

Climate Change and Denial

Even though abundant scientific evidence supports anthropogenic climate change's existence and inevitable impact, some skeptics still deny its existence, cause, and/or effects. This view, clashing with scientific evidence, is known as climate change denial.

NASA cites eight main sources of evidence for climate change (Climate change: How do we know?)

- sea level rise
- global temperature rise
- warming oceans
- shrinking ice sheets
- declining arctic sea ice
- glacial retreat
- extreme events
- ocean acidification

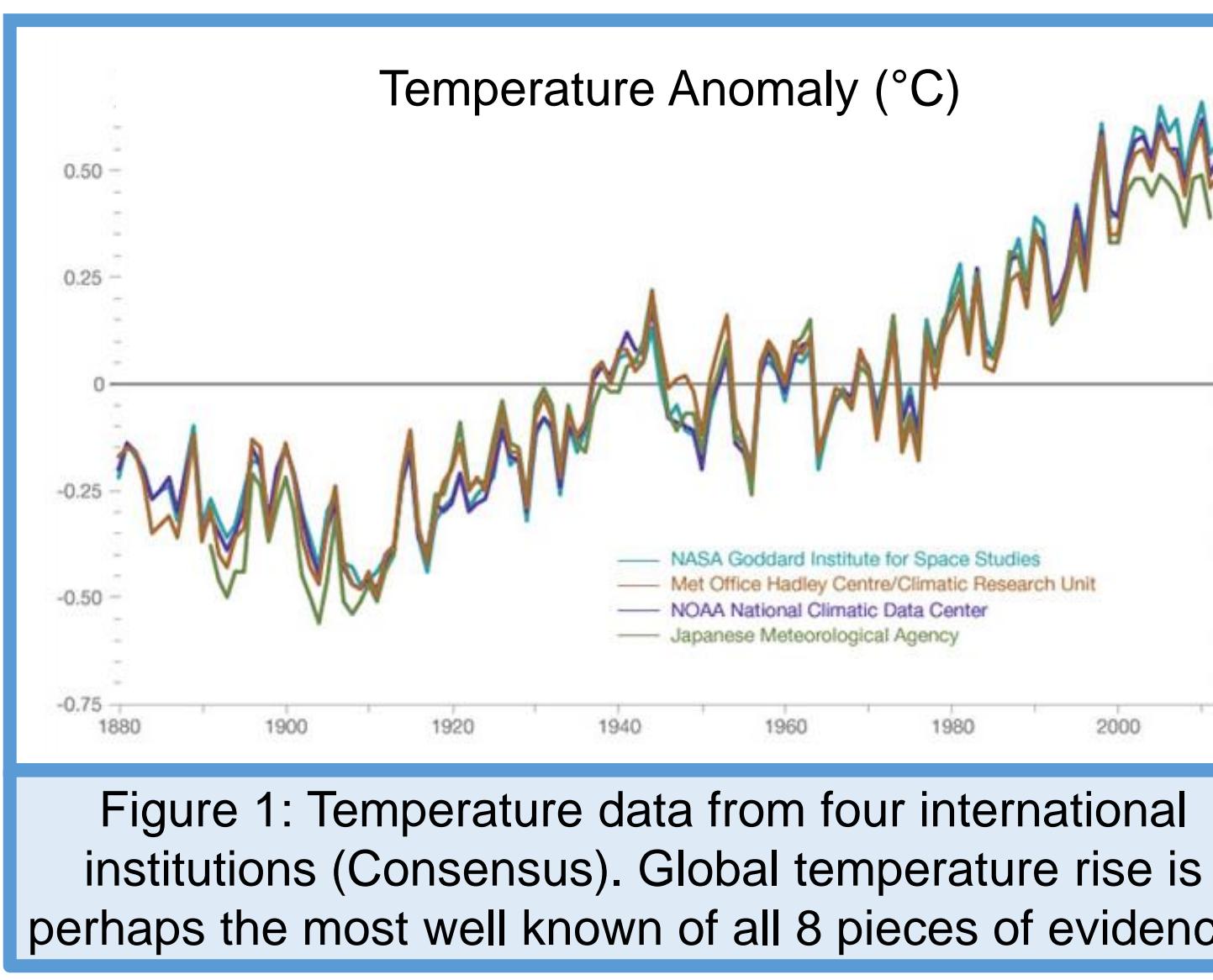


Figure 1: Temperature data from four international institutions (Consensus). Global temperature rise is perhaps the most well known of all 8 pieces of evidence.

The scientific community is convinced; 97% of climate scientists agree that climate change is occurring. However, the American public is unsure, as 59% deny or are unsure of anthropogenic climate change (Figure 2).

