the Cultural Cognition Project at Yale Law School

www.culturalcognition.net

America's Two "Climate Changes"

Dan M. Kahan
Yale University

& ***many x 10^3 others***

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Skoll Global Threats Fund

What am I talking about? ...

1.
2.
3.
4.
5.

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1. Weird, intresting data about members of public
2.
3.
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2. Weird, intersting data about *farmers*
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3. Mechanism: Cognitive dualism
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4. Two Methodological notes
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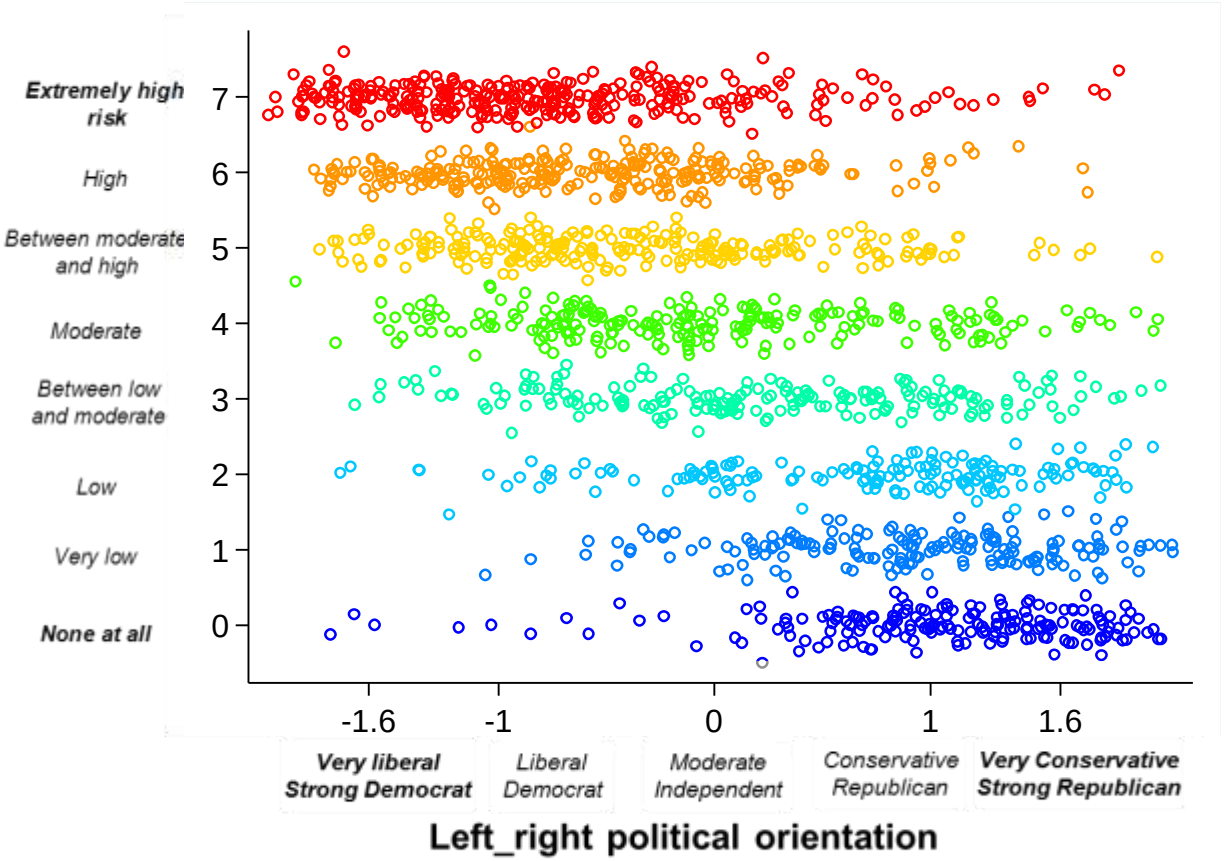
5. One practical implication

"How much risk do you believe **global warming** poses to human health, safety, or prosperity?"



Data source: CCP/Annenberg Public Policy Cntr, Jan. 5-19, 2016. *N* = 1190.

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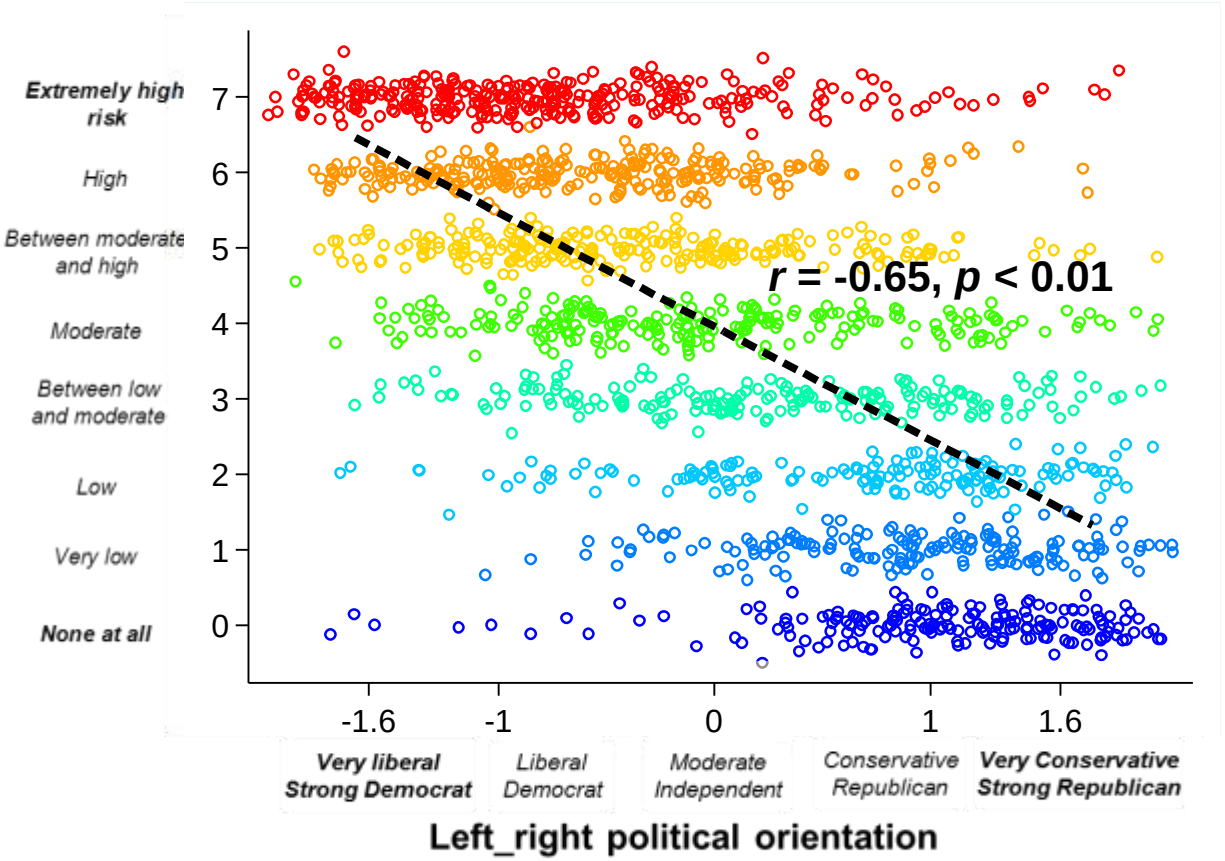
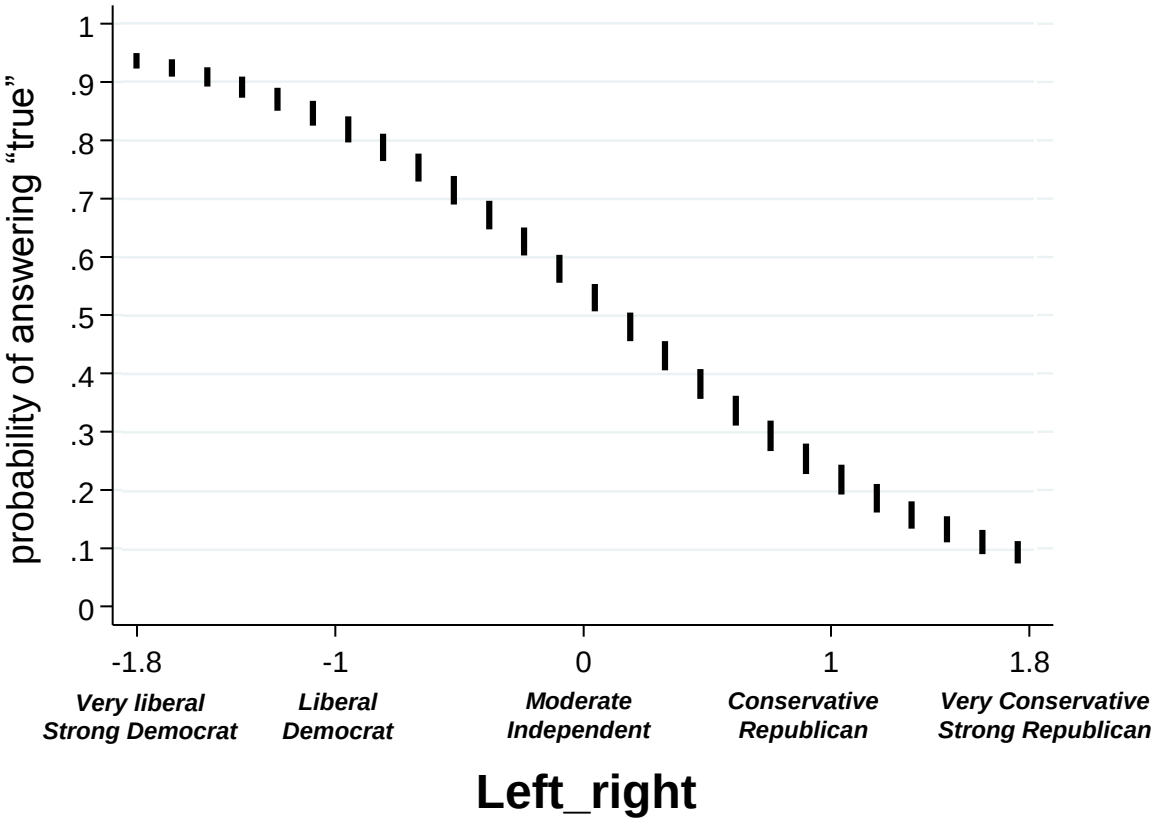


Data source: CCP/Annenberg Public Policy Cntr, Jan. 5-19, 2016. *N* = 2389..

***There is "solid evidence" of recent global warming due "mostly" to "human activity such as burning fossil fuels."* [true/false]]**



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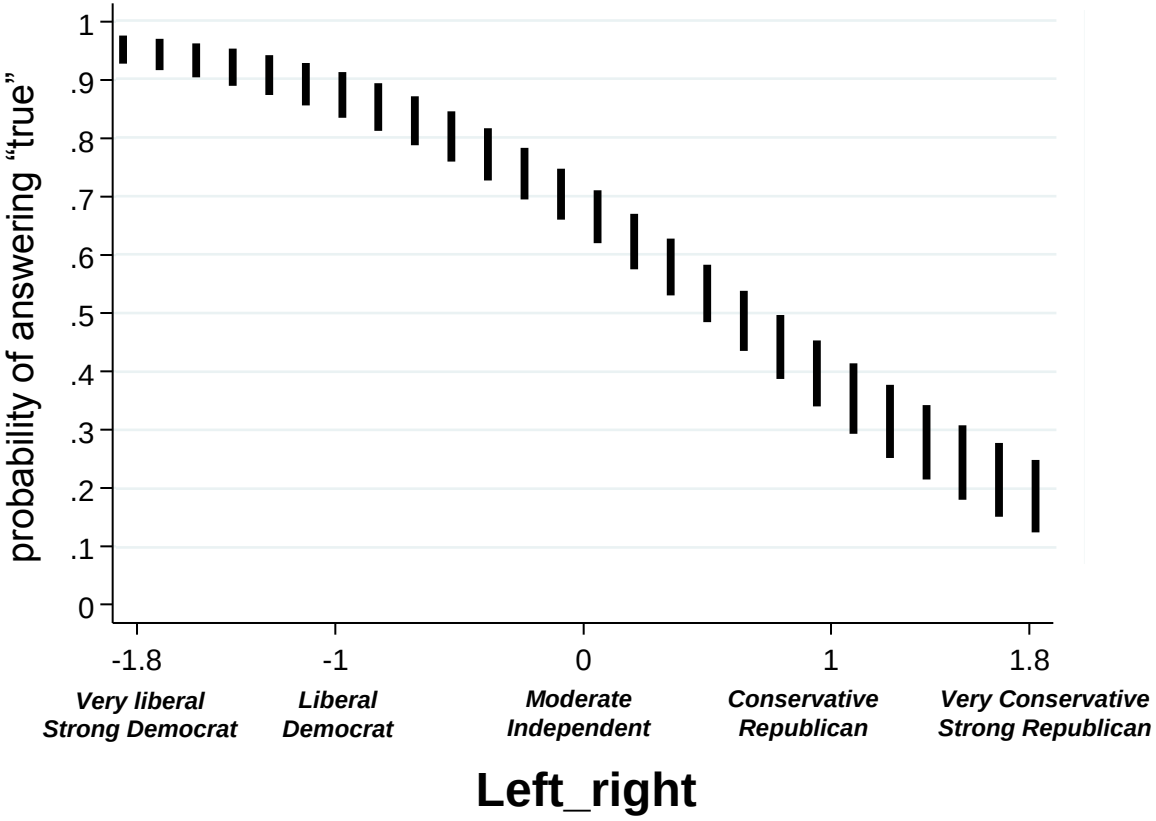
" . . . human-caused global warming will result in flooding of many coastal regions ." [True or False]



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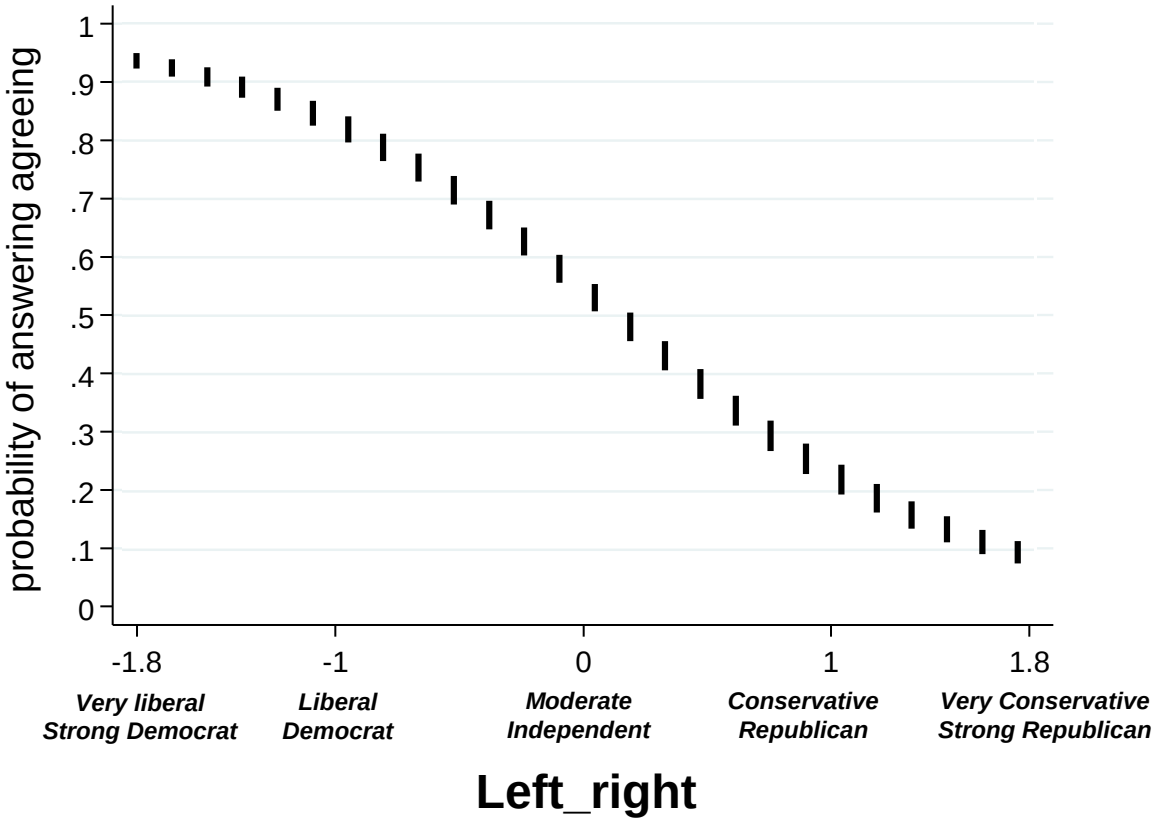

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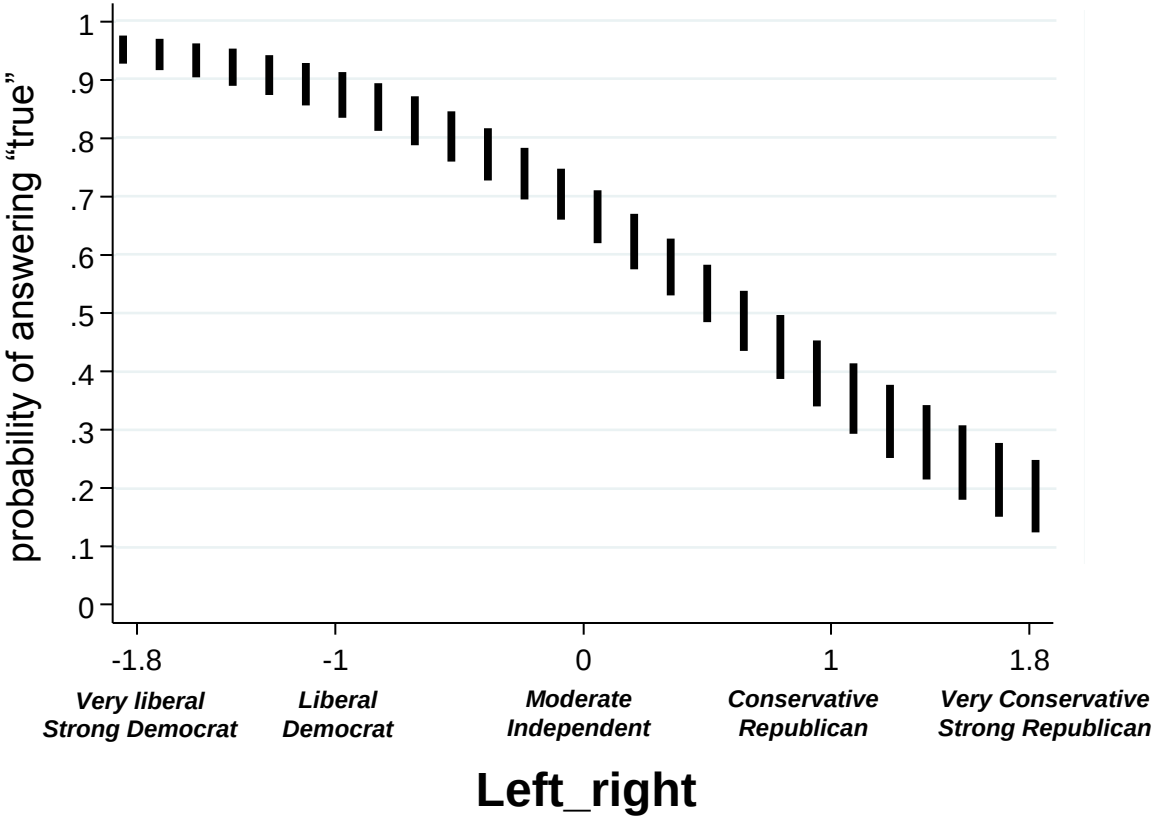

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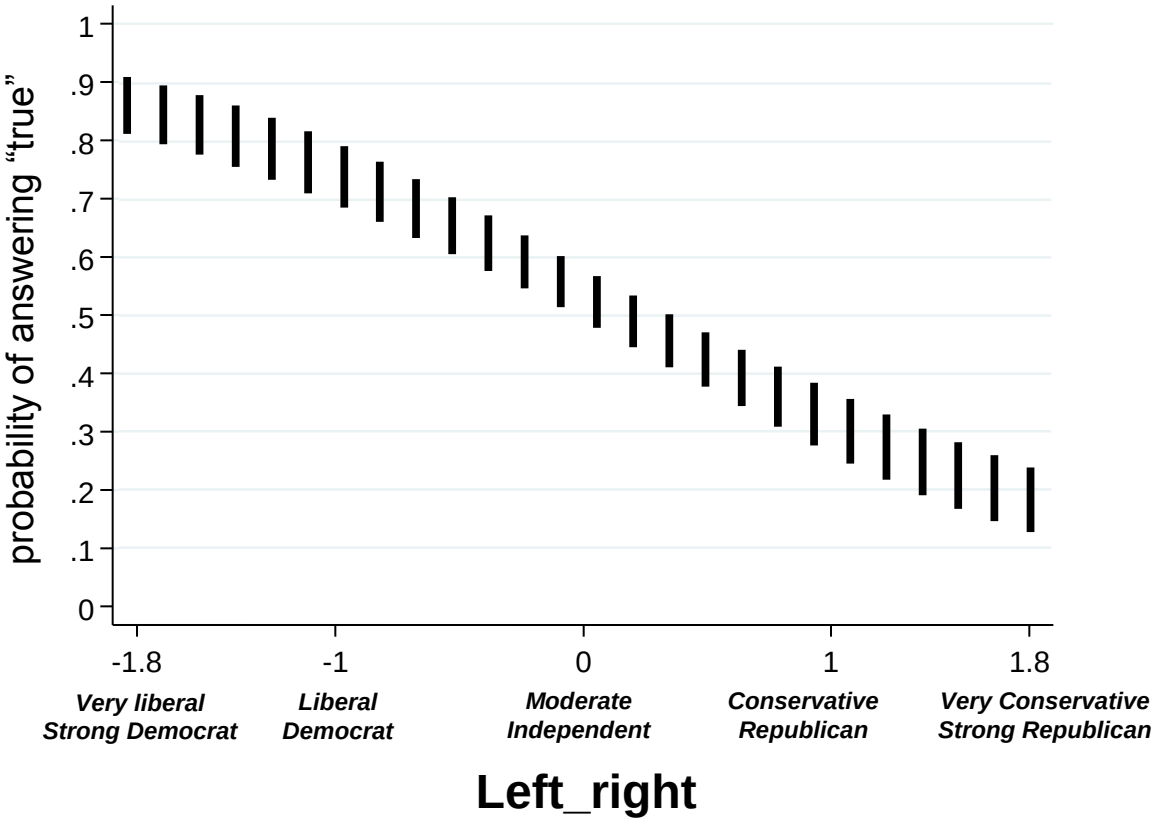

