Communicating a Coastal Crisis: Issue Presentation's Influence on Environmental Attitudes and Behavior

Raleigh Goodwin (University of Oregon) | Dr. Jason Harman (Louisiana State University)

University of Oregon | College of Arts and Sciences | LSU Louisiana State University

Background

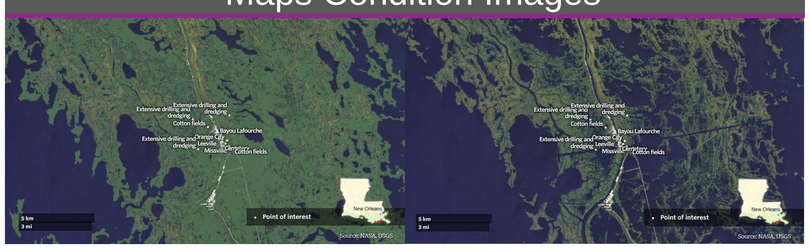
- Presenting information on climate change can help to change peoples' attitudes. This does not always translate into proactive behavior, such as donating to an environmental organization.[1]
- We tested interventions that might increase pro-environmental behavior regarding the problem of coastal erosion in Louisiana.
- The five interventions differed by their use of information provision (IP) or norms and priming (NP).

Methods

- 389 undergraduates completed the experiment online.
- All participants read background information about Louisiana coastal erosion. Conditions were randomly assigned.
- Participants completed assessments of their attitudes, received either one of five interventions or the Control, indicated the amount of money they would like to donate to a pro-coastal organization, and once again completed attitude assessments.
- Various demographic measures were also taken, some of which are included in exploratory analyses.

Condition	Description
State Age[2]	Longer past implies longer future.[3] Primes participants to consider Louisiana as a relatively old state.
Legacy[4]	Decreases temporal discounting by increasing psychological closeness to future generations.
Social Norms[5]	Informs participants of the descriptive social norm that most Louisianans value coastal protection.
Maps	Presents land loss maps, the main science communication tool used for this issue.
Numbers	Frames commonly-used land loss statistics in the context of participants' lives.
Control	No additional information.

Maps Condition Images



Leeville, LA, in 1932 (left) and 2009 (right). The Maps condition presents these images to participants to illustrate land loss in three disappearing communities.

Dependent Variables: Attitude

Attitudes towards coastal erosion

- Example item: "Louisiana coastal erosion is a problem that will negatively affect me during my lifetime."

Attitudes towards climate change

- Example item: "Climate change is an urgent problem that requires immediate action."

- Seven-point Likert scale items that ranged from "strongly disagree" to "strongly agree"

Dependent Variables: Donation Behavior

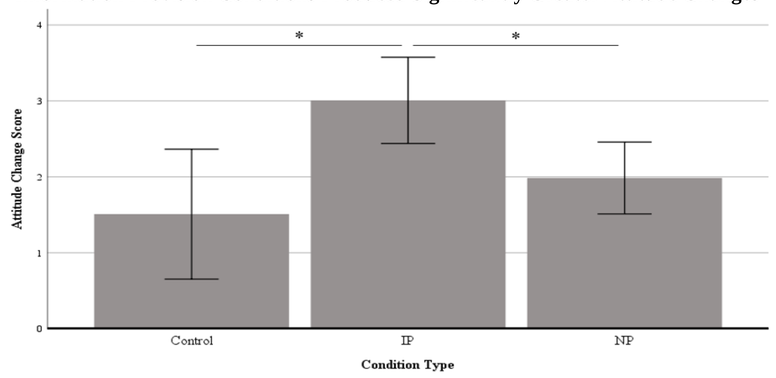
Participants were told that they have been entered in a raffle to win $100 and were given the opportunity to donate a portion of those winnings to a pro-coastal organization in Louisiana.

