Study examines how perceived closeness of climate change influences opinions

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Determining if the perceived proximity of climate change can be manipulated to inspire engagement in the issue is the central focus of a recent study led by a University of Maine researcher.

The study adds to growing science and risk communication literature that suggests dimensions of psychological distance can influence attitudes toward environmental policies and behaviors, including those

associated with climate change.

Laura Rickard, an assistant professor of communication at UMaine, is lead author of the study that was recently published in the journal *Global Environmental Change*.

"We have significant scientific evidence that the impacts of climate change are presently being felt around the globe, and even here in Maine," Rickard says. "Yet, political action on the issue has been challenging, and, on an individual level, many of us, especially here in the U.S., tend to think about climate change as a distant, even irrelevant issue, and thus not something to act on."

In creating experimental messages for participants, Rickard and her team used results from a published 2013 study led by the University of Hawaii at Manoa that presented the concept of departure dates, or the future date after which the climate experienced on Earth will be unlike anything experienced in the recorded past.

Rickard worked with communication professors Janet Yang of the University at Buffalo and Jonathon P. Schuldt of Cornell University to further explore the effect of departure dates in relation to climate change communication.

The researchers included three departure dates—2020, 2047 and 2066—taken from the University of Hawaii at Manoa study with the intention of exploring a possible departure date threshold that might function as most effective in influencing climate change policy support.

"Although 2020 may seem the most compelling—and thus, motivational— date given its temporal closeness to the present, it may also induce undesired despair and a sense of helplessness; a challenge previously identified in past climate change communication research,"

Rickard says.

Participants, who were surveyed in New York state and Singapore, read a brief scenario describing how life in either location would differ when one of the three randomly assigned departure dates are reached.

The team found exposure to departure date information in a message about climate change may interact with individuals' opinions on the issue, including political orientations to influence policy support and risk perception.

The results suggest that communicating the temporal urgency of climate change impacts and its spatial location may not always produce intended results among certain audiences, according to the researchers.

In particular, Rickard says, exposure to varying departure dates and locations played a significant role in the policy preferences of U.S. conservatives. Political ideology did not play as important a role among Singapore participants or liberal U.S. participants.

U.S. conservatives reported the highest level of climate change policy support after reading a scenario that described negative climate change impacts on New York City in 2066—the scenario that was closest in terms of spatial distance but farthest away in terms of time.

"This research sheds light on how we—UMaine Cooperative Extension affiliates, government officials, town planners, citizens, etc.—might be most effective in communicating with the 'average Mainer,' especially to encourage support for policies related to climate change mitigation and adaptation, which are of paramount importance to Maine communities," Rickard says.

More research is needed to determine whether framing climate impacts

as spatially close and temporally distant may be most effective when appealing to politically conservative audiences, according to Rickard.

The researchers plan to explore how the perceptions of psychological distance may be influenced by visual representations of climate change, including images in newspapers; graphs used by scientists for public presentations; or interactive, new technology, such as virtual reality simulations.

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