

Optimal Message Framing for Environmental Information

Tiffani Ng, Rachel Jespersen, & Mindy Engle-Friedman
Baruch College, City University of New York

Baruch COLLEGE

CUNY The City University of New York

ABSTRACT

Positively and negatively framed environmental messages were presented to participants and assessed for their efficacy to influence sustainable behaviors. We did not find that either positive or negative messages had a significant effect on the decision to write a letter to an official supporting an environmental cause. Additionally, we did not find a significant difference between positive and negative messages on influencing the choice to donate to an environmental cause; most participants (n=58) chose to donate regardless of condition or gender. However, several personality and attitudinal correlates were related to the decision to donate. We found that people who donated had significantly higher scores on Agreeableness, lower scores on Social Dominance Orientation, rated their interest in politics as higher, and tended to support science compared to people who chose not to donate. These findings suggest that certain types of personalities and attitudes are more likely to engage in sustainable charitable behavior.

INTRODUCTION

Framing can be defined as a cognitive heuristic in which people tend to reach conclusions based on the 'framework' within which a situation is presented (The Penguin Dictionary of Psychology, 2009). Previous research suggests that different types of message framing may affect readers' willingness to engage with and act upon the message. These types of message frames include fear appeal, positively-framed, negatively-framed, and frames involving social influence or social norms.

Research has found that fear appeal results in increased recycling behavior (Burn and Oskamp, 1986); that positive messages in which the benefits of performing a behavior are highlighted are more likely to increase desirable behaviors compared to negatively framed messages in which the consequences of not performing a behavior are highlighted (Durdan, Leeder & Hecht, 1985; Lord, 1994); and that social norms can increase sustainable behavior (Cialdini, Reno & Kallgren, 1990; Wang and Katzev, 1990).

For messages about climate change and the environment to be effective readers must believe in the credibility of the message, must believe in the message itself, must feel that the message is relevant to them, and must want to act on the message or change their behavior in response to it. This study investigated whether positively or negatively framed messages are more effective at encouraging readers to engage with and act on sustainable messages and whether different types of messages appeal to people with different personalities or values.

HYPOTHESES

H1: Positively framed messages will be more effective than negatively framed messages at encouraging people to write letters and donate money to support an environmental cause

H2: Messages that are negatively framed or appeal to fear will be more effective for people who are already concerned about the environment. These people will be more likely to write letters or donate money to support an environmental cause.

H3: Those who are more socially dominant will be less likely to write a letter or donate to support an environmental cause

H4: Those who score high on Agreeableness will be more likely to choose to write a letter or donate to support an environmental cause

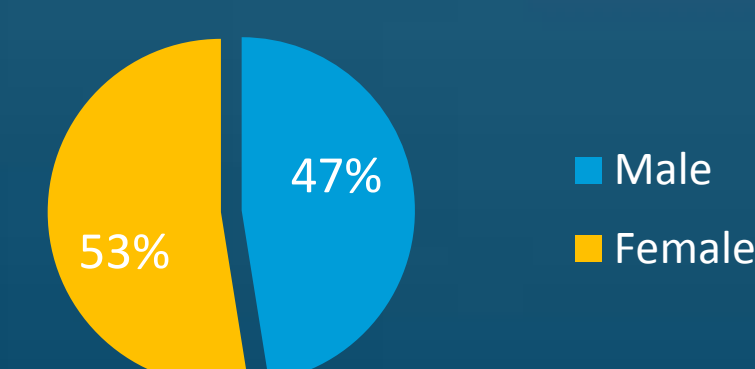
METHODS

- Big-Five Personality Inventory (John, Donahue, & Kentall, 1991)** - Assesses personality on the following domains: openness, conscientiousness, extraversion, agreeableness, and neuroticism
- World Values Survey (WVS 2010-2012 Wave, 2011)** - A series of questions taken from the World Values Survey; measures attitudes about government, the economy, the environment, science, technology, and human rights
- Social Dominance Orientation Scale (Pratto, Sidanius, Stallworth, Bertram & Malle, 1994)** - Predictor of hierarchy-enhancing attitudes and behavior
- Message Framing** - Participants were randomly assigned to read one of two passages related to water resources in New York State. To assess whether message frames affected behaviors related to environmental sustainability
 - Positively-framed message focused on the benefits of protecting water resources
 - Negatively-framed message focused on the consequences of not protecting water resources
- Donation Questionnaire** - Participants were told donations were being collected to print flyers to spread information about the importance of conserving water at their home campus
 - Given choice to donate their allotted printing money
 - Specified what percentage of their printing money they wanted to donate
- Letter Choice** - Participants asked if they would like to write a letter to a local official about the importance of protecting water resources in New York
- Demographic Questionnaire** -- Collected data on age, gender, ethnicity, class standing, country of origin, and comfort with English as a written, read, and spoken language.

