

3_Stats Literacy CUT1

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SPEAKERS

Aparna Nathan, Nick Thieme, Regina Nuzzo

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Regina Nuzzo 00:19

I'm Regina Nuzzo, senior advisor for stats communication and media innovation for ASA. And I'm thrilled that ASA is working to bring stats to the general public, making sure that statistics is interpreted well and reaches a wider audience in ways that are relevant and interesting to a broad range of people. And one of the ways that we do this that I find most exciting is by, every year, sponsoring a AAAS Mass Media Fellow. And this is a program where a graduate student in statistics or related field actually spend an entire summer writing for a media outlet embedded with the organization like NPR, Slate, or magazines, or local or national newspapers. And this is a really terrific program. It puts people trained in statistics out there communicating directly to the public, where they can show people how relevant and important statistics are for their everyday lives. And it's one of the many programs at ASA where member donations can directly help support and make it possible. So not long ago, I sat down together with two recent fellows to learn more about their experiences and how that summer really changed their perspective on things and even their career paths.

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Aparna Nathan 01:42

I'm Aparna. I am currently a fifth year PhD student in bioinformatics and genomics program at Harvard doing research on immunology and the way that our immune system is shaped by genetics.

N

Nick Thieme 01:55

I'm Nick Thieme. I'm a data journalist at the Atlanta Journal Constitution, where I do stories related to civil rights and social justice, all from a data perspective.

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Regina Nuzzo 02:10

Aparna Nick, tell me, then, about your fellowship experience the AAAS Mass Media Fellowship, what did you do on a day-to-day basis? Nick, let's start with you. Because you were the oldest, what did you do? Where were you?

N

Nick Thieme 02:29

Yeah. So, I was with Slate Magazine. Day-to-day work was, you know, calling other statisticians, calling scientists. Every morning, I would send over a list of maybe eight or so stories to my editor. And she would flag a couple of them that she found interesting, and I would, you know, pursue them and go about the process of turning them into stories. Which, you know, is I think, maybe more similar to the process of statistics and science than a lot of people are likely to give it credit for being. Right, it's you sort of pull this idea from the ether unformed. And you spend the next however long solidifying it and crystallizing it, finding the kernel of an idea, right, which, you know, maybe is your lead in the story or is a thesis in a science article. But, you're right, once you pull that out, once you have sort of the kernel of what your article will be, you spend the next X amount of time researching it. Yeah, you know, backing up or refuting your own points with evidence, which turns into conversations with scientists or other, you know, articles you've read online in both settings, I think. But then the process of spending a huge part of my day writing was a load of fun.

R

Regina Nuzzo 03:54

The scientific process. Aparna, I saw you nodding your head, you agree. Tell us a little bit. You just finished your fellowship this week, last week. So tell us a little bit about that.

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Aparna Nathan 04:06

Yeah, my last official day was yesterday, but I just did it this summer, which meant it was a little bit of an unconventional format, because newsrooms are still largely remote. And so much of the work doesn't necessarily need to maybe needs to happen in the field, but doesn't need to be happening in a room full of desks. So, I was a fellow at the Philadelphia Inquirer, which is a little different in that it does have a very local focus. I was part of the science and health team, which the Inquirer actually has a pretty fleshed out science and health team. It's about 10 reporters, who I sort of joined them at the tail end of them coming through a year of reporting basically solely on COVID. So it was kind of the first half of my summer, I feel like was a time of like, "Oh, I can really start to learn what matters to the people of Philadelphia and like why science and why health are actually really important underpinnings of like these things that they noticed in their daily lives." Then the second half of the summer, more COVID stuff started coming back ... Delta variant, vaccination stagnancy, and so my second half actually ended up being a little bit more back to I think, the COVID-oriented type of science writing. But I think what's really interesting, like what Nick said about how crafting a story is a lot like crafting, like, you know, a scientific experiment or crafting some kind of like statistical argument. It's so much about like collecting evidence and kind of contextualizing evidence. And I think that, in so many ways, statistics gives us a really good framework for doing this. In some ways, it gives us a framework to kind of do it in a uniform way. And I liked, kind of bringing that mindset into writing. And sometimes I also have to be reminded that, in writing, there's a little bit more flexibility and there's like, evidence can take a lot of different forms and, you know, different voices and a story, different ways of, you know, maybe place is your evidence, maybe actual person story is your evidence, but I think it was, it was a good exercise for me to think about how evidence, yeah, even in science and in statistics, can probably look really different, too.

