

Trends in American Public Opinion on Climate Change 1997-2018:

TESTING PREDICTIONS OF THE ACE MODEL

Catherine Chen

Bo MacInnis

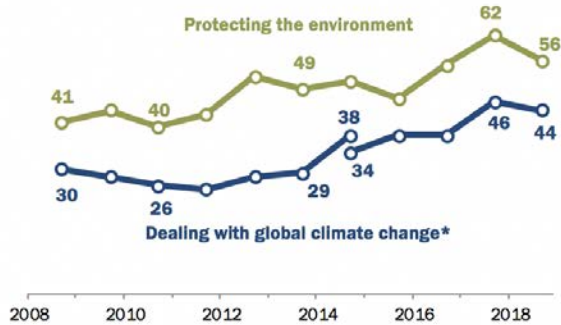
Jon Krosnick

Stanford University

Fluctuations in American Public Opinion in Climate Change

Increased support for prioritizing policies on the environment, climate change since 2011

% U.S. adults who say ____ should be a top priority for the president and Congress



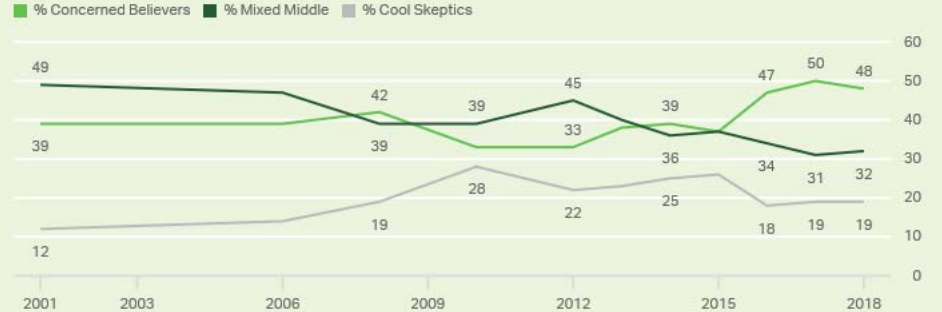
*In 2014 and earlier, respondents were asked about dealing with "global warming." In 2015 half the sample was asked about either "global warming" or "global climate change"; 34% called "global climate change" a top priority while 38% said this about "global warming."

Source: Survey of U.S. adults conducted Jan. 9-14, 2019

"Public's 2019 Priorities: Economy, Health Care, Education and Security All Near Top of List"

PEW RESEARCH CENTER

U.S. Global Warming Opinion Groups

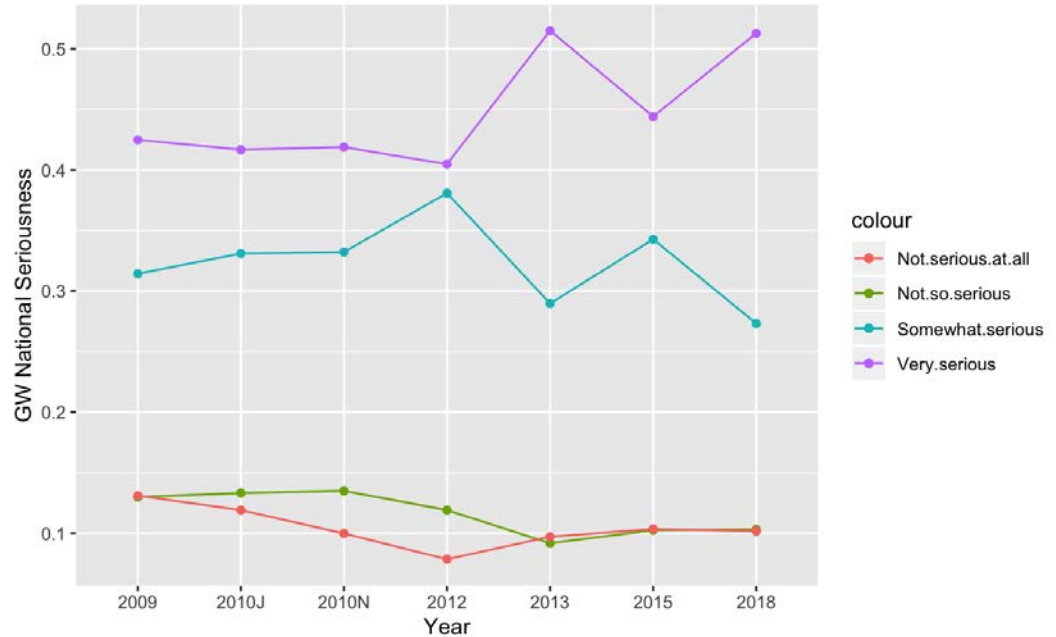


Based on cluster analysis of four global warming attitudes

GALLUP

The Current Study

- Data collected through representative national surveys via RDD from 1997 to 2018.
- A significant change in the perceived seriousness of global warming from 2009 to 2018.



