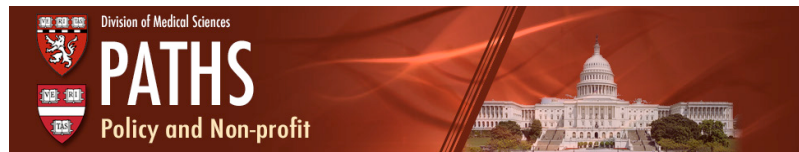




HARVARD GSAS SCIENCE POLICY GROUP



Harvard GSAS Science Policy Group and DMS Policy Path Report on Washington DC Agency Visit 2014 Author: Ashim Subedee

Washington D.C., April 23-25, 2014

The GSAS Science Policy Group (<http://www.hcs.harvard.edu/~sciencepolicy/>) is an organization made up of graduate students interested in the intersection of science and policy. Similarly, DMS Policy Path is a graduate student-run group at the Division of Medical Sciences. We aim to engage students in the public policy issues that are a result of, and directly affect, scientific advancement, and to educate students on how to communicate science effectively to policy-makers and the public. Activities include topical discussion sessions, practical workshops, invited speakers, panel discussions, career events, and collaboration with other schools and organizations.

To educate the students about nuts and bolts of policymaking from the policymakers, to provide an opportunity to engage in science and technology policy discussions with the policymakers, and to connect students to agencies and organizations working to shape, implement and influence science policy, 12 graduate student representatives visited Washington DC on April 23-25, 2014. During the first trip of its kind, the students visited Defense Advanced Research Agency (DARPA), National Science Foundation (NSF), National Academy of Sciences (NAS), American Association for Advancement of Science (AAAS), White House Office of Science and Technology Policy (OSTP), Department of State, Environmental Protection Agency (EPA), Department of Health and Human Services (DHHS) and Department of Defense (DOD). The students were exposed to various aspects of science policy-making, advising, influencing, and implementing. The students learned how scientists like us can influence and shape national and international science policies and were able to explore career opportunities for scientists and engineers in science policy,

The GSAS Science Policy Group and the DMS Policy Path thank all the agencies for hosting the group. The group also thanks Dean Cherry Murray, Professor Sheila Jasanoff, Dean David Cardozo, Dean Garth McCavana and the Harvard Office of Federal Relations for their support and guidance during the planning of the trip.

The GSAS Science policy group and DMS path also thank all the funding departments and organizations. The visit would not have been possible without the support.

Division of Medical Sciences (DMS)
Harvard University Center for Environment (HUCE)
School of Engineering and Applied Sciences (SEAS)

Graduate School of Arts and Sciences (GSAS)
Harvard Integrated Life Sciences Program (HILS)
GSAS Graduate Student Council (GSC)

The GSAS science policy group and DMS path also thank the participating graduate students for enthusiastically representing the group and the university and for preparing the summaries of the agency visits.

Aileen Li, PhD Candidate, Bioengineering
Amy Gilson, PhD Candidate, Chemical Physics
Ashim Subedee, PhD Candidate, Biological and Biomedical Sciences
Candice Yip, PhD Candidate, Neuroscience
Edlyn Levine, PhD Candidate, Applied Physics
Hossein Safaei, PhD Candidate, Mechanical Engineering
Iulia Neagu, PhD Candidate, Physics
Johnny Hu, PhD Candidate, Biological and Biomedical Sciences
Liza Litvina, PhD Candidate, Neuroscience
Sabin Dhakal, PhD Candidate, Biological and Biomedical Sciences
Tracy Kambara, PhD Candidate, Biological and Biomedical Sciences
Yanina Barrera, PhD Candidate, Environmental Science and Engineering



The group at the White House

Reports from Agency Visits

Agency: Defense Advanced Research Projects Agency (DARPA)

Date: Wed. April 23, 2014, 2:30pm

Location: 675 N. Randolph Street, Arlington VA 22203

Meeting with: Charles Wolf and Rick Weiss

Author: Edlyn Levine

Meeting Overview

Our visit to DARPA constituted the initial agency visit of our trip to Washington DC. We had the pleasure of meeting with Mr. Charles Wolf and Mr. Rick Weiss who led a presentation and informal discussion giving and overview of DARPA's mission and operations. Charles (Chuck) Wolf is the Deputy Director of DARPA's Adaptive Execution Office and a former Navy SEAL and Joint Specialty Officer. Rick Weiss is Director of Strategic Communications and Science and Technology Policy Advisor at DARPA.

