

My Year on Capitol Hill: 5 Lessons I Have Learned

This past academic year, I had the privilege of being the 2011-2012 AMS Congressional Fellow. I want to take this opportunity to give my personal perspective of what I have learned about the culture and legislative process on Capitol Hill. Here are five of the lessons I learned.

1) **Scaling Helps Put Big Numbers into Perspective:** Today, out of every one dollar the government spends, roughly sixty-two cents are devoted to mandatory spending on entitlement programs (including Social Security, Medicare, Medicaid, and interest on federal debt). Another twenty cents are spent on defense appropriations. That leaves just eighteen cents for discretionary nondefense items, including research funding within the NSF, NIST, NASA, and the NIH. Most budgetary debates are over these eighteen cents. Often one hears of a “\$100 million dollar cut here”, or “a \$100 million dollar increase there”. For the average constituent, such a figure becomes “just another number” with no reference to everyday life.

There is a better way to drive home the point. The average American family makes roughly \$50,000 a year. Assume that the entire U.S. budget is scaled to this hypothetical family’s income of \$50K. A \$100 million cut in a federal program would be analogous, in our family’s budget, to cutting \$1.40 or roughly twelve cents a month: for example, saving twelve cents per month on a gallon of milk. In the meantime there is a \$3,400 monthly mortgage payment (the other eighty-two percent).

If nothing is done about our current fiscal situation, the discretionary nondefense portion will become a smaller piece of the federal budget, with interest payments on debt increasing substantially.

2) **Congress was Designed to Prevent the Enactment of Legislation:** The process of introducing and passing legislation is messy, with no clear path and no known algorithm proven to lead to a solution. Most legislation that is proposed is a combination of political kabuki dashed with media theatrics, resulting in no concrete action. Legislation is introduced to raise awareness of an issue, to keep debate on a subject alive, or to make core constituents happy. Serious legislation, however, involves dialogue with all stakeholders, with extensive input and communication from all interested parties. I learned this lesson during my involvement with legislation aimed at improving standards and methodology in forensic science. The current status (at the time of my submission of this piece) of this specific bill remains unsettled. However, the long and complicated process of negotiating the legislation is evidence that serious and deliberative debate is a prerequisite for enacting legislation.

3) **Budget is Policy:** The best way to understand anyone’s priorities is to look at their checkbook. The same is true of the Federal Government. The priorities of the administration and of the Congress will always be reflected in their budgets. For most people, reading the federal budget is akin to reading a telephone book. Nevertheless, knowing the budget brings a thorough understanding of programs and initiatives in federal agencies. Equally important is understanding the process of negotiating a budget and how “friction points” are resolved. An intricate knowledge of the budget and its process will enable a legislator to work nimbly and gain the respect of his/her fellow colleagues and staffers.

4) **Framing Scientific Research as “Need to Have” not “Nice to Have”:** Science research in the United States is predominately funded by the American taxpayer. From my observation, science funding enjoys wide bipartisan support. However, what is true today is not necessarily true tomorrow. We are now entering a period of tight budgets. Science funding will not be immune to deep and debilitating cuts, so our community must avoid complacency. We must frame science not as a luxury but as something essential, with documented and significant return on investment for our nation. The case for basic science funding is even more imperative, given the tendency by lawmakers to put a lower priority on basic research than on applied research, which they believe will translate into immediate economic growth. A balanced approach must be emphasized. In addition, the scientific community must be willing to change the existing culture of science to adapt to the new fiscal reality that emphasizes spreading funding opportunities for younger investigators, increased scrutiny for established investigators with significant grant support, and the quality rather than the quantity of publications.

5) **The Greatest Threat to Democracy is...?:** Contrary to popular opinion, the greatest threat to democracy is NOT the numerous cable TV and radio talk shows, nor is it the growth of political action committees and third-party interest groups. No! The greatest threat to our democracy is the absence of our participation. This truism is the most obvious yet the most under-appreciated lesson I learned. I encourage everyone reading this article to take seriously the responsibility of citizenship. Constituents must continually communicate with their representatives, offer cogent suggestions, and thank them for their support on an issue. As my senator’s chief of staff once told me: “We have no idea what is on people’s minds until they contact our office.” A serious legislator may not agree with your viewpoints, but he/she will make sure to respond appropriately. Our system is “broken” only when citizens no longer take the time to participate in democracy and engage on the issues.

I want to close by thanking the American Mathematical Society for their sponsorship of my Congressional Fellowship this year. This experience has truly been both life-changing and informative and I will always be grateful for this opportunity. Thank you!

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