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Tapping Perceptions of Water Use and Water Systems

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152 Link Hall

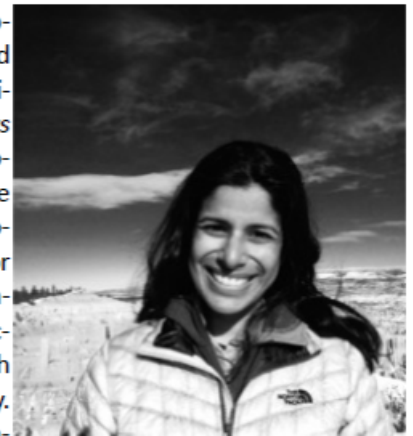
ABSTRACT

Moment by moment we consciously or subconsciously make decisions about water use. How accurate is our understanding of the magnitude of water we use? If we need to decrease water use, due to personal or societal constraints, do we know which changes in behavior are most effective? Do we understand the system of interconnected processes that are required to deliver potable water to the home and what happens to the water once it leaves the home? Here I show that perceptions of water use and water systems are rife with systematic and sometimes large inaccuracies. Notably, participants tend to underestimate water use on average and compress differences between activities, especially for activities that use a lot of water. Participants tend to believe that curtailing their activities (doing the same behavior but less of it, such as taking a shorter shower) are among the most effective ways to decrease household water use as compared to adopting efficient technologies – for example, installing a low-flow toilet. With regard to systems thinking, 1 in 5 student participants had untreated water returning to the natural environment, 56% did not draw a water treatment plant, and 71% did not draw a wastewater treatment plant. For the majority of non-environmental students, the water system stops at the home. I will also discuss a working project, an online interactive game called WaterWorks, designed to teach players about the water system, before soliciting your ideas.

BIO

Shahzeen Attari's research focuses on the psychology of resource use. In particular, her research spans work on perceptions, motivations, and biases of how people understand complex systems and use natural resources. Her papers entitled *Public perceptions of energy consumption and savings* and *Perceptions of water use* were both published in the Proceedings of the National Academies of Sciences, and have been summarized in a variety of venues, including The Economist, New York Times, and BBC. She is an Assistant Professor at the School of Public and Environmental Affairs (SPEA) at Indiana University Bloomington. Previously, she was a postdoctoral fellow at the Earth Institute and the Center for Research on Environmental Decisions (CRED) at Columbia University. She holds a PhD in Civil and Environmental Engineering & Engineering and Public Policy from Carnegie Mellon University, and a Bachelors of Science in Engineering Physics from University of Illinois at Urbana-Champaign. For more information:

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