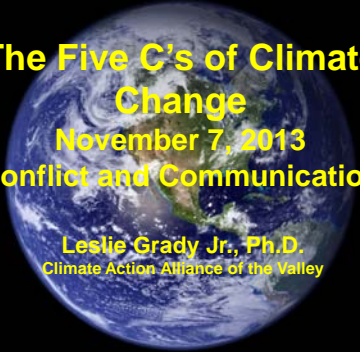


## The Five C's of Climate Change

November 7, 2013  
Conflict and Communication

Leslie Grady Jr., Ph.D.  
Climate Action Alliance of the Valley



## There is consensus among climate scientists about humans causing climate. What exactly does that mean?



### Doran and Zimmerman Surveyed 3146 Earth Scientists in 2008

- Areas of expertise: geochemistry (15.5%), geophysics (12%), oceanography (10.5%), general geology (5-7%), hydrogeology (5-7%), paleontology (5-7%), climate science (5%).
- 8.5% (267) indicated that more than 50% of their peer-reviewed papers in the past 5 years were on the subject of climate change.
- 79 identified themselves as climate scientists.
  - 77 answered the question whether humans were causing climate change.
  - 75 (97.4%) said yes.
- Economic geology [47% (48 of 103)] and meteorology [64% (23 of 36)] were the fields with the smallest percentage answering that humans are causing climate change.

From Doran, P. T. and Zimmerman, M. K., "Examining the Scientific Consensus on Climate Change", EOS, 90, #3, 22, 2008.

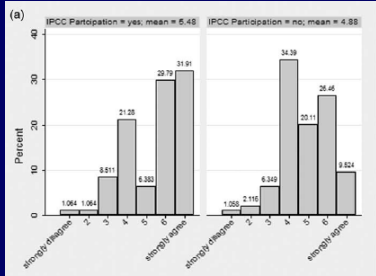
### Others Have Examined the Published Peer-Reviewed Literature

- Using the keywords "global climate change", Oreskes (2004) retrieved the abstracts of 928 peer-reviewed articles published between 1993 and 2003.
  - 75% were in agreement with the position that humans are causing Earth to warm.
  - 25% dealt with methods or paleoclimate analysis and expressed no opinion.
  - None disagreed with the position.
- Anderegg et al (2010) compiled a database of 1,372 climate researchers based on authorship of scientific assessment reports and papers on climate change.
  - They excluded those with less than 20 publications on climate, reducing the list to 908 researchers.
  - Ranked expertise based on number of publications and citations.
  - Based upon their publications and signed opinion statements, split the researchers into two groups, convinced and unconvinced of human's role in climate change.
  - Of the top 50 researchers, only 1 was unconvinced.
  - Of the top 100 researchers, only 3 were unconvinced.
  - Of the top 200 researchers, only 5 were unconvinced.

### Others Have Examined the Published Peer-Reviewed Literature - II

- Cook et al. (2013) examined the abstracts of 11,944 peer-reviewed papers from 1991–2011 matching the topics 'global climate change' or 'global warming'.
  - 66.4% expressed no position on the cause of climate change.
  - 32.6% accepted the idea that humans are causing climate change.
  - 0.7% rejected the idea that humans are causing climate change.
  - 0.3% were uncertain.
  - Among abstracts expressing a position on global warming, 97.1% endorsed the position that humans are causing it.

### Do the IPCC Reports Accurately Reflect the Consensus of Scientific Thought Pertaining to Temperature?



IPCC Participation	Agree	Disagree	No opinion	Mean
Yes	1.064	1.064	31.08	6.48
No	1.028	2.110	34.39	4.88

Figure from Bray, D., "The Scientific Consensus of Climate Change Revisited", Environmental Science and Policy, 13, 340, 2010.

### Do the IPCC Reports Tend to Under Estimate, Accurately Reflect (a Value of 4) or Over Estimate the Magnitude of Future Changes in Temperature?