DARPA's Mission and Structure

DARPA is responsible for the development of new and innovative technologies. As an agency of the Department of Defense, the technology and research initiatives that DARPA supports have the purpose of augmenting the US national defense and military capabilities. In this way, DARPA also fulfills its original mission to prevent the US from technological surprise and unpreparedness.

DARPA is structured to maintain a small staff with high turnover to ensure that flexibility and an influx of new ideas are sustained. It has seven program offices:

- Adaptive Execution Office (AEO)
- Biological Technologies Office (BTO)
- Defense Sciences Office (DSO)
- Information Innovation Office (I2O)
- Microsystems Technology Office (MTO)
- Strategic Technology Office (STO)
- Tactical Technology Office (TTO)

Their research portfolio consists of a plethora high-risk, high-return projects that typically would not receive support in the private sector. In this way, DARPA is not afraid for projects to fail, since this risk is part-in-parcel with their research investment strategy.

Projects that DARPA undertakes are typically run on the course of a set timeline and often require a collaborative effort between researchers and resources across universities, industry, military and government. DARPA acts as an investor or technology incubator for the projects it undertakes; it does not have research laboratories of its own. In order to obtain DARPA funding, a project proposal must demonstrate what is to be accomplished, why it is novel, why it is relevant, how it differs from current technologies, and how the project objective will be achieved successfully.

Case Studies of Current and Successful DARPA Projects

These case studies were presented to us by Chuck Wolf as examples of the pioneering work that DARPA has funded and successfully supported.

- **MQ-9 Reaper**
 The MQ-9 Reaper is a hunter-killer unmanned combat air vehicle designed for long endurance, high-altitude surveillance. Previous drone models include the MQ-1 Predator and the MQ-1C Gray Eagle. An interesting NOVA feature referenced during our meeting, called “Rise of the Drones,” highlights the increasing role that drones are to play in our military (excerpt on ARGUS-IS: <https://www.youtube.com/watch?v=QGxNyaXfJsA>).
 DARPA funded and developed a sophisticated surveillance technology, called the ARGUS-IS: Autonomous Real-Time Ground Ubiquitous Surveillance Imaging System. This is a 1.8-gigapixel video surveillance platform, developed by under contract with BAE systems. The system is composed of a multitude of cellphone cameras, built into a mosaic that can auto-track every moving object within a 36 square mile radius. It is able to resolve details as small as 6 inches from an altitude of 20,000 feet, and can store up to 1 million terabytes of video per day.
- **Human-Machine Interface**
 DARPA sponsors research involving brain-machine interface technologies and robotics. Developments in this area would enable paralyzed people and amputees to control robotic, prosthetic limbs. The research initiative would also allow for brain-mapping technology, enabled by the new brain-machine interfacing, which would aid neuroscientists and physicians in their understanding of cognitive function and determination of unhealthy brain tissue.
 DARPA also invests in the development of humanoid, autonomous robots. A specific example is PETMAN (Protection Enable Test Mannequin), which was built by Boston Dynamics under contract. This robotic system can be deployed in search and rescue situations among others. DARPA has also funded other robotics systems including the Cheetah Robot and the L3.
- **Lung on a Chip**
 This DARPA funded project is centered at the Wyss Institute of Harvard. The objective is to create organs-on-chips that recapitulate the micro-architecture and function of human organs. These chips are composed of clear flexible polymers that contain hollow microfluidic channels lined by living cells. The ultimate project objective is to link the organs on a chip together in order to recreate the entire human physiology; in other words, to create human-on-a-chip. This technology will be used to rapidly assess and determine human response to new drug candidates, thereby streamlining the process of moving drugs down the pipeline from development to clinical trials.
- **Brain Spatial Imaging**
 Please see entry on Human-Machine Interface.
- **DARPA Phoenix Project**
 This DARPA project focuses on developing space robotics technology to service active satellites and to salvage or recover material from spent satellites.

