

## Supplementary Materials

### Table of Contents

<b>Study 1 Demographics .....</b>	<b>3</b>
<b>Percentage of Respondents by Age .....</b>	<b>3</b>
<b>Percentage of Respondents by Race and Ethnicity .....</b>	<b>3</b>
<b>Percentage of Respondents by Gender .....</b>	<b>3</b>
<b>Percentage of Respondents by Education Level.....</b>	<b>3</b>
<b>Percentage of Respondents by Relationships with Scientists .....</b>	<b>4</b>
<b>Percentage of Respondents by Political Affiliation .....</b>	<b>4</b>
<b>Percentage of Respondents by Belief in God .....</b>	<b>4</b>
<b>Percentage of Respondents by Religious Affiliation .....</b>	<b>4</b>
<b>Study 1 Additional Measures .....</b>	<b>5</b>
<b>Intergroup Scientist Beliefs .....</b>	<b>5</b>
<b>Relevance of Signage Locations .....</b>	<b>5</b>
<b>Scientist Attributes.....</b>	<b>6</b>
<b>Self-Scientist Overlap.....</b>	<b>6</b>
<b>Public-Scientist Overlap and Prevalence.....</b>	<b>7</b>
<b>Scientist Intergroup Competition.....</b>	<b>7</b>
<b>Topic-Specific Trust.....</b>	<b>7</b>
<b>Informal Science Institution Trust.....</b>	<b>7</b>
<b>Manipulation Check.....</b>	<b>8</b>
<b>Demographics .....</b>	<b>8</b>
<b>Study 2 Demographics .....</b>	<b>9</b>
<b>Percentage of Respondents by Gender .....</b>	<b>9</b>
<b>Percentage of Respondents by Race and Ethnicity .....</b>	<b>9</b>
<b>Percentage of Respondents by Education Level.....</b>	<b>9</b>
<b>Percentage of Respondents by Place of Residence .....</b>	<b>9</b>
<b>Percentage of Respondents by Age .....</b>	<b>9</b>
<b>Percentage of Respondents by Group Attendance Status .....</b>	<b>10</b>
<b>Percentage of Respondents by Status of Attending with Children .....</b>	<b>10</b>
<b>Percentage of Respondents by Exhibit Crowding Level.....</b>	<b>10</b>

<b>Study 2 Additional Measures .....</b>	<b>10</b>
<b>Symbolic Threat .....</b>	<b>10</b>
<b>Scientist Warmth and Competence.....</b>	<b>11</b>
<b>Entitativity of the Scientific Community .....</b>	<b>11</b>
<b>Homogeneity of Individual Scientists.....</b>	<b>11</b>
<b>Scientist Affiliation.....</b>	<b>11</b>
<b>Manipulation Check.....</b>	<b>11</b>
<b>References.....</b>	<b>12</b>

### Study 1 Demographics

#### Percentage of Respondents by Age

Item	Percentage
18 to 24 years old	4%
25 to 34 years old	37%
35 to 44 years old	30%
45 to 54 years old	15%
55 to 64 years old	10%
65+ years old	4%

#### Percentage of Respondents by Race and Ethnicity

Item	Percentage
American Indian or Alaskan Native	1%
Asian	6%
Black or African American	5%
Latinx or Spanish Origin	5%
Multiple racial or ethnic identities	4%
White	79%

Item	Percentage
Hispanic	12%
Not Hispanic	88%

#### Percentage of Respondents by Gender

Item	Percentage
Female	39%
Male	61%

#### Percentage of Respondents by Education Level

Item	Percentage
Did not finish high school	1%
High school or GED	14%
Some college	14%
Vocational degree	2%
Associate's degree	8%
Bachelor's degree	54%
Master's degree or higher	7%

**Percentage of Respondents by Relationships with Scientists**

<b>Item</b>	<b>Percentage</b>
Did not have family or friends who are scientists	49%
Did have family or friends who are scientists	51%

**Percentage of Respondents by Political Affiliation**

<b>Item</b>	<b>Percentage</b>
Democrat	51%
Independent	20%
Other	3%
Non-voter	1%
Republican	24%

**Percentage of Respondents by Belief in God**

<b>Item</b>	<b>Percentage</b>
Believes in God	59%
Does not believe in God	41%

**Percentage of Respondents by Religious Affiliation**

<b>Item</b>	<b>Percentage</b>
Christian or Christian Denomination	49%
Agnostic	20%
Atheist	20%
Buddhist	<1%
Hindu	1%
Islamic	<1%
Jewish	3%
Other	5%
Pagan/Wiccan	1%

### **Study 1 Additional Measures**

Items from ‘Intergroup Scientist Beliefs’ through ‘Topic-Specific Trust’ were presented post-manipulation, but before demographics. Items on ‘Informal Science Institution Trust’ was collected after demographics.