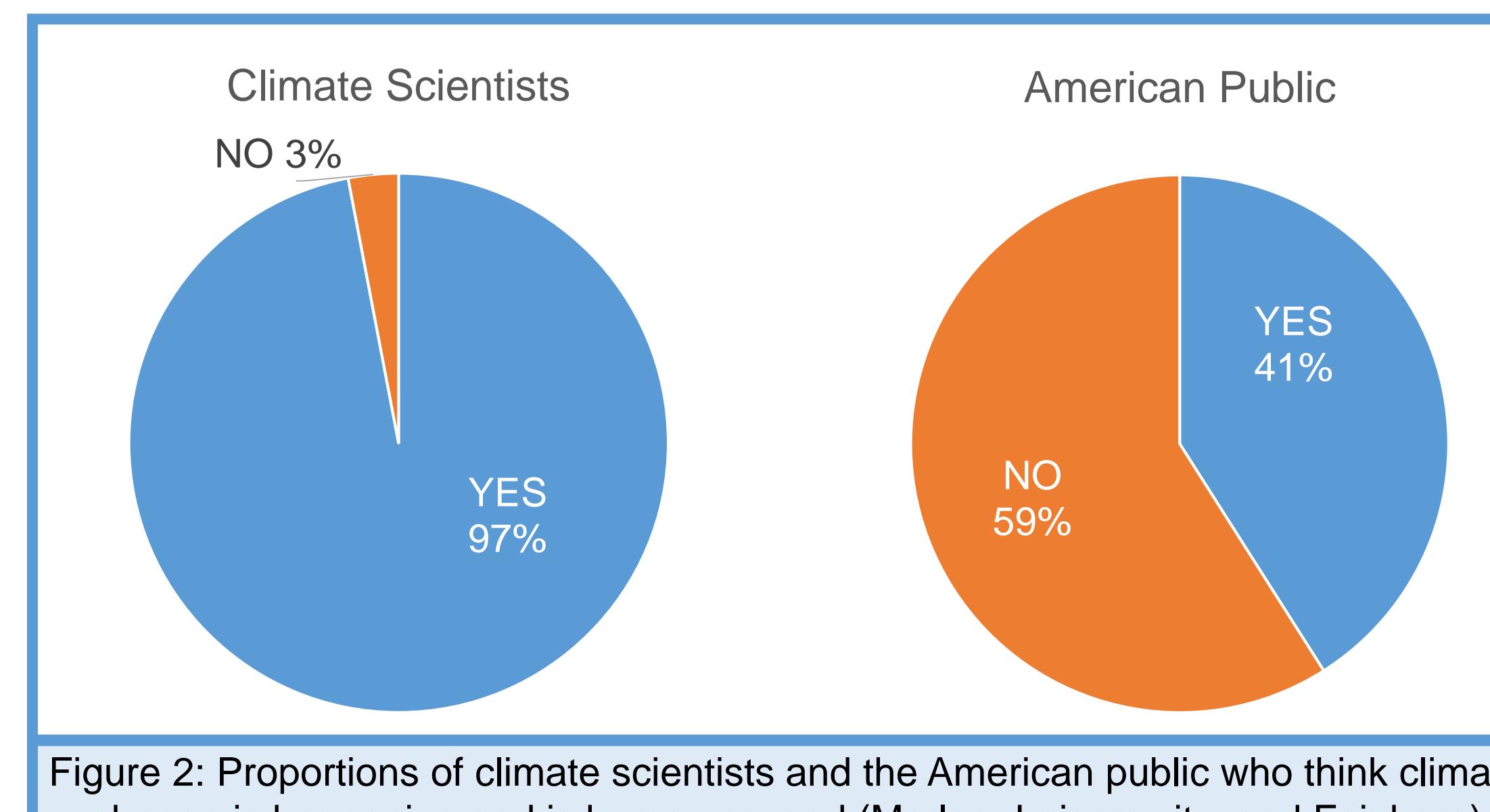


Figure 2: Proportions of climate scientists and the American public who think climate change is happening and is human caused (Marlon, Leiserowitz, and Feinberg)

Denial is particularly prevalent in America. In June 2013, 40% of Americans said that global warming was a major threat to their country, a percentage smaller than that of any other surveyed region