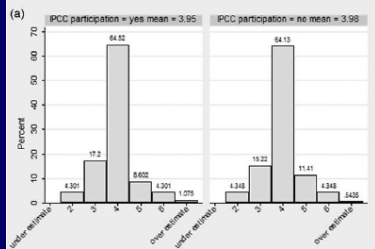


Figure from Bray, D., "The Scientific Consensus of Climate Change Revisited", *Environmental Science and Policy*, 13, 340, 2010.

### Do the IPCC Reports Accurately Reflect the Consensus of Scientific Thought Pertaining to Sea Level Rise?

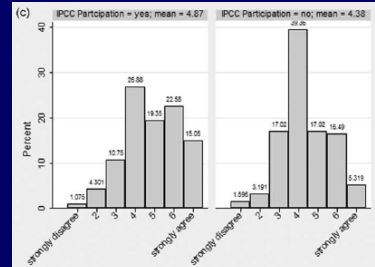


Figure from Bray, D., "The Scientific Consensus of Climate Change Revisited", *Environmental Science and Policy*, 13, 340, 2010.

### Do the IPCC Reports Tend to Under Estimate, Accurately Reflect (a Value of 4) or Over Estimate the Magnitude of Future Changes in Sea Level?

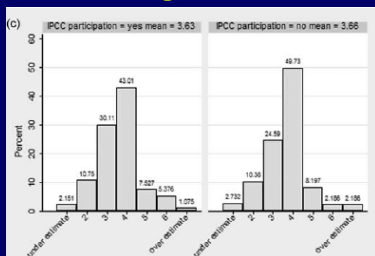


Figure from Bray, D., "The Scientific Consensus of Climate Change Revisited", *Environmental Science and Policy*, 13, 340, 2010.

### The Public's Perception of Scientific Consensus Is Quite Different from the Actual Consensus

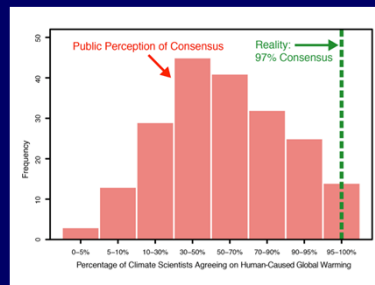


Figure from Cook, J., "Closing the Consensus Gap on Climate Change", post on Weather Underground: <http://www.wunderground.com/earth-day/2013/closing-the-climate-change-consensus-gap>.

### The Public's Perception of Climate Change Is Quite Different from that of Climate Scientists

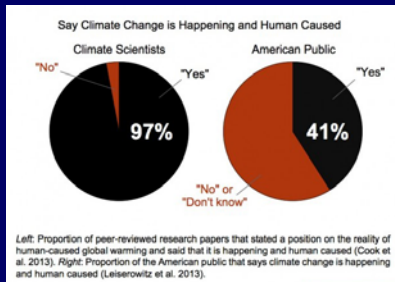


Figure from Marlon, J.R., et al., "Scientific and Public Perspectives on Climate Change", Yale University, New Haven, CT, Yale Project on Climate Change Communication, 2013. [http://environment.yale.edu/climate-communication/files/ClimateNote\\_Consensus\\_Gap\\_May2013\\_FINAL6.pdf](http://environment.yale.edu/climate-communication/files/ClimateNote_Consensus_Gap_May2013_FINAL6.pdf)

### One factor influencing the public's perception of climate change is their moral construct.



## The Moral Dimension of Climate Change Puts it in the Realm of a Moral Dilemma

- Jonathan Haidt and Craig Joseph posit that there is a biological basis for morality.
- Expressed through six mechanisms (foundations):
  - Care/Harm
  - Fairness/Cheating
  - Loyalty/Betrayal
  - Authority/Subversion
  - Sanctity/Degradation
  - Liberty/Oppression
- Our personality (nature and nurture) causes us to favor some of these foundations more than others.

Haidt, J., *The Righteous Mind: Why Good People Are Divided by Politics and Religion*, Pantheon Books, New York, 2012.