#### **Intergroup Scientist Beliefs**

Using a 7-point scale (1 = *strongly disagree*; 7 = *strongly agree*) we asked six questions examining intergroup beliefs consistent with recategorization (scientists and non-scientists share a common identity), decategorization (non-scientists engage in science), entitativity (easy to tell scientists and non-scientists), essentialism (scientists have unique internal characteristics), intergroup differentiation (someone is either a scientist or not) and common fate awareness (scientists and non-scientists either succeed or fail together).

#### **Relevance of Signage Locations**

For individuals who slightly agreed, agreed, or strongly agreed to a statement that signage supported any personalization of science or shared, common identity statement, a follow-up question asked them to select what part of the sign invoked that item. Using a multi-answer question, participants could state which of 10 numbered locations invoked that response, with the locations corresponding with different examples within the signage. During this section, the signage was posted once more with an overlay of the numbered locations for a point of reference (Figure 1). Values were coded as either ‘0’ indicating the participant did not agree to the statement or did not select a specific location, or ‘1’ indicating the participant identified that location as relevant to the statement. These values were then used to create two composite scores for each location in each signage condition. One composite score was created for the statements

corresponding with personalization of science, and the second composite score was for statements corresponding with shared, common identities with scientists.

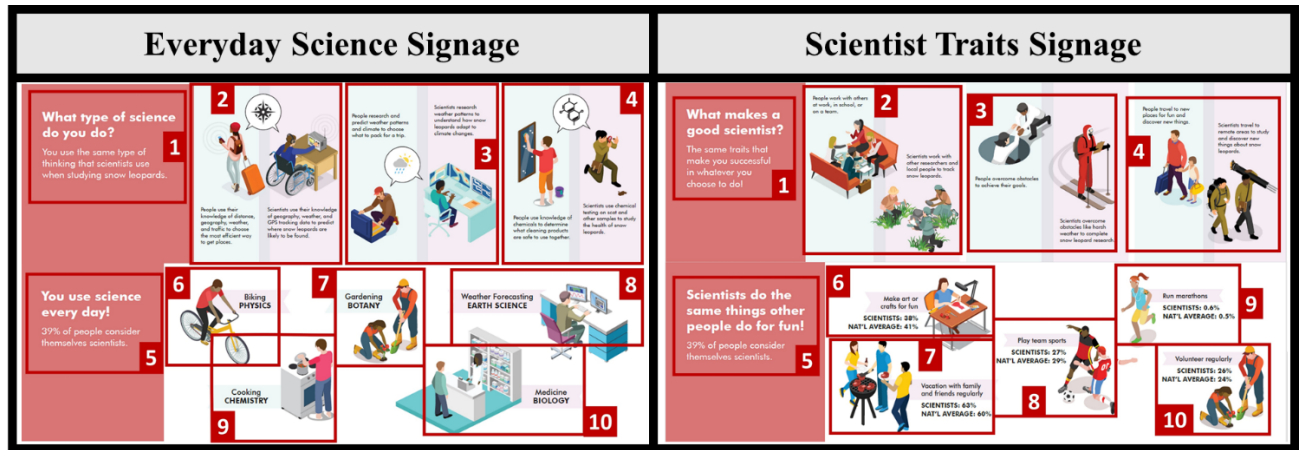


Figure 1. Numbered Location for Study 2's Relevance of Signage Location Variables.

### Scientist Attributes

Study 2 measured warmth and competence using the same measures as Study 1 (Fiske, et al., 2007), with an additional measure of scientists' perceived morality ( $\alpha = .52$ ) using three additional attributes (honest, trustworthy, treacherous) measured on the same 5-point scale (1 = *not at all*; 5 = *extremely*). The morality dimension and items were added to address if morality shows different effects compared to warmth (Brambilla & Leach, 2014; Brambilla et al., 2013).

