

essays

Being a science journalist is difficult. It's difficult to write without big scientific words, make a science topic interesting to the average reader, and ask the right questions during an interview and get an interesting quote.

I faced and conquered these challenges during the summer of 2005 as an IEEE-USA-sponsored AAAS Mass Media Science and Engineering Fellow. The fellowship was a huge change from my "real" life as a Ph.D. student in biological resources engineering at the University of Maryland and a researcher at the National Institutes of Health (NIH).

The program offers two dozen scientists and engineers a chance to get out of their labs and work as reporters at newspapers, radio stations, or television stations across the country. It aims to help them sharpen their ability to communicate complex scientific issues to nonscientists and help improve public understanding of science.

I applied for the fellowship because I love science and I love writing. And I knew early on that I may not be cut out for a job in academia when I was always more interested in learning about other people's research projects than digging deeper into my own.

LIFE AS A REPORTER

I spent ten weeks as a science reporter at the *Richmond Times-Dispatch* in Richmond, Virginia. I spent every day working on a new story and learning about new scientific research. During my fellowship, I published 14 articles on topics as diverse as seismology, paleontology, physics, astronomy, health, birds, nail salons, wind farms, transportation, the space shuttle Discovery, and green building techniques. The job was difficult but worth it when one of my articles was published and readers responded with phone calls and e-mails commending me on informing them about a topic that they were unaware of before and asking where they could find more information.

I received my first assignment on my first day at the paper. The next issue of the journal *Science* was going to include a journal article about earthquakes written by researchers from Virginia Tech. I had to interview the scientists and then find another expert in the field that could verify that the study was novel and brought new information to the public.

The next week, NASA Langley held a media day for reporters to tell them about research at the Hampton, Virginia facility—research that would hasten the space shuttle's return to space after the 2003 Columbia disaster. Seeking a project that interested me, I talked to many researchers. And I found one—using thermal cameras to see cracks and impact damage on the

Reflections of an engineer/science writer

Abby Vogel

outside of the shuttle during a spacewalk. I even got to interview an astronaut for this story to get his perspective.

I wrote two more shuttle stories that summer, including one about an unplanned spacewalk to remove two strips of ceramic-filled fabric wedged between thermal tiles, which landed on the front page of the *Times-Dispatch*. I got the assignment when I arrived in the newsroom at 9:00 a.m., and the

story was due by 6:00 p.m. Doing a story in one day was tough because I had to talk to a bunch of sources, learn everything I could, and write the story in a time crunch.

That summer I also interviewed a Lynchburg College professor who used mathematical models to predict the winning times for each stage of the Tour de France and a William and Mary biologist who found that female birds were attracted to a mate with the same characteristics as the mates their female friends had chosen.

WORKSHOPS IN VIETNAMESE

The most challenging assignment I received was to attend an Environmental Protection Agency (EPA) workshop aimed at teaching nail technicians about the dangers of salon chemicals. The catch: the workshops were taught in Vietnamese! But I had to get the story, so I sat through hours of Vietnamese warnings about the hazards of working in a nail salon. My hard work paid off—the story landed on the front page of the newspaper the following day.

Another interesting story arose when one of the senior editors asked me to find out when the Virginia Department of Transportation (DOT) would repave the highway he drove on to get to work. Even though I didn't know why it was my job to find this out, I started calling around to people who worked at the Virginia DOT and found out there's actually a science to road repaving. I turned my editor's query into a fascinating—and relevant—story about how workers have to drive on all the state highways counting the cracks, ruts, and patches to determine if the road needs to be repaved. I received the most responses from readers for this story.

My summer as a reporter let me keep science in my life everyday without having to spend time in the laboratory to get results. I learned about a variety of topics that I probably would not have learned about if I had just spent the summer on my Ph.D. research. The internship also allowed me to meet and interview extremely interesting scientists and engineers.

The summer of 2005 deepened my desire to be a science writer, but I couldn't just go out and become a full-time science writer because I had finished only my first year as a Ph.D. student. But I knew I had to keep writing if I wanted to pursue science writing as a career after graduation.

