

Communicating About Water Resources: What We Can Learn from Surveys and Experiments

Andrew R. Binder

Assistant Professor

Department of Communication



This material is based upon work supported by a grant from the U.S. National Science Foundation (#CMMI-1233197). Any opinions, findings, and conclusions or recommendations expressed in this material are those of the authors and do not necessarily reflect the views of the National Science Foundation.

Overview

Communication Research and Water Resources

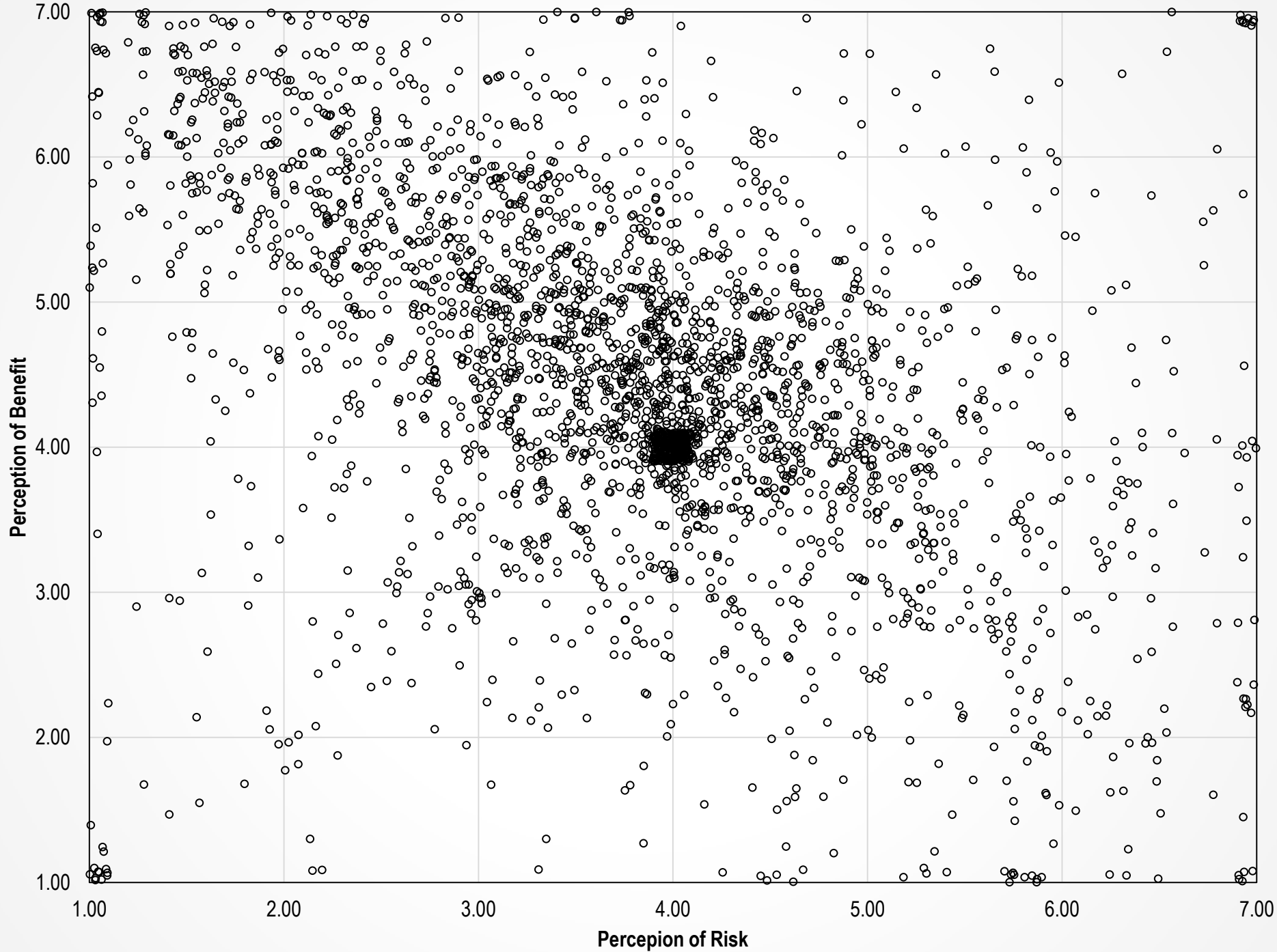
- How might people respond to the prospect of using new water resource technologies in their communities?
- What types of scenarios and messages might be effective or ineffective in encouraging adoption of reclaimed water?