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Regina Nuzzo 06:13

So did you have, Aparna, did you have like a favorite story that you worked on? Or a big story or something you're proud [of], where you'd like to share?

A

Aparna Nathan 06:23

REPORTING RESEARCH SERIES

Yeah, definitely. So, much like Nick, a lot of my time was spent looking for stories. And I think something that at the beginning of my summer, when I still didn't really know Philadelphia that well and didn't really know what mattered to people in Philadelphia that well, I was like, "What do I know? I know numbers. If you can give me some numbers, maybe I can find something there that'll be like a seed of a story." So actually, I started going through some CDC mortality data, which is like a little bit bleak, but it's actually a data set that I've used in research before. And so going through that, going through trends in Pennsylvania, comparing them to national trends, trends in neighboring states, we actually noticed some interesting trends in deaths related to falls among seniors and how those rates in Pennsylvania have always been higher than in a lot of other states, have been increasing. The data actually ended right before COVID, so we couldn't necessarily look at how COVID ... like the numbers can tell us how COVID has changed these trends. But I guess that's like where journalism can take you a step further. So then, I spent my first few weeks talking to doctors, talking to nurses, talking to, you know, it was fun, like cold calling, like, I really like calling people on the phone, so I actually really enjoyed cold calling some of like the aging offices in different towns in Pennsylvania. And like the people there are super excited to talk about the kinds of work and the ways that they're connecting with their senior community, especially because seniors have been so isolated during COVID. And eventually being able to talk to some actual seniors who are a part of some of these programs, who know people who've had falls recently, who know people whose lives have really been changed by, you know, like losing strength and losing balance with age. So, I think for me, that was just a fun story, because it started with something I was super familiar with. And then I learned so much from it. And it was kind of also a whirlwind tour of Pennsylvania and Philadelphia, for me.

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Regina Nuzzo 08:18

So that turned into a story, then? When you ended up analyzing some of the data and that helped to shape the story. Right? So, Nick, did you have like a favorite story ... how did they respond to you as a statistician in the newsroom? Did they give you stat stories to do, or were you just taking whatever?

N

Nick Thieme 08:46

Yeah, so I was also on the science desk on the science team there and I wrote--I would say the majority of my stories were non-statistics stories. I wrote a lot, you know, stories on cultured meats, or, you know, a mink farm that had 40,000 mink escape, you know, these kinds of stories, but I did get to write a couple of statistics stories throughout. And you know, it's funny when you said, "What were some of your favorite stories?" Those were the ones that jumped to mind, for sure. I mean, I wrote one about general adversarial networks, which was a good time. And, you know, I got to talk about, you know, like, everyone wants to talk about machine learning and deep learning and all those that it was fun to get to do that. And maybe it's hopefully a more, you know, like, rigorous way, I guess, using maybe more apt metaphors and helping people understand some of the concepts more clearly. Yeah.

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Regina Nuzzo 09:42

Do people in the newsroom respond well to you coming in with your stats background, like how did they ... how did they treat you? How did they think about it?

N

Nick Thieme 09:51

Yeah, that's funny. I think at Slate ... people responded - they responded well. Some of the people I've had who have helped my stats stories the most have had no statistics treatment, training themselves, because I think what we do a lot of the time with statistics is, you know, we talked about this a couple of weeks ago, but sort of translating real

lot of the time with statistics is, you know, we talked about this a couple of weeks ago, but sort of translating real-world situation sentences into math problems and math problems back into sentences. And I think at either end of that, at the translation stage, people without training can be incredibly, incredibly helpful because they're like, "Well, the thing you're translating doesn't quite make sense to me. Explain that a little more." And people in newsrooms without training have helped me a ton on those stages of the process for sure.