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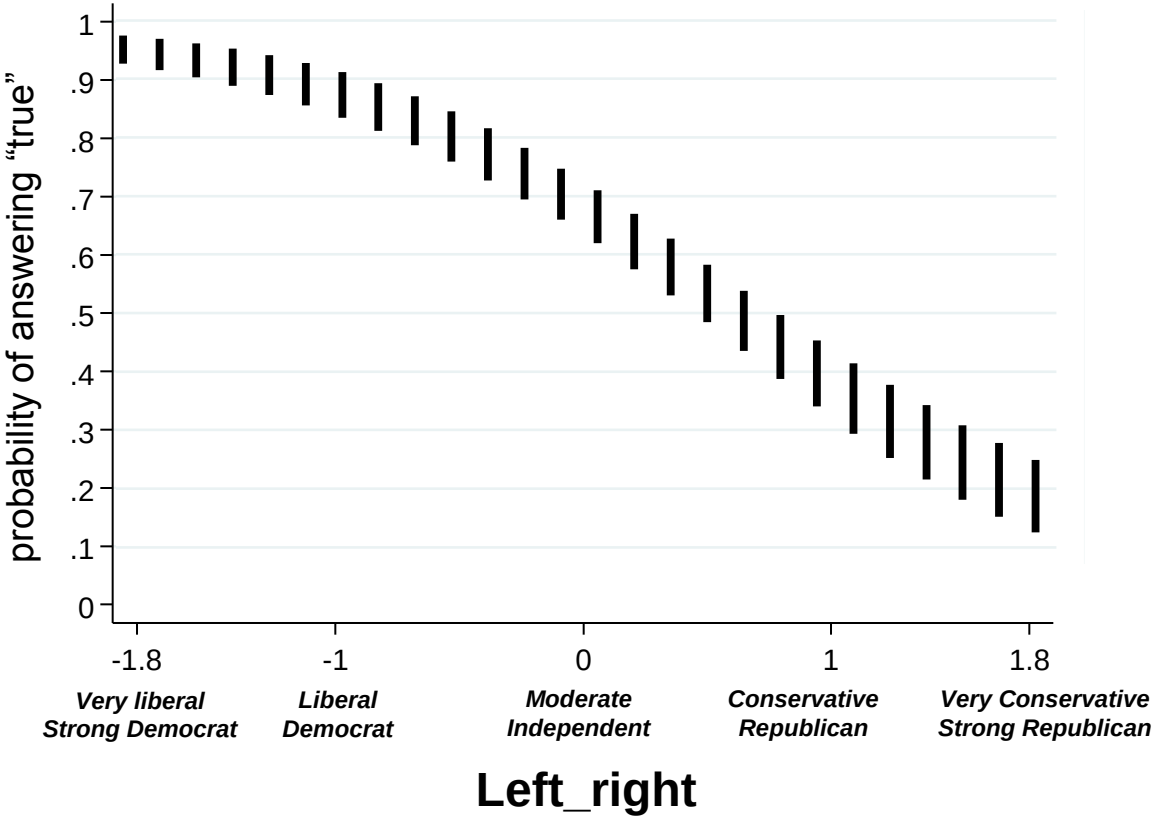

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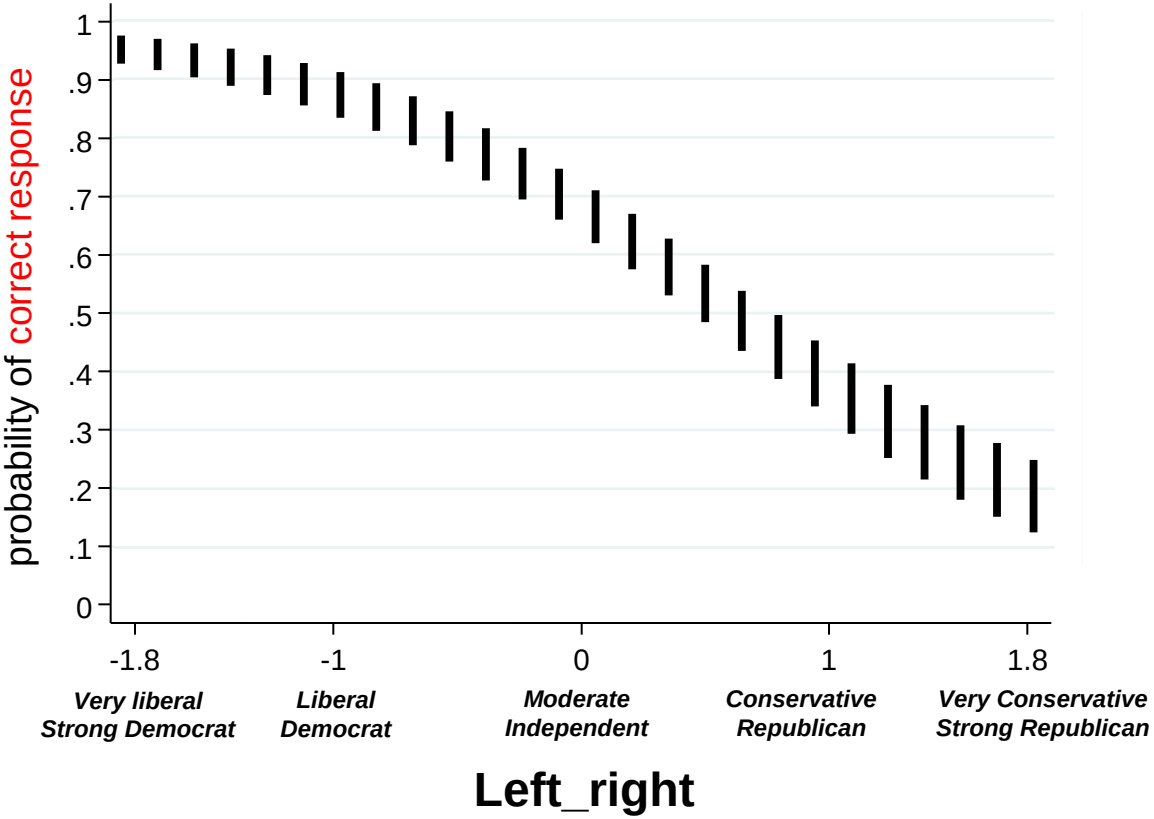

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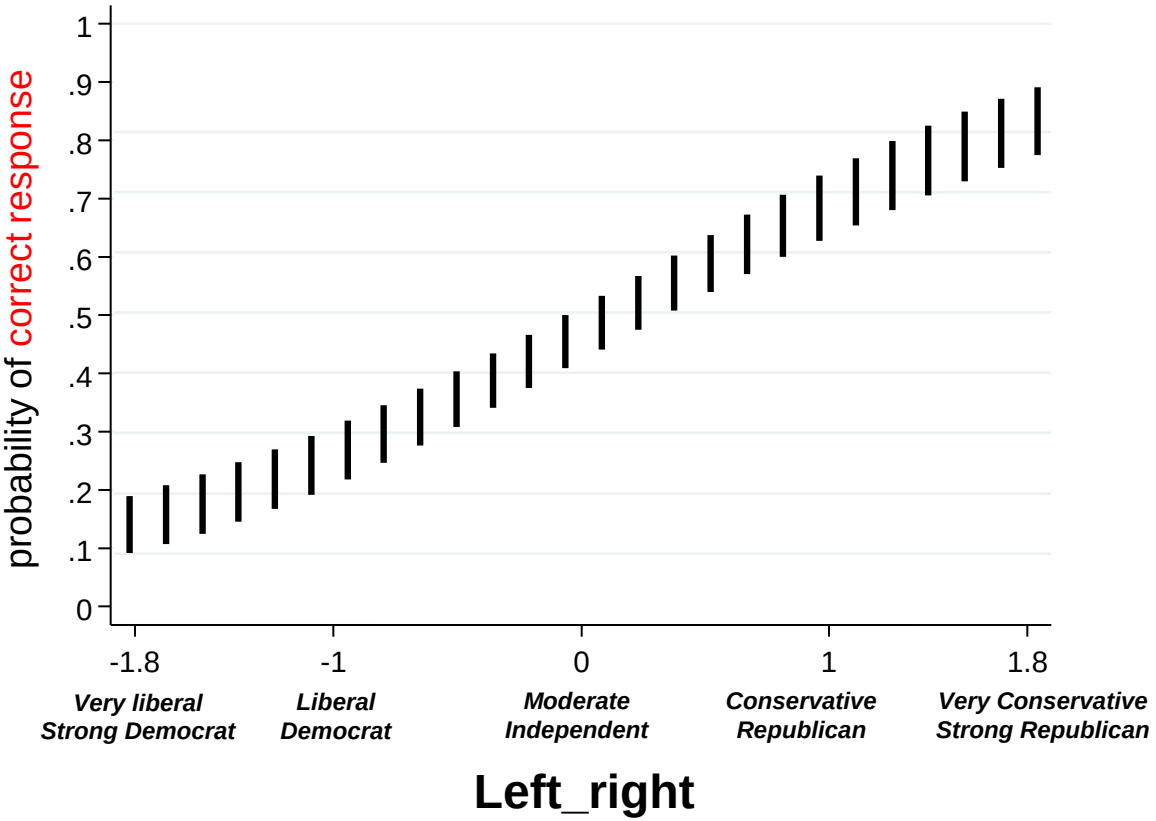

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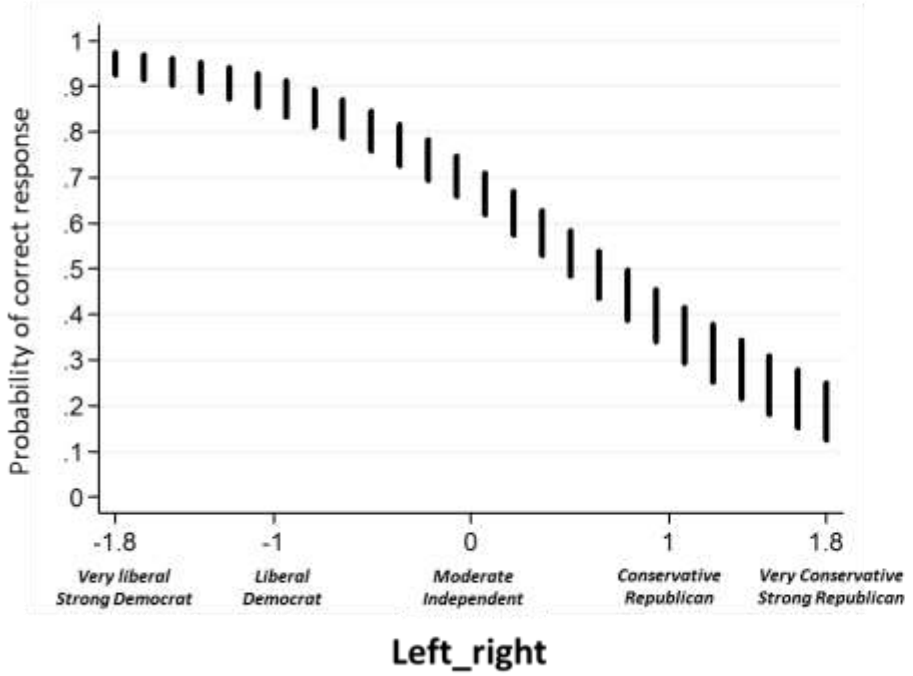

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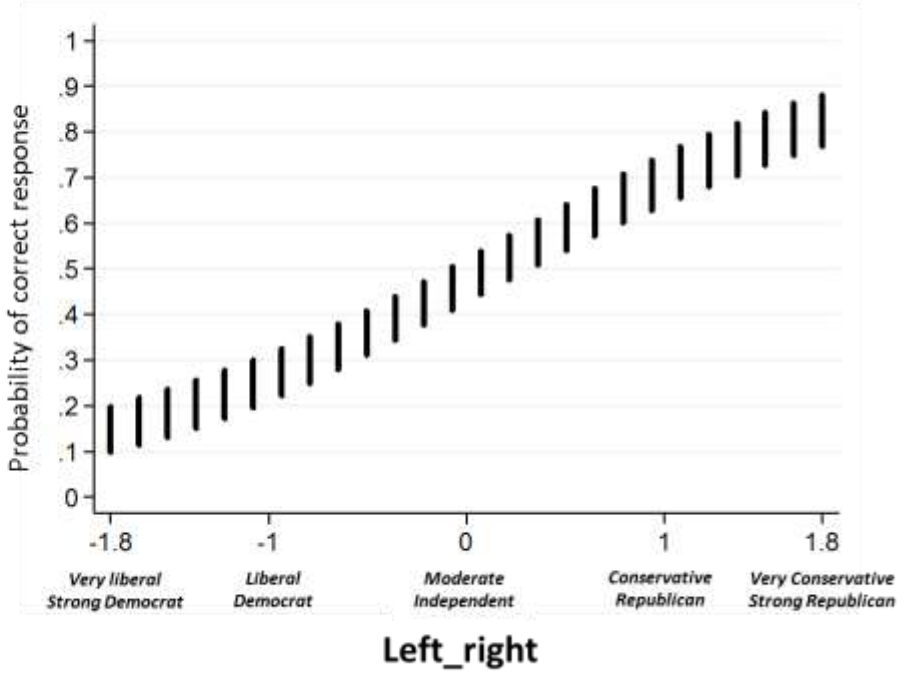

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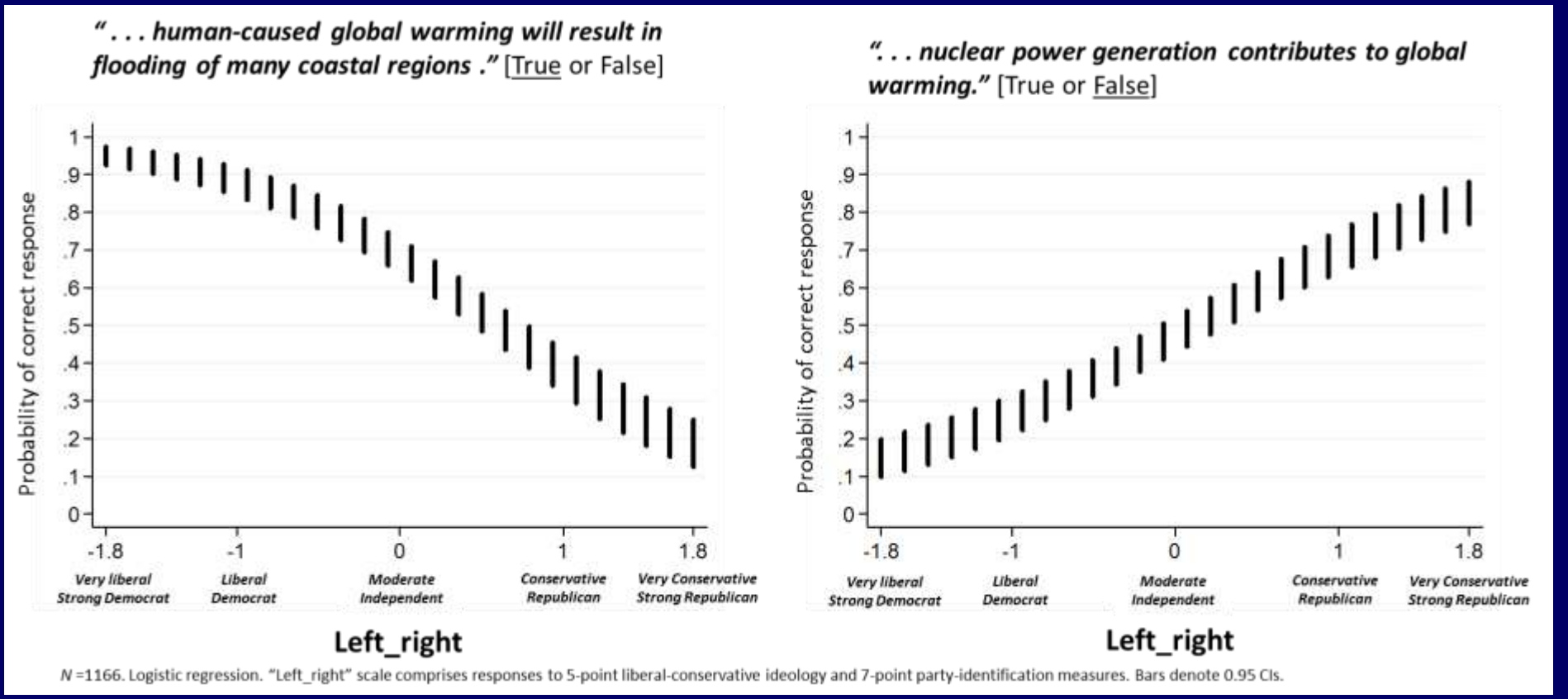
What you *believe* about climate change



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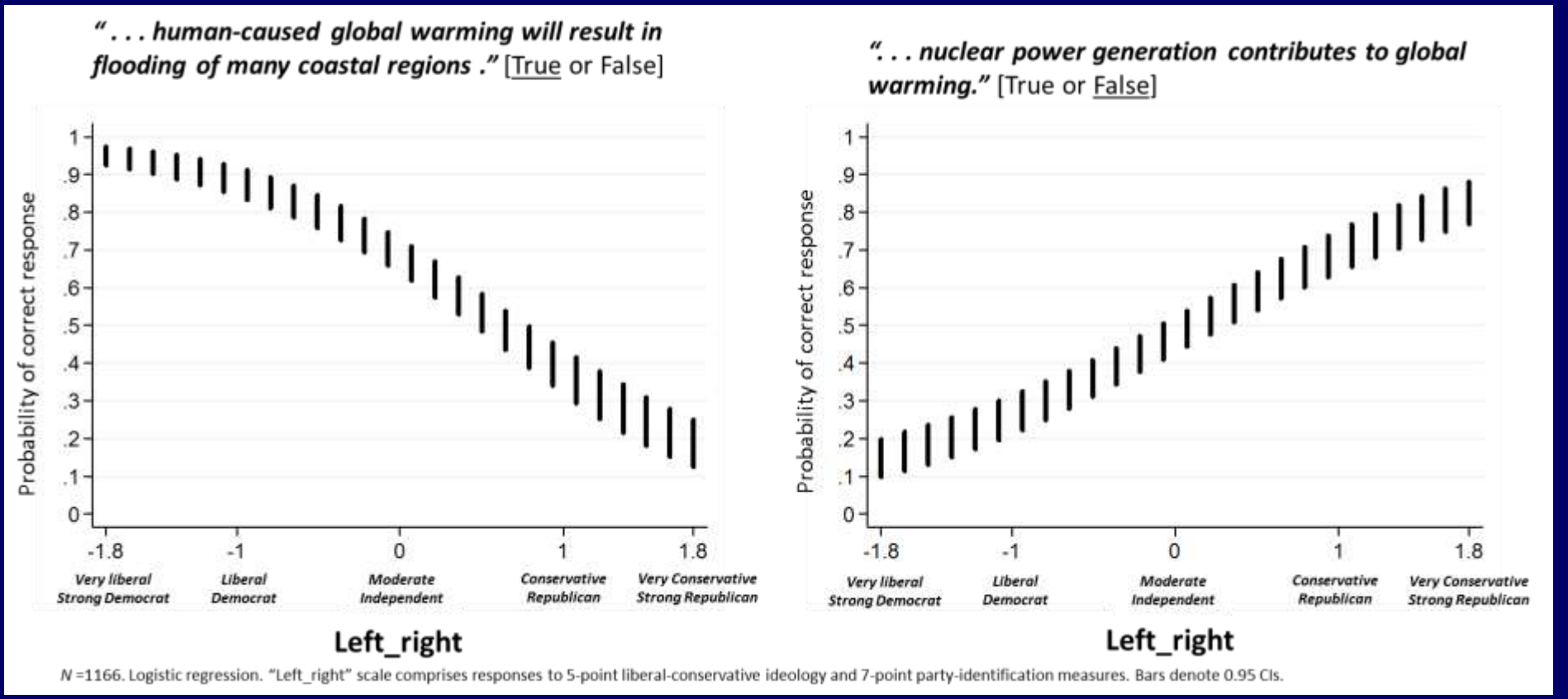

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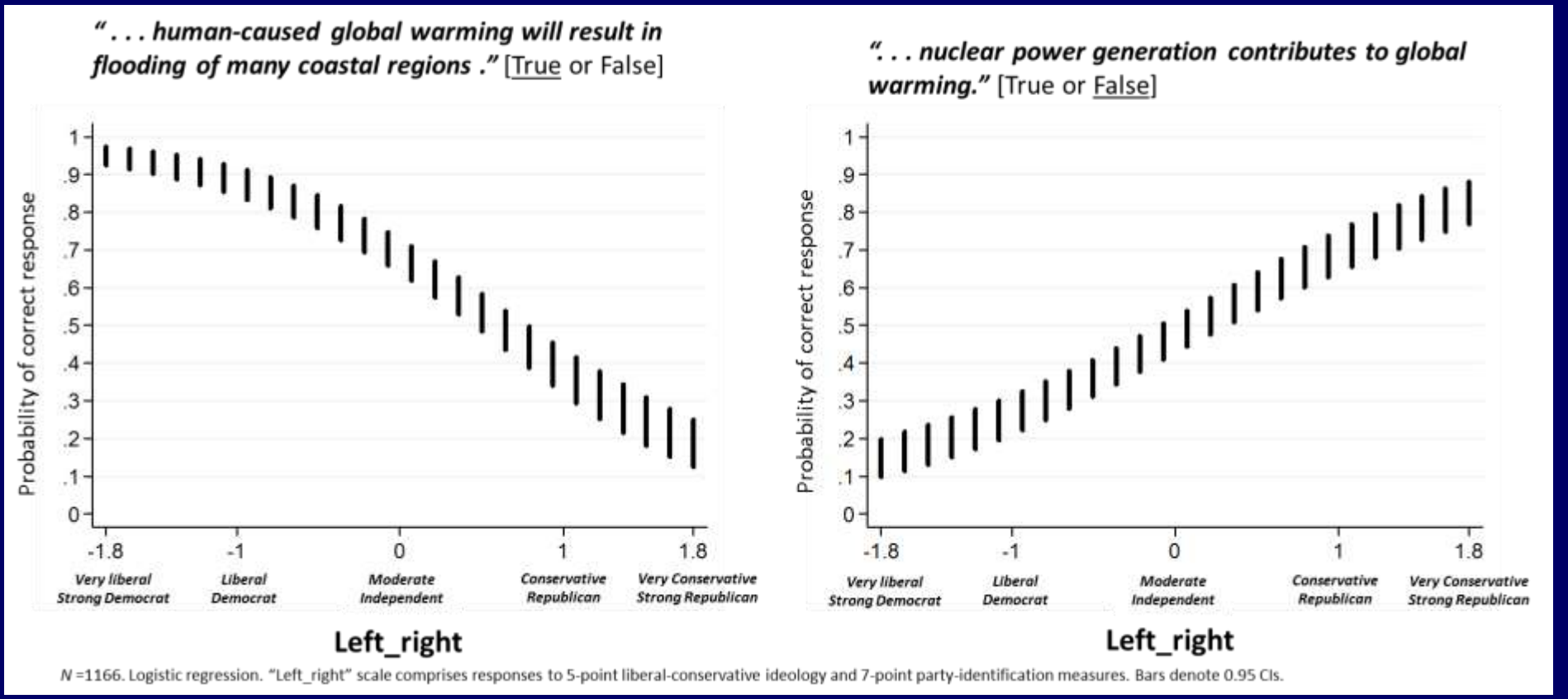
What you *believe* about climate change doesn't reflect what you know . . . It *expresses who you are*



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Ordinary Science Intelligence assessment (OSI)

Journal of Risk Research, 2016
http://dx.doi.org/10.1080/13669877.2016.1148067

Routledge
Taylor & Francis Group

'Ordinary science intelligence': a science-comprehension measure for study of risk and science communication, with notes on evolution and climate change

Dan M. Kahan*

Yale Law School, Yale University, New Haven, CT, USA

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Keywords: science comprehension; risk perception; global warming; belief in evolution

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The validity of any science-comprehension instrument must be evaluated in relation to its purpose. The quality of the decisions ordinary individuals make in myriad

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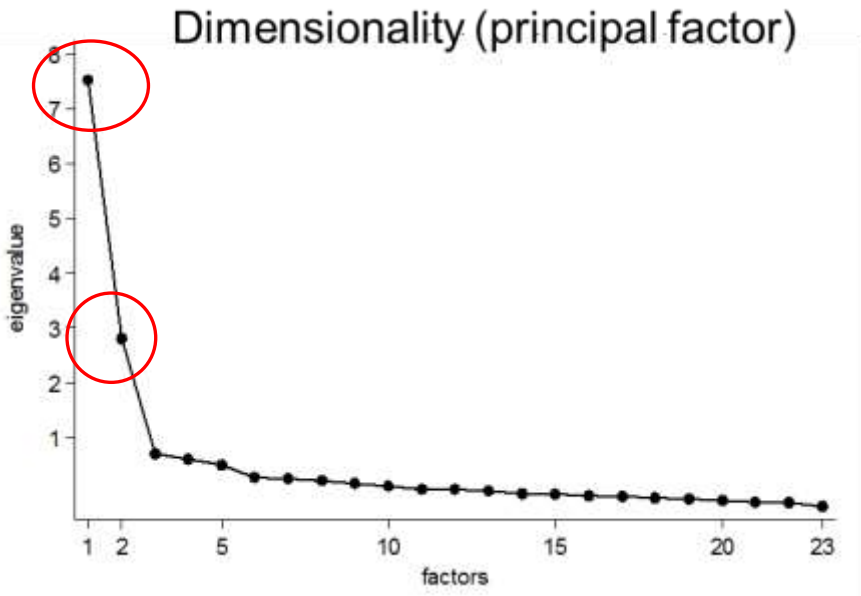
“Belief” in climate change: who you *are*, not what you *know*



Variable	Factor1	Factor2
die_c	0.5713	
BUCKS_c	0.5487	
SWEEP_c	0.6779	
DISEASE1_c	0.4550	
DISEASE2_c	0.3876	
brst_c	0.4572	
BATBALL_c	0.5672	
WIDGET_c	0.4932	
lillypad_c	0.7155	
PEWGAS1_c	0.4493	
RADIOACTIV~c	0.3614	
LASERS_c	0.4879	
ELECTRONS_c	0.4027	
PEWGAS2_c	0.5253	
ANTIBIOTIC~c	0.4729	
probabil~a_c	0.3208	
probabil~b_c	0.3347	
COPERNIC~2_c	0.5355	
C_FLOODING		-0.5165
C_NUCLEAR		-0.4290
AGW		-0.7864
GWRISK		-0.8405
libcon		0.7610
dem_repub		0.7735

loadings < 0.3 suppressed

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OSI_1.0

nature climate change

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The polarizing impact of science literacy and numeracy on perceived climate change risks

Dan M. Kahan[1]*, Ellen Peters[2], Maggie Wittlin[3], Paul Slovic[4], Lisa Larrimore Donald Braman[5] and Gregory Mandel[6]

Seeming public apathy over climate change is often attributed to a deficit in comprehension. The public knows too little science, it is claimed, to understand the evidence or avoid being misled[1]. Widespread limits on technical reasoning aggravate the problem by forcing citizens to use unreliable cognitive heuristics to assess risk[2]. We conducted a study to test this account and found no support for it. Members of the public with the highest degrees of science literacy and technical reasoning capacity were not the most concerned about climate change. Rather, they were the ones among whom cultural polarization was greatest. This result suggests that public divisions over climate change stem not from the public's incomprehension of science but from a distinctive conflict of interest: between the personal interest individuals have in forming beliefs in line with those held by others with whom they share close ties and the collective one they all share in making use of the best available science to promote common welfare.

