Supporting Information for "When and How Different Motives Can Drive Motivated Political Reasoning"

On-line Appendix S1: Sample Demographics

In Table S1.1, we compare our sample to the American National Election Studies probability 2016 sample, focusing only on Republicans.[1] The table suggests that our sample is fairly representative of the Republican population. Perhaps the main noteworthy deviation is that our sample skews more conservative which, if anything, would make finding movement on climate change more of a challenge. Otherwise, our sample is under-representative of young people, more representative of educated people, and has a slightly distinct income distribution.

Table S1.1: Sample Description versus the American National Election Studies (Republicans Only)

	Our Sample	2016 American National Election Studies (Web and Face to Face Weighted Sample)
Age	18-24: 4.33%; 25-34: 14.77%; 35-50: 33.25%; 51-65: 32.79%; Over 65: 14.87%	18-24: 10.66%; 25-34: 13.97%; 35-50: 23.88%; 51-65: 31.61%; Over 65: 19.87%
Religion	Protestant: 65.12%; Catholic: 19.40%; Jewish: 2.09%; Muslim: 0.25%; Hindu: 0.10%; Other: 1.93%; Not religious: 11.10%	Protestant: 60.16%; Catholic: 22.70%; Jewish: 1.16%; Muslim: 0%; Hindu: 0.24%; Other: 3.34%; Not religious: 12.40%
Race/Ethnicity (where respondents could check multiple options)	White: 92.77%; Hispanic or Latino: 3.82%; Black or African American: 2.34%; Asian or Pacific Islander: 2.80%; Middle Eastern/Northern African: 0.15%; Native American: 1.83%; Other: 0.61%	White: 91.65%; Hispanic or Latino[A]: 6.75%; Black or African American: 2.58%; Asian or Pacific Islander: 3.60%; Native American: 2.93%; Other[B]: 4.08%
Education	Less than high school: 2.14%; High school graduate: 23.22%; Some college: 39.61%; College degree: 25.10%; Advanced degree: 9.93%	Less than high school: 7.90%; High school graduate: 26.82%; Some college: 32.72%; College degree: 21.44%; Advanced degree: 11.11%
Income	Less than $30,000: 21.84%; $30,000 - $69,000: 40.89%; $70,000 - $99,000: 19.35%; $100,000 - $200,000: 16.34%; Over $200,000: 1.58%	Less than $30,000: 25.21%; $30,000 - $69,000: 14.17%; $70,000 - $99,000: 27.52%; $100,000 - $250,000: 29.17%; Over $250,000[C]: 3.94%
Ideology	Very liberal: 0.10%; Mostly liberal: 0.10%; Somewhat liberal: 0.81%; Moderate:	Extremely liberal: 0.34%; Liberal: 0.93%; Slightly liberal: 2.75%; Moderate: 19.51%;

[1] Demographic comparisons are tricky insofar as the panel which we used and the ANES probability sample comparison are both drawn to be representative samples of the U.S. and not of Republicans per se. Thus, neither are necessarily perfectly accurate portraits of Republicans.

	17.11%; Somewhat conservative: 20.67%; Mostly conservative: 34.93%; Very conservative: 26.27%	Slightly conservative: 24.09%; Conservative: 42.47%; Extremely conservative: 9.91%
Partisanship	Independent leans Republican: 10.28%; Weak Republican: 32.80%; Strong Republican: 56.98%	Independent-Republican: 28.28%; Not very strong Republican: 30.03%; Strong Republican: 41.69%
Gender	Male: 48.17%; Female: 51.78%	Male: 51.69%; Female: 48.31%

[A]The American National Election Studies (ANES) asks this question separate from the question about race and includes "Are you Spanish?" in the question as well as Hispanic and Latino, both of which may account for the higher number of selections here.

[B]The ANES does not offer MENA as an option, so MENA individuals are included in Other.

[C]The ANES uses slightly different income brackets than we did.

On-line Appendix S2: Treatments

Motivational Primes

Our accuracy non-directional prime induces a sense of accountability that has been used in prior work to ensure an accuracy goal (e.g., Kunda, 1990, p. 481; Tetlock, 1983, 1985; Lerner & Tetlock, 1999; Bolsen, Druckman, & Cook, 2014). For the directional goals, we develop primes to generate defensiveness in the given direction (Dunning, 2015). The value prime aims directly at moral foundations theory. The norms prime is relatively new, but there are findings suggesting that, when people's overall feelings of belonging are threatened, they attempt to affirm the size and cohesion of their social groups, which presumably allows them to more securely feel like they have a robust social network that would accept them (Kahan, 2017). So, contra-positively, people should be expected to feel threats to belonging if the cohesion of their group is threatened. For the directional primes, we purposefully use asymmetric scales (see below primes) to force agreement, which strengthens the prime and sense of threat (e.g., Petrocelli et al., 2010). The exact primes appear below (note that the control group, no motivation group, and accuracy group answered ideology and partisanship questions at the end of the survey – see the end of on-line Appendix S3).

Articles

We constructed our articles in a way to maximize mundane realism. Each article was accompanied by a picture and had a title consistent with the nature of the given treatment. The exact text of each article appears below. A few other relevant points are as follows.