## The Six Moral Foundations

- Care/Harm
  - Begins with our desire to nurture and raise our children.
  - Flexible enough to extend to a wider or narrower range of creatures in different times and places.
- Fairness/Cheating
  - An inclination to give strangers the benefit of the doubt and then respond in kind to how they respond to us.
  - Thought to have evolved to address the challenge of taking advantage of mutual cooperation without being taken advantage of.
- Loyalty/Betrayal
  - The predisposition to develop affection for those who display loyalty to our group and hatred for those who betray it.
  - Thought to have evolved as a mechanism that gave people an advantage in inter-group conflict.

Haidt, J., *The Righteous Mind: Why Good People Are Divided by Politics and Religion*, Pantheon Books, New York, 2012.

## The Six Moral Foundations - II

- Authority/Subversion
  - Helps us negotiate social hierarchies.
  - The authority figure is recognized as legitimate in the eyes of the subordinates and the legitimacy is based on the leadership and protection provided.
  - Consists of the predisposition to give deference to those above us while exercising dominance and protection of those below us.
- Liberty/Oppression
  - Concerns social hierarchies wherein the authority figure is viewed as illegitimate.
  - Triggered by signs of attempted domination. Results in righteous anger.
  - Exists in a state of tension with the Authority/Subversion foundation. The two work together to form a fragile balance between equality and hierarchy.
- Sanctity
  - The predisposition to identify certain things as base or profane and others as noble or sacred.
  - Notions of the sacred and the profane tend to be shared across communities.

Haidt, J., *The Righteous Mind: Why Good People Are Divided by Politics and Religion*, Pantheon Books, New York, 2012.

## Humans Are Conditional “Hive Creatures”

- “Groupishness” is activated by particular circumstances.
- Under the right circumstances humans have the ability to transcend self-interest and temporarily lose themselves to the good of the group.
- Implies that not all human behavior can be reduced to self-interest. Some of our behavior is truly directed to the good of the groups of which we are a part.
- Can lead to in-groups and out-groups.
  - Binds us to our own group.
  - Blinds us to virtues of the “other side.”

Haidt, J., *The Righteous Mind: Why Good People Are Divided by Politics and Religion*, Pantheon Books, New York, 2012.

## Leftist and Rightist Personality Traits

- Political beliefs are highly heritable.
  - “Genetics explains between a third and a half of the variability among people in their political attitudes.”
  - “Being raised in a liberal or conservative household accounts for much less.”
  - Evidence for this comes from “twin studies”.
- The difference between left and right depends on two heritable factors:
  - How sensitive we are to danger and threats.
  - How open we are to new experience.
- The relative importance of the various foundations was determined from surveys of a broad spectrum of people.

Haidt, J., *The Righteous Mind: Why Good People Are Divided by Politics and Religion*, Pantheon Books, New York, 2012.

## Leftist and Rightist Personality Traits - II

- Conservatives
  - Reluctant to change.
  - Prefer to preserve and conserve.
  - Sensitive to danger and threats
  - Less open to new experiences.
  - Pay heed to all six moral foundations, with more emphasis on loyalty, authority, and sanctity.
- Progressives
  - Open to change; often wish to hasten it.
  - Less sensitive to danger and threats.
  - More open to new experiences.
  - Pay heed primarily to care, fairness, and liberty; little concerned with loyalty, authority and sanctity.
- To find your own score on each of the moral foundations go to: <http://www.yourmorals.org/index.php>.

Haidt, J., *The Righteous Mind: Why Good People Are Divided by Politics and Religion*, Pantheon Books, New York, 2012.

### Our Political Parties Exhibit Distinct Differences in their Views of Climate Change

Do You Think Global Warming Is Happening?				
	Democrats	Independents	Republicans	Tea Party
Yes	78	71	53	34
No	8	14	30	53
Don't know	14	15	18	13

- My hypothesis:
  - Progressives view climate change as threatening harm to people (care/harm and fairness).
  - Conservatives view the *idea* of climate change and its solutions as threatening to a number of institutions (loyalty and authority).

