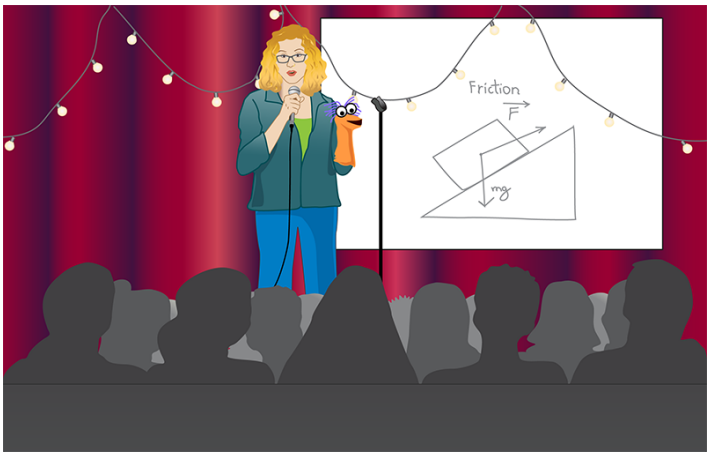
Comedy as a Tool to Demystify Science

If we want people to take science seriously, comedy may be the key.

By **Jessamyn Fairfield**

Most physicists will tell you that they don't want their work to be laughed at. In fact, current societal challenges, from climate change to the ongoing pandemic, are exacerbated when policymakers and the public don't take scientific evidence or mitigation strategies seriously. In fact, having a sense of humor about science can be a potent communication tool. Although comedy can be culturally specific or rely on insider knowledge, laughter is a universal human experience. It can also be an incredibly powerful means of bonding groups of people together as they consider new ideas.

Often, when people think of science jokes, they imagine something that might start, "A proton walks into a bar…" Great, if you know what a proton is. Lots of common examples of scientific humor are in-group jokes, whose endings may make sense only if you already possess scientific knowledge. But in my work over the past decade running Bright Club Ireland, I've trained academics to write stand-up comedy material about their research expressly to help their research make sense to a public audience [**1**–**3**]. We run events at pubs and festivals—places without "science" in the name—and we recruit speakers from across all disciplines. They all take their work seriously, but they've seen the limits of what science can be conveyed through journal articles or features and op-eds in *The New York Times*, *Scientific American*, and other popular media. Taking a comedic approach often yields new insights into both science communication and science itself and can reach very different audiences.



Comedy's lateral approach can be more effective at changing minds than a direct presentation of facts.
Credit: S. Cross; APS/C. Cain

When you listen to a joke, think about what you are doing. A good joke involves a story being told, a world with systems and laws set up as factual, and then comes the punchline—a reversal, a flip that upends everything you thought was true. You experience surprise (or, as humor theorists would call it, incongruity) when forced to change your perspective entirely and then the release of laughter in response. Laughing at a joke literally involves changing your mind, and a good joke can invite the audience into the speaker's expertise rather than dividing them into people who do or don't know what a proton is. Laughter is contagious when it's inclusive.

Simply presenting facts does not change minds and indeed can often make people dig their heels in to preserve their existing views. But the lateral approach of comedy, with its embrace of multiple perspectives, can be much more persuasive. Recent studies have found that humorous takes on research can increase the perceived credibility of the speaker and improve the listener's endorsement of scientific content. If we hope to combat fake news and encourage critical thinking about what

science endorses, comedy has the core skills baked in.

Indeed, the mindset of comedy is quite like the mindset of scientific research. Both involve creative exploration—asking, If this is true, what else is true?—and an unwillingness to accept the status quo without verifying it for oneself. What's more, the inherently subversive nature of comedy provides a space to challenge the human biases that impact the supposedly objective conclusions we draw as scientists, including stereotypes around science and around who can be a scientist. It also acknowledges the emotive and affective impact of both scientific research and the experience of researchers who face elitism, sexism, racism, classism, homophobia, transphobia, and countless other issues in the culture of science. Scientists who spoke at Bright Club said afterward that the experience of writing comedy about their work helped them to feel more agency and empowerment. They were freed from a falsely passive voice to adopt a more authentic delivery, strengthening their professional identities as researchers.

When we ask the public to engage with scientists, we should be careful not to expect them to passively listen as they are berated by "experts." Members of the public can and should be a part of scientific discourse, and their fears must be taken seriously. Indeed, climate communication studies have found that engaging with prior knowledge, emotions, and emotional doubts is a critical component of public involvement in that topic. It stands to reason that the approach would apply to many more important and contentious topics.

The COVID-19 pandemic provided many examples of science communication having a huge impact, but it also unfortunately brought a reversion to the "deficit model," in which the audience is thought of as an empty bucket to be filled. We know, and have known for 20 years, that the deficit model doesn't work. If we wish to be heard, we also have to listen. Comedians who don't listen and respond to their audience are rarely funny, and science communicators who don't listen and respond to their audience rarely get their points across.

Although comedy can be culturally specific or rely on insider knowledge, laughter is a universal human experience. It can also be an incredibly powerful means of bonding groups of people together as they consider new ideas. If we as physicists want to be part of a society where science is a pillar of culture, a process that everyone participates in, then it may be time to start taking ourselves a little less seriously.

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