1. We opted to use the term "climate change" and not "global warming," given the possibility of aversive Republican reactions to the latter term (Schuldt et al., 2015, 2018).

2. The introduction to each treatment is drawn from Wolsko et al. (2016).

3. Each treatment article does include explicit calls for individual actions but does not endorse any policy positions. We made this choice since policy solutions sometimes also generate aversive reactions among Republicans (Campbell & Kay, 2014). Future work would benefit from exploring if the impact of messages differ based on the inclusion of explicit policy information.

4. The information treatment offers statements on "human-induced" climate change in particular. The other ones also mention it in the first paragraph. We mentioned it in each since the messages advocate for changing behavior to address climate change.

5. In all treatments, there is presumably new material – a new report, a new value portrayal, new information on group beliefs – being presented, thereby minimizing the likelihood of pre-treatment effects (Druckman & Leeper, 2012).

6. The treatments vary from 188 to 228 words, so they are all of similar length.

7. In terms of specific sources for each treatment:

a. The information message treatment is drawn from the Fourth National Climate Assessment Volume II: Impacts, Risks, and Adaptation in the United States (USGCRP, 2018), which was released in November 2018. A *New York Times* article described it as follows: a "major scientific report issued by 13 federal agencies [that] presents the starkest warnings to date of the consequences of climate change for the United States, predicting that if significant steps are not taken to rein in global warming, the damage will knock as much as 10 percent off the size of the American economy by century's end. The report, which was mandated by Congress and made public by the White House, is notable not only for the precision of its calculations and bluntness of its conclusions, but also because its findings are directly at odds with President Trump's agenda of environmental deregulation, which he asserts will spur economic growth" (Davenport & Pierre-Louis, 2018). A part of that report thus involves a consensus statement on climate change. We drew on language from the report, the *New York Times* coverage, and a *Science* article (Malakoff, 2018).

b. Our value message treatment focuses on moral foundations theory (Haidt, 2001). We drew most directly on Wolsko et al. (2016), as their environmental message included the full set of relevant conservative values, including "loyalty to the in-group, respect for authority, maintenance of purity and sanctity in human endeavors, and patriotism and pride in the United States" (also see Feinberg & Willer, 2013). Our message explicitly mentions purity, talks about in-group loyalty a la patriotic duty, and brings in authority by referencing honoring America.

c. For our norms message, we mostly use a descriptive norm but do include some reference to an injunctive norm too. We drew, in part, on Abeles et al. (2018) who study perceptions of what others think of climate change in 2012 and 2018. They find that people underestimate the percentage of others who believe in climate change. For example, in 2018, "Americans perceived only 57% of other Americans to think global warming had been happening while 74% of Americans actually thought that" (p. 21). Moreover, "72 percent of Americans inaccurately estimated that the majority of Republicans did not believe that global warming had been happening" (p. 22). Our interest is that a perhaps surprising group norm exists among Republicans: in 2018, Americans believe that only 43% of Republicans believed global warming was happening when in reality 57% believed it (Abeles et al., 2018). The actual percentage, though, may be even higher. A Pew 2016 climate report suggests about 70% of Republicans believe climate change is happening (Pew Research Center, 2016). The higher number may be due to the use of the term "climate change" rather than global warming (see Schuldt et al., 2015). To test the full power of norms, we pushed this 70% figure up to "nearly 75%" (and included a brief debrief). We also, in the treatment, mention support for action. This comes from a survey that shows that a majority of Republicans agree that the U.S.

should take some actions on climate change (see Hochschild and Hochschild, 2018; also see Leiserowitz et al., 2018). The picture and the text used in our message title (more Republicans believe in climate change than one might think) comes from see Hochschild and Hochschild's (2018) editorial.

Our group norm then is a bit of a correction to a misperception about the presumed extant norm. Importantly, we focus on the percentage of Republicans – of the in-group—that believe in climate change and support solutions, as the in-group is the relevant social group for our theory.

[1. No Motivation:]

[PAGE BREAK]

We will next ask you to read a brief public service announcement. We then will ask you to answer questions about the issue it describes.

[PAGE BREAK]

[2. Accuracy motivation:]

[PAGE BREAK]

We will next ask you to read a brief public service announcement. In assessing the announcement, try to be as evenhanded as possible and carefully consider the information it presents. We will later ask you to evaluate the announcement and answer questions about the issue it describes. You will also be asked to explain in detail about how you arrived at your answers.

[PAGE BREAK]

[3. Value motivation:]

[PAGE BREAK]

Which point on this scale best describes your political views?

_____	_____	_____	_____	_____	_____
_____					
very liberal	*mostly liberal*	*somewhat liberal*	*moderate*	*somewhat conservative*	*mostly conservative*	*very conservative*

Generally speaking, do you consider yourself a Democrat, Independent, or Republican?

_____	_____	_____	_____	_____	_____
_____					

Strong Democrat | *Weak Republican* | *Independent Democrat Republican* | *Independent leans Democrat* | *Independent* | *Weak* | *Strong leans Republican*

[IF ANSWER A DEM. ANSWER OR PURE INDEP. STOP SURVEY]

[PAGE BREAK – the next four items can be on one page]

How important is being a Republican to you?

