



Nancy Baron

Do I make myself clear? Media training for scientists

Media savviness previously consisted of on-the-job training. Now, more universities and organizations are offering programs to help scientists get their message across to the public.

By Charlotte Schubert

Ryan Kelly's office reflects his eclectic interests. A poster of chitons, the marine invertebrates he once studied, leans against the wall. On his shelves, books on marine ecology are intermingled with law, policy, and science communications texts.



Ryan Kelly

Kelly, an assistant professor at the University of Washington's (UW) School of Marine and Environmental Affairs, pulls down one book, *Escape from the Ivory Tower: A Guide to Making Your Science Matter*, by Nancy Baron, the director of science outreach at COMPASS, a public engagement organization for scientists.

Kelly thumbs through the book, pointing to a one-page chart designed by COMPASS to help scientists organize their

thoughts before presenting their research to a broader audience. "Here it is," he says. "The message box."

He explains how he used the message box before media interviews about a recent study. When he first released the paper, he contacted a press officer at UW who told him that the study was likely to be of wide interest. Kelly then wrote his own press release, and after the press officer edited it, began working with the message box.

In the center of the box is a space for the core issue, in Kelly's case, "If you want your science to matter, tell a story." Flanking the center message are spaces to write the problem, its solution, the benefit of the study, and why people should care about it. That exercise helped Kelly prepare to talk with journalists from the BBC and other outlets. "The more prepared you are, the more relaxed you can be. The message box is one way to do that," says Kelly.

When his research on marine ecosystems or marine law puts him in front of policymakers, journalists, or the public, Kelly

also leans on training he received through a communications workshop at UW.

Kelly has tapped into a trend. Scientists like him are increasingly gaining communications savvy from formal training, whether through their workplaces or through roving workshops sponsored by organizations such as COMPASS in the United States, or the Science Media Centre in the United Kingdom.

In the last decade or so, an increasing number of scientists, many of them just beginning their careers, have begun to view science communications as integral to their work. "There has been a huge shift," says Baron, who is based in Santa Barbara, California. "It is not 'should I do it?' but 'how should I do it?'"

Though meaningful numbers are hard to come by, those who run science communications workshops observe that demand has only grown in the last decade, and more institutions worldwide are sprouting homegrown programs. Funders, such as the Rita Allen Foundation and the Burroughs Wellcome Fund, are encouraging their growth.

Communications training now goes far beyond providing media tips, to teaching a general skill set that can be deployed to engage a broad audience through the medium of a scientist's choice, be it public talks, video, social media, or other self-made content.

"We have a lot of individual experiments and innovations, and the question is whether it is going to coalesce into something bigger," explains Andrew Hoffman, a professor at the University of Michigan's School for Environment and Sustainability, who studies academic engagement in society. The environmental sciences lead the pack in this area, as do some biomedical and public health fields, he says.

Beyond PowerPoint

The University of Washington College of the Environment is aiming to serve as a model for scientist engagement and impact, says Dean Lisa Graumlich.

The college's midwife may be Jane Lubchenco, a prominent environmental scientist at Oregon State University in Corvallis. In the late 1990s, Lubchenco used her considerable influence to call on scientists to engage more broadly in society and help shape the public conversation on environmental issues. She later cofounded COMPASS and the Leopold Leadership **cont.** >

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– Andrew Hoffman

Program, a communications program for mid-career scientists, which Graulich took part in during its first year.

When Graulich became dean at the college’s 2010 founding, she had absorbed Lubchenco’s message and had developed the tools to help implement it. “This goes beyond beautiful PowerPoints,” says Graulich. “It informs everything we do.”

The college brings together researchers as diverse as atmospheric scientists and fisheries students, who can all access communications resources such as intensive workshops. For example, a workshop specifically designed for graduate students typically fills its 20 slots within one day.

Like similar workshops elsewhere, the college’s workshops focus on basic communications skills, teaching researchers how to define and understand their audience, develop a narrative, and come across as relatable and human.

Participants use the COMPASS message box, and also typically interact with a panel of journalists who challenge them to explain their research clearly, in front of their peers—an experience Kelly calls “intense.”

