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Diversity Rocks!

Renowned Geoscientist Scott Tinker explains why diversity is critical for building a better world

By Jessica Sinn · November 30, 2022



After another year of record-breaking weather events, concerns about the toll of our rapidly changing planet continue to rise. As we grapple with the realities of climate change, we turn to STEM scientists for answers. However, national statistics show that we don't have the right mix of talent at the table to address our biggest questions.

Data published in a 2019 nature geoscience report shows the geosciences — which include the study of planet Earth, its oceans, its atmosphere and its interactions with human society — are among the least diverse across all STEM fields. Although diversity numbers are slowly improving, nearly 90% of doctoral degree recipients are white.

This lack of diversity means we are missing those who have lived in poverty and are vital to developing and implementing practical solutions, says Dr. Scott Tinker, director of the Jackson School of Geosciences' Bureau of Economic Geology. With the goal of building the most talented and impactful research team to solve the world's biggest energy and environmental problems, he has made diversity a top priority in hiring practices ever since coming on board as director more than two decades ago.

"Diversity was embedded in me early on," says Tinker, who also serves as the State Geologist of Texas and holds the Allday Endowed Chair in the <u>Jackson School of Geosciences</u>. "We work globally, so it's important we reflect diversity in our staff. Currently, we have people representing 25 different nations on permanent staff. When we get together, it looks like a UN meeting!"



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Scott Tinker (far right) with several members of his research team

The second largest research unit at UT Austin, the Bureau of Economic Geology is home to more than 150 scientists from countries around the globe. Women hold about 40% of the bureau's research positions, greater than the national average of 27 percent, according to data published in a 2021 AGU Advances report.

"Gender diversity in STEM is not great in national labs and the industry, which is why attracting and retaining women scientists is a challenge," he says. "It's very competitive; we can't compete on salary alone, so our culture of inclusion, opportunity, challenging problems, integrated teams, facilities support and the like become vital. And, of course, there is no difference in pay at any experience level between men and women at the bureau."

When selecting candidates, Tinker pays close attention to their lived experiences rather than high test scores and ivy league pedigrees.

"When we look at our applicants, we recognize that they are coming from different government systems as well as educational and economic backgrounds," he says. "We look at the history of the individual and how much they have achieved given their circumstances. Some of our staff are simply remarkable."

While discussing this topic, Tinker recalls an inspiring encounter with a young researcher, Aken Tong, from South Sudan, Africa who, despite many hardships and financial barriers, is completing his master's degree in chemical engineering and has launched a nonprofit designed to help African farmers build and sustain lucrative businesses.

"Following the talk that I had given, he called and asked if I could help expose him to top researchers and investors around the world," says Tinker. "His story brought tears to my eyes, which often happens when I speak to young people," Tinker says. "It's remarkable what they can do when exposed to opportunities—phenomenal, really."

In order to see the world from a much wider lens, the scientific community needs researchers like this, Tinker adds. Otherwise, our innovations risk being too parochial; relevant to some, but perhaps detrimental to others.

"We're all products of our own experiences, and we have biases based on those experiences," Tinker says. "In my visits to some 60 countries, I recognize my own more and more. Incorporating different perspectives, beliefs and cultures into scientific research is powerful. With a diverse team, you are more likely to work out tough problems objectively."

Early in his career, Tinker was less aware of his own limited world view until he encountered a young boy while doing fieldwork as a graduate student in Northern Mexico. Curious about the researchers' rock hammers, the boy walked over to investigate. When Tinker reached for his polaroid camera, he was taken aback by the boy's reaction.

"His eyes grew so big when I handed him the square photo and he watched it develop before his eyes," Tinker says. "He ran away holding the picture and yelling excitedly for his mother. This moment made me realize how much we take for granted, and all of the things people have never seen."

In addition to challenging his team to widen their world views, Tinker also encourages the public to think outside their binary "good" and "bad" standpoints on contentious topics such as electric cars, fracking and climate change.

"I approach energy the same way I look at diversity," Tinker says, "The bottom line is that humans impact the environment no matter what form of energy we use. We need different kinds of energy for different things. The challenge is talking about these problems in a less polarized, divisive way so we can work together on finding solutions."

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Throughout his decades of fieldwork with diverse groups of scientists in numerous countries around the world, Tinker says the best way to make any progress is to find humanity in humans again.

"It's there, and it's in all of us," Tinker says. "The only way to do that is to tear down the walls, build bridges and work together. That's the way to better the world."

View photos from Dr. Tinker's fieldwork in various developing countries around the world. You can also learn more about his work by watching his recent film "Switch On," which explores energy across the developing world.



 ${\it Dr. Tinker visiting with a family outside their home in Nepal}$



A family in Nepal with an electric cooker, gifted to them by Dr. Tinker



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 $Dr.\ Tinker\ visiting\ with\ a\ community\ in\ Ethiopia$



 $Dr.\ Tinker\ visiting\ with\ children\ in\ Ethiopia$



 $A\ woman\ in\ Vietnam\ standing\ outside\ her\ floating\ house$



 $Dr.\ Tinker\ with\ "Farmer\ John"\ in\ Kenya$



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