Examining how people think about, and respond to, climate change data

July 21 2021, by Summer Allen

Credit: CC0 Public Domain

In the United States, climate change is controversial, which makes communicating about the subject a tricky proposition.

A recent study by Portland State researchers Brianne Suldovsky, assistant professor of communication, and Daniel Taylor-Rodriguez, assistant professor of statistics, explored how liberals and conservatives in Oregon think about climate science to get a better sense for what communication strategies might be most effective at reaching people with different political ideologies. The study was published in *Climatic Change* in June.

Prior studies have shown that exposing climate change skeptics, who are more likely to be conservatives, to more science is unlikely to change the way they think about the issue. Instead, Suldovsky and Taylor-Rodriguez found that a more fruitful strategy may be to give conservatives opportunities to share their own lived experiences with the effects of climate change.

To learn more about how liberals and conservatives differ in how they think about climate change, Suldovksy and Taylor-Rodriguez created an online survey that was completed by 1,049 Oregonians. The participants ranged from age 18 to 86 and closely mirrored the demographics of the state in terms of sex, race, age and education. There was also ample representation from different political groups; 43% of participants were moderates, 30% were liberals and 27% were conservatives.

The survey asked participants questions about how they thought about climate change, and included questions about how certain they were that climate change is happening; how complicated or complex they think climate science is; and who they rely on to give them knowledge about climate change—their own direct lived experience or experts. The survey also measured how participants prefer to engage with climate science. The researchers then used a statistical tool called multivariate regression to figure out what factors predicted engagement preferences.

"The most interesting thing to me is that liberals and conservatives are

just seeing climate science from a completely different epistemic vantage point," says Suldovsky about the results.

The survey showed that liberals see climate science and climate change as certain and simple. They don't think it's very complicated to understand, and they also don't think it's going to be refuted in the future. Liberals also defer to scientific experts about climate change to such an extent that they reported that they would defer to what a scientist says about climate change even if it contradicts their own experience.

"That's a pretty bold thing to agree with," says Suldovsky. "That was pretty shocking to me."

By contrast, conservatives saw climate science completely differently. "They see it as far less certain and far more complex, [the latter] is super interesting because in that way conservatives are more in line with climate scientists," says Suldovsky. Conservatives also rely more on their own direct lived experience to give them knowledge about the world and knowledge about climate change.

"That has huge implications for the way that we engage with conservatives because, up until this point, the approach has been to shove more information from climate scientists at them and that'll do the trick, and it doesn't," says Suldovsky. "One of the things that our study is showing is that [resistance] might be because conservatives are looking to a different source to give them knowledge about climate change: their own direct lived experience."

The results also showed that people who believe that climate change is certain and simple—like liberals tend to—prefer receiving more information from experts. This one-way knowledge transfer is also called the deficit model of science communication and has been the standard communication strategy. By contrast, people who rely on their

own experience and see climate change as complicated and fairly uncertain—like conservatives tend to—prefer what is called a lay expertise model of engagement. This means they value being able to contribute their own knowledge and experience to help better understand climate change.

These findings suggest that people who communicate about climate change may benefit from a shift of perspective.

"Attending to people's philosophical beliefs might get us beyond this place where we focus on the facts," says Suldovsky. "This study demonstrates we can go deeper than that and ask questions and measure how people are seeing the world. That might get us a little bit further."

Suldovsky herself changed her views on climate change, in part thanks to philosophy.

"I grew up very conservative. I grew up in northern Idaho. I grew up very religious. I didn't accept evolution. I didn't accept climate science and so I know what it feels like to feel like science is your adversary," she says. "And what changed my mind was philosophy, learning that there are different ways to think about the world and different ways to think about knowledge."

Instead of presenting science as the only answer, Suldovsky suggests it could be presented as a piece of the puzzle that is combined with other perspectives and ways of knowing that fill in the rest of the puzzle. An example of this approach could involve asking fishermen, farmers and ranchers what changes they have noticed over the past few decades.

Focusing on the effects of climate change might help get buy-in for mitigation strategies from people of different political ideologies. Take dealing with rising sea levels or heat waves, for example. "Sea level rise

is something that we can infrastructurally deal with without people agreeing on why that sea level rise is occuring," says Suldovsky. "Cities can plan for increased heat waves without convincing people that climate change is causing the heat waves."

The results of this study also suggest that climate science—and other controversial scientific topics such as GMOs and vaccines—could benefit from an expanded understanding of science communication.

"Just broadening our conception of what communication and engagement can look like to include things like public forums or transdisciplinary science where you're involving multiple perspectives and problem solving would be helpful," says Suldovsky.

Suldovsky and Taylor-Rodriguez are now following up this study by looking at the relationship between extreme weather perceptions, the actual weather and climate change beliefs.

More information: Brianne Suldovsky et al, Epistemic engagement: examining personal epistemology and engagement preferences with climate change in Oregon, *Climatic Change* (2021). DOI: 10.1007/s10584-021-03138-5

Provided by Portland State University