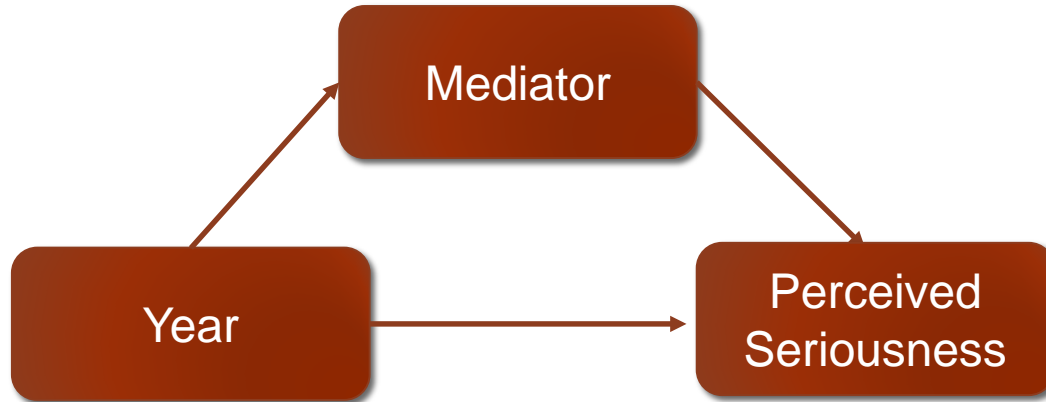
Research goal

- To uncover the mechanism beneath changes in American public opinion on climate change, i.e., what explains those changes in perceived seriousness of global warming?



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The ACE Model

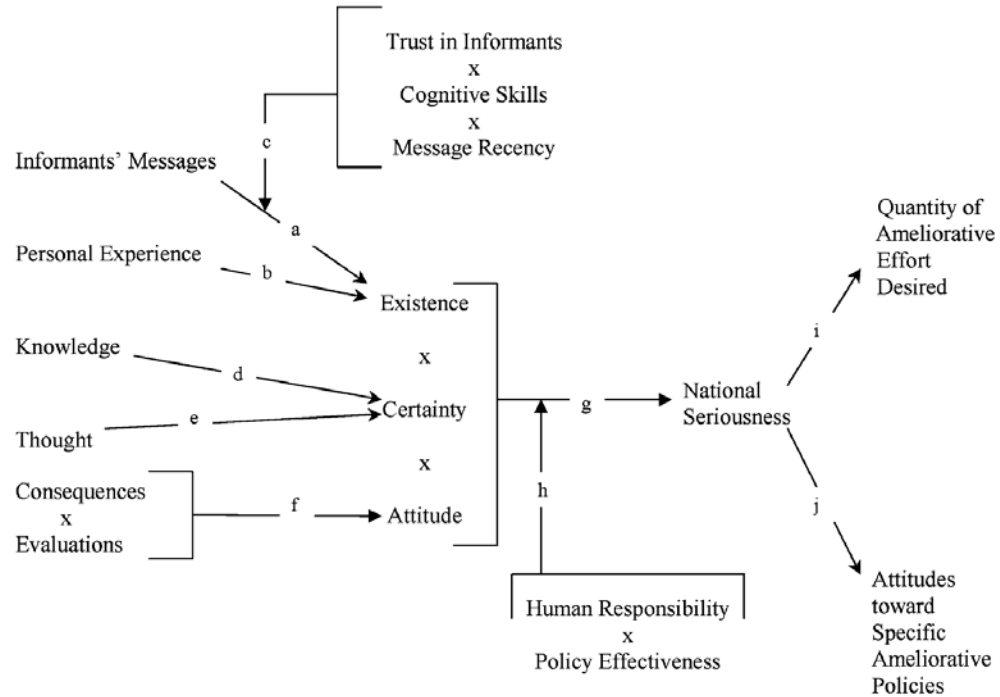


Figure 1. ACE Model of the origins and consequences of national seriousness judgments.

Possible Mediators

- *Attitude*: would you say that global warming would be good, bad, or neither good nor bad?
- *Certainty*: How sure are you that the world's temperature has (not) been going up over the past 100 years? Extremely sure, very sure, somewhat sure, or not sure at all?
- *Existence*: What is your personal opinion? Do you think that the world's temperature probably has been going up over the past 100 years, or do you think this probably has not been happening?
- *Human Cause*: (If the world's temperature did increase over the past 100 years), do you think that the increase in the world's temperature over the past 100 years was caused mostly by things people did, mostly by natural causes, or about equally by things people did and by natural causes?
- *Trust in Scientists*: How much do you trust the things that scientists say about the environment - completely, a lot, a moderate amount, a little, or not at all?