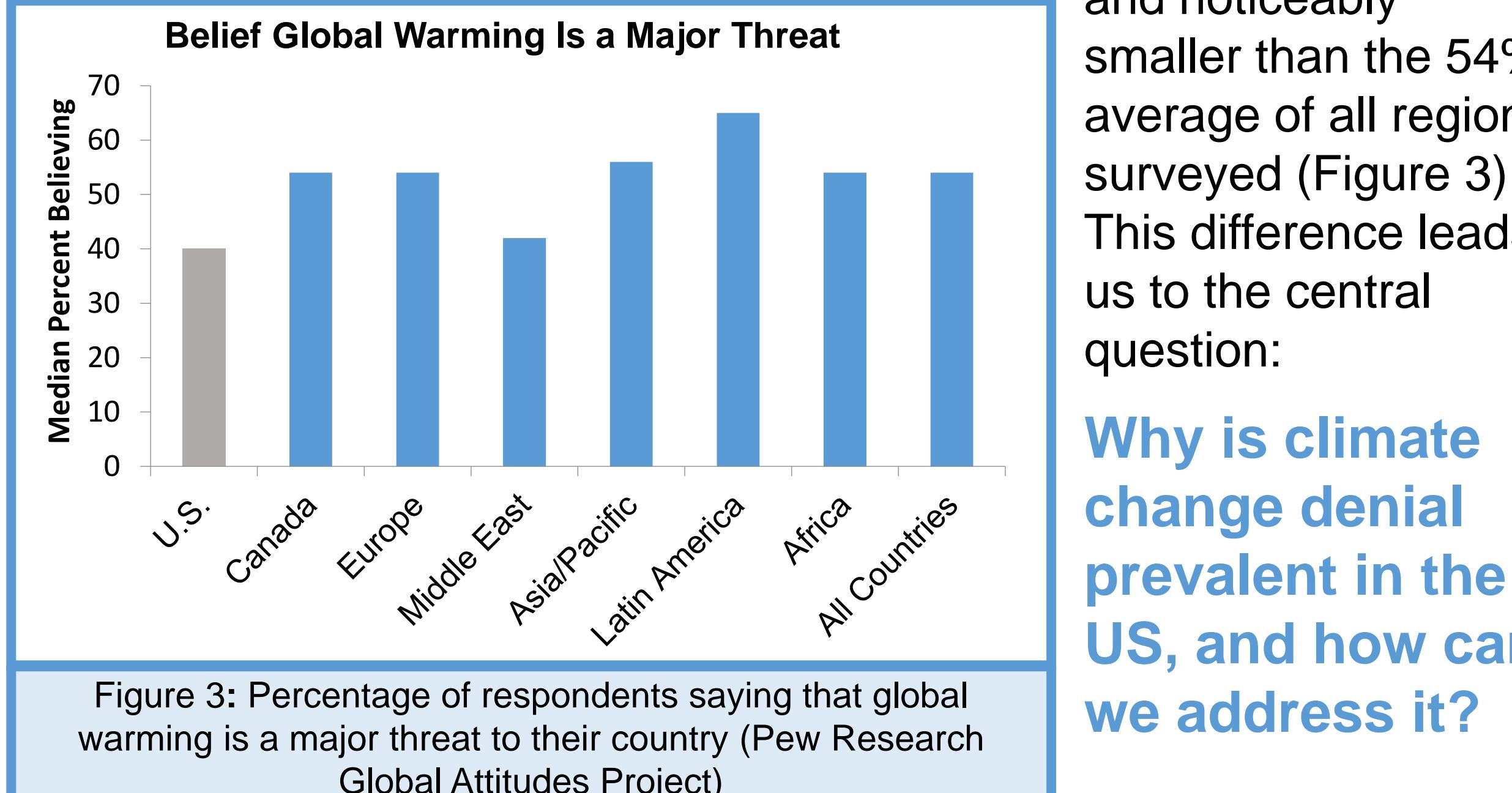


Figure 3: Percentage of respondents saying that global warming is a major threat to their country (Pew Research Global Attitudes Project)

and noticeably smaller than the 54% average of all regions surveyed (Figure 3). This difference leads us to the central question:

Why is climate change denial prevalent in the US, and how can we address it?

Reframe messages to match beliefs

- Conservatism: Combatting global warming is patriotic and necessary to preserve the American way of life (Feygina)
- Consumerism: Encourage consumers to construct green identities by purchasing environmentally responsible products
- Religious Fatalism: Nature is part of God's creation, so we must protect it
- Secular Fatalism: Point out that without repeatability, you have no way of knowing that history is inevitable--believing so is basically an act of faith (not secular)
- Fear of Loss of Control: Make clear that there still are things individuals can do to make a difference

