As a business and lifestyle reporter, Arizona-based freelance journalist Alaina Levine never expected a newspaper ad about spiders to play a key role in her journalism career. But in 2012, it landed her a story with *Scientific American*.

Levine had been a columnist and freelancer for *Inside Tucson Business* for years, writing about business and public relations, as well as food and nightlife. As part of that job, she made a point of reading local newspapers to stay informed about events in the area, brainstorm ideas, and think of potential new sources. In July 2012, she spotted “a speck of an announcement” about the American Tarantula Society conference, which was to be held in Tucson that year. Although the topic had little connection to her usual beats, it sparked her curiosity and she decided to attend.
At the conference, she heard a graduate student giving a talk about her research in forensic entomology, the burgeoning field studying the succession of insects that feast on corpses at crime scenes. It was something Levine had never heard of before, but she found the presentation fascinating and asked the student to get coffee. That simple coffee date resulted in a successful pitch to *Scientific American* about how the student’s research was upending the field of crime scene investigation. Levine says that science story—and other opportunities in science journalism that followed—stemmed directly from her focus on keeping up with the local business beat.

It’s a pattern that Levine says has repeated many times throughout her career. Writing about business taught her how to break through the army of public relations specialists surrounding prominent executives like Elon Musk to get access for in-depth profiles—a skill she now uses in covering technology. And writing columns that were meant to give people advice in a brief space helped her focus on a few key takeaways—a skill she now puts to use distilling complex research or the most significant impacts of a new scientific discovery.

“Because of that exposure, I feel I’m a stronger science writer,” Levine says.

And she’s not alone. Many science reporters get their start in other beats, including crime, business, fashion, or politics. And many of them agree that the skills they developed in those beats have made them better equipped—and sometimes uniquely positioned—to report on science.

That’s what Abigail Foerstner believes. She’s co-director of the health, environment, and science graduate specialization at Northwestern University’s Medill School of Journalism. She’s been teaching science journalism for more than a decade, often to graduate students who have experience in many different beats.

Science stories touch every aspect of life, Foerstner says. Understanding the political arena can help reporters cover climate change policy. Understanding the business of research funding or the roadblocks to product development can help reporters cover new scientific advances with nuance and healthy skepticism.

“Anything you do could help inform science writing,” Foerstner says.
Meredith Rutland Bauer

*Previous Beat: General Assignment*

*Current Position: Freelance science and technology writer*

When covering the devastation of Hurricane Harvey in Texas in August 2017, Meredith Rutland Bauer found the son of a woman with type 2 diabetes whose house had flooded. The woman couldn’t get out and the son was desperate to find her help. Bauer knew her story depended on extracting details from the son about the condition of the house and how much medication his mother had remaining. But she also knew that information could only come from a probing and personal conversation, which would be difficult in a time of crisis. The way she convinced him to open up to her, she says, came down to skills she’d picked up as a general assignment reporter.

Before going into science writing, Bauer worked at *The Florida Times-Union* in Jacksonville, covering everything from school board meetings to the shooting of an unarmed black teen.
She also worked on the traditional training ground for young reporters: obituaries and memorials.

Working on obituaries in particular “gave me a really good sense of how to approach topics that are sensitive and how to approach people when they’re under stress,” Bauer says. “That’s something that’s applicable to covering a crime at 3:00 a.m. or a story on ecosystem damage.”

She learned to be honest with sources and not give false hope about what her article could do for them, but still explain why she felt their story was important to tell. She applied that same tactic to speak with the diabetic woman’s son during the flooding in Houston. She didn’t promise her article could help his mother get more insulin, but she did explain that the story would help people outside of Texas understand how dire the circumstances were for people stranded during Harvey.

As a science journalist, that tact has become invaluable for her. “Being able to cover natural disasters in an empathetic way to get this story out there is really important,” she says, “especially as climate change creates a whole host of disasters.”

**What advice do you have for someone in general assignment who wants to do science journalism?**

Meredith Rutland Bauer: Focus on strong, powerful stories in general, and show that you can over-deliver on your articles. If you have to take an extra assignment that you do on a weekend or stay at work late to find a way to plug a scientific study into your beat, then do it. It’s okay if it’s difficult at first. But know that it’s very possible to make the transition to science.
One reason Christina Couch loves covering technology is because it’s an optimistic field. Unlike a lot of news that often focuses on what’s going wrong, tech reporters get to chronicle advances that can improve people’s lives. But sometimes that type of reporting goes too far into hype, she says.

