

# Talking Climate

The Science of Climate Change  
Communication

# Americans on Climate Change

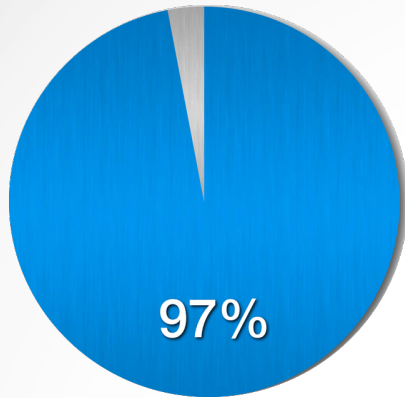


Four in six Americans believe climate change is happening.



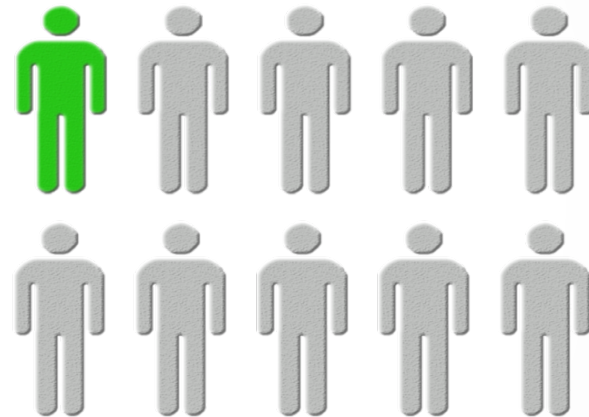
Three in six Americans believe humans are the cause.<sup>1</sup>

<sup>1</sup> Leiserowitz, Maibach, Roser-Renouf, Feinberg, & Rosenthal, 2015



Ninety-seven percent of climate scientists believe humans are causing climate change.<sup>2</sup>

One in ten Americans understands more than 90 percent of climate scientists believe humans are causing climate change.<sup>3</sup>



People who believe scientists disagree about climate change are less likely to support climate action.<sup>4</sup>

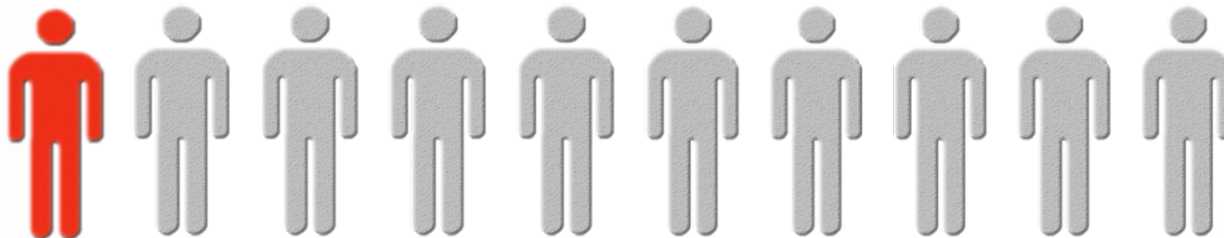
<sup>2</sup>Doran & Zimmerman, 2009

<sup>3</sup>Leiserowitz, Maibach, Roser-Renouf, Feinberg, & Rosenthal, 2015

<sup>4</sup>Ding, Maibach, Zhao, Roser-Renouf, & Leiserowitz, 2011



Six in 10 Americans say they are at least “somewhat worried” about global warming.



Roughly one in 10 Americans says they are “very worried” about climate change.<sup>5</sup>

<sup>5</sup> Leiserowitz, Maibach, Roser-Renouf, Feinberg, & Rosenthal, 2015

# Climate Change in the News

People understand issues that receive more news coverage to be more important.<sup>6</sup>

Climate change is difficult to cover...

“Journalism needs events. We need clear causes, agents and forces to be visibly responsible. We need... a narrative of baddies and goodies. Where the climate is concerned, things are slow-moving, complex, and what's more, we ourselves are the baddies. That's not something listeners and viewers want or want to be told.”

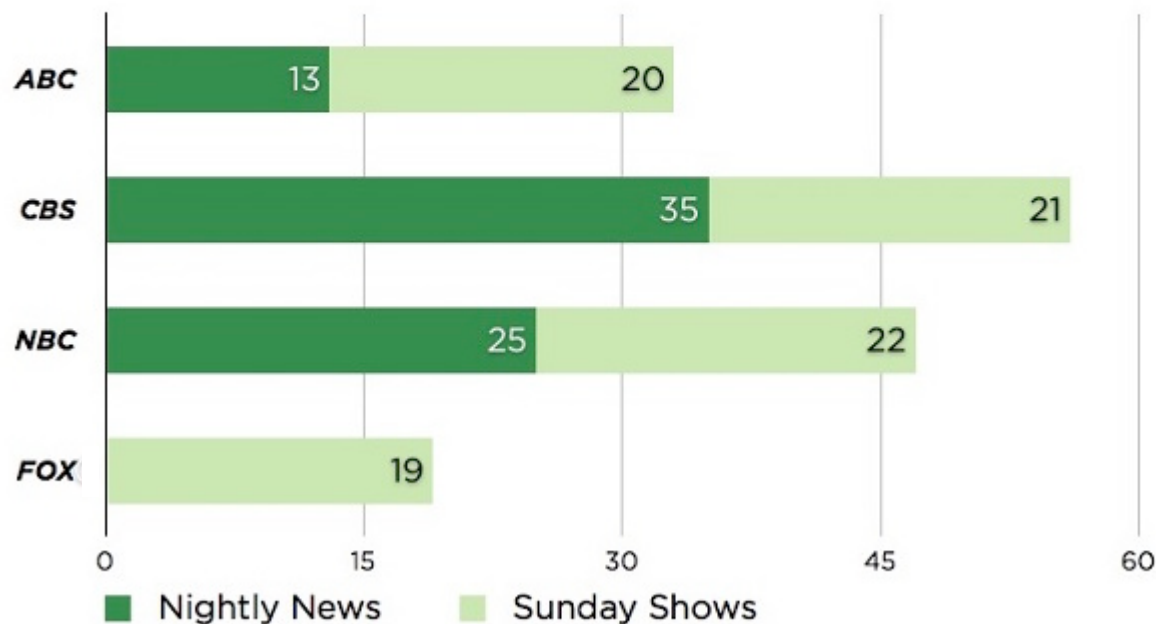
—Mark Brayne, Former BBC Correspondent

<sup>6</sup> McCombs & Shaw, 1974

How much coverage did climate change receive in 2014?

