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(774) 271-0434
amatthews@ufl.edu

Alexandrea Matthews (MA, University of Florida) is a doctoral student in the College of Journalism and Communications at the University of Florida. Her research interests include strategic science, environmental, and political communication. She is particularly interested in the role of persuasive message techniques in environmental communication and how this relates to political participation.

Jay D. Hmielowski (Ph.D., The Ohio State University) is an associate professor in the Department of Public Relations in the College of Journalism and Communications at the University of Florida. His research interests include political and environmental communication. PO BOX 118400, Gainesville, Fl. 32611 (352) 392-3995 jhmielowski@ufl.edu.

Abstract:

This study addresses polarization by examining how targeted ideological messaging through use of moral cues may stimulate political participation and influence attitudes in support for green energy. Democrats and Republicans continue to disagree about how we should address environmental problems and how to solve the climate crisis. This has resulted in political standstill in moving forward with environmental legislation. While most climate change messaging tends to appeal to the ideals of the Democrat party, we also need to develop approaches that are attractive to Republicans to gain bipartisan support. Based on previous literature from Moral Foundations Theory and the Elaboration Likelihood Model, this project examines how moral cues may trigger differing levels of cognitive processing and how this varies by ideology. Greater cognitive processing has been shown to result in stronger influence on attitude and behavior and may offer evidence of how moral cues have been so effective in persuasion. Across two experiments, this study attempts to expand current literature in four ways: (1) gaining understanding of the mediating role of elaboration in the effectiveness of applying moral cues to influence attitude and behavior in an environmental context; (2) exploring how this relationship varies by ideology to expand knowledge about developing strategic messaging for partisan groups; (3) building understanding of how varying the number of morals affects conservatives; (4) and building on previous literature that found including morals which appeal to both conservatives and liberals will not be alienating to either group. As certain scientific topics have become increasingly politicized and polarized, this study serves to offer science communication professionals a deeper understanding of how to structure messages to address the polarization of science. Understanding how moral cues may be used to identify common bipartisan language may reduce these differences in opinion.
Scope & Purpose:

This study addresses polarization by furthering understanding of how targeted ideological messaging through use of moral cues may stimulate political participation and influence attitudes in support for green energy. Scholars have argued the best approach to implementing environmental policy may come from encouraging public support (Ockwell, et al., 2009). However, recent research shows large differences in opinions between political liberals and conservatives (Tyson et al., 2022). Democrats and Republicans continue to disagree about how we should address environmental issues and how to solve the climate crisis. This has resulted in political standstills in moving forward with legislation and has created a need for more effective persuasive strategies to overcome this ideological gap (Jaffe, 2018). While most climate change messaging tends to appeal to the ideals of the Democrat party (Feinberg & Willer, 2012), we also need to develop approaches that are attractive to Republicans to gain bipartisan support (Jaffe, 2018). This project examines how morals may trigger differing levels of cognitive processing and how this varies by ideology. Greater cognitive processing has been shown to result in stronger influence on attitude and behavior (Petty & Cacioppo, 1979). Through deeper understanding of such targeted messaging, communication professionals could influence individuals on environmental issues regardless of ideological differences.

Expanding Knowledge:

According to Moral Foundations Theory (MFT), there are five universally held morals that are important to most people across cultures (Haidt & Joseph, 2004). Furthermore, certain morals tend to be more important to different groups of people. Political liberals have been found to construct their moral systems based on harm/care and fairness, the “individualizing morals,” while political conservatives base their moral systems equally on all five of the morals, including the three other “binding morals” of loyalty, authority, and sanctity (Graham, Haidt, & Nosek, 2009). Previous studies have shown environmental messages may be constructed with use of specific moral cues to influence groups of individuals, such as Democrats and Republicans, to act more environmentally friendly and support environmental policy (e.g., Wolsko et al., 2016; Kidwell et al., 2013) Hurst & Stern (2019) found use of all five morals was not alienating to liberals, offering evidence this may be a useful tactic for influencing both Democrats and Republicans. Luttel, et al. (2019) also showed that counter-attitudinal messages which included morals were still able to influence attitudes in the direction of the message. However, it is still unclear how moral cues are so effective at influencing attitude and behavior.

Studies from the Elaboration Likelihood Model (ELM) have showed increasing an individual’s motivation to cognitively process information can lead to an increase in persuasion and create stronger, longer-lasting effects on attitude and behavior (Petty & Cacioppo, 1979). Previous application of the ELM has proved successful at influencing individuals in environmental contexts (e.g., Manca, et al., 2019; Powell et al., 2017). Some research has suggested inclusion of moral cues in messages may increase individuals’ level of cognitive elaboration (Petty & Cacioppo, 1986; Luttell, et al. 2019; Skitka, et al., 2021). This may explain the success of moralized messages in persuasion. However, the effect of moral cues on elaboration has not yet been tested, nor the effects of how this may vary by ideology. I previously submitted a paper to the AEJMC’s Annual Conference describing a theoretical model to help explain this relationship and it won the second-place award for Top Student Paper in the
Communication Theory and Methodology Division. This study would now move forward to empirically test this model and fill the current gap in knowledge.

