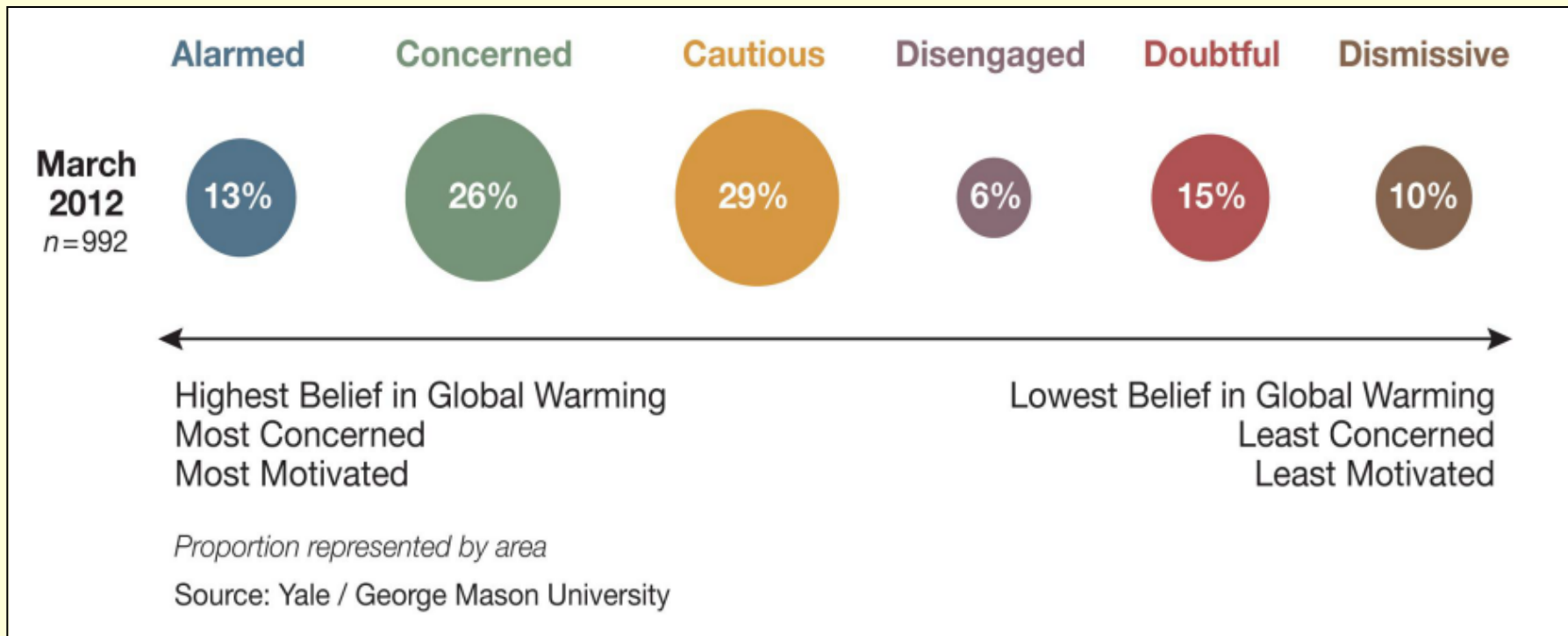




# Public Perceptions

Yale and George Mason Universities conducted several national studies on public perceptions of climate change, grouping the respondents into Six Americas:



# Six Americas

- Alarmed and Concerned
  - Global warming is happening and is probably due to human factors
  - We are responsible; we should do something about it
- *This group is motivated and willing; needs information about how to be effective*