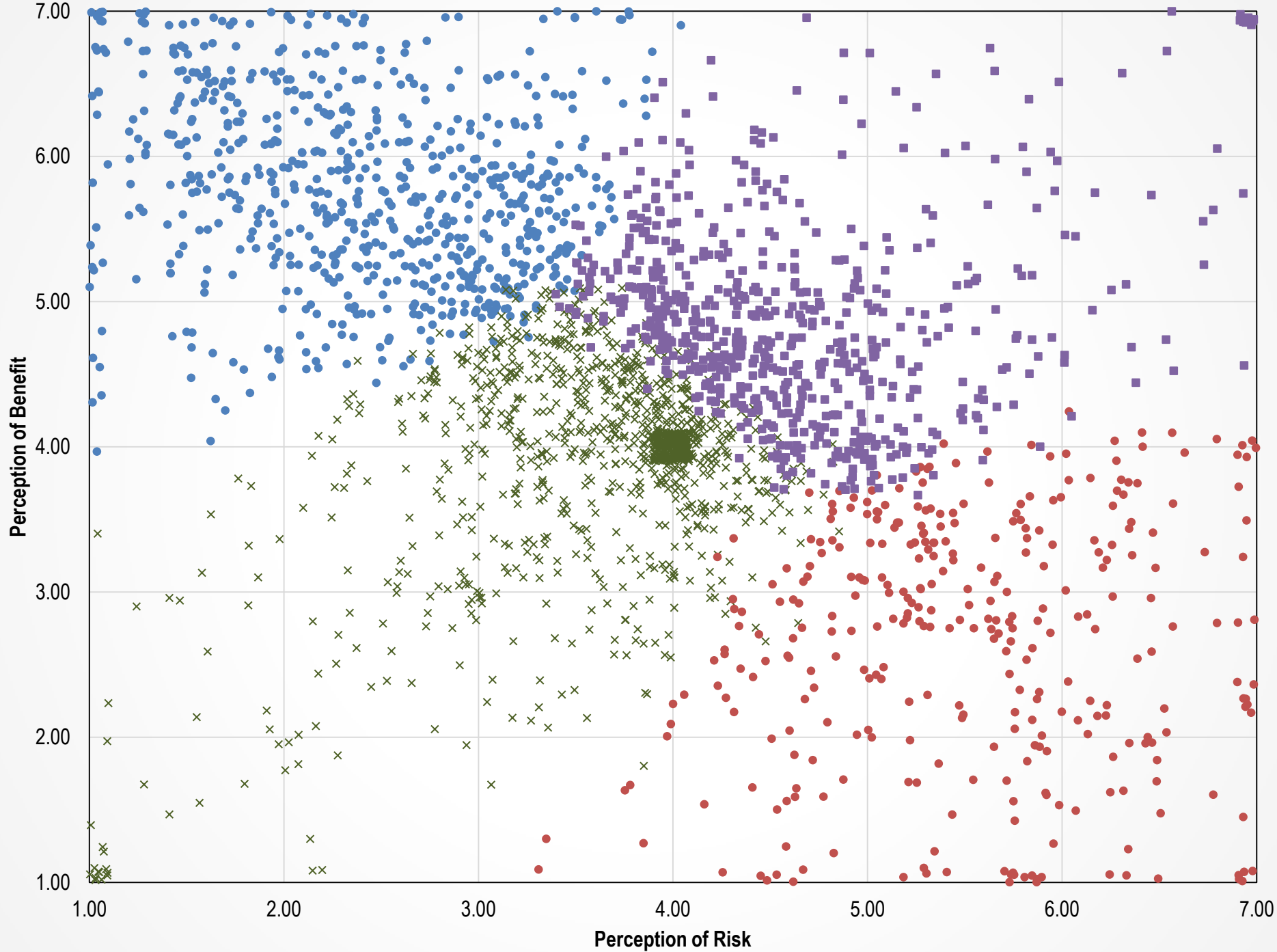
Surveys

Analyzing 'Risk Publics' for New Technologies

- Citizens intuitively evaluate the risks and benefits of all kinds of technologies
- Citizen perceptions seem to be important, as we've learned from Milwaukee in 1993 and 'anti-fluoridationist' movements

Reclaimed water: Could it be successful?





Surveys

Simulating the Dynamics of Communities

- How do these different groups interact with each other?
- How do those interactions shape overall community acceptance of a technology?

Turns out that community acceptance prevails, but not in a linear way. Acceptance is negotiated over time, giving us insight into infrastructure policies for implementation.

Experiments

Experiments overcome some limitations of surveys. In communication research, we often focus on measuring the influence of messages on some outcome.