_____	_____	_____	_____	_____
Not at all important	*Not very important*	*Somewhat important*	*Very important*	*Extremely important*

How well does the term Republican describe you?

Not at all well	Not very well	Somewhat well	Very well	Extremely well

When talking about Republicans how often do you use "we" instead of "they"?

Never	Rarely	Some of the time	Most of the time	All of the time

To what extent do you think of yourself as being a Republican?

Not at all	Not too much	Somewhat	A good deal	A great deal

[PAGE BREAK]

You reported that you identify with the Republican Party. A lot of people think that Republicans these days have strayed from their core values. They say Republicans no longer care enough about decency, purity, and the country's well-being. They say Republicans have disregarded the traditions of government, which has created chaos and disorder. And, they say that Republicans have shown a love for power rather than a love of country. How much do you agree that Republicans have strayed from their values?

Agree Somewhat	Agree Quite a Bit	Agree A Lot	Agree Very Much	Agree Completely

[PAGE BREAK]

Next, we turn to something else – we are going to ask you to read a brief public service announcement. We then will ask you to answer questions about the issue it describes.

[PAGE BREAK]

[4. Identity motivation group:]

[PAGE BREAK]

Which point on this scale best describes your political views?

very liberal	mostly liberal	somewhat liberal	moderate	somewhat conservative	mostly conservative	very conservative

Generally speaking, do you consider yourself a Democrat, Independent, or Republican?

_____	_____	_____	_____	_____	_____

_____

Strong   *Weak*   *Independent*   *Independent*   *Independent*   *Weak*   *Strong*

Democrat   *Democrat*   *leans Democrat*   *leans Republican*

       Republican   *Republican*

[IF ANSWER A DEM. ANSWER OR PURE INDEP. STOP SURVEY]

[PAGE BREAK – the next four items can be on one page]

How important is being a Republican to you?

_____	_____	_____	_____	_____
Not at all	*Not very*	*Somewhat*	*Very*	*Extremely*
important	*important*	*important*	*important*	*important*

How well does the term Republican describe you?

_____	_____	_____	_____	_____
Not at all	*Not very*	*Somewhat*	*Very*	*Extremely*
well	*well*	*well*	*well*	*well*

When talking about Republicans how often do you use "we" instead of "they"?

_____	_____	_____	_____	_____
Never	*Rarely*	*Some of*	*Most of*	*All of*
		the time	*the time*	*the time*

To what extent do you think of yourself as being a Republican?

_____	_____	_____	_____	_____
Not at all	*Not too much*	*Somewhat*	*A good deal*	*A great deal*

[PAGE BREAK]

You just reported that you identify with the Republican Party. A lot of people say that the Republican Party is falling apart. They point to Democratic wins in the 2018 midterm election. They also point to the decreasing consensus within the Republican Party on important issues such as trade, foreign policy, and economic development. There is also worry that this lack of cohesion will reduce Republicans' opportunities to use and maintain their political power. How much do you agree that the Republican Party is falling apart?

_____	_____	_____	_____	_____
Agree *Agree*	*Agree*	*Agree*	*Agree*	
Somewhat	*Quite a Bit*	*A Lot*	*Very Much*	*Completely*

[PAGE BREAK]

Next, we turn to something else – we are going to ask you to read a brief public service announcement. We then will ask you to answer questions about the issue it describes.

[PAGE BREAK]

[PAGE BREAK]

Climate change poses major threat to United States, new scientific report concludes

Climate change is being felt in communities across the United States, and will cause growing harm to the environment. We need to take concerted action on human-induced climate change so as to protect our environment from desecration.

That is the sobering message sent by a major scientific report released in November that examines climate change impacts on different U.S. regions, economic sectors, and ecosystems. The 29-chapter report, formally known as Volume II of the *Fourth National Climate Assessment,* was assembled by some 300 expert scientists and involved collecting public comment at events in more than 40 cities. The report concludes that "Earth's climate is now changing faster than at any point in the history of modern civilization, primarily as a result of human activities… the evidence consistently points to human activities, especially emissions of greenhouse or heat-trapping gases, as the dominant cause." The report also states that without "substantial and sustained global efforts," climate change will "cause growing losses to American infrastructure and property and impede the rate of economic growth over this century." This report suggests that these efforts will have to come, in part, from individuals taking environmentally thoughtful actions such as driving less, using energy efficient products, and adjusting thermostats. The report makes clear the time to act is now.

[2. Moral Framing Message:]

[PAGE BREAK]

Climate change poses major threat to United States, challenging our fundamental values

Climate change is being felt in communities across the United States, and will cause growing harm to the environment. We need to take concerted action on human-induced climate change so as to protect our environment from desecration.

