A MEDIA GUIDE
FOR SCIENTISTS

BEFORE
THE INTERVIEW

During the Interview

AFTER
THE INTERVIEW

SAS USA
SENSE *about* SCIENCE

Explaining your science

In order for journalists to distill complex scientific principles and methodologies into digestible stories for the public, they must find creative ways to explain science. This may mean focusing on fewer aspects of a scientific finding or trend, but it also means giving clarity to those aspects and ensuring that they are accurately explained in the limited time and space available for their story. During your interview, this may translate into being asked questions that seem too narrow or too basic—however starting simple and letting you, the scientist, explain your work and the field in your words is crucial in telling the story.

Just as important to this endeavor is finding relevant anecdotes, comparisons and metaphors to illustrate elusive topics in tangible ways. What was the "Aha!" moment in your work? How did you form this idea? Can you describe the process or concept using something mundane most people would be familiar with? These little tidbits of information can be great in giving depth and color to the bigger story.

As we've noted before, investing time in talking with journalists and the public is an important endeavor, and we would like to provide you with the resources you need to do so. In 2015, we surveyed 218 science journalists; the data and quotes in this guide represent the responses collected from these individuals. We hope that with this guide, the second in a series of three, you will be better prepared for an interview and better informed on why journalists work the way they do.

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Deputy Director, Sense About Science USA
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Science journalism as storytelling

By Mark Harris

One of my most popular stories only came about because a scientist lost his temper. Not with me (although that has happened) but with another scientist. The first guy flamed a second guy online, in the comments section of a story about hacking, crowd sourcing, and data analysis. I mean really tore into him, academically and personally.

It piqued my interest. I looked a little deeper, unraveled a few threads, talked to a few people, and ended up with an interesting investigation into a DARPA-sponsored crowd sourcing competition. Perhaps I would have stumbled across the story anyway, or maybe someone else would, but what caught my attention was the researcher's indignation and passion for his voice to be heard.

Scientists are taught to eschew emotion in their professional lives. You might be working on a treatment for cancer, a ground breaking study of climate change, or an energy source that could transform the lives of millions, but your published papers are expected to be cool, rational, even-handed, and alert to every possible ambiguity or error.

This does not translate well into the mass media. Human beings have been trained from infancy to enjoy stories that contain drama, conflict, highs and lows. Jerry never really tries to see Tom's side of things. Aladdin and the Grand Vizier do not combine their magical abilities to enact social justice.

Journalism flows from the same narrative tradition. A scientific development is news if it disrupts existing power structures, if it pits one theory against another, or if it provides a neat resolution to an outstanding problem.

The job of the science journalist, and by extension the scientists they rely upon, is to satisfy the readers' appetite for spectacle and struggle

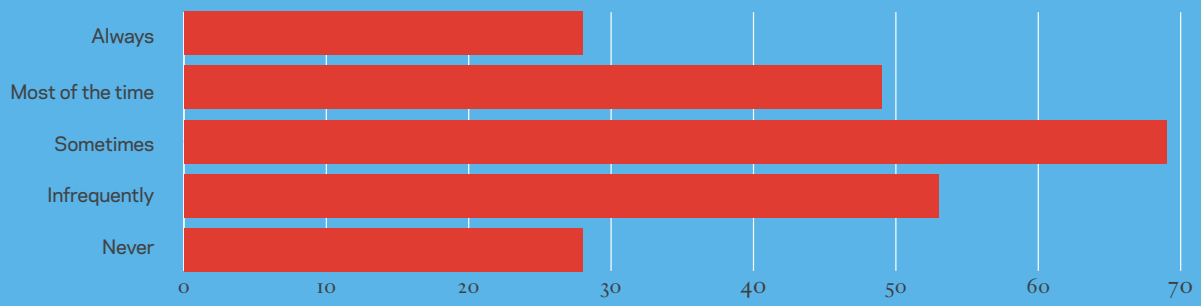
without compromising the accuracy of the science itself. So while we really are genuinely interested in the percentage efficiency increase of your solar cell or your novel transporter protein, what we really want to know is, what are your hopes and fears for this discovery? Who will benefit? Who will lose? Who will shower you with money to commercialize this technology, or launch a lobby group to ensure it never sees the light of day?

The best science stories are not always epic, revolutionary tales. They might simply be a record of perseverance in the face of skepticism or an unlikely collaboration between rivals. What we journalists are looking for is a way to humanize what can seem to lay readers a vast, impersonal machine grinding out dull facts, incomprehensible theories, and dubious innovations.

Tell us what enthused you to get into science in the first place, what big questions you are seeking answers to, and how your latest work fits into the magnificent jigsaw puzzle that is human knowledge. And if that fails to spark our interest, you can always try losing your temper.