DEMOGRAPHIC INFORMATION

	Sample	Mean	Standard dev.	Minimum	Maximum
Male	n=53	25.58 yrs	6.56 yrs	21 yrs	53 yrs
Female	n=47	25.79 yrs	4.27 yrs	21 yrs	38 yrs
Total	N=100	25.68 yrs	5.58 yrs	21 yrs	53 yrs

Gender of Participants



RESULTS

H1: Positively framed messages will be more effective than negatively framed messages at encouraging people to write letters and donate money to support an environmental cause

- No significant difference found between message frames on the decision to write a letter, $t(98) = .537, p = .592$
- No significant difference found between message frames on the decision to donate, $t(98) = .771, p = .442$
- No significant correlation found between message frames on the amount donated, $r(59) = .118, p = .372$

H2: Messages that are negatively framed or appeal to fear will be more effective for people who are already concerned about the environment. These people will be more likely to write letters or donate money to support an environmental cause.

- No significant difference on the choice to write a letter for those who received a negatively framed message and expressed concern for the environment, $t(49) = .694, p = .491$
- No significant difference on the choice to write a donate for those who received a negatively framed message and expressed concern for the environment, $t(49) = -.638, p = .526$

H3: Participants who are more socially dominant (high scores on the SDO) will be less likely to support an environmental cause

- No correlation between social dominance and letter writing, $r(59) = -.046, p = .727$
- Participants who donated ($M=40.66, SD=18.68$) scored significantly lower on Social Dominance than those who didn't ($M=47.8, SD=15.9$), $t(97)=-1.99, p=.049$
- We found a negative correlation between Social Dominance and donation amount, $r(59) = -.28, p=.03$

H4: Participants who are high in Agreeableness will be more likely to support an environmental cause

- No correlation between Agreeableness and choice to write a letter, $r(100) = 0.58, p = .566$
- Participants who donated ($M=3.90, SD=.52$) had significantly higher scores on Agreeableness than people who didn't ($M=3.63, SD=.60$), $t(97)=2.14, p=.035$
- No correlation between higher scores on Agreeableness and donation amount, $r(59) = .079, p = .551$

Other Findings:

- Participants who chose to donate rated their interest in politics as higher ($M=2.53, SD=.92$) than those who did not ($M=2.2, SD=.93$), $t(97)=-1.79, p=.075$.
- Participants who chose to donate had significantly higher scores ($M=45.6, SD=8.2$) on a scale measuring support for science than those who didn't ($M=41.0, SD=9.01$), $t(97)=2.62, p=.010$

SUMMARY & IMPLICATIONS

- Receiving a positively or negatively framed message had no effect on outcomes on the choice to write a letter, the choice to donate, or the amount donated
- Social Dominance Orientation showed a negative correlation with likelihood of donating and donation amount
- Those who donated tended to score higher on Agreeableness, political interest, and support for science
- People are willing to contribute in a passive way, but not if it takes extra time/effort
- Those who do not believe in social dominance are more likely to participate in activism
- People may be equally likely to engage with positive and negative messages

LIMITATIONS

- Very few people chose to write the letter compared to a majority of participants choosing to donate
 - Variable was not sensitive enough, which made it difficult to find statistical significance
- Distinction between the two conditions was not strong enough, and sample sizes for both groups was not large enough
- Sample was composed largely of students with a moderate political orientation

FUTURE DIRECTIONS

- Obtain a larger sample for both conditions
- Replicate the study changing the wording of the main dependent variable to make it more sensitive
- Test and alter messages to make them more positive and negative

REFERENCES

- WVS 2010-2012 Wave. (2011). *The World Values Survey*.
- Burn, S. M., & Oskamp, S. (1986). Increasing community recycling with persuasive communication and public commitment. *Journal of Applied Social Psychology, 16*(1), 29-41.
- Cialdini, R. B., Reno, R. R., & Kallgren, C. A. (1990). A focus theory of normative conduct: Recycling the concept of norms to reduce litter in public places. *Journal of Personality and Social Psychology, 58*, 1015-1026.
- Durdan, C. A., Reeder, G. D., & Hecht, P. R. (1985). Litter in a university cafeteria: Demographic data and the use of prompts as an intervention [Abstract]. *Environment and Behavior, 17*(3), 387-404.
- Framing. (2009). In *The Penguin Dictionary of Psychology*. Retrieved from <http://www.credoreference.com/entry/penguinpsyc/framing>
- John, O. P., Donahue, E. M., & Kentle, R. L. (1991). *The Big Five Inventory—Versions 4a and 54*. Berkeley, CA: University of California, Berkeley, Institute of Personality and Social Research.
- John, O. P., Naumann, L. P., & Soto, C. J. (2008). Paradigm shift to the integrative Big Five trait taxonomy: History, measurement, and conceptual issues. In O. P. John, R. W. Robins, & L. A. Pervin (Eds.), *Handbook of personality: Theory and research* (pp. 114-158). New York, NY: Guilford Press.
- Lord, K. R. (1994). Motivating recycling behavior: A quasi-experimental investigation of messages and source strategies. *Psychology and Marketing, 11*(4), 341-358.
- Wang, T. H., & Katzev, R. D. (1990). Group commitment and resource conservation: Two field experiments on promoting recycling. *Journal of Applied Social Psychology, 20*, 265-275.

