

All Hands on Deck: What a Scientist Brings to the Front Lines of a Crisis



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“OK, we’ll plan for that. Or not. No one knows anymore.”

That phrase captures a Congressional Science Fellowship experience that, although only half-way done, must be at least in the running for the strangest, and most interesting, of all time.

My first day in Congressman Paul Tonko’s (D-NY) office was Thursday, 26 September 2019, and I was greeted upon my entrance to

the Rayburn House Office Building by the entire Washington Press Corps. Joe Scarborough waved hello to me on my way in. They were all there, of course, to cover the earth-shattering announcement that Speaker of the House Nancy Pelosi was formally directing Congress to begin the process to impeach the President of the United States. It was the third time in history such a thing was happening, and I thought, without a doubt, this cataclysmic political development would be the lens through which my Fellowship year was to be viewed.

Oh, to be young, naïve, and within six feet of other people.

Yes, it was impossible to predict the onset of a pandemic in September 2019. However, had I known, I would still have been eager to work in Congress, in the House, and in Tonko’s office. Although the substance of my work changed dramatically, the lessons learned from it remained the same.

The COVID-19 crisis demanded a massive shift in our office priorities: Our top priority in September was to lead the comprehensive Democratic effort to pass meaningful clean energy legislation. The time scale of this work was long term, and the topics to be addressed were specific, technical, and related to my training as a geoscientist. COVID-19 flipped the script. Our job was to lead advocacy efforts for hospitals, small businesses, and nonprofits, and to provide assurance and comfort to an exceptionally frightened constituency. Everything about it was opposite: the time scale was NOW (and often, now wasn’t soon enough), and the topics we worked on were extremely broad, far-reaching, and had absolutely no tangible connection to the geosciences. It is easy to look at that situation and, well, chalk the year up as a loss.

There is one crucial mental reason why I am still exuberant to work each day: My goal entering this Fellowship year, simply put, was to use my scientific training to help make a tangible, beneficial difference. Working in Congress during the COVID-19 pandemic ensures that you not only can, but you MUST, make that difference. The public demands it.

COVID-19 changed my day-to-day in a huge way. Pre-pandemic, my primary job was to shepherd a number of climate, energy, and science-related bills through what our office calls the “regular process.” The process follows a standard blueprint: research the topic of interest, reach out to as many expert groups as you can find to get their opinion on the topic, identify where the federal government can be useful, identify if there is a political appetite for such legislation, write the legislation, publicize the legislation, edit the legislation as feedback pours in, drum up support for the legislation, and then (hopefully) vote on the legislation. It is relatively evident that many of

the steps in the “regular process” are similar to designing and undertaking a research project: In particular, I found substantial similarities between the art of writing a scientific proposal and the art of writing a bill. Both require rapid and creative synthesis of a wide variety of viewpoints and information, and both require the ability to communicate those concepts to wide audiences that are outside your field of expertise. As scientists, I’d like to think we’re quite good at that.

Post-pandemic life, at first glance, looks nothing like academia. The precious weeks to months afforded in the regular process to develop thoughtful, community-based legislation simply don’t exist. The office has morphed into an all-purpose crisis hotline as thousands of requests from individuals, businesses, nonprofits, schools, and any other group imaginable pile up. Our primary jobs became to manage and advocate for these requests. I was assigned requests related to agriculture and education, and the requests I had to advocate for ranged from government buybacks of surplus milk to paycheck protection for children’s museums. It is my job to figure out any pathway to assist our critically important but ailing constituent groups, through whatever means necessary: letters, appropriations language, public TV interviews, even Twitter posts. There is seemingly nothing in my current job that sounds related to the time-intensive, careful, and painstakingly slow process to develop Ph.D.-level research. However, with just a little digging, I was able to find some very clear analogues.

Scientists, particularly early career professionals and Ph.D.s, are often confronted with tasks they have no idea how to complete. My years of fieldwork and modeling were replete with these experiences. I had had to develop a method from scratch to sample slushy, peaty mud without compression, and before my degree, I had no experience in soil sampling. I had to develop code in C++, XML, and Python, without ever having taken a coding class. The scientific training process is replete in valuable lessons, but paramount for me was this: You give me any task, and I’m confident I can get it done, somehow.

Leaving the lab for the government took a leap of faith and required me to get over some serious fears, but I wish I wasn’t so nervous. As scientists, we’re lucky enough to be trained thoroughly in skills the world desperately needs: competency, communication, and creativity. This skillset, I believe, makes us as useful in regular business as it does in crisis. I am so thankful to GSA that this opportunity exists, and I hope to help continue its legacy as my career moves forward.

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