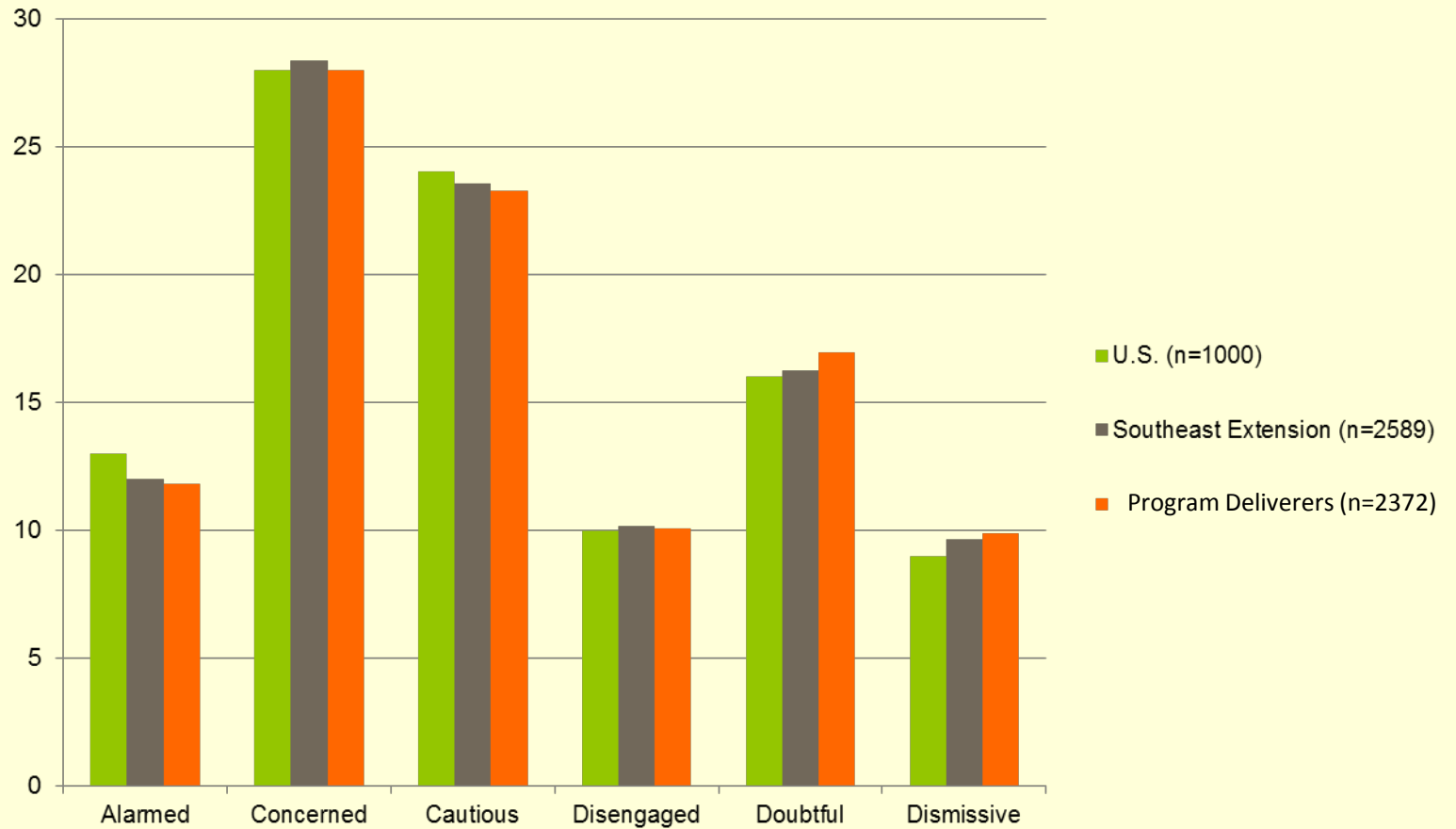
# Six Americas

- Cautious and Unconcerned
  - Not sure, confused, recognize conflicting information
  - Other things are more important
- *This group needs additional information about the issue and imagery about what they might do.*

