

Getting Congress' Attention: From the Washington Noise Barrier to the Main Street Barrier

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[The scientists] want to come to Congress and give tutorials. That doesn't work. We don't have time for tutorials. They need to get right to the point: "This is why it's important. I know there are a lot of competing interests, but here's why we should be at the head of the line. And here's what it means for society."

Sherwood Boehlert, *Science Magazine*,
November 24, 2006, p. 1228.

Spring in Washington brings the masses. Cherry blossoms attract the tourists, and Congress' deliberations about the coming year's federal budget bring the supplicants. Congressional office buildings are abuzz with every interest group one can imagine, and almost all are seeking their share of the federal budget pie. Given the fierce competition for funding, how can scientists get their messages to rise above the commotion? As the ASA ramps up its advocacy, what will be our role?

Statisticians rely on a variety of funding sources. The ASA is currently studying the federal funding of statistics, but it is believed the National Institutes of Health (NIH) and the National Science Foundation (NSF) are the primary federal supporters. While funding statistics research is often categorized under mathematical sciences, statisticians also participate in life sciences research. As a result, a large segment of our community benefited by NIH's doubling that ended in 2003. With the NIH budget now falling and NSF's proposal funding rate down significantly since 2000, statisticians are facing the same challenges as the majority of fields.

As to how to approach Congress, it's not enough for statisticians to talk about why Congress should increase science funding. We must convince Congress that it can't afford not to.

The first approach is too easily answered by saying science increases can be funded next year. The second approach, which echoes former House Science Committee Chair Sherwood

Boehlert's quote above, demands a compelling argument for why additional funding should be made available for research in a tight funding environment.

Innovation and competitiveness are the buzzwords that have had traction on the Hill for the last several years and form the basis of a compelling argument for mathematical and physical science research funding. It is interesting and instructive to examine how this came about.

The seemingly endless headlines about offshore outsourcing of high-tech jobs several years ago raised significant concern in Congress. Tom Friedman's book, *The World Is Flat*, and various association reports also helped to soften the "inside-the-beltway" audience.

It was the National Academies' report, "Rising Above the Gathering Storm," that broke through the Washington noise barrier in the autumn of 2005. The report's theme is summarized well by an oft-quoted excerpt from the executive summary:

The scientific and technological building blocks critical to our economic leadership are eroding at a time when many other nations are gathering strength.

The report recommended major improvements to our K-12 science and math education, more funding for basic research in the physical sciences (which includes mathematical and statistical sciences), and a reinvention of our research enterprise.

Both the White House and Congress reacted quickly to the "Gathering Storm"

ASA Science Policy Actions:

The ASA urges funding for science in the fiscal year 2008 supplemental funds.

The ASA joins other science and engineering groups to encourage scientists and engineers to enter public office. See <http://elections.sefora.org>.

Go to the ASA Science Policy web page at www.amstat.org/scipolicy/index.cfm for details.

report. Within months, then-Minority Leader Nancy Pelosi introduced the Democratic Innovation Agenda and President George W. Bush announced the American Competitiveness Initiative, both of which propose a 10-year doubling of the budgets of NSF, the Department of Energy Office of Science, and the National Institute of Standards and Technology (NIST) laboratories.

The reason Congress and the White House responded to the calls for competitiveness and innovation is jobs, jobs, jobs. Although it is difficult to quantify, it's long been known that basic research contributes to our economic growth—one needs only to point to MRIs, lasers, GPS, the internet, and transistors—to name a few—for evidence.

The huge growth of the science and technology infrastructures in countries such as China, India, and South Korea and the subsequent growth of high-tech jobs in those countries provide an excellent illustration of the research-jobs connection to U.S. policymakers. It also gives immediacy to the calls

for more research funding and better science and math education, because high-tech jobs created in other countries mean high-tech jobs not created in the United States.

Looking at our \$100 billion trade deficit for advanced technology products, or our share of high-tech product exports, will tell the story of the exploding high-tech prowess of other countries [charts below].

There have now been two budget deliberation cycles since the “Gathering Storm” report. While support for the report’s recommendations seems strong, Congress and the White House have failed to fund the proposed significant increases. In each of the last

two years, President Bush has requested large increases for the three agencies noted above in his budget request and both chambers of Congress have approved the increases. But, the budget process has broken down when it’s come time to reconcile differences between the various versions, and science research has been left on the chopping block.

Indeed, two years later, members of the “Gathering Storm” committee note that much progress has been made since the report appeared, but mostly by other countries. As another observer put it, the storm continues to gather.

While I believe the need for scientific research funding has broken through the Washington noise barrier, I think Congress’ failure to provide it is due to a higher obstacle: the Main Street barrier. When the federal budget isn’t as difficult as it is now, it is sufficient to break the Washington Noise barrier. But in the current budget environment, it’s the Main Street barrier with which we have to contend.

For us in the Washington advocacy community, it is not uncommon to hear from a member of Congress, “You’ve convinced me of the necessity to increase science budgets; now you have to convince my constituency.”

Given that members of Congress face difficult funding choices and there are elections every two years, it is easy to understand why Congress chose projects with short-term payoffs over basic research, which may not see payoffs for a decade or more.

ASA members can help with research advocacy in a number of ways. First, ASA members can help with the Main Street barrier. We should be speaking out locally about the importance of research and its benefits to the economy so the general public can help us make our case. Opportunities range from approaching local rotary clubs to writing letters to newspaper editors to raising the issue at town hall meetings and other public forums. If those outside the beltway made the “Gathering Storm” connection—the connection between U.S. competitiveness and the need for stimulus packages—we would have a much better chance for success.

ASA members also should communicate with their elected officials on basic research funding, whether it be through phone calls, emails, or visits to local offices. And, more fundamentally, we need to explain to Congress why statistics should be a part of the federal research funding portfolio. Finally, looking forward, we must explain how statistics can help with current issues.

The fantastic contributions statistics has made to our economy and society would bolster the case for science research funding immensely. If we aren’t telling the story, it is not being told. Clearly, we have a compelling argument for why Congress should increase research funding, and statistics is an important component. Statisticians are essential to making sure we remain above the Washington noise barrier and penetrate the Main Street one. ■

