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3-3-2021

### Climate Change Communication in the [M]anthropocene

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# Climate Change Communication in the [M]anthropocene

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Steve Sassaman, Michael Sofis, & Scott Ramsey



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# We Acknowledge the Lenni-Lenape People

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Photo Credits: Delaware Public Archives

The image features a solid teal background. On the left side, there is a large, light teal circle. To its right and slightly lower, there is a smaller, darker teal circle. The text "Our Positionality" is written in a white, sans-serif font, centered horizontally between the two circles.

# Our Positionality

A meme featuring Leonardo DiCaprio from the movie Inception. He is wearing a black tuxedo with a white shirt and a black bow tie. He is holding a martini glass in his right hand, which is raised towards the camera. He has a slight, knowing smile on his face. The background is dark with many out-of-focus lights, creating a bokeh effect. The text is overlaid on the image in a bold, white, sans-serif font with a black outline.

**I'VE GOT 99 PROBLEMS**

**AND EXPLOITATIVE CAPITALIST HETEROPATRIARCHAL  
TOXIC MASCULINITY IS ALL OF THEM.**



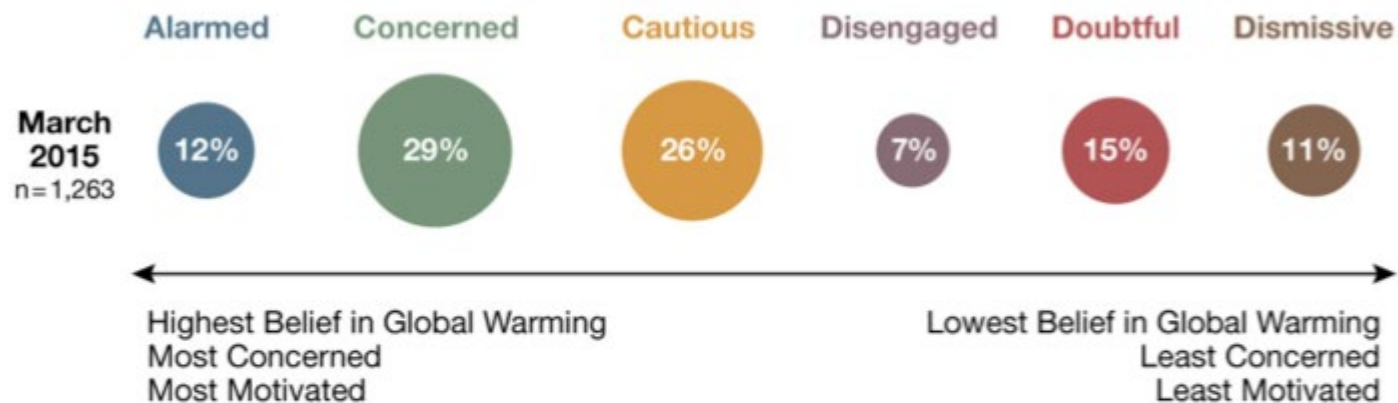
How do women in conservative verbal communities reinforce masculine toxicity?



REX USA/Julian Makey / Rex

# Rise in Jingoism Driven by Masculine Toxicity

# Global Warming's "Six Americas"



Proportion represented by area

Source: Yale / George Mason University







# The Alarmed

- Most Engaged
- Most Worried and Believe
- Convinced Global Warming is Happening, Human-caused, and Urgent Threat
- Unlikely to Change Their Minds
- Tend to be Moderate to Liberal Democrats, Women, College Educated, Upper- Middle Class
- Follow and Seek News on Global Warming
- Find the Most Trusted Information are scientists, Environmental Organizations



# The Concerned

- Convinced Global Warming is Happening but not Engaged Personally
- Relatively Worried
- Somewhat Informed, Believe There is a Scientific Consensus
- Start Harming People in the US in 10 years
- Somewhat Unlikely to Change Their Minds
- Represent a Full Diversity of America
- Average Use of Media
- Need Additional Information on Global Warming
- Find the Most Trusted Information are scientists, Environmental Organizations



# The Cautious

- Believe Global Warming is Happening but Less Concerned
- No Sense of Urgency or Personal Threat
- Somewhat Informed, Believe There is a Scientific Consensus
- Start Harming People in the US in 10 years
- Somewhat Unlikely to Change Their Minds
- Evenly divided between Moderate Democrats and Republicans
- Traditional Religious Beliefs
- Average Use of Media
  - Need Additional Information on Global Warming, but Don't Seek it Out
  - Least Attention to News
  - Find the Most Trusted Information are scientists, Followed by Family and Friends