Agency: National Science Foundation (NSF)

Date: April 23, 2014: 4:00pm – 5:00pm

Location: 4201 Wilson Boulevard, Arlington, Virginia

Meeting with: Susan Pell, AAAS fellow, Ryan Bixenmann, AAAS fellow, Warren Lathe, AAAS fellow, Gergory Mack, AAAS fellow and Karen Pearce, Senior Legislative Affairs Specialist.

Author: Aileen Li

At the National Science Foundation (NSF), we met with a diverse group of AAAS Fellows: Dr. Susan Pell, Dr. Ryan Bixenmann, Dr. Warren Lathe, Dr. Gregory Mack, and a senior legislative affairs specialist: Ms. Karen Pearce. The goals of our meeting were many. We were interested in learning more about the role of NSF as a science policy agency, how policies influence the activities at the NSF, the organization of NSF and specifically from the AAAS fellows, how they utilized their backgrounds in science policy making.

All the AAAS fellows we met at the NSF had a Ph.D in science or science-related fields and had diverse experiences after graduate school prior to joining NSF. These experiences include business, professorship, post-doctoral fellowship and so on. They were very passionate about promoting science, and broaden the education and awareness of science, which inspired them to come to Washington to find out more about science policy and get their hands wet in policymaking.

AAAS fellowships are typically 1-2 years long, and fellows are placed in various branches of the government, though mostly in the executive branch. At the NSF, the fellows work on various projects within their offices and departments. Fellows also have a tremendous amount of freedom to work on issues and projects they are passionate about. The amount of communication and network between the fellows were very impressive, and it was clear that the fellows came to NSF to do very important work. For example, Dr. Susan Pell was heavily involved with organizing the USA Science and Engineering Festival in Washington DC, which is the largest science fair in the country. Through events like this festival and the many others that the NSF organizes or helps schools all over the country to organize, policy makers help to advance the sciences by promoting awareness and generating conversation about science and science education, and giving people venues to explore, to be inspired and to learn. In particular, policy makers at the NSF are constantly looking for ways and funding to better promote science in the underprivileged, under-represented and under-served populations.

50% of the NSF employees are rotating, which means they typically hold positions elsewhere and come to the NSF for a few years and go back to their previous positions. In order for NSF to thrive and for the public to be better served by the NSF, it is necessary to use these positions to attract people with passion in science, who have high caliber, talent and experience. To attract these people to the NSF to serve, however, requires sufficient funding from the government.

We benefited greatly from our conversation and were very inspired by everyone we met. One thing that was particularly striking to me was their passion to serve the public, their desire do work that benefit the public, and that there should constantly be a conversation between the public and the policy agencies. Participating in this meeting certainly made me more aware about how and why to reach out to the NSF.

Agency: National Academy of Sciences (NAS)

Date: Thursday, April 24th, 9-10AM

Location: National Academy of Sciences

Meeting with: Bruce Darling, Executive Officer of National Academy of Sciences, National Research Council, and Anne-Marie Mazza, Director of Committee on Science, Technology, and Law.

Author: Johnny Hu

We were welcomed into the National Academy of Sciences building near the National Mall. The historic building had an expansive mural dedicated to advances in science from the invention of the abacus to the discovery of DNA. From the lobby, we were led to a meeting room, where we met Bruce Darling, the Executive Officer of National Academy of Sciences, National Research Council, and Anne-Marie Mazza, Director of the Committee on Science, Technology, and Law. They were very gracious in welcoming us and spent time telling us about the history of the NAS, their current work, and fellowship programs graduate students might be interested in.