Indeed, there is something entirely pristine about the natural environment. When we drink polluted water, live near toxic sites, or inhale dirty, smog-filled air, we contaminate our bodies with chemical impurities. The good news is that we can act to protect and decontaminate the environments we live in, making them pure once again – before the full effects of climate change are felt. Simply adjusting thermostats, choosing to use energy efficient appliances, and driving less can make a big difference. By taking a tougher stance on protecting the natural environment, you will be honoring all of Creation. It should be every good American's goal to cleanse the environment, so our children and our children's children can experience the uncontaminated purity and value of nature. Take pride in your country and perform your patriotic duty by taking responsibility for caring for yourself and the land you call home. You can make a difference.

[3. Norms Message:]

[PAGE BREAK]

Most agree – Democrats and Republicans – that climate change poses major threat to United States

Climate change is being felt in communities across the United States, and will cause growing harm to the environment. We need to take concerted action on human-induced climate change so as to protect our environment from desecration.

This is actually a point on which there is more agreement than many people realize. A recent representative survey of Americans found that citizens underestimate the percentage of Americans, Democrats and Republicans, who think climate change is happening. For example, when asked to guess how many Republicans believe in climate change, the average guess is 43%. Yet, perhaps surprisingly, a clear majority – nearly 75% or almost 3/4ths – of Republicans actually believe climate change is happening. Overall, Americans view their fellow citizens, even members of their own political party, as more different than they really are. The reality is that even the bulk of Republicans believe in climate change, worry about how it will impact the environment, and are in favor of taking action (e.g., driving less, using energy efficient products, adjusting thermostats). Another recent poll shows that a clear majority of Republicans take actions themselves to help the environment. As one report put it: "More Republicans Than You Think Support Action on Climate Change." The right thing to do is for all Republicans to recognize this new consensus and unite themselves so as to take individual actions to combat climate change.

On-line Appendix S3: Question Wording

Pre-Treatment

What is your age?

Under 18	*18-24*	*25-34*	*35-50*	*51-65*	*Over 65*

What is the highest level of education you have completed?

Less than *High school*	*High* *school graduate*	*Some* *college*	*4 yr college* *degree*	*Advanced* *degree*

Which of the following best describes your religion?

Christian	*Catholic*	*Jewish*	*Muslim*	*Hindu*	*Other*	*Not religious*

What is your gender?

Male	*Female*	*Other*

What is your estimate of your family's annual household income (before taxes)?

< $30,000	*$30,000 - $69,999*	*$70,000-$99,999*	*$100,000-$200,000*	*>$200,000*

Which of the following do you consider to be your primary racial or ethnic group (you may check more than one on this question)?

White	*Black/African American*	*Hispanic/Latino*	*Asian/Pacific Islander*	*Middle Eastern/* *Northern African*	*Native* *American*	*Other*

Post-Treatment

[ASK THE NEXT ITEM ONLY TO 12 TREATMENT CONDITIONS (WHERE RECEIVED A MESSAGE)]

[PAGE BREAK]

How negatively or positively did you feel about the message you just read about climate change and the environment?

_____	_____	_____	_____	_____	_____	_____
_____						
completely negative	*largely negative*	*somewhat negative*	*neutral*	*somewhat positive*	*largely positive*	*completely positive*

[PAGE BREAK]

[EVERYONE RECEIVES THE REST OF THE OUTCOME MEASURES]

[PAGE BREAK]

Climate change refers to a long-term change in Earth's climate due to an increase in the average atmospheric temperature. What do you think? Do you think that climate change is happening?

____ ____ ____ ____ ____ ____ ____
definitely is NOT happening *very likely is NOT happening* *probably is NOT happening* *not sure* *probably is happening* *very likely is happening* *definitely is happening*

[IF ANSWERED "DEFINITELY NOT HAPPENING" TO CLIMATE CHANGE BELIEF QUESTION," ASK THIS:]
Assuming climate change is happening, to what extent do you think it is *human-induced* as opposed to a result of Earth's natural changes?

____ ____ ____ ____ ____ ____ ____
entirely Earth's natural changes *nearly entirely Earth's natural changes* *mostly Earth's natural changes* *equally human-induced and Earth's natural changes* *mostly human-induced* *nearly entirely human-induced* *entirely human-induced*

[OTHERWISE, ASK THIS]:
To what extent do you think climate change is *human-induced* as opposed to a result of Earth's natural changes?

____ ____ ____ ____ ____ ____ ____
entirely Earth's natural changes *nearly entirely Earth's natural changes* *mostly Earth's natural changes* *equally human-induced and Earth's natural changes* *mostly human-induced* *nearly entirely human-induced* *entirely human-induced*

How unimportant or important to you is your opinion about climate change?

_____	_____	_____	_____	_____	_____	_____
_____						
extremely unimportant	*very unimportant*	*somewhat unimportant*	*neither unimportant nor important*	*somewhat important*	*very important*	*extremely important*

[PAGE BREAK]

When it comes to issues that the United States needs to address, would you say climate change is unimportant or important?

_____	_____	_____	_____	_____	_____
_____					

extremely unimportant   *very unimportant*   *somewhat unimportant*   *neither unimportant important nor important*   *somewhat important*   *very important*   *extremely important*

To the best of your knowledge, what percentage of climate scientists have concluded that human-caused climate change is happening? (0% -100%) _____

Do you think people should be doing less or more to reduce climate change?

