

# Supplementary file for “secularism in science: The role of religious affiliation in assessments of scientists’ trustworthiness”

## Summary of Overall Study Procedure (Study 1-3)

All studies consisted of a similar procedure and thus have been condensed to a single summary, with any differences noted.

### After consenting to participate:

Individuals first reported their gender orientation (and other demographics in Study 1). This information was used to branch the survey flow so the vignettes could be gender consistent.

Individuals were then randomly assigned to one of three short vignettes describing a scientist, and were asked to read the vignette. The presented religious affiliations differed across the three studies. In Study 2, there was an additional manipulation present where the scientists were randomly presented as either a production scientist (e.g. conducting research meant to produce materials) or an impact scientist (e.g. conducting research meant to assess hazards).

Scientist’s Affiliation		
Study 1	Study 2	Study 3
Atheist	Atheist	Atheist
<p>Dr. Abigail Kanterman is a molecular biologist and professor at a renowned Ivy League university. She has recently received both the National Medal of Science and the Presidential Award for Lifetime Achievement in Science.</p> <p>Dr. Kanterman is also an outspoken member of the Atheist community, who regularly attends conferences on atheism and oversees a popular online discussion forum about atheism.</p>	<p><b>Production Scientist</b></p> <p>Dr. Abigail Kanterman is a molecular chemist and professor at a renowned Ivy League university. She has recently received both the National Medal of Science and the Presidential Award for Lifetime Achievement in Science. Her research focuses on creating stronger synthetic materials that can be used in construction. She has been conducting research on creating materials for use in construction for over a decade.</p> <p>Dr. Kanterman is also an outspoken atheist, who regularly attends conferences on atheism and oversees a popular online discussion forum about atheism.</p> <p><b>Impact Scientist</b></p> <p>Dr. Abigail Kanterman is a molecular chemist and professor at a renowned Ivy League university. She has recently received both the National Medal of Science and the Presidential Award for Lifetime Achievement in Science. Her research focuses on studying the health risks of new synthetic materials used in</p>	<p>Dr. Abigail Kanterman is a molecular biologist and professor at a renowned Ivy League university. She has recently received both the National Medal of Science and the Presidential Award for Lifetime Achievement in Science.</p> <p>Dr. Kanterman is also an outspoken atheist, who regularly attends conferences on atheism and oversees a popular online discussion forum about atheism.</p>

	<p>construction. She has been conducting research on the health risks of materials used in construction for over a decade.</p> <p>Dr. Kanterman is also an outspoken atheist, who regularly attends conferences on atheism and oversees a popular online discussion forum about atheism.</p>	
<b>Christian</b>	<b>Christian</b>	<b>Christian</b>
<p>Dr. Abigail Kanterman is a molecular biologist and professor at a renowned Ivy League university. She has recently received both the National Medal of Science and the Presidential Award for Lifetime Achievement in Science.</p> <p>Dr. Kanterman is also an outspoken member of the Christian community, who regularly attends church services and oversees a popular online discussion forum about religion.</p>	<p><b>Production Scientist</b></p> <p>Dr. Abigail Kanterman is a molecular chemist and professor at a renowned Ivy League university. She has recently received both the National Medal of Science and the Presidential Award for Lifetime Achievement in Science. Her research focuses on creating stronger synthetic materials that can be used in construction. She has been conducting research on creating materials for use in construction for over a decade.</p> <p>Dr. Kanterman is also an outspoken Christian, who regularly attends church services and oversees a popular online discussion forum about religion.</p> <p><b>Impact Scientist</b></p> <p>Dr. Abigail Kanterman is a molecular chemist and professor at a renowned Ivy League university. She has recently received both the National Medal of Science and the Presidential Award for Lifetime Achievement in Science. Her research focuses on studying the health risks of new synthetic materials used in construction. She has been conducting research on the health risks of materials used in construction for over a decade.</p> <p>Dr. Kanterman is also an outspoken Christian, who regularly attends church services and oversees a popular online discussion forum about religion.</p>	<p>Dr. Abigail Kanterman is a molecular biologist and professor at a renowned Ivy League university. She has recently received both the National Medal of Science and the Presidential Award for Lifetime Achievement in Science.</p> <p>Dr. Kanterman is also an outspoken Christian, who regularly attends church services and oversees a popular online discussion forum about religion.</p>
<b>Jewish</b>	<b>Muslim</b>	<b>Non-Specified</b>
<p>Dr. Abigail Kanterman is a molecular biologist and professor at a renowned Ivy League university. She has recently received both the National Medal of Science and the Presidential Award for Lifetime Achievement in Science.</p> <p>Dr. Kanterman is also an outspoken member of the Jewish community, who</p>	<p><b>Production Scientist</b></p> <p>Dr. Abigail Kanterman is a molecular chemist and professor at a renowned Ivy League university. She has recently received both the National Medal of Science and the Presidential Award for Lifetime Achievement in Science. Her research focuses on creating stronger synthetic materials that can be used in construction. She has been conducting research on creating materials for use in construction for over a decade.</p> <p>Dr. Kanterman is also an outspoken Muslim, who regularly attends mosque and oversees a</p>	<p>Dr. Abigail Kanterman is a molecular biologist and professor at a renowned Ivy League university. She has recently received both the National Medal of Science and the Presidential Award for Lifetime Achievement in Science.</p>