Source of table: Leiserowitz, A., et al. (2011) *Politics & Global Warming: Democrats, Republicans, Independents, and the Tea Party*. Yale University and George Mason University. New Haven, CT: Yale Project on Climate Change Communication. <http://environment.yale.edu/climate/files/PoliticsGlobalWarming2011.pdf>

### Our Political Parties Exhibit Distinct Differences in their Views of Climate Change

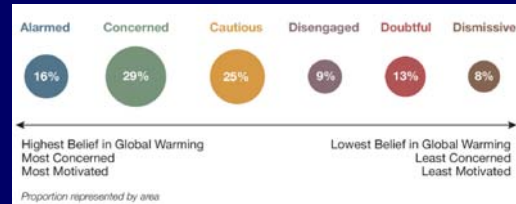
Assuming Global Warming Is Happening, Do You Think It Is:				
	Democrats	Independents	Republicans	Tea Party
Caused mostly by human activities.	62	43	36	19
Caused mostly by natural changes.	25	35	43	50
None of the above because global warming isn't happening.	2	5	11	21
Other	11	17	10	9

Source of information: Leiserowitz, A., et al. (2011) *Politics & Global Warming: Democrats, Republicans, Independents, and the Tea Party*. Yale University and George Mason University. New Haven, CT: Yale Project on Climate Change Communication. <http://environment.yale.edu/climate/files/PoliticsGlobalWarming2011.pdf>

### America's perceptions of climate change can be divided into six distinct segments.



### On the Question of Climate Change, America Is Actually Six Americas



- Identified in 2008 using nationally representative survey data on global warming beliefs, behaviors, and policy preferences in the United States.
- Organizations conducting climate change public engagement initiatives can use this information to select their priority target audiences and their communication strategies.

Figure from Leiserowitz, A., et al. (2013) *Global Warming's Six Americas, September 2012*. Yale University and George Mason University. New Haven, CT: Yale Project on Climate Change Communication. <http://environment.yale.edu/climate/publications/Six-Americas-September-2012>

### Characteristics of the Six Americas

- **Alarmed**
  - Feel personally threatened by climate change.
  - Believe that aggressive actions are needed immediately to deal with the threat.
  - Somewhat more likely to be women (57%) and to be late middle aged (50-64 years of age; 30%).
  - Less religious than the national average with 60% rarely or never attending religious services.
  - Considerably more likely than national averages to be Democrats (57%), Independents (34%), and liberal (43%).
- **Concerned**
  - Very concerned about climate change but feel less personally threatened than the Alarmed.
  - Support aggressive governmental policies.
  - Somewhat more likely to be women (61%) and to be early middle-aged (30-49 years of age; 47%).
  - Less religious than the national average with 55% rarely or never attending religious services.
  - More likely than average to be Democrats (54%) and liberal (38%).

Information from Leiserowitz, A., et al. *Global Warming's "Six Americas": An Audience Segmentation*. Yale University and George Mason University; Yale Project on Climate Change and George Mason University Center for Climate Change Communication, 2008.

### Characteristics of the Six Americas - II

- **Cautious**
  - Concerned about climate change but view it as a distant threat.
  - Show moderate support for policies that reduce greenhouse gas emissions.
  - More likely to be women (56%), to be 65 or older (22%), to have less education (46% hold a high school diploma or less), and to have limited income.
  - More likely than average to be Democrats (44%) and to call themselves political moderates (47%).
- **Disengaged**
  - Significantly less concerned about climate change than the cautious segment.
  - Stronger supporters of government action than the cautious segment. May suggest a "better safe than sorry" stance.
  - Somewhat more likely to be men (55%), to be non-Hispanic white (81%), and to live in a middle or high income household.
  - Somewhat more likely to attend religious services weekly (48%) and to be Protestant (58%).
  - Somewhat more likely than average to be Republicans (42%), conservative (44%), or moderate (43%).