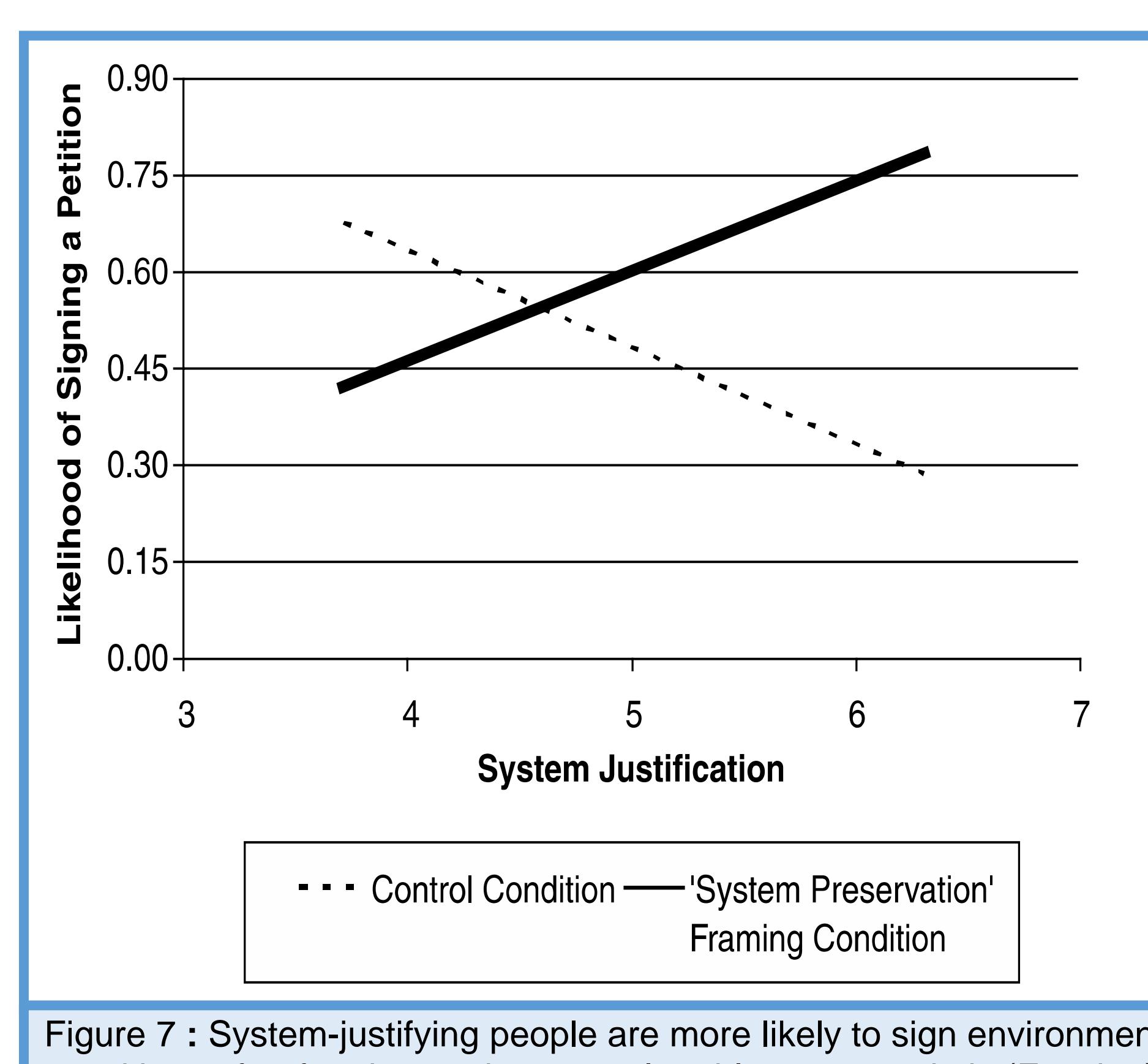


Figure 7: System-justifying people are more likely to sign environmental petitions after framing environmental problems as patriotic (Feygina).

Major Sources of Climate Change Denial

Communication

When we lack deep knowledge of climate science, we rely primarily on the media to develop qualities such as trust that help us evaluate confusing climate change information (Hmielowski).



However, scientific information may not be accurately portrayed when it actually reaches the public due to:

- **Mistranslating information:** Media may reframe uncertainties as confusion
- **Different time scales:** Media tends to focus on breaking news
- **Different environments:** Media may oversimplify an issue to satisfy deadlines, space constraints, editorial and publisher preferences (Boykoff).

Dale Willman, a journalist and correspondent with CNN, CBS, and NPR, said that "the media don't tell people what to think, but they tell them what to think about." Consequently, some people don't trust scientists (Figure 4) and perceive uncertainty and disagreement among scientists, opinions which support climate change denial.

