MO - Saint Louis University

[Assistant or Associate Professor](#)
Turlock, CA - California State University - Stanislaus

[Assistant Professor](#)
Jackson, MS - Jackson State University

[View All Jobs](#)

SEARCH & APPLY FOR JOBS NOW



Internships & Fellowships

- Chance to “get your feet wet”
- Chance to explore career opportunities
- Develop relationships that last a lifetime
- Valuable experience
- A fun experience

How do I find an internship/fellowship or government job?

- MIT Careers Office
- Washington Information Directory
- <http://www.usajobs.gov>
- <http://www.science.gov/internships/>
- www.StudentJobs.gov
- www.Science-policy.net
- MIT Alumni Club
- Hill Office Websites
- Senate job bulletin
- www.Idealist.org
- CQ.com/Roll call
- www.Indeed.com
- Networking (the DC Way!)

AAAS Fellowships

- Congressional Fellows
- AAAS/NIH Science Fellows
- AAAS/NSF Science & Engineering Fellows
- Diplomacy Fellows
- Defense Policy Fellows
- Science, Justice and Public Policy Fellows
- Environmental Fellows
- Risk Policy Fellows

AAAS Congressional Fellowships

"AAAS Fellows bring enormous learning, energy and curiosity to my office, as well as a fresh perspective. Indeed, many of my most valued staffers began their careers as AAAS Science Fellows. With Congress dealing with more and more science-based issues, the value of having Fellows on my staff increases every year."

Rep. Sherwood L. Boehlert (R-NY)

Graduate School

- Master of Public Administration
- Master of Public Affairs
- Master of Public Policy
- Master of Nonprofit Organizations
- Doctor of Public Administration
- Law



One of the Most Noble Science Policy Jobs of All

CONTINUES TO BE

Doing science itself...
&
the government needs
good scientists and
engineers!



A Brief History Lesson



- The Russian launch of Sputnik inspired a whole generation of students to pursue STEM careers.
- Many ended up working for the federal government.

The Sputnik Generation is Retiring

- According to the Partnership for Public Service, over the next 5 years, our Federal government is projected to lose 527,000 full-time workers, roughly 1/3 of the total workforce.
- The Department of Energy alone estimates that it will need to replace 10,000 of its 13,500 federal employees over the next ten years. Many of these are scientists and engineers.
- Nearly one-third of the civilian STEM employees in the Department of Defense are eligible to retire right now. Over the next 7 years, this percentage is expected to double with more than 70 percent eligible to retire.
- 13,000 DOD laboratory scientists are projected to retire within that next decade.
- Similar retirements are expected at NASA.

Our Nation Again Faces Major Challenges

- Economic/Financial
- Energy
- Environment/Climate Change
- Education
- Health
- National and Homeland Security
- Combating Terrorism

“The Quiet Crisis”

“It’s a creeping crisis, and it’s not something the American psyche responds to well. It’s not a Sputnik shot, it’s not a tsunami.”

— Rep. Vernon Ehlers (R-MI)

-- Craig Barrett, CEO, Intel

The Government Needs Top Notch Talent to Address Critical National Issues

...we must get serious about recruiting top talent into the Federal government

NEW PROGRAMS TO ADDRESS THE GOVERNMENT'S STEM TALENT NEEDS

...so that, as our current employees

begin to retire in large numbers, we have

the scientific and engineering expertise

needed to address critical national

imperatives.

- National Defense Education Program: <http://www.ndep.us/>
- DOE Research and Management Internships at the National Laboratories, DOE Headquarters and DOE Regional Facilities: http://www.science.doe.gov/Program_Offices/Workforce_Development.htm

-- Samuel Bodman, U.S. Secretary of Energy

AAU Spring Membership Meeting, April 14, 2008

Be A “Civic Scientist”

Increasingly, society requires citizens with technical expertise as communicators. In times of routine information dissemination, and most especially in times of emergencies, we have a responsibility. Scientists and engineers must be prepared for these new and more public roles. And it stands to reason that that preparation should become part of the routine training of our technical professionals.

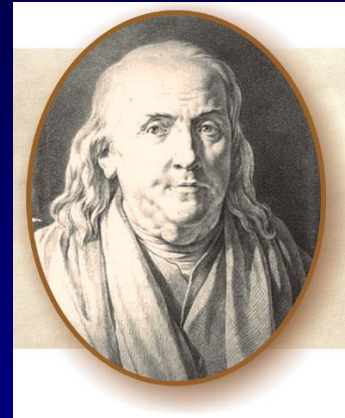
Dr. Rita R. Colwell

Director, National Science Foundation

January 30, 2002

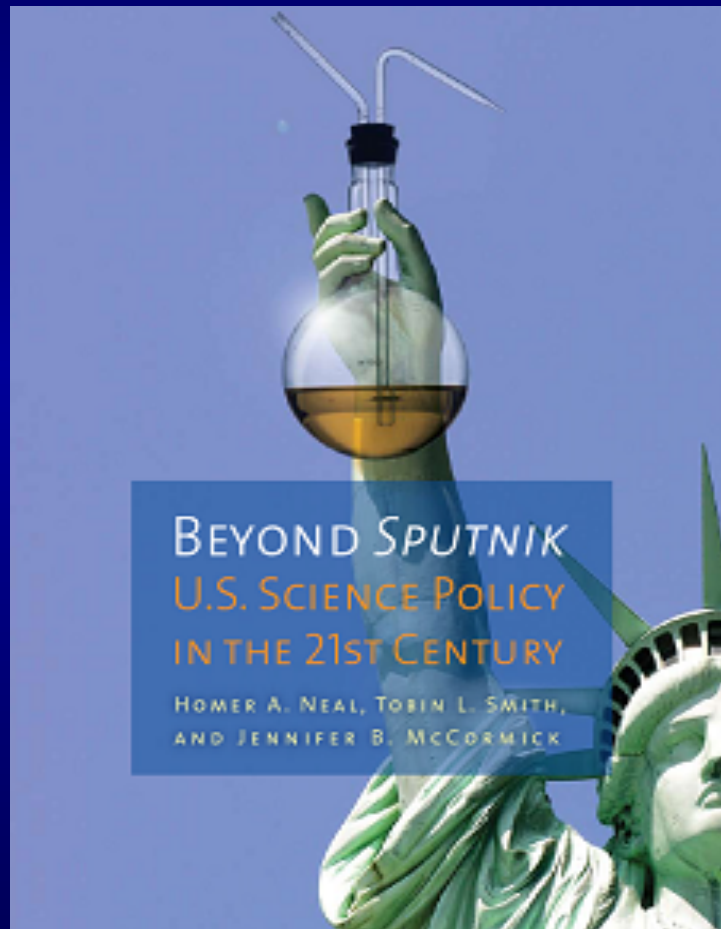
"Science As Patriotism"

A Civic Scientist: Benjamin Franklin



- A scientist and a civic-minded activist, Benjamin Franklin called upon his scientific intuition and skills to address broad societal questions at the time the US was founded.
- Like Franklin, today we seek to advise government in the ever optimistic hope of informing sound public policy and as we work to raise the American public's level of understanding of science and technology.

One Final Advertisement...



BEYOND SPUTNIK: ***U.S. Science Policy in*** ***the 21st Century***

by Homer A. Neal, Tobin L. Smith
& Jennifer B. McCormick
University of Michigan Press,
Expected July 2008

www.science-policy.net

Thank you for your attention...