Mr. Darling began his presentation by describing the history of the NAS. The Academy was incorporated by President Abraham Lincoln in 1863 and drew its original members from a network of scientists in Cambridge, MA. One of its first projects was to consider the use of the San Juan River in Nicaragua to construct a shipping canal across Central America. Deemed infeasible with the technologies available at the time, the US instead bought the French rights to the construction of the Panama Canal. During World War I, the National Research Council was established as an arm of NAS and developed such technologies as early warning detection of aircrafts. Other important roles that the Academy has played in our nation's history include the start of the US satellite program in 1954 and determining regulations surrounding recombinant DNA technologies in the 1970s.

Recent NAS policy studies include everything from obesity to K-12 science education. In the field of astronomy, NAS recently convened, over a three-year period, three thousand scientists to define the future agenda of astronomical observations. Their report became the basis of the funding requests from the National Science Foundation, the Department of Energy, and NASA to Congress.

NAS continues to serve as independent policy advisors. In addition to the NAS and the NRC, the National Academy of Engineering (NAE) and the Institute of Medicine (IOM) also fall within NAS. Academy members are elected by their peers, and in addition, over seven thousand volunteers from academia, industry, and NGO's also contribute to NAS's mission.

At the end of our meeting, Dr. Mazza introduced the Christine Mirzayan Science and Technology Graduate Fellowship Program, a 12-week program at the National Academies. Fellows are assigned to an Academies' board, committee, roundtable, or forum and are provided with a mentor. They are immersed in the NAS and "participate in unit activities, attend committee meetings, attend Hill and agency briefings, arrange informational interviews, and plan outings." In addition, the program provides further educational and training opportunities from overviews of science policy to journal clubs to lunches with Presidents of NAS, NAE, and IOM. The program runs from January to mid-April with applications for Winter 2015 accepted beginning in June. Each class has 26 fellows, leading to over 730 alumni located around the world. For more information about the Fellowship, visit <http://sites.nationalacademies.org/PGA/policyfellows/index.htm>.

Agency: American Association for the Advancement of Science (AAAS)

Date: Thursday, April 24, 2014, 11:00 am -12:00 pm

Location: 1200 New York Ave NW, Washington, DC

Met with: Edward Derrick, PhD, Joanne Carney and Rick Kempinski

Author: Ashim Subedee

The American Association for the Advancement of Science (AAAS) is an international non-profit organization operating with the mission to “advance science, engineering, and innovation throughout the world for the benefit of all people.” Founded in 1848 with only 87 members, AAAS is now the world’s largest general scientific society with over 120,000 members worldwide.

We met with Dr. Edward Derrick, Chief Program Director at the Center of Science, Policy, and Society Programs, Joanne Carney, Director of the Office of Government Relations, and Rick Kempinski, Project Director of the Congressional and DSD Science and Technology Policy Fellowships. To scientists like us, AAAS is the publisher of the journal “Science” and two other journals. During our meeting, we were also made aware of the many other programs and initiatives that AAAS runs to advance science and serve society.

The Center of Science, Policy, and Society programs that Dr. Derrick directs, organizes many programs aimed to further the work of scientists, improve the effectiveness of research, coordinate the communication between scientists and society, and foster scientific responsibility. To achieve the goals, the center organizes many events like AAAS forum on science and technology policy, AAAS science and technology policy leadership seminar, and AAAS lecture series. In addition, the center also runs the Science and technology policy fellowships, which provides opportunities for scientists and engineers to gain first-hand policymaking experience.

Rick Kempinski talked more about the fellowship program, which by that point needed no introduction. The fellowship program was mentioned at almost all the agencies we visited in Washington DC as the best route for scientists and engineers to transition to a career in science policy. The program provides almost 250 fellowships annually and the fellows are hosted in the executive, legislative and judicial branches of government and even non-profit organizations. More information about the fellowship can be found at:
<http://www.aaas.org/program/science-technology-policy-fellowships>