The study collected data on the climate-change risk perceptions of a large representative sample of US adults ($N = 1{,}540$). Measures were selected to permit assessment of two competing accounts of public opinion on climate change. One, already adverted to, can be called the science comprehension thesis (SCT). As members of the public *do not know* what scientists know, or think the way scientists think, they predictably fail to take climate change as seriously as scientists believe they should[1].

The alternative explanation can be referred to as the cultural cognition thesis (CCT). CCT posits that individuals, as a result of a complex of psychological mechanisms, tend to form perceptions of societal risks that cohere with values characteristic of groups with which they identify[4,7]. Whereas SCT emphasizes a conflict between scientists and the public, CCT stresses one between different segments of the public, whose members are motivated to fit their interpretations of scientific evidence to their competing cultural philosophies[8].

Explanations for the public's perceptions of climate change risk can be tested by observational study insofar as such hypotheses imply correlations between concern over climate change and specified individual characteristics[9]. We instructed subjects to rate the seriousness of climate change risk on a scale of 0 (no risk) to 10 (extreme risk), a general risk-concern measure that furnishes a parsimonious focus for such testing[10].

SCT asserts, first, that ordinary members of the public underestimate the seriousness of climate change because of the difficulty of the scientific evidence[1]. If this is correct, concern over climate change should be positively correlated with science literacy—that is, concern should increase as people become more science literate.

Second, and even more important, SCT attributes low concern with climate change to limits on the ability of ordinary members of the public to engage in technical reasoning. Recent research in psychology posits two discrete forms of information processing: system 1, which involves rapid visceral judgments that manifest themselves in various decision-making heuristics and system 2, which requires conscious reflection and calculation[11]. Most members of the public, according to this research, typically employ system 1 reasoning without resorting to more effortful system 2 processing. Although system 1 works well for most daily contingencies, ordinary citizens' predominant reliance on heuristic rather than analytic modes of reasoning is viewed as leading them to underestimate climate change risks, which are remote and abstract compared with a host of more emotionally charged risks (for example, terrorism) that the public is thought to overestimate[12].

If this position is correct, one would also expect concern with climate change to be positively correlated with numeracy. Numeracy refers to the capacity of individuals to comprehend and make use of quantitative information[13]. More numerate people are more disposed to use accuracy-enhancing system 2 forms of reasoning and are less vulnerable to system 1 cognitive errors[11,13]. Hence, they should, on this view, form perceptions of climate-change risk less biased towards underestimation.

These predictions were unsupported (Fig. 1). As respondents' science-literacy scores increased, concern with climate change decreased ($r = -0.05$, $P = 0.05$). There was also a negative correlation between numeracy and climate change risk ($r = -0.09$, $P = 0.01$). The differences were small, but nevertheless inconsistent with SCT, which predicts effects with the opposite signs.

CCT also generates a testable prediction. CCT posits that people who subscribe to a hierarchical, individualistic world-view—one that ties authority to conspicuous social rankings and eschews collective interference with the decisions of individuals possessing such authority—tend to be sceptical of environmental risks. Such people intuitively perceive that widespread acceptance of such risks would license restrictions on commerce and industry, forms of behaviour that hierarchical individualists value. In contrast, people who hold an egalitarian, communitarian world-view—one favouring less regimented forms of social organization and greater collective attention to individual needs—tend to be morally suspicious of commerce and industry, to which they attribute social inequity. They therefore find it congenial to believe those forms of behaviour are dangerous and worthy of restriction[8].

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"Belief" in climate change: who you *are*, not what you *know*

OSI_2.0

Journal of Risk Research, 2016
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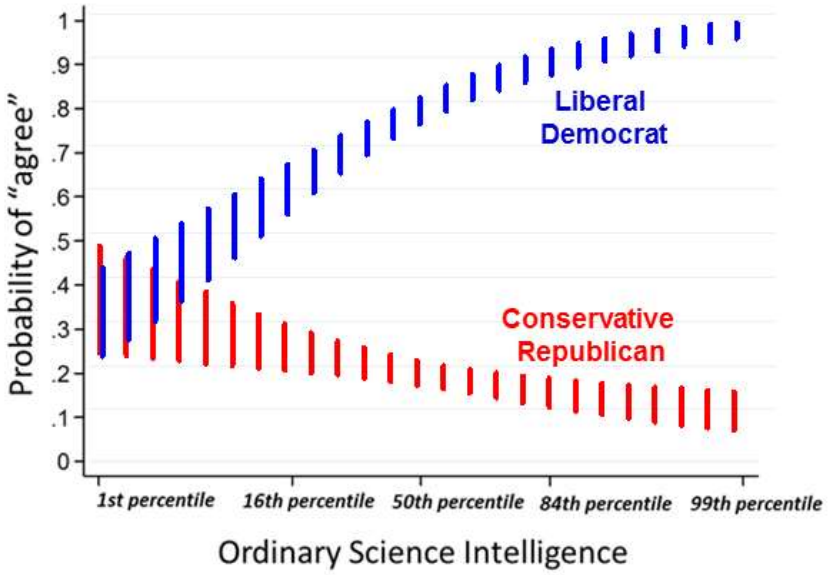

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Unconfounding knowledge & identity: Evolution

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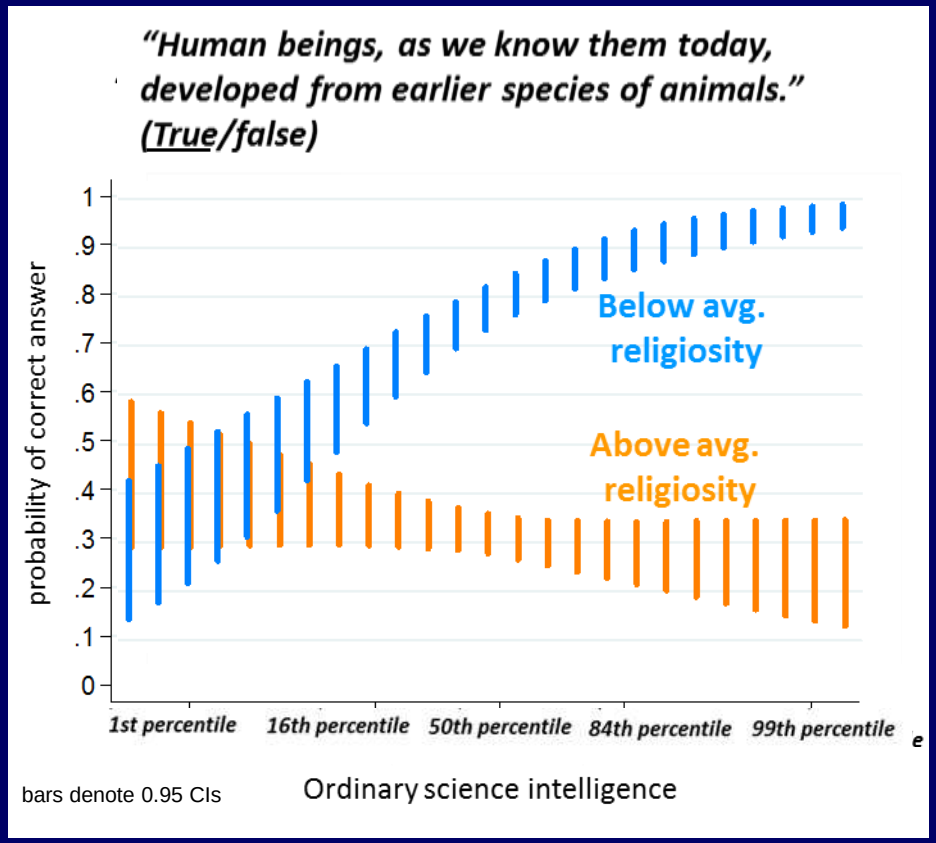

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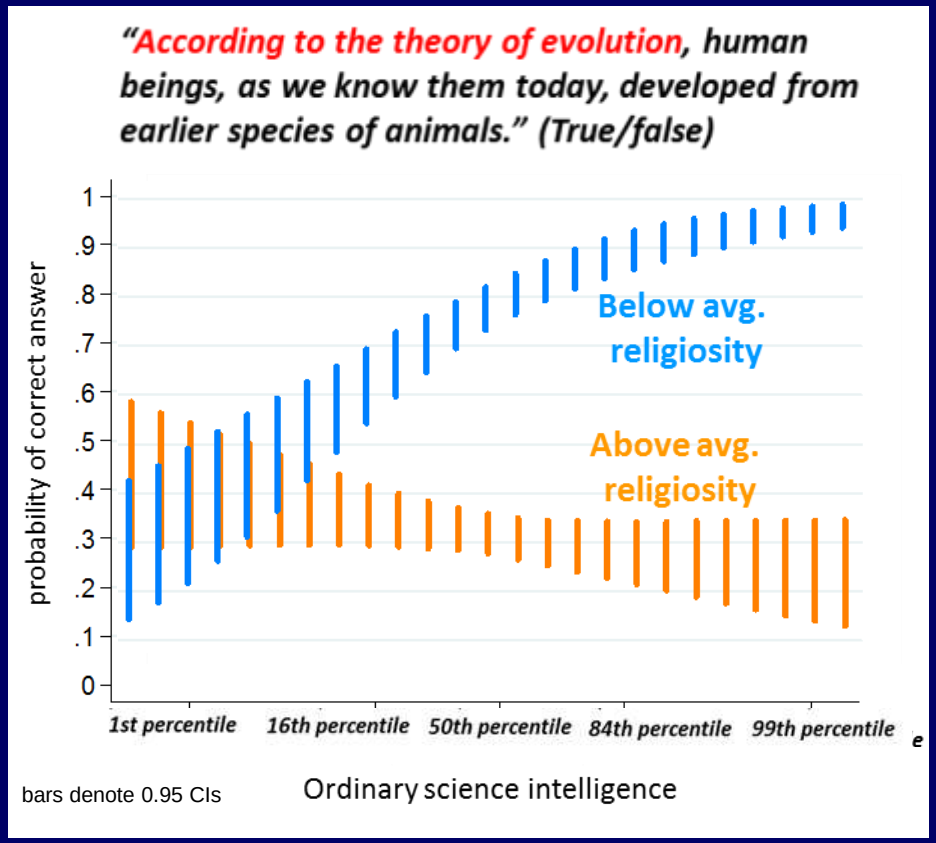

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This paper describes the 'ordinary science intelligence' scale (OSI_2.0). Designed for use in the empirical study of risk perception and science communication, OSI_2.0 comprises items intended to measure a latent capacity to recognize and make use of valid scientific evidence in everyday decision-making. The derivation of the items, the relationship of them to the knowledge and skills OSI requires, and the psychometric properties of the scale are examined. Evidence of the external validity of OSI_2.0 is also presented. Finally, the utility of OSI_2.0 is briefly illustrated by its use to assess standard survey items on evolution and global warming: when administered to members of a US general population sample, these items are more convincingly viewed as indicators of one or another latent cultural identity than as indicators of science comprehension.

Keywords: science comprehension; risk perception; global warming; belief in evolution

1. Introduction: OSI_2.0

This paper (more a technical research note, actually) furnishes information on the 'ordinary science intelligence' scale (OSI). OSI is a tool to facilitate empirical investigation of how individual differences in science comprehension contribute to public perceptions of risk and like facts. The paper describes the motivation for OSI, the process used to develop it, and the scale's essential psychometric properties. It also presents evidence of the external validity of the scale as a predictor of scientific reasoning proficiency. Finally, it illustrates the utility of OSI for testing hypotheses on the relationship between public science comprehension and controversial applications of science.

The current version of OSI is the successor to the science comprehension instrument used in Kahan et al. (2012) and was featured in a study reported in Kahan (2015a). Additional refinements, including creation of a short form, are anticipated. To distinguish it from previous and likely future versions, the scale described in this paper will be referred to as 'OSI_2.0.'

2. What and why?

The validity of any science-comprehension instrument must be evaluated in relation to its purpose. The quality of the decisions ordinary individuals make in myriad

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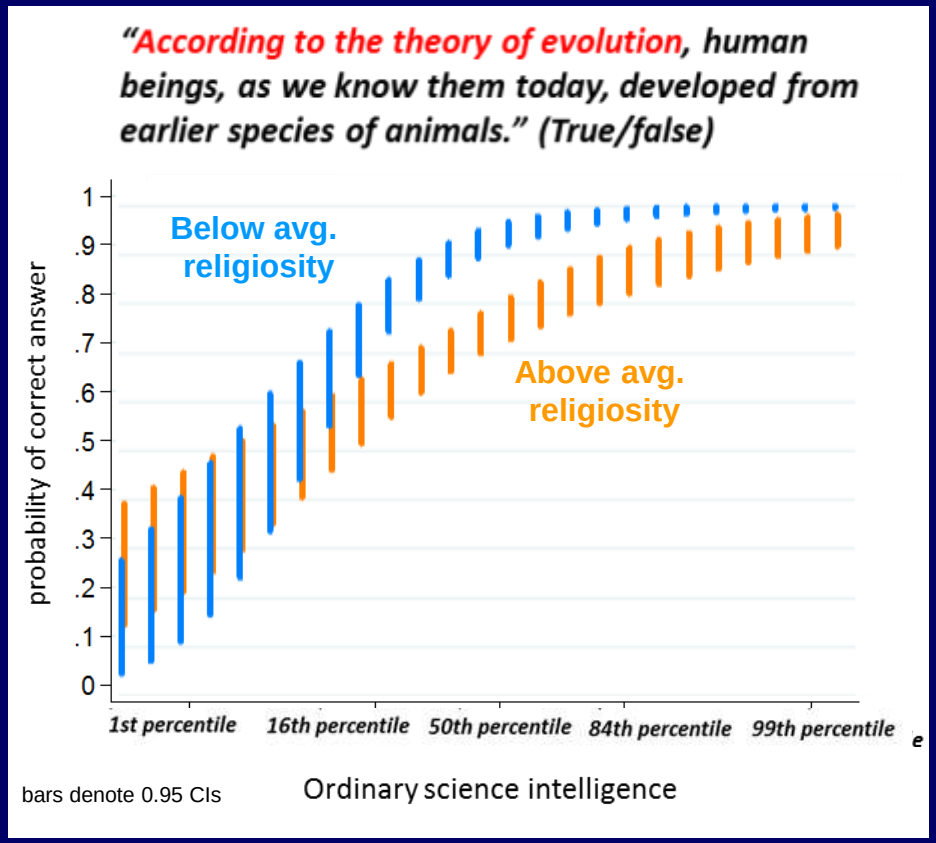


Unconfounding knowledge & identity: Climate change

Advances in Political Psychology

Advances in Political Psychology, Vol. 36, Suppl. 1, 2015
doi: 10.1111/pops.12244

Climate-Science Communication and the *Measurement Problem*

Dan M. Kahan
Yale University

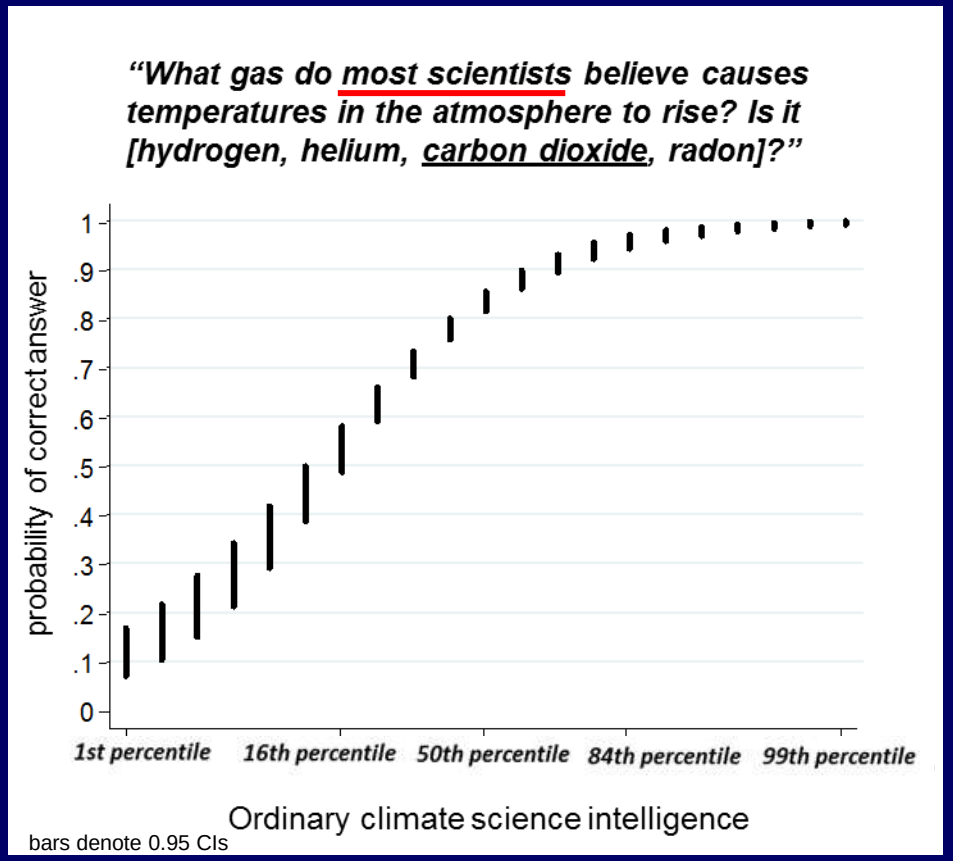
This article examines the science-of-science-communication measurement problem. In its simplest form, the problem reflects the use of externally invalid measures of the dynamics that generate cultural conflict over risk and other policy-relevant facts. But at a more fundamental level, the science-of-science-communication measurement problem inheres in the phenomena being measured themselves. The "beliefs" individuals form about a societal risk such as climate change are not of a piece; rather they reflect the distinct clusters of inferences that individuals draw as they engage information for two distinct ends: to gain access to the collective knowledge furnished by science and to enjoy the sense of identity enabled by membership in a community defined by particular cultural commitments. The article shows how appropriately designed "science comprehension" tests—one general and one specific to climate change—can be used to measure individuals' reasoning proficiency as collective-knowledge acquirers independently of their reasoning proficiency as cultural-identity protectors. Doing so reveals that there is in fact little disagreement among culturally diverse citizens on what science knows about climate change. The source of the climate-change controversy and like disputes over societal risks is the contamination of the science-communication environment with forms of cultural status competition that make it impossible for diverse citizens to express their reason as both collective-knowledge acquirers and cultural-identity protectors at the same time.

KEY WORDS: identity-protective cognition, science literacy, climate-science literacy, evolution

What Is the Science-of-Science-Communication Measurement Problem?

The "double slit" experiment is the most bewitching illustration of the challenge that quantum physics poses to its classical predecessor. When a light beam is trained on a barrier with two parallel slits, the "wave like" character of light is shown to originate not in the interference of colliding streams of photons, but rather in the probabilistic interference of *each individual photon with itself* as it simultaneously passes through "both slits at once." More eerily still, the mere attempt to observe this phenomenon as it occurs—by placing sensors, say, at the entry to the slits—"forces" each photon to pass through just one of the slits and to travel an unmolested, "particle like" path to a screen, forming two parallel strips of light instead of the wave's signature interference pattern (Feynman, 1963, III: 1–4 to 1–6). Why collecting information on the "dualistic" wave-particle quality of photons (or electrons or any other elementary particle) eviscerates every trace of this process is known in the study of physics as the "measurement problem," and it emerges as the central feature of every distinctive element of quantum mechanics.