# The Disengaged

- Not Much Thought About Global Warming
- Not Sure it is Happening
- Not Very Informed
- Most Likely to Change Their Minds
- Tend to be Moderate Democrats who are Politically Inactive, Traditional Religious Beliefs
- High Use of Media, Watch More Entertainment and Less News
- Unlikely to Seek it Out Information
- Equally Trusted Scientists, Family, and Friends



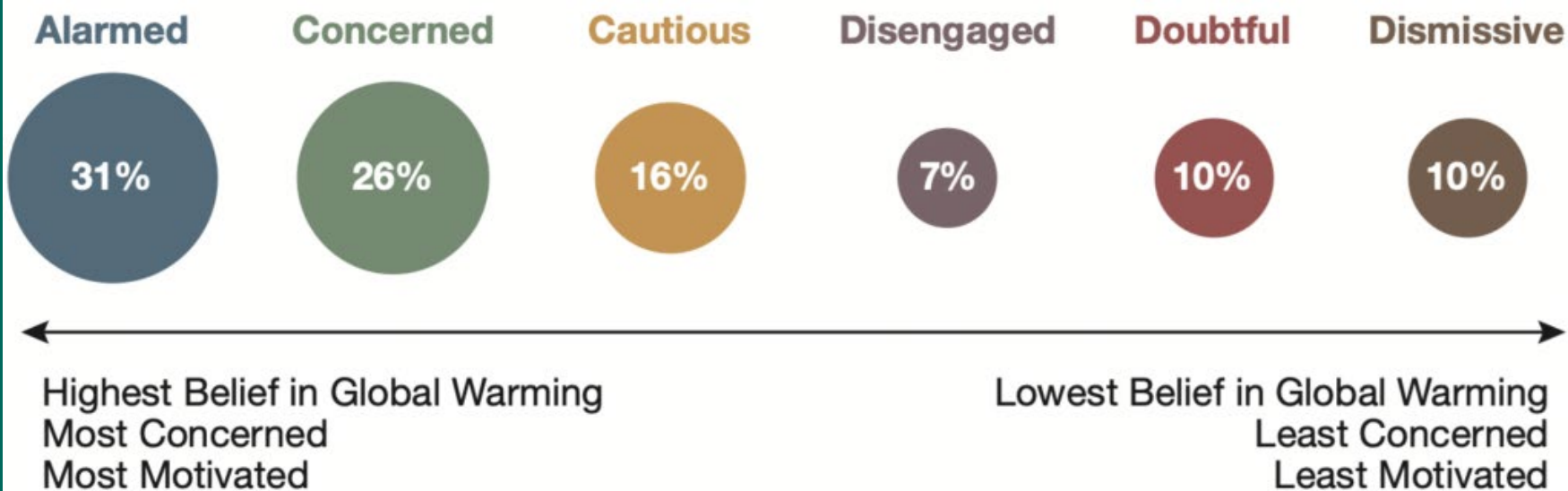
# The Doubtful

- Evenly Split If Global Warming is Happening and Those Who Don't Know
- Many Believe is Happening Due to Natural Changes
- Won't Harm People for Decades if at All
- Unlikely to Change Their Minds
- Believe There is Disagreement Among Scientists
- Pessimistic About Efforts to Reduce Global Warming
- Tend to be Republicans and Identified as Born Again or Evangelical Christians
- Average Use of Media,
- Most Likely to Trusted Scientists Their Own Family and Friends, followed by Scientists and Religious Leaders



# The Dismissive

- Like the Alarmed, They are Engaged in the Issue
- Believe it is Not Happening
- Believe They are Well-Informed
- Are Certain About Their Views and Unlikely to Change Their Minds
- Tend to be Conservative Republicans, High Income, Well-Educated, White Men
- Most Likely Evangelical Christians
- Have a Specialized Media Diet with Media Sources that Reflect Their POV
- Do Not Trust Mainstream News Media or Scientists
- They Trust Own Family and Friends



November 2019. Base: Americans 18+ ( $N = 1,303$ ).