Again, in the context of reclaimed water, what types of messages might influence the likelihood of citizens using the water?

Experiments

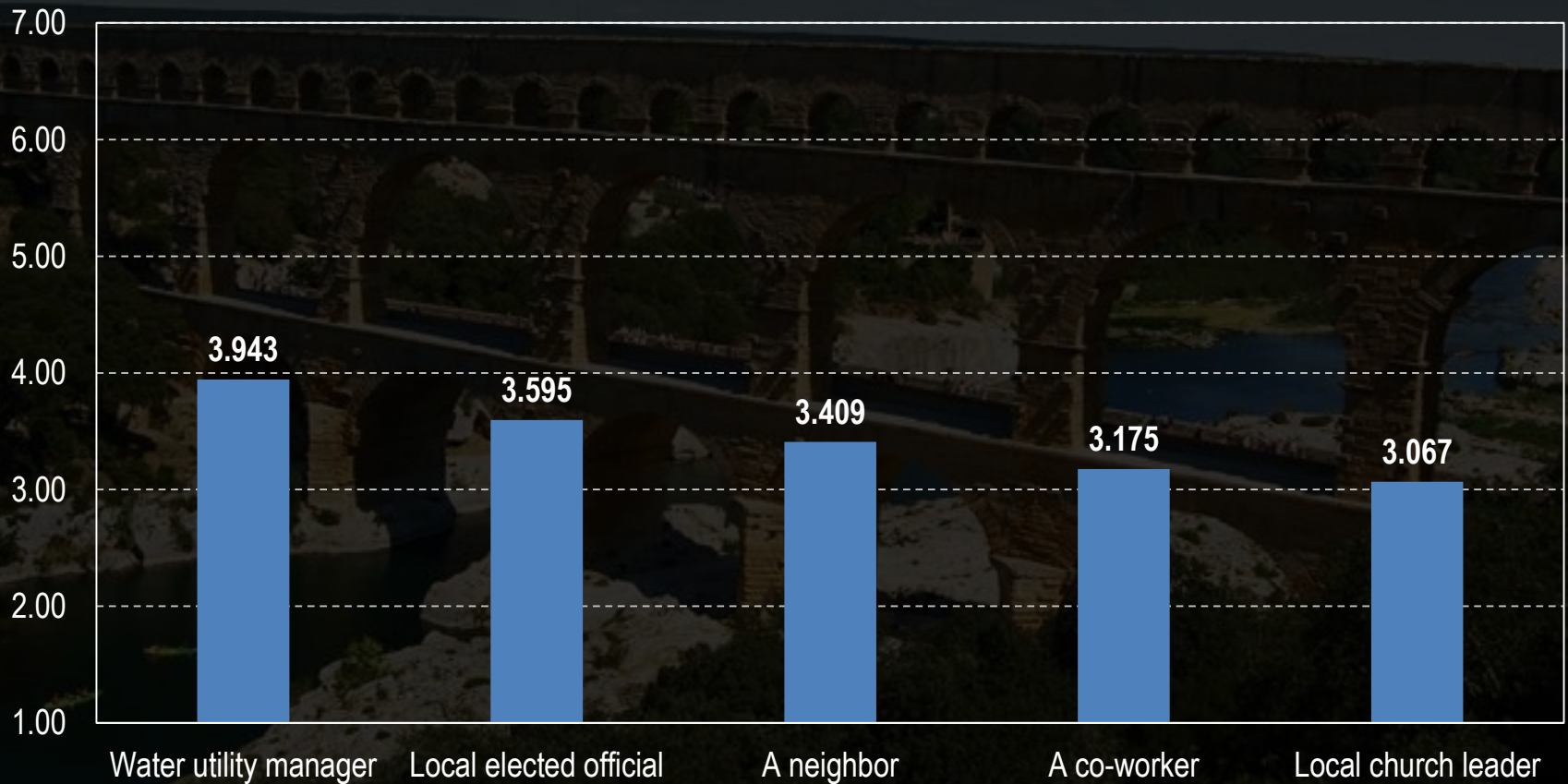
Experiment 1:

Imagine that the manager of your local water utility asked you to use less water at your residence.