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Regina Nuzzo 10:40

It's good to have both, right? You got the stats and then you have the smart people who know how to question and bring that together. And that's a good relationship. I like that. Aparna, how about you? I know you were virtual. But still, how did the other people at the Inquirer treat you and your quantitative chops?

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Aparna Nathan 11:02

Yeah, I think another thing that was really lucky is the science and health team has a very strong community. And so we actually had morning meetings every day, where we would all sort of come and share what we were working on, share ways that people could contribute to each other's projects, whether through sources or, in some cases, you know, like helping with some data analysis or just like interpreting something. I felt like people were really excited to kind of bring things to me and ask, "Hey, what do you think about this?", "Hey, this study doesn't seem robust. Like does this seem like the right control group for this?" And so I actually felt, in some ways, I was like, "Oh, wow, like, I'm still, like, working all of my normal, like science, like evaluation and rigor and critique skills that I'm using in grad school, too."

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Regina Nuzzo 11:49

Nick, quickly, like, what are you doing now? So where did that fellowship take you? It took you good places, right?

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Nick Thieme 11:58

Yeah, yeah, no, I mean, it really was the the launching pad for a career that I couldn't have had otherwise. That's undeniably true. So, I'm currently a data journalist at the Atlanta Journal Constitution, which is, you know, sort of the regional newspaper for the southeast in a lot of ways. And it's certainly the, you know, the, the main Georgia newspaper. And so, yeah, you know, it's pretty easy to trace a clear line between the fellowship I did at Slate and my job now. I think while the AAAS fellowship was intended originally to have people go back into academia with those skills, it's doing exactly that, just in a different forum.

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Regina Nuzzo 12:46

That is a very good way of putting it. I like that. And to me, it seems like a dream kind of job to be able to combine these things and go in every day and get all that excitement. So Aparna, I know you just finished and you still have a PhD to continue. I'm assuming you're going back there. But do you have any thoughts about possibilities of what you're taking from the summer and what you might do in the future?

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Aparna Nathan 13:15

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I think the summer has kind of taught me how my graduate training actually could be really helpful in a journalism career or in any kind of sort of question-asking, information-synthesizing career and that academia is not the only place you can find careers like that. So, I have probably like a year and a bit left of grad school, but I very much now feel like journalism could be a more feasible and very fulfilling option to look into.

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Regina Nuzzo 13:44

So, really quick, before I let you go, as you know, ASA is investing in all kinds of programs like this, educational programs to bring statistics into journalism. So quickly, what would you say to people on why that's so important? Why that's so valuable?

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Nick Thieme 14:07

There's a certain level of rigor and understanding of what to use when, how you can do things have limitations, I think, especially on, you know, the kind of work that we do that only happens when you have, you know, formal training in this kind of thing. And I think that what the ASA does by, you know, incorporating people who have that formal training and also giving that formal training to people in journalism ... it's vital. Especially now, like we're saying, where people do more and more rigorous data journalism in a newspaper setting, having people who have those skills and can give those limitations internally is increasingly important. Yeah. And anyone who works to that effect is doing great work.

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Regina Nuzzo 14:57

Okay. Aparna, anything to add? I felt like ...

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Aparna Nathan 15:01

Yeah, I thought that. Yeah, that's like the key thing and I think, from my experience in a newsroom, the summer especially being in a local newsroom, like so many of the stories that really matter to local communities. I think it's important to have people who can find those stories in like all of the data that exists at the local level that maybe, you know, a national outlet doesn't have as much vested interest in digging into but, you know, they need the resources to be able to look at that data with like a critical eye and ask the right questions based on it. And I think that having opportunities where reporters--even if they're not data reporters, I feel like all reporters encounter some question with like, "Ah, if only someone had counted this thing." And someone probably has counted that thing, and making them feel not intimidated to go and look for that number is, I think, a great thing that can get out of interfacing with a place like the ASA.