The Office of Government Relations led by Joanne Carney serves as the liaison between the scientific community and the government. Her office provides information to congress on current science and technology issues. An example she mentioned was the testimony by AAAS CEO to commerce, justice and science committee on neuroscience. The office also assists scientists in understanding and working with congress. The office has published a book “Working with congress: A scientist’s guide to policy” with the aim to educate scientists about organization and legislative process of the congress and strategies to communicate better with congress and policymakers. The office also manages and updates a website to make it easier for scientists and public to track legislations relevant to science and technology. The website can be accessed at:
<http://www.aaas.org/page/legislation-trackers>

Agency: White House Office of Science and Technology Policy (OSTP)

Date: Thursday, April 24, 2014

Location: Eisenhower Executive Office Building

Meeting with:

Cristin Dorgelo, Assistant Director for Grand Challenges

Danielle Carnival, Senior Policy Advisor (STEM Education)

Erie Meyer, Senior Advisor to the U.S. CTO

Jayne Morrow, Executive Director, NSTC

Knatokie Ford, AAAS Fellow (PCAST)

Doug Rand, Assistant Director for Entrepreneurship

Meredith Drosback, Science Division

Authors: Yanina Barrera and Amy Gilson

The Office of Science Technology and Policy (OSTP) advises the President and others within the Executive Office of the President on all matters related to science and technology. Rooted in the Cold War, President Eisenhower reinvigorated the President's Science Advisory Committee "after the first Soviet sputnik removed any doubts that science and government had better maintain an intimate relationship"¹, and thus Congress established the OSTP in 1976. Today, the OSTP generates diverse science policy recommendations across all parts of the Executive Branch.

OSTP's structure can be understood through the role of its director, the President's Council of Advisors on Science and Technology (PCAST), its initiatives, and the National Science and Technology Council (NSTC). The director of OSTP, currently Dr. John P. Holdren, is also the senior science advisor to the President and co-chair of PCAST. The role of this council is to convene some of the U.S.'s most prominent scientists and engineers to provide policy recommendations as well as scientific and technical expertise on topics as diverse as climate change, big data and privacy, cyber security, and energy. OSTP initiatives often arise from the ideas of its staff and information provided in PCAST reports, while NSTC directly engages in interagency interactions to implement policy across the Executive Branch.

In the case of OSTP, staff can be described as "policy entrepreneurs", a term used by Cristin Dorgelo, the Assistant Director of Grand Challenges, during our visit. As policy entrepreneurs, OSTP staff seeks creative ways of developing new programs and initiatives, rather than allowing themselves to be limited by currently available resources. For example, PCAST reported the need for more K-12 STEM teachers and thus, OSTP created the "100K in 10" initiative to train 100,000 new STEM teachers within the next 10 years. The Executive Director of NSTC at OSTP, Dr. Jayne Morrow, stated that the success of STEM education requires "huge" interagency exchange to ensure agencies are headed in the right direction together.

Many of the OSTP's staff we met came in through the AAAS fellowship and represented a variety of fields such as astrophysics, neuroscience, and BBS. Most of the OSTP staff agreed that their responsibilities included event planning, writing reports, as well as developing projects and initiatives in the STEM fields that foster ingenuity in the U.S. There is typically a one-year turnover at OSTP since many staff members are on detail from other federal

¹ "New Office of Science and Technology Proposed by Kennedy To Strengthen White House Advisory Setup" *Science Magazine*, Vol. 136, No. 3510 (1962)

agencies or recruited from industry for several years of public service. This short turnaround fuels the policy entrepreneurship attitude and sustains a collaborative environment, as the staff are some of the most diverse, optimistic, and creative that we met during our visit in Washington, D.C..

Opportunities at OSTP:

- The AAAS fellowship places students at OSTP.
- OSTP also manages the OSPT Policy Internship Program, a 90-day, uncompensated internship

Agency: Department of State

Date: Thursday, April 24, 2014

Location: 6910 Henry S. Truman Building

Meeting with:

Dr. William Colglazier, Science & Technology Adviser to the Secretary of State

Dr. Jonathan Margolis, Deputy Assistant Secretary, Bureau of Oceans and International Environmental and Scientific Affairs

Dr. Erin Casey, Bureau of International Security and Non-proliferation, Office of Cooperative Threat Reduction

