

AAAS Forum on S&T Policy
Panel on Science Advocacy
Congressional Perspective

Dahlia L Sokolov
Professional Staff
House Committee on Science and Technology

I want to thank AAAS for inviting me to participate in this panel and provide my views on science advocacy from the perspective of policy makers, and in particular, Congress.

I should add at least one disclaimer before beginning my remarks. I am trained as a scientist myself and I have spent my 3 ½ years on the Hill with the House Science Committee. Mine is obviously a unique seat from which to view science advocacy in Congress - I'm far from your typical staffer in your typical office when it comes to this issue. However, I think I've been around just long enough to have a pretty good sense of how scientists and science advocacy are viewed outside the four walls of my own committee.

Science advocacy, like science policy itself, can be separated into two distinct categories: advocacy for policies and budgets that directly affect the scientific enterprise itself; and advocacy for the inclusion of scientific data and understanding in decision making on the full range of policies affecting health, environment, energy, national security, and other major issues before our country and the world. Or to simplify, policy for science and science for policy.

I believe that, with few exceptions, Members of Congress and their staff strongly support science, and respect the scientific enterprise and its practitioners. Of course, there have been a few high-profile stories of Congressmen accusing respected scientists of being part of a big scientific hoax and then inviting fiction writers to testify on the "science" of climate change.

But while those sorts of actions and attitudes get a lot of attention, they are the exception. The pervasive problem is not willful ignorance or exclusion of good science, but rather that most Members and staff don't have the tools to identify and incorporate sound science into their policy decisions.

The other problem is that they don't connect support for basic research budgets to the issues they care about most. And even when they do make that connection, the electoral system forces them to think in terms of short-term benefits, while the benefits of scientific research are usually long-term and often unknown. Therefore, they may say all the right things about science, but they won't put science ahead of other priorities where the rubber hits the road- during tough budget times. The scientific community was understandably disappointed by the outcome of the fiscal year 2008 appropriations process, but they should not have been surprised.

We scientists like to think, “but if I just *explained* it to them and presented all of the facts, they would understand how important my science is.” Unfortunately, there are two problems with that attitude. First, it can often come across as arrogant and patronizing to Members and staff, especially in a situation where several senior scientists are trying to explain technical issues to a staffer who might only be in his or her twenties. But in addition to the potential for seeming arrogant, this attitude misses the point. By following some basic rules of effective communication, scientists can convince most Members of Congress of the importance of their science or of science in general. However, it is *very* hard to convince those Members that funding science is more important than funding infrastructure, education, health care, jobs, secure borders, relief from the high cost of energy – the issues that Americans at large and their constituents in particular grapple with on a daily basis. Members care about what their constituents care about, and they have to explain their funding decisions to normal, ordinary people back at home. So the best way to make headway is to convince Members of the relevance of your science to their own signature issues or to the issues that their constituents care about.

Of course, that being said, there is a danger in tying the goals of your science too closely to the interests of a Member’s constituents. If you do too good of a job, you run the risk of Members acting narrowly by earmarking research budgets or prematurely biasing budgets in favor of development and demonstration projects while there are still big gaps in the science underpinning those projects.

These are difficult challenges for science advocates, and in some cases probably unachievable – depending on the Member, on the issue, and on the budget context at that time. But I don’t mean to imply that you all should pack up and go home. Quite the opposite. Science advocates have a job to do, and I think it’s worth every bit of effort they put into it, provided they do so through a carefully thought-out long term strategy.

Before I begin the “how to” part of my remarks, I want to pose the following question: What are the fundamental goals of science advocacy to federal policy makers? My colleagues on the panel have addressed this question already, but here’s my Congressional view, to set the context for my “how to” remarks that follow.

- 1) Making sure science has a role in decision-making whenever it is relevant – that’s the science for policy piece.
- 2) Helping to set the balance between research, development and demonstration when top line budgets are being allocated and, at a finer level of detail, ensuring that policy makers pay attention to the priorities of individual communities when agency budgets are being decided – which also means that those communities need a process by which to set consensus priorities whenever possible. That’s the policy for science piece.
- 3) Working to improve science literacy in Congress and in the general public so that (1) and (2) become easier over time.

Now I turn to the “how to” of being an effective science advocate to Congress. I’ll say a few words about letter-writing and phone-calling campaigns and then spend more time on

the basics of face-to-face meetings and briefings. Mailing and calling campaigns can be effective. Members pay attention when they start getting multiple phone calls and letters from constituents on a single issue. And it's the easiest way for a scientist to make her voice heard on policies that affect or are related to her work as a scientist.

For those scientists who want to be more involved than writing letters and are willing and able to learn how to be effective advocates, I would encourage participation at all levels of government and in all ways. As for advocacy to Congress, get to know your own Member of Congress and his/her staff. Coming to Washington DC in particular can be exciting and eye-opening, perhaps even career-changing, especially for students and young scientists who are the future leaders of the science and engineering enterprise. But scientists coming to the Hill should not expect more than 15 minutes of a typical staffer's time, and are highly unlikely to meet the Member him/herself.

Therefore I encourage scientists to make the connection to Representatives in their district offices. There you are much more likely to build a long-term relationship and trust with staff, and will get to meet and talk directly to your Representative. Like letter-writing campaigns and Congressional visit days, this may also be done as part of a centrally organized effort, but does not have to be. Of course science advocates want to and should target key Members with influence on their issues, but don't ignore everyone else. Every Member of Congress has a vote, and some of the junior Members are going to be sitting in powerful positions in a few years.

Next, *know your audience*: I touched on this before. Go to your Representative's website to learn a little about his or her background and positions on the issues you care about. You can really undermine your own credibility if you don't do your homework. Also, consider if your science can be tied to one of his or her signature issues, and to issues affecting the district directly, including any research university in that district.