MARK HARRIS is a freelance science and technology writer based in Seattle, WA. He has contributed to The Economist, IEEE Spectrum, The Guardian, and MIT Tech Review. He was a Knight Science Journalism Fellow. You can tweet him at @meharris.

Do you explain if scientists will be able to review the story (or parts of the story) before publication?



During the Interview
SENSE ABOUT SCIENCE USA

33%

of journalists always or most of the time explain at what point an interview is "on the record".

"Always assume everything you say is on the record. If you're talking to anyone other than a PR writer from your own institution, assume that you will not be able to review your quotes beforehand—especially for a short news article. If you are not comfortable with that, decline the interview."

On the record

Anytime you speak with a journalist, assume that you are "on the record", that is, anything you say can be quoted. If at anytime you want to give information anonymously, you need to say that your comments are "off the record" *before* you make the comment, *not after* you make the statement. Though journalists often ask before they tape or digitally record an interview, you can always inquire if they are doing so. Not agreeing to have an interview recorded does not mean you're off the record; journalists can still take notes and quote you.

67%

of journalists infrequently or never explain what being "on the record" means when interviewing scientists.

59%

of journalists responded that they always or almost always explain to scientists if there will be any more follow-ups to the interview.

Helpful tips for during your interview

- Prepare for your Interview (see our "Before the Interview" guide)
- Be engaged—turn off your email and phone, and find a quiet place to talk
- You're always on the record unless you say otherwise *before* you make a comment
- The questions may be simple as the journalist wants good analogies, quotes, and stories—don't patronize or be rude!
- Analogies don't need to be perfect, but effective in capturing the essence of research

Questions to ask a journalist before the interview starts

- If s/he is taping or digitally recording the conversation
- If you will be able to review your quotes, part, or all of the story before publication—many times you will only be able to review quotes or technical parts of the story (see our "After the Interview" guide), but determine this early on
- If there will be a follow-up call or email
- If they know when the story will be published or aired

"[S]ometimes we ask dumb or repetitive questions because we're trying to get good quotes and because we'd rather have them explain a complex topic than make it up ourselves. They can answer print journalists just like TV or radio journalists who ask questions like 'So tell me about XYZ results.' Statements like 'This is all in the article' and, less frequently, 'This is more nuanced than you can understand' are really unhelpful."

"[S]cience journalism is a stream of information over time, no single story can contain everything about a particular topic or research study. Over time however, consumers of journalism will come to understand a topic if they hear or read about it from different angles. The most important thing a scientist can do is put her or his work in context to larger concerns and questions of the moment."

Don't expect

That what you think is most interesting, is going to be the crux or focus of the journalist's story

That you will be quoted—be informative and helpful, but be comfortable with giving your time even if you are not quoted

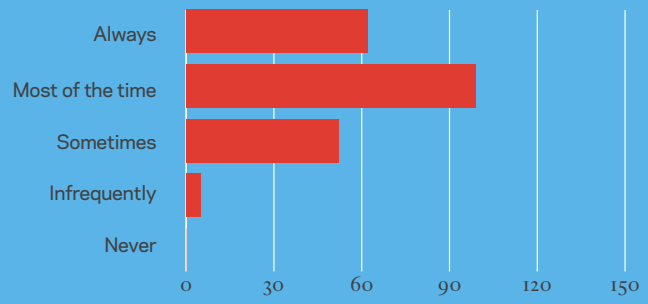
Bonus points

Can you recommend someone else for the journalist to speak to?

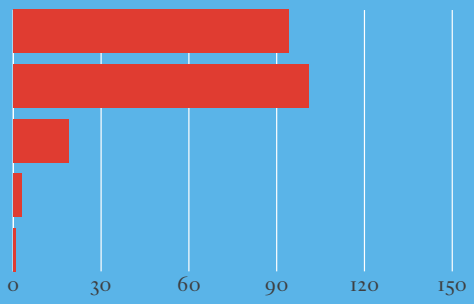
Do you have any images that would be of interest to a general audience and could accompany the interview/article?

"Just because I have a background in a particular branch of science (e.g. Ph.D.) does not mean I am OK with jargon during our interview. I've had this happen before, where a source looked up my background, saw my advanced degree, and proceeded to talk 'scientist-to-scientist.' I ended up having not a single usable quote (the publication was a national newspaper). He then got angry at me later for not using any of our conversation. Sources ultimately need to speak to the audience of the publication and not the journalist. We will tell them if they are being too simplistic, but most often, plain language is much preferred over trying too hard to sound smart."

