



Doing Science Policy in the Beltway

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What is Science Policy?

- Science Policy
 - Policy for Science
 - Science in Policy
- Advocacy
 - Advocacy for Science
 - Advocacy for Policy



Melinda Gormley, Ph.D.

- American Association for the Advancement of Science (AAAS)
 - Science & Technology Policy Fellow
- Environmental Protection Agency (EPA)
 - Office of the Science Advisor (OSA)
 - Scientific Integrity Program
 - Human Subjects Research Program

SCIENCE & TECHNOLOGY
POLICY FELLOWSHIPS



Scientific Integrity at the Environmental Protection Agency

Objectivity

Conducting Science

"We will restore science to its rightful place..."
- President Barack Obama, January 2009

Timely Release

Utility

Professional Development

ensure scientific work is of the highest quality

Clarity

"Science must be the compass guiding our environmental protection decisions...While the laws that EPA implements leave room for policy judgments, the scientific findings on which these judgments are based should be arrived at independently using well-established scientific methods, including peer review, to assure rigor, accuracy, and impartiality."
- Lisa Jackson, 9 May 2009

Clearance

Impartiality

represent scientific work fairly and accurately

Openness

Communicating Science

Federal Advisory Committees

Quality Assurance

"We will attempt to communicate with everyone from the environmentalists to those we regulate and we will do so as openly as possible."
- William Ruckelshaus, May 19, 1983

Authorship

Accuracy

Whistleblower Protections

release of scientific information to the public

"The work we do together to preserve the integrity of our science is as critical as ever...With science as your North Star - EPA has steered America away from health risks, and toward healthier communities and a higher overall quality of life."
- Gina McCarthy, 28 April 2014

Transparency

Responsibility

Publication

Communication

Supervising Scientists

Conflict of Interest

Validity

welcome differing views and opinions on scientific and technical matters

Public Trust

"The Agency's ability to pursue its mission to protect human health and the environment depends upon the integrity of the science on which it relies."
- Scientific Integrity Policy, February 2012

Data Management

Peer Review

"The environmental policies, decisions, guidance, and regulations that impact the lives of all Americans every day must be grounded, at a most fundamental level, in sound, high quality science."
- Scientific Integrity Policy, February 2012

Utilizing Science in Policymaking

Data Access

uphold scientific and ethical standards

Honesty

Integrity

Best Practices

appropriately characterize, convey, and acknowledge intellectual contributions of others

Reproducibility

"Science is the backbone of the EPA's decision-making."
- Scientific Integrity Policy, February 2012



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November 30, 2016



2300 Scientists from All Fifty States Pen Open Letter to Incoming Trump Administration

Unfettered Science Essential to Decision Making; the Science Community Will Be Watching

WASHINGTON (November 30, 2016)—More than 2300 scientists from all fifty states, including 22 Nobel Prize recipients, [released an open letter](#) urging the Trump administration and Congress to set a high bar for integrity, transparency and independence in using science to inform federal policies. Some notable signers have advised Republican and Democratic presidents, from Richard Nixon to Barack Obama.

From Union of Concerned Scientists website at <http://www.ucsusa.org/news/press-release/scientists-pen-open-letter-to-trump-administration#.WEBsCuYrKUk>

What opportunities are available in the Beltway?



Internships, Fellowships, and Educational Programs

How do you learn about and gain work experience
in science policy and government?

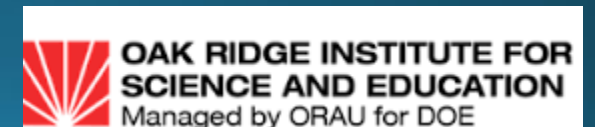
Educational avenues

- Professional degrees:
 - Law and Public Policy
 - Policy track
 - University of Michigan, Gerald R. Ford School of Public Policy, Science, Technology, and Public Policy Graduate Certificate Program
- Masters and PhDs
 - Sciences, Engineering, Political Science, History, Philosophy, Science and Technology Studies...
 - PhD with a policy track
 - Carnegie Mellon University, Engineering and Public Policy (EPP)
 - University of Colorado, Graduate Certificate in Science and Technology Policy



Finding Opportunities in Science Policy

- Pathways for Students and Recent Graduates to Federal Careers
 - Internship Program and Presidential Management Fellows
<https://www.opm.gov/about-us/careers-at-opm/students-recent-graduates/>
- AAAS, Engaging Scientists and Engineers in Policy (ESEP)
 - Resource database: <http://www.aaas.org/page/resources-1>
- Oak Ridge Associated Universities (ORAU) and Oak Ridge Institute for Science and Education (ORISE; orise.orau.gov)
 - Internships, Scholarships, and Fellowships: <http://orau.org/science-education/internships-scholarships-fellowships/default.aspx>



Finding Opportunities: White House

- Office of Science and Technology Policy (OSTP)
 - Tracks
 - Policy Internships – open to all majors and programs
 - Legal internships – open to law and LLM students only
 - Compensation
 - Unpaid internship with funding assistance available
 - Students are eligible for course credit
 - <https://www.whitehouse.gov/administration/eop/ostp/about/student>
- Presidential Innovation Fellowship
 - Partnership between OSTP, Office of Management and Budget (OMB), and General Services Administration (GSA)
 - 12 months, placed in federal agency
 - <https://www.whitehouse.gov/innovationfellows>



