Over the past month alone, a series of reports have highlighted the role of scientists in promoting gender and racial disparities in work-life balance,\(^1\) grant awards,\(^2\) and academic achievement,\(^3\) to say nothing of our shortfall in creating learning and workplace climates devoid of sexual harassment.\(^4\) These studies reveal that scientists (that’s us) are restricting who advances and persists in science, technology, engineering, mathematics, and medicine (STEMM) careers. Making these decisions based on anything other than ability inhibits personal and scientific progress. To reverse this reality, it’s up to each one of us to work to make our profession more diverse, equitable, and inclusive.

I have been interested in and have been an advocate for that goal throughout my academic career, and I am often asked to speak about “what works.” I firmly believe that it will take our collective effort to get there. That’s why I have grown increasingly concerned about the polarizing chatter on social media around this challenge. These efforts have clearly and importantly increased the urgency to promote positive change. Rather than settling into despair, use these data to create teachable moments to change our trajectory toward a future that supports the success of all members of our community and the scientific enterprise. For example, I began a project in 2016 to collect stories about microaggressions in STEM not only to give voice to our experiences but also to raise awareness of them.\(^6\) I have used these submissions to identify common themes that negatively impact perceptions of learning and workplace climate in STEMM (e.g., comments on pregnancy, choice of dress, dedication) and discussed them in presentations and workshops to demonstrate that impact is often independent of intent. You might consider doing something similar in your own department by presenting published studies in a journal club, where discussion is possible.

**Learn from the Past, Work toward the Future**

Statistics on the lack of diversity in STEMM fields and studies of its underlying causes can push even the most optimistic of us to a sense of helplessness in the face of seemingly insurmountable challenges. Rather than settling into despair, use these data to create teachable moments to change our trajectory toward a future that supports the success of all members of our community and the scientific enterprise. For example, I began a project in 2016 to collect stories about microaggressions in STEM not only to give voice to our experiences but also to raise awareness of them.\(^6\) I have used these submissions to identify common themes that negatively impact perceptions of learning and workplace climate in STEMM (e.g., comments on pregnancy, choice of dress, dedication) and discussed them in presentations and workshops to demonstrate that impact is often independent of intent. You might consider doing something similar in your own department by presenting published studies in a journal club, where discussion is possible.
Engage to Create a Learning Culture
Our lived experiences give us unique perspectives on our learning and workplace climates that may inhibit us from seeing the challenges faced by others. It’s difficult to motivate people, including ourselves, to change if the problem is not apparent or if we are being criticized for not seeing it. Respectful conversations across divides are an important component of building that understanding and often the most challenging because we have to be willing to publicly unpack, confront, and reconsider the basis of our own beliefs. In my own life, a friend elsewhere on the ideological spectrum has broadened my perspective by challenging my viewpoints and answering even my naïve questions on topics ranging from consent to scientific credit. These conversations push both of us outside of our comfort zones. Yet we emerge with greater understanding rather than with bruised egos because we come to these conversations from a place of mutual respect, where blame, criticism, and personal attacks are absent. Be a part of creating such a learning culture at your institution by emulating the psychological safety of my friendship. For example, you can build and/or participate in forums for exchange, such as surveys, book clubs, focus groups, and workshops. In these activities, suggest ground rules for discussions and plans for addressing conflict before sensitive topics are broached. My own university, the University of Massachusetts, Amherst, has successfully implemented these strategies to foster honest dialog and the work necessary to respectfully bridge divides.

Focus on End Goals Rather than a Single Fix
In my current role, I’m often asked to “fix” things in a way that is specific to the perspective of a single person or group, but I’m wary of doing so because such actions can often have unintended consequences. For example, term limitations on postdoctoral appointments were introduced to promote career progression but have created new challenges for persistence of underrepresented groups in STEMM.

Recognize the Importance of Your Own Contributions
Our workplace and learning climates place each of us within a network. Be bold in engaging your own sphere of influence. No matter how small our individual contributions may seem, they will positively ripple outward from our primary connections. Over time, the scale of my own efforts has expanded from supporting individual friends in graduate school, to talking about work-life balance, to suggesting
institutional policy changes, but they have always been motivated by something that mattered to me. More often than not, I have found that I am not alone in those perspectives and that others are willing to join and amplify my effort. Start by sharing your own perspectives and also consider joining conversations that have already begun.

Change is never easy. The complexity of this work makes it nearly impossible to chart a positive course that is devoid of setbacks and pitfalls, proceeds at a pace that is not too fast for some or too slow for others, and reaches all perspectives. Nevertheless, I am optimistic: Even imperfect attempts will help us to create a more productive path forward and even small steps will bring us closer to our aspirations.

The current state of STEMM professions arose from our past actions, but together we have the power to determine what is possible for our future by daring to be different.

References


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