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Harassment in science is real

#MeToo

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s the rallying cry against sexual harassment and bullying in many fields, including academia, continues to grow, more and more victims are coming forward with their stories, reflecting how this damaging culture has been the norm across sectors for decades. Studies of women in academia report that more than half have experienced harassment. This

behavior has remained obscured for many reasons: fear, resignation, and acceptance. The scientific community must recognize the difficult conversations that have started and embrace this watershed moment as an opportunity for rapid and essential cultural change.

In our own fields of geophysical and environmental sciences, in which teams researchers travel to corners of the planet, harassment has long been a reality. Huts atop frozen ice sheets, bunks on research vessels, and poster-strewn office halls have all hosted scenes of inexcusable behavior. Our own personal stories comprise more than three decades of scientific achievement, yet cultural change in our fields

seems as slow as the glaciers we study. Senior scientists have touched us inappropriately and have repeatedly invaded our personal space. Many of our male colleagues believe harassment is a thing of the past, yet some of these events occurred in the last 2 years. We have remained silent, fearful of the ramifications. When we did speak up softly, we saw no consequences, no action, and no change. We have witnessed friends, employees, and colleagues suffer in a culture that looks the other way, labeling bullying and harassment as "antics" or disguising them as rigorous scientific review.

The consequences for the harassed, bullied, and assaulted are real. Women and men affected by harassment struggle to get jobs, secure tenure, win research funding, get appropriate authorship on papers, and receive scientific recognition. Perpetrators gain power and prestige. Victims-often students and postdocs who wield little power-"choose" other paths.

Since news of the sexual misconduct of film executive Harvey Weinstein broke, the #MeToo movement denouncing harassment is alight across the sciences. People are speaking up and sharing stories that they have hidden for decades. We know from our research that meltwater produced by a warming climate can make glaciers move faster. We know, too, that major social events can trigger rapid changes in communities. The recent high-

> profile harassment cases are an opportunity to change the basic ethical culture of science.

> Cultural change must occur at the individual, team, professional society, and institutional levels. This year, the American Geophysical Union adopted a new ethics policy that defines bullying and harassment as scientific misconduct. The American Geosciences Institute, which encompasses more than 50 scientific societies, is working to adopt a common statement to address harassment. As societies move forward, harassers will no longer be bestowed academic honors while victims sit quietly in the audience. Change must come to institutions where harassers retire or resign and go to new institutions to begin again.

The greatest opportunity for cultural change rests with individual scientists, teams, and professional societies. Men and women need to listen, speak up, and learn and teach about the prevalence of harassment. Field teams and laboratory groups must openly discuss the culture and develop codes of conduct and equality alongside safety protocols. Societies and institutions must provide training for scientists at all career stages-especially for senior scientists-on how to be ethical leaders and how to confront harassers. Science requires diverse, innovative thinkers to protect our global citizens, understand our home planet, and push us to the outer reaches of space. Efforts in three arenas individuals working to understand the prevalence of harassment, teams developing a code of conduct, and societies providing training toward ethical leadership have the potential to stimulate powerful change.



Robin E. Bell is a professor at the Lamont-Doherty Earth Observatory of Columbia University, Palisades, New York, and is president-elect of the American Geophysical Union. robinb@ ldeo.columbia.edu



Lora S. Koenig is a senior research scientist at the National Snow and Ice Data Center in the Cooperative Institute for Research in *Environmental* Sciences at the University of Colorado, Boulder, Colorado. lora.koenig@ colorado.edu

-Robin E. Bell and Lora S. Koenig

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