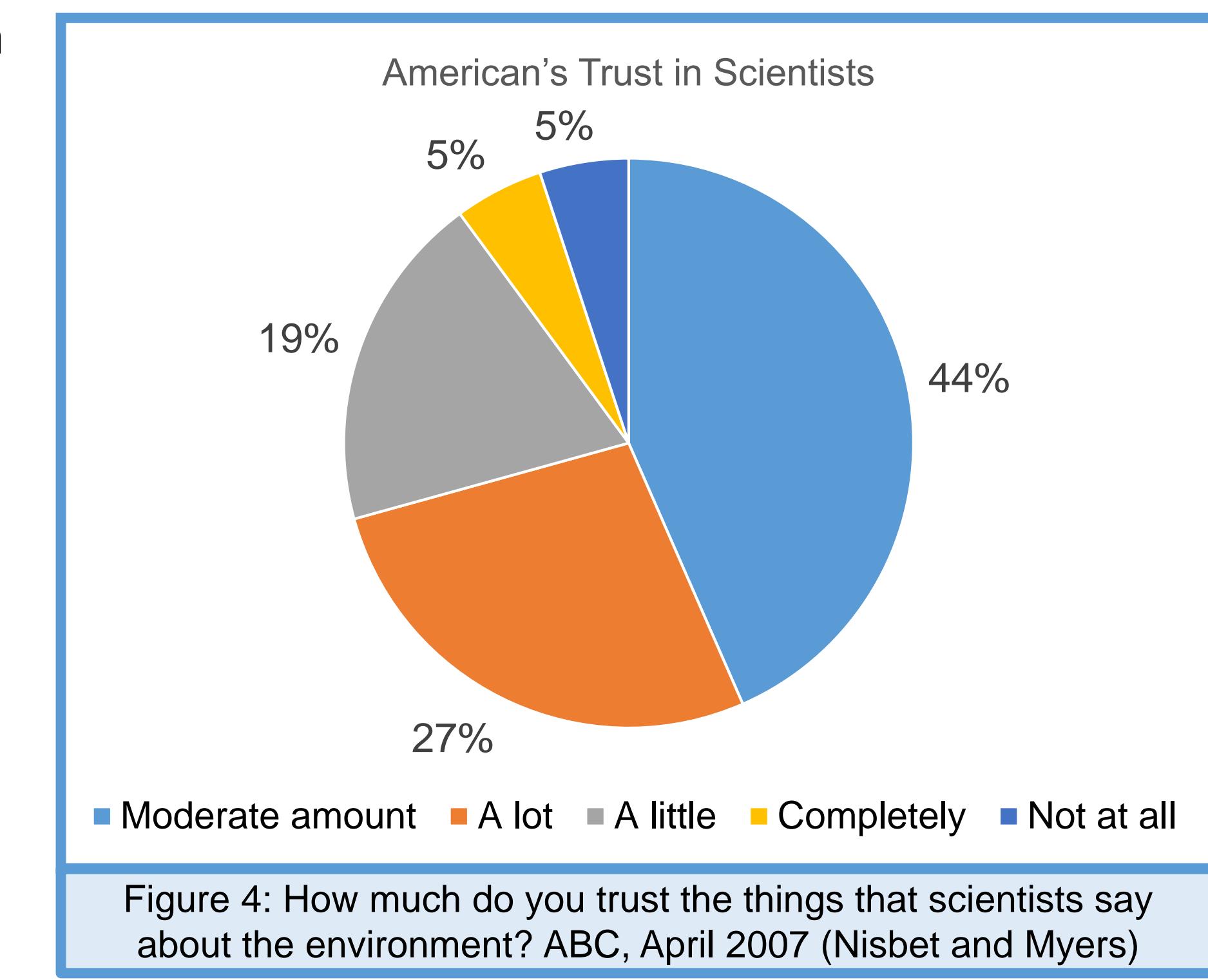


Figure 4: How much do you trust the things that scientists say about the environment? ABC, April 2007 (Nisbet and Myers)

Economics

The main cause of climate change is burning fossil fuels, and the logical solution is to reduce fossil fuel consumption. However, this will have two main effects:

- oil and gas sales will decline
- alternative energy sources may end up being less efficient than fossil fuels, which would reduce economic growth and further cut fossil fuel industry profits

Both would reduce the profits of fossil fuel companies. To preserve their profits, organizations invested in fossil fuels like Exxon, Koch, and Donors Trust financially support groups that spread uncertainty about climate change, thus sowing doubt amongst the public (Figure 5). Since the U.S. consumes much of the world's fossil fuels and contributes significantly to global warming, American industries face the largest cuts and contribute proportionally to global warming denial (Austin).