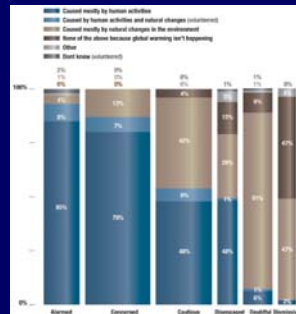
Information from Leiserowitz, A., et al. *Global Warming's "Six Americas": An Audience Segmentation*. Yale University and George Mason University; Yale Project on Climate Change and George Mason University Center for Climate Change Communication, 2008.

### Characteristics of the Six Americas - III

- **Doubtful**
  - Significantly less likely to believe that climate change is happening or human caused.
  - Believe that climate change will only begin to harm people much further into the future. Are much less likely to feel that immediate action is needed.
  - More likely to be men (60%), to be 65 or older (23%), to be non-Hispanic white (83%), and to live in moderate-income households.
  - More likely to attend religious services weekly (49%) and to be Evangelical Christians (46%).
  - Considerably more likely than average to be Republicans (57%) and conservative (60%).
- **Dismissive**
  - Are not at all convinced that climate change is happening, and therefore don't support any form of societal response.
  - More likely to be men (62%), to be early middle-aged (30-49; 46%), to be non-Hispanic white (88%), and to live in an upper middle income household.
  - More likely to attend religious services weekly (61%) and to be Evangelical Christians (51%).
  - Far more likely than average to be Republican (72%) and conservative (81%).

Information from Leiserowitz, A., et al. *Global Warming's "Six Americas": An Audience Segmentation*. Yale University and George Mason University: Yale Project on Climate Change and George Mason University Center for Climate Change Communication, 2008.

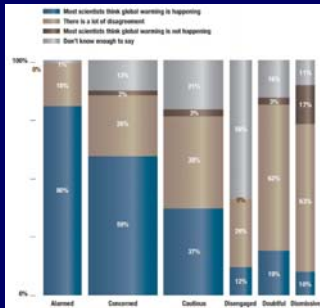
### Six Americas Exhibit Distinct Differences in their Views of Causes of Climate Change



Column width represents the proportion of the American public in each segment.

Figure from Leiserowitz, A., et al. (2013) *Global Warming's Six Americas*, September 2012. Yale University and George Mason University, New Haven, CT: Yale Project on Climate Change Communication. <http://environment.yale.edu/climate/publications/Six-Americas-September-2012>

### Six Americas Exhibit Distinct Differences in their Views of Scientific Consensus



Column width represents the proportion of the American public in each segment.

Figure from Leiserowitz, A., et al. (2013) *Global Warming's Six Americas*, September 2012. Yale University and George Mason University, New Haven, CT: Yale Project on Climate Change Communication. <http://environment.yale.edu/climate/publications/Six-Americas-September-2012>

### The Sizes of the Segments in the USA Have Varied since their Identification

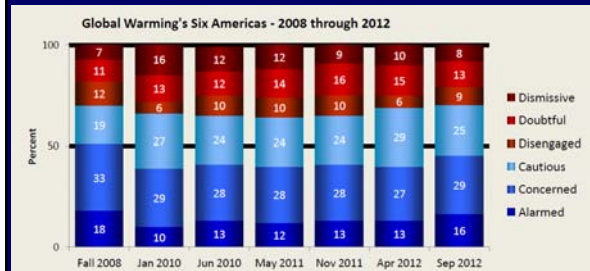


Figure from Leiserowitz, A., et al. (2013) *Global Warming's Six Americas*, September 2012. Yale University and George Mason University, New Haven, CT: Yale Project on Climate Change Communication. <http://environment.yale.edu/climate/publications/Six-Americas-September-2012>

While many of the differences between the Six Americas can be attributed to personality type, many are due to misinformation and disinformation.