“A lot of tech reporting is very breathless,” Couch says, describing the prevalence of articles proclaiming tech fixes to global poverty or world hunger. “But understanding the very concrete reasons why [much-hyped technologies] often never pan out is important to me.”

According to Couch, her focus on those concrete reasons stems from her time as a business reporter. She spent more than seven years writing about student loans, personal finance, and small business before switching to science.
That experience, especially covering venture capital funding, taught her to develop a healthy level of skepticism, she says. Now, as a science reporter, she doesn’t just write about every new tech startup’s plan to “disrupt” the way we live. Instead, she researches the company’s venture capital funding, the founder’s past projects, and where the product falls in the development pipeline. She knows to ask about a company’s runway (how long it can survive if income and expenses stay constant) and burn rate (the rate at which a new company is spending its venture capital before generating positive cash flow) to determine how much confidence investors have in the startup.

“I’m not 100 percent sure I would be focused on those types of issues if I didn’t come from a business background,” she says.

What advice do you have for someone in business reporting who wants to do science journalism?

Christina Couch: I would get very familiar with how products are developed, whether they are tech related or not. Really familiarize yourself with venture capital funding and why businesses fail. Also, learning to write a basic human profile is tremendously useful. A lot of times when we talk about science writing, we just talk about the science portion, but science writing comes with other parts like human interest and features too. Profiling a company is a great way to build those skills.
Donald G. McNeil, Jr.

Previous Beat: Foreign Correspondent


No matter where in the world he’s reporting, there’s one question Donald G. McNeil, Jr. always likes to ask his interviewees: What do you think made you sick?

It seems straightforward, but McNeil, a global health reporter for *The New York Times*, says he’s gotten some surprising answers over the years. People sometimes tell him their neighbor cursed them, or that their ancestors are unhappy.

It’s a question McNeil says he learned to ask from his past life as a foreign correspondent. Traveling through more than 50 countries reporting on topics as varied as the pope’s visit to South Africa or a coup in Burundi, McNeil learned about different cultures, thought patterns, and belief systems. It taught him that not everyone processes life events in the same way Americans do, whether those events are wars, elections, or illnesses.

“You learn to ask questions you wouldn’t ask otherwise,” he says. If you’re visiting a new country for the first time, “it might not occur to you to ask someone, ‘How do you think you got this illness?’ ”

Science writers often assume people act rationally, McNeil says. They spend significant amounts of time interacting with researchers and academics, so it can be easy to default to a scientific explanation for everything. But that’s not always the full story. “You can’t act as if everybody is a patient in America,” he says. “You can’t assume. You have to ask a lot of questions and get that into the story.”

On a trip to South Africa to report on AIDS, for example, McNeil asked doctors whether their patients preferred traditional remedies. It turned out one of the doctors actually kept in touch with a network of traditional healers. He knew his patients—even the college-educated ones—would often follow up a visit with him by seeing a healer. The doctor tried to
coordinate with the healers’ remedies, so any herbs or other substances they suggested
wouldn’t react negatively with medications he was prescribing.

McNeil says he never would have gotten that story had he not consciously thought to ask
that extra question. That’s his takeaway from years in the field: “Ask enough questions so
that you really understand people, not just the science.”

What advice do you have for someone who’s a foreign
correspondent and wants to do science journalism?

Donald G. McNeil, Jr.: No matter where you are, a lot of reporting is just remembering never
to leave out the human element. Learn how to get people talking by asking what they had
for breakfast or what type of work their parents did. Those are useful skills that’ll help you
really understand them.
One of the most memorable cases Rebecca Boyle covered as a crime reporter at the *Greeley Tribune* in Colorado was a double homicide where the prosecution was seeking capital punishment.

At first, however, there was a mistrial, which led to an extensive process to start a second trial. It involved a number of motions, pretrial hearings, and evidentiary proceedings. While some would consider that complicated legal process dull, it fascinated Boyle.

“To me, it was really important to go through that,” she says. “What did it mean for someone to go through a murder trial? I wanted to understand the process.”

That perspective has served her well as a science reporter. She often sees research papers, which present the final results of a study, but Boyle likes to ask how the researchers arrived at those results. And she makes sure to include those details in her articles.
“I think many journalists don’t write about it, but you need that background to grasp what that research means to someone’s career and why it’s a big deal,” Boyle says.

Writing about crime also helped Boyle learn about scientific procedures. She used the forensic evidence brought into court as a vehicle to learn about techniques like DNA testing, fingerprint analysis, and ballistics.