- Varied by opinion leader and
- Different abstract versus concrete behaviors

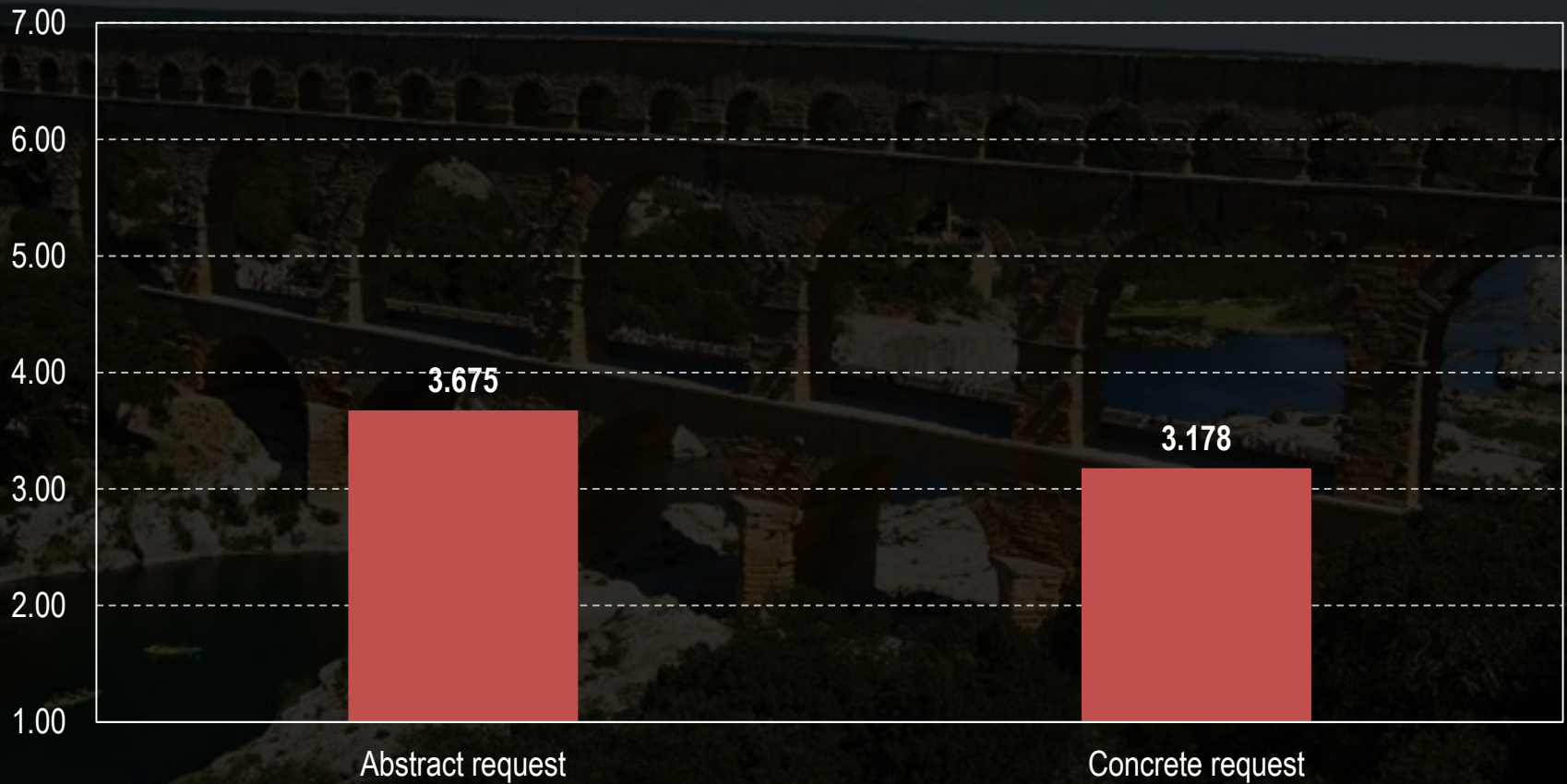
Experiments

How likely would you be to comply with that request? Coming from ...