### Some Books on the Climate Wars from the Perspective of Climate Scientists

- S. H. Schneider, *Science as a Contact Sport: Inside the Battle to Save Earth's Climate*, National Geographic, Washington, DC, 2009.
- N. Oreskes and E. M. Conway, *Merchants of Doubt: How a Handful of Scientists Obscured the Truth on Issues from Tobacco Smoke to Global Warming*, Bloomsbury Press, New York, 2010.
- J. L. Powell, *The Inquisition of Climate Science*, Columbia University Press, New York, 2011.
- M. E. Mann, *The Hockey Stick and the Climate Wars: Dispatches from the Front Lines*, Columbia University Press, New York, 2012

## Deniers of the Consensus on Climate Change Uses Five Tactics

- Fake Experts
  - Invokes dissenting non-experts who appear to be highly qualified while not having published any actual climate research.
  - An alternative is to take a handful of sincerely dissenting scientists and magnify their voices.
- Cherry Picking
  - Focuses on select pieces of data, often out of context, while excluding any data that conflicts with the desired conclusion.
  - Can be detected when the conclusion derived from a small selection of data differs from the conclusion derived from the full body of evidence.
  - Examples
    - Focusing on short time periods in a time series.
    - Selecting isolated examples while ignoring others that lead to the opposite conclusion.
    - Focusing on a specific location.
    - Selecting isolated papers while ignoring the larger body of literature.
    - Taking quotes out of context to paint a misleading picture. Employed with the 2009 hacked e-mails.

Farmer, G. T. and Cook, J., *Climate Change Science: A Modern Synthesis – Vol 1, The Physical Climate*, Springer, Dordrecht, Germany, 2013.

## Deniers of the Consensus on Climate Change Uses Five Tactics - II

- Logical Fallacies
  - *Ad hominem* attacks, which dismiss a person's arguments by attacking the person. (Michael Mann)
  - Straw man arguments, which involves misrepresenting the opposition so their position is easier to argue against. ("Climate scientists say CO<sub>2</sub> is the only driver of climate change.")
  - Red herrings, which present a statement that is easy to support, but has nothing to do with the final argued conclusion. ("CO<sub>2</sub> is plant food so it can't be bad.")
  - False Analogies, in which the analogy is not a valid comparison. (Skeptics comparing themselves to Galileo.)
  - Association fallacies, which argue that because two things share a property, they are the same. (The Unabomber billboard.)
  - *Non sequiturs*, in which the stated conclusion is not supported by its premise. ("Climate has changed in the past, so current climate change must be natural.")
  - False Dilemmas, in which only two alternatives are presented, even though there may be others or the two may both be valid. (CO<sub>2</sub> lags temperature, not the other way around.)

Farmer, G. T. and Cook, J., *Climate Change Science: A Modern Synthesis – Vol 1, The Physical Climate*, Springer, Dordrecht, Germany, 2013.

## Deniers of the Consensus on Climate Change Uses Five Tactics - III

- Impossible Expectations
  - Involves demanding unrealistic standards of proof before acting on the science.
  - Misrepresents the nature of science by perpetuating the misconception that science is about providing absolute proof.
  - To demand 100% certainty is to never act.
- Conspiracy Theories
  - Claims of climate change conspiracies have been around for many years.
  - In 2009 conspiracy theories were fueled by the leaked e-mails from the Climate Research Unit of the University of East Anglia in Great Britain.
    - Deniers quoted selected e-mails as evidence that scientists were engaged in a conspiracy to falsify climate data to exaggerate the warming trend.
    - Nine independent investigations concluded that there was no evidence of wrongdoing by climate scientists.
    - Nevertheless, around 13% of Americans reported becoming more certain that global warming wasn't happening.
  - Given the large number of climate scientists in many nations, a conspiracy among them is hard to imagine.

Farmer, G. T. and Cook, J., *Climate Change Science: A Modern Synthesis – Vol 1, The Physical Climate*, Springer, Dordrecht, Germany, 2013.

## Oreskes and Conway Link the Obfuscation of Climate Science to Similar Tactics on Smoking, Acid Rain, and the Ozone Hole

- Oreskes and Conway posit that a handful of scientists, primarily physicists, were all fiercely anti-communist and viewed government regulation as a step towards socialism and communism. They feared that an over-reaction to environmental problems would lead to heavy-handed government intervention in the marketplace and intrusion into people's lives.
- The scientists helped form institutions such as the Heritage Foundation, Competitive Enterprise Institute, and Marshall Institute.
- Oreskes and Conway state that similar tactics have been used in each case: "discredit the science, disseminate false information, spread confusion, and promote doubt."