Dr. Franklin Carrero-Martinez, Office of the Science & Technology Adviser to the Secretary of State (covers South-Central Asia, science diasporas, and urbanization)

Dr. Seila Selimovic, Bureau of European and Eurasian Affairs, Office of Central European Affairs

Dr. Zach Rosner, Bureau of East Asian and Pacific Affairs, Office of Korean Affairs

Authors: Candice Yip and Iulia Neagu

The United States Department of State is a federal executive agency responsible for international relations and foreign affairs of the United States, with a mission to “advance freedom for the benefit of the American people and the international community by helping to build and sustain a more democratic, secure, and prosperous world composed of well-governed states that respond to the needs of their people, reduce widespread poverty, and act responsibly within the international system”. There are two dominant cultures in the State Department: the Foreign Service, which consists of people serving at US diplomatic missions around the world, and the civil service, based exclusively in the nation’s capital.

We met with a host of current or former American Association for the Advancement of Science (AAAS) Science & Technology Policy fellows, including Dr. Bill Colglazier, the science and technology adviser to the Secretary of State, and Dr. Jonathan Margolis, Deputy Assistant Secretary for Science, Space, and Health. Generally, they portrayed science and technology as a tool for enhancing diplomatic relations. For example, when Dr. Margolis recounted his day in the life, it included meetings regarding international science cooperation in Antarctica, space tourism on the moon, global health security, bilateral science and technology cooperation with Uzbekistan, as well as fostering technological innovation among scientists in the Middle East.

The most common route into the State Department as a PhD holder in the sciences is via the AAAS policy fellowship. Indeed, the department currently hosts ~30 AAAS fellows, who work on a variety of issues ranging from intellectual property to energy to US-South Korean relations. Working in the State Department as an AAAS fellow would be an excellent way for a scientist interested in international affairs to contribute to science diplomacy.

Agency: Environmental Protection Agency (EPA)

Date: Thurs. April 24, 2014, 2:30pm

Location: 1200 Pennsylvania Ave NW, Washington, DC 20460

Meeting with: Glenn Paulson, the Science Advisor to the Acting Administrator

Mary Greene, the Deputy Director of the Office of the Science Advisor

Fred Hauchman, Director of the Office of Science Policy

Author: Sabin Dhakal

About EPA

The United States Environmental Protection Agency (EPA) is an agency of the US federal government, which was founded with the purpose of protecting human health and the environment by sketching and implementing regulations based on laws passed by congress. The EPA was proposed by President Richard Nixon in 1970.

EPA's Structure and Responsibilities

The EPA has its headquarters in Washington, D.C. It currently has 27 different laboratories in 13 different regional offices. It is the biggest program under American Association for Advancement of Sciences (AAAS) and currently hires approximately 15,193 full-time employees.

Offices of EPA:

- Office of the Administrator (OA)
- Office of Administration and Resources Management (OARM)
- Office of Air and Radiation (OAR)
- Office of Chemical Safety and Pollution Prevention (OCSPP)
- Office of the Chief Financial Officer (OCFO)
- Office of Enforcement and Compliance Assurance (OECA)
- Office of Environmental Information (OEI)
- Office of General Counsel (OGC)
- Office of Inspector General (OIG)
- Office of International and Tribal Affairs (OITA)
- Office of Research and Development (ORD)
- Office of Solid Waste and Emergency Response (OSWER)
- Office of Water (OW)

The responsibilities of the EPA include maintaining and enforcing national standards under a variety of environmental laws, in consultation with state, tribal and local governments. In addition the EPA works with industries and all levels of government in a wide variety of voluntary pollution prevention programs and energy conservation efforts. They collaborate with other federal agencies like National Academy of Sciences on several of their projects.

Policy related jobs at EPA for science graduates

The best way to transition into the science policy related jobs at EPA after a graduate degree in sciences is through science policy fellowship programs at AAAS. There are currently around 30 AAAS fellows working at different capacities at the EPA.