Additionally, some studies have used only the binding morals (e.g., Feinberg & Willer, 2012), whereas others have used all five morals, to appeal to conservatives (e.g., Hurst & Stern, 2019), but it is still unclear what the different effects on conservatives would be from varying the number of morals identified by MFT. As all five of the morals are appealing to conservatives, increased use of the number of morals may have a stronger effect. As such, this study also contributes to the literature by testing these differences. This study also attempts to build on previous research which found use of all five of the morals was not alienating to liberals to find common language that builds bipartisan support. Following the previous research, I will be testing the following hypotheses:

H1. Use of moral framing will increase elaboration compared with the control.

H2. Among liberals, the individualizing morals message will result in the greatest level of elaboration compared with the other messages.

H3. Among liberals, use of all four moral cues will result in greater elaboration compared with the control.

H4. Among conservatives, use of the binding moral cues will result in greater elaboration compared with the control.

H5. Among conservatives, use of all four moral cues will result in the greatest elaboration compared with the other messages.

H6. Participants with a higher level of elaboration will have (a) stronger attitudes and (b) greater behavior intentions toward the topic.

Project Description & Methods:

Across two experiments, this study will test various messages promoting green energy to understand the effects of specific moral cues on attitude and behavior, mediated by level of elaboration. I will also examine how the relationship between moral cues and elaboration is moderated by ideology. Specifically, in study 1, I will test four messages promoting use of offshore wind including one message embedded with the individualizing moral cues (harm/care and fairness), one with two of the binding moral cues (loyalty and sanctity), one with all four moral cues, and an informational control message which contains no morals. The mediator, elaboration, will be tested using an adapted scale developed by Kahlor et al., (2003). The dependent variables will measure participants’ attitudes toward the type of green energy and various political behavior intentions (e.g., signing a petition, contacting a politician, voting, influencing others, etc.) relating to offshore wind. I will run a moderated mediation analysis as depicted in figure 1 below. For study 2, to address the possibility of case-category confound (Kim & Cappella, 2019) I will replicate study 1, except for replacing offshore wind with geothermal energy as the topic. In doing so, I aim to address the replication crisis by determining whether this model applies to other environmental areas (Shrout & Rodgers, 2018).

In each experiment, I will use a sample of participants recruited from the online survey service Amazon Mechanical Turk (MTurk). From MTurk, participants will be directed to Qualtrics and randomly assigned to read one of the four messages. Participants will then be
asked to complete a questionnaire. To determine the number of participants needed for the study, I ran a power analysis using SPSS Sample Power. Based on the analysis for four conditions to achieve 85% power and a medium effect size, it was determined each study would need a total of 100 participants to include groups of both liberals and conservatives.

Figure 1.

**Current Status & Timeline:**

An initial study of 75 undergraduates was conducted to test the salience of different types of green energy. From this test, I selected offshore wind and geothermal energy as the topics of our experiments. I chose to use energy types of low salience to understand whether use of moral cues would increase elaboration with topics participants were not as familiar with. The next steps are as follows:

**February-May 2023** - Awaiting Collaborative Scholar selections  
**June 2023** - Run first experiment on MTurk & conduct analysis  
**July 2023** - Revise stimuli, run second experiment on MTurk, & conduct analysis  
**August 2023-November 2023** - Work on final paper  
**December 2023** - Submit interim report to AEJMC by 12/15/24  
**April 2024** - Final paper completed  
**August 2024** - Present at AEJMC 2024 conference

**Outcomes & Impact:**

Through the collaboration and supervision of my faculty advisor, this project will help me gain more experience in my program of research. The study will expand current literature in the fields of mass communication and science communication by gaining understanding of the mediating role of elaboration in the effectiveness of applying MFT to influence attitude and behavior in an environmental context. It will also explore how this relationship varies by ideology to expand knowledge about developing strategic messaging for partisan groups. Additionally, this study serves to understand how varying the number of morals affects conservatives. By combining the binding and individualizing morals, it also adds to the literature that found including morals which appeal to both conservatives and liberals will not be alienating to either group (i.e., Hurst & Stern, 2019). As certain scientific topics have become increasingly politicized and polarized, this study serves to offer science communication professionals a deeper understanding of how to structure messages to address the polarization of science.
Understanding how moral cues may be used to identify common bipartisan language may reduce these differences in opinion.