## Total Coverage of Climate Change In 2014

*Minutes of airtime on ABC, CBS, NBC, and FOX\**



Media Matters

## What did Americans care about in 2014?

|                                                         | <b>Great deal</b> | <b>Fair amount</b> | <b>A little/<br/>not at all</b> |
|---------------------------------------------------------|-------------------|--------------------|---------------------------------|
|                                                         | %                 | %                  | %                               |
| The economy                                             | 59                | 29                 | 11                              |
| Federal spending and the budget deficit                 | 58                | 22                 | 20                              |
| The availability and affordability of healthcare        | 57                | 20                 | 23                              |
| Unemployment                                            | 49                | 28                 | 23                              |
| The size and power of the federal government            | 48                | 20                 | 31                              |
| The Social Security system                              | 46                | 29                 | 24                              |
| Hunger and homelessness                                 | 43                | 33                 | 23                              |
| Crime and violence                                      | 39                | 31                 | 29                              |
| The possibility of future terrorist attacks in the U.S. | 39                | 24                 | 37                              |
| The availability and affordability of energy            | 37                | 30                 | 33                              |
| Drug use                                                | 34                | 29                 | 37                              |
| Illegal immigration                                     | 33                | 24                 | 42                              |
| The quality of the environment                          | 31                | 35                 | 34                              |
| Climate change                                          | 24                | 25                 | 51                              |
| Race relations                                          | 17                | 26                 | 56                              |

*Gallup*

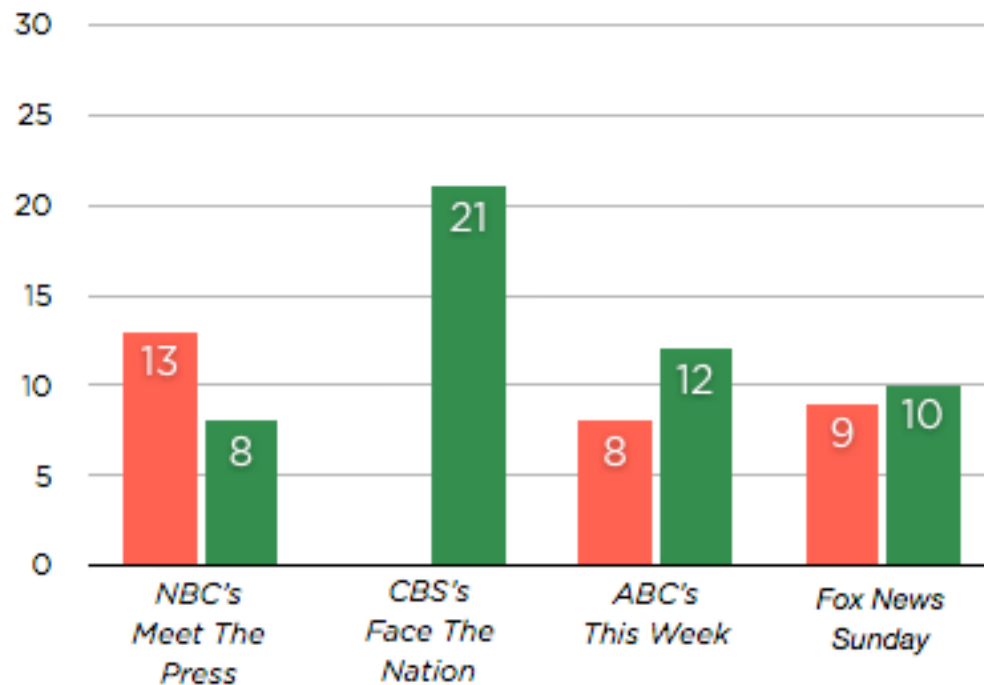
# What did Americans vote on in 2016?

| Rank by "very imp." | Liberal Democrats                                     | Moderate/Conservative Democrats                       | Liberal/Moderate Republicans                          | Conservative Republicans                              |
|---------------------|-------------------------------------------------------|-------------------------------------------------------|-------------------------------------------------------|-------------------------------------------------------|
| 1                   | The economy                                           | The economy                                           | The economy                                           | The economy                                           |
| 2                   | Health care                                           | Social Security                                       | Terrorism                                             | Terrorism                                             |
| 3                   | Income gap between rich and poor                      | Health care                                           | Federal budget deficit                                | Federal budget deficit                                |
| 4                   | Protecting the environment                            | Terrorism                                             | Immigration reform                                    | Immigration reform                                    |
| 5                   | Education                                             | Education                                             | Health care                                           | Supreme Court nominations                             |
| 6                   | <i>Global warming</i>                                 | Income gap between rich and poor                      | Social Security                                       | Tax reform                                            |
| 7                   | Race relations                                        | Federal budget deficit                                | Tax reform                                            | Foreign policy                                        |
| 8                   | Developing sources of clean energy                    | Improving the nation's roads, bridges, and powerlines | Gun control/rights                                    | Health care                                           |
| 9                   | Social Security                                       | Protecting the environment                            | Education                                             | Gun control/rights                                    |
| 10                  | Improving the nation's roads, bridges, and powerlines | Tax reform                                            | Foreign policy                                        | Social Security                                       |
| 11                  | Gun control/rights                                    | Developing sources of clean energy                    | Improving the nation's roads, bridges, and powerlines | Abortion                                              |
| 12                  | Terrorism                                             | Foreign policy                                        | Energy independence                                   | Education                                             |
| 13                  | Energy independence                                   | <i>Global warming</i>                                 | Protecting the environment                            | Energy independence                                   |
| 14                  | Supreme Court nominations                             | Energy independence                                   | Income gap between rich and poor                      | International trade                                   |
| 15                  | Campaign finance reform                               | Gun control/rights                                    | Developing sources of clean energy                    | Same-sex marriage                                     |
| 16                  | Foreign policy                                        | Race relations                                        | International trade                                   | Improving the nation's roads, bridges, and powerlines |
| 17                  | Reforming Wall Street                                 | Reforming Wall Street                                 | Race relations                                        | Campaign finance reform                               |
| 18                  | Federal budget deficit                                | Supreme Court nominations                             | Supreme Court nominations                             | Income gap between rich and poor                      |
| 19                  | Tax reform                                            | Immigration reform                                    | Abortion                                              | Race relations                                        |
| 20                  | Abortion                                              | Campaign finance reform                               | Reforming Wall Street                                 | Reforming Wall Street                                 |
| 21                  | Immigration reform                                    | Abortion                                              | <i>Global warming</i>                                 | Protecting the environment                            |
| 22                  | Same-sex marriage                                     | International trade                                   | Campaign finance reform                               | Developing sources of clean energy                    |
| 23                  | International trade                                   | Same-sex marriage                                     | Same-sex marriage                                     | <i>Global warming</i>                                 |

That's note to mention the issue of false balance...

