Hi, Reddit! I am Alexa Billow, a writer for ACS Reactions. Ask me anything about science writing, writing about chemistry as a biologist, or finding your way in a career in scicomm.

AmerChemSocietyAMA [1] and r/Science AMAs[1]

[1]Affiliation not available

April 17, 2023

Abstract

ACS AMA Hi Reddit! I'm Alexa Billow. I'm a writer for ACS Reactions https://www.youtube.com/user/ACSReactions, a YouTube show about chemistry from the American Chemical Society and PBS Digital Studios. We make fun zany videos about everything from the chemistry of wine myths to how astronaut pee could help us get to Mars (https://www.youtube.com/watch?v=w6x54zYuqXk). I'm also a freelance science writer whose work has appeared on SciShow and the Science Magazine YouTube channel and podcast. I'm also working on a new podcast effort for ACS, so if you want to head on over to http://bit.ly/rxnselements and tell us what you'd like to hear, I'd totally love that. I have a master's degree in molecular biology that was meant to be a Ph.D. until I realized I can't stand doing research and would rather be writing. That doesn't mean that research isn't important–just that people who are more patient than me should be doing it. I moved to Washington for an internship at Science and then joined ACS, and I love getting to write about science every day. Ask me anything about science writing, podcasting, writing about chemistry as a biologist, or finding your way to a career in science communication. I'll be back at 1pm EDT (10am PDT, 5pm UTC) to start answering your questions. -ACS typeset edits EDIT: I have to run to a meeting! Thanks for all the great questions, everyone.

the WINNOWER

REDDIT

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AMERCHEMSOCIETYAMA R/SCIENCE

ACS AMA

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AmerChemSocietyAMA , r/Science , Hi, Reddit! I am Alexa Billow, a writer for ACS Reactions. Ask me anything about science writing, writing about chemistry as a biologist, or finding your way in a career in scicomm., *The Winnower*

Hi Alexa, thanks for taking the time to chat with us today! Breakthrough fatigue seems to be a major issue in terms of how the general public perceives the progress of science. On r/science we regularly see pieces where science writers have spun up a story on cancer, or hair follicle regrowth, or CRISPR to attract readers with sensationalist headlines. However, our parents and grandparents still die of cancer, no cure for baldness is developed, and super-babies aren't taking over the world. How much do you think science comms contributes to the general public's lack of trust in science and scientists? A lot of people put the blame on researchers themselves, when the truth is, few researchers directly engage with the general public, and most science communication passes through the intermediary of a writer. What do you think scientists can do to help? What do you think comms people should be doing differently?

Other resources

p1percub

This is a very difficult issue, especially when you work for a news org and your job is to cover the week's headlines. So you pull up EurekAlert, scroll through the embargoed releases, and pick what you

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think is most interesting and impactful. It's hard to avoid, because that's the news biz, right? And while there's nothing wrong with that approach, exactly, that doesn't mean it can't also be contributing to a larger problem, as you're hinting.

I think one thing that can help is reporters being really familiar with the science on their beats. Don't just pull a salient point from every paragraph of the press release and call that your article--put it in context as best you can. Remind the audience that it can take a decade or more from its initial discovery for a drug to come into the hands of patients. Note other findings in the field that seem contradictory--is red wine good for you or not?--and explain the nuance behind these findings.

Reading the primary literature can help with this, because scientists in the field are generally deeply familiar with this context and will talk about it in the discussion section of the paper. That nuance often won't make it into the press release. Knowing the methods the researchers used and how to interpret data can help as well, because if you're familiar with what a Western blot does, you know what it does and doesn't tell you.

I'm not saying all science journos should also be scientists, but I am suggesting that building your scientific literacy as a scicomm'er is extremely helpful.

Of course, I'm lucky, because Reactions usually isn't headline-driven and I can take the time I need to put whatever I'm writing in context.

Why is the pay so bad in science communication and publishing? I had an interview with one of the main publishers and they offered less than what I make as a Post-Doc.

Carnal-Pleasures

You know, I think I've been compensated pretty fairly in the various jobs I've had so far...maybe I've been lucky!

Do you feel there is more pressure to publish sensational articles of trending topics vs creating in depth articles?

false_anemone

Oh, definitely. Unfortunately, in my opinion, this is where science and science journalism can feed off each other in a negative way. Scientists need funding and are under pressure to publish the most novel, cutting-edge results. Writers need clicks and are under pressure to bring eyeballs to their websites, or channels in my case. So there are two levels where only relatively exciting research reaches the public eye--even though science is incremental, and negative data or boring findings still contribute to our body of knowledge.

Edit: ...I didn't quite address the whole question. Negative data or boring findings contribute to our body of knowledge and should be covered in in-depth reporting when they DO get published. We're motivated to chase headlines, but as I've said, context is what leads to real understanding.

Hello, Alexa. Thank you for taking your time to answer our questions.

I oftentimes find that it is difficult to engage everyone in my passion for science, new discoveries and the unknown. Granted, science isn't for everyone, but I wish I could better engage those skeptical of new discoveries into the marvelous side of science.

I oftentimes find most of that resistance comes from the fear of big apocalypses like nuclear technology, global warming and overpopulation. It is far easier to just play deaf.