### Self-Scientist Overlap

Self-outgroup overlap, or the extent individuals perceive themselves as similar to scientists was measured using an adapted version of the self-other overlap question with a seven-point scale of overlapping circles (adapted from Aron et al., 1992). Previous research has shown this measure to be negatively correlated with self-outgroup differences and positively with superordinate category identification, and thus served as our outcome measure of perceived self-group similarity (Schubert & Otten, 2002).

### **Public-Scientist Overlap and Prevalence**

Similar to the self-scientist overlap variable, a question asked about the extent individuals perceive the average person as similar to scientists to measure public-scientist overlap with a seven-point scale of overlapping circles (adapted from Aron et al., 1992). A 100-point scale was also included that asked what percentage of the population were scientists (0 = *0% are scientists*, 100 = *100% are scientists*).

### **Scientist Intergroup Competition**

Six questions asked about whether scientists compete ( $\alpha = .87$ ) with laypeople for resources in society (adapted from Clifton & Aberson, 2012) on a 7-point scale (1 = *strongly disagree*; 7 = *strongly agree*). Items included, “when making laws and regulations, the opinions and values of non-scientists should be more important than the opinions and values of scientists.”

### **Topic-Specific Trust**

To ascertain whether trust differs across science topics, we examined the level of trust participants had in scientists who discuss both scientific and social topics. Data was collected on a 5-point scale of how much they trust a scientist talking about the topic (1 = *not at all*, 5 = *extremely*). Topics were immigration reform, Black Lives Matter, vaccines, genetically-modified foods, evolution, global climate change and the Green New Deal.

### **Informal Science Institution Trust**

A composite score of trust in science at informal science institutions was created from five questions on a 7-point scale (1 = *strongly disagree*; 7 = *strongly agree*). Items included, “informal science institutions include all relevant information when discussing a science topic,” and “the scientific information provided by informal science institutions would be verifiable if examined.”

For those who agreed that informal science institutions were less likely to be biased, they completed a multi-answer multiple choice question, asking which other sources of science information are less trustworthy than informal science institutions. Examples of other sources include news media, friends and family, government and science organizations.

### **Manipulation Check**

One item asked participants to identify the two signs they viewed of four possible signs.

### **Demographics**

Study 1 collected basic demographics as well as questions about the political bias in science (semantic differential of 0 = *extreme liberal bias* to 100 = *extreme conservative bias*), how many close others such as family or friends are scientists (ordinal 5-point scale from 0 = *none*; 5 = *more than ten*), occupation (e.g., construction, homemaker), political affiliation (e.g., Democrat; Non-voter), religious affiliation (e.g., atheist; Jewish), and belief in god (0 = *no*; 1 = *yes*). We also collected data on how long it took to complete the survey in seconds.



## Study 2 Demographics

### Percentage of Respondents by Gender

Item	Percentage
Female	63%
Male	36%
Transgender	1%

### Percentage of Respondents by Race and Ethnicity

Item	Percentage
Asian or Pacific Islander	2%
Black, non-Hispanic	6%
Hispanic	19%
Multiple racial or ethnic identities	3%
White, non-Hispanic	71%

### Percentage of Respondents by Education Level

Item	Percentage
Did not finish high school	4%
High school or GED	9%
Some college	13%
Vocational degree	4%
Associate's degree	12%
Bachelor's degree	42%
Master's degree or higher	18%

### Percentage of Respondents by Place of Residence

Item	Percentage
United States Resident	75%
Non-US Resident	25%

### Percentage of Respondents by Age

Item	Percentage
18 to 24 years old	36%
25 to 34 years old	30%
35 to 44 years old	19%
45 to 54 years old	10%
55 to 64 years old	4%
65+ years old	1%

**Percentage of Respondents by Group Attendance Status**

<b>Item</b>	<b>Percentage</b>
Attended alone or with one other person	75%
Attended with two or more people	25%

**Percentage of Respondents by Status of Attending with Children**

<b>Item</b>	<b>Percentage</b>
Attended with children	87%
Did not attend with children	13%

**Percentage of Respondents by Exhibit Crowding Level**

<b>Item</b>	<b>Percentage</b>
Low crowding, e.g., 0 to 4 other people in the exhibit	25%
Mid-level crowding, e.g., six to nine others in the exhibit	41%
High crowding, e.g., 10 or more others in the exhibit	33%

**Study 2 Additional Measures**

All items in the supplemental materials were administered post-manipulation, after measurement of trust in science and scientists.