Causal Mediation Analysis

Model M: Mediator = Year

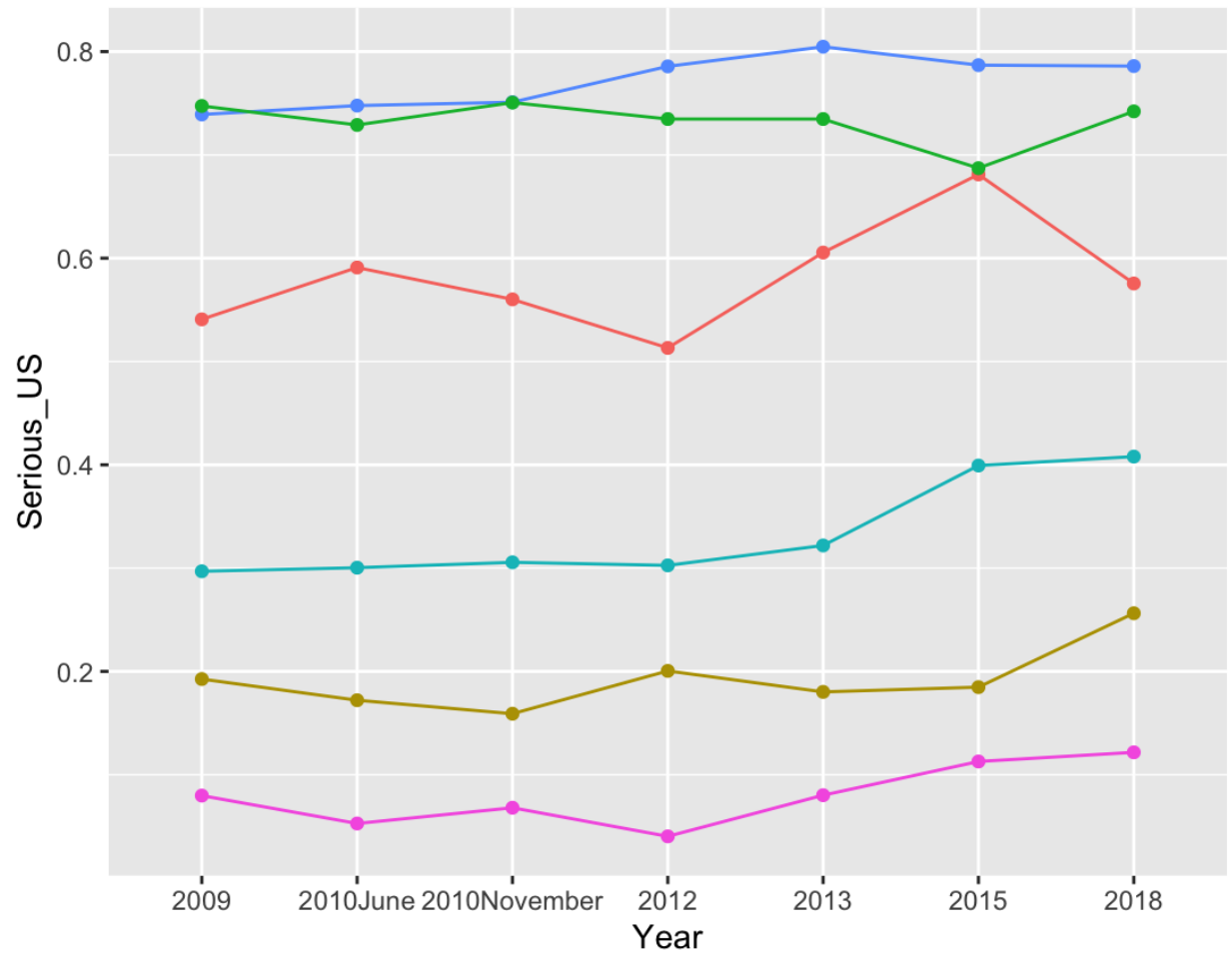
Model Y: GW Seriousness = Year + Mediator

Confidence intervals constructed using nonparametric bootstrapping

Analyses performed using the mediation package in R

Results

1. *Human Cause* fully mediates the relationship between *GW Seriousness* and *Year*.
2. *Trust in scientists* partially mediates the relationship between *GW Seriousness* and *Year*.
3. *Certainty* partially mediates the relationship between *GW Seriousness* and *Year*.
4. *Attitude* does not mediate the relationship between *GW Seriousness* and *Year*.
5. *Existence* does not mediate the relationship between *GW Seriousness* and *Year*.