“I remember being like, ‘Can you really tell which bullet came from which gun based on these stripes?’ ” she recalls. “So I started learning more about that.”

It taught her not only about the science behind the crimes, but also how to write about methodologies in a way that’s accessible for most readers. That often involves using examples and recognizing which details are extraneous, she says.

What advice do you have for someone in crime reporting who wants to do science journalism?

Rebecca Boyle: Incorporate science writing into your everyday beat writing. Science is not separate from other topics. It’s basically the process of figuring out how and why things work. Really, so is being a journalist. You can figure out how a person gets incarcerated for his entire life, or figure out the process behind a new paper on epigenetics. You can write about science in the context of anything. You just have to think about it creatively.
Most people probably don’t think fashion relates to science. But Ashley Berg found a story to prove them wrong.

Berg is a science writer for Rosemont Media, where she creates web content about elective medical procedures. But she comes from a background in fashion and beauty journalism. It’s that training that helped her spot the unique story she’s currently working on: about the pattern makers who work at NASA.

In fashion, a pattern maker draws a map of how to piece together a garment. At NASA, these employees create the fabric shields that cover satellites and protect them from burning up upon returning to Earth’s atmosphere.
Berg says when she discovered that NASA employed pattern makers, “It was like a lightbulb went off.” She realized few other people would think to write a story around this, but given her background in fashion, she could flesh out a story and ask questions that the average science writer might not think of, like discussing seam allowances (extra material that is left where the edges will go together and be sealed) and lining (material that is often used as an additional layer and, in the case of satellites, could be protective).

Berg’s fashion reporting background has also shaped her writing style.

“Fashion is very much about glitz, glamour, and narrative,” she says. “No one wants to read a blog about fabric types. They want stories built around the fashion.”

The same is true for medical writing, Berg says. While some of her colleagues write in a more straightforward manner, emphasizing the dry facts, Berg prefers a more literary approach. “I like to create a little bit more of a story,” she says. “I want to have more depth than simply providing the facts.” It pushes her to find human narratives to illustrate the medical procedures she’s explaining.

What advice do you have for someone in fashion reporting who wants to do science journalism?

Ashley Berg: Research is the most important skill to develop. Read other science writers. Learn from their work. Learn how they turn a nice phrase or identify an intriguing topic. If you can do that, then you can swiftly realize how to apply that to a new beat. Also, pick the brains of someone in medical or science writing. Try a science story in your free time and ask for their opinion on it.
One thing that politics and science have in common, says Seth Mnookin, is that no one can agree. That means reporters are often left trying to figure out what the truth is or which view has the most evidence on its side.

Today, Mnookin is a science reporter and book author, but during the 2000 presidential campaign he was covering media and, in particular, the arena of political reporting for the now-defunct magazine Brill's Content. The experience taught him how to decipher what information was worth reporting when there’s disagreement.

“A crucial thing then was finding people who I could trust,” he says. “People who I could call even if they weren’t directly related to the story and say, ‘I’m hearing this. Does that sound crazy to you?’ ”

It’s a tactic he uses all the time in science writing now, calling researchers in a field to ask about a study or gauge whether a new treatment lives up to the hype.
He’s also learned never to assume anything. On the campaign trail, Mnookin was a rookie political reporter surrounded by journalists who’d been covering politics for years.

“They’d talk about campaign managers from five campaigns ago,” he recalls. “I felt like I had no idea what was going on.”

At first, he was self-conscious about his inexperience, but he eventually realized he could use it to his advantage. “I didn’t know enough to know the questions I was supposed to feel too dumb to ask,” he says. “And in asking those questions, I often got the most revealing answers.”

It’s something that’s become a mantra for him ever since. At MIT, he teaches his students not to be intimidated by scientists, but to ask the questions their readers may have. Sometimes Mnookin will even ask a question he knows the answer to, simply because the way scientists respond can reveal something about how they think or shed new light on the topic.

“I’ve found it’s really easy to feel dumb when talking to a scientist,” he says. “But for me, it’s been really important to embrace that.”

What advice do you have for someone reporting on politics or media who wants to do science journalism?

Seth Mnookin: The most important thing you can do is look for a good editor. I’m someone who believes a good editor can cure all ills. So if you don’t have a science background, but you know of a science editor that really knows their stuff, try to work with them. That way, when you’re getting your feet wet, you have someone there to make sure you don’t fall on your face. Because when you start off, it can be hard to know what those potential screw-up situations are.