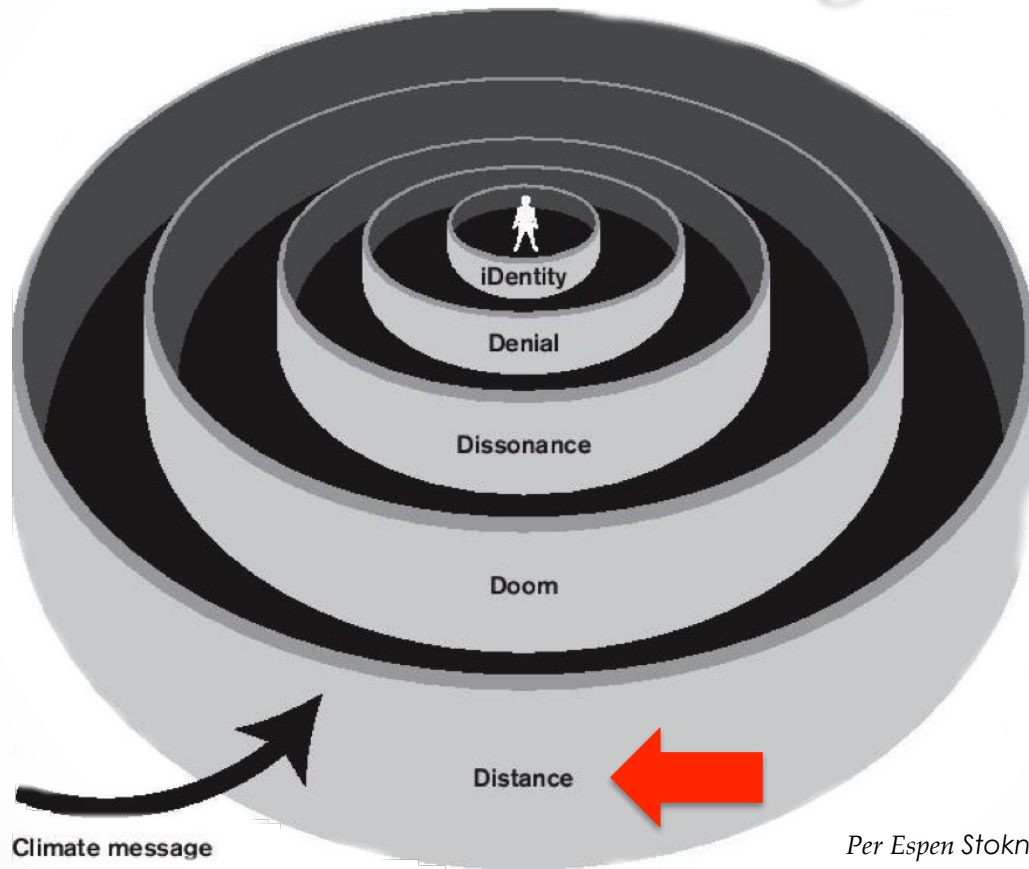
### How Much Time Did Major Sunday Shows Yield To False Balance On Climate Change In 2014?

- Minutes of Segments That Included False Balance
- Minutes of Segments Without False Balance



Media Matters

# Barriers to Understanding Climate Change



We respond to threats with four key triggers:

- **Personal** - We respond to threats from other people.
- **Abrupt** - We are sensitive to abrupt changes.
- **Immoral** - We pay attention when we see something indecent or disgusting.
- **Now** - We respond to immediate threats.



- Americans largely see climate change as a distant threat that will hurt distant people and places far off in the future.



- Only three in ten Americans believe they are being harmed by climate change right now.<sup>8</sup>
- We are more concerned with present pain than future agony.<sup>9</sup>



<sup>8</sup> Leiserowitz, Maibach, Roser-Renouf, Feinberg, & Rosenthal, 2015

<sup>9</sup> Jacquet et al., 2013

# Overcoming Distance

“Just a few million years ago, the mammalian brain learned a new trick: to predict the timing and location of dangers before they actually happened.”

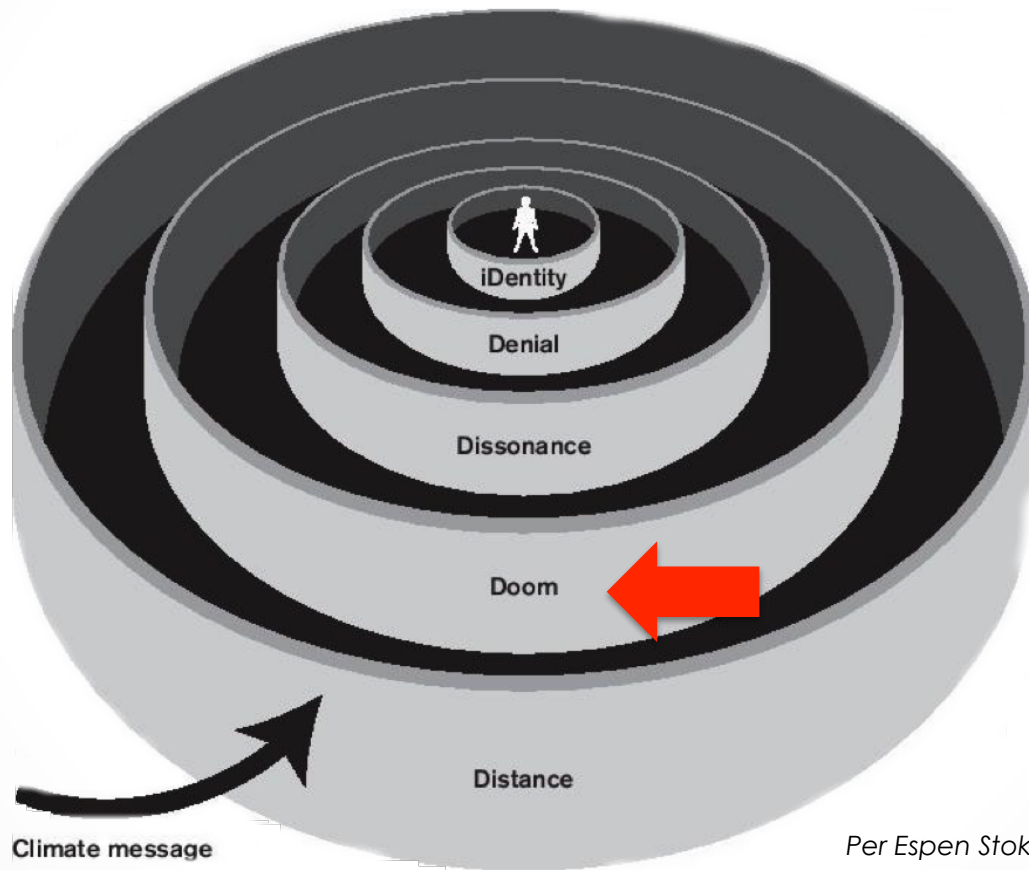
—Dan Gilbert, Psychologist

# Overcoming Distance

- Bring climate impacts close to home.
- Connect climate to issues that matter to your audience.
- Invoke legacy.



# Barriers to Understanding Climate Change



*Per Espen Stoknes*

- When people see the impacts of climate change, they feel more concerned, but they also feel more powerless.<sup>10</sup>
- Dire warnings about climate change can actually make people less likely to reduce their carbon footprint.<sup>11</sup>

“Our research has shown there is a *hope gap*. Even people who are most alarmed at climate change don't know what the solutions are. Many people feel scared and frustrated and impotent. Which is patently wrong. It's solvable.”