Kelly explains that overcoming the need for approval from peers is a major communication barrier. When scientists broaden their audience, they often pare down their usual cautionary statements, eliminate jargon, and generate a simple message—all of which can aggravate an expert. “If you are communicating effectively you are only going to satisfy 95 percent of your peers,” says Kelly. “You have to forget about that other 5 percent.”

Researchers at UW can also take courses that teach specific skills such as making videos or graphics, or engage in a public-speaking program—and they can access one-on-one training to prepare for a media interview or a talk with a policymaker.

Kelly also recently moderated a panel discussion on communicating about socially and politically charged science topics. Graulich adds that the emphasis on impact and engagement has also helped her college recruit young researchers drawn to this mission.

Other institutions offering programs to train scientists in

communications include the University of Michigan, which has a workshop and community events, launched in 2013 by two graduate students. Cornell University and the University of Wisconsin have had such programs for decades, and dozens more are cropping up, some in the early stages of growth.

Homegrown and international programs

“At this point, most of the training that happens is sort of homegrown, and people are reinventing the wheel,” says **John Besley**, who studies the field and also runs a communications program for scientists at the Department of Advertising and Public Relations, at Michigan State University in East Lansing. He notes that instructors do not all go to the same meetings or belong to the same science societies, so “no one knows what everyone else is doing.”

Some homegrown programs are drawing inspiration from COMPASS or workshops at the American Association for the Advancement of Science (AAAS, the home of *Science Careers*). Another major player is the Alan Alda Center for Communicating Science, at Stony Brook University in New York. The center focuses on improvisation and listening skills to help scientists and engineers be more relatable—a goal of its founder, Alan Alda, former host of the PBS show *Scientific American Frontiers*. The center has trained nearly 10,000 people across the country, according to director **Laura Lindenfeld**.

Internationally, the London-based Science Media Centre hosts workshops throughout the United Kingdom, and has inspired similar endeavors in Germany, Canada, and other countries. In Australia, most universities have robust communications programs, says **Joan Leach**, who leads the Australian National Centre for the Public Awareness of Science (CPAS), at the Australian National University in Canberra. CPAS has partnerships with the Alan Alda Center as well as institutions in Indonesia, Africa, and New Zealand.

But what should a scientist do if their institution provides little or no communications support? **Brian Lin**, who oversees the AAAS-hosted media portal EurekaAlert!, runs communications workshops in Japan and China, countries that are just beginning to build public relations offices at their universities, akin to what happened in the United States about 15 years ago. He advises researchers with a hot paper on deck to contact the journal publishing their study for guidance. People can also hire the Alan Alda Center, COMPASS, or other individual trainers for one-on-one sessions before facing a media storm.

Some scientific societies, such as Newswise from the American Society for Cell Biology, also offer training at meetings as well as other support. **Erin Wirth**, for instance, fielded media inquiries about a study on earthquake hazards while she was a postdoc at the University of Washington. A press officer there directed Wirth, now at the U.S. Geological Survey in Seattle, to the website of the American Geophysical Union, where she found a worksheet similar to the COMPASS message box. Wirth’s initial media exposure has led her to an outreach opportunity speaking at a public forum in a nearby town.

The science of science communications

Communications training programs are increasingly leveraging research about best practices for scientists, says Besley, such as the value of being relatable and telling a story. And they are helping researchers use their time wisely.

To keep researchers focused, more programs are encouraging scientists to identify their communications goals and audience. After that, scientists can choose an activity they feel comfortable with, such as writing for an outlet like **cont.**>

Featured participants

Alan Alda Center for Communicating Science
www.aldacenter.org

American Geophysical Union
news.agu.org

Australian National Centre for the Public Awareness of Science, Australian National University
cpas.anu.edu.au

College of the Environment, University of Washington
environment.uw.edu

COMPASS
www.compasscomm.org

Department of Advertising and Public Relations, Michigan State University
comartsci.msu.edu/advertising-public-relations

EurekaAlert!
www.eurekaalert.org

Jane Lubchenco, Oregon State University
gordon.science.oregonstate.edu/lubchenco/jlcvbio

Lund University
www.lunduniversity.lu.se

Marcus Autism Center
marcus.org/about-us

Newswise
www.newswise.com/institutions/newsroom/979

School for Environment and Sustainability, University of Michigan
seas.umich.edu

School of Marine and Environmental Affairs, University of Washington
smea.uw.edu

Science Media Centre
www.sciencemediacentre.org

The Conversation (theconversation.com), which features experts in various fields, or doing their own podcast. Scientists are also increasingly using Twitter, particularly to reach peers about research that interests them. Says Besley, “People are becoming increasingly sophisticated about what they need to do to achieve their goals.”