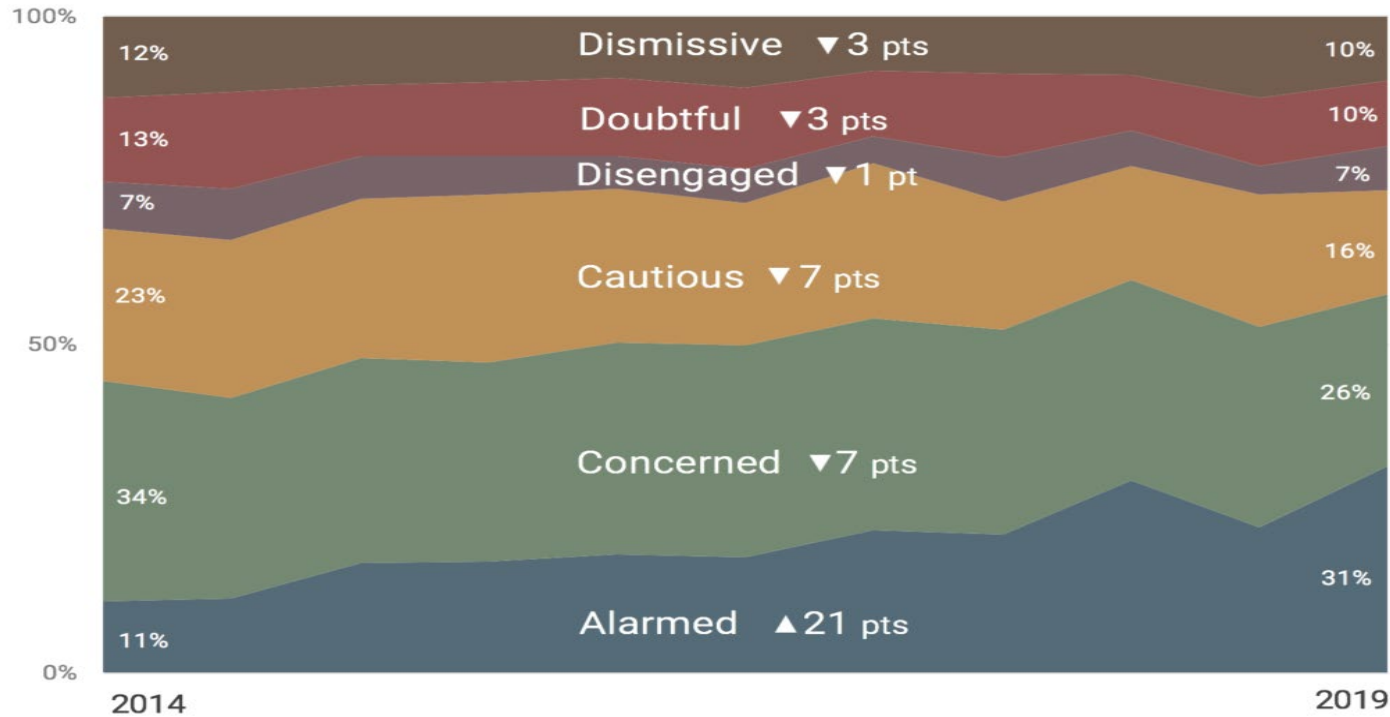


YALE PROGRAM ON  
Climate Change  
Communication



GEORGE MASON UNIVERSITY  
CENTER for CLIMATE CHANGE  
COMMUNICATION

## Global Warming's Six Americas: Five-year Trend



Data from 11 national surveys ( $N = 13,854$ ) from Oct. 2014 to Nov. 2019. Difference scores are calculated before rounding (example:  $12.3\% - 9.7\% = 2.6\%$  which, after rounding, would appear in the figure as  $12\% - 10\% = 3\%$ ).