Current Projects and Focus: EPA is currently working on a variety of projects that includes pesticides, fuel economy, air quality, oil pollution, Safer Detergents Steward initiative (SDSI), radiation protection, etc with one of the major as well as popular focuses being increasing awareness about climate change and ways to deal with it.

Agency: Department of Health and Human Services (DHHS)

Date: Friday, April 25, 2014

Location: Hubert H. Humphrey Building

Meeting with:

- Laina Bush, Associate Deputy Assistant Secretary for Planning and Evaluation, Science and Data Policy
- Hui Hsing Wong, MD, JD, Medical Officer for the Office of the Assistant Secretary for Planning and Evaluation

Authors: Tracy Kambara and Liza Litvina

The U.S. Department of Health and Human Services (DHHS) is the cabinet-level department charged with protecting the health and well-being of Americans and managing delivery of essential human services. On a budget of over \$1 trillion (surpassed only by the Department of Defense), DHHS consists of operating and staff divisions, including the Food and Drug Administration, National Institutes of Health, and Centers for Disease Control and Prevention in the former category, and such offices as Legislation, Health, and Planning and Evaluation in the latter category. DHHS administers over 100 programs across these divisions, among them Medicare and Medicaid, Head Start, assistance for low-income families, children, and the elderly, and health and social science research.

We met with Laina Bush and Hui Hsing Wong, two members of The Office of The Assistant Secretary for Planning and Evaluation (ASPE), a staff division of DHHS. Ms. Bush began the meeting with a brief introduction to the structures of the DHHS and ASPE. ASPE is responsible for policy development, coordination, research, evaluation, analysis and planning, and acts as the chief policy adviser to the Secretary of HHS. This division encompasses four policy areas: (1) Disability, Aging, and Long-term Care Policy; (2) Health Policy; (3) Human Services Policy; and (4) Science and Data Policy. These offices help coordinate policies among the different operating divisions to ensure consistency between various federal health-related agencies. Policy research in ASPE is based on economic analyses, to help make policy recommendations in an evidence-based manner. Most projects are directly commissioned by Congress or the Executive Branch, and go through several stages of internal review and public comment. However, research scientists can also bring policy-relevant research to the attention of ASPE.

Recent and current projects include policy research and recommendations on Big Data, obesity and nutrition, medical product development, and drug shortages. ASPE is also able to nurture the development of health-related programs that deal with addressing health-related policy that might be too political risky for other departments. Neither Ms. Bush nor Dr. Wong were free to comment on any conclusions or regulatory recommendations currently being addressed by their office. However, most documents published by their office will eventually be made available to the public.

The ASPE office counts several current and past AAAS fellows among its staff. For PhDs interested in entering public service either through DHHS or elsewhere, Ms. Bush strongly recommended applying to the AAAS fellowship. For PhDs who will stay in research but want to see their work applied to policy, the recommendation was to do good, reliable science, and to maintain awareness of the kinds of questions that policymakers are asking.

Agency: Department of Defense (DOD)

Date: Friday, April 25, 2014, 3:00-4:00 pm

Location: The Pentagon

Meeting with:

- Brian Beachkofski, Director, Office of Technical Intelligence
 - PhD in Aerospace Eng from Wright State University,
 - MBA from MIT Sloan

Author: Hossein Safaei

This office basically consults Pentagon on S&T trends and advises on the technologies that may/ should be present in future. Brian is basically asked: What's the next big technological thing that we need to do?

A strategy that Brian often uses is going back instead of going to future. We do not know what will happen in future but we can go back and see how technologies can change. An example is dominance of iPhone today compared to Nokia phones 10 years ago.

The idea is to make politicians and military officials comfortable with new technologies so that they can make decisions about them when the time comes.

A good part of his job is going through S&T literature every week and seek for the big technical things that DOD should keep an eye on. (<https://tin-ly.sainc.com/ASDRE/>)

There is a disconnect between politicians and scientists. Politicians read the news headlines (e.g. 3D printing) and expect magic from them. We, as scientists have the role of translating the news to facts/ realities for them and elaborate on their ramifications. We identify roadblocks and research strategies to overcome them.