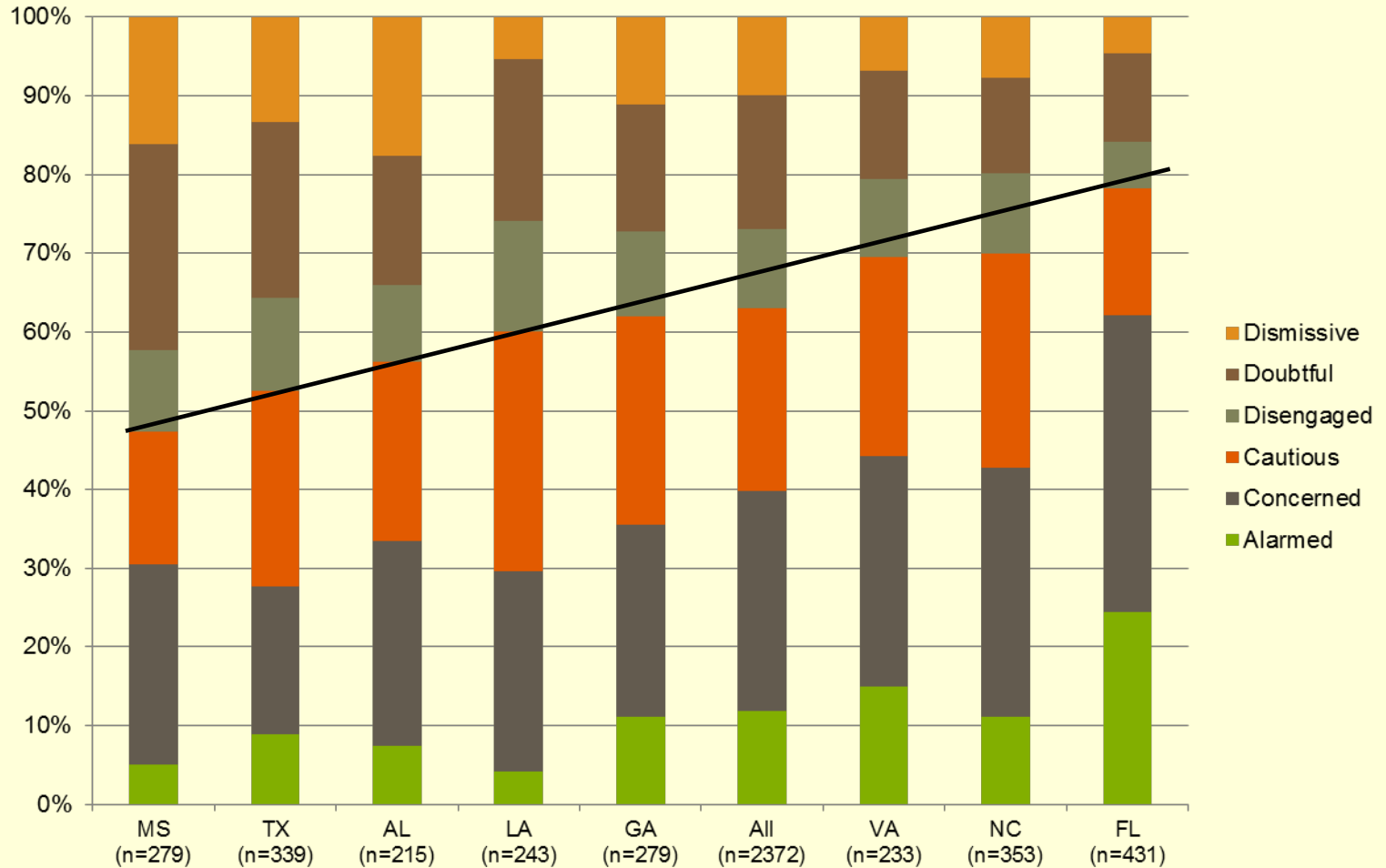
# Six Americas

- **Doubtful and Dismissive**
  - Global warming probably isn't happening and if it is, it is natural
  - Changing policies for climate would be bad for the economy
- *This group might be motivated by their interest in freedom, economic growth, clean energy, and saving money.*

