



Message Source and Argument Impact on Water Opinions and Behaviors

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Abstract

National hybrid-study of the general public in summer 2016 asked participants to read manipulated news articles covering water scarcity and pollution. The experimental procedure varied sources of information in the articles as well as the types of supporting data cited. Despite manipulations of source and information factors, only the political ideology of the participants as well as their own scarcity/pollution experience influenced their perceptions/attitudes/opinions toward the story content and water issues in general.

Study Foundation

Credibility of information in non-environmental contexts has shown to be influenced by perceived bias of the spokesperson presenting the information and the organization for whom he/she works. Ultimately the research suggests that paid spokespersons and those working for non-governmental entities are less credible and therefore less persuasive and convincing (Callison, 2001, 2002, 2004).

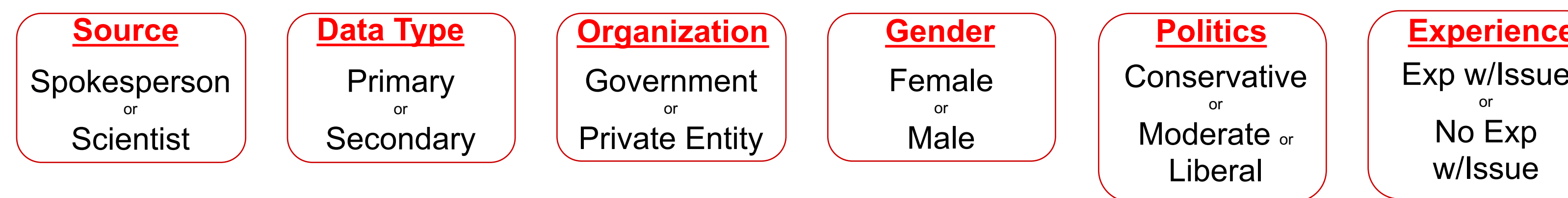
The American public largely views environmental issues differently based on political ideology and affiliation. Overall, self-identified Liberals express more pro-active attitudes toward environmental issues than self-identified Conservatives (Dunlap, Xiao & McCright, 2001).

When examining political ideology, Conservatives are more likely to question and lose trust in climate scientists than Liberals. In terms of political affiliation, Democrats are the least likely group (compared to Republicans, Independents, other party affiliations, and those who have no party affiliation) to lose trust in climate scientists (Leiserowitz et al., 2013).

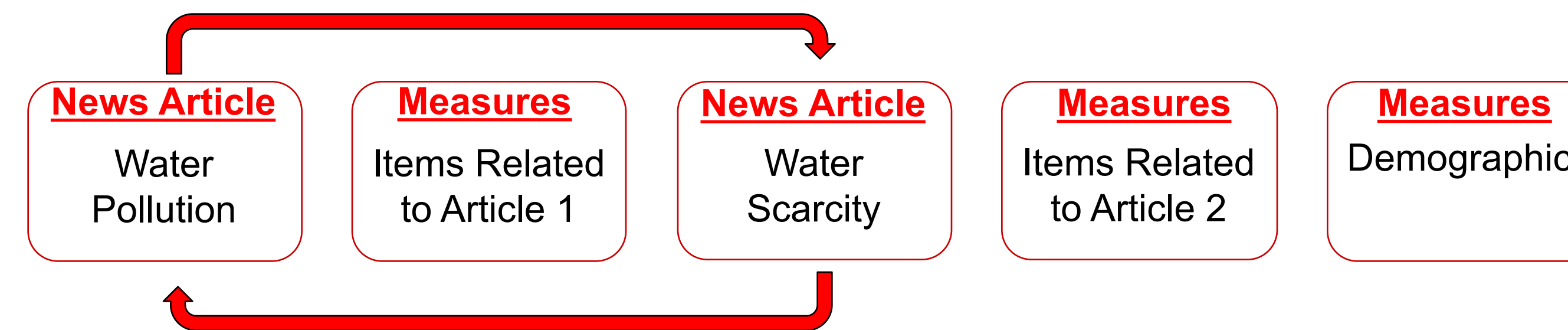
Method

- Data nationally collected on July 8, 2016, with an N = 498
- Participants recruited using Amazon's Mechanical Turk (MTurk) & paid 50 cents each
- Experiment hosted on Qualtrics and then linked to MTurk's participant database
- All measures were rotated and the order of dependent measures was randomized

Fully Crossed Factorial Design



Experimental Procedure



Study Data

Construct	Eigenvalue	Reliability		
Scared	2.10	.892	Male	59.0%
Worried	3.38	.938	Female	41.0%
Threatening	1.60	.740	Conserv.	21.2%
Topic Skepticism	2.91	.818	Moderate	32.2%
Importance of Issue	1.72	.835	Liberal	46.6%
Behavioral Change	1.72	.836	Attended HS	8.4%
			Some College	29.9%
			College Grad	44.4%
			Grad Degree	17.3%
			Ave. Age	38.8

RQ1: How does political ideology influence perceptions/expected behaviors related to water scarcity/pollution?