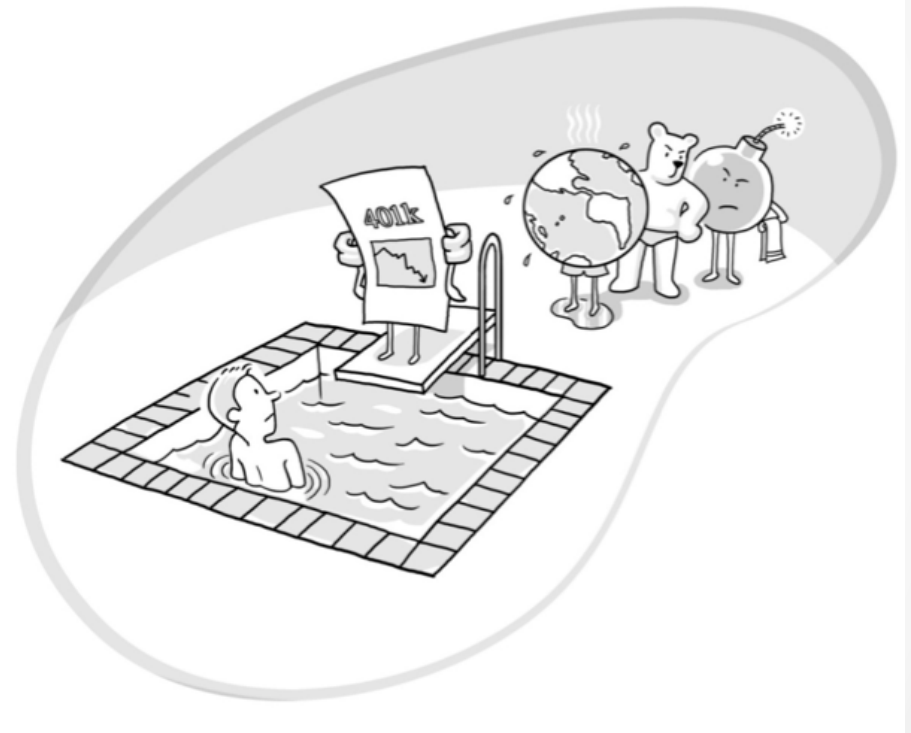
—Anthony Leiserowitz, Professor, Yale University

<sup>10</sup> O'Neill, Boykoff, Niemeyer, & Day, 2013

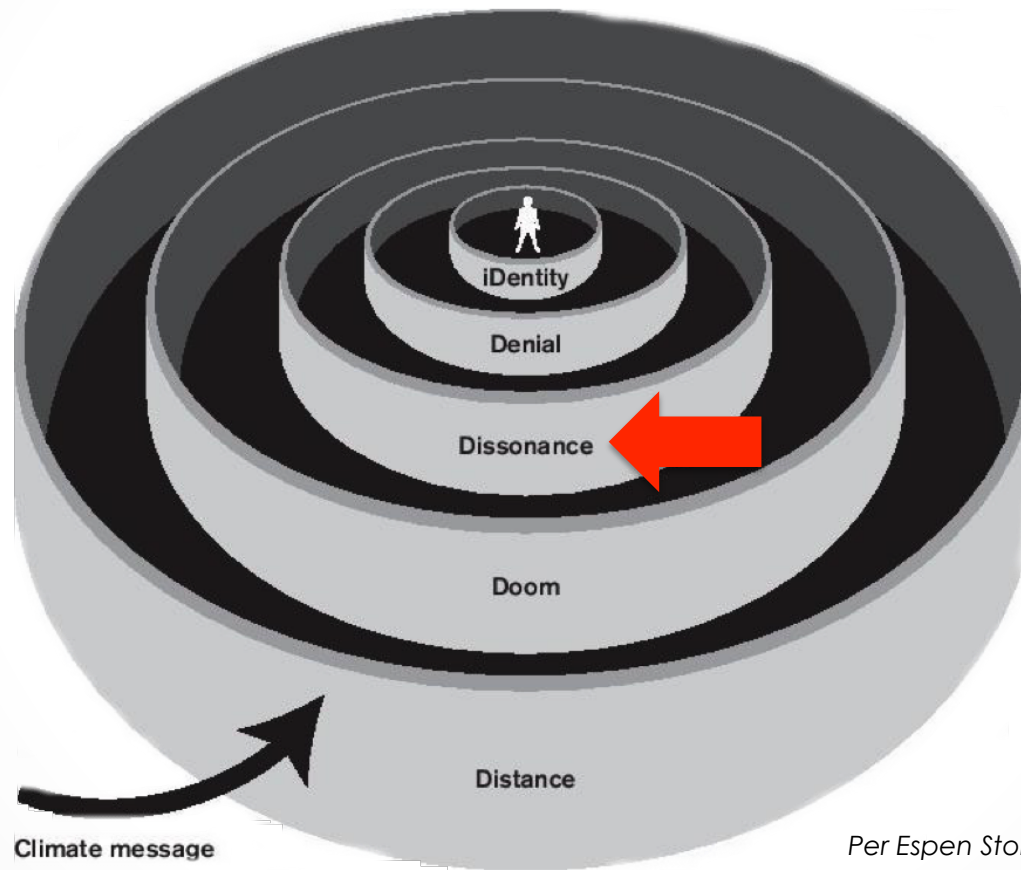
<sup>11</sup> Feinberg & Willer, 2010

# Overcoming Doom

- Emphasize solutions & benefits.
- Beware the overuse of emotional appeals.