regularly attends synagogue and oversees a popular online discussion forum about religion.	popular online discussion forum about religion. <b>Impact Scientist</b> Dr. Abigail Kanterman is a molecular chemist and professor at a renowned Ivy League university. She has recently received both the National Medal of Science and the Presidential Award for Lifetime Achievement in Science. Her research focuses on studying the health risks of new synthetic materials used in construction. She has been conducting research on the health risks of materials used in construction for over a decade. Dr. Kanterman is also an outspoken Muslim, who regularly attends mosque and oversees a popular online discussion forum about religion.	
<p>Note: all vignettes present here are female, but individuals who identified as male received a male scientist vignette (e.g. Dr. Steven Kanterman)</p> <p>Note: attention checks for the religious affiliation of the scientist were included in all studies</p>		

After reading the vignettes individuals completed each study's outcomes of interest. These outcomes differed between studies, with a complete list of all instruments included in the next section .

Study 1	Study 2	Study 3
<ul style="list-style-type: none"> <li>Demographics</li> <li>Trait Subscales: Scientist Warmth, Competence, and Trust (McCright, Dentzman, Charters, &amp; Dietz, 2013)</li> <li>Motive Subscales: Prosociality, Self-Interest, Intellectual Curiosity (Critchley, 2008)</li> <li>Belief in God Scale (Preston &amp; Epley, 2005)</li> </ul>	<ul style="list-style-type: none"> <li>Gender Identification</li> <li>Trait Subscales: Scientist Warmth, Competence, and Trust (McCright, Dentzman, Charters, &amp; Dietz, 2013)</li> <li>Perceived Threat of Science (adapted from Simpson, Rios, &amp; Cowgill, 2017)</li> <li>Science-Religion Compatibility (Simpson &amp; Aveyard, in press)</li> <li>Liberal Bias of Science</li> <li>Motive Subscales: Prosociality, Self-Interest, Intellectual Curiosity (Critchley, 2008)</li> <li>Behavioral Intentions</li> <li>Scientific Knowledge Assessment (NSB, 2001)</li> </ul>	<ul style="list-style-type: none"> <li>Gender Identification</li> <li>Trait Subscales: Scientist Warmth, Competence, and Trust (McCright, Dentzman, Charters, &amp; Dietz, 2013)</li> <li>Motive Subscales: Prosociality, Self-Interest, Intellectual Curiosity (Critchley, 2008)</li> <li>Trust in Different Types of Science (McCright &amp; Dunlap, 2013)</li> <li>Scientific Knowledge Assessment (NSB, 2001)</li> <li>Demographics</li> </ul>

	• Demographics	
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Across all studies, after outcome measures were completed individuals were debriefed and compensation was granted.

## Study Measures

Below is a list of all measures used within each study, including either the full measure or, where applicable, citations to the instrument.

### Study 1 Measures

#### Demographics

Please indicate your gender.