Make sure you *understand where science fits in*: In the case of science funding, look at the broader budget contexts – for science overall and even for domestic discretionary spending overall. It is really helpful to understand the context in which Members have to set budget priorities, and they appreciate it when you acknowledge the context. In tough budget times, science is not the only thing that gets squeezed. In fact, for decades federal budgets for nondefense R&D have been a near constant 1 in 7 dollars relative to the total nondefense discretionary budget. Right now that total domestic budget is flat.

In the case of science contributing to a broader policy decision, be aware of other contributing factors - for example, ethics, economics, and yes, politics. Science is just one seat at the table for most of these policy decisions, as well it should be, and too many scientists don't understand or refuse to acknowledge the legitimate role of other factors, including politics. If these other factors lead your Representative to speak or vote in a way that you believe ignores or misrepresents the science, don't give up. You can still educate, and you can still change minds.

Perhaps now is a good time for me to make clear the distinction between policy and politics, because those terms are too often used interchangeably. Even though I work in the most political institution in the most political town in this country, I consider my job to be a policy job. That doesn't mean I can ignore the politics – for example, which Members should we recruit to sponsor this bill, how can we satisfy the needs and concerns on both sides of the aisle, and so on. That's politics, but it is not so different than meeting the needs of the many and varied voices in the scientific community. It's not as if the scientific community is monolithic. We staff do our best to balance all of the input and push back on anything really detrimental or short-sighted, and most often the result is a compromise that the overwhelming majority of stakeholders and Members can support. Science, therefore, can have as large if not a greater role than politics in shaping policy. Of course silly politics sometimes rule the day, especially as elections near, and sadly, those are the events that see the most media coverage. They are not the events that keep me coming to work every day, without any concern whatsoever that I am compromising my integrity as a scientist.

Next, *practice communicating* to your policy-maker audience. You should be able to present the relevance of your science in understandable terms in 10 minutes– that means set the big picture context, address the particular challenge your science may help overcome, and only then talk about the details of your own science - always in terms that an educated but non-technical person can understand. This holds whether you are advocating for increased science budgets or trying to influence a broader policy decision. Use visual aids only when they clearly convey something you can not capture effectively in words. You might also discuss additional societal benefits- such as training the next generation or advancing other fields of science, but don't hand-wave or pull numbers out of a hat or any intelligent staffer will back you against a wall if they pay attention at all. Leave behind a 1-2 page summary of main points and figures rather than a packet of power point slides.

Finally, *keep building these relationships in good times and in bad*. If Members hear from the community or individual scientists only when budgets get squeezed or the day before some bill you have a problem with is supposed to hit the floor for a vote, they will be less receptive to you than they might otherwise. Don't forget Members of Congress and their staff are hearing from a lot of different interest groups during crunch times, and you need to give them a reason to pay particular attention to you. Knowing you and trusting you based on a relationship built over time is reason enough. Just being a smart, data-wielding scientist may not be.

So far I have focused my recommendations on one-on-one meetings, but disciplinary and professional societies and even agencies educate or advocate for science through public briefings. I should emphasize here that there is a distinction between advocacy and education, although the line often gets blurred. I have been to many excellent briefings sponsored by all kinds of organizations. But the truth is I have also been stuck in some really awful briefings – awful either because they are much too technical and in the weeds for the 24-year old political science major staffers who are the target audience, or awful for any number of other reasons. The societies and organizations that sponsor

these briefings need to screen their prospective speakers carefully and always bear in mind the communication skills, and not just the expertise or title of the speaker.

I will also say a few words about lobbyists. It's not a dirty word. Lobbyists and in-house legislative affairs specialists hired by stakeholders in the science and engineering community serve a critical role in science advocacy. They are most effective when they understand the politics, are able to build long-term relationships with key staff and even Members, and don't cross the line between being assertive and being a pest. They don't have to be scientists. They have to be conversant, but don't have to be an expert on the issues they deal with. In fact, the most knowledgeable lobbyists can do a disservice to the stakeholder they represent when they lose the respect of staff through sheer force of personality or political missteps. So it behooves these organizations to vet their lobbyists and legislative affairs staff thoroughly.

In closing, science doesn't fare quite as poorly on the Hill as some people would believe. But there is plenty of room for improvement, and that will never happen by scientists and other stakeholders putting their heads in the sand and pretending or hoping that AAAS and a few other DC-based organizations and individuals will take care of everything for them. The AAAS science and technology policy fellowship program has created hundreds of engaged and savvy science advocates over its three decades, and that certainly helps. Many of those fellowship alumni help to serve as bridges between the scientific community and policy makers. Others return to academia where they help to educate their colleagues about the process. But it's not just a matter of educating and engaging more individual scientists in advocacy. The community needs to think hard about institutional changes as well.

The fact is the status quo of science advocacy, while it has achieved some remarkable goals over the years, is also seriously flawed. Yes – the scientific community helped realize a doubling of the NIH budget. But at the same time it failed to set any priorities of its own or to provide any thoughtful advice on how NIH should effectively manage that increase over the long term. And now all most scientists and universities can do is complain that Congress and the Administration are flat funding an agency with a \$30 billion budget. I am a passionate supporter of science in general, my graduate research was NIH funded, and my postdoc was at NIH. If you can't convince me that NIH needs more money, then you have a problem. Universities and the scientific community need to take a hard look at themselves, and what changes they could and should make internally, and they need to think carefully about federal policy beyond just budgets. Don't ask us to step up the plate if you aren't willing to yourselves.

This willingness to stir the pot and look inward must be part of any forward looking strategy for science advocacy, in addition to everything else the panelists have discussed here today. So that I can end on a positive note, let me reiterate that I do believe it's worth it. Thank you.