# Barriers to Understanding Climate Change



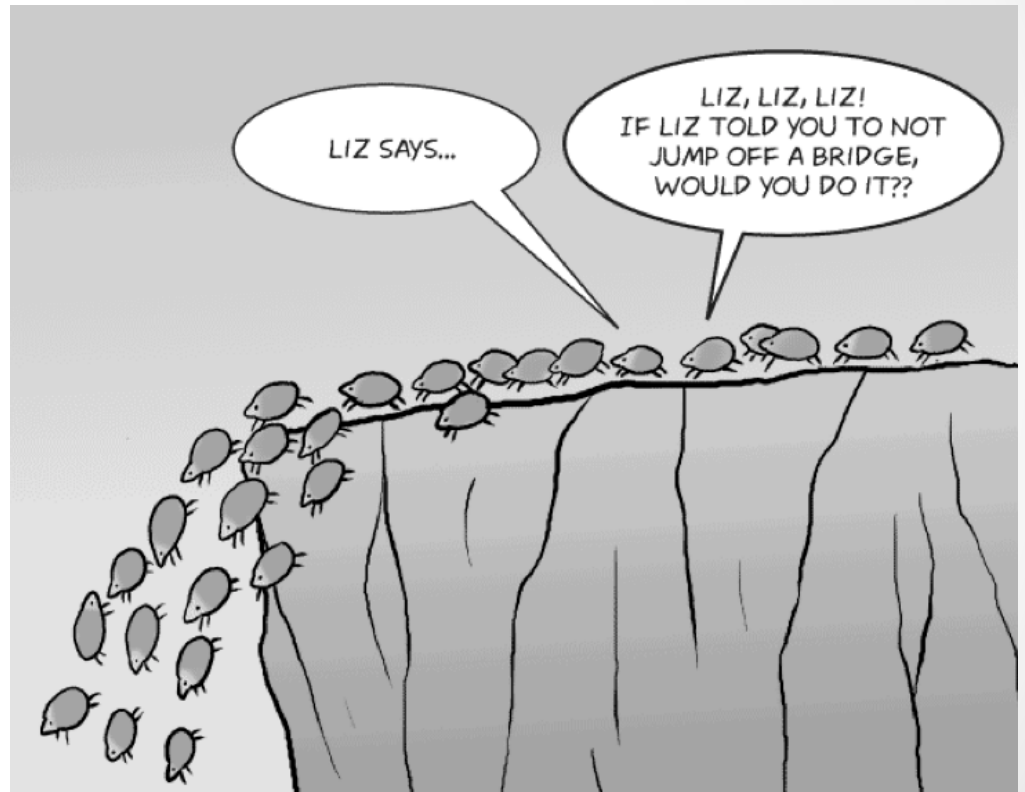
*Per Espen Stoknes*

- People feel a dissonance between their actions and the impact of their actions.
- They see few climate-friendly consumer options and enjoy little social support.
- People respond to their guilt by dismissing the facts of climate change.<sup>12</sup>

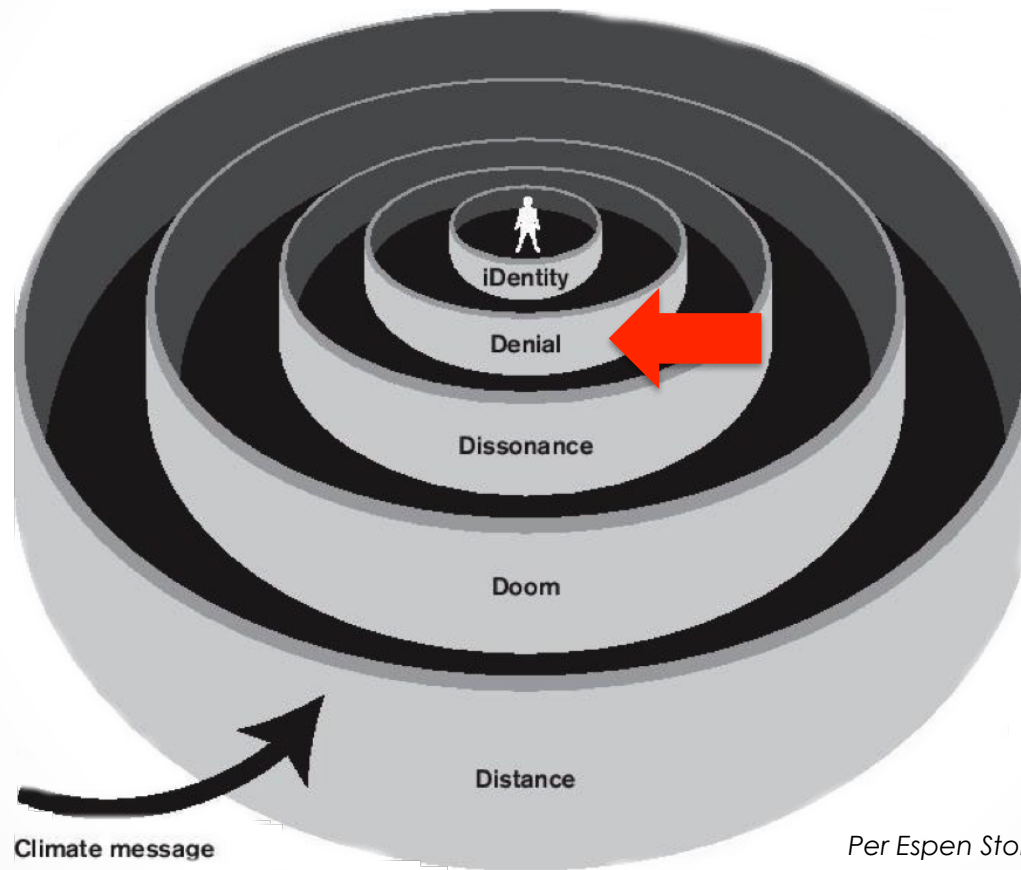


# Overcoming Dissonance

- Channel the power of social norms.
- Appeal to group identity.



# Barriers to Understanding Climate Change



*Per Espen Stoknes*

- Climate change challenges our core belief that the world is a just, orderly and stable place.<sup>13</sup>
- People deny the reality of climate change to defend the status quo.<sup>14</sup>

“Denial is due to a surplus of culture rather than a deficit of information.”

—Clive Hamilton, Professor, Charles Stuart University

<sup>13</sup> Feinberg & Willer, 2010

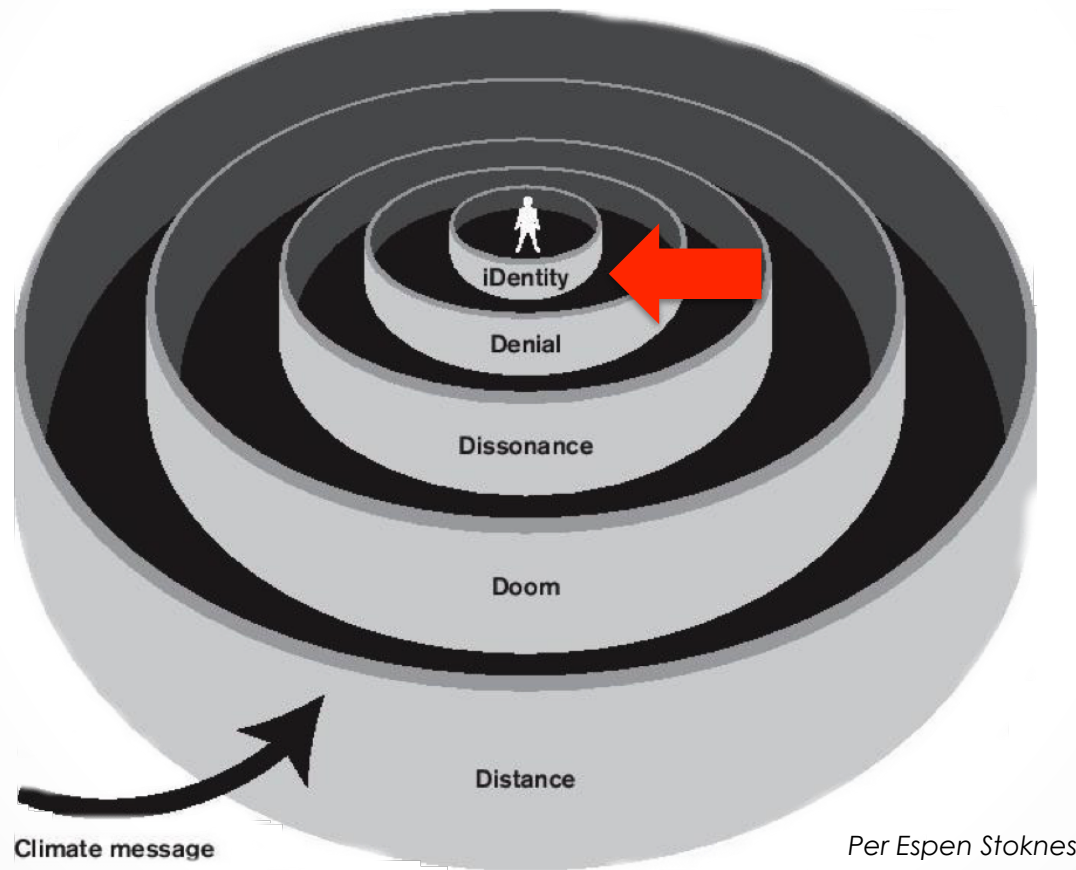
<sup>14</sup> Feygina, Jost, & Goldsmith, 2010