- ☐ Male
- ☐ Female

Write your age (e.g., 18) below:

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How would you describe your racial/ethnic background? (check all that apply)

- ☐ American Indian or Alaska Native
- ☐ Asian American or Pacific Islander
- ☐ Black/African American
- ☐ Hispanic/Latino
- ☐ Middle Eastern or Arab American
- ☐ White/European American
- ☐ Other

What is the highest level of education you have completed?

- ☐ Some high school
- ☐ High school diploma or equivalent
- ☐ Some college
- ☐ Bachelor's degree
- ☐ Master's degree
- ☐ Doctorate or professional degree

Is English your first language?

- ☐ Yes
- ☐ No

Are you a resident of the U.S.?

- ☐ Yes
- ☐ No

What is your religious affiliation?

- ☐ Wiccan, or another Celtic, Nature-Based, Pagan Religion
- ☐ Islam
- ☐ Hindu
- ☐ Buddhist
- ☐ Christian - Protestant
- ☐ Christian - Catholic
- ☐ Christian - Other
- ☐ Jewish
- ☐ Agnostic
- ☐ Atheist
- ☐ Other

Do you believe in God?

- ☐ Yes
- ☐ No

What do you think this study was about?

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#### [Trait Subscales: Scientist Warmth, Competence, and Trust](#)

McCright, A. M., Dentzman, K., Charters, M., & Dietz, T. (2013). The influence of political ideology on trust in science. *Environmental Research Letters*, 8(4), 1-9.

#### [Motive Subscales: Prosociality, Self-Interest, Intellectual Curiosity](#)

Critchley, C. R. (2008). Public opinion and trust in scientists: The role of the research context, and the perceived motivation of stem cell researchers. *Public Understanding of Science*, 17(3), 309-327.

### Belief in God Scale

Preston, J., & Epley, N. (2005). Explanations versus applications: The explanatory power of valuable beliefs. *Psychological Science*, 16(10), 826-832.

## Study 2 Measures

## Gender

Please indicate your gender.

- ☐ Male
- ☐ Female

## Trait Subscales: Scientist Warmth, Competence, and Trust

McCright, A. M., Dentzman, K., Charters, M., & Dietz, T. (2013). The influence of political ideology on trust in science. *Environmental Research Letters*, 8(4), 1-9.

## Perceived Threat of Science

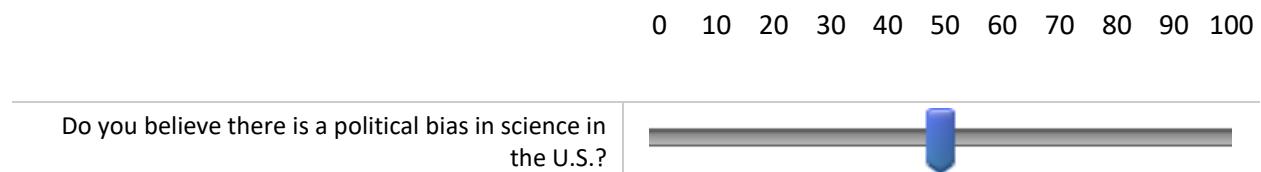
Simpson, A., Rios, K., & Cowgill, C. M. (2017). Godless in essence? Psychological essentialism, theistic meta-beliefs, and anti-atheist prejudice. *Personality and Individual Differences*, 119, 35-45.

## Science-Religion Compatibility

Rios, K., & Aveyard, M. (in press). Science-religion compatibility beliefs across Middle Eastern and American young adult samples: The role of cross-cultural exposure. *Public Understanding of Science*.

## Liberal Bias of Science

Do you believe there is political bias in science in the U.S.? If you believe there is LEFT-wing (liberal) bias, move the slider to the left and indicate how far to the left the bias is (0 = extreme liberal bias). If you believe there is RIGHT-wing (conservative) bias, move the slider to the right and indicate how far right the bias is (100 = extreme conservative bias). If you believe there is no bias at all, please select '50'.



## Motive Subscales: Prosociality, Self-Interest, Intellectual Curiosity

Critchley, C. R. (2008). Public opinion and trust in scientists: The role of the research context, and the perceived motivation of stem cell researchers. *Public Understanding of Science*, 17(3), 309-327.