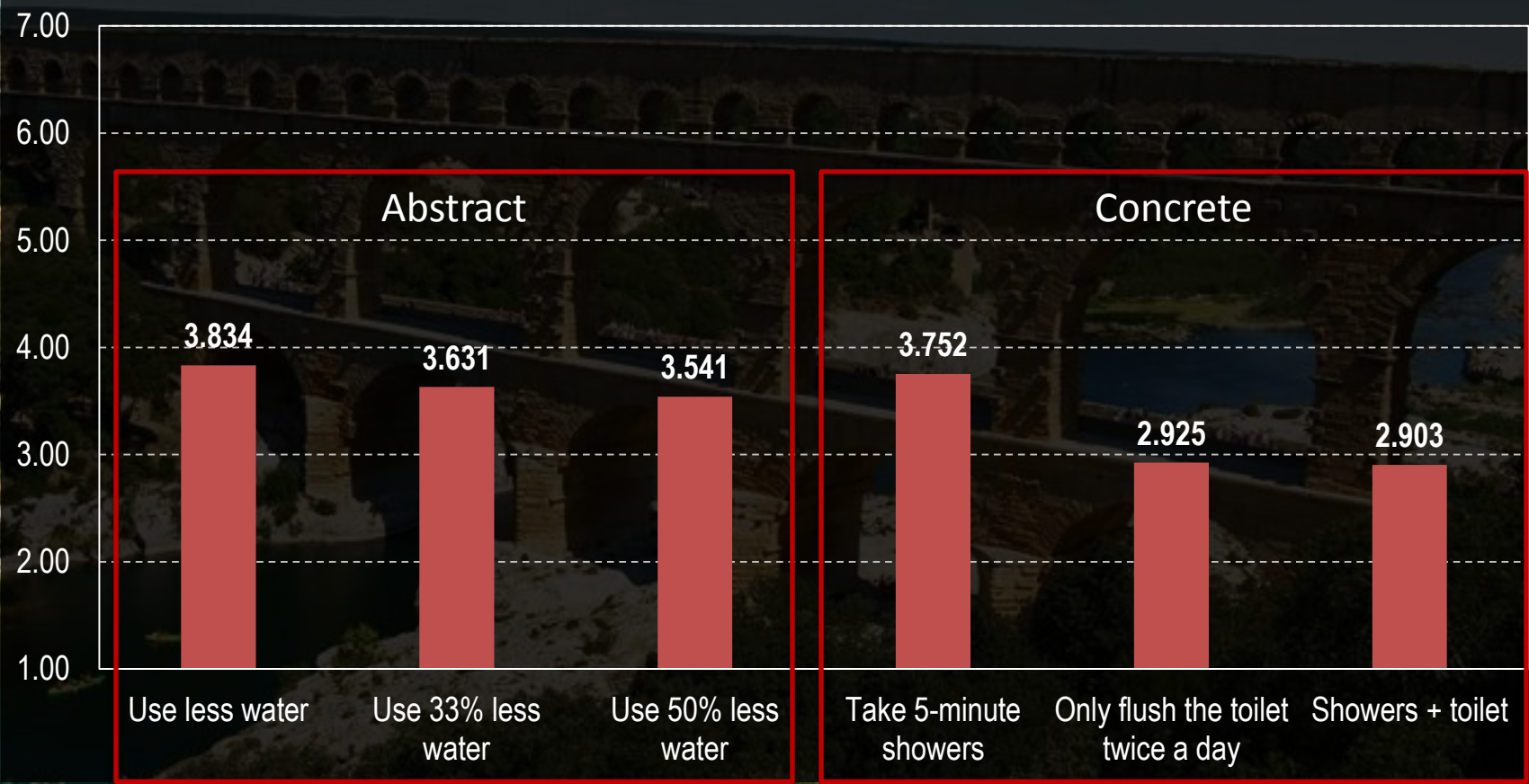
Experiments

How likely would you be to comply with that request to ... ?



Experiments

How likely would you be to comply with that request to ... ?



Experiments

How likely would you be to comply with that request? Coming from ...



Experiments

What the experiment shows us ...

- Who could make for a good messenger
- What kinds of requests seem reasonable
- What the outcome might look like

In addition to this more exploratory look at reclaimed water, we also looked at financial incentives for adopting reclaimed water.

Experiments

Experiment 2:

Imagine your community would like to build infrastructure to deliver reclaimed water to residents who are interested in using it. To pay for this water system, every household in the community would have to pay no additional surcharge in their monthly water bill. Each household that chooses to use reclaimed water would need to be hooked up to this new system. The water utility would do this for those people, and they would receive no incentive for signing up in the program. Finally, for those people who chose to use reclaimed water, their monthly water bill would stay about the same.

Experiments

Hypotheses:

1. Most attractive option = Reduced bill, large rebate, no surcharge
2. Least attractive option = Same bill, no rebate, bigger surcharge

Experiments

Results:

1. Most attractive option = Reduced bill, no rebate, smaller surcharge
2. Least attractive option = Same bill, no rebate, bigger surcharge

Biggest deciding factor? Whether or not the overall household water bill stays the same or if it gets reduced by a small amount.

Conclusions

Communication Research and Water Resources

- Integrating people more centrally into models of natural resources, especially taking into account the systematic nature of human behavior.
- Interdisciplinary collaborations to bridge the social science/engineering/natural sciences divide.
- Surveys and experiments to answer targeted questions about consumer attitudes and behaviors.