

allow me to publish extra research or to go to other conferences. I don't think that it's for everybody. It has to match your career goals.

GAVIN SCHMIDT

Invest the time

*Climate scientist at the NASA
Goddard Institute for Space Studies in
New York City.*

It pays to invest in putting together a high-quality presentation. I spent three months collating my talk on the emergent patterns of climate change for the main TED conference in 2014. At the beginning of the process, I was casting about for an appropriate metaphor, and the jigsaw puzzle presented itself as a visual way of representing the million lines of code that piece together all the variables that must be modelled to achieve a realistic, dynamic picture of the global climate.

Everything in a TED talk has to be created from scratch, so I had to make my own jigsaw pieces. Once I had that metaphor, I had the advantage of being able to tap into some great NASA images. For the past five years, I've benefited enormously from that three-month investment in my graphics.

The TED team encouraged me to go more deeply into things that I would normally have thought too complex for a general audience. Basically, you can make one point in your talk, and you can go deep into the details, as long as you take the audience with you and build up to your main point. Each slide should push that point further rather than go off on an ancillary detail.

It goes back to some basic communication skills: know your audience and know what you want to say. Overall, my presentations are now much less cluttered, and they have more impact than they used to (see 'A talk with impact'). My talks are graphics-heavy and I use the imagery to convey a narrative. Being able to point people who have contacted me with questions to the TED talk also saves me an enormous amount of time.

Communicating high-profile, controversial science is a bit of a gamble. If you have something genuine to share, it can push you and your science forwards. But if the science is subsequently not held up, it can pull you down — and that might hold you back or serve as a millstone around your neck for years. It's a bit of a two-edged sword. It's gone badly for only a handful of scientists, but it's good to remember that TED talks are a high-impact opportunity. It pays to be careful, because your talk can come to define you. ■

INTERVIEWS BY VIRGINIA GEWIN

These interviews have been edited for clarity and length.

COLUMN

Speak up now

Resolve minor misunderstandings before they snowball, says **Jamie Sugrue**.

Trinity College Dublin, where I'm a PhD student in comparative immunology, offers a class called 'Planning and Preparing for your PhD'. It aims to equip doctoral students like me with the skills and advice necessary to deal with both unforeseen and predictable situations that might arise during their studies.

I think it's an exercise in futility. No amount of planning will teach you as much during your PhD programme as will your own experience. Still, those who have found themselves in bizarre or peculiar situations might be able to pass on useful advice. I am one such person.

During 2018 — the first year of my PhD studies — my supervisor and I flew to Cambridge, UK, to visit a collaborator. As the three of us sat down to lunch, my supervisor asked me if I did much cooking. I replied that I did, and said that I tended to cook even when I went home to southern Ireland, because my mother usually prepared mostly 'meat-and-two-veg' dishes. My supervisor looked confused, turned to our collaborator and said, "That's so surprising, because Jamie's mother makes the most fantastic chocolate! His family owns the most wonderful chocolate factory!"

We should pause here for a moment to take in the fact that I don't own a chocolate factory. Nor does my mother or my family.

This faulty assumption on my supervisor's part did not arise completely from thin air. To provide some context, I am from County Kerry in southwest Ireland, which hosts Skelligs Chocolate, a well-known artisanal chocolate manufacturer. My family home's geographic proximity to the company and my having gifted the lab with chocolate from there in the past had led to a classic 'wires-crossed' situation.

Hoping to avoid embarrassing my supervisor or myself, I did not correct her assertion. Instead, I simply changed the subject, thinking that the topic would never arise again.

YOU WANT ME TO...WHAT?

But several months later, it did. My supervisor was a co-organizer of the 25th International Hepatitis C conference in October 2018, here in Dublin, and was holding a meeting in her office. She appeared in the lab in a rush to ask if I could briefly join the meeting. When I entered her office, she introduced me to two of her co-organizers, and then asked if my family would be willing



to make bespoke chocolate for the invited speakers at the conference.

I stood there, stunned by my own silliness for not having foreseen a situation like this. Conversation about the chocolate continued while I tried to work out how I was going to get myself out of this unfathomable situation.

On reflection, I realized that the only way out was to bite the bullet and explain the whole situation to my supervisor. So the next day, I broke the news that my family did not, in fact, own the chocolate business, or have any ties to it beyond its location close to my family home. I was exceptionally fortunate in that she thought the whole scenario quite funny.

It is eminently possible that my disinclination towards speaking up came about because Irish people, and perhaps also English people, are often more deferential than our US counterparts to those in positions of authority, such as principal investigators. Were a US PhD student in my shoes at the time, she or he might simply have interjected with, "Hey, that's crazy!" rather than letting the wound fester, as I did.

My aversion to a potentially uncomfortable correction in the short term led me down a path that could have had greater consequences if the stakes had been higher.

Although I expect that I would have spoken up about something more serious, my misstep, in any event, is a perfect illustration of how even the most trivial of mix-ups can lead to an awkward and uncomfortable situation. So, no matter how unpleasant it might seem at the time, you must speak up and correct the error. Otherwise, you could find yourself frantically Googling how difficult it is to make bespoke chocolate at short notice. ■

Jamie Sugrue is a PhD student in comparative immunology at Trinity College Dublin.