

My Year in the United States Senate

This past year I served as one of thirty-four Congressional Fellows as part of the Science & Technology Policy Fellowship program run by the American Association for the Advancement of Science (AAAS) and funded by the AMS. In addition to the Congressional Fellows, there are about 200 AAAS Fellows placed in the Executive Branch each year. While the AAAS funds the Executive Branch Fellows, professional associations typically fund Congressional Fellows. Other scientific associations—ranging from the American Society of Mechanical Engineers to the American Veterinary Medical Association to the American Psychological Association—support PhD scientists as fellows in the same way that the AMS does. Recently, most fellows have come from academic settings, but some come from the private sector. Most have recently completed their PhD or postdoc, but some are more advanced in their careers. The fellows form a tight social group and work together on projects outside of the day job; for example, I worked with other fellows to run the first ever DC Mini Maker Faire, which served as a warm up for some of the participants who would attend the first ever White House Maker Faire the next week.

The fellowship starts at the beginning of September, with a two-week orientation that is exhilarating and extremely informative. Next, the Congressional Fellows begin the interview and placement process, looking for a good match for the year. Many considerations go into the match—majority v. minority, geographic connections, Democratic v. Republican, member's legislative priorities and committee assignments, etc. I chose to work for my home state, for Senator Franken. I worked on education issues, with focus on higher education and STEM (science, technology, engineering, and mathematics) education. This assignment suited me, as I have worked in higher education in Minnesota for over twenty years and know the education landscape well. Also, Senator Franken serves on committees I care about. I supported the Senator in his work on the Senate HELP (Health, Education, Labor and Pensions) Committee and on the Senate Indian Affairs Committee. The policy areas covered by the 2013–2014 fellows included food safety, transportation, agriculture, energy, and climate science. It was a big year for health policy and energy, as the Affordable Care Act was being rolled out during our fellowship year and as Congress increased its attention to “fracking.” In my portfolio the topics of high visibility included student loan reform and college access and completion.

In the Senate, the pace of work and the interactions with colleagues are quite different from academia. A typical day

included preparing background material and questions for HELP Committee hearings that the Senator attended, preparing video remarks for the Senator to deliver, writing legislation, and vetting proposed legislation from other Senators to consider whether or not to ask my boss to cosponsor. Every Monday began with a meeting of the full legislative team, followed by a meeting with the Senator and the full office staff to lay out the week ahead. Each week I also participated in a meeting of education policy advisors for the Democratic HELP Committee Senators. We also had weekly check-ins with our education staffers back in Minnesota.

The scientific experience of the fellows helped us engage in “science for policy”; for example, our scientific background was helpful as lawmakers considered poultry immunizations while developing legislation regulating the poultry industry. The lawmakers we worked for were eager to hear our input, and our expertise was valued. There are very few scientists in Congress and only one mathematician: Representative Jerry McNerney of California. After participating in the Joint Meetings in 2014, he gave a House floor speech about the twin prime conjecture. The purpose of the speech was to interest the public in STEM fields broadly and also to emphasize that basic research is a valuable investment even when it does not generate immediate impact.

While fellows provide “science for policy,” we also engage in “policy for science”, which includes for example efforts to ensure that the National Science Foundation (NSF) is well-funded and that basic research remains a budgetary priority. “Policy for science” is critical in appropriations discussions, during which priorities are set for the small portion of the federal budget that goes to discretionary non-defense items such as the NSF. Some of us also worked with our offices on other “policies for science,” including funding for research universities, promoting STEM education and participation in STEM fields by women and other underrepresented groups, patent legislation that might affect scientists and universities, and so on.

Policymaking is hard. It is a subtle craft involving many stakeholders. I worked with a great office, with supportive constituents, and with conscientious Senators who are good people, trying to do good things. It is easy to be cynical about Capitol Hill these days, and I wondered if the fellowship experience might exacerbate my own cynicism. For the most part, the experience reduced it.

The fellowship was a terrific and life-changing experience and I am grateful to the AMS for making it possible and for working to keep mathematics visible in the policymaking arena. If you are interested in pursuing the fellowship, feel free to contact me.

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