Echo chambers persist in climate politics, research shows

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New research from the University of Maryland (UMD) finds that contentious climate politics continue to be influenced by the diffusion of scientific information inside "echo chambers"—social network

structures in which individuals with the same viewpoint share information with each other.

A paper based on the research published online Friday, September 14 in the journal *PLOS One*, builds upon previous work by the research team that determined how echo chambers work and how to measure them.

"Finding evidence of echo chambers in American climate politics proves that policy actors are essentially cherry picking the information they receive related to climate science," said lead researcher Dana R. Fisher, Professor of Sociology at UMD and Director of the Program for Society and the Environment. "Echo chambers can block progress toward a policy resolution related to climate change because individuals who have the same perspective and get information from the same sources are often under the impression that theirs is the dominant perspective."

In their initial study, researchers surveyed active members of the U.S. climate policy network in the summer of 2010 about their attitudes toward climate science and climate policy, and questioned them about their policy network connections. The research team repeated the process in the summer of 2016 to determine whether echo chambers still existed and how they have changed.

"The research presents data collected during two very different time periods with respect to climate politics," said Lorien Jasny with the Department of Politics at the University of Exeter, a co-investigator on the study and lead author of the paper in *PLOS One*. "In 2010, Congress was considering legislation aimed at regulating carbon dioxide emissions. Meanwhile, the data collected in 2016 was after implementation of President Obama's Clean Power Plan was halted by the US Supreme Court until the legal challenges to the program had been concluded."

The summer of 2016 ended up being the swan song for the Clean Power

Plan (CPP), which focused on reducing emissions from power plants. In August of 2018, the Trump Administration proposed the Affordable Clean Energy Rule to replace the CPP.

To test for the presence and significance of echo chambers among members of the U.S. climate policy network, researchers utilized an exponential random graph model—used to analyze data about social and other networks. In the "echo," two people who have the same outlook or opinion on a relevant issue share information, reinforcing what each already believes. In the "chamber," individuals hear information originating from one initial source through multiple channels.

"Our findings show that echo chambers were not unique to 2010 but their impact on policy networks has shifted," Fisher said. "In 2010, we found that echo chambers amplified divergence on certain issues—making it seem as if more people disagreed with scientific consensus related to the drivers of climate change. In 2016, however, we found that echo chambers worked in the opposite manner and amplified the level of agreement on these same topics."

Fisher and the rest of the research team are currently examining how climate policy networks changed after the 2016 election once the Trump administration took office.

"Our results demonstrate that even when echo chambers are amplifying support for a particular climate policy, the President can stop progress, as the Trump administration did in the case of the Clean Power Plan," Fisher said.

More information: Lorien Jasny et al. Shifting echo chambers in US climate policy networks, *PLOS ONE* (2018). DOI: 10.1371/journal.pone.0203463