Which resistances did you find on your journey towards delivering science to the people? How do you think we can better engage the general public into "hopeful" science while still explaining the dangers of the road ahead?

CoralineCastell

Quite a bit of ink has been spilled by smarter people than me about why people are so resistant to new information regarding GMOs or vaccines or climate change. The best I can do is to remember to not just talk about the whiz-bang cool stuff (what I sometimes glibly paraphrase as "space and dinosaurs," even though I genuinely love both of those things.) When talking about something scary, or controversial, I try to be compassionate and not condescending, to genuinely try and help people understand rather than shout them down for being wrong. But it ain't easy.

Thanks so much for doing this! I have a couple of questions:

How did you transition into scientific writing? What were some of the best things you did to prepare yourself for a writing career? What advice would you give to a current graduate student looking to pursue scientific writing?

pamperedpunk

My advice is: READ. Read widely. Follow scicomm folks on twitter and keep up with what's going on in the world of science news and writing. My other piece of advice is to write. I started out just keeping a science-themed tumblr (this was a couple years ago, when Science Side of Tumblr was more of a thing) until SciShow approached me to ask if I was interested in freelancing. Put yourself out there, write about things you think are interesting, and do it consistently.

As a grad student you have a lot of insight into a relatively narrow field that most people probably know nothing about. And it's good to share that expertise with folks. But it's also good to not limit yourself to that, which is how I, theoretically a molecular biologist, end up writing about chemistry and dinosaurs and women in science and whatever I find compelling.

Did you find it difficult to build a career in science writing?

mzz23

I think I had some lucky breaks. I did take some risks, like packing up everything I owned to move to D.C. for an internship, but it paid off and I have this awesome job at ACS now. But I also laid the groundwork very gradually beginning while I was still in grad school. I wouldn't say it was difficult, but I would say there was a sustained effort over the course of a few years to get where I am now!

How many memes is too many in a research paper?

Zebid

The number you can no longer slide under the radar past your PI so they send it back to you for rewrites.

Have you heard of, or read, Steven Pinker's "The Sense of Style"? It's about writing & has lots of advice for science writers specifically.

Phlox_carolina

No, but I'll add it to my Goodreads list!

How did you know that you wanted to transition into scicomm?

devilwearstoms

It was the fox/hedgehog situation, which I've seen attributed to way too many people to take a guess at who actually originated the metaphor. But it goes like this: Hedgehogs dig deep and uncover everything about one particular thing. Foxes range far and wide and touch on a little bit about everything.

PhD scientists these days are expected to be hedgehogs. In grad school I was expected to know, in detail and off the top of my head, the particulars of every experiment in every paper in a certain body of work in my field. I found that difficult and exhausting. I couldn't keep up in lab meetings when someone referenced figure 2 of Mary's paper or figure 5 of Joe's paper. I was still trying to remember who Mary and Joe were!

Meanwhile, I'd get on Twitter and Tumblr and find myself absolutely fascinated by some new finding about photosynthesis or the color of dinosaurs. It was way too interesting reading about that stuff to spend time memorizing the same five papers. I practically lost my mind when New Horizons flew by Pluto. We were getting the first ever pictures of Pluto! Beautiful, high-resolution photos of a whole new world! And no one else in my lab even blinked. I don't mean to insult my labmates. They're clever, hardworking people. We just seemed to be wired differently. Once I realized I could bring that excitement I felt to other people and talk about something new and cool every week by going into writing, well, why would I look back?

Hi there! Thanks for doing this AMA. I'm working on my MS and also slowly coming to terms with the fact that I don't think I can do research for the rest of my life and have the impact I want. (1) What would you say is your biggest gripe with sci com as an industry? (2) Is there anything that you wish more science writers would do? (3) And finally, do you have a favorite podcast? (science-y or non-science-y)

aweeby

1. I think if I have a gripe, it's that there are a lot of wonderful, talented scicommers out there who seem to spend a lot of time talking to each other on Twitter. I'm not calling out anyone specific, but sometimes it can feel like a bubble.
2. Contextualize, as I've touched on above. Zooming out and covering the wide context of a difficult issue is a huge research effort but it can feel awfully rewarding if you come up with a decent piece.
3. I like Star Talk and Science Friday. (I've always been an NPR kinda gal.) But my absolute favorite podcast right now has to be The Adventure Zone.

Thank you for the AMA!

I have actually watched some of these videos and appreciate the overall accurateness of them (I'm a

senior biochem major). I have seemed to notice that many science videos on YouTube tend to "dumb down" the idea so it is easier to explain, but they make generalizations and lose accuracy in what they're saying.

Have you noticed the same thing, and how do you try to prevent that?

brownaj010

At Reactions, we always, always have a scientist who's an expert in the field we're covering fact check our scripts. And then we ask them to fact check a draft of the video in case any factual errors snuck in during production. When we have to state something very briefly (which is often!) we spend a lot of time going back and forth and getting it right.

The attitude I take is that the people I'm talking to aren't dumb, so they don't need "dumbing down." They might need simplifying because they don't have a lot of background in a subject, but that's not the same thing. So, as much as possible, I try to be simple and concise without being condescending. Easy? No, but it's a skill one practices...