# Overcoming Denial

- Understand different sources of doubt.
- Don't repeat the myth.
- Don't overload with facts.



# Barriers to Understanding Climate Change





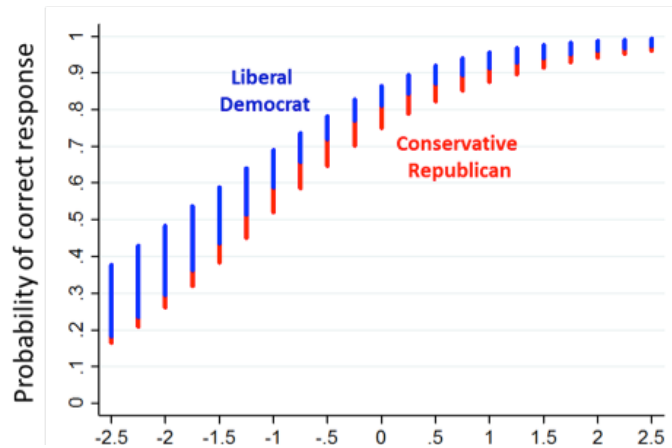
- Climate deniers tend to be white, male, religious and conservative.<sup>15</sup>
- Conservatives who understand climate science are actually *more* likely to deny climate change.<sup>16</sup>
- Conservatives deny climate change because popular solutions conflict with their values and identity.<sup>17</sup>

<sup>15</sup> Leiserowitz, 2005

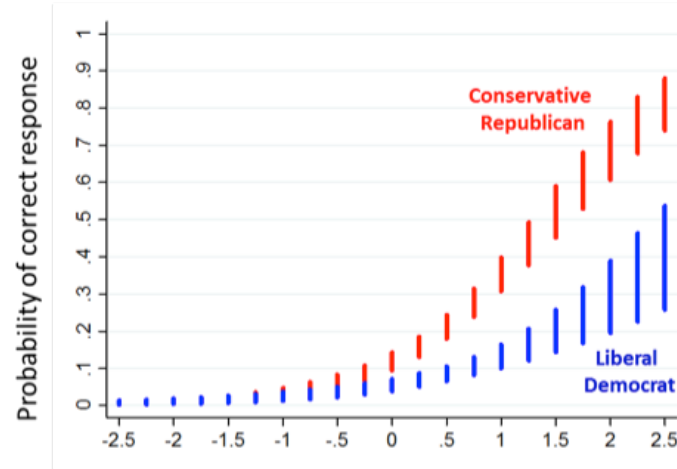
<sup>16</sup> McCright & Dunlap, 2011

<sup>17</sup> Kahan, 2010

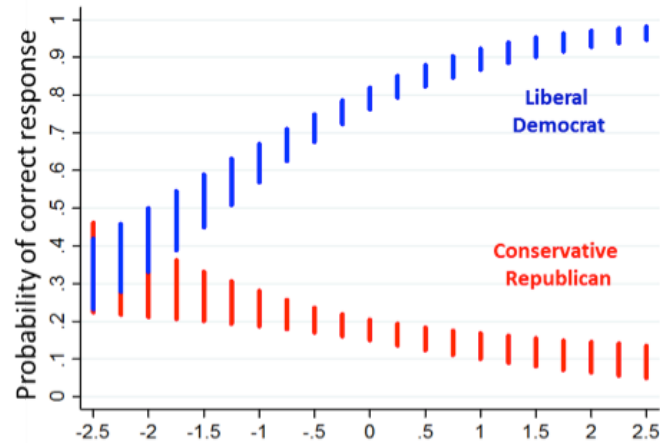
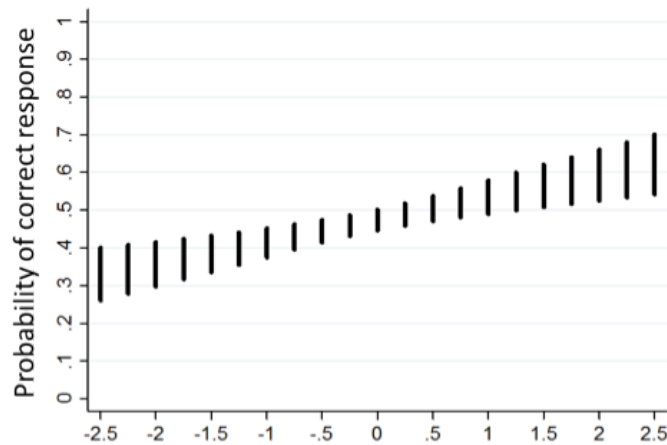
*"What gas do most scientists believe causes temperatures in the atmosphere to rise? Is it [hydrogen, helium, carbon dioxide, radon]?"*



*"Climate scientists believe that if the North Pole icecap melted as a result of human-caused global warming, global sea levels would rise." [True or False]*



*"[Is the earth] getting warmer (a) mostly because of human activity such as burning fossil fuels or (b) mostly because of natural patterns in the earth's environment?"*

