Social Media for Scientists Part 1: It's Our Job - Science Sushi

By Christie Wilcox

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Scientists. We’re an enigmatic group of people. On the one hand, we are trailblazers. We’re the innovators and inventors whose job it is, quite literally, to expand the world’s technology through knowledge. We’re quick to see the merit in new methods like fluorescent proteins and hit the ground running with them.

Yet when it comes to social adaptation and technology, we’re more than behind the curve. Although 72% of internet-using Americans are on Facebook, less than 2/3 of college faculty are. Similarly, in one survey, more than half of lab managers said they have never used Facebook.

It may seem of little consequence whether scientists are using social media. That certainly seems to be the attitude of many scientists – social media platforms like Facebook are seen as little more than ways to tell everyone how good the omlette you just made was or convince yourself that your ex’s new girlfriend isn’t
But social media platforms aren’t just digital water coolers. They are the way the world is networking and communicating. They are how and where we share information – with friends, colleagues, acquaintances and any and everyone else.

Last Friday, I gave a talk titled “Science and the Public: Why Every Lab Should Tweet.” My slides can be downloaded here (keynote for now – will get ppt ones soon!), but I want to go over the argument I presented. I have broken this into two parts: this first post covers why, from a global perspective, it is important for scientists to engage in social media. My second post will cover what scientists can gain – personally and professionally – from doing so.

So who cares if scientists are slow to adopt social media? For one, I do. I care because especially here in the US, science is poorly understood. Only 28% of our population can pass a basic science literacy test with questions like “Does the Earth revolve around the sun?” or “Did modern humans live alongside dinosaurs?” Such results might be funny if science weren’t so central to current politics. How can our nation make good decisions on climate change, medical practices or research funding if so little of our population understands even basic science?

Yes, part of the solution to this problem is to invest in better education. But even assuming we do that, we are ignoring the millions of Americans who are no longer in school. We can make the next generation more scientifically literate, but we have to consider the current generations, too. Adults over age of 35 never learned about stem cells, nanotechnology or climate change in school, so they depend on the media to learn what they need to know. These are the people who vote. They are the ones whose
taxes pay for scientific funding. We need to reach out to them, and to do that we need their trust.

Contrary to how it might seem, scientists as a group are highly trusted by Americans. We rank second only to military personnel. But this trust is only in a broad sense – as a recent survey by Scientific American and Nature showed, the minute you start asking about specific topics, especially complicated scientific topics like the causes of autism or climate change, that trust fizzles.

How to we build and maintain that trust? We have to communicate better. As Rick E. Borchelt and colleagues wrote in an essay for AAAS, “The scientific community needs to understand what ethical practitioners of public relations have long known: trust is not about information; it’s about dialogue and transparency.”

Right now, science is almost entirely a one-way conversation. Scientists, as a group, pride themselves on doing cutting-edge research and publishing it in the top-tier journals of their field – then most feel that their part in the conversation is over. The problem is, these publications aren’t really communicating science to anyone but other scientists. Articles are kept locked behind expensive paywalls, and even those that are published in open access journals are still inaccessible, as they lie behind what I like to call jargon walls.

It’s not that non-scientists are too stupid to get science. Far from it. The average person simply doesn’t have the specific vocabulary to understand a scientific paper. I’m not stupid, yet when I take my car in to the mechanic, I don’t have the specific vocabulary to understand exactly what is making my check engine light keep turning on.
This jargon wall breeds distrust. Do I overall trust mechanics to know how to fix my car? Sure. But when one starts going on and on about how my timing belt needs adjustment, my fuel injectors need to be replaced, and there’s an oil leak in my engine that needs fixing, do I fully trust that he’s not just making up problems to get me to pay more for repairs? Not for a second.

Even worse, scientists pass the buck when it comes to communicating science. We write the papers, but then hand them off to journalists and say “here, explain this to everyone else.” We hand what we’ve committed years of our life to over to a writer that may have little to no science training and even less passion for the discipline as a whole. Then, we gripe and moan when the science is shottily explained or, worse, completely misinterpreted.

Guess what? As scientists, that is our fault. Sure, some science writers are worse than others. Some are perfectly content to publish hype-driven stories that neglect scientific integrity. Others are amazing – I would trust Ed Yong or Carl Zimmer with even my most precious scientific baby. But it is first and foremost the scientist’s job to share his or her research with the broader community. That means it is the scientist who is ultimately to blame when their research isn’t communicated well.

How can the public trust us when we’re not out there sharing what we do? When they can’t see our passion? When we say we ‘don’t have time’ to interact with them, to explain our research better or answer their questions?

Only 18% of Americans can name a living scientist. That statistic crushes my heart.

When I say scientists should be involved in social media, it is
because we need to open that dialogue. If people don't know who we are or what we do, they will never really care about or trust what we say. Once upon a time I would have said this meant walking down the street and talking to people, but we now live in a digital age. 57% of Americans say they talk to people more online than they do in real life. Scientists need to be on social media because everyone else is already, talking about their thoughts and feelings, having discussions about things they care about, and generally, well, being social.

48% of young Americans check Facebook first thing in the morning. 28% do so before they even get out of bed (including me). There are now more than 200 million tweets posted every day. If you’re trying to communicate but you’re not on social media, you’re like a tree falling in an empty forest – yes, you’re making noise, but no one is listening. It’s not much of a dialogue if you’re the only one talking.

Scientists need to be searchable. We need to be available. We need to take the time to open a dialogue about our research. Yes, it’s going to take up time, which is a rare and precious commodity to the average scientist. Yes, it’s going to take extra effort and dedication. But it will be worth it.

Alan Alda said it perfectly when he asked,

“if scientists could communicate more in their own voices—in a familiar tone, with a less specialized vocabulary—would a wide range of people understand them better? Would their work be better understood by the general public, policy-makers, funders, and, even in some cases, other scientists?”

The answer is YES.
Update: my slideshow for the talk (though it's much prettier in Keynote... just sayin')

I've gotten some questions regarding stats references in the slideshow, so here they are: The Facebook stats are put out every year by Facebook; this is a nice info graphic post which sums up their most recent set. The 28% statistic came from this Science Daily account of Jon Miller’s AAAS Symposium, and the number who can name a living scientists came from this Research!America poll. There were also some stats at the end from a couple surveys, summarized in this blog post. All of the stats on use of different media for news are from Pew Research Center (here’s a nice summary post). Social media image credit: ThumbsUp

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