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PURSUING A CAREER

With the articles from my fellowship in hand, I began writing freelance articles for a few newsletters at the NIH, since I was conducting my Ph.D. research there. I also started taking journalism classes at the University of Maryland; I've taken five now. I also wanted to see what science writers do at other types of media outlets, like universities. I learned that a science writer at a university writes press releases about professors' research that the newspaper and magazine reporters will read and want to write about. Many universities also have research magazines and annual reports that a science writer will contribute to.

I started volunteering at George Washington University's Medical Center in the Office of Marketing and Communications during the summer of

2006. I loved it! The atmosphere at the university drew me in even more than the newspaper's. Instead of talking to researchers on the telephone, I was visiting them in their labs and offices and having one-on-one conversations about their research before it was published in a journal. Professors would call me to let me know they had a new journal article coming out, and others invited me to see some cool experiment going on in the lab. University communications was a much better fit for me—I had personal relationships with the faculty members and still felt close to the science.

Last November, I started freelancing for the Georgia Institute of Technology's Research News and Publications Office. I've written press releases on conference presentations, newly published papers and faculty promotions. I've also written articles for the Georgia Tech Research

Institute's annual report and *Research Horizons* magazine.

After my internship, I was invited to join the IEEE-USA Communications Committee and currently serve as career policy editor for *Today's Engineer*. Without the AAAS Mass Media fellowship, I wouldn't have started a full-time job as a communications officer at Georgia Tech in September. I will still graduate in December with my Ph.D. from the University of Maryland. Being a science journalist is difficult, but I learned it just takes time, originality and practice.

For more information about the AAAS Mass Media program, visit <http://www.aaas.org/programs/education/MassMedia/index.shtml>. For more information about former IEEE-USA-sponsored Mass Media Fellows, visit <http://ieeusa.org/communications/massmedia.asp>.

Mass media 101: The AAAS mass media fellowship *Sourish Basu*

I'm a scientist. Or at least I should be, after four years (and still counting) spent in getting a physics Ph.D. at Cornell. But there's a dream profession that everyone has, thumbing through old copies of *National Geographic*, *Time*, or *Readers' Digest* in middle school, before age and reality

set in. For most people, the dream would be something adventurous, such as an Antarctic explorer, or an astronaut, or some guy on a raft trying to prove that South Americans settled Polynesia. For me, it was to be a photojournalist.

Now, close to double the middle-school age, I got a chance to live half of that youthful fantasy—the journalist half—for nine weeks, thanks to a fellowship from the American Association for the Advancement of Science (AAAS) in mass media sponsored by IEEE-USA. After submitting a paper application, followed by a telephone interview, I got a terse e-mail in mid-April from AAAS declaring that I would spend the summer of 2007 as an editorial intern with *Scientific American* in New York City. I was among almost 20 graduating seniors, grad students, and post-docs chosen for an internship with various mass media organizations.

VARIED MOTIVES

My decade-old fantasy was certainly not the only reason I chose to apply. Three years into my Ph.D., I was beginning to

doubt whether I could be a top-notch physicist at a good research university, and I did not want to settle for second rate; on the other hand, I was also disturbed, even frustrated, by the schism between science in the lab and science on the streets. We're surrounded by science and technology, from

when we wake up to an electronic alarm clock to when we fall asleep to a CD playing softly; if we're to use science and technology without blundering into either an Orwellian *1984* situation or *Terminator* territory, we had better understand their ramifications.

Then there's the creationist museum in Ohio, 150 years after Darwin's *Origin of Species*. There's my astronomer friend who thinks global warming is not going to be significant in our generation. There are my "young professional" friends who think carrying your own grocery bag is laughable, and recycling is too much of a hassle. There are those thousands of contradictory dietary advisories on how to live a healthy life and avoid all sorts of diseases from cancer to Alzheimer's—all based on "scientific" studies. And, of course, there are the millions for whom the term "digital copyright" is no more than technobabble—until a copied song or a shared Internet connection brings a lawsuit upon them. It is both sad and incredible how little attention is paid to these issues.

And so, partly because I was looking for something different to do with my science education, partly out of a sense of social responsibility, and partly because I like

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