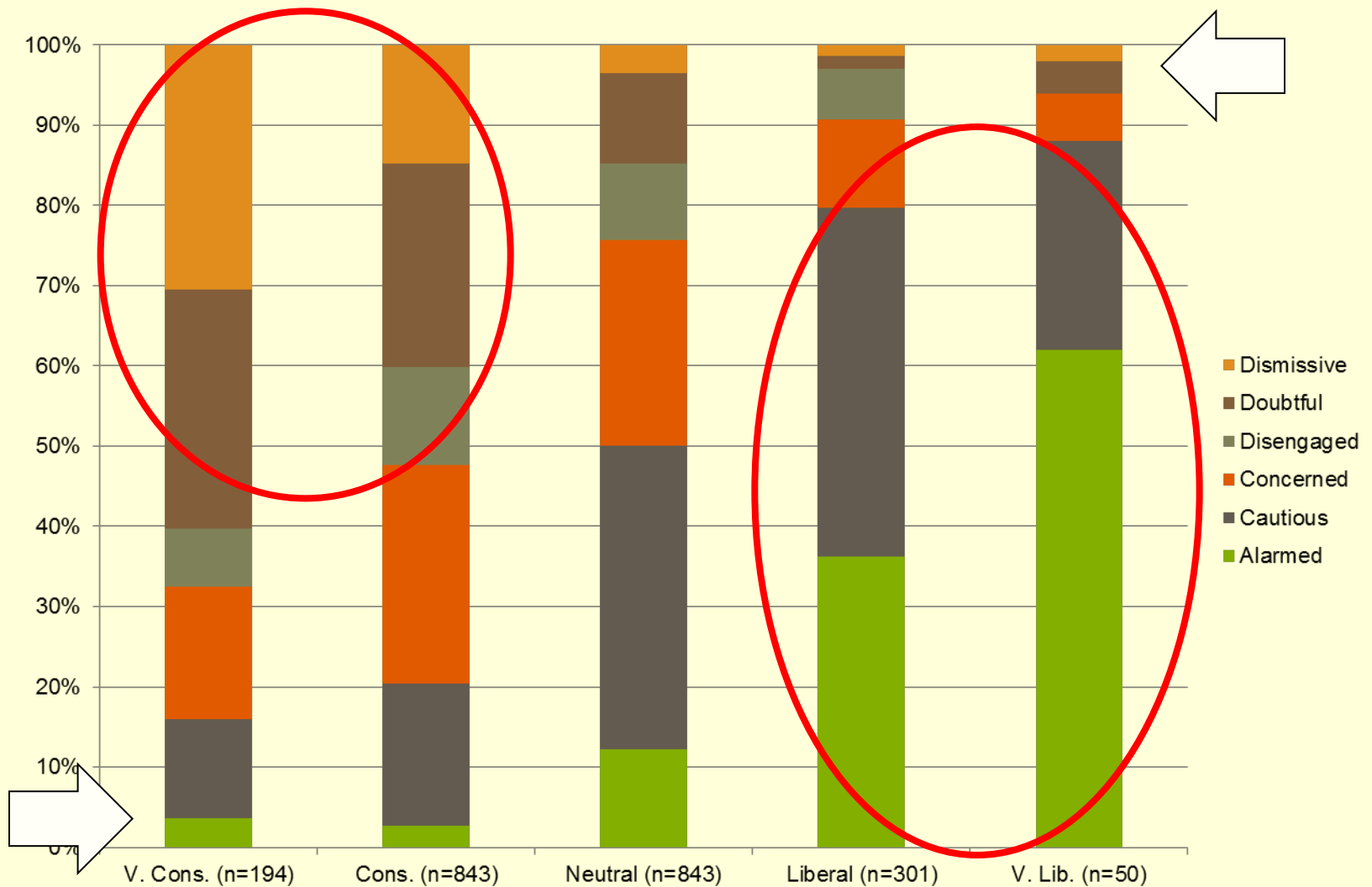
# Extension faculty in SE mirror the general public in perceptions