The ACE Model

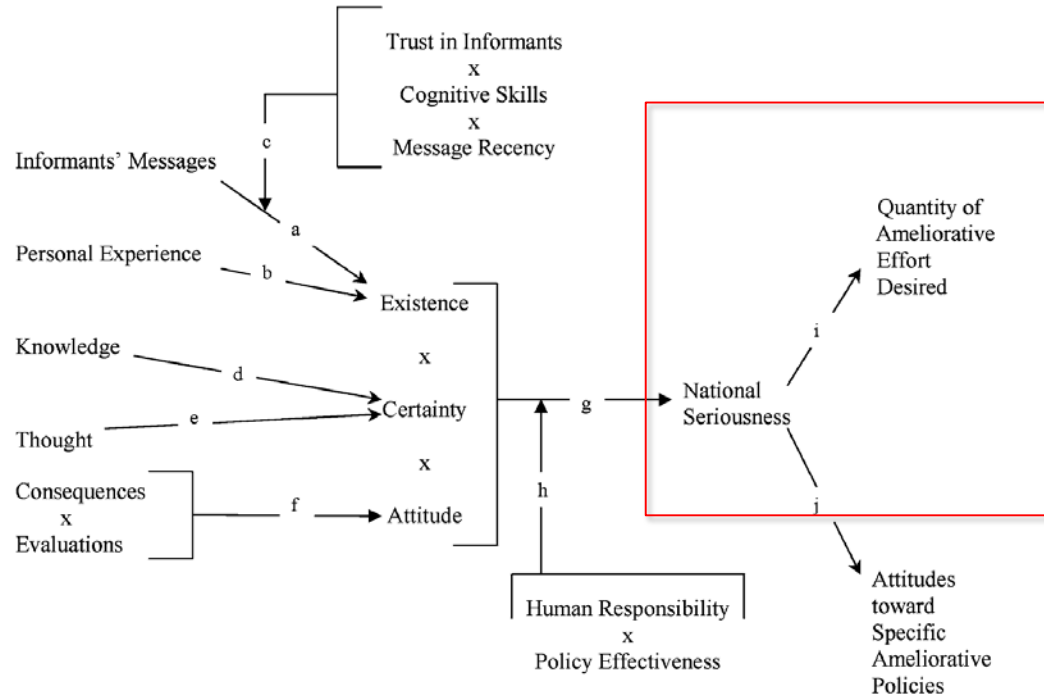
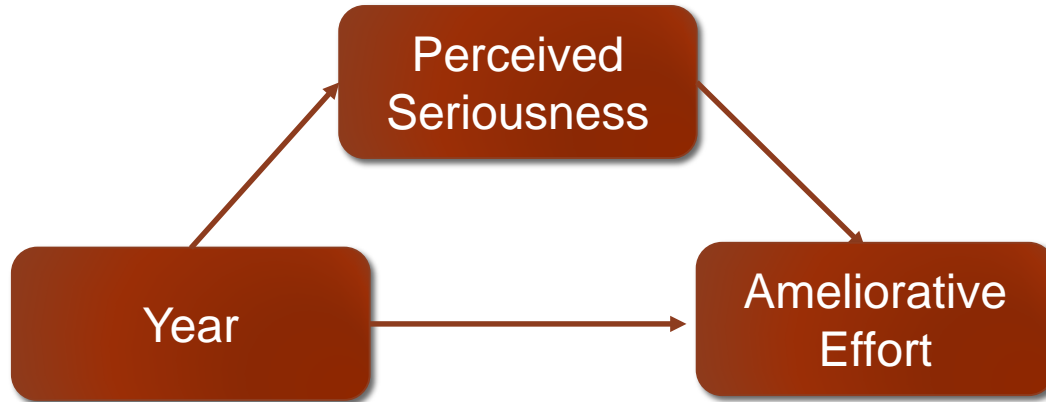


Figure 1. ACE Model of the origins and consequences of national seriousness judgments.

Research goal

- Does changes in perceived seriousness throughout the years explain the changes in the quantity of ameliorative effort desired?



Quantity of Ameliorative Effort Desired

- How much do you think the U.S. government should do about global warming? A great deal, quite a bit, some, a little, or nothing?
- How much do you think U.S. businesses should do about global warming? A great deal, quite a bit, some, a little, or nothing?
- How much do you think average people should do about global warming? A great deal, quite a bit, some, a little, or nothing?

Results

1. *GW Seriousness* fully mediates the relationship between *Government Action* and *Year*.
2. *GW Seriousness* fully mediates the relationship between *Businesses Action* and *Year*.
3. *GW Seriousness* partially mediates the relationship between *Average People Action* and *Year*.

Discussion

- Attitude and Existence do not explain the changes in seriousness between 2009 - 2018, but Certainty and Human Cause do
- Intervention on Human Cause
- More variables affecting “How much average people should do” than GW Seriousness; but GW Seriousness solely explains a great deal of “How much the government should do” and “How much businesses should do”
- Shirking
- Rational for individual people – each of us cannot make a difference by ourselves
- A big problem, you need a big intervention – only government and businesses can do that

Thank you!

Contact me at tche101@stanford.edu