**Symbolic Threat**

A four-item measure of the perceived harm, or symbolic threat, of science (1 = *strengthen a lot*, 7 = *undermine a lot*, adapted from Pereira et al., 2009). This scale measures the extent to which science is seen to undermine or conflict with core values, customs or traditions, national identity, and cultural unity ( $\alpha = .86$ ). We computed an average composite score with higher values indicating more negative attitudes toward science.

### **Scientist Warmth and Competence**

We assessed perceptions of the warmth and competence of scientists using two questions for each construct (warmth: warm, friendly; competence: competent, capable) (1 = *not at all*, 5 = *extremely*, Fiske, et al., 2007) and calculated an average composite score for each.

### **Entitativity of the Scientific Community**

Using a 9-point scale (1 = *not very much*, 9 = *very much*) a composite score of eight items was computed to create a measure of the perceived cohesiveness of the scientific community (Hogg et al., 2007). Participants were asked to rate how much the scientific community held each trait, including traits such as cohesion, hierarchy, uniformity, similarity and defined roles ( $\alpha = .82$ ).

### **Homogeneity of Individual Scientists**

We measured perceived uniformity of individual scientists with four separate measures. Two used a 6-point scale asking about the typicality (1 = *not at all typical*, 6 = *extremely typical*) and similarity (1 = *extremely different*, 6 = *extremely similar*) of a single scientist to the scientific community. The second used the self-other overlap scale to ask how similar the average scientist is to the scientific community with a series of increasing overlapping circles (adapted from Aron et al., 1992). The last asked on a 100-point scale about what percentage of the scientific community share the opinion of a single scientist (Nauroth et al., 2017).

### **Scientist Affiliation**

One item asked on a 7-point scale (1 = *strongly disagree*, 7 = *strongly agree*) if the participant, “felt strong ties with scientists.”

### **Manipulation Check**

One item asked participants to identify the two signs they viewed of four possible signs.

### References

- Aron, A., Aron E. N., & Smollan, D. (1992). Inclusion of other in the self scale and the structure of interpersonal closeness. *Journal of Personality and Social Psychology*, *63*, 596-612. <https://doi.org/10.1037/0022-3514.63.4.596>
- Brambilla, M., & Leach, C. W. (2014). On the importance of being moral: The distinctive role of morality in social judgment. *Social Cognition*, *32*(4), 397-408. <https://doi.org/10.1521/soco.2014.32.4.397>
- Brambilla, M., Sacchi, S., Pagliaro, S., & Ellemers, N. (2013). Morality and intergroup relations: Threats to safety and group image predict the desire to interact with outgroup and ingroup members. *Journal of Experimental Social Psychology*, *49*(5), 811-821. <https://doi.org/10.1016/j.jesp.2013.04.005>
- Clifton, J., & Aberson, C. L. (2012). Measuring threat as it relates to social policy: Psychometric considerations. In B. O. Hunter & T. J. Romero (Eds.), *Psychology of threat* (pp. 111-140). Nova Science Pub Inc.
- Fiske, S. T., Cuddy, A. J., & Glick, P. (2007). Universal dimensions of social cognition: Warmth and competence. *Trends in Cognitive Sciences*, *11*(2), 77-83. <https://doi.org/10.1016/j.tics.2006.11.005>
- Hogg, M. A., Sherman, D. K., Dierselhuis, J., Maitner, A. T., & Moffitt, G. (2007). Uncertainty, entitativity, and group identification. *Journal of Experimental Social Psychology*, *43*(1), 135-142. <https://doi.org/10.1016/j.jesp.2005.12.008>
- Nauroth, P., Gollwitzer, M., Kozuchowski, H., Bender, J., & Rothmund, T. (2017). The effects of social identity threat and social identity affirmation on laypersons' perception of scientists. *Public Understanding of Science*, *26*(7), 754-770. <https://doi.org/10.1177/0963662516631289>
- Pereira, C., Vala, J., & Leyens, J. P. (2009). From infra-humanization to discrimination: The mediation of symbolic threat needs egalitarian norms. *Journal of Experimental Social Psychology*, *45*(2), 336-344. <https://doi.org/10.1016/j.jesp.2008.10.010>
- Schubert, T. W., & Otten, S. (2002). Overlap of self, ingroup, and outgroup: Pictorial measures of self-categorization. *Self and Identity*, *1*(4), 353-376. <https://doi.org/10.1080/152988602760328012>