Finding Opportunities

THE NATIONAL ACADEMIES
Advisers to the Nation on Science, Engineering, and Medicine

- National Academies, Christine Mirzayan Science & Technology Policy Graduate Fellowships
 - sites.nationalacademies.org/pga/policyfellows/
 - 12 weeks, paid
- NOAA, John A Knauss Marine Policy Fellowship
 - seagrant.noaa.gov/fundingfellowships/knaussfellowship.aspx
 - 12 months, paid
- California S&T Policy Fellowships
 - fellows.ccst.us
 - 12 months, paid



**SCIENCE & TECHNOLOGY
POLICY FELLOWS**
MAKING CALIFORNIA'S POLICIES STRONGER WITH SCIENCE

Fellowships & Resources

AAAS S&T Policy Fellowships, aaas.org/stpf

- Providing opportunities for scientists and engineers to learn first-hand about policymaking while contributing their knowledge and analytical skills in the federal policy realm
- Deadline is Nov 1 annually
- 1 to 2-year fellowship in Washington DC working for a federal agency.

AAAS Mass Media Science & Engineering Fellowships, aaas.org/programs/education/MassMedia

- Places science, engineering, and mathematics students at media organizations nationwide. Fellows use their academic training as they research, write, and report today's headlines, sharpening their abilities to communicate complex scientific issues to the public.
- Deadline is January 15, 2017
- A 10-week summer program

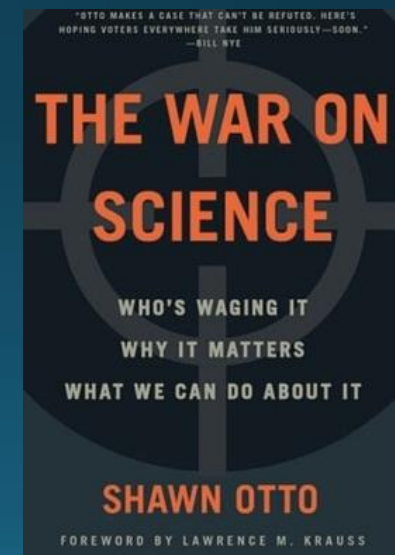
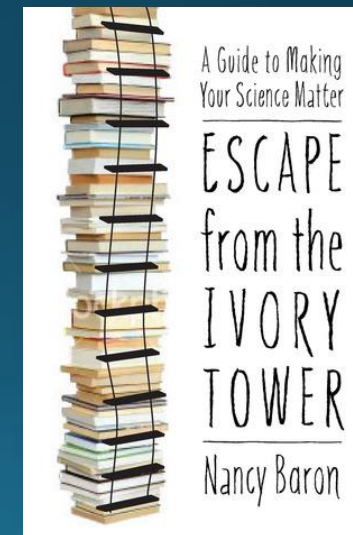
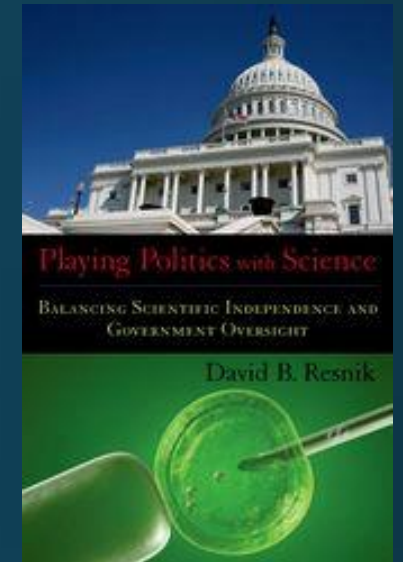
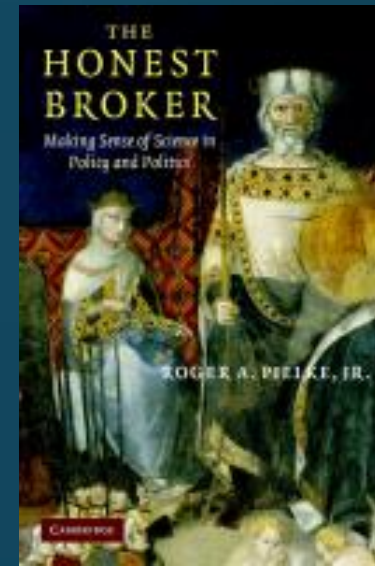
ScienceCareers.org

- Articles, resources, and other helpful information



RESOURCES

- *The Honest Broker* by Roger A. Pielke, Jr. (2007)
- *Playing Politics with Science: Balancing Scientific Independence and Government Oversight* by David B. Resnik (2009)
- [Code of Conduct for Advocacy in Science](#) by Nicholas Steneck (2013)
- *Escape from the Ivory Tower: A Guide to Making Your Science Matter* by Nancy Baron (2010)
- *The War on Science: Who's Waging it, Why it Matters, What we can Do About It* by Shawn Otto (2016)
- *So what are you going to do with that?: Finding Careers Outside of Academia* by Susan Basalla and Maggie Debelius (2007)
- *Brag!: The Art of Tooting Your Own Horn without Blowing It* by Peggy Klaus (2003)



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