# Perceptions Differ by State

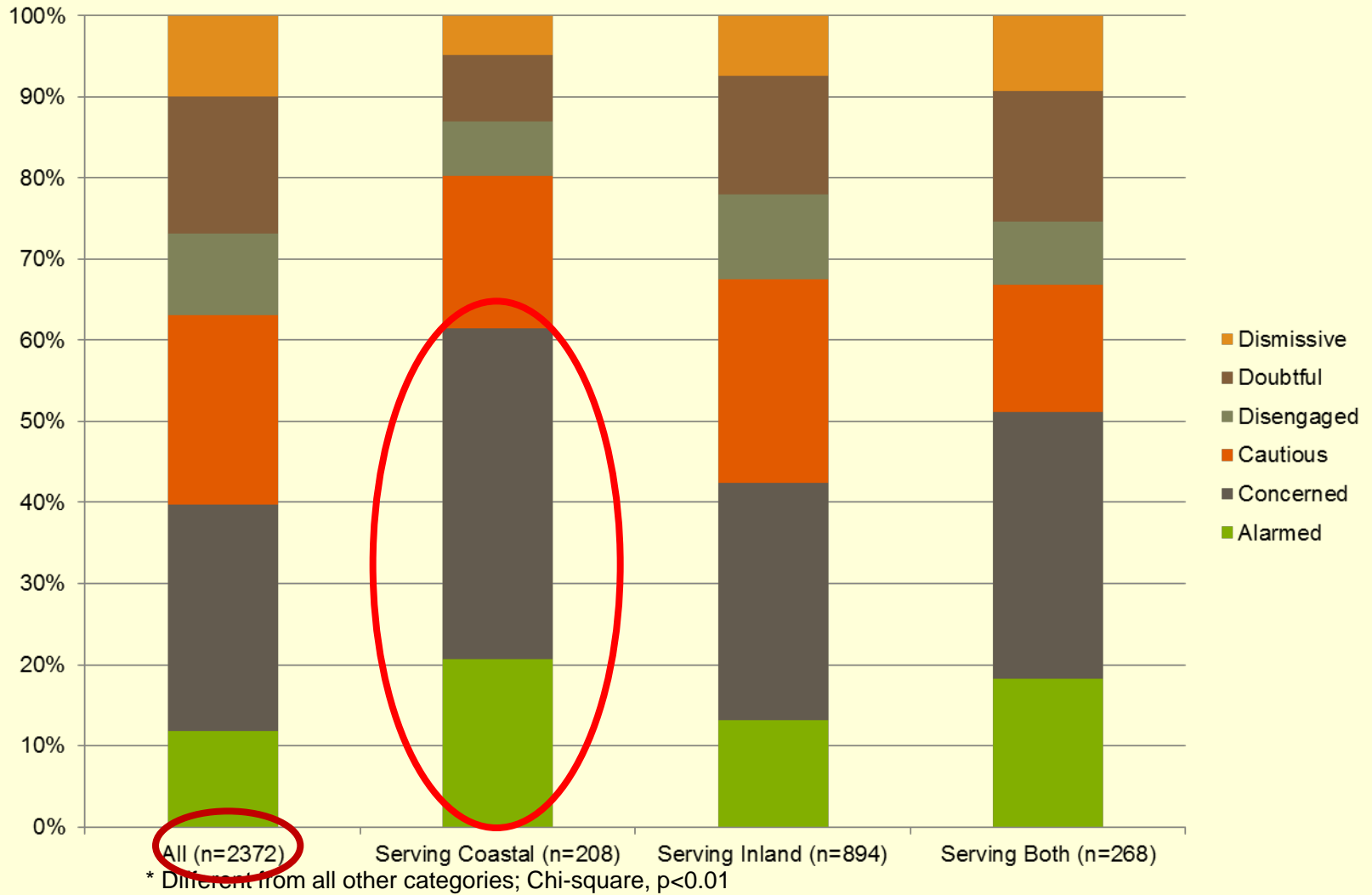


# And by political identity



Note: All groups are different from all others—chi-square  $p < 0.05$

# Coastal Location Matters



So why don't we agree about climate?



# Not a simple problem

- Difficult to measure, see, or experience
- Variable impacts around the globe
- Potential ramifications in the future
  - Non-linear causality and feedback systems
  - Uncertainty
- Action could occur at many scales
  - At individual, family, community, national, intn'l levels
- A tragedy of the commons

# And on top of that

- Misconceptions
- Partial information
- Selective information = confirmation bias
  
- Easily reinforced because the issue is complex

# Partial information that people can agree with leads to different assumptions

Partial Bit	Denier response	Believer response
Climate change has always happened		
Carbon dioxide makes up a very small amount of the atmosphere		
Plants emit at least 5 times more carbon than burning fossil fuels		
People have been burning coal since 1000 BCE		

# Partial information that people can agree with leads to different assumptions

Partial Bit	Denier response	Believer response
Climate change has always happened	So this is not caused by people	
Carbon dioxide makes up a very small amount of the atmosphere	Water vapor is a more abundant greenhouse gas	
Plants emit at least 5 times more carbon than burning fossil fuels	People just aren't making a big difference	
People have been burning coal since 1000 BCE	So if this is causing a change, it should not have started in 1850	