Potential Publication Venues:

Potential academic journals I will submit the final paper to include Journalism & Mass Communication Quarterly, Science Communication, Public Understanding of Science, and Environmental Communication.
References


Collaborative Scholars Program Budget

Budget:

<table>
<thead>
<tr>
<th>Study</th>
<th>Cost for Participants</th>
<th>MTurk Fee</th>
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<tr>
<td>Total Amount Requested:</td>
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Budget Description:

I am requesting a total of $1,456 from the Collaborative Scholars Program to complete two studies. I have previously completed an initial test on undergraduate students to determine the topics of the green energy messages and would like to move forward conducting the two experiments with participants from the online survey company, Amazon Mechanical Turk (MTurk). Utilizing MTurk rather than relying on student participants will help achieve a more representative sample (Berinsky et al., 2012). MTurk has been shown to produce higher quality data than platforms such as Prime Panels and other sources of panel data in terms of attention checks, manipulation checks, and completion rate (Chandler et al., 2019; Zhang & Gearhart, 2020).

For each study, participants will be randomly selected to view one of four messages (i.e., three stimuli and a control) on Qualtrics before completing a questionnaire. To determine the number of participants needed for the study, I ran a power analysis using SPSS Sample Power. Based on the analysis for four conditions to achieve 85% power and a medium effect size, it was determined each study would need a total of 100 participants to include groups of both liberals and conservatives. Each experiment will take about 15 minutes to complete. In each experiment, participants will receive $1.00 in compensation after completion of the survey. I will use Qualtrics’ detection services to screen out fraudulent participants using Google’s reCaptcha technology, Relevant ID, and Response Quality options as well as additional attention check questions in the questionnaire. To account for possible participants who have been flagged as not meeting these criteria for high-quality data, I will oversample by 30 percent. As such, I will conduct each study with 520 participants at $1.00 each for a total of $520 per experiment. Additionally, MTurk charges a $0.40 fee per participant which will cost $208 for 520 participants. Including the cost to pay participants and the MTurk fee, this results in $728 per study. To conduct both studies this will cost a total of $1,456.
References


https://doi.org/10.29115/sp-2020-0015
February 20, 2023

To whom it may concern:

I am writing a letter of support for the Association for Education in Journalism and Mass Communication Collaborative Grant application being submitted by Alexandrea Matthews. This is a project that Alexandrea has been working on for several years. During this time, I have served as the academic advisor on this project. My role relative to this project has been to provide Alexandrea with feedback on her ideas, her stimuli, her survey, and serve as the faculty advisor relative to the IRB application.

As noted, this is a project that was initiated by Alexandrea a few years ago after arriving as a PhD student here at the University of Florida. Although I have provided feedback along the way, this is a project that was initiated by Alexandrea.

Moving forward, I will continue to serve as the academic advisor relative to this project. I will continue to provide Alexandrea with feedback on this project as she continues to work on this idea. In this role, I will continue to look at drafts of papers, stimuli, and help run relevant analyses on the data once they have been collected.

Please let me know if you have additional questions about Alexandrea or if you have additional questions about my role relative to the project.

Sincerely,

Jay D. Hmielowski, Ph.D.
Associate Professor
Department of Public Relations
College of Journalism and Communications
University of Florida
RESEARCH INTERESTS
Strategic Communication, Science Communication, Political Communication

EDUCATION
Ph.D. in Mass Communication, ongoing – University of Florida. Jay Hmielowski, Chair
M.A. in Mass Communication, Science Communication track, June 2015, magna cum laude – University of Florida. Debbie Treise, Chair
B.A. in Public Relations, June 2012, cum laude – Bridgewater State University

ACADEMIC CONFERENCE PRESENTATIONS


INDUSTRY CONFERENCE PRESENTATIONS


AWARDS
**TEACHING EXPERIENCE**

**Instructor of Record, University of Florida**
- Public Relations Research (PUR 3500), face-to-face, *Spring 2023*
- Public Relations Campaigns (PUR 4800), face-to-face online, *Summer, 2022*
- Social Media Management (PUR 3622), asynchronous online, *Fall, 2021; Summer, 2022*

**Graduate Teaching Assistant, University of Florida**
- Public Relations Campaigns (PUR 4800)
- Public Relations Research (PUR 3500)
- Social Media Management (PUR 3622)
- Public Relations Ethics (PUR 4203)

**RESEARCH EXPERIENCE**

**Graduate Research Assistant, University of Florida**  January 2022-May 2022
Supervisor: Jay Hmielowski

**Graduate Research Assistant, University of Florida**  August 2020-May 2021
Supervisor: Spiro Kiousis

**Program Evaluator, University of Florida**  March 2014-May 2015
- Conducted and transcribed interviews with program participants to bring together students and faculty of various fields for research collaboration.
- Assisted in evaluation and recommendations for program improvement.