_____	_____	_____	_____	_____	_____
_____					

Much Less   *Somewhat Less*   *Slightly Less*   *About the Same Amount*   *Slightly More*   *Somewhat More*   *Much More*

[PAGE BREAK]

Regardless of what you have done in the past, please report how unlikely or likely you are to engage in each activity in the future.

	Very Unlikely	Moderately Unlikely	Neither Unlikely Nor Likely	Moderately Likely	Very Likely
Buy a more fuel efficient automobile and/or drive less					
Use only energy efficient lightbulbs					
Adjust thermostat settings (so it is warmer in the summer and cooler in the winter)					
Buy Green Electricity					

[PAGE BREAK]

Do you oppose or support increased government regulation on industries and businesses that produce a great deal of greenhouse emissions linked to climate change?

_____	_____	_____	_____	_____	_____	_____
_____						
1	2	3	4	5	6	7
strongly oppose	*moderately oppose*	*slightly oppose*	*neither oppose nor support*	*slightly support*	*moderately support*	*strongly support*

Do you oppose or support increased taxes on industries and businesses that produce a great deal of greenhouse emissions linked to climate change?

_____	_____	_____	_____	_____	_____	_____
_____						
1	2	3	4	5	6	7
strongly oppose	*moderately oppose*	*slightly oppose*	*neither oppose nor support*	*slightly support*	*moderately support*	*strongly support*

To what extent do you oppose or support emissions trading or "cap and trade"? This is a market-based approach for controlling pollution from climate change. The government allocates permits that allow for particular amounts of pollution per time period. These permits can then be bought and sold between companies.

_____	_____	_____	_____	_____	_____
_____					
1	2	3	4	5	6	7
strongly oppose	*moderately oppose*	*slightly oppose*	*neither oppose nor support*	*slightly support*	*moderately support*	*strongly support*

To what extent do you oppose or support providing a tax credit to people who take actions to address climate change, such as purchasing hybrid vehicles, purchasing energy efficient appliances, and/or investing in home insulation?

_____	_____	_____	_____	_____	_____
_____					
1	2	3	4	5	6	7
strongly oppose	*moderately oppose*	*slightly oppose*	*neither oppose nor support*	*slightly support*	*moderately support*	*strongly support*

Should the United States' government decrease or increase investment into research on ways to reduce the impacts of climate change?

_____	_____	_____	_____	_____	_____
_____					
1	2	3	4	5	6	7
decrease a great deal	*decrease a moderate amount*	*decrease a little*	*neither increase nor decrease*	*increase a little*	*increase a moderate amount*	*increase a great amount*

[FOR CONTROL GROUP (THE 1/13TH):

Which point on this scale best describes your political views?

_____	_____	_____	_____	_____	_____	_____
_____						
very liberal	*mostly liberal*	*somewhat liberal*	*moderate*	*somewhat conservative*	*mostly conservative*	*very conservative*

Generally speaking, do you consider yourself a Democrat, Independent, or Republican?

_____	_____	_____	_____	_____	_____	_____
_____						
Strong Democrat	*Weak Republican*	*Independent Democrat Republican*	*Independent*	*Independent leans Democrat*	*Weak*	*Strong leans Republican*

[IF DOES NOT ANSWER ONE OF THE REPUBULICAN IDS, STOP SURVEY]

How important is being a Republican to you?

_____	_____	_____	_____	_____
Not at all important	*Not very important*	*Somewhat important*	*Very important*	*Extremely important*

How well does the term Republican describe you?

_____	_____	_____	_____	_____
Not at all well	*Not very well*	*Somewhat well*	*Very well*	*Extremely well*

When talking about Republicans how often do you use "we" instead of "they"?

_____	_____	_____	_____	_____
Never	*Rarely*	*Some of the time*	*Most of the time*	*All of the time*

To what extent do you think of yourself as being a Republican?

_____	_____	_____	_____	_____
Not at all	*Not too much*	*Somewhat*	*A good deal*	*A great deal*

[FOR NO MOTIVATION GROUP ONLY:]

Which point on this scale best describes your political views?

_____	_____	_____	_____	_____	_____	_____
_____						
very liberal	*mostly liberal*	*somewhat liberal*	*moderate*	*somewhat conservative*	*mostly conservative*	*very conservative*

Generally speaking, do you consider yourself a Democrat, Independent, or Republican?

_____   _____   _____   _____   _____   _____

_____
Strong   Weak   Independent   Independent   Independent   Weak   Strong
Democrat   Democrat   leans Democrat   leans Republican
               Republican   Republican

[IF DOES NOT ANSWER ONE OF THE REPUBULICAN IDS, STOP SURVEY]

How important is being a Republican to you?

_____   _____   _____   _____   _____
Not at all   Not very   Somewhat   Very   Extremely
important   important   important   important   important

How well does the term Republican describe you?

_____   _____   _____   _____   _____
Not at all   Not very   Somewhat   Very   Extremely
well   well   well   well   well

When talking about Republicans how often do you use "we" instead of "they"?