# Partial information that people can agree with leads to different assumptions

Partial Bit	Denier response	Believer response
Climate change has always happened	So this is not caused by people	And this is very different than anything we've seen
Carbon dioxide makes up a very small amount of the atmosphere	Water vapor is a more abundant greenhouse gas	But it can have significant impacts
Plants emit at least 5 times more carbon than burning fossil fuels	People just aren't making a big difference	But all the fossil carbon is more than the biological system can absorb
People have been burning coal since 1000 BCE	So if this is causing a change, it should not have started in 1850	But not at the quantities we have seen post 1850

# How we perceive risk

- Natural vs synthetic
- Voluntary vs imposed event
- Fairly vs unevenly distributed cost
- Affects adults vs children
- Radon vs nuclear plant
- Driving car vs plane crash
- National tax vs pollution around factory
- Botox injection vs apple juice contaminant

# How we perceive risk

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- Voluntary vs imposed event
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Not a problem

Problem

- Radon vs nuclear plant
- Driving car vs plane crash
- National tax vs pollution around factory
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# Media Messages

- News:
  - Simplify science
  - Exacerbate conflict
  - Create “balance” by seeking multiple perspectives
- Campaign:
  - Create confusion
  - Faulty science
  - Focus on frightening predictions
  - Sole media sources in rural America

**WHO DO YOU BELIEVE?**

**“Hurricane\* Sandy is a disturbing sign of things to come.”**

**AL GORE**  
10/30/2012

**“We can’t attribute any particular weather event to global warming.”**

**BARACK OBAMA**  
11/14/2012

 **CFACT.ORG**

The billboard features two portraits: Al Gore on the left and Barack Obama on the right. The text is centered between them. The word 'YOU' in the title is red, and the word 'can't' in Obama's quote is red. The dates are also in red.

- Billboard between NYC and Wash DC
- Center for a Constructive Tomorrow
- Favors free-market solutions to environmental issues
- Sending Heartland Institute book

# And why?

- McCright and Dunlap (2011) report that economic and political leadership often appears to accept risk = favors status quo.

## *The conservative white male effect*

Perhaps they see less risk in the world because they manage, control, and benefit from so much of it. They have more power.

- And this has become a cultural worldview; shared by in-group; resisting revision when confronted by out-group

# Identity-protective cognition

- People perceive the world through cultural norms and worldviews
- People tend to adopt the views of the group leaders
- People resist revising beliefs when confronted by conflicting information from out-group members
- Identity self-defense

# Penn State Football

Nittany Lions won National Title twice under Joe Paterno. He promoted academics AND athletics and was seen as a fatherly figure. The winningest coach in football history was loved by many and mourned when he died.

Others say he ruled with an iron fist and led a strong culture of insider approval.



# Sex Scandal, Fall 2011

- Football coach who worked under Paterno, Jerry Sandusky, was arrested for allegedly raping 8 boys.
- Information had been reported to Paterno.
- Paterno and President of PSU fired.
- Students rioted in defense of Paterno.



# “Penn State of Mind” in Time Magazine

- "From the outside looking in, you can't understand it," says Andrew Hanselman. "From the inside looking out, you can't explain it."
- College sports are “too big to fail economies” which may create an “insular culture.”
- There’s a risk of not being able to see outside the box.

# Strong cultural norms

- Group culture defines social norms
- **Selective perception**
  - Bias toward ignoring information that conflicts with world view
- **Subjective perception**
  - Tendency to link uncomfortable facts with reaffirming information to make ourselves feel better.

Paterno is loved and respected. Scandal happens. People don't approve of abuse, yet are angry over Paterno's dismissal. Paterno is seen as a victim too.

# What about students?

- Answer questions
- Prepare them to solve problems
  - Invite observations, experimentation
- Help them understand there are different perceptions and why they might exist
- Help them see the core facts that can be agreed upon, and where assumptions vary



## Activity 2: Clearing the Air

After introducing some of the science about climate change, invite students to analyze perspectives

# A Taste of an Activity

- Work in four small groups. Each group will receive a different paragraph. If time, answer all the questions. Focus on the assumptions and what is missing.
- Jigsaw by moving into groups made up of one person from each original group. Share your insights with each other. Why are there different perceptions?

# Discussion

If these conclusions don't represent the scientific consensus about climate change, why do some people believe them?

Besides scientific knowledge, what other things do you think influence the way people feel about climate change?