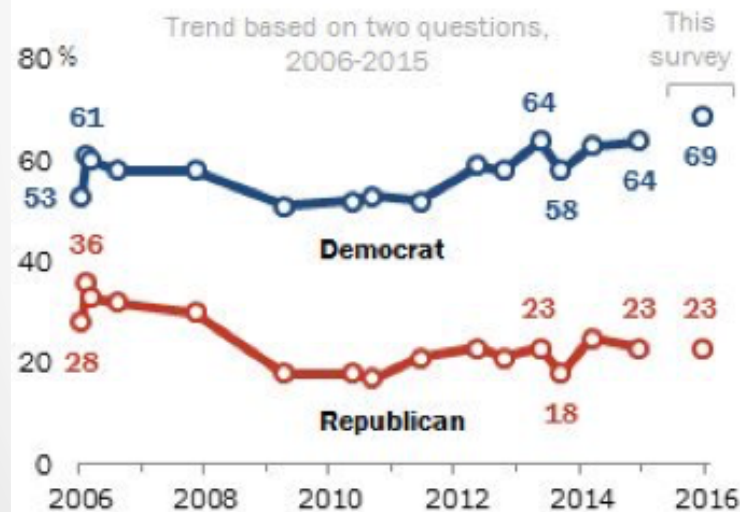


Kahan, 2015

- Climate change has grown more contentious, but clean energy is universally popular.<sup>18</sup>

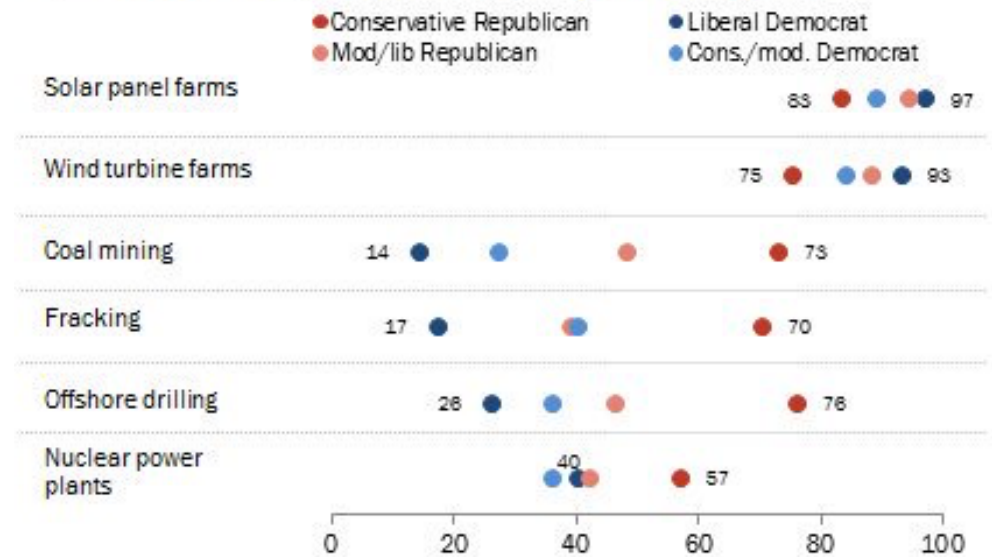
## A decade of political divides over climate change

% of U.S. adults in each group who say the Earth is getting warmer mostly because of human activity



## Strong political divide over expanding fossil fuels; but mostly agreement on renewable energies

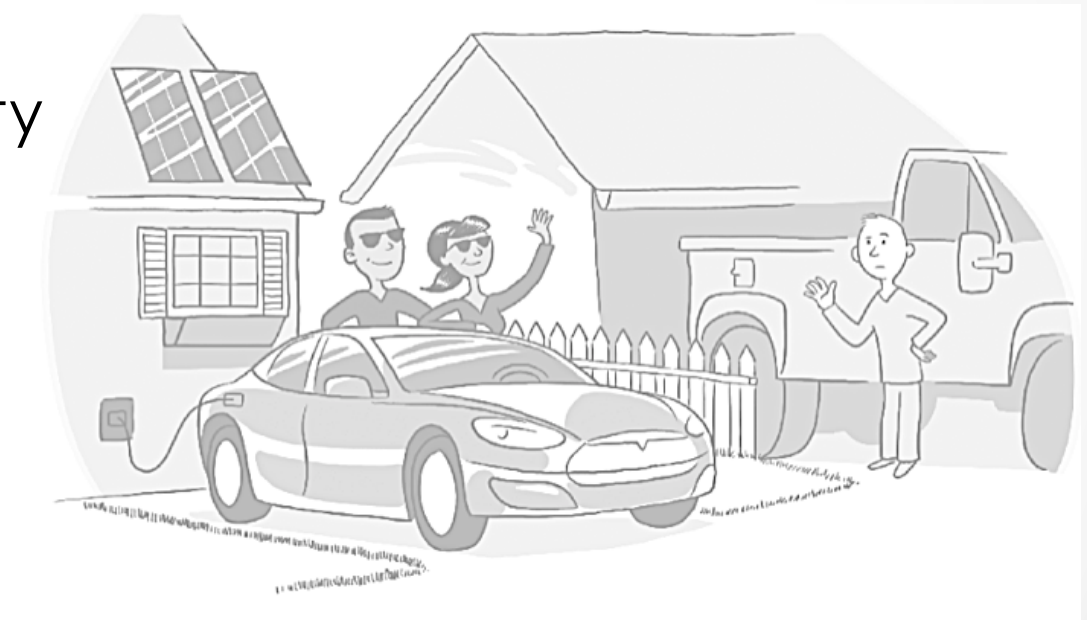
% of U.S. adults who say they favor expanding each energy source