_____   _____   _____   _____   _____
Never   Rarely   Some of   Most of   All of
                                 the time   the time   the time

To what extent do you think of yourself as being a Republican?

_____   _____   _____   _____   _____
Not at all   Not too much   Somewhat   A good deal   A great deal

[FOR ACCURACY GROUP ONLY:]

Which point on this scale best describes your political views?

_____   _____   _____   _____   _____   _____

_____
very   mostly   somewhat   moderate   somewhat   mostly   very
liberal   liberal   liberal   conservative   conservative   conservative

Generally speaking, do you consider yourself a Democrat, Independent, or Republican?

_____   _____   _____   _____   _____   _____

_____
Strong   Weak   Independent   Independent   Independent   Weak   Strong
Democrat   Democrat   leans Democrat   leans Republican
               Republican   Republican

[IF DOES NOT ANSWER ONE OF THE REPUBLICAN IDS, STOP SURVEY]

How important is being a Republican to you?

_____   _____   _____   _____   _____
Not at all   Not very   Somewhat   Very   Extremely

important   *important*   *important*   *important*   *important*

How well does the term Republican describe you?

_____	_____	_____	_____	_____
Not at all well	*Not very well*	*Somewhat well*	*Very well*	*Extremely well*

When talking about Republicans how often do you use "we" instead of "they"?

_____	_____	_____	_____	_____
Never	*Rarely*	*Some of the time*	*Most of the time*	*All of the time*

To what extent do you think of yourself as being a Republican?

_____	_____	_____	_____	_____
Not at all	*Not too much*	*Somewhat*	*A good deal*	*A great deal*

[PAGE BREAK]

Recall we asked you to read a brief public service announcement before we asked you about your opinions on climate change. In a few sentences, please explain what you thought about the announcement and how you arrived at the answers to the questions we asked.

[TEXT BOX]

On-line Appendix S4: Pilot Test

As noted, we implemented a pilot test to assess the strength of the messages, among systematic processors. We recruited participants via Amazon's Mechanical Turk, restricting participation to 89 self-identified Republicans (on January 30, 2019). We asked participants to view all three of our messages (i.e., information, values, and norms) in a randomized order and complete a set of questions after each one. Adapting procedures from Petty and Wegener (1998; see also Petty & Cacioppo, 1986), we aimed to induce systematic processing in all participants to attenuate any naturally occurring differences in people's tendencies to think more carefully about one type of argument or another. Thus, at the outset, participants read the following instruction:

"Think carefully about the information presented in the following public service announcement on climate change. Consider whether the arguments presented are good reasons to be concerned about climate change and whether they are persuasive reasons to adopt new behaviors that might help reduce climate change."

The purpose was to assess whether the information message was in fact seen as the "strongest" on its merits, as that is the underlying premise of our accuracy motivation X information message prediction.

After each message, respondents answered these questions:

Please rate the public service announcement on the following scales:

_____	_____	_____	_____	_____	_____
_____					
very bad	*bad*	*somewhat bad*	*neither bad nor good*	*somewhat good*	*good*	*very good*

_____	_____	_____	_____	_____	_____
_____					
very weak	*weak*	*somewhat weak*	*neither weak nor strong*	*somewhat strong*	*strong*	*very strong*

_____	_____	_____	_____	_____	_____
_____					
very harmful	*harmful*	*somewhat harmful*	*neither harmful nor beneficial*	*somewhat beneficial*	*beneficial*	*very beneficial*

_____	_____	_____	_____	_____	_____
_____					
very foolish	*foolish*	*somewhat foolish*	*neither foolish nor wise*	*somewhat wise*	*wise*	*very wise*

We merged these outcomes for each message to create a 7-point scale indicating message strength ($\alpha = .82$ for the information message, $\alpha = .81$ for the value message, and $\alpha = .85$ for the norms message). We find that respondents rate the information message ($M = 4.87$, $SD = 1.19$, $N = 86$) as significantly stronger relative to the value message ($M = 4.54$, $SD = 1.13$, $N = 85$), $t(84) = 2.27$; $p \leq .02$, $d = .50$, and relative to the norm message ($M = 4.44$, $SD = 1.27$, $N = 84$), $t(83) = 2.5$, $p \leq .01$, $d = .50$. The values and norms messages did not significantly differ from one another, $t(83) = 0.74$; $p \leq .50$, $d = .16$). This then provides evidence that the information message is substantially "stronger." It leads us to the expectation that when individuals process with an accuracy goal, the information message presumably will be seen as most persuasive as it is a credible piece of information (which is not, what we find, however, as discussed in the text).