My focus in this article is on another "measurement problem": one distinctive of the science of science communication. The occasion for *this* bewitching difficulty is not the "dualistic" qualities of



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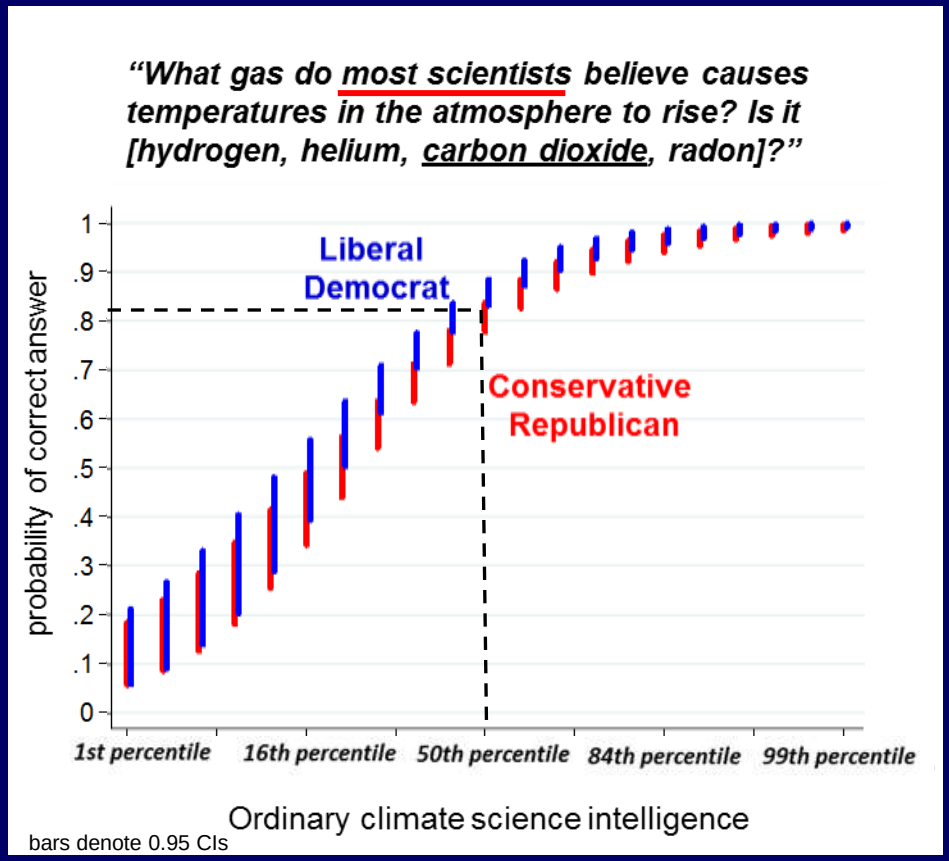

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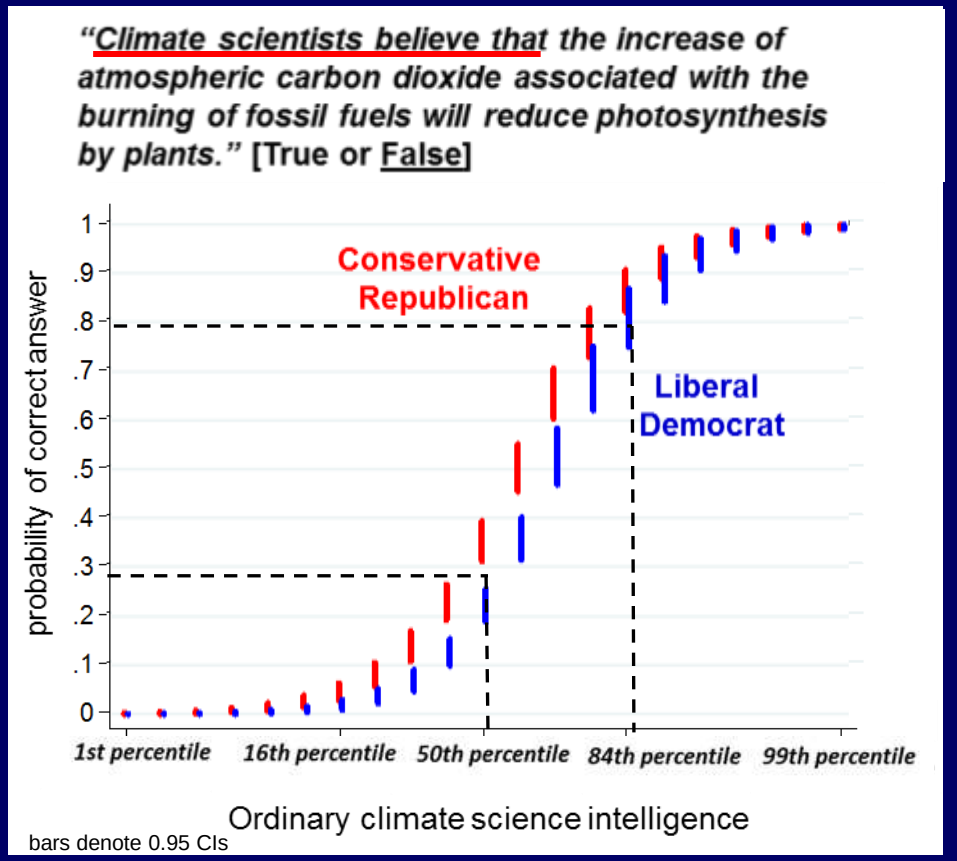

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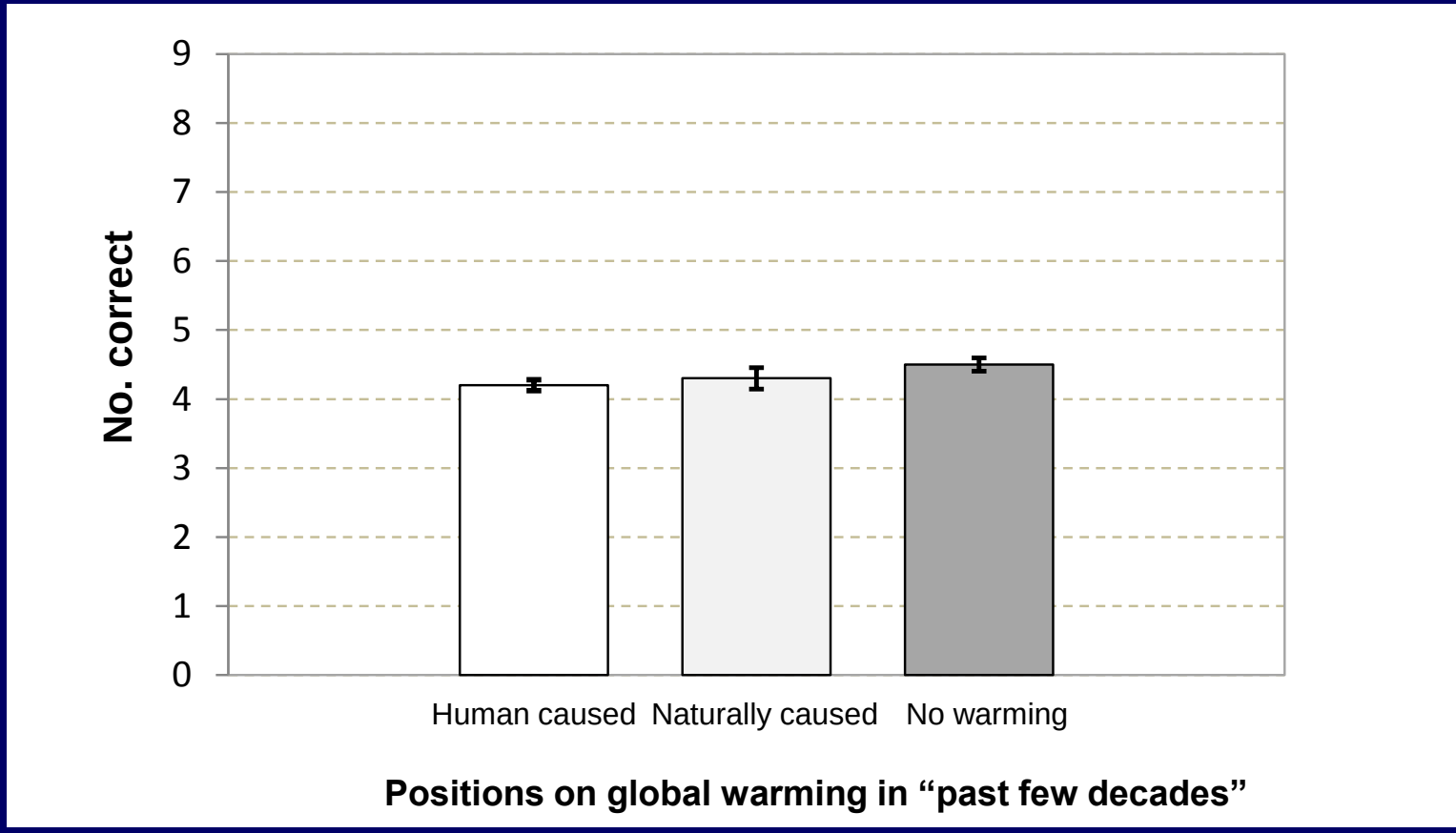
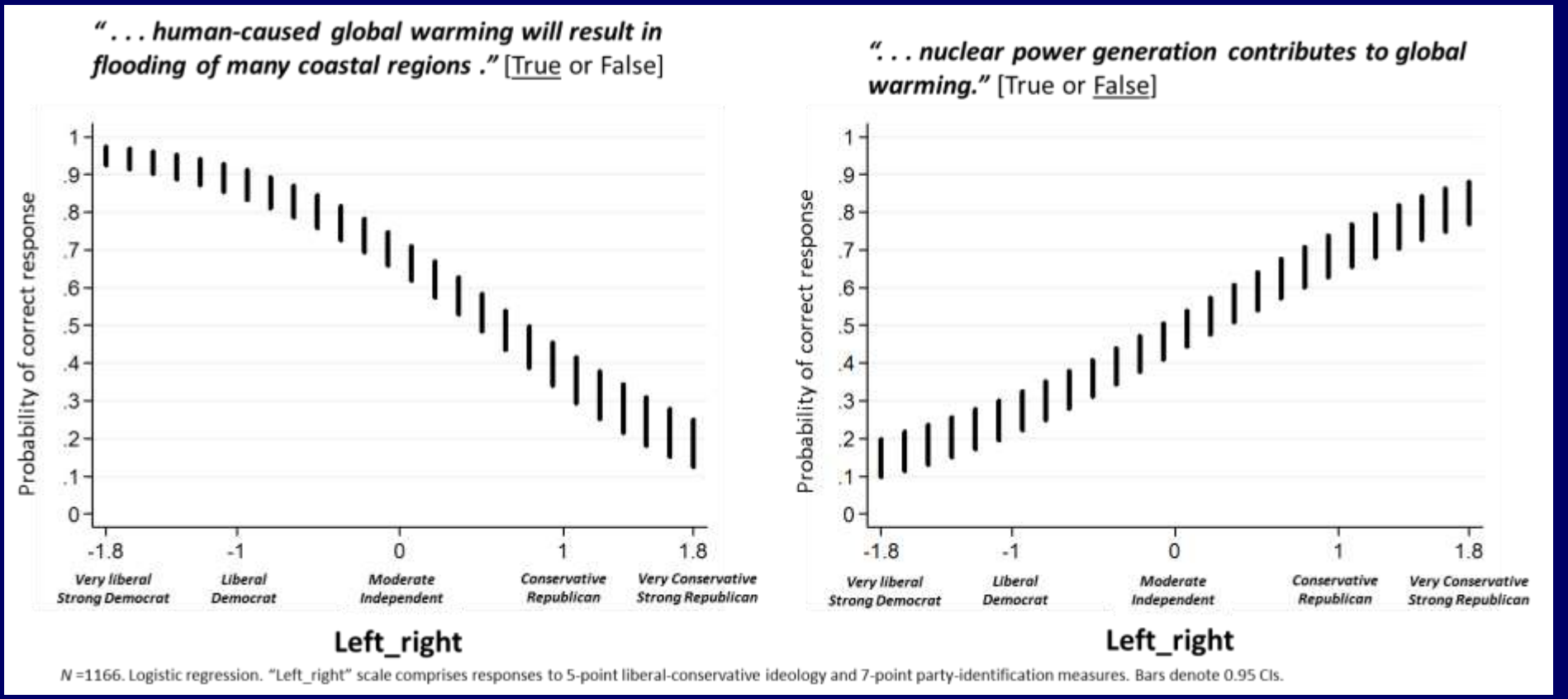

9
8
7
6
5
4
3
2
1
0
No. correct
Human caused
Naturally caused
No warming
Positions on global warming in “past few decades”

What you *believe* about climate change doesn't reflect what you know . . . It *expresses who you are*



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The “prefix effect” . . .

no prefix: “ . . . ”

“Human-caused global warming will result in flooding of many coastal regions.” [True or False]

“Nuclear power generation contributes to global warming.” [True or False]

prefix: “According to climate scientists, . . .”

“*According to climate scientists*, human-caused global warming will result in flooding of many coastal regions.” [True or False]

“*According to climate scientists*, nuclear power generation contributes to global warming.” [True or False]

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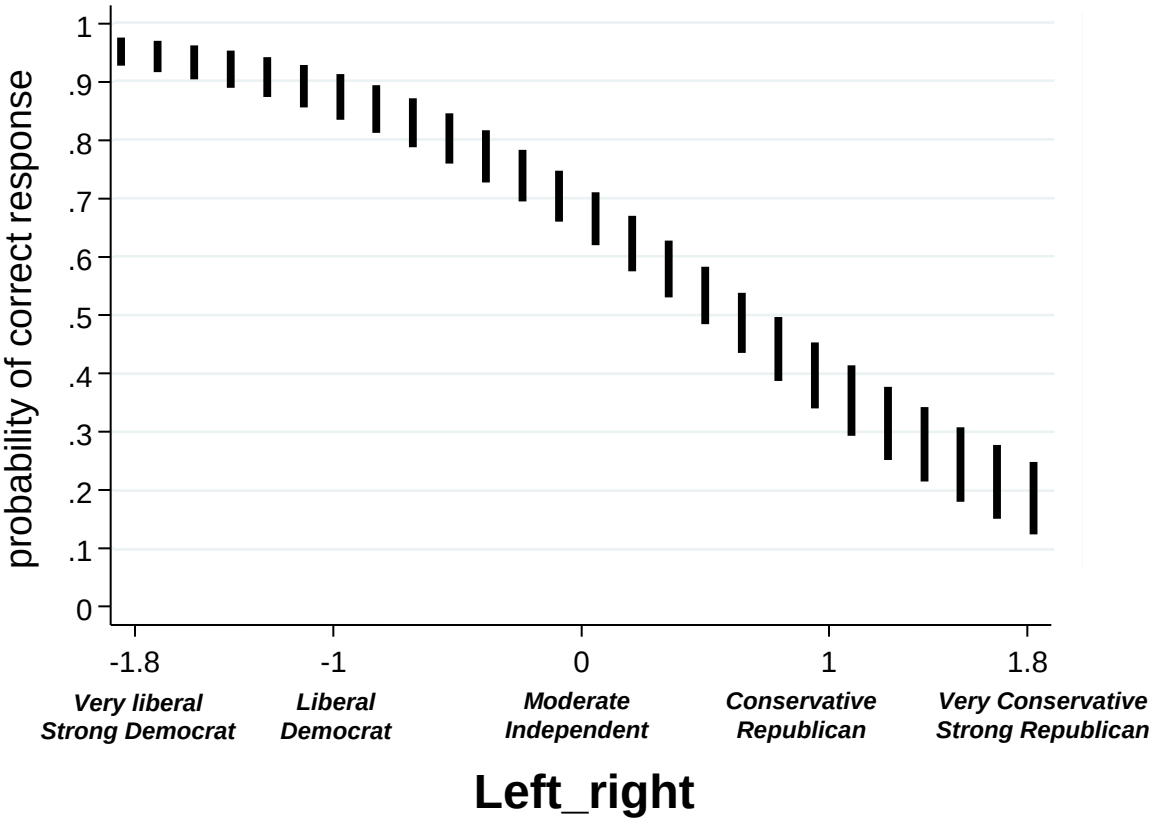
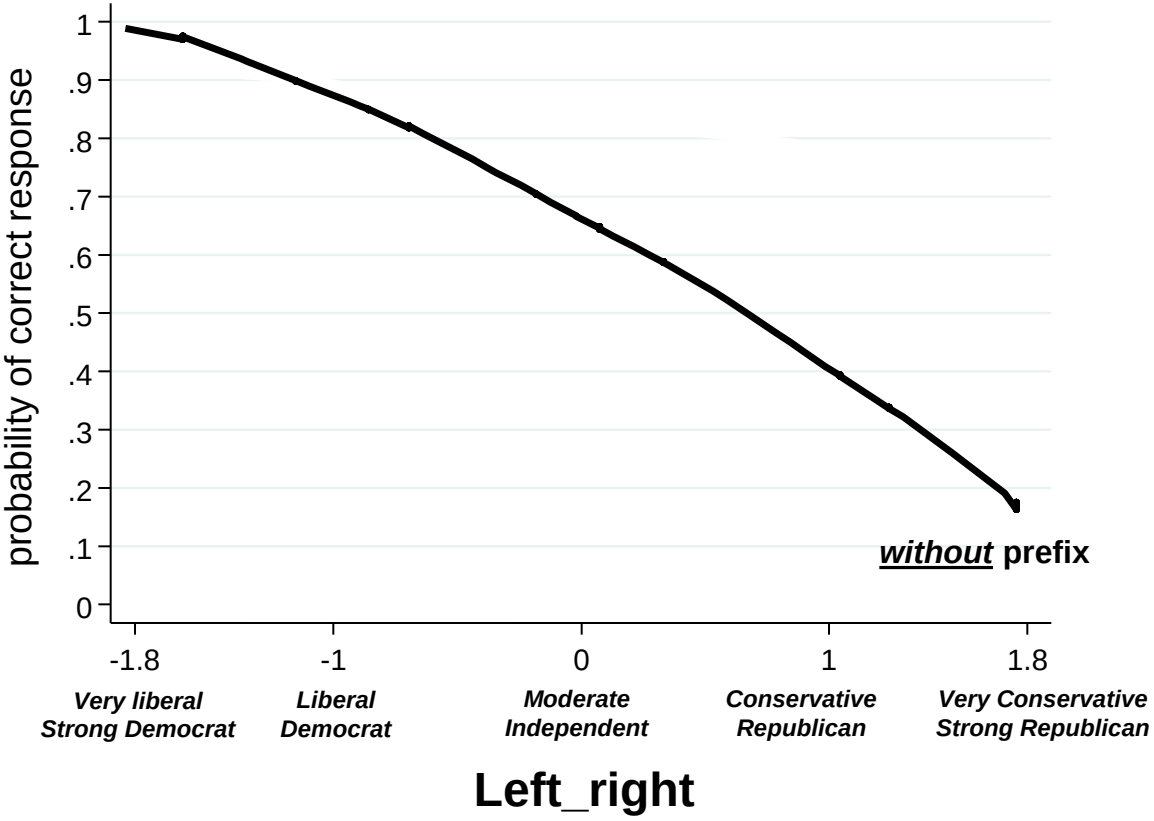


Data source: CCP/Annenberg Public Policy Cntr, Jan. 5-19, 2016. *N* = 1166. Logistic regression. "Left_right" scale comprises responses to 5-point liberal-conservative ideology and 7-point party-identification measures. Bars denote 0.95 CIs.

" . . . human-caused global warming will result in flooding of many coastal regions ." [True or False]



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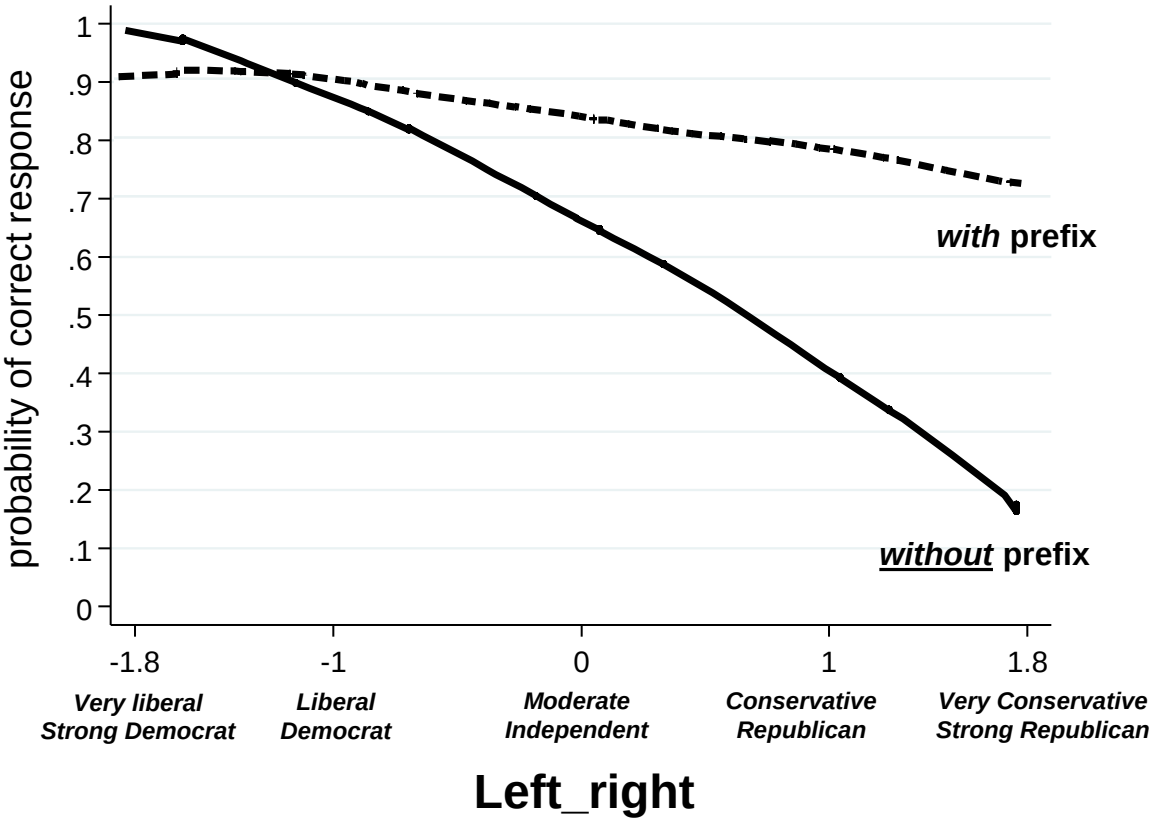

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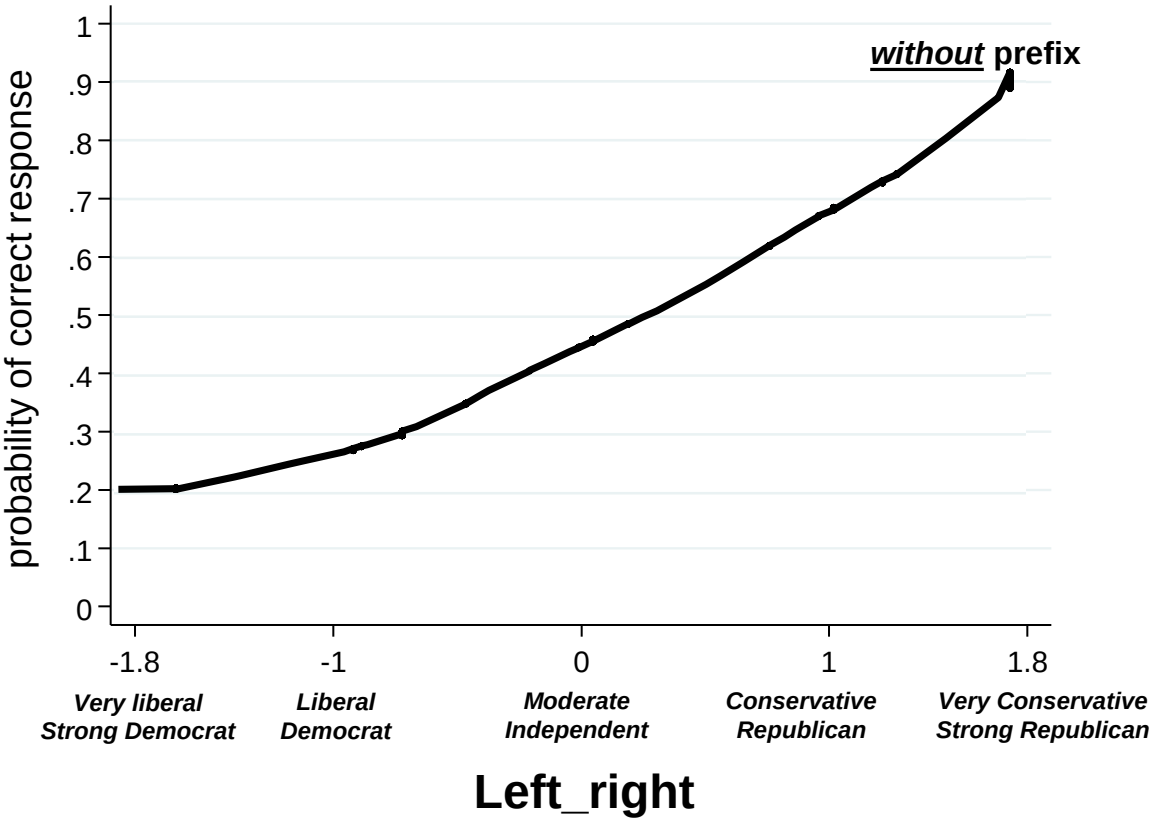
". . . nuclear power generation contributes to global warming." [True or <u>False</u>]



