

Using IT to Compress Perceived Time and Space in How People Think About Global Change: A Step Towards Behavioral Change

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Climate change ranks very low on Americans' priorities for action when compared to countless other issues such as job losses, crime, debt and terrorism, just to name a few. This unfortunate situation is a consequence, at least in part, of the relatively large scales of time and space over which climate change is perceived to be taking place, compared to the usual scope of human decision making. This perception of "far off in the future" consequences holds despite growing evidence that climate change impacts are already upon us with more intensified cycles of flood, drought, fire, and food shortages.

This project brings together a multi-disciplinary team of researchers to study use of information and communication technologies to compress long-term environmental change to human scales of decision making. Sanders is an expert in flood simulation, Keller specializes in behavioral analysis, and Tomlinson studies information technology and interactive visualization.

Flooding has been chosen as a focus for this study because it is strongly linked to climate change, based on intensified weather systems and sea level rise, and many Americans are engaged with it at some level (e.g., flood insurance).



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Answer a survey regarding flooding.

We are conducting a survey of people's attitudes about sea level rise and its impact on the United States. Huntington Beach has been identified in a recent statewide assessment as being particularly vulnerable to future coastal flooding during winter storms. The series of questions that follow will help us understand more about how people perceive flood risks.

Q1: Enter the last digit of your primary phone number.

Q2: What country do you live in?

Q3: If you live in the United States or Canada, enter your postal (zip) code.

Q4: What percentage of all the people you know live in the United States? %

Q5: What is the closest major city to your home? yes no

Q6: Would you vote in favor of a government program to fund flood protection in that city? yes no

Q7: If the government is not going to pay for it, how much money would you donate for flood protection for that city?
(Please specify the monetary units.)

Q8: If you had to choose between two projects in that city costing the same amount, would you choose the project on flood protection or the project on park improvement? flood park

Q9: Have you ever experienced a flood caused by natural events? If so, please describe.

Using visualization technology such as Google Earth, and survey technology such as Mechanical Turk and Survey Monkey, the group plans to create online systems that can help users personalize future flood impacts, not only through individual consequences (e.g., home impacted by sea level rise) but through social networks.

By understanding how people make decisions about long-term environmental hazards, and how people respond to different forms of personalized climate change impacts, the team seeks to develop science and technology that can be used to improve the efficacy of climate change mitigation and adaptation efforts.