THE TRANSMITTER

PERSPECTIVES / **CRAFT AND CAREERS**

In your New Year's resolutions for 2025, consider public outreach

If every person in the neuroscience community committed to doing one thing, imagine the cumulative difference it would make.

BY **NICOLE RUST**
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Listen up: In dark times, public-facing communication can help reconnect you with your enthusiasm.
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With the election of Donald Trump as the next U.S. president, it's not political but factual to note that many scientists are being asked to justify their work in an unprecedented way. As one NPR headline reads, "With Trump coming into power, the NIH is in the crosshairs." Eliminating wasteful government spending is a laudable goal, but the evaluation of what constitutes waste is delicate and fraught. Trump's newly formed Department of Government Efficiency (DOGE) is pointing to specific targets, including a grant titled "Role of the estrous cycle and nucleus accumbens signaling on incubation of oxycodone craving in female rats." It is beholden upon us as scientists to explain to the public, whose grant dollars support the National Institutes of Health and the National Science Foundation, why grants like that matter.

For this and many other reasons, 2025 is a terrific year for neuroscientists to get more involved in public outreach. If we all committed to making one more public-facing contribution to promote science in 2025 than we did in 2024, imagine the cumulative and tremendous difference it would make! Here I'll make a (perhaps unexpected) case for why you should get involved, and I'll offer up a number of concrete suggestions about how you can contribute in ways that won't feel like a burden—such as by attending a festival or chatting with another scientist in a bar. In fact, the effort may even benefit you and your science.

I know what you are thinking: Outreach from scientists to the public needs to happen—but why should you be the one to do it? You undoubtedly have plenty of obligations, and you may feel that you can't handle one more piled on your plate—particularly one that counts little for hiring and promotion. And despite good intentions, you may fear that you'll do more harm than good. The political arm of all of this (i.e., DOGE) is a minefield, after all, and it may feel better to keep your head down and do the thing you know how to do best: science.

My first message is that I get it—I'll admit to thinking this way for years. With experience, though, my perspective has changed; public outreach need not be a burden but a joyful experience that can benefit your science by leading you to new perspectives and insights.

That public outreach can be scientifically insightful was a surprise to me at first. I first dipped a toe in the science-communication waters to write a blog post for *Scientific American* on memory—my field of expertise—but not directly about my own work. In researching and writing the piece, I not only read papers but connected dots between them in ways that I would not have otherwise. I found myself bringing up these connections in conversations with the graduate students I was working with, who transformed them into new hypotheses for existing projects.

This experience has since been reaffirmed many times, inspiring me to write a public-facing book that ultimately redirected my entire research program. Others note similar experiences. "I have found that engaging with a broader audience can help you clarify your own idea," says Joseph Kable, professor of psychology at the University of Pennsylvania. "For example, when Maggie Jackson was

professor of psychology at the University of Pennsylvania. "For example, when Maggie Jackson was writing her book 'Uncertain,' I spent more than an hour talking to her about a line of work in my lab and came away with renewed excitement for that research direction."

> *Public outreach need not be a burden and a service but a joyful experience that can benefit your science by leading you to new perspectives and insights.*

Not every public outreach experience is scientifically insightful, of course. But if chosen correctly, the experience can be joyous, reaffirming and replenishing. In dark times, public-facing communication can help reconnect you with your enthusiasm—it's hard to imagine interacting with a classroom full of children via Skype a Scientist and walking away from the experience with a frown. Even serious or stressful types of public outreach, such as those with congresspeople or DOGE, can help relight the scientific spark, simply by forcing you to spell out why science is worth doing.