Hypothesis

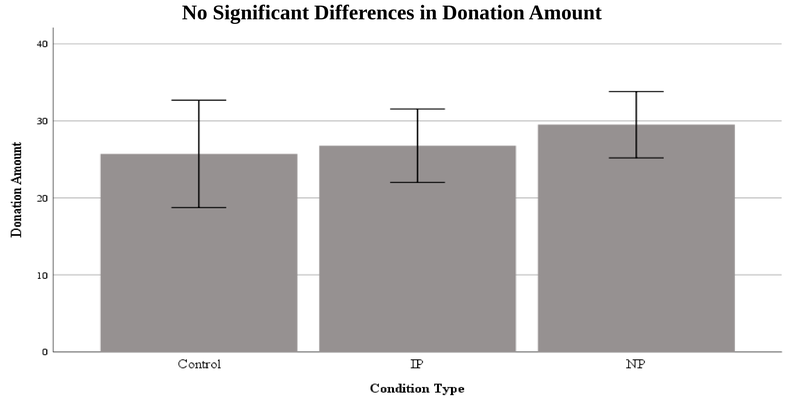
For both dependent variables, **State Age, Legacy, and Social Norms (Norms and Priming, or "NP")** conditions will perform best, followed by the **Maps and Numbers (Information Provision, or "IP")** conditions, and the Control will perform the worst.

Results

Information Provision Conditions Produced Significantly Greater Attitude Changes

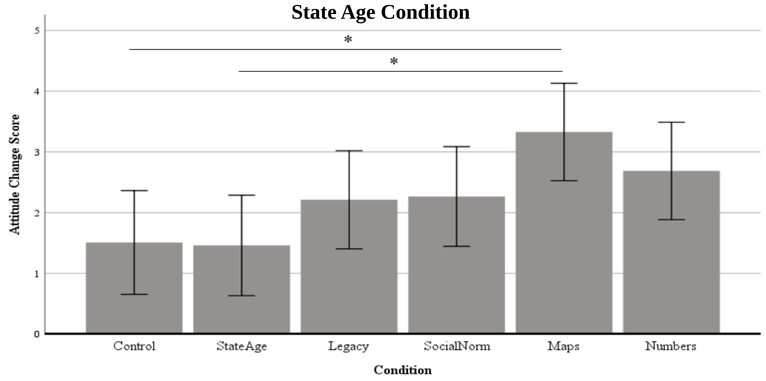


No Significant Differences in Donation Amount

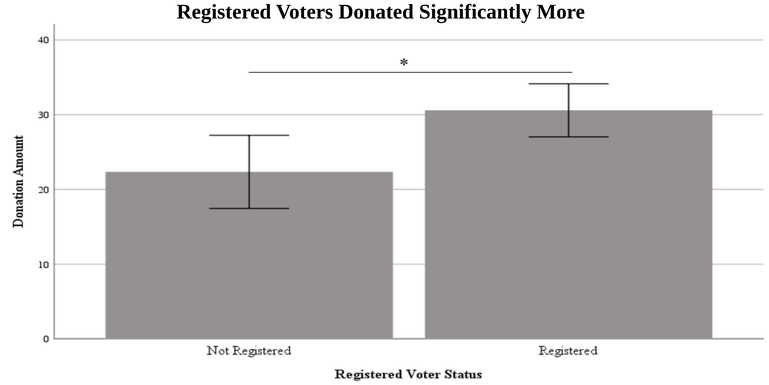


Exploratory Analyses

Maps Condition Produced Significantly Greater Attitude Changes Than Control and State Age Condition



Registered Voters Donated Significantly More



Discussion

- Differences between condition type on attitude changes were significant, but differences between condition type on donation amount were not.
- Replication of Deryugina & Shurchkov (2016): While interventions significantly affected attitude changes, they were not successful in promoting behavioral changes.
- Attitudes significantly predict behavior.
- Participants who were registered to vote were willing to donate significantly more money on average than those who were not registered to vote, an effect that could be related to one's sense of political self-efficacy.
- Future directions include analysis of follow-up attitude data.

References

1. Deryugina, T. & Shurchkov, O. (2016). The effect of information provision on public about climate change. *Plos ONE*, *11*(4).
2. Hershfield, H. E., Bang, H. M., & Weber, E. U. (2014). National differences in environmental concern and performance are predicted by country age. *Psychological Science, 25*(1), 152-160.
3. Gott, J. R. (1993). Implications of the Copernican principle for our future prospects. *Nature, 363,* 315–319.
4. Zaval, L., Markowitz, E. M., & Weber, E. U. (2015). How will I be remembered? Conserving the environment for the sake of one's legacy. *Psychological Science*, 26(2), 231-236.
5. Burger, J. M., & Shelton, M. (2011). Changing everyday health behaviors through descriptive norm manipulations. *Social Influence, 6*(2), 69-77.