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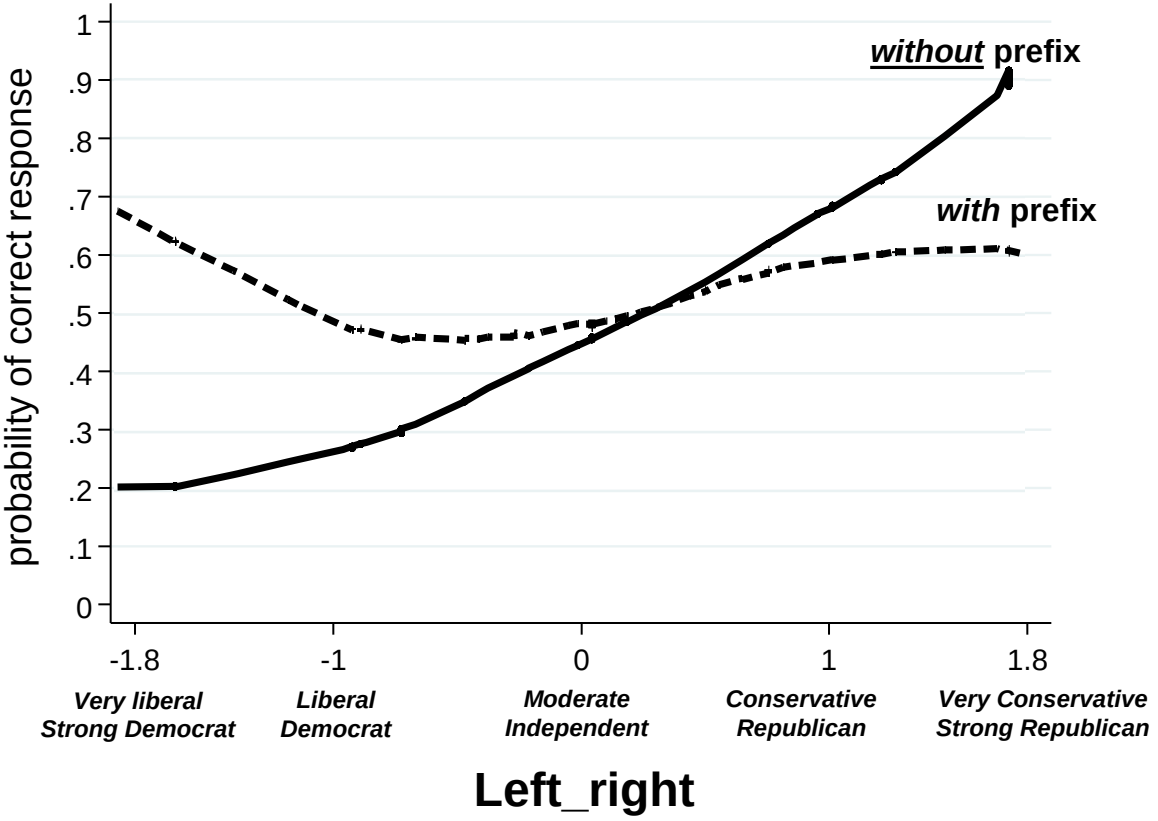

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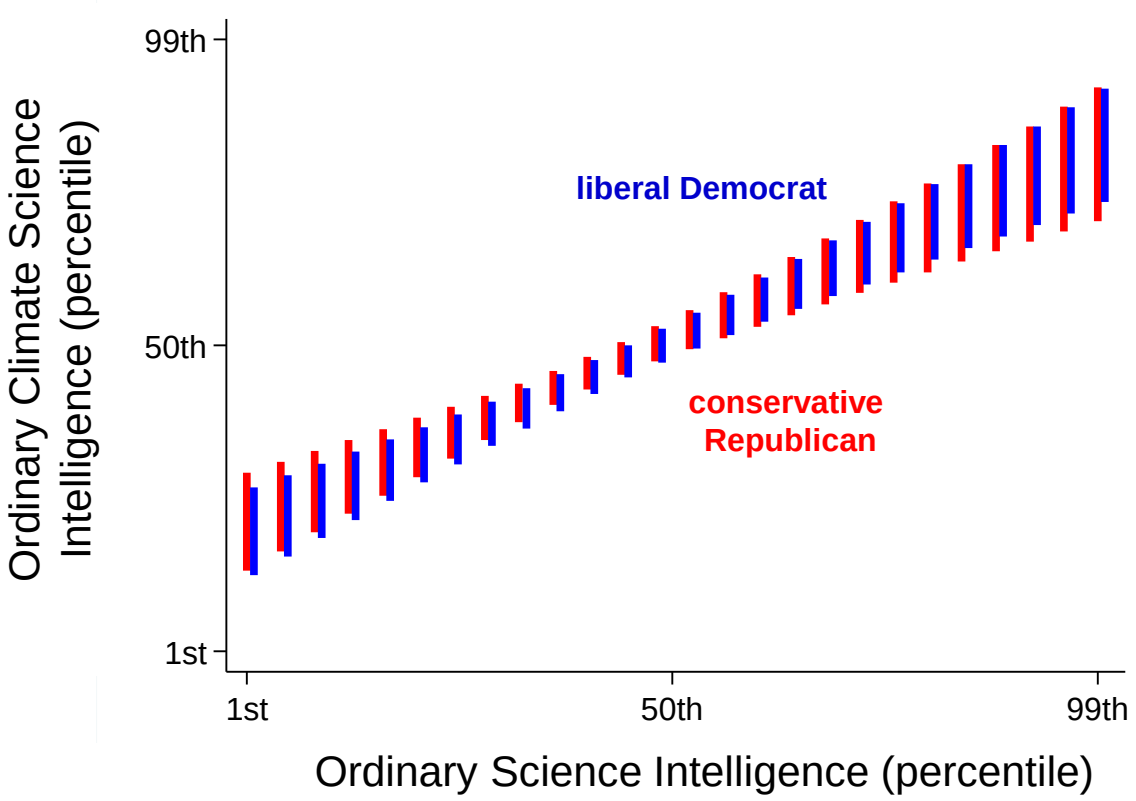
OCSI scores in relation to OSI scores



N = 597. OLS regression. "Liberal Democrat" and "Conservative Republican" reflect corresponding predictor values on a composite political orientation scale comprising responses to 5-point liberal-conservative ideology and 7-point party-identification measures. Colored bars denote 0.95 CIs.

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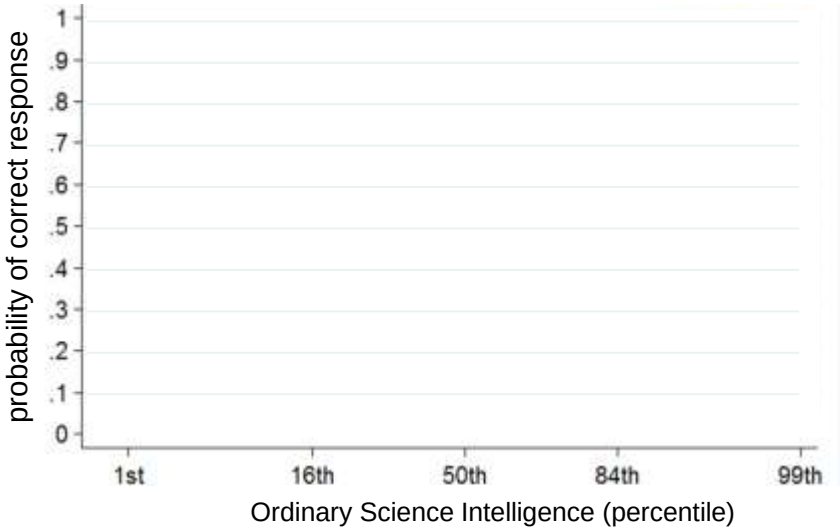

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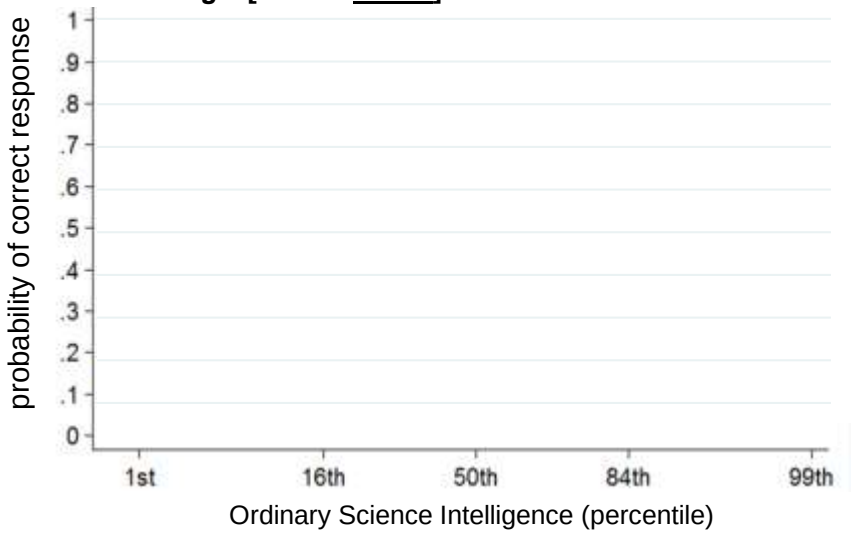

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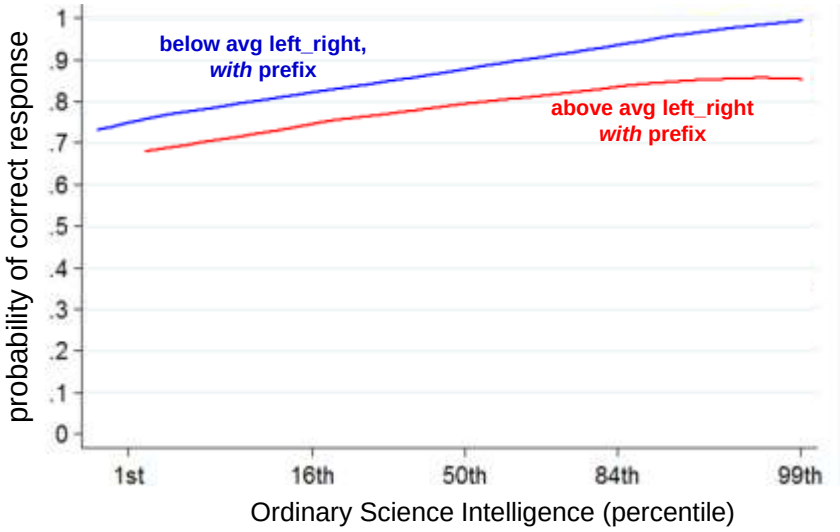

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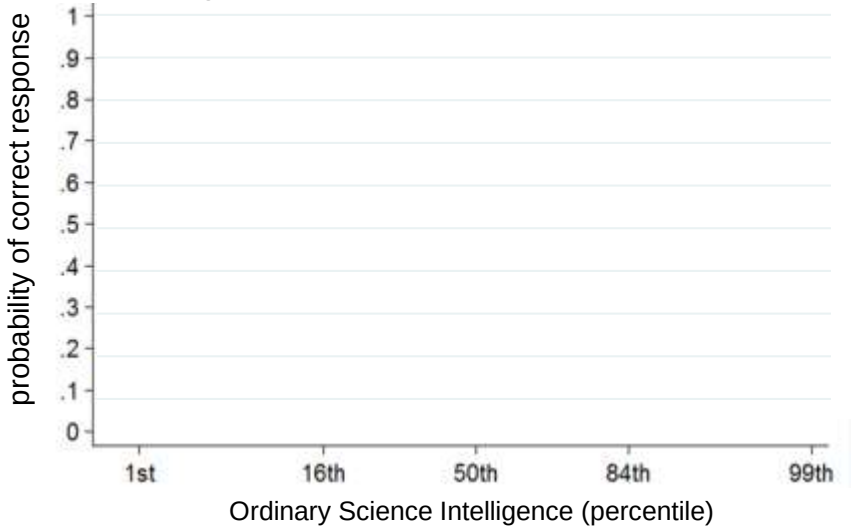

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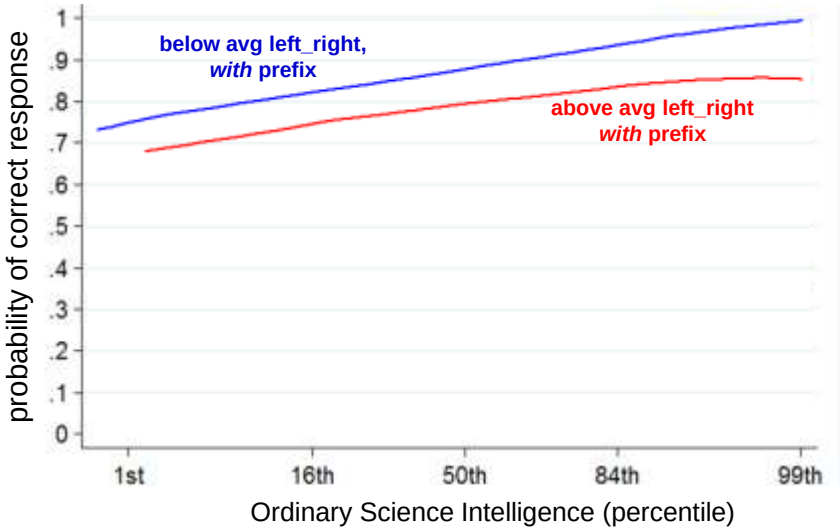

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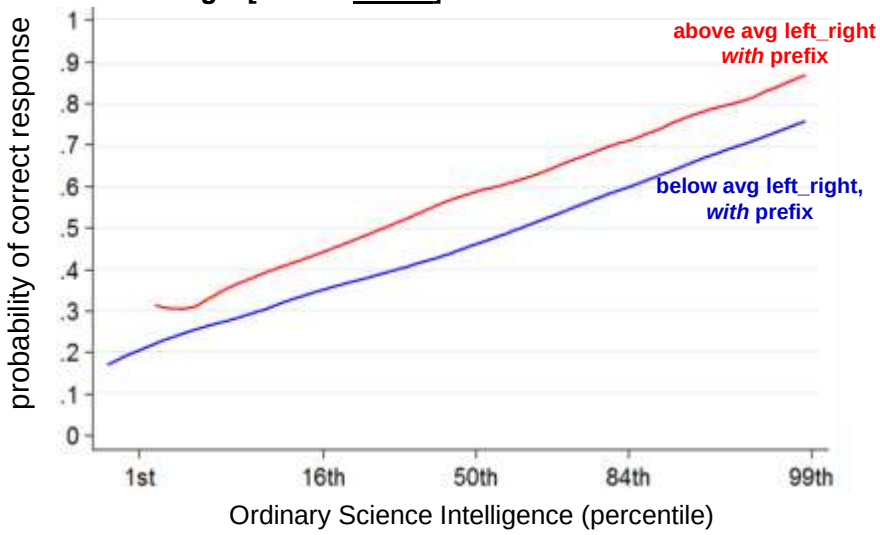

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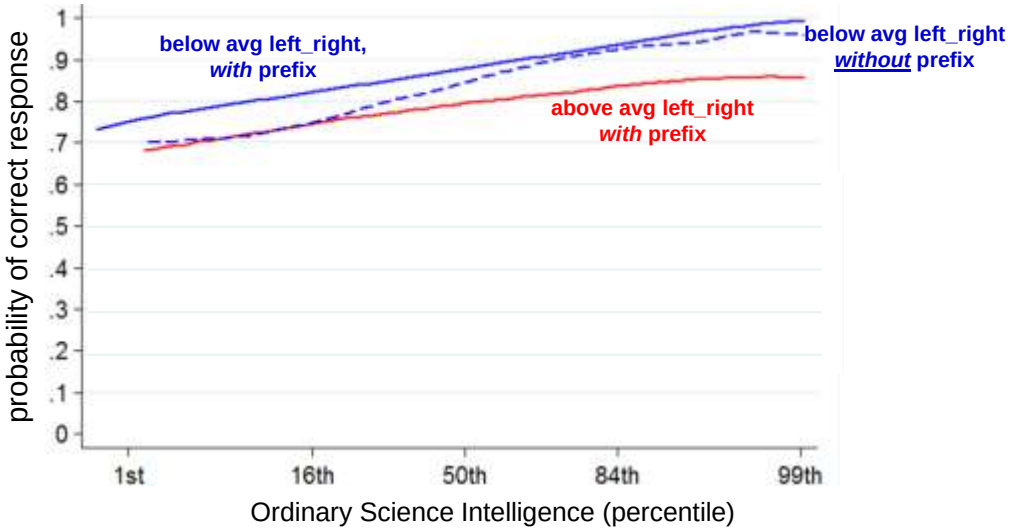

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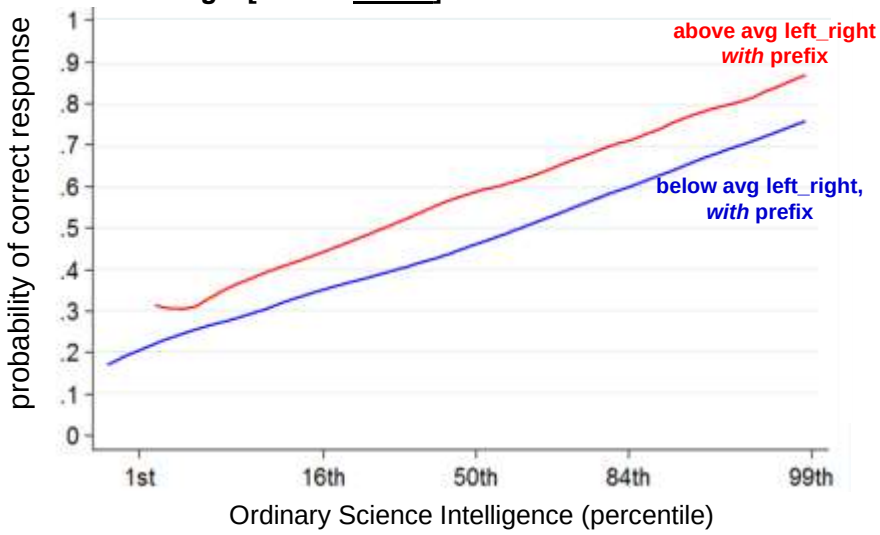

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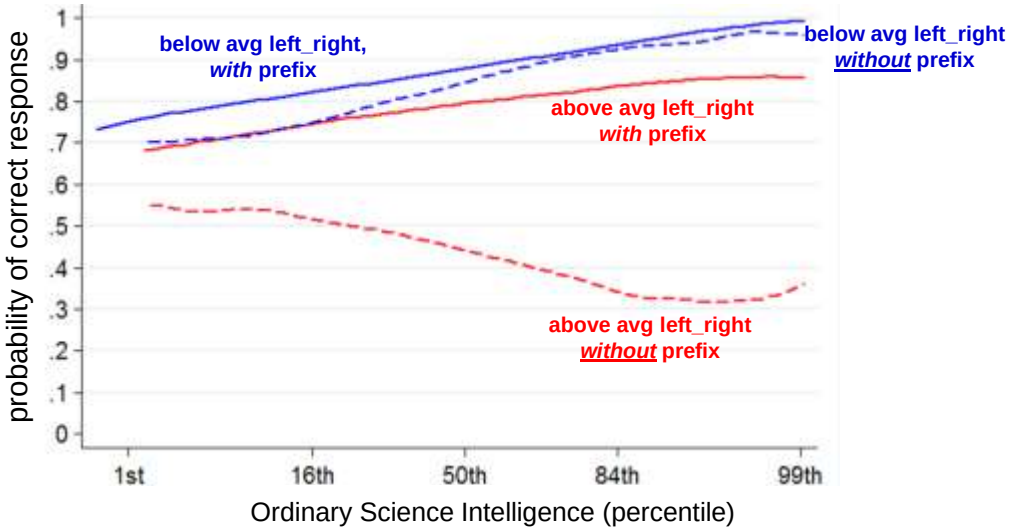

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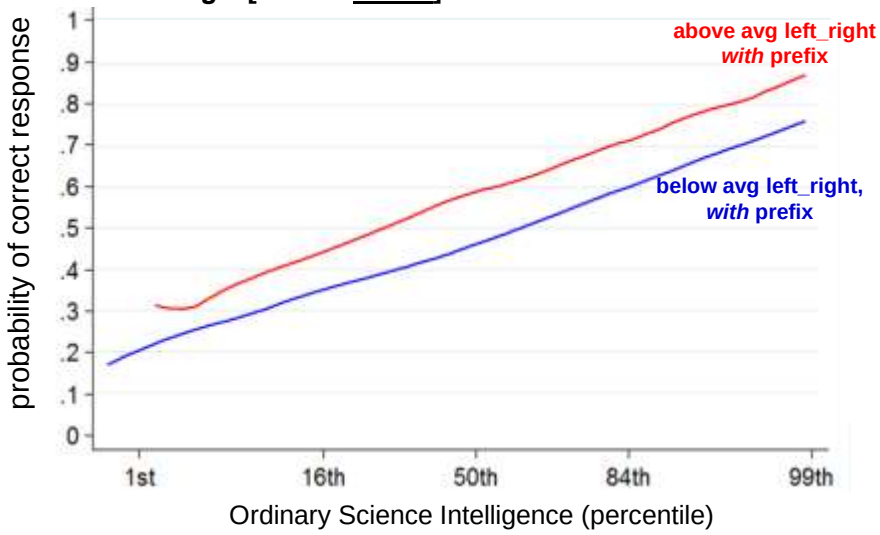

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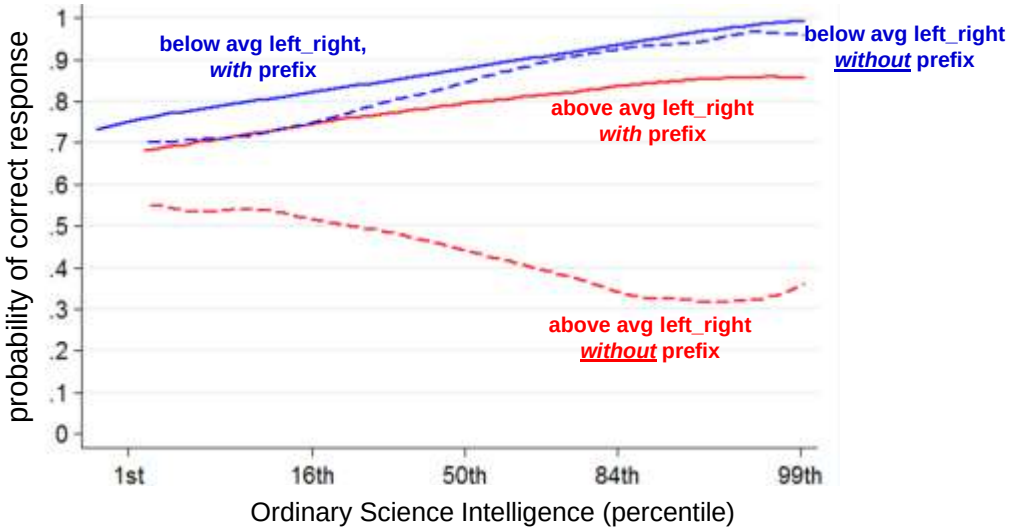

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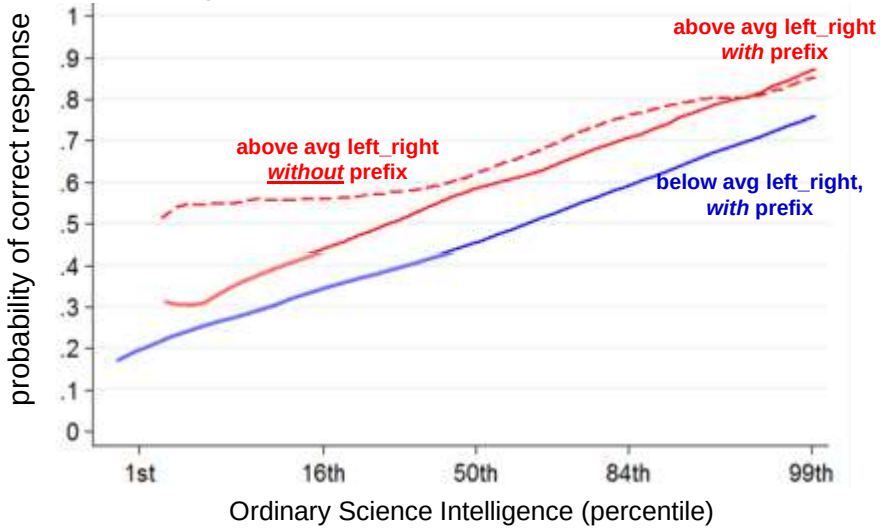