On-line Appendix S5

In Figure S5.1, we show the means for policy support for the motivational matching analyses. As expected, given the non-significant focused contrast, there are less clear or consistent effects. The only significant difference is the contrast between the value prime-moral framing (condition 6) and the no motivation-moral framing (condition 3), $t(1950) = 2.09$, $p = .04$, $d = .09$.[2] Furthermore, the motivational matching conditions do not even yield significant differences relative to the baseline control, $ts(1950) < .85$, $ps > .39$, $ds < .04$. In Figure S5.2, we show the means for policy support for the motivational distinctiveness analyses. It shows no significant effects, $ts(1950) < 1.27$, $ps > .20$, $ds < .06$. In addition, none of these conditions were significantly different from the message conditions with matching motivations versus the no-message, no-motivation control group, $ts(1950) < 1.26$, $ps > .20$, $ds < .06$.
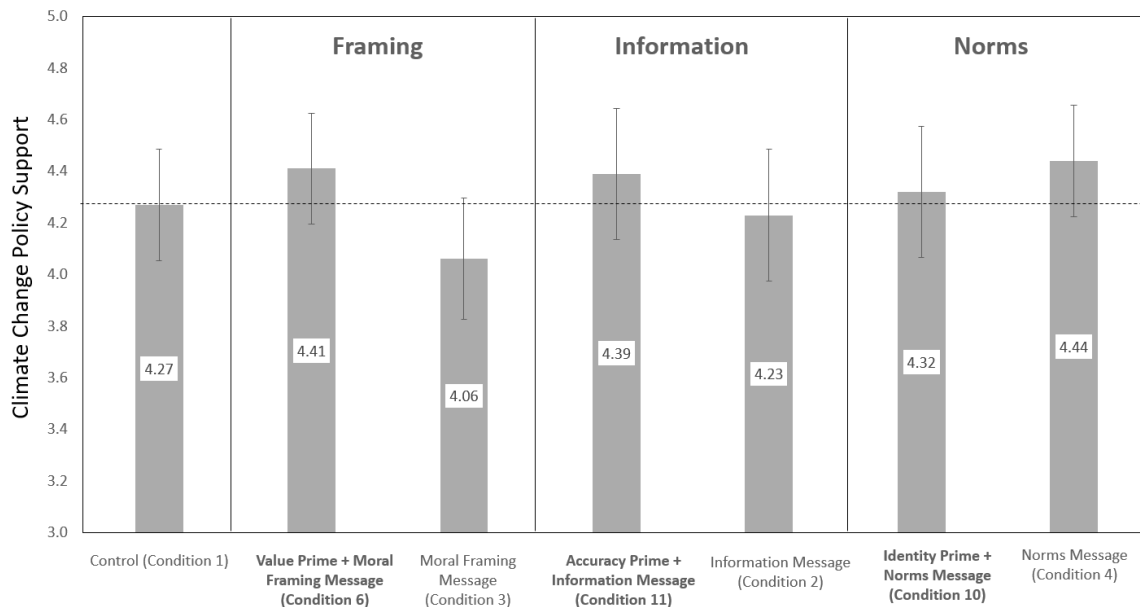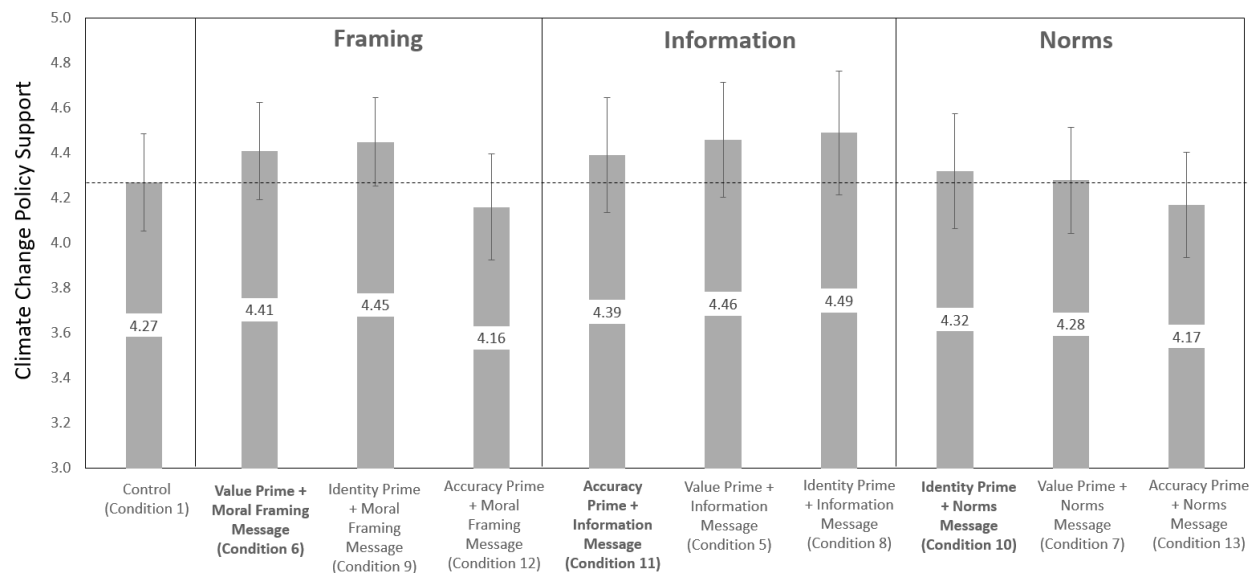

Figure E-1. Average scores for climate change policy support composite (see On-line Appendix C for question wording) with 95% confidence intervals. Motivation-message matched conditions are bolded and compared in each frame to conditions receiving the same message with no motivation primed.