## Behavioral Intentions

Please consider the scientist you read about earlier, and answer whether you agree or disagree with the following statements, on a scale of (1=*strongly disagree* to 7=*strongly agree*).

[illegible]



I would donate my time to help them conduct research.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
If this scientist needed human participants, I would volunteer.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When making policy decisions, the government should consider this scientist's research.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The government should use this research to make policy decisions that are relevant.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How much money would you be willing to provide to support his/her research? (Please respond in dollars and cents, ex. \$200.00)

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### Scientific Knowledge Assessment

National Science Foundation, National Center for Science and Engineering Statistics, Survey of Public Attitudes Toward and Understanding of Science and Technology (2001); University of Michigan, Survey of Consumer Attitudes (2004); and University of Chicago, National Opinion Research Center, General Social Survey (2006, 2008, 2010).

### Demographics

Write your age (e.g., 18) below:

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How would you describe your racial/ethnic background? (check all that apply)

- ☐ American Indian or Alaska Native
- ☐ Asian American or Pacific Islander
- ☐ Black/African American
- ☐ Hispanic/Latino
- ☐ Middle Eastern or Arab American
- ☐ White/European American
- ☐ Other

What is the highest level of education you have completed?

- ☐ Some high school
- ☐ High school diploma or equivalent
- ☐ Some college
- ☐ Bachelor's degree
- ☐ Master's degree
- ☐ Doctorate or professional degree

How do you typically vote?

- ☐ Democratic
- ☐ Republican
- ☐ Independent
- ☐ Other
- ☐ Non-voter

What is your political belief regarding social issues?

- ☐ (Extremely left/liberal) 1
- ☐ 2
- ☐ 3
- ☐ 4
- ☐ 5
- ☐ (Centralist) 6
- ☐ 7
- ☐ 8
- ☐ 9
- ☐ 10
- ☐ (Extremely right/conservative) 11

What is your political belief regarding economic issues?

- ☐ (Extremely left/liberal) 1
- ☐ 2
- ☐ 3
- ☐ 4
- ☐ 5
- ☐ (Centralist) 6
- ☐ 7
- ☐ 8
- ☐ 9
- ☐ 10
- ☐ (Extremely right/conservative) 11

Is English your first language?

- ☐ Yes
- ☐ No

Are you a resident of the U.S.?

- ☐ Yes
- ☐ No

What is your religious affiliation?

- ☐ Wiccan, or another Celtic, Nature-Based, Pagan Religion
- ☐ Islam
- ☐ Hindu
- ☐ Buddhist
- ☐ Christian - Protestant
- ☐ Christian - Catholic
- ☐ Christian - Other
- ☐ Jewish
- ☐ Agnostic

☐ Atheist

☐ Other

Do you believe in God?

☐ Yes

☐ No

What do you think this study was about?

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## Study 3 Measures

### Gender

Please indicate your gender.

- ☐ Male
- ☐ Female

### Trait Subscales: Scientist Warmth, Competence, and Trust

McCright, A. M., Dentzman, K., Charters, M., & Dietz, T. (2013). The influence of political ideology on trust in science. *Environmental Research Letters*, 8(4), 1-9.

### Motive Subscales: Prosociality, Self-Interest, Intellectual Curiosity

Critchley, C. R. (2008). Public opinion and trust in scientists: The role of the research context, and the perceived motivation of stem cell researchers. *Public Understanding of Science*, 17(3), 309-327.

### Trust in Different Types of Science

McCright, A. M., & Dunlap, R. E. (2013). Bringing ideology in: the conservative white male effect on worry about environmental problems in the USA. *Journal of Risk Research*, 16(2), 211-226.

### Scientific Knowledge Assessment

National Science Foundation, National Center for Science and Engineering Statistics, Survey of Public Attitudes Toward and Understanding of Science and Technology (2001); University of Michigan, Survey of Consumer Attitudes (2004); and University of Chicago, National Opinion Research Center, General Social Survey (2006, 2008, 2010).

### Demographics

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- ☐ Agnostic
- ☐ Atheist
- ☐ Other

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What do you think this study was about?

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