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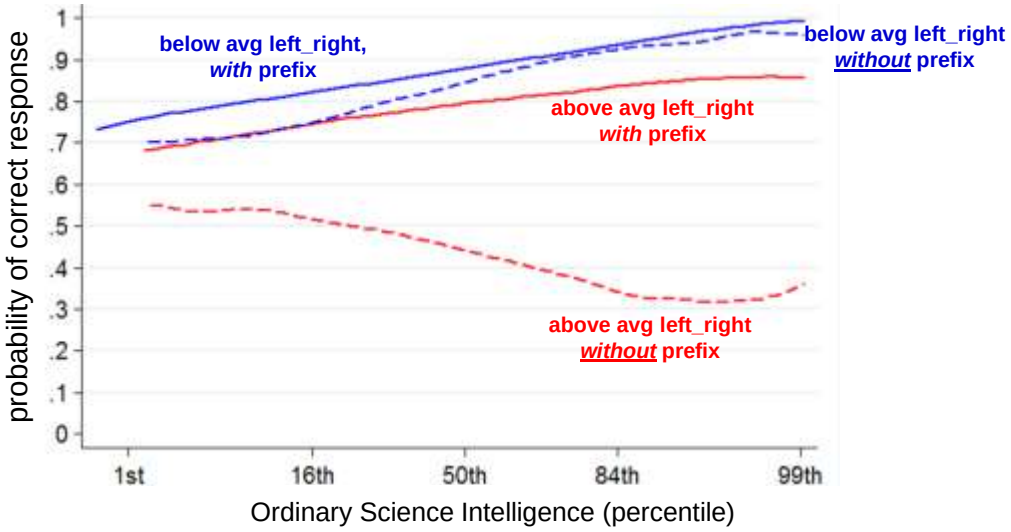

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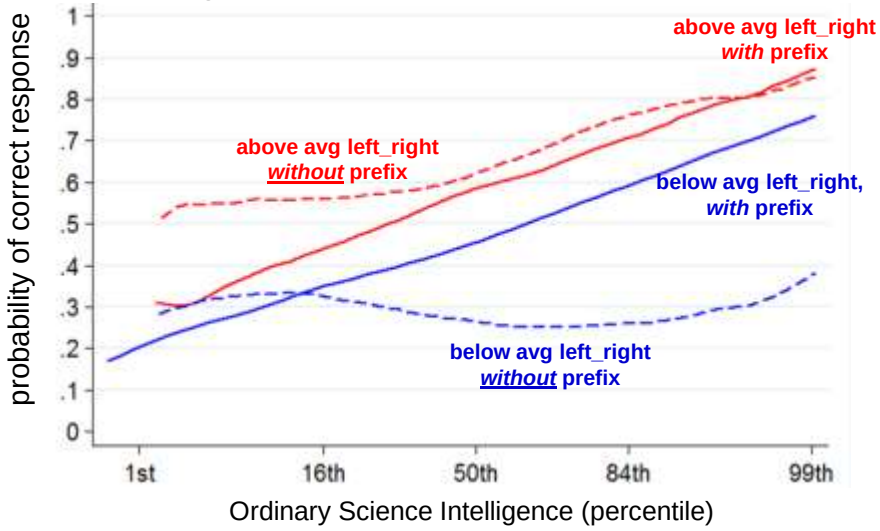

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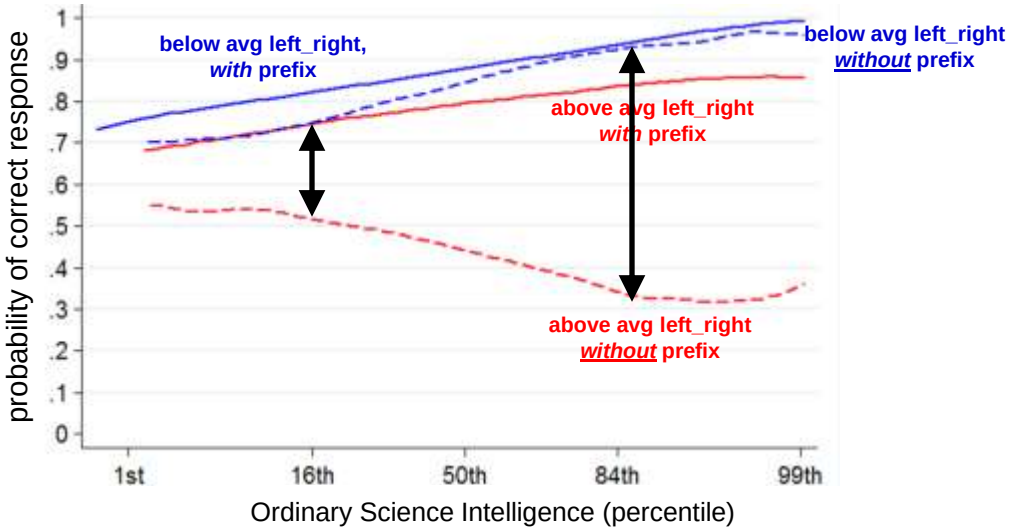

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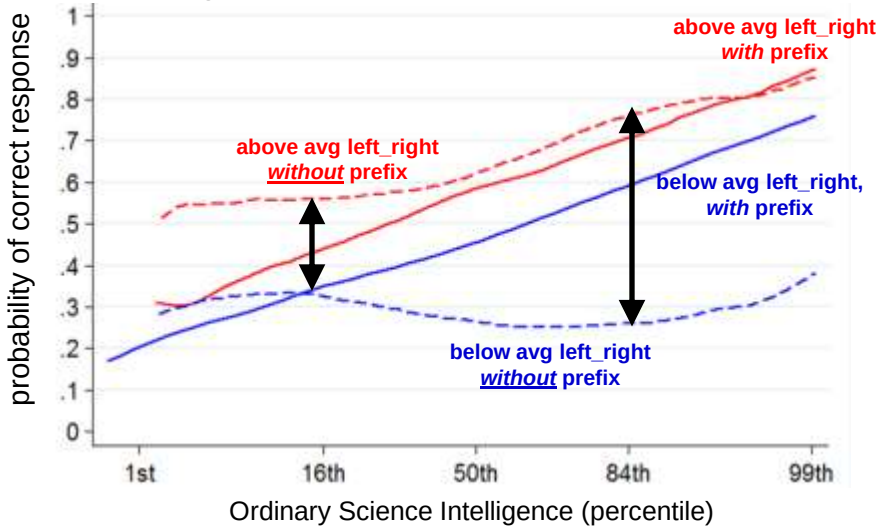

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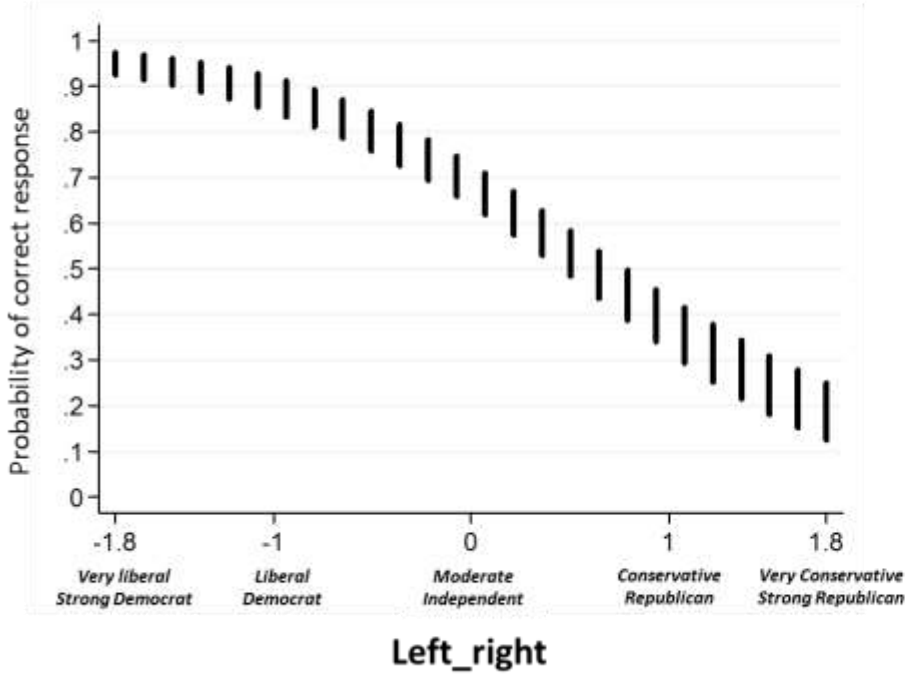

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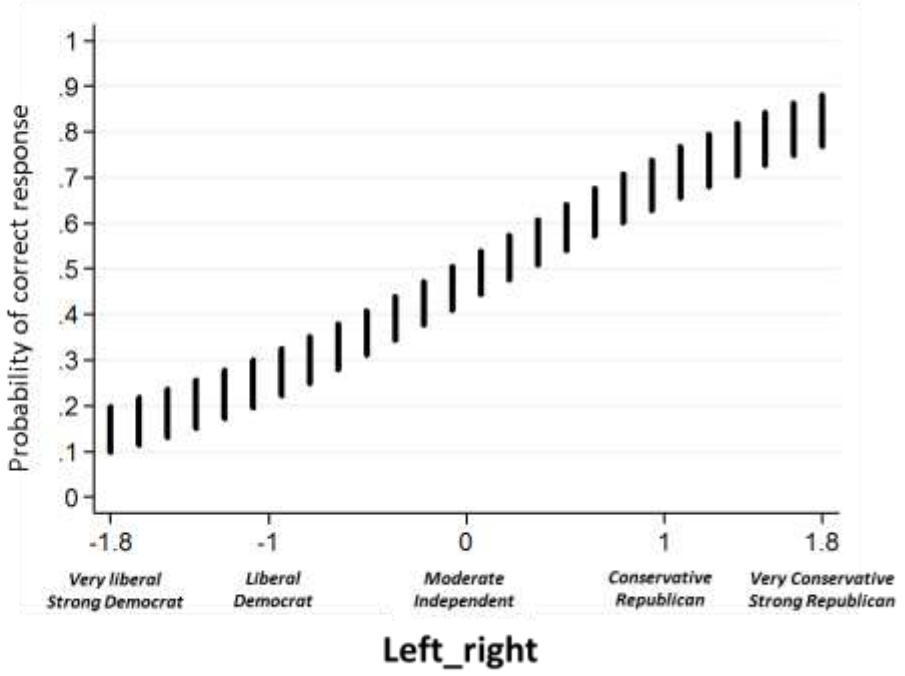

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What am I talking about? ...

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2. Weird, intersting data about *farmers*
3. Mechanism: Cognitive dualism
4. Two Methodological notes
5. One practical implication

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Do U.S. farmers believe in climate change?

Journal of Agricultural and Applied Economics, 45,4(November 2013):701–718

U.S. Agricultural Producer Perceptions of Climate Change

Roderick M. Rejesus, Maria Mutuc-Hensley, Paul D. Mitchell, Keith H. Coble, and Thomas O. Knight

This study examines U.S. crop producers' perceptions of climate change, its effects on crop agriculture, and likely ways farmers would adapt to weather extremes. Based on a survey of crop producers in four states, we find that a significant proportion of farmers do not perceive that climate change has been scientifically proven and do not believe that it will adversely affect average crop yields and yield variability. Farmers are likely to diversify crops, buy crop insurance, modify lease arrangements, and exit farming in response to extreme weather caused by climate change.

Key Words: agriculture, beliefs, climate change, farmer perceptions, human values

JEL Classifications: Q10, Q19, Q54

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Even with over half of the American public cognizant of climate change, public policy directed at mitigating climate change has not been commensurate. For instance, although the American Clean Energy and Security Act of 2009 (also called the Waxman-Markey Bill) that addresses emissions of CO_2 and other greenhouse gases passed in the U.S. House of Representatives, the U.S. Senate failed to pass

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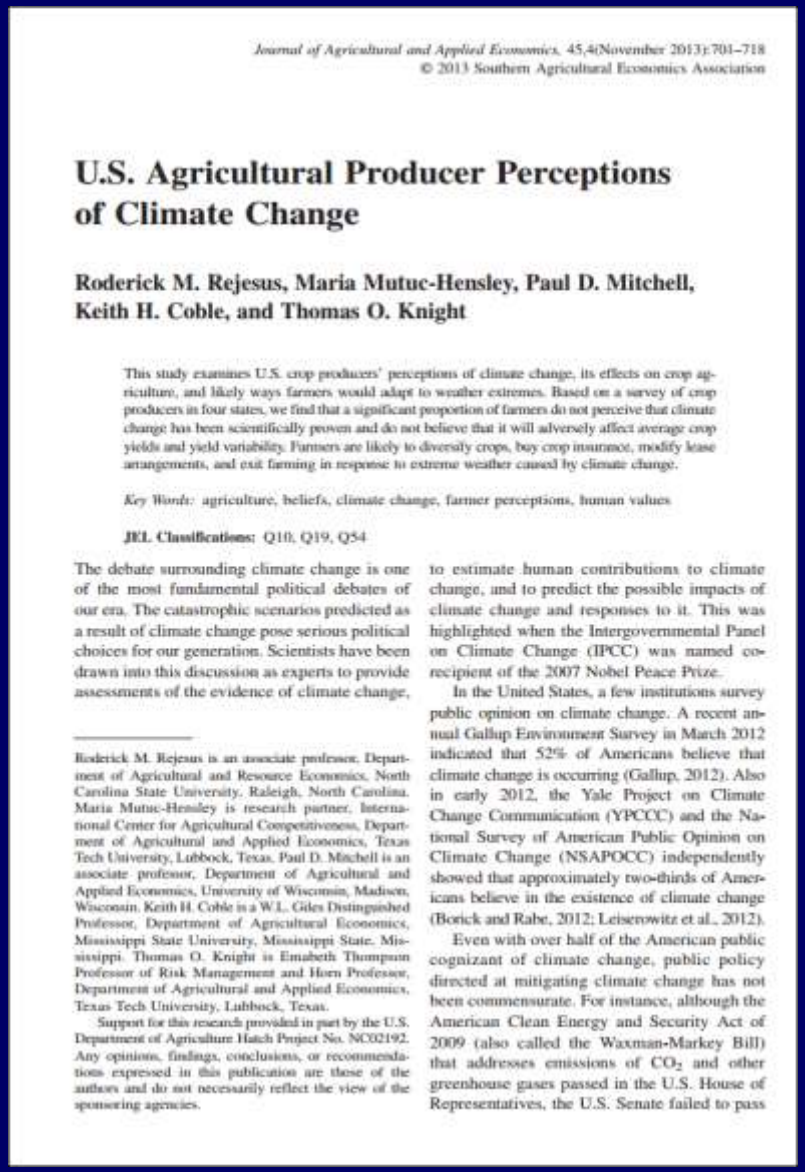
Support for this research provided in part by the U.S. Department of Agriculture Hatch Project No. NC02192. Any opinions, findings, conclusions, or recommendations expressed in this publication are those of the authors and do not necessarily reflect the view of the sponsoring agencies.

N = 1380: Miss., N.C., Tex., Wisc.

Do U.S. farmers believe in climate change?



Journal of Agricultural and Applied Economics, 45,4(November 2013):701–718

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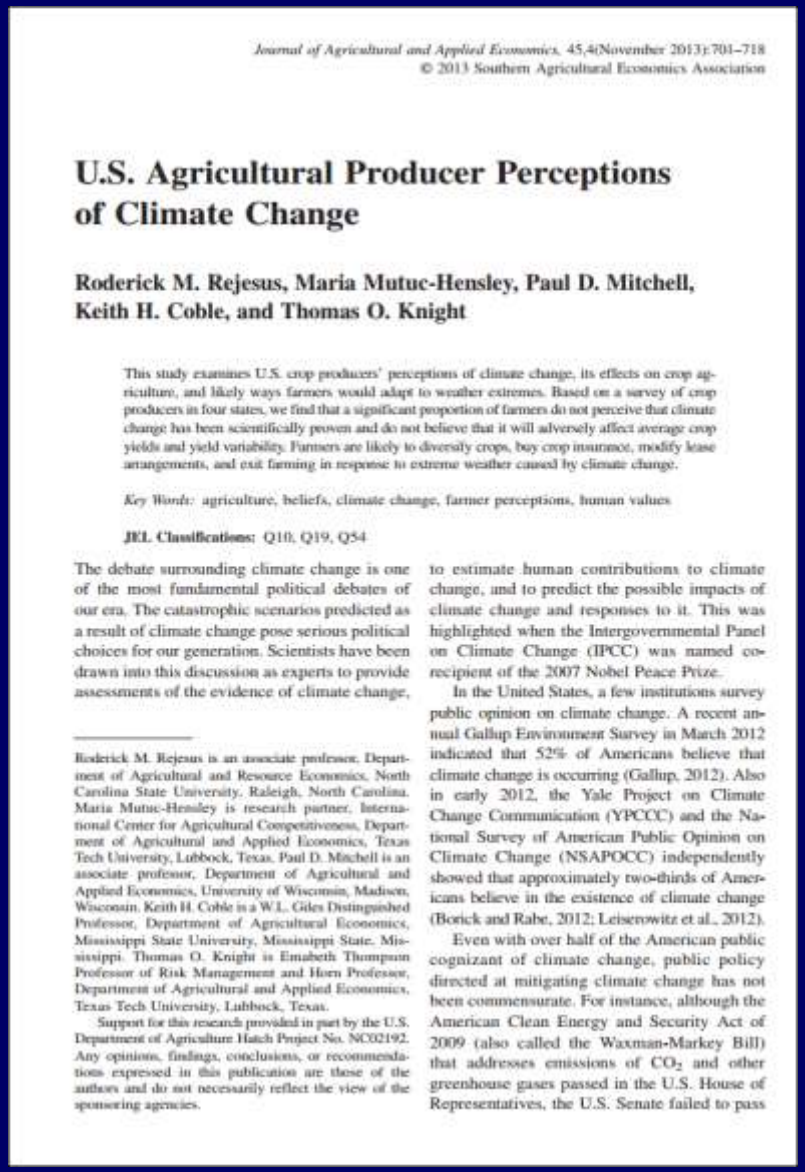

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- *change in crop mix*
- *more crop insurance*
- *farmers driven out of business*

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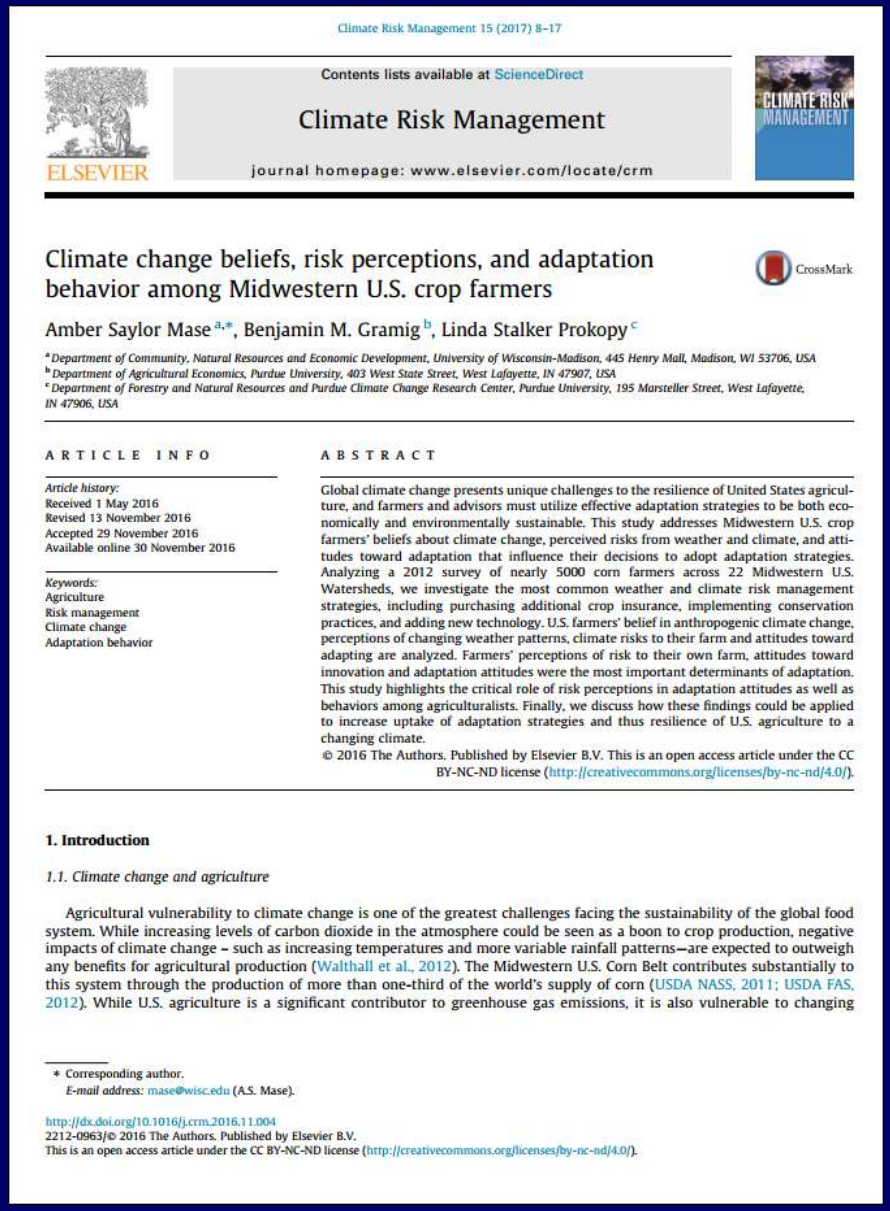

Climate Risk Management 15 (2017) 8–17

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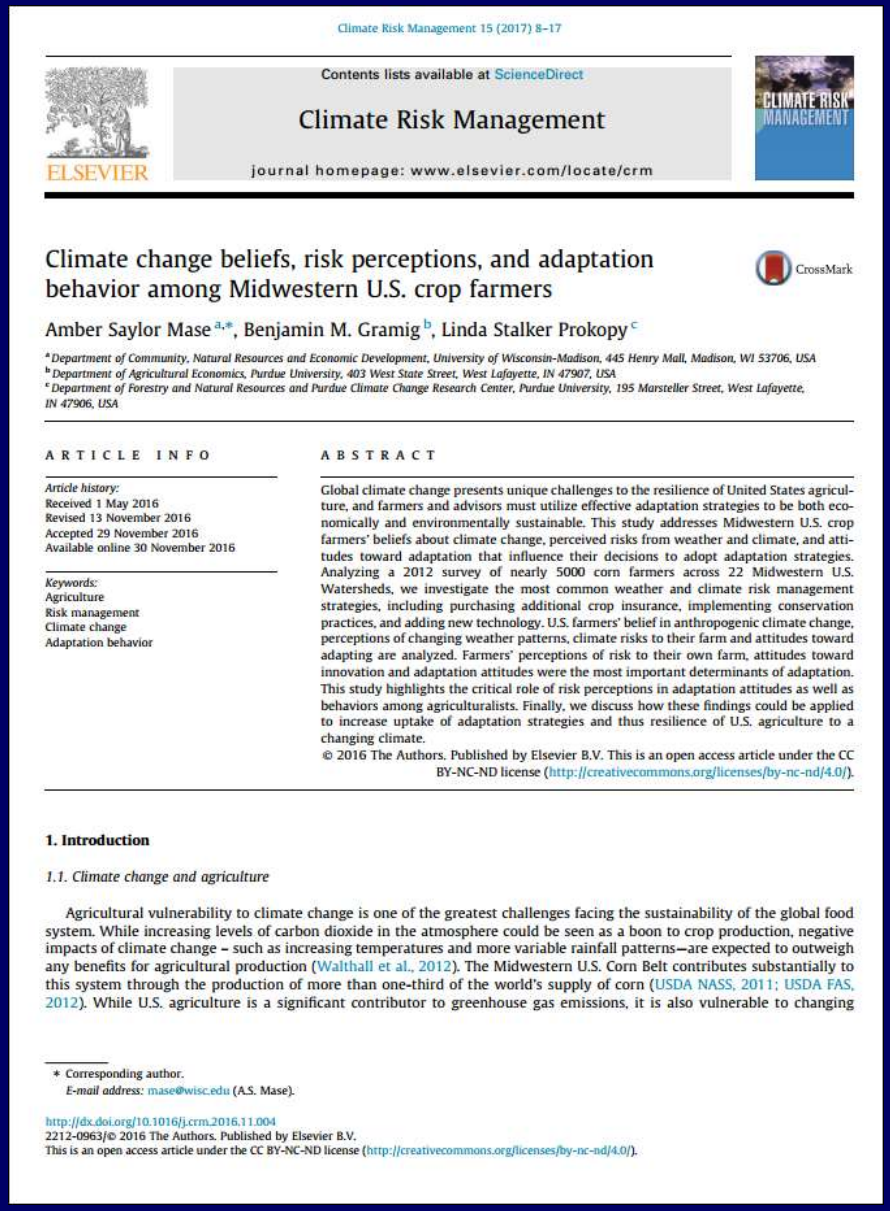