Table 1. Responses by Scenario and Political Identity

	Scarcity			Pollution			Overall		
	Lib	Mod	Con	Lib	Mod	Con	Lib	Mod	Con
Scared	5.94 ^a	5.42 ^{ab}	4.86 ^b	6.12 ^a	5.51 ^{ab}	5.09 ^b	6.04 ^a	5.47 ^{ab}	4.98 ^b
Worried	7.23 ^a	6.55 ^{ab}	6.04 ^b	7.57 ^a	7.06 ^{ab}	6.32 ^b	7.39 ^a	6.79 ^{ab}	6.18 ^b
Threatening	7.36 ^a	6.95 ^{ab}	6.10 ^b	7.38 ^a	6.93 ^{ab}	6.20 ^b	7.36 ^a	6.93 ^{ab}	6.13 ^b
Topic Skepticism	2.65 ^a	3.16 ^{ab}	3.58 ^b	2.55 ^a	3.06 ^{ab}	3.42 ^b	2.60 ^a	3.11 ^{ab}	3.50 ^b
Important Issue	8.29 ^a	7.68 ^{ab}	6.98 ^b	8.30 ^a	7.77 ^{ab}	7.29 ^b	8.30 ^a	7.72 ^{ab}	7.15 ^b
Change Actions	5.32 ^a	4.94 ^{ab}	4.75 ^b	5.25 ^a	5.05 ^{ab}	4.62 ^b	5.28 ^a	4.99 ^{ab}	4.68 ^b

Note: All horizontal means within scenario not sharing a superscript letter vary significantly by SNK post hoc tests.

RQ2: How does experience with water scarcity/pollution influence perceptions/expected behaviors?

Table 2. Responses by Politics and Experience

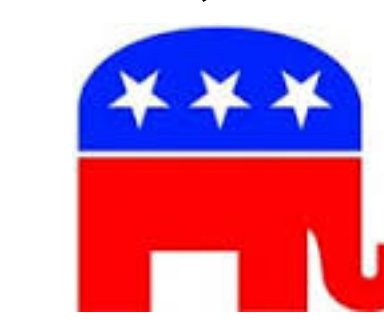
	Liberal		Moderate		Conservative	
	Low Exp	High Exp	Low Exp	High Exp	Low Exp	High Exp
Scared ^{Scarcity}	5.54 ^a	6.34 ^b	5.01 ^a	5.70 ^b	4.27 ^a	5.71 ^b
Scared ^{Pollution}	5.69 ^a	6.46 ^b	4.78 ^a	6.04 ^b	4.02 ^a	6.19 ^b
Worried ^{Scarcity}	7.05 ^a	7.45 ^b	6.10 ^a	6.89 ^b	5.27 ^a	7.08 ^b
Worried ^{Pollution}	7.26 ^a	7.84 ^b	6.82 ^a	7.23 ^b	5.55 ^a	7.14 ^b
Threatening ^{Scarcity}	6.94 ^a	7.77 ^b	6.28 ^a	7.46 ^b	5.29 ^a	7.16 ^b
Threatening ^{Pollution}	6.94 ^a	7.77 ^b	6.48 ^a	7.26 ^b	5.10 ^a	7.30 ^b
Topic Skeptic ^{Scarcity}	2.28 ^a	3.07 ^b	2.79 ^a	3.41 ^b	3.43 ^a	3.77 ^b
Topic Skeptic ^{Pollution}	2.30 ^a	2.77 ^b	2.65 ^a	3.35 ^b	3.49 ^a	3.35 ^b
Import Issue ^{Scarcity}	8.35 ^a	8.22 ^b	7.83 ^a	7.61 ^b	6.44 ^a	7.67 ^b
Import Issue ^{Pollution}	8.24 ^a	8.37 ^b	8.10 ^a	7.55 ^b	6.90 ^a	7.69 ^b
Change Actions ^{Scarcity}	5.22 ^a	5.44 ^b	4.80 ^a	5.07 ^b	4.38 ^a	5.28 ^b
Change Actions ^{Pollution}	5.00 ^a	5.47 ^b	4.91 ^a	5.14 ^b	4.17 ^a	5.13 ^b

Note: All horizontal means within political category not sharing a superscript letter vary significantly by SNK post hoc tests. Capital superscript indicates p value less than .05. Lower case superscript indicates p value more than .05 but less than .10

Water Scarcity

"This issue makes me scared."
"I am worried about this issue."
"This issue is threatening."
"I plan to change my behavior to correct this issue."

"This issue is important."
"I trust the data regarding this issue."



Water Pollution

Discussion

Least important to perceptions or future behavior was what was said and who said it.

Most important was a person's political ideology as well as a person's own personal experience with water scarcity or pollution.

Key Findings

Regarding scarcity & pollution:

- Liberals are more fearful
- Liberals are more worried
- Liberals see the issues as more threatening
- Liberals are more trusting of the data
- Liberals are more likely to see issue importance
- Liberals are more likely to plan behavior change

Related to having personally experienced issues, all ideologies with experience are:

- More fearful
- More worried
- See issues as more threatening

BUT, regardless of experience

- Conservatives are skeptical of data
- Liberal and moderates see issue as important
- All Liberals plan to change behavior, while only those conservatives with experience plan the same