Political Beliefs

- Conservatives support the status quo, more likely to deny environmental problems (Feygina)
- Conservatives challenge climate change science to stall carbon emission regulations (Dunlap)
- Political polarization is high in the U.S. (Figure 6), even higher than in other countries, which could contribute to high levels of denial in the U.S. (Hamilton)

Consumerism

- Accepting climate change implies a need to reduce consumption
- Purchases are one of the ways people form identities; telling people to reduce their consumption can feel like a personal attack as a result (Hamilton)

Fatalistic Beliefs

- Fundamentalist Christian: global warming is a "normal" event that reflects of God's will and is not to be tampered with
 - Prevalent religion in the U.S. as compared to the rest of the West increases denial rate (Hamilton)
- Secular: mass extinctions and climate change already happen naturally, so anthropogenic climate change is part of natural evolutionary processes (since the human intelligence to build technology capable of altering climate is also naturally evolved)

Belief in one's Control over their Future

- Because of fear of loss of self-control, people will shift attention to other issues (Norgaard)
- Global warming threatens the knowledge that the future is predictable in terms of the present

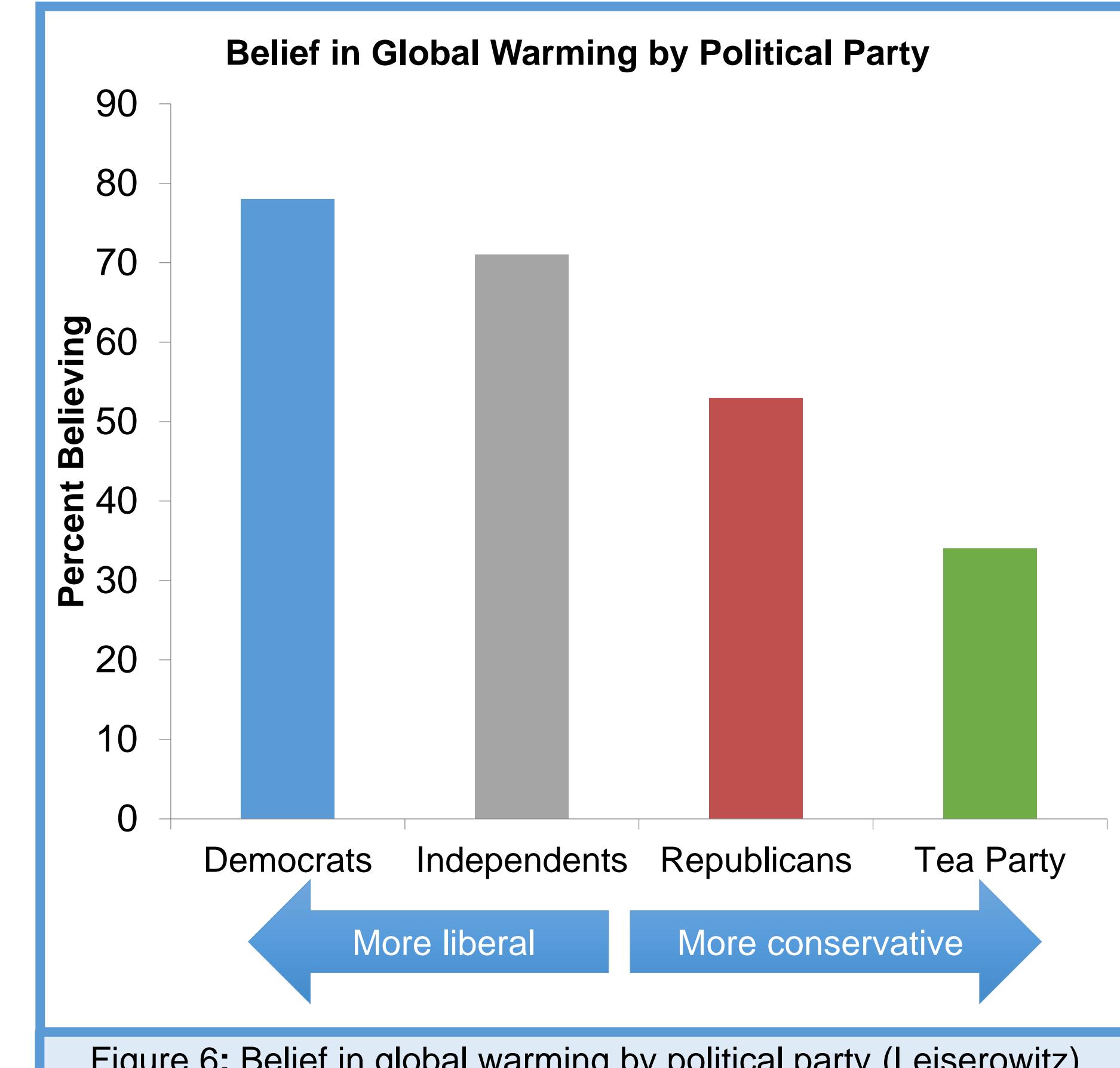


Figure 6: Belief in global warming by political party (Leiserowitz)