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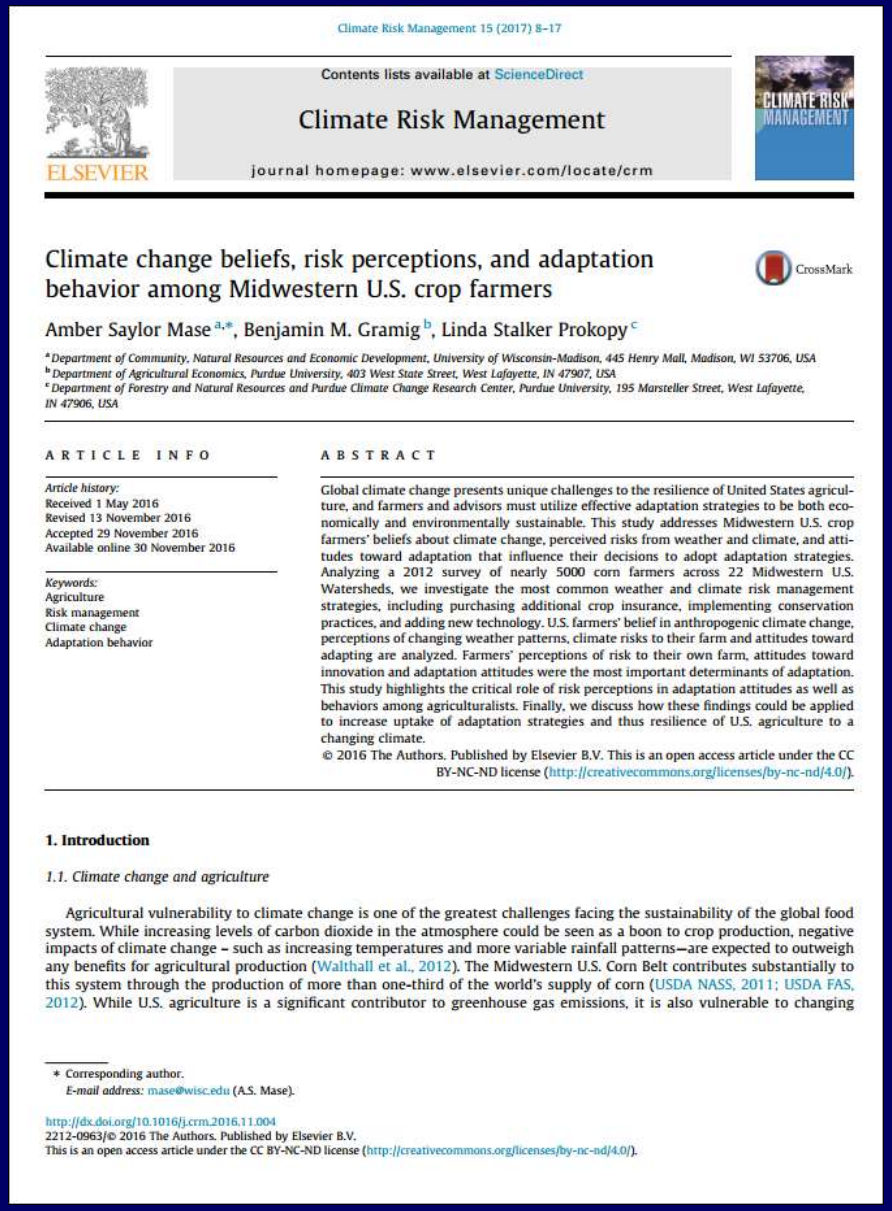

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Do U.S. farmers believe in climate change?

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CLIMATE CHANGE

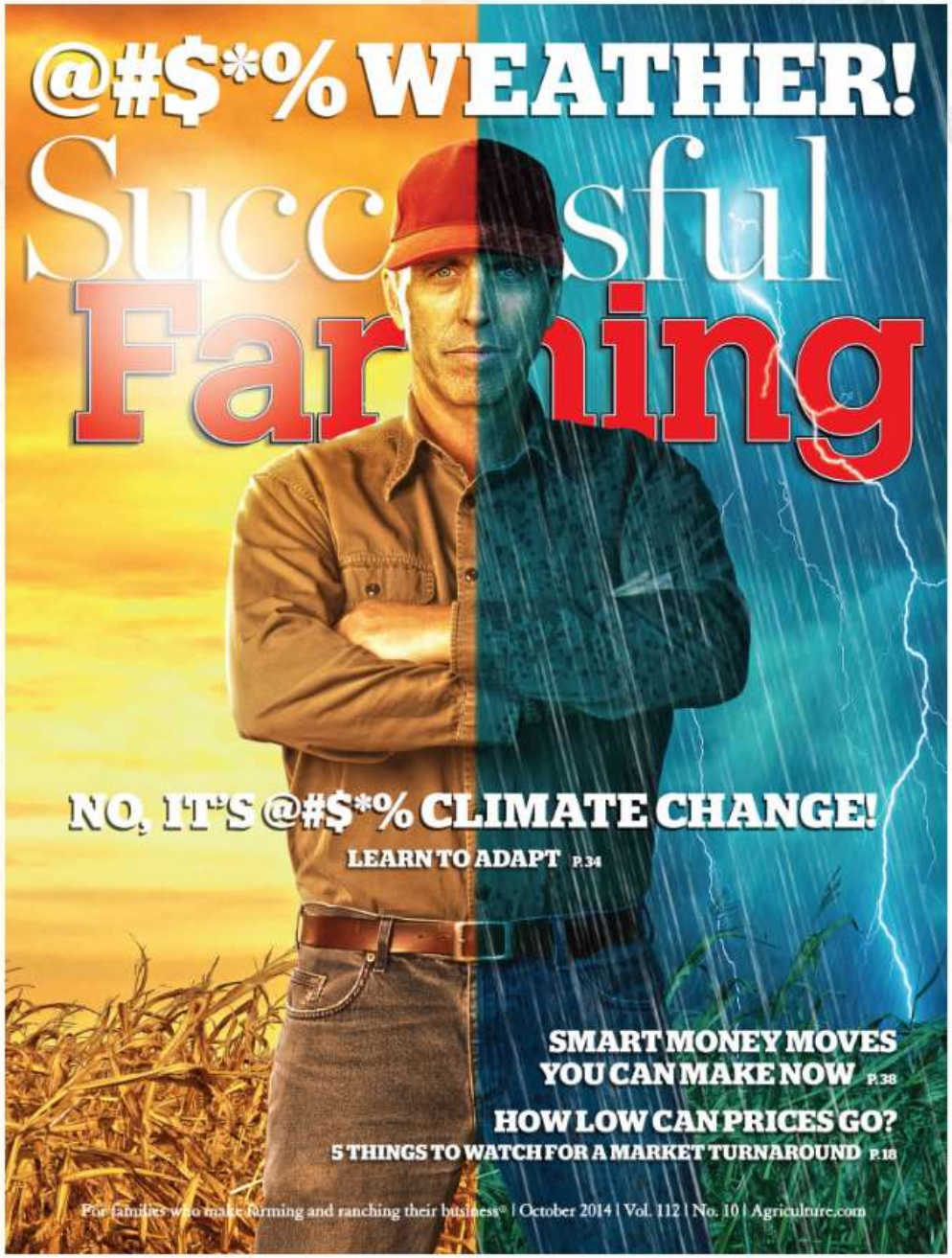
The Paradox of American Farmers and Climate Change

The New York Times

ENERGY & ENVIRONMENT

In America's Heartland, Discussing Climate Change Without Saying 'Climate Change'

By HIROKO TABUCHI JAN. 28, 2017



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No-till, cover crops, additional rotational rotational crops, a
cattle can all help curb climate change.

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Climate Change and Agriculture – part 1

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09.24.2012 | Audio | Darrell Anderson

Climate Change and Agriculture – part 2

Climate Change and Agriculture – part 2

09.25.2012 | Audio | Darrell Anderson

Climate Change and Agriculture – part 3

Climate Change and Agriculture – part 3

09.26.2012 | Audio | Darrell Anderson

Climate Change and Agriculture – part 4

Climate Change and Agriculture – part 4

09.27.2012 | Audio | Darrell Anderson

Rep. Frank Lucas (R. Okla.)

Does your senator or House rep. suffer from Climate Change Denial Disorder?

AlabamaRep. Robert Aderholt (R-AL-04)Rep. Mo Brooks (R-AL-05)	**Kentucky**Rep. Thomas Massie (R-KY-04)Rep. Ed Whitfield (R-KY-01)	**Oklahoma**Rep. Jim Bridenstine (R-OK-01)Rep. Frank Lucas (R-OK-03)
Rep. Gary Palmer (R-AL-06)	Sen. Mitch McConnell (R-KY)	Rep. Markwayne Mullin (R-OK-02)
Sen. Jeff Sessions (R-AL)	Sen. Rand Paul (R-KY)	Sen. Jim Inhofe (R-OK)
Sen. Richard Shelby (R-AL)	**Louisiana**	**Pennsylvania**

Published on Friday, May 01, 2015 by Common Dreams

Anti-Science GOP 'Eviscerates' NASA Spending on Climate Change Research

NASA administrator says proposal 'guts' crucial Earth science program and 'threatens to set back generations worth of progress in better understanding our changing climate'

by Deirdre Fulton, staff writer

AGRICULTURE & LIFE SCIENCES
TEXAS A&M UNIVERSITY

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$20 million grant to study effects of climate change

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climate variability, dynamic land-use and fluctuating markets. The team's goal is to safeguard regional beef production while mitigating the environmental footprint of agriculture. The project also includes education and Extension components to train the next generation of producers and researchers in addressing the impact of climate on beef cattle. Using a community- and citizen-science approach, the project will train young

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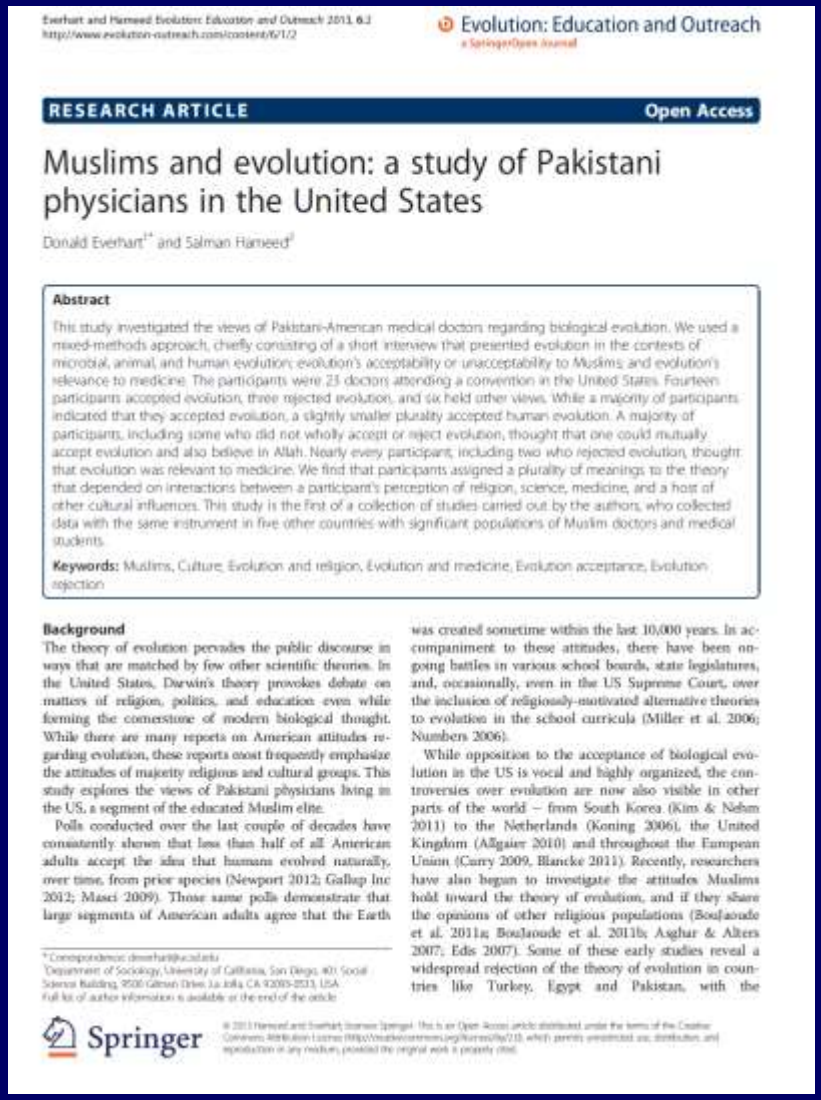
Cognitive dualism



Everhart and Hameed Evolution: Education and Outreach 2013, 6:2
http://www.evolution-outreach.com/content/6/1/2

Evolution: Education and Outreach
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RESEARCH ARTICLE Open Access

Muslims and evolution: a study of Pakistani physicians in the United States

Donald Everhart[1*] and Salman Hameed[2]

Abstract

This study investigated the views of Pakistani-American medical doctors regarding biological evolution. We used a mixed-methods approach, chiefly consisting of a short interview that presented evolution in the contexts of microbial, animal, and human evolution; evolution's acceptability or unacceptability to Muslims; and evolution's relevance to medicine. The participants were 23 doctors attending a convention in the United States. Fourteen participants accepted evolution, three rejected evolution, and six held other views. While a majority of participants indicated that they accepted evolution, a slightly smaller plurality accepted human evolution. A majority of participants, including some who did not wholly accept or reject evolution, thought that one could mutually accept evolution and also believe in Allah. Nearly every participant, including two who rejected evolution, thought that evolution was relevant to medicine. We find that participants assigned a plurality of meanings to the theory that depended on interactions between a participant's perception of religion, science, medicine, and a host of other cultural influences. This study is the first of a collection of studies carried out by the authors, who collected data with the same instrument in five other countries with significant populations of Muslim doctors and medical students.

Keywords: Muslims, Culture, Evolution and religion, Evolution and medicine, Evolution acceptance, Evolution rejection

Background

The theory of evolution pervades the public discourse in ways that are matched by few other scientific theories. In the United States, Darwin's theory provokes debate on matters of religion, politics, and education even while forming the cornerstone of modern biological thought. While there are many reports on American attitudes regarding evolution, these reports most frequently emphasize the attitudes of majority religious and cultural groups. This study explores the views of Pakistani physicians living in the US, a segment of the educated Muslim elite.

Polls conducted over the last couple of decades have consistently shown that less than half of all American adults accept the idea that humans evolved naturally, over time, from prior species (Newport 2012; Gallup Inc 2012; Masci 2009). Those same polls demonstrate that large segments of American adults agree that the Earth was created sometime within the last 10,000 years. In accompaniment to these attitudes, there have been ongoing battles in various school boards, state legislatures, and, occasionally, even in the US Supreme Court, over the inclusion of religiously-motivated alternative theories to evolution in the school curricula (Miller et al. 2006; Numbers 2006).

While opposition to the acceptance of biological evolution in the US is vocal and highly organized, the controversies over evolution are now also visible in other parts of the world – from South Korea (Kim & Nehm 2011) to the Netherlands (Koning 2006), the United Kingdom (Allgaier 2010) and throughout the European Union (Curry 2009, Blancke 2011). Recently, researchers have also begun to investigate the attitudes Muslims hold toward the theory of evolution, and if they share the opinions of other religious populations (Boujaoude et al. 2011a; Boujaoude et al. 2011b; Asghar & Alters 2007; Edis 2007). Some of these early studies reveal a widespread rejection of the theory of evolution in countries like Turkey, Egypt and Pakistan, with the

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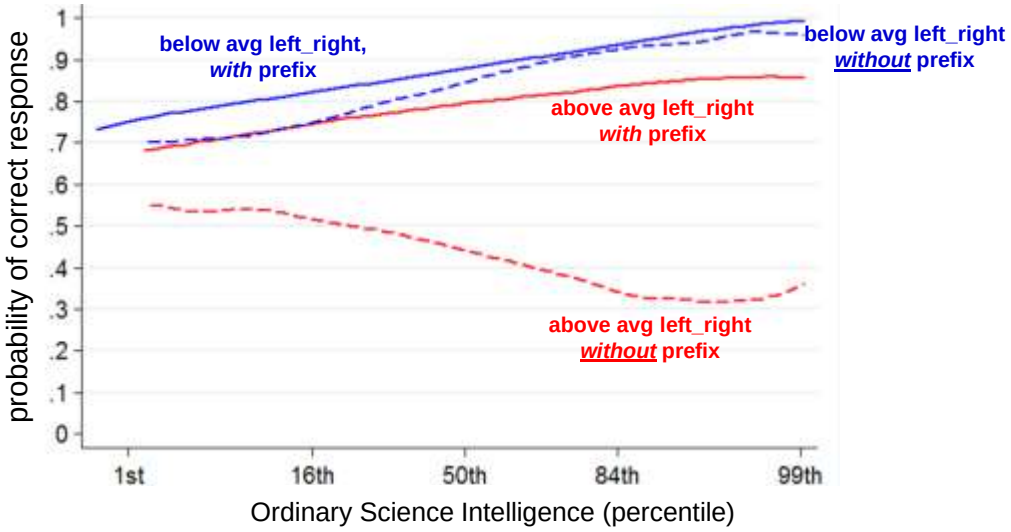
Full list of author information is available at the end of the article

". . . human-caused global warming will result in flooding of many coastal regions ." [True or False]



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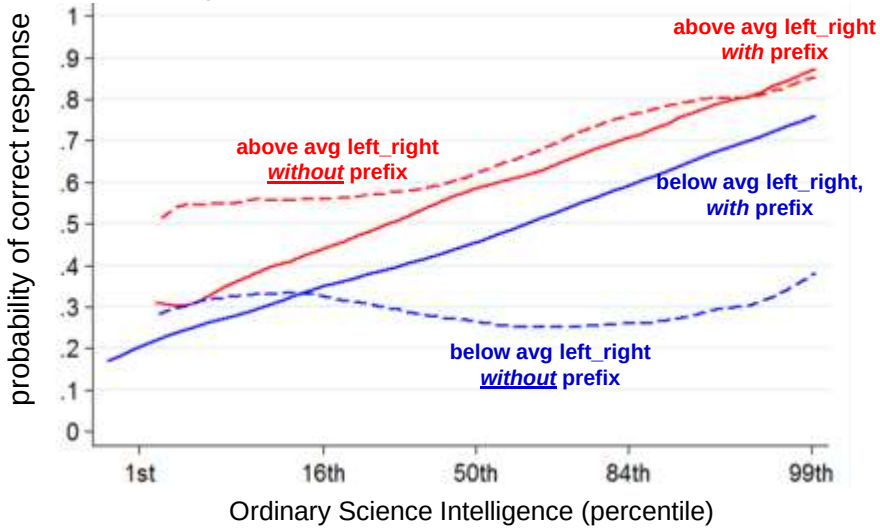

Locally weighted regression. "Above avg" & "below avg" Left_Right" based on subjects' scores in relation to mean on left_right scale.

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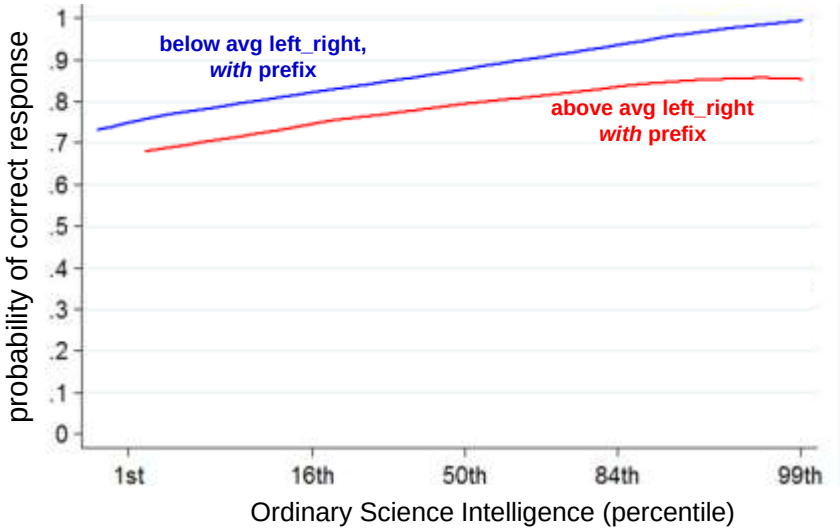

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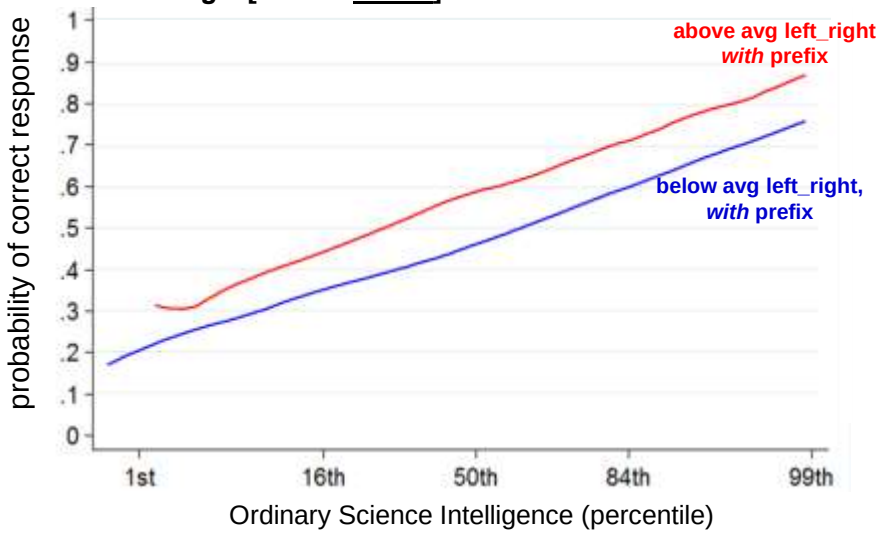

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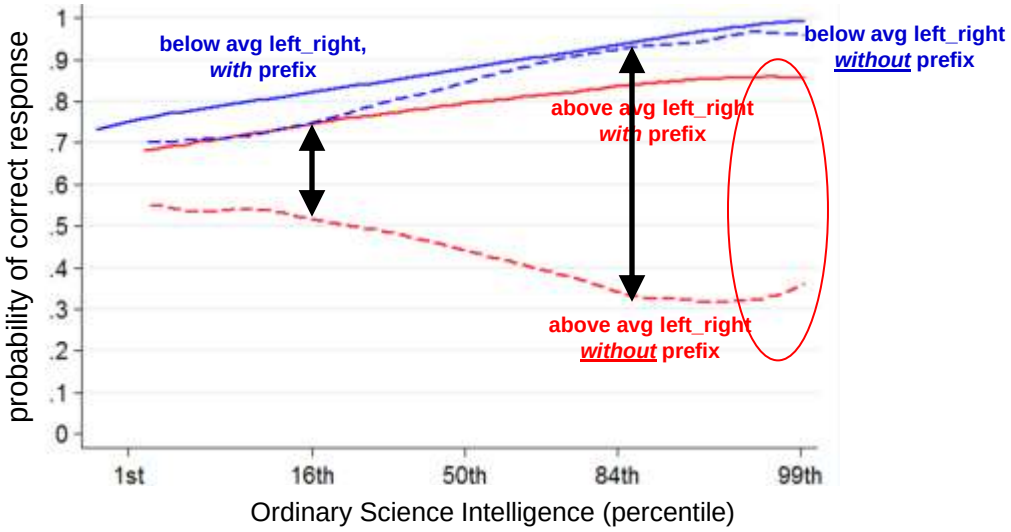