Though everyone can improve, Hoffman says that broader communication and engagement is not everyone’s strength. And researchers need to think carefully about their role in any conversation—a sentiment echoed by Kelly, who notes that the scientific community does not view excess self-promotion favorably.

“There is something in between sitting ensconced in our ivory tower and totally jumping in and playing more of an advocate and activist—which is dangerous,” says Hoffman. “Somewhere in between is where we need to be, but I think that place is always changing.”

Building a network

The direct influence of COMPASS and similar programs is hard to trace, but their reach is international in scope. When **Maren Wellenreuther** was a postdoc at Lund University in Sweden in 2013, she relied on Baron’s book to help build a communications program for scientists. Wellenreuther knew very little starting out, but *Escape from the Ivory Tower* still serves as a guide for the week-long course, which draws Ph.D. students throughout Scandinavia and Northern Europe.

Wellenreuther now has a position in New Zealand, at Plant and Food Research in Nelson, where she is planning her next move in the communications realm. “The younger generation especially realizes that, while [training in science communications] takes time away from their course of study, it also gives back so much to you and makes you a better scientist.”

At Lund University, the communications course is cotaught by **Daniel Conley**, an aquatic scientist who is also indirectly part of Nancy Baron’s network. Inspired by the Leopold Fellowship, Conley began a similar program in 2011 focused on marine sciences, the Vega Fellows program. And the network that began there spread outwards—two Vega Fellows consulted during their train trip back from the program and started Baltic Eye, an organization that works with journalists on issues affecting the Baltic Sea.

Conley echoes the motivations of many scientists who undertake similar endeavors. “I want to make a difference,” he says.

Providing incentives

Both Conley and Wellenreuther feel that Lund University was supportive of their work in science communications. One factor contributing to this, says Conley, is that some Swedish funding agencies require researchers to engage with the wider community. Such requirements are helping to bolster similar endeavors worldwide.

In the United Kingdom, national requirements for impact and engagement encourage communications efforts at research institutions, says **Fiona Fox**, head of the Science Media Centre, founded in 2002 in part as a response to public misunderstanding about the safety of genetically modified organisms.

In the United States, grant proposals submitted to the U.S. National Science Foundation are evaluated for their broader impact on society, and some grants from the U.S. National Institutes of Health (NIH) also have an outreach component. **Chris Gunter**, for instance, is a principal investigator for the outreach component of a large NIH Autism Center of Excellence grant that funds the Marcus Autism Center in Atlanta, Georgia. As director of communications operations there, she is planning events at the Atlanta Science Festival, including a discussion of the portrayal of autism in the media. In addition, she coleads a three-hour media training workshop for the faculty at the center.

Offering rewards

While many scientists may wish to engage a broader audience, they may feel hamstrung by the reward system at their institution. Few institutions have formal systems to recognize or reward such endeavors through tenure or promotion decisions.

Fortunately, there are new efforts underway to change that. The Mayo Clinic, for instance, now includes social media involvement in its criteria for academic advancement. And the University of Michigan Ross School of Business, where Hoffman studies, now includes a category called “practice” in its annual review, which can include media engagement. At UW College of the Environment, the impact of engagement and communications activities is evaluated under “service,” a promotion category present at many universities.

Ryan Kelly will be assembling his tenure and promotion package this year. He will highlight his outreach activities with the media and policymakers, along with his role as an advisor to the Public Comment Project, a web portal that facilitates public comment on proposed federal regulations. He feels that these activities will be viewed positively.

And at UW, the dean is on board. “Part of being a member of the faculty at the college is to be an excellent scholar and then to strategically share that scholarship in a way that has impact,” says Graumlich. “This is not some kind of icing on the cake. We are changing the culture [of science].”

Charlotte Schubert is a freelance journalist based in Seattle.