Understanding the "whys" behind what we do is particularly important to reach people who are uninterested in or skeptical of science. To be successful, these efforts need to be engaging. Understanding hamster hibernation, for example, might seem like a frivolous pursuit. But this *Aeon* piece, "Could humans hibernate?", entertainingly explains why it matters. Emphasizing the throughline from what you're studying to how it might be meaningful for your reader (and all of humanity) is key. This kind of engagement need not focus on the latest scientific breakthrough. "I have been recently making anatomy videos and putting them on TikTok, and I find I get a lot of comments from people who have just never really thought about their bodies before," says science journalist Bethany Brookshire. "I don't know if they 'supported' science before, but curiosity is a first step."

When trying to connect and communicate with the public, be sure to leave the jargon at home. Use the words you would use to talk to a non-scientist friend, even if you've never used those words to talk about your work before. "Emotion" and "mood" are words that everyone knows; "affect" is not. Drawing on analogy and metaphor can also be effective—not everyone appreciates that controlling a complex dynamical system is difficult, but everyone knows that we cannot redirect a hurricane. Start there.

How can you get involved?

Public outreach requires a village. It's great if you're game for posting videos on TikTok, but not everyone is up for that. Ask yourself: What sounds both tractable and appealing? Start small to test the waters; you can always build up to bigger later. Here are some ideas to get started.

Reach out to your congresspeople.

Ask for a meeting or write letters. The Society for Neuroscience has great tips on how to effectively and powerfully advocate for science with policymakers. The key is to write something memorable and to be specific about what you're advocating for. As Bita Moghaddam, professor of behavioral neuroscience at Oregon Health & Science University, points out, "Congresspeople were elected by you and work for you—contact them, and encourage your trainees to contact them."

Social media.

Microblogging—on platforms such as X, Bluesky and Mastodon, or on photo and video sites such as TikTok and Instagram—are effective ways to reach the public. The key is to not just appeal to other scientists but to connect with people who aren't as familiar with science. "Social-media platforms offer a unique opportunity to meet people right where they are—scrolling on their phones," says Lindsay Ejoh, a graduate student at the University of Pennsylvania who regularly posts on TikTok and other platforms. "An accessibly written thread, video or even infographic can help demystify complex science, bust myths and spark genuine curiosity among nonscientists. By engaging online, we can ensure that science remains accessible while building public trust."

Write an op-ed.

In the right venue, op-eds and guest editorials can be an effective way to widely communicate a compelling message to the public and policymakers. Writing an effective one is its own art. "A good op-ed has to be accessible to average people but also have enough factual detail to support your argument," says Samuel Wang, professor of neuroscience at Princeton University. "Scientists are in a great position to do this because they have credibility that comes from deep familiarity with a topic."

Reach out to children.

Getting the next generation intrigued is a worthy investment. Good ways to do that include volunteering to speak to a classroom, perhaps through Skype a Scientist, or writing up your research for children in *Frontiers for Young Minds* or brainfacts.org. "Kids are the future, and them understanding science is our main tool to counter bad decisions by our leaders," says Robert Knight, professor of psychology and neuroscience at the University of California, Berkeley, and founder of *Frontiers for Young Minds*, who encourages scientists to get involved with his nonprofit publication. "Any involvement can only help stop the slow slide to scientific ignorance which is on our headlights."

Outside-the-box efforts.

Join existing grassroots community-building and advocacy programs—for example, Guerilla Science, which brings science into unusual spaces, such as festivals. "I went with them to a huge festival where I gave mini-science demos and interacted with a ton of people, many of whom were science-curious but not deeply familiar with the process," says Ashley Juavinett, teaching professor at University of California, San Diego and a contributor to *The Transmitter*. "This kind of deep, one-on-one interaction, sometimes meeting people quite literally where they are, might be necessary." Similarly, some communities hold events, such as "Two Scientists Walk Into a Bar," where two scientists

literally sit in a bar and field questions from anyone about nearly anything.

There are so many ways you can contribute! Whatever you do, let's all commit to doing one more public-facing thing in 2025 than we did in 2024. What we do matters for society, and there is too much at stake to let support for science slip away.

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Nicole Rust

Professor of psychology, University of Pennsylvania;
Contributing editor, The Transmitter

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