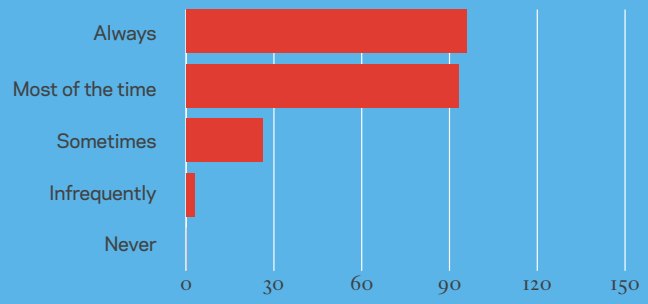
What types of questions come up most often during an interview?



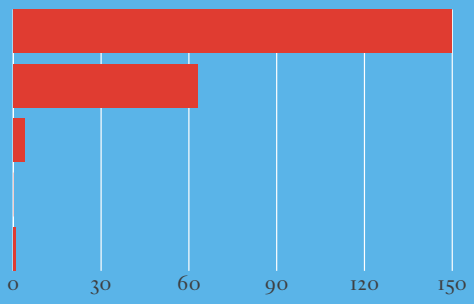
How was a study conceived or structured?



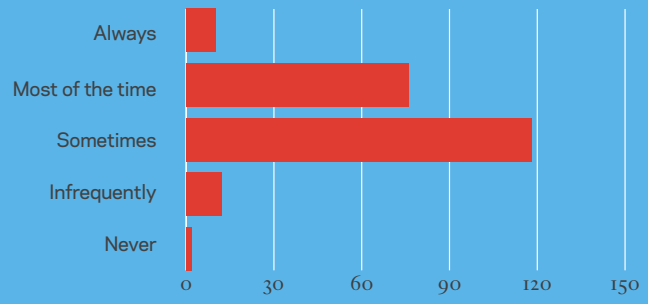
How were the conclusions reached?



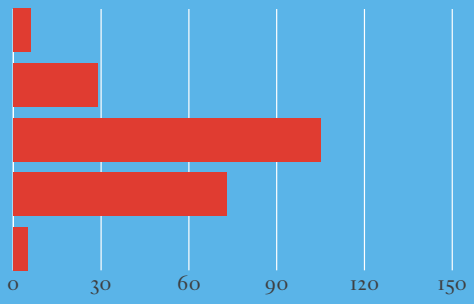
What unknowns remain or were not answered?



What do the findings mean in context of what is going on in the field?



Asked to comment on another scientist's findings?



Asked to comment on a policy or funding issue?

"[I]f a source wants to review quotes or has concerns or questions about the fact-checking process, it's so much better to ask those questions first—before the interview happens. That way we can discuss those procedures and expectations. And in the unlikely event that we can't clear things up, we can decide that ahead of time rather than spending time talking only to discover that we weren't on the same page. And if they want to be involved in the fact-checking process, scientists need to make themselves available for follow-up emails and phone calls."

49%

of journalists say they infrequently or never mention who else they will be interviewing for their story.

51%

of journalists note that they always or most of the time ask scientists to recommend others for them to speak to.

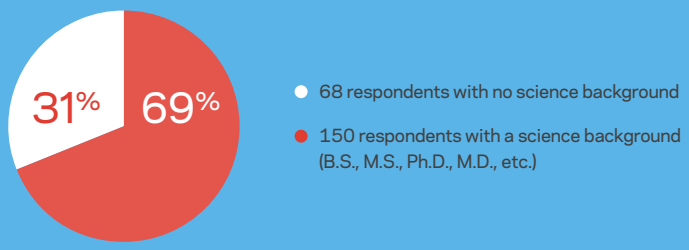
"Our job as journalists is to translate the scientist's enthusiasm for something that is obscure to most of the world. This enthusiasm usually drives the bulk of a scientist's life, taking time and energy away from countless other things he or she could be doing. Yet many times scientists answer questions about their work dispassionately. Charisma is viewed with suspicion, as data are supposed to speak for themselves. But the thing is: data do NOT speak for themselves to a popular audience."

How we put this guide together

In the summer of 2015, Sense About Science USA worked with its network of young scientists to see what questions and concerns they had about being interviewed. Similarly, we asked several science journalists what questions and concerns they most often hear from scientists. With these insights, we composed a short survey to better understand how science journalists work, what the conventions in their field are, and what concerns they have; in September 2015, we invited science journalists in the US (via various science writer organizations and societies) to participate in our online survey.

Of the 218 (mostly science) journalists who took our survey:

- 115 were freelance journalists, 103 were staff journalists
- 58% have undergraduate or graduate journalism degrees, or both
- With the exception of three general assignment journalists, all others are science, health, environment, and/or energy journalists
- Most worked at print or online media outlets



This guide is available online at: http://www.senseaboutscienceusa.org/guides-for-scientists/
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