

Talking science with journalists

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The media attention bestowed on scientists is like a hundred-year flood—rare but potentially overwhelming for the unprepared.

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Answering a reporter's questions may be exciting or it may be intimidating, but in any case, participating in media interviews is an important part of being a professional physicist. It is also a subject rarely covered in course work or professional training.

Rest assured, however, that you have within you the tools and knowledge to give a great interview. That's because you are already an expert in the subject the reporter is most likely to ask about: your own research or the work of colleagues in your field. With practice, you can learn to communicate your results in the way journalists want: clearly and with flair.

You can go home again

Reporters try hard to get the facts right, but they also put a great deal of effort into entertaining their readers with a good story. In science journalism that means distilling complex concepts into pithy, engaging prose. As they conduct their interviews, science journalists are constantly on the lookout for humorous, relatable, or attention-grabbing angles.

Your crucial job is to make sure the most important thing you want to say is also the most interesting. That means honing months or even years of research into a simple, engaging narrative. You might start with the importance of your work to solving societal problems or answering big-picture questions, then concisely tell your story—"we did X; we found Y; that means Z"—in language that a nonscientist would understand. Repeat that story later in the interview. Ask reporters if they got it.

We cannot emphasize enough how helpful brevity can be, especially to mainstream TV, newspaper, or radio reporters who often have extremely short deadlines and limited knowledge of your subject area. Their job is to describe what you did and explain its significance. Your job is to help them understand those things. Rise above the details, unlike the scientist patron depicted in the figure, and explain your work in simple and jargon-free language. At the same time, be careful not to dumb down your message so much that it loses all meaning. And be aware that although some journalists may need a lot of help to understand what you did, others will get it right away. Some will even want to hear the nitty-gritty details, so prepare yourself to discuss the complicated technical stuff. But don't offer that stuff unless asked!

In honing your message, think about the particular

needs of individual reporters. Television reporters want you to be articulate, look good on camera, and keep it brief. Radio reporters will care more about sound than appearance. The needs of print reporters can vary wildly depending on whether they are doing a short news item or a long feature. And Web reporters may care more about images or video clips than anything else.

We know journalists who have PhDs in the area they cover and others who don't have advanced degrees but do have decades of experience writing about their subject matter. Many will come to your interview highly prepared. General assignment reporters, on the other hand, simply don't have time for extensive preparation. We have seen local TV reporters show up for interviews with nothing more than a text message from their producer giving them the contact name for a university press officer. They arrive with the vague notion that you discovered something, and they want you to describe it in two minutes or less—after which they will pack up and head off to the next story: a nearby auto accident or cooing children welcoming a new furry face at the city zoo.

Knowing the backgrounds and needs of your interviewers will greatly help you to help them. But don't fret. You don't need to become a media authority overnight; you probably have easy access to people who already are.

Press on

Most universities and government laboratories employ experts who can advise you in your interactions with reporters. Get to know them. They can be your guides through the sometimes choppy waters of mainstream media. Public information officers (PIOs) often know large networks of science journalists, and they may have met the reporters who asked for an interview. They can vet interview requests, help you prioritize them, anticipate what sorts of questions a journalist might ask, and help you send images, videos, or a copy of your paper to the reporter. A good PIO can also assist in crafting your story, by providing tips about what will make your results most newsworthy in the eyes of a journalist.

Not all research lends itself to stunning visuals, but if you've got them, flaunt them. Images of lasers, galaxies, or the microscopic scales on a butterfly's wings could inspire an editor at a science desk to take a second look at your story. A slow-motion video of a violent explosion or a splashing water droplet can make the difference between whether your research appears everywhere or nowhere at all. As more and more news moves to the Web, the news outlets' interest in multimedia will likely grow.

Once your research gets some coverage, you can keep the momentum going by spreading the word on social media. Post links to news stories that report on your work, tweet out links to interviews that you've given, and share those cool photos and videos that you have put together. If you add personality to your messages, they will be more likely to be read. Astrophysicist Neil deGrasse Tyson, who spices his tweets

with humor and opinion, has garnered upwards of 3 million Twitter followers, more than half as many as Pope Francis.

Every week a few stories catch the attention of national and international reporters, and every so often one of those stories goes viral and gets picked up by reporters outside the science press corps. You cannot choose virality. But if you find yourself as the lead author on a hot paper that every reporter wants to write about—or you receive a Nobel Prize—you need to be ready for the feeding frenzy that will follow. Be prepared to set aside several hours a day for several days to answer media calls. Work with your PIO if need be to vet and respond to reporters. If they call you out of the blue, tell them you will call them back and then do so as promptly as possible after reviewing the narrative you will give them.

Brace yourself for the possibility that you will not like how the science writers depict you or your science. Unflattering portrayals and missing the real point of the science are among the top complaints we hear from researchers, and most senior scientists we know have felt burned at one time or another by a story in the mainstream press that discussed their work.

Science reporters may focus on elements you deem unimportant, even trivial. They may quote an outside expert who challenges your work—or an activist or politician who questions why we are spending money on your research in the first place. You have no control over where they take the story, and you probably won't have an opportunity to review what they produce before it goes public.

Know, however, that reporters want to get the facts straight; if you spot gross factual errors, you should bring them to the writer's attention. But don't suggest stylistic changes: The research may be yours, but the story is the journalist's.

Given your lack of control and the possibility of a less than flattering portrayal, why should you talk to the media in the first place? It's a question that many scientists have wrestled with.

Ignorance is not strength

When people make a case for talking to the media, they usually invoke a sense of duty or cultivated self-interest. Agencies like NSF and the National Institutes of Health specifically require researchers to do public outreach as part of the work they fund. It's taxpayer dollars after all, and the public has a right to know where its money is going. Studies have shown that media coverage and social media buzz can increase the number of citations for your article. And in our own experi-

ence, we regularly see that the articles for which we produce press releases become the most downloaded papers of the year for the journals we cover.

The two of us feel, however, that the best reason for doing media interviews is their potential value to humanity. We live in a time when the human race has accumulated more information than ever before. But if we are flush with information, we are also awash in misinformation, conspiracy theories, distortions, and outright lies. Ill-conceived policies may be made, money wasted, medical advice ignored, and lives lost because people make poor choices based on bogus information.

As a scientist, you can be a voice of clarity. You have a special type of knowledge, and you can help reporters sort through information and separate fact from fiction. If it's a duty, then it's a noble one.

The online version of this Quick Study includes a handful of specific tips for dealing with the media and a supplemental essay, "What makes a science story newsworthy?"

Additional resources

- Sense About Science, *Standing Up for Science: A Guide to the Media for Early Career Scientists*, Sense About Science (2006).
- R. Hayes, D. Grossman, *A Scientist's Guide to Talking with the Media: Practical Advice from the Union of Concerned Scientists*, Union of Concerned Scientists (2006).

Keep it brief. Many science reporters, like restaurant servers, need to do their jobs quickly. So avoid unnecessary detail and get to the key ideas promptly. Servers and journalists who want to know the technical details of how you arrived at your conclusions will ask. (Drawing by Carin Cain.)