Solutions for Climate Change Denial

Reframe messages to match beliefs

- Conservatism: Combatting global warming is patriotic and necessary to preserve the American way of life (Feygina)

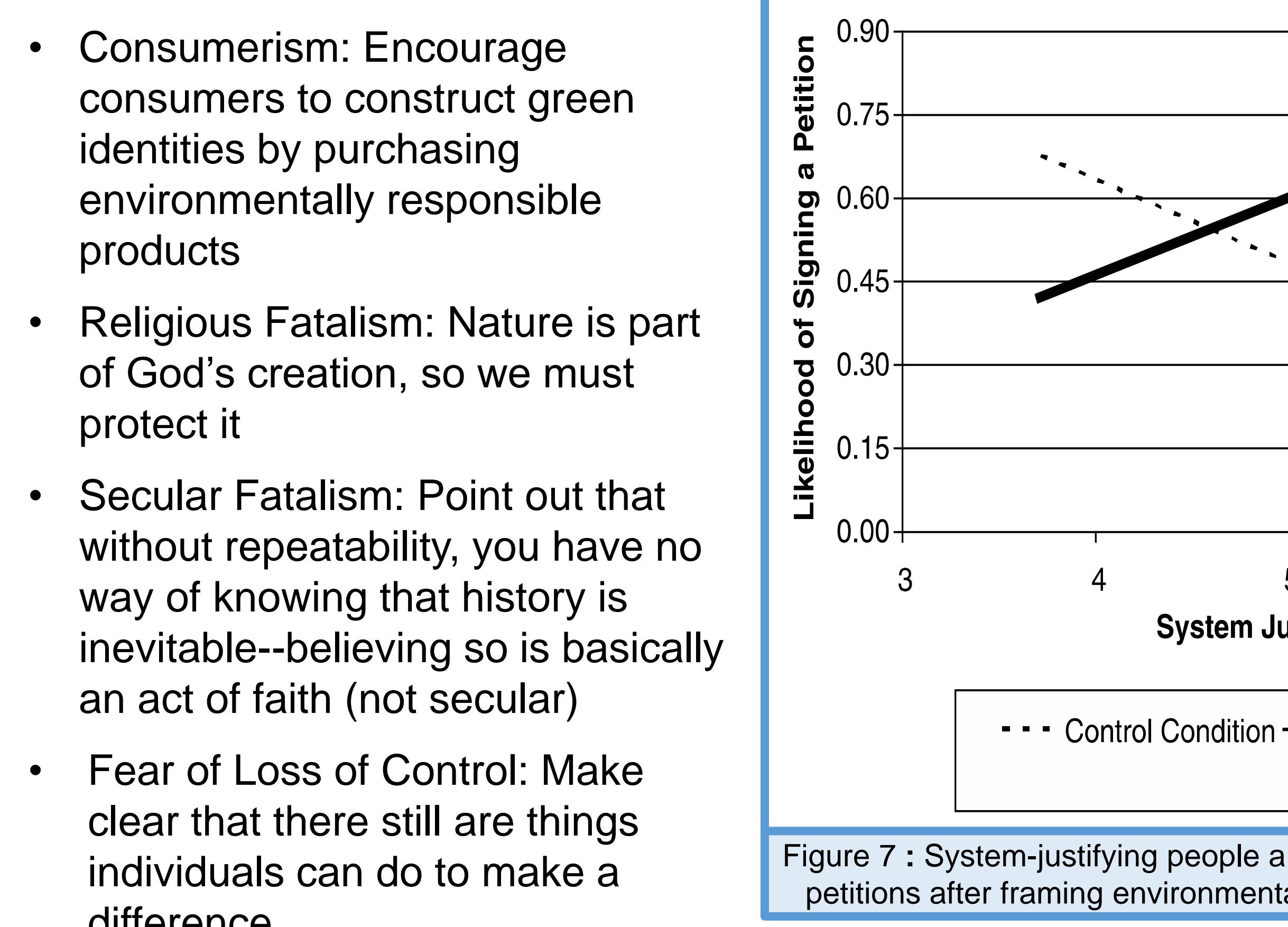
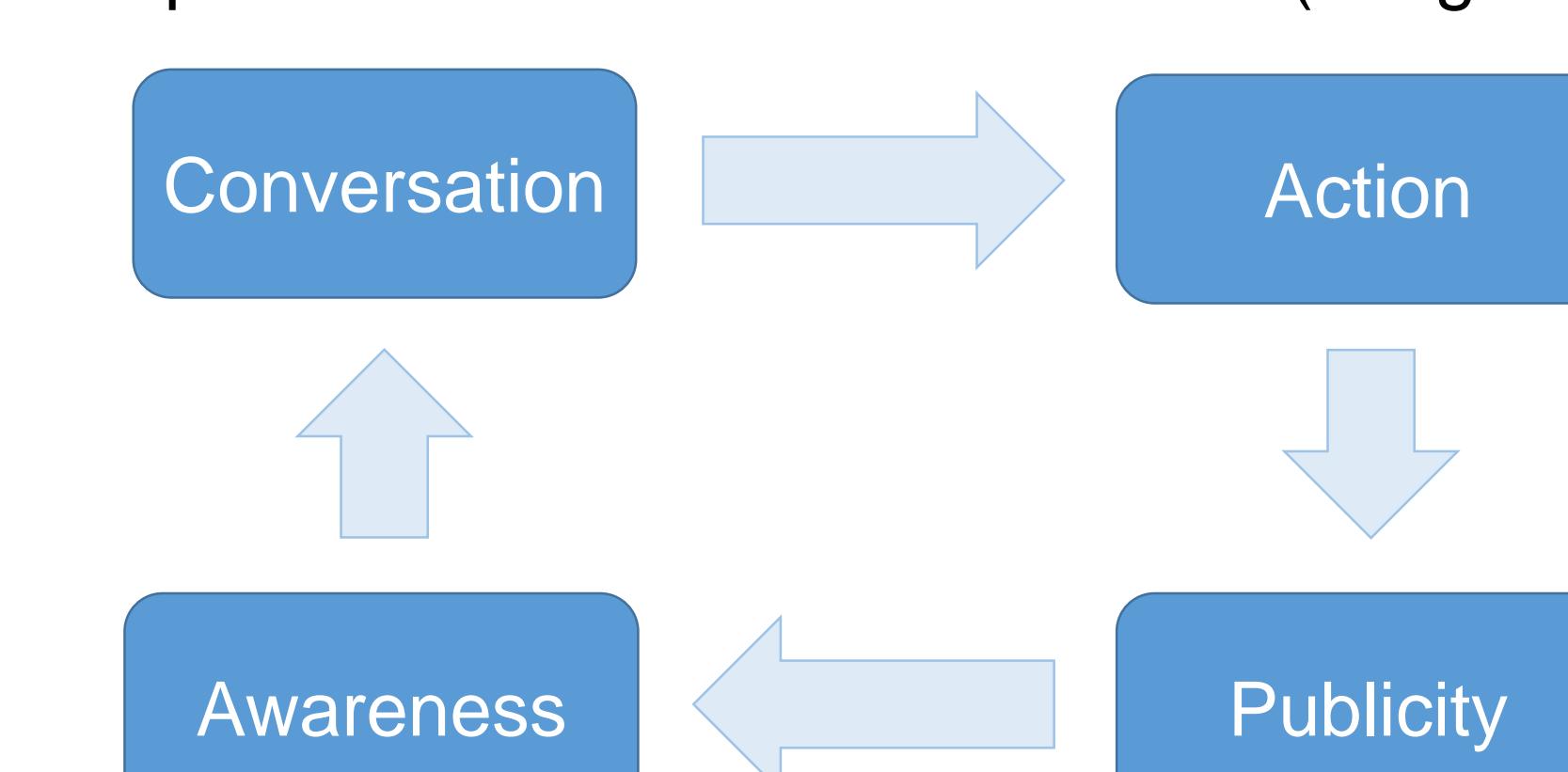


Figure 8: System-justifying people are more likely to sign environmental petitions after framing environmental problems as patriotic (Feygina).

Openly discuss climate change issues

- Existing climate change discussions are generally superficial, occurring in settings such as (Norgaard 105):
 - Small talk
 - Political inspirational speeches
 - Education
 - Informal gatherings
- Open discussion would Increase amount and depth of discussion and enable people to:
 - Generate ideas
 - Start to take action, impact the community
 - Use local experiences to draw wider attention (Norgaard)
- Such a change might start a cycle such as the one depicted to the right:



Provide economic incentives

Government can give companies a reason to lower carbon emissions in various ways, and cause a domino effect to stop their contribution to climate change denial:

- If companies themselves want to reduce their carbon emissions due to an incentive, they are clearly not losing profits
- If companies aren't losing profits due to the idea of climate change, then they aren't so invested in the issue
- In turn, this will cause companies to stop funding denial of climate change

Need More Information?

Just dying to know more?
 Check out our website for citation information and additional resources on climate change denial:

gwdnial.blogs.rice.edu

