Making tiny waves

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Right now, there's a growing recognition of the lack of diversity in science and engineering. As a woman in STEM, I've been personally impacted by the lack of diversity around me, but I'm often unsure of how to be a part of the solution. I think many of my colleagues feel the same way.

We all share a passion for research and a desire to conduct it in a friendly, inclusive, and diverse environment. Many programs exist to foster excitement for STEM in underrepresented groups and support them through their studies, but it's on us to make sure STEM fields provide an inclusive community in which underrepresented individuals will feel welcome and be able to succeed professionally.

A friend of mine recently gave a talk in her lab's group meeting about her experiences as a woman in computer science. The talk was very well received and many of her groupmates—mostly men—appreciated the opportunity to discuss a sometimes-uncomfortable issue. Hearing this inspired me to give a presentation to my group about maintaining an inclusive environment in our lab. As a senior grad student, I've been able to practice presenting my research over the years and preparing a research talk for our lab meeting is now just part of the routine. This one was different, probably more difficult even than the first talk I gave at a conference. My goal for the talk was to keep things feeling friendly and welcoming in the lab. What if I ended up offending or upsetting people in the process? I began to second-guess myself and play out worst-case scenarios in my mind.

After a few weeks of brainstorming and making tons of slides I wasn't satisfied with, my breakthrough came by seeing my audience and preparing my talk for them. Meet my two hypothetical target audience members:

> I want Mike, my male graduate student friend who gets defensive when social justice topics come up, to understand that he's not responsible for societal-level discrimination. In fact, he's probably suffered from it as well. I want him to gain insight, both emotionally and cognitively, that underrepresented groups experience things he's never experienced. I want him to become an active bystander when he sees discrimination and to support his friends and colleagues who experience it.
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> I want Kara, my young female mentee who struggles with feeling like she doesn't belong in science, to know that these feelings are common among underrepresented groups and that I've had them too. I want her to walk away feeling validated and equipped with a new vocabulary to identify and battle with her internalized stereotypes as well as the subtle sexism she encounters.

I decided to be honest, open, and personal. This wasn't going to be a research talk. I've read a lot about diversity and inclusion in STEM, but I'm no expert. I thought the best approach would be to talk about my own experiences as a woman in science and discuss the research that helped me make sense of

those experiences. I remember the relief I felt when I first recognized familiar hurdles such as microaggressions, stereotype threat, and implicit bias as common and well-studied experiences of underrepresented people. I hoped my talk could help people like Kara learn how to distance themselves from the emotional impact of frustrating day-to-day experiences.

My intent was to avoid putting the audience in a position where they might feel guilty or defensive. With this in mind, the major theme of my talk was that we are all guilty of—and victims of—discrimination and that we can all participate in improving and maintaining an inclusive environment.

One advantage I had as a speaker was that I'm a senior student in the lab. I knew that expressing vulnerability in front of the lab would make them more receptive to my message, but I was still uncomfortable opening up even though my lab is friendly and my PI is supportive. Anticipating this, I invited a few friends with whom I've talked about these topics, knowing they would bolster my confidence and resolve.

I asked some friends who are not members of underrepresented groups if they'd feel comfortable participating in Q&A and discussion at the end. This felt a bit like planting audience members at a magic show, so I didn't give direction. I simply asked them to share in any way they felt comfortable. Regardless of what they said, I knew their participation would demonstrate critical buy-in and perhaps encourage my groupmates to do the same. After all, embracing diversity isn't something the minority can do solely by themselves; the involvement of the majority is critical for making positive change.

The audience was very attentive during the talk. When I finished, there was a stressful moment of silence followed by a flood of questions, discussion, and sharing from unexpected voices. The talk hit better than I could have imagined and many expressed their appreciation. That day I learned a lot about myself and my lab members.

Since giving the talk, I've seen and felt the atmosphere change in my lab. It's lighter and friendlier. We're in this together. People are catching and self-correcting microaggressions and have obviously been educating themselves. Talking through these uncomfortable topics showed me and everyone else that our lab is a safe place, and I think we've created a more fun and productive workplace. This is supported by recent studies which find that psychological safety is the most important feature of productive groups.

This was a stressful undertaking, but it paid off. Just one talk was enough to spark a continuing positive change in my lab. Although it felt like taking a gamble to give this talk in a lab meeting, I had the security of knowing that my advisor and group would support me. Find a group that supports you, and you can do it too.

If you would like to review a copy of the presentation, contact me at rene.davis@asu.edu.