**WORK EXPERIENCE**

**Programs and Events Manager**  December 2015-August 2020
City of New Bedford, Dept. of Parks, Recreation & Beaches & May 2021-Aug. 2021
New Bedford, MA & June 2022

- Developed and managed city-wide programs and events for the department with an emphasis on building public interest and understanding in science and the environment.
- Coordinated communications through public relations, media relations, social media, printed materials, press releases, advertising, and community relationship building.
- Wrote and oversaw grants, contracts, budgets, reporting, and raised an average of $400,000 each year from grants and federally funded programs for the department.
- Hired, supervised, and trained over 100 seasonal employees each year.

**Marketing and Public Relations Consultant**  July 2015-September 2015
Russell Morin Catering & Events
Newport, RI

- Created a strategic marketing plan for new business growth.
Conducted research to recognize target audiences, generate feedback from customers, & build community partnerships.
Photographed product and created content for social media.

**Marketing Specialist**  
*University of Florida, Office of Technology Licensing*  
*Gainesville, FL*

- Converted technical scientific literature of inventions from the University of Florida into understandable marketing material for outside firms.
- Compiled targeted mailing lists of companies likely to license the inventions & used various business databases to identify contacts at relevant companies.

**Communications & Public Relations Coordinator**  
*September 2011-August 2012*  
*Bridgewater State University Observatory*  
*Bridgewater, MA*

- Planned and managed public programs, workshops, & events.
- Built and strengthened new partnerships with local schools & maintained contact lists.
- Wrote and published press releases in newspapers such as the Boston Globe.
- Managed improvements to website and social media.

**SERVICE**

**Academic Service**

2022-current. Graduate Student Committee Member of ComSHER Division, AEJMC.

**Professional Presentations**


2017. “Importance of Science Communication” Presentation for speaker series, Society of Physics Students, Bridgewater State University Chapter.

**ACADEMIC GRANTS**

2022. Travel Award, Dean’s Graduate Student Travel Fund to Present at a National Conference, University of Florida, $500.

2021. Travel Award, Dean’s Graduate Student Travel Fund to Present at a National Conference, University of Florida, $89.
Jay D. Hmielowski, Ph.D.
College of Journalism and Communications
University of Florida

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PO Box 118400 (352) 392-3995
Gainesville, FL. 32611

Education

Ph.D., Communication 2011
The Ohio State University

M.A., Communication 2007
Washington State University

B.A., Communication, cum laude 2002
University of Massachusetts at Amherst

Academic Positions

University of Florida Aug. 2019 – Present
Washington State University May 2014 – May 2019
University of Arizona Aug. 2012 – May 2014
Yale University July 2011 – June 2012

Research

Refereed Publications

Hmielowski, J. D. & ±DuBosar, E. (in press). Country Roads to Citiscapes:
Examining the Relationship between Rural Identity and Media

Hmielowski, J. D., ±Heffron, E., Ma, Y., & ±Munroe, M., (in press). You've Lost
that Trusting Feeling: Examining the Consequences and Conditions
of the Diminishing Trust in the Press in Rural and Urban US
Communities. The Social Science Journal. doi:

+Sparks, J. & Hmielowski, J. D. (2023). At the Extremes: Assessing
Readability, Grade Level, Sentiment, and Tone in US Media Outlets.
Journalism Studies. 24(1), 24-44. doi:
10.1080/1461670X.2022.2142646.

Hmielowski, J. D., ±Cleve, M., ±DuBosar, E., & ±Munroe, M. (2022). Feeling is
NOT mutual: Discussion, Science, and Environmental Attitudes by
Party Affiliation. 16 (7), 960-976. Environmental Communication. doi:
10.1080/17524032.2022.2140689.


**Refereed Presentations**


Service

Journal Activities

Associated Editor
Mass Communication & Society 2021–present

Editorial Board
Mass Communication & Society 2016 – 2021
Journal of Broadcasting & Electronic Media 2018–present
Journal of Communication 2018–present
The Social Science Journal 2018–present
Science Communication 2021–present

Conference Activities

*Association for Education in Journalism and Mass Communication*

Mass Communication and Society Division
Head 2018 – 2019
Vice Head 2017 – 2018
Co-Vice Head Elect 2016 – 2017
Research Chair 2015 – 2016
Mid-winter conference Co-Chair 2014 – 2015
Awards Committee Co-Chair 2013 – 2014
Co-Teaching Chair 2011 – 2013