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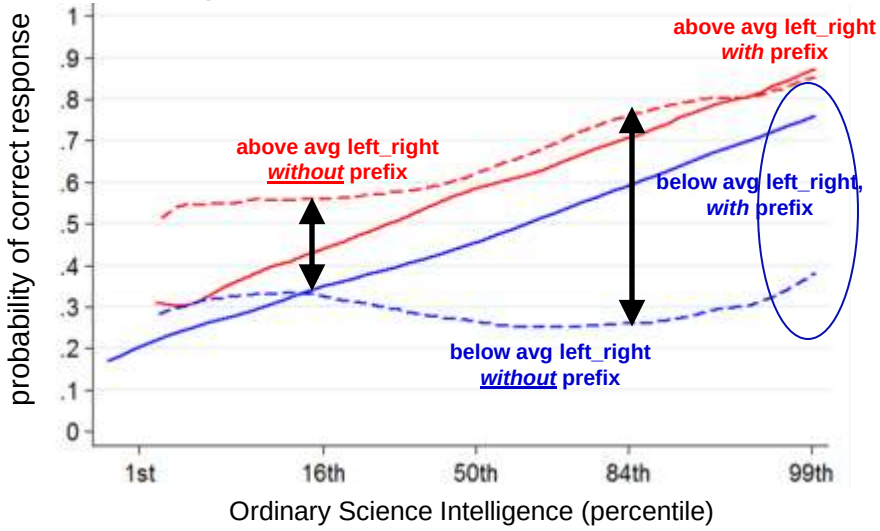

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Cognitive dualism

Climate Risk Management 15 (2017) 8–17

Contents lists available at ScienceDirect

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journal homepage: www.elsevier.com/locate/crm

Climate change beliefs, risk perceptions, and adaptation behavior among Midwestern U.S. crop farmers

Amber Saylor Mase [a,*], Benjamin M. Gramig [b], Linda Stalker Prokopy [c]

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[b] Department of Agricultural Economics, Purdue University, 403 West State Street, West Lafayette, IN 47907, USA
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1. Introduction

1.1. Climate change and agriculture

Agricultural vulnerability to climate change is one of the greatest challenges facing the sustainability of the global food system. While increasing levels of carbon dioxide in the atmosphere could be seen as a boon to crop production, negative impacts of climate change – such as increasing temperatures and more variable rainfall patterns—are expected to outweigh any benefits for agricultural production (Walthall et al., 2012). The Midwestern U.S. Corn Belt contributes substantially to this system through the production of more than one-third of the world's supply of corn (USDA NASS, 2011; USDA FAS, 2012). While U.S. agriculture is a significant contributor to greenhouse gas emissions, it is also vulnerable to changing

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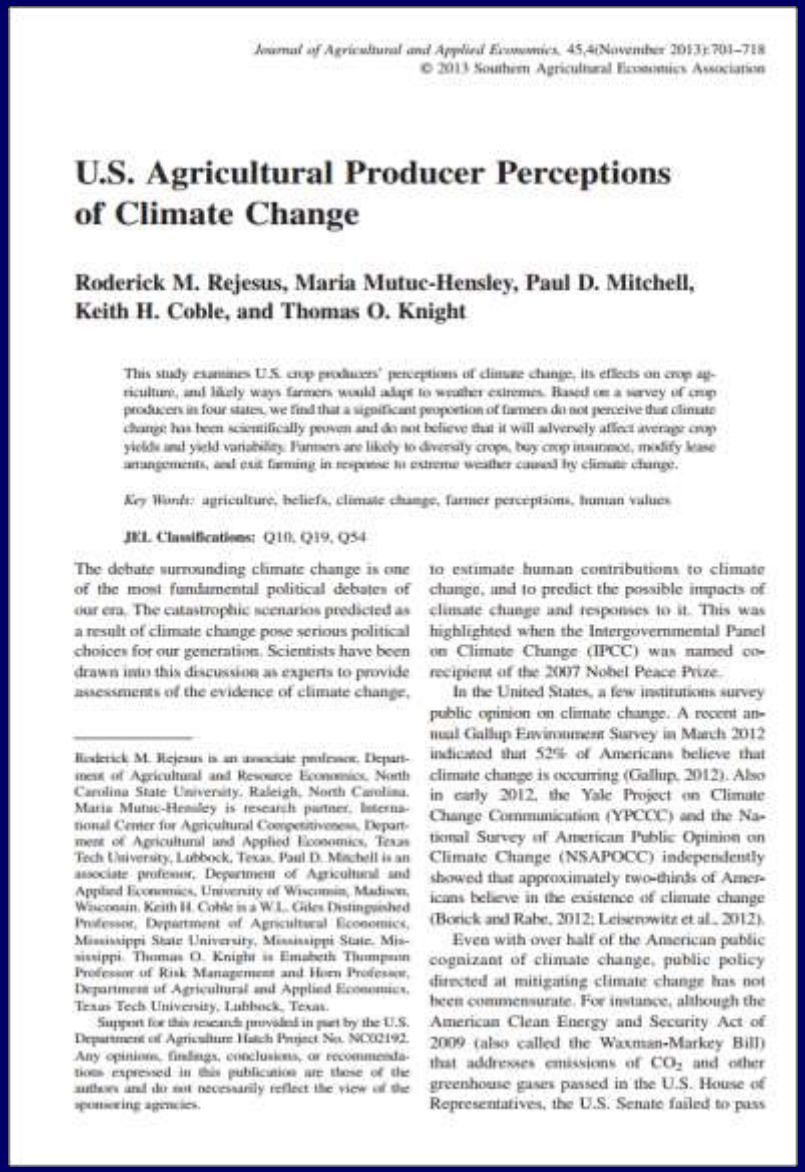

Journal of Agricultural and Applied Economics, 45,4(November 2013):701–718

U.S. Agricultural Producer Perceptions of Climate Change

Roderick M. Rejesus, Maria Mutuc-Hensley, Paul D. Mitchell, Keith H. Coble, and Thomas O. Knight

This study examines U.S. crop producers' perceptions of climate change, its effects on crop agriculture, and likely ways farmers would adapt to weather extremes. Based on a survey of crop producers in four states, we find that a significant proportion of farmers do not perceive that climate change has been scientifically proven and do not believe that it will adversely affect average crop yields and yield variability. Farmers are likely to diversify crops, buy crop insurance, modify lease arrangements, and exit farming in response to extreme weather caused by climate change.

Key Words: agriculture, beliefs, climate change, farmer perceptions, human values

JEL Classifications: Q10, Q19, Q54

The debate surrounding climate change is one of the most fundamental political debates of our era. The catastrophic scenarios predicted as a result of climate change pose serious political choices for our generation. Scientists have been drawn into this discussion as experts to provide assessments of the evidence of climate change, to estimate human contributions to climate change, and to predict the possible impacts of climate change and responses to it. This was highlighted when the Intergovernmental Panel on Climate Change (IPCC) was named co-recipient of the 2007 Nobel Peace Prize.

In the United States, a few institutions survey public opinion on climate change. A recent annual Gallup Environment Survey in March 2012 indicated that 52% of Americans believe that climate change is occurring (Gallup, 2012). Also in early 2012, the Yale Project on Climate Change Communication (YPCCC) and the National Survey of American Public Opinion on Climate Change (NSAPOCC) independently showed that approximately two-thirds of Americans believe in the existence of climate change (Borick and Rabe, 2012; Leiserowitz et al., 2012).

Even with over half of the American public cognizant of climate change, public policy directed at mitigating climate change has not been commensurate. For instance, although the American Clean Energy and Security Act of 2009 (also called the Waxman-Markey Bill) that addresses emissions of CO_2 and other greenhouse gases passed in the U.S. House of Representatives, the U.S. Senate failed to pass

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Support for this research provided in part by the U.S. Department of Agriculture Hatch Project No. NC02192. Any opinions, findings, conclusions, or recommendations expressed in this publication are those of the authors and do not necessarily reflect the view of the sponsoring agencies.

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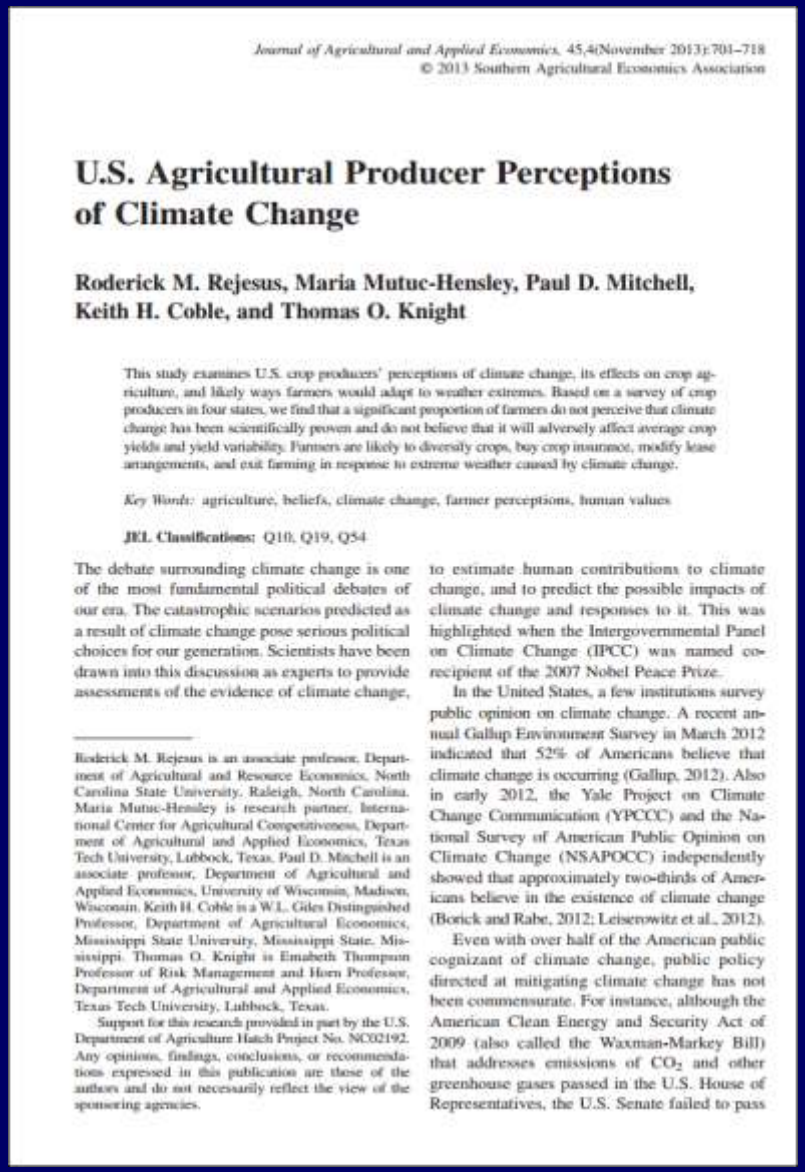
- *change in crop mix*
- *more crop insurance*
- *farmers driven out of business*

Cognitive dualism



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4. Two Methodological notes
5. One practical implication

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Candidate mechanisms

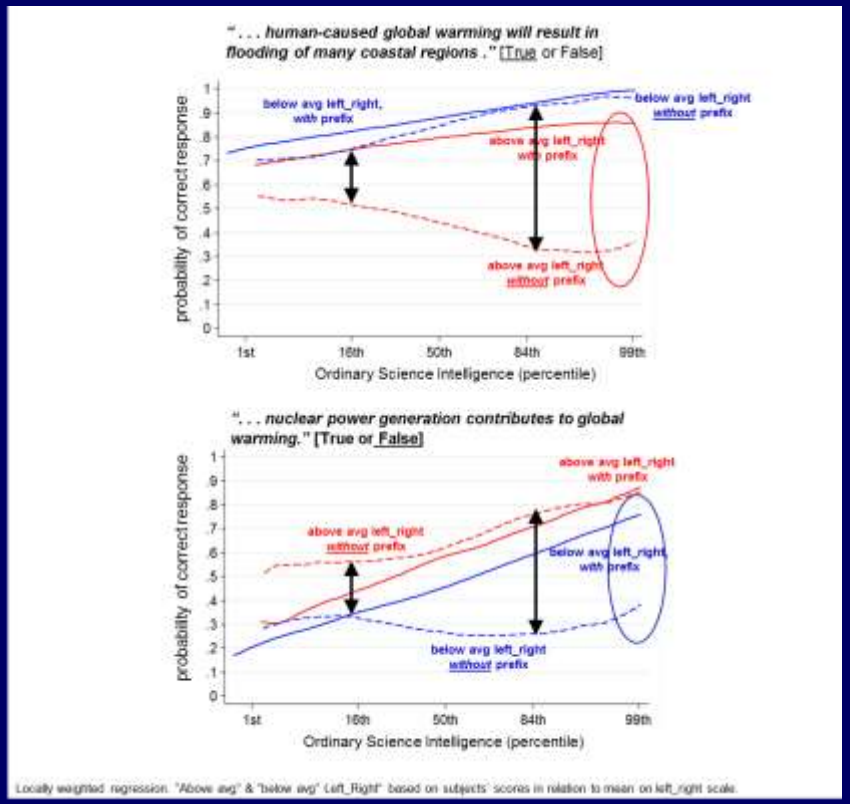
1. Cognitive dualism
2. FYATHYRIO
3. Compartmentalization

Convergent validity

The University of Oklahoma
Center for Risk & Crisis Management

Oklahoma Weather, Society and Government survey

This material is based on work supported by the National Science Foundation under Grant No. IIA-1301789.



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Florida: the state in a state of denial . . .

environment climate change

Florida governor has allegedly banned climate change terminology for all government officials

This story was published: 2 MONTHS AGO | MARCH 25, 2015 7:10AM

STORY BY
NICK WHIGHAM
news.com.au

Wrong!

The Washington Post

Forget "bans" on talking about climate. These Florida Republicans are too busy protecting their coasts

By Chris Mooney March 31 Follow @chriscmooney

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SCIENCE

Pragmatism on Climate Change Trumps Politics at Local Level Across U.S.

By JOHN SCHWARTZ OCT. 24, 2014

MIAMI BEACH — As she planned her run for the Florida House of Representatives this year, Kristin Jacobs told her team that she wanted her campaign to address the effects of climate change. Her advisers were initially skeptical, noting that voters typically said they cared about the environment, but considered the issue less urgent than the economy and health care.

Ms. Jacobs, a commissioner for Broward County, pressed her case, arguing that few issues were more critical to residents of southeast Florida than street flooding at high tide — sometimes even on sunny days — and ocean water seeping into their drinking water. "It's how you ask the question," she said. "Is clean water important to you?"

From left: Kristin Jacobs, a Broward County commissioner; Dr. Fred Bloetscher, of Florida Atlantic University; and William Talbert, of the Greater Miami Convention & Visitors Bureau, at a Senate subcommittee hearing in Miami in April on the effects of climate change on Florida's coastline. Joe Raedle/Getty Images

FLORIDA REPUBLICAN CONGRESSMAN CALLS FOR ACTION ON CLIMATE CHANGE

AA BY JESSICA WEISS MONDAY, MAY 25, 2015 | 8 DAYS AGO

773 72 2

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Rep. Ileana Ros-Lehtinen (R-FL-27)


Rep. Ryan Costello (R-PA-06)


Rep. Patrick Meehan (R-PA-07)


Rep. Lee Zeldin (R-NY-01)


Rep. Mark Amodei (R-NV-02)


Rep. Mia Love (R-UT-04)


Rep. Brian Fitzpatrick (R-PA-08)


Rep. Elise Stefanik (R-NY-21)


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Rep. Dave Reichert (R-WA-08)


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Rep. Suzanne Bonamici (D-OR-01)


Rep. Peter Welch (D-VT-00)


Rep. Jim Himes (D-CT-04)


Rep. Don Beyer (D-VA-08)


Rep. Earl Blumenauer (D-OR-03)


Rep. Charlie Crist (D-FL-13)

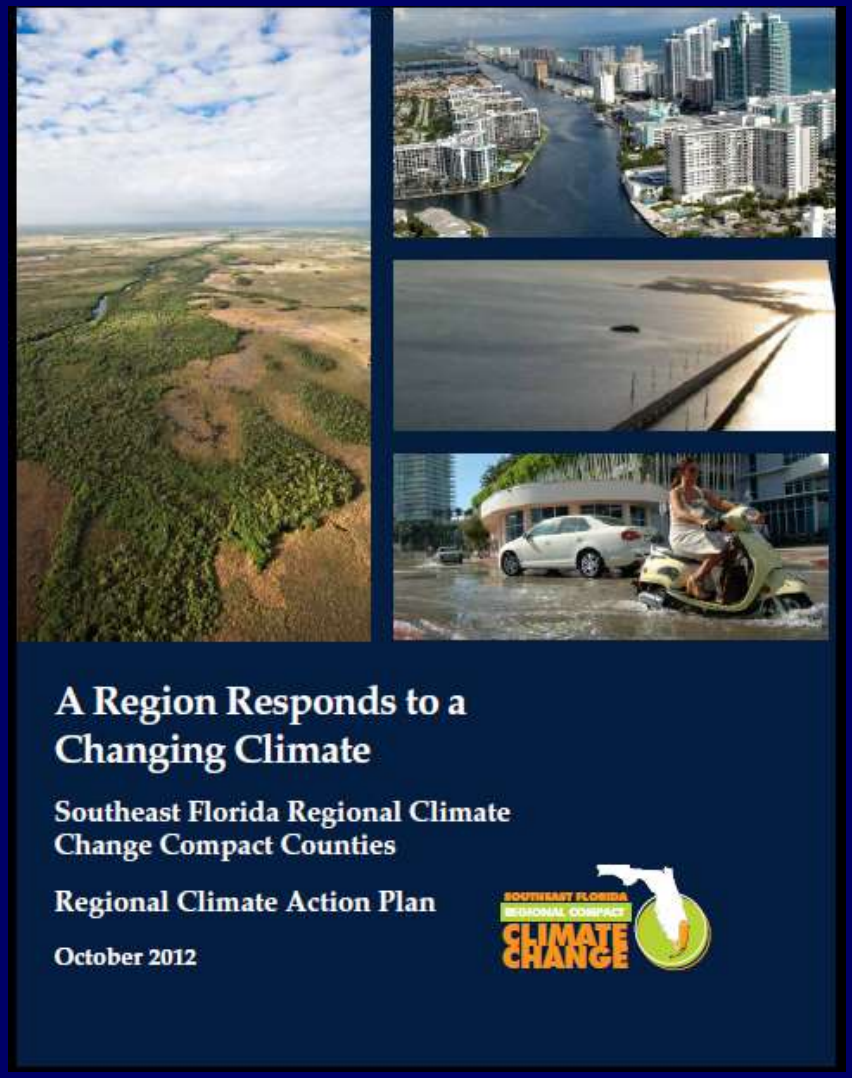

Rep. Juan Vargas (D-CA-51)

the Cultural Cognition Project at Yale Law School

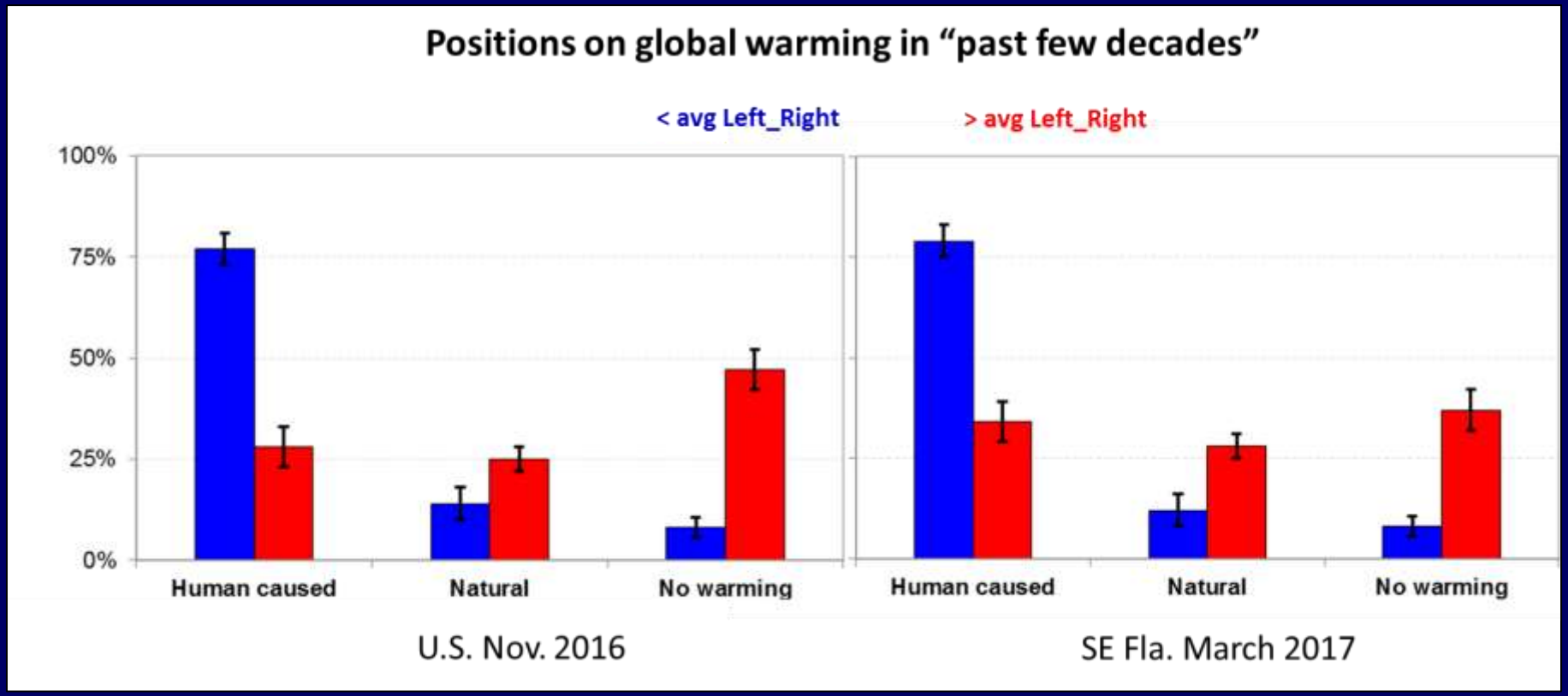
YALE LAW SCHOOL

Evidence-based Policy Science Communication Initiative

SOUTHEAST FLORIDA REGIONAL COMPACT CLIMATE CHANGE



So what happened—is happening–in SE Florida?!

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Follow
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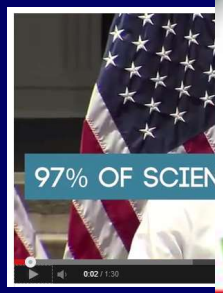
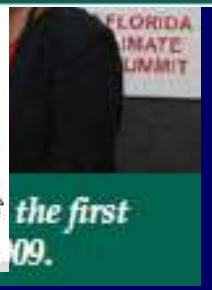
The Climate Reality Project
SCIENTIFIC CONSENSUS
for ACTION
1:27 / 1:30

Southeast Florida science communication





Proselytizing the *normality* of climate science

Local businessman

Homeowner

Corp. exec.

climate scientist

Proselytizing the *normality* of climate science

Politics & cultural identity

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