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2 For the other contrasts between the message conditions with matching motivations versus no motivational induction, $ts(1950) < .85$, $ps > .39$.

Figure E-2. Average scores for climate change policy support composite (see On-line Appendix C for question wording) with 95% confidence intervals. Motivation-message matched conditions are bolded and compared in each frame to conditions receiving the same message with a mismatched motivation primed.

On-line Appendix References

Abeles, A. T., Howe, L. C., Krosnick, J. A., & MacInnis, B. (2019). Perception of public opinion on global warming and the role of opinion deviance. *Journal of Environmental Psychology, 63*, 118-129.

Bolsen, T., Druckman, J. N., & Cook, F. L. (2014). The influence of partisan motivated reasoning on public opinion. *Political Behavior, 36*(2), 235–62.

Campbell, T. H., & Kay, A. C. (2014). Solution aversion: On the relation between ideology and motivated disbelief. *Journal of Personality and Social Psychology, 107*(5), 809–24.

Davenport, C., & Pierre-Louis, K. (2018, November 23). U.S. climate report warns of damaged environment and shrinking economy. *The New York Times.* Retrieved from https://www.nytimes.com/

Druckman, J. N., & Leeper, T. J. (2012). Learning more from political communication experiments: Pretreatment and its effects. *American Journal of Political Science, 56*(4), 875-896.

Dunning, D. (2015). Motivational theories. In B. Gawronski & G. V. Bodenhausen (Eds.), *Theory and explanation in social psychology*. New York: Guilford.

Feinberg, M., & Willer, R. (2013). The moral roots of environmental attitudes. *Psychological Science, 24*(1), 56–62.

Haidt, J. (2001). The emotional dog and its rational tail: A social intuitionist approach to moral judgment. *Psychological Review, 108*(4), 814.

Hochschild, A., & Hochschild, D. (2018, December 29). More Republicans than you think support action on climate change. *The New York Times.* Retrieved from https://www.nytimes.com/

Kahan, D. M. (2017). Misconceptions, misinformation, and the logic of identity-protective cognition. *Cultural Cognition Project Working Paper Series No. 164*. http://dx.doi.org/10.2139/ssrn.2973067.

Kunda, Z. (1990). The case for motivated reasoning. *Psychological Bulletin, 108*(3), 480–98.

Leiserowitz, A., Maibach, E., Roser-Renouf, C., Rosenthal, S., Cutler, M., & Kotcher, J. (2018). *Politics & global warming, March 2018*. Yale University and George Mason University. New Haven, CT: Yale Program on Climate Change Communication.

Lerner, J. S., & Tetlock, P. E. (1999). Accounting for the effects of accountability. *Psychological Bulletin, 125*(2), 255.

Malakoff, D. (2018, November 23). Climate change poses major threat to United States, new government report concludes. *Science*. Retrieved from https://www.sciencemag.org/

Petrocelli, J. V., Martin, J. L., & Li, W. Y. (2010). Shaping behavior through malleable self-perceptions: A test of the forced-agreement scale effect (FASE). *Journal of Research in Personality, 44*(2), 213-221.

Petty, R. E., & Wegener, D. T. (1998). Matching versus mismatching attitude functions: Implications for scrutiny of persuasive messages. *Personality and Social Psychology Bulletin, 24*(3), 227-240.

Petty, R. E., & Cacioppo, J. T. (1986). The elaboration likelihood model of persuasion. In *Communication and persuasion* (pp. 1-24). New York: Springer.

Pew Research Center. (2016). *The politics of climate*. Retrieved from http://www.pewinternet.org/

Schuldt, J. P., Rickard, L. N., & Yang, Z. J. (2018). Does reduced psychological distance increase climate engagement? On the limits of localizing climate change. *Journal of Environmental Psychology, 55*, 147-153.

Schuldt, J. P., Roh, S., & Schwarz, N. (2015). Questionnaire design effects in climate change surveys: Implications for the partisan divide. *The Annals of the American Academy of Political and Social Science, 658*(1), 67–85.

Tetlock, P. E. (1983). Accountability and complexity of thought. *Journal of Personality and Social Psychology, 45*(1), 74.

Tetlock, P. E. (1985). Accountability: The neglected social context of judgment and choice. *Research in Organizational Behavior, 7*(1), 297-332.

USGCRP. (2018). Reidmiller, D., Avery, C. W., Easterling, D. R., Kunkel, K. E., Lewis, K., Maycock, T. K., & Stewart, B. C. (Eds.). *Impacts, risks, and adaptation in the United States: Fourth national climate assessment, volume II*. Washington DC: U.S. Global Change Research Program. doi: 10.7930/NCA4.2018.

Wolsko, C., Ariceaga, H., & Seiden, J. (2016). Red, white, and blue enough to be green: Effects of moral framing on climate change attitudes and conservation behaviors. *Journal of Experimental Social Psychology, 65*, 7–19. http://dx.doi.org/10.1016/j.jesp.2016.02.005.