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Society for Risk Analysis

Divided Public: Climate Survey Shows Skepticism and Alarm Rising Over the Past Decade

Two analyses highlight the growing polarization of public attitudes toward climate change, as well as the role “psychological distance” plays in levels of concern.

Washington, D.C. – Researchers have found that between 2002 and 2010 the images and emotions that the American public associates with global warming shifted significantly. Four consecutive nationwide surveys found both increasing skepticism and growing alarm among respondents. The researchers assessed Americans’ “cognitive risk representations” including the words, thoughts, and images, and the positive or negative feelings the public associates with global warming. The study also measured the underlying values of egalitarianism and individualism, as well as a variety of political, social and demographic characteristics.

Drs. Nicholas Smith and Anthony Leiserowitz of the Yale University School of Forestry & Environmental Studies conducted the study, “The Rise of Global Warming Skepticism: Exploring Affective Image Associations in the United States Over Time,” with funding from the 11th Hour Project, the Pacific Foundation, the Surdna Foundation, the Jesse and Betsy Fink Foundation, and the Yale Center for Environmental Law & Policy. The article appears in the June 2012 issue of the journal *Risk Analysis*, published by the Society for Risk Analysis.

The researchers identified several significant shifts in the associations Americans have with the phrase “global warming” over time. Most notably, they found an increase in the proportion of “naysayer” images, such as “hoax.” In 2002, the proportion of naysayer images was less than 10 percent, but rose to over 20 percent of total responses in 2010. In 2002, 20 percent of Americans associated global warming with melting ice, the most salient category, but in 2010 this accounted for just over 10 percent of associations. Meanwhile, “alarmist” images of disaster (e.g., “end of everything”) increased from 2002 to 2008, then decreased slightly in 2010.

Four nationally representative surveys formed the basis of the study and were completed in 2003, 2007, 2008, and 2010. Using a form of free association, respondents were asked to provide the first thought or image that came to mind when they heard the term “global warming” (e.g., “polar bears”) and an affective rating (e.g., +3 = a very good thing and -3 = a very bad thing). The associations were then analyzed to identify the nine most common themes: ice melt, heat, nature, ozone, alarmist, flood/sea level, climate change, weather and naysayers.

The authors also found that many Americans perceive climate change as distant and abstract and “outside of most people’s direct experience.” The authors conclude that analyzing affective

imagery “provides a powerful tool to measure, track, and explain shifting public perceptions of risk over time.”

The issue of climate change’s abstractness was studied by researchers Dr. Alexa Spence, of The University of Nottingham, U.K., and colleagues Dr. Wouter Poortinga and Professor Nick Pidgeon, both of Cardiff University, U.K., in their paper, “The Psychological Distance of Climate Change,” which also appears in the June issue of *Risk Analysis*. To analyze public perceptions of climate change risk, the researchers focused on “psychological distance” in promoting action and the significance of uncertainty as a justification for inaction. Survey data for the study were collected using computer assisted personal interviews of a nationally representative sample of 1,822 of the United Kingdom’s population between January and March 2010. To understand the psychological dimensions of distance in relation to climate change, the researchers assessed geographical, social, and temporal (or time-related) distance, as well as uncertainty.

Geographically, 52.6 percent of survey respondents agreed with the statement that climate change would mostly affect their local areas, compared with 30 percent who disagreed. Socially, 44.6 percent agreed that climate change would impact people like themselves, compared with 32.3 percent who disagreed. Temporally, 41 percent indicated that Britain is feeling already the effects of climate change, compared with less than 15 percent who indicated it would never occur or would be felt beyond the next 100 years. Regarding uncertainty, 47 percent of respondents said that climate change is caused by a combination of human activity and natural processes, 31 percent said it is caused mostly or entirely by human activity, and 18 percent said it has mostly or entirely natural causes.

The authors note that “generally lower psychological distance was associated with higher concern about climate change,” and thus risk communications should focus on making the problem psychologically closer. However, they add, although personal, local and “closer considerations of climate change” are important in promoting concern, to promote action it may be important to highlight the global impacts of climate change. Together, these two papers shed light on the basis of attitudes toward climate change in the United States and the U.K. at a time of growing scientific concern and political debate over the issue.

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Note to editors: The two studies are available upon request from Steve Gibb or here:

<http://onlinelibrary.wiley.com/doi/10.1111/j.1539-6924.2012.01801.x/full>

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