## Conservative Think Tanks Have Had a Large Impact on the Public View of Climate Science

- Funded by corporations and conservative foundations, these organizations have opposed many forms of state intervention or regulation.
- These institutions have been at the forefront of efforts to show that conventional climate science is wrong.
  - "From 1972 to 2005, 92% of English-language books that promoted environmental skepticism had a clear link to conservative think tanks."
  - Have established their in-house "experts" as having equal legitimacy as qualified climate scientists, even though most are not scientists.
- Some have engaged in campaigns of intimidation against climate scientists.
- Some have used freedom-of-information requests as a form of harassment.
- Have exploited the journalistic norm of balance, achieving a disproportionate amount of media attention for skeptical non-experts.
- Have achieved the same amount of representation as climate scientists at Congressional hearings on climate change.

Farmer, G. T. and Cook, J., *Climate Change Science: A Modern Synthesis – Vol 1, The Physical Climate*, Springer, Dordrecht, Germany, 2013.

## Vested Corporate Interests Have Also Fueled the Climate Wars

- In 1991 the Western Fuel Association, in combination with various fossil fuel groups, produced a series of campaigns casting doubt on climate science.
- In the decade after the Kyoto Protocol was introduced in 1997, Exxon-Mobile contributed more than \$20 million to think tanks promoting climate change denial. They have since stopped.
- From 1997 to 2008 Koch Industries contributed more than \$48 million to groups that cast doubt on climate change science.
- All were apparently motivated by the threat imposed by limitations on fossil fuel use to their businesses.

Farmer, G. T. and Cook, J., *Climate Change Science: A Modern Synthesis – Vol 1, The Physical Climate*, Springer, Dordrecht, Germany, 2013.

### The Internet Has Facilitated the Quick and Easy Dissemination of Climate Misinformation

- The Internet contributes to the polarization surrounding public opinion on climate change.
  - Search engines track the sites you visit and direct you to similar sites. This reinforces opinions.
- The Internet enables rapid dissemination of information without the rigorous quality control of the peer-review process.
  - Allows disinformation to spread widely before responses can appear through normal scientific publications.
- Twitter and Facebook facilitate the spread of information regardless of its accuracy.

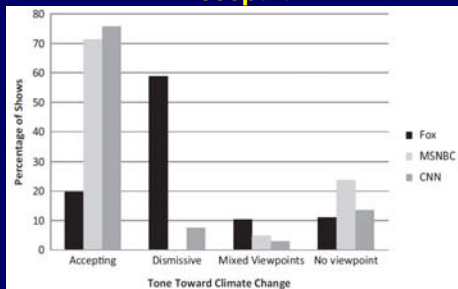
Farmer, G. T. and Cook, J., *Climate Change Science: A Modern Synthesis – Vol 1, The Physical Climate*, Springer, Dordrecht, Germany, 2013.

### Republican Political Strategist Frank Luntz Set the Stage for Political Obfuscation in a 2002 Memo

- “Voters believe that there is no consensus about global warming within the scientific community. Should the public come to believe that the scientific issues are settled, their views about global warming will change accordingly. Therefore, you need to continue to make the lack of scientific certainty a primary issue in the debate, and defer to scientists and other experts in the field.”
- “The scientific debate is closing [against us] but not yet closed. There is still a window of opportunity to challenge the science.”
- This strategy has been employed successfully, as we saw previously.

