Why are we more divided than ever on climate change?

November 25 2015, by Tim Lucas

Pundits have reminded us that "all politics is local" since American newspaper columnist Byron Price first used the phrase in 1932 to explain how hometown issues and economics shape national elections.

Old as the adage may be, it still holds true—especially, Megan Mullin's research suggests, when it comes to the politics of climate change.

"The evidence for the effect of local weather on public opinion regarding climate change is overwhelming," says Mullin, associate professor of environmental politics at the Nicholas School.

Numerous studies, by Mullin and other social scientists, have shown that many people conceptualize climate change, and form political attitudes about what we as a society should be doing in response to it, based more on personal experience than on scientific evidence. Their experiences with, or perceptions of, recent unusual changes in local weather often play a central role.

"As part of our psychological processes, we're wired to reconstruct our experiences—real or perceived—into coherent stories that make sense to us," Mullin says. "It's human nature."

But her research also suggests there's more to it than that. For the past five years, she's been working to shed light on a tangle of underlying factors, both personal and political, that can shape beliefs about climate change, and to quantify what type of person is likely to be influenced by

these factors, how long the impacts can last, and to what extent they affect our decisions at the ballot box.

As the 2016 U.S. election cycle swings into full gear, Dukenvironment magazine sat down with Mullin for a Q&A to learn more about how personal experience affects our political attitudes on climate issues, her research on the phenomenon, and how she thinks it might affect who our next national leaders will be.

Q: What role do you think climate change, or environmental issues in general, might play in the upcoming presidential and congressional elections?

MULLIN: Evidence suggests the environment is not driving U.S. voters to the polls. Now that our politics have become more polarized, we see more partisan division on environmental issues than ever before—especially with respect to climate change. Because environmental issues are now part of a bundle of positions and platforms that separates the parties, it's hard to find evidence that the environment on its own drives many people's vote choices. People don't vote with climate change in mind, at least not in general elections; they vote with a bundle of issues in mind. That's one reason it can be hard to make politicians responsive to environmental concerns.

Q: What can be done to change this?

MULLIN: That's a question a lot of people are trying to get a handle on. One piece of the puzzle is to understand how the public interprets environmental problems.

In theory, democratic political processes are supposed to be responsive to voters' concerns, so if the severity of a problem changes, so too should

the response. But in a nation as large and diverse as the United States, people experience widely different environmental conditions. It can be hard for political organizations to gauge public response to problems that are difficult to observe and can vary dramatically from place to place and over time.

An example of my research in this area is on the ways that people's perceptions about climate change are shaped by personal experience with recent local weather.

A study I authored with Patrick Egan of New York University in 2012 in the *Journal of Politics* found that these experiences can affect attitudes about climate change in a significant and sizable fashion. For each 3.1 degrees Fahrenheit that local temperatures rose above normal in the week prior to a survey, we found that Americans became one percentage point more likely to agree there is 'solid evidence' that Earth is getting warmer.

Q: How long do these effects last?

MULLIN: They're fairly short-lived, typically disappearing after about a week. Periods of unusual weather that last a longer time can have a larger effect on attitudes, but even these effects eventually dissipate. Our study shows that even a heat wave leaves no impact on climate change belief after about two weeks. It's a powerful influence, but not a lasting one."

Q: What role does exposure to political rhetoric about climate change shape these perceptions?

MULLIN: Exposure to policymakers' polarized debate on climate can be a huge factor in shaping people's opinions, especially among people with

strong political leanings or party affiliations.

Although our analysis showed that temperature's effect on opinion was as large or larger than the impacts of race, education, religion, or gender, we nonetheless found that party ID and political ideology still were the primary forces shaping people's perceptions of climate change.

One of the challenges in designing our study was disentangling politics from the effect of personal experience. Because climate change is such a polarized issue in American politics, people's self-reported experiences of the weather can be misleading. We perceive that weather is hotter, or cooler, if that's the pattern we expect. This tendency may be especially strong when people are responding to surveys that contain political content.

In our 2012 study, to see how, or if, perceptions about climate are shaped by personal experience outside the lens of politics, we collected actual local weather data and mapped temperature trends for the zip codes of respondents to five large national opinion surveys. Our findings showed that people's responses to survey questions about belief in climate change correlated strongly to their geocoded experiences with recent local weather, independent of external political influences."

Q: Were some people more likely than others to be influenced by recent experience with hotter than normal weather?

MULLIN: "We saw the strongest effect among people with the lowest levels of education, who may be least likely to have formed opinions about climate change ahead of time. We also saw strong influence among political leaners—people who lean toward one party or the other but tend to be less informed about politics and have fewer strongly held

issue positions.

To some degree, however, we all are influenced by recent personal experience because when we respond to surveys, we typically tap into information or experiences that are freshest in our minds and most readily accessible.

Climate change is hard to understand. Local weather is easy to understand and seems relevant to the topic. So it's understandable that our experience with local weather might influence our perceptions about climate and how we all respond to survey questions.

Q: As a political scientist, what do you make of that?

MULLIN: Considering that one of the chief effects of climate change in the United States is to raise the prevalence of unusually hot days, drawing conclusions about the existence of a warming climate from a recent string of usually hot local weather isn't entirely irrational.

On the other hand, it does give you pause for thought. Is this really how we are forming our opinions on difficult public policy issues such as climate change?

It's not surprising that many people form assessments of complex, society-wide issues like climate change based on personal experience. If you get mugged, you're more likely to think that crime is getting worse; if you lose your job, you're more likely to believe unemployment is rising. Scientists call this process attribute substitution. The problem is, it can lead you to discount other sources of information, such as scientific research, that are much more relevant.

Q: It also begs the question that if people's attitudes

are influenced by local weather, and local weather is getting hotter across much of the united states, why aren't we seeing a change in opinions?

MULLIN: That's the real question. Why is public opinion not reflecting the concern we should be giving to the issue given the increasing seriousness and scope of the problem?

One answer is that the effects we found were short-lived. Although temperatures in the United States have been rising, especially in winter so far, a cold snap can counteract warm weather's effects on opinion. But my colleague Patrick Egan and I suspect that long-term temperature trends are exerting their own influence on opinion, and we currently have research under way to investigate that possibility."

Q: In a commentary you published in the journal nature climate change in 2014, you noted that since 1988, when climate scientist James Hansen presented the first testimony on human activity and planetary warming to the US Senate, the american public has been exposed to more than a quarter-century of sustained attention to this issue. There have been hundreds of congressional hearings on it, thousands of peer-reviewed studies, and tens of thousands of media reports. Does your research suggest that any of this has made a difference?

MULLIN: Yes, but perhaps not as much as some people might have hoped. Those who hoped the long-running debate we've had on climate

change would close the gap between the scientific consensus and the public's divided beliefs are probably disappointed.

The public has become more aware about climate change, but levels of belief and concern have changed little over the last 20 years. The main change in opinion has been the emergence of a partisan gap as those who identify as Republican have become less worried about climate change, less likely to believe that it is attributable to human activities, and more suspicious of mainstream news coverage about the issue. Politicians have had more success than scientists in shaping the debate."

Q: What's the takeaway message from all this?

MULLIN: As scientists and science communicators, we need to engage with the public using language and values that Americans recognize. Personal experience resonates more strongly than scientific evidence. Rather than discount people's experiences, we need to communicate science in a way that helps people interpret those experiences as being part of a broader phenomenon. Politicians are skilled at this form of communication—we scientists have a lot to learn from them.

Provided by Duke University

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