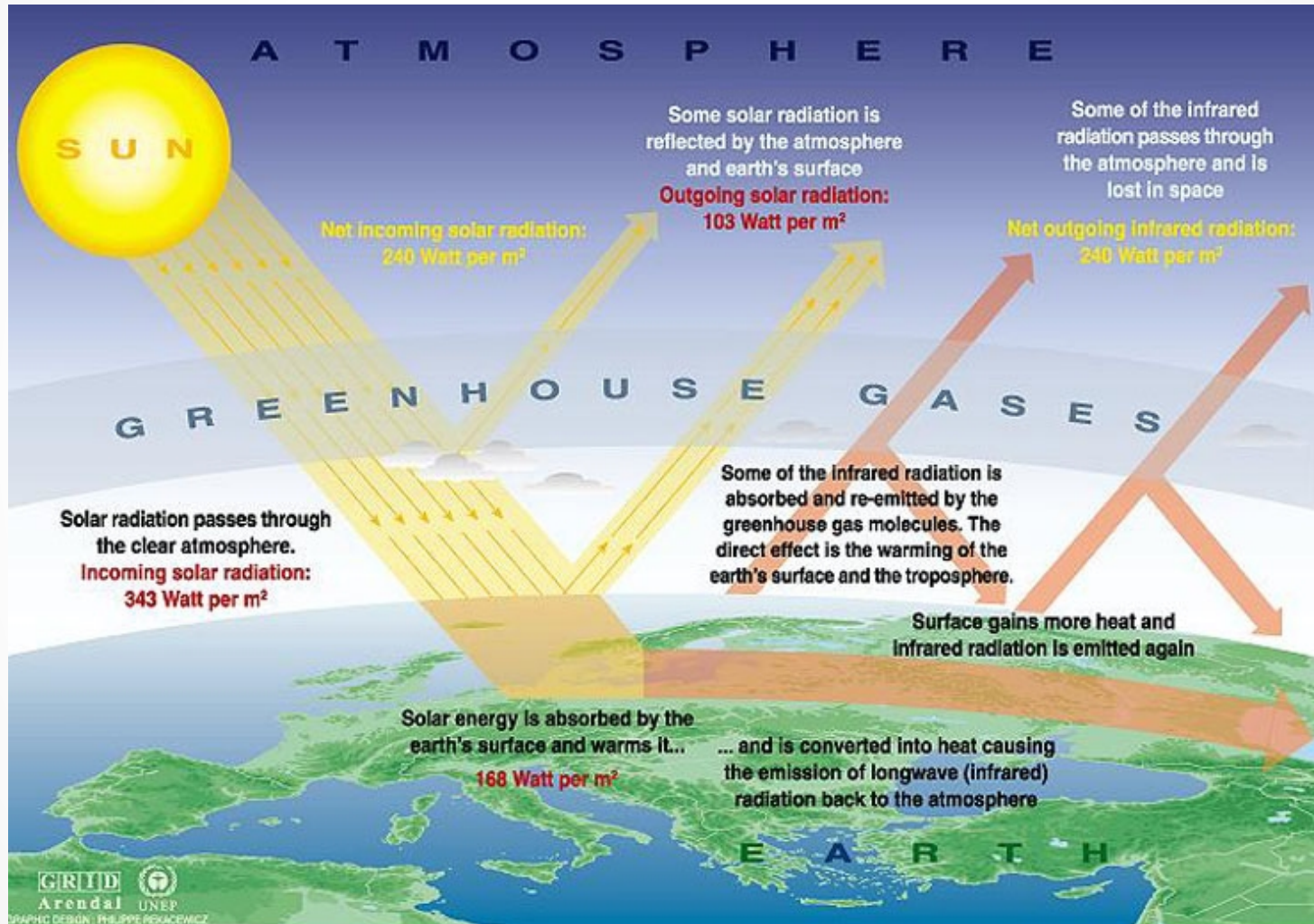
<sup>18</sup> Pew Research Center, 2016

# Overcoming Identity Issues

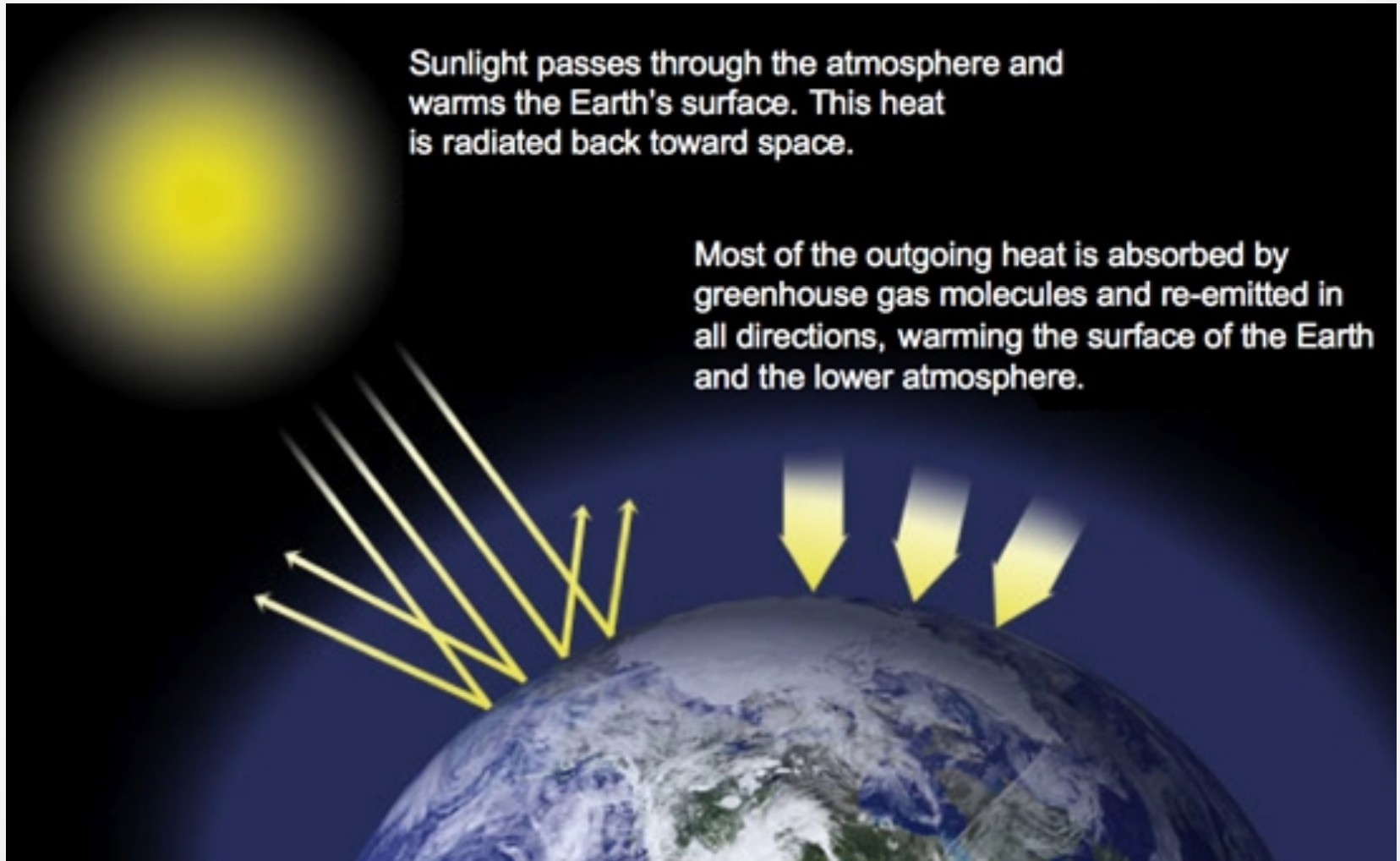
- Appeal to identity
- Social Norms



# Examples



# Examples



# Examples

“It’s something that we understand with absolute assurance of the veracity of that science... When 97 percent of scientists agree on anything, we need to listen, and we need to respond. Well, 97 percent of climate scientists have confirmed that climate change is happening and that human activity is responsible.”

—John Kerry

# Examples

“The atmosphere is about five percent warmer than it was 40 years ago, a staggering shift that more than anything else signals that we’ve left behind the Holocene, the 10,000-year period of benign climate that underwrote the rise of human civilization. That increase in atmospheric moisture also loads the dice for both drought and flood.”

—Bill McKibben

# Examples



# Examples



# For more information

[theclimatechat.org](http://theclimatechat.org)

[climateadvocacylab.org](http://climateadvocacylab.org)

[climateoutreach.org](http://climateoutreach.org)

[cred.columbia.edu](http://cred.columbia.edu)

[climatecommunication.yale.edu](http://climatecommunication.yale.edu)

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