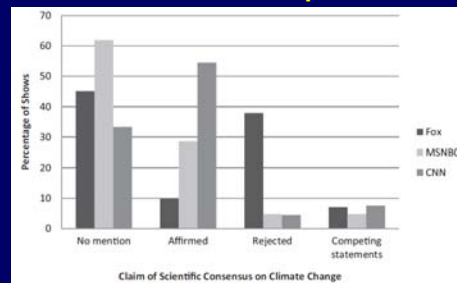
Quotes from pp 137 & 138 of the leaked Luntz memorandum:  
<https://www2.bc.edu/~plater/Newpublicste06/suppmat02.6.pdf>  
 The photographed original pages are at <http://www.ewg.org/briefings/luntzmemo/>

### Fox News Takes a Dismissive Tone toward Climate Change while MSNBC and CNN Accept it



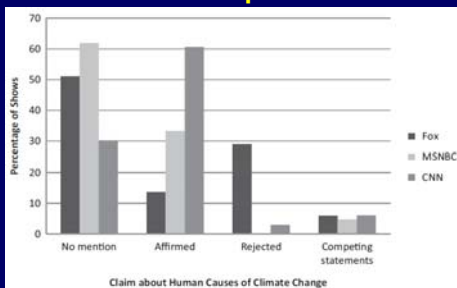
Feldman, L et al., "Climate on Cable: The Nature and Impact of Global Warming Coverage on Fox News, CNN, and MSNBC, *The International Journal of Press/Politics*, 17, 3, 2012; DOI: 10.1177/1940161211425410

### Fox News Tends to Reject the Scientific Consensus on Climate Change while MSNBC and CNN Accept it



Feldman, L et al., "Climate on Cable: The Nature and Impact of Global Warming Coverage on Fox News, CNN, and MSNBC, *The International Journal of Press/Politics*, 17, 3, 2012; DOI: 10.1177/1940161211425410

### Fox News Tends to Reject the Human Cause of Climate Change while MSNBC and CNN Accept it



Feldman, L et al., "Climate on Cable: The Nature and Impact of Global Warming Coverage on Fox News, CNN, and MSNBC, *The International Journal of Press/Politics*, 17, 3, 2012; DOI: 10.1177/1940161211425410

Making the case for action against climate change requires effective communication.



## Examples of Good Communication??

## Principles of Climate Change Communication

- Know your audience.
- Get your audience's attention.
- Translate scientific data into concrete experience.
- Beware the overuse of emotional appeals.
- Address scientific and climate uncertainties.
- Tap into social identities and affiliations.
- Encourage group participation.
- Make behavior change easier.

Source: Center for Research on Environmental Decisions. (2009). *The Psychology of Climate Change Communication: A Guide for Scientists, Journalists, Educators, Political Aides, and the Interested Public*. Columbia University, New York: <http://cred.columbia.edu/guide>

## Communication Guidelines

- Talk about the here and now.
  - Talking only about the future undermines the sense of urgency.
- Paint the big picture.
  - Speakers on climate change need to lead, continue, and end with the simple overarching statement that climate change is here.
- Link damage and disasters to the larger trend.
  - Start with the current event, explain how it is consistent the ongoing trend, and then link that trend to climate change.
- Highlight the strongest link.
  - When linking climate disruption to individual events with multiple climate change connections, start with the links where the science is strongest.
- Talk about climate change or disruption rather than global warming.
- Frame climate change as amplifying an event as opposed to being the underlying cause.
- Emphasize that climate change can turn an extreme event into a disaster.

Source: *Right Here, Right Now: A Communications Guide to Climate Change Impacts*, Climate Nexus, New York, 2013. <http://climatenexus.org/wp-content/uploads/2013/01/RHRN.pdf>

## Communication Guidelines

- Start from what you know and build from there.
- Highlight record setting events.
- Focus on the fact that climate change alters the frequency of severe events.
- Don't be afraid to link unprecedented events to climate change when the events are consistent with the basic science.
- Know the signatures of climate change.
  - Know the science and get the language right to ward off challenges.
- Don't debate the science; assert its strength.
- Don't debate the consensus.
- Preempt alternative explanations by accounting for them.
- Know your audience.

Source: *Right Here, Right Now: A Communications Guide to Climate Change Impacts*, Climate Nexus, New York, 2013. <http://climatenexus.org/wp-content/uploads/2013/01/RHRN.pdf>