# White Male Effect



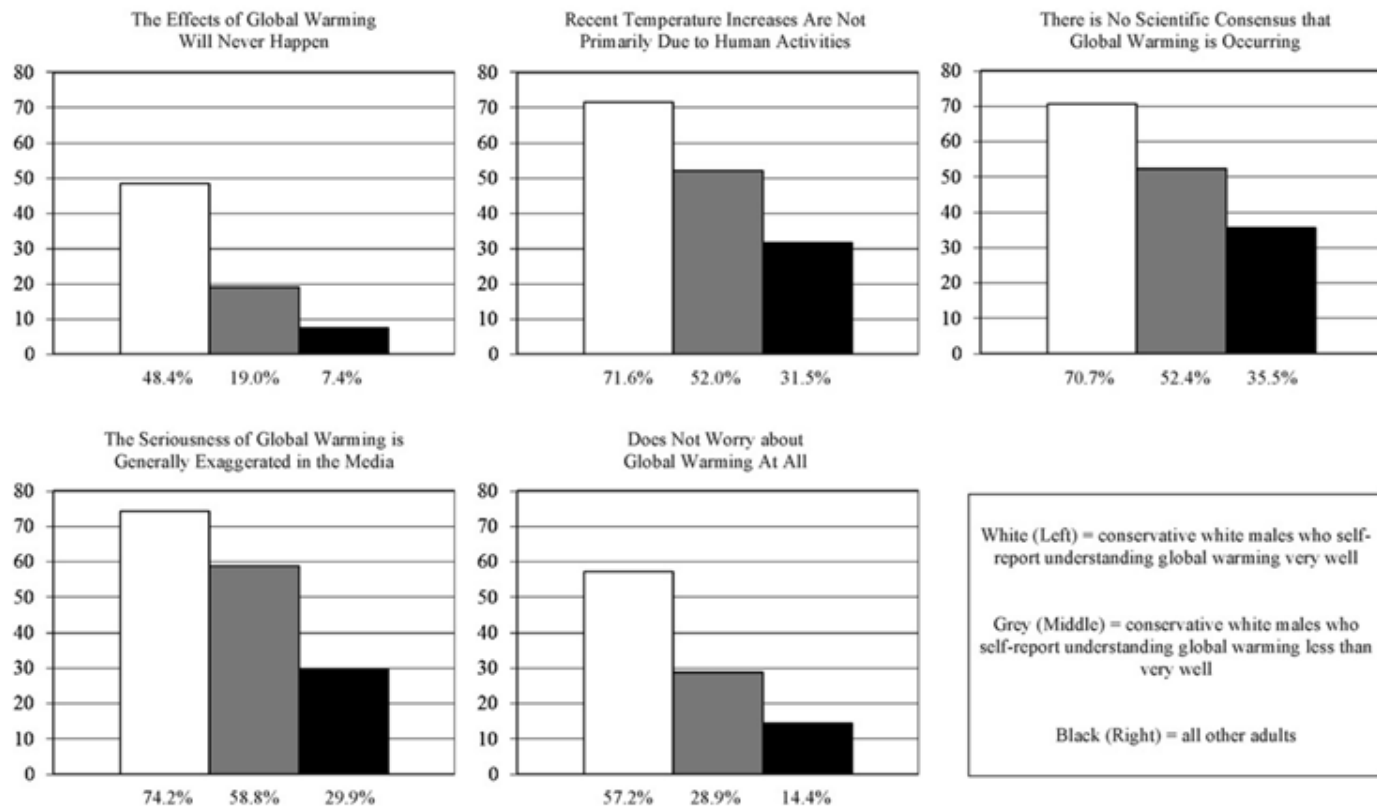


Fig. 1. Percents reporting selected climate change denial beliefs: confident conservative white males, other conservative white males, and all other adults.

“The link between industrial/ breadwinner masculinities and climate change denialism exposes a disconnection between modern Western malestreams and Earthcare”  
(Hultman & Pule, 2018, p. 43)



Photo Credits: New York Post

# Most Registered Voters Think the U.S. Should Use More Renewable Energy And Less Fossil Fuel

(Unweighted base)	All Reg Voters (1,061)	Democrats				Republicans		
		Total	Lib	Mod/Con	Ind	Total	Lib/Mod	Con
		(469)	(239)	(227)	(97)	(455)	(143)	(310)
	%	%	%	%	%	%	%	
<b>Use renewable energy sources (solar, wind, and geothermal)...</b>								
Much/somewhat more than today	81	85	88	82	78	76	80	74
Much/somewhat less than today	3	2	1	3	2	5	5	5
Same amount as today	7	4	4	4	7	11	7	13
<i>Net: more - less =</i>	<b>+78</b>	<b>+83</b>	<b>+87</b>	<b>+79</b>	<b>+76</b>	<b>+71</b>	<b>+75</b>	<b>+69</b>
<b>Use fossil fuels (coal, oil, and natural gas)...</b>								
Much/somewhat more than today	17	9	10	8	18	27	22	29
Much/somewhat less than today	55	68	75	62	52	39	46	35
Same amount as today	16	10	5	16	15	25	18	28
<i>Net: more - less =</i>	<b>-38</b>	<b>-59</b>	<b>-65</b>	<b>-54</b>	<b>-34</b>	<b>-12</b>	<b>-24</b>	<b>-6</b>

In the future, do you think the United States should use renewable energy sources (solar, wind, and geothermal) less, more, or the same amount as we do today?

In the future, do you think the United States should use fossil fuels (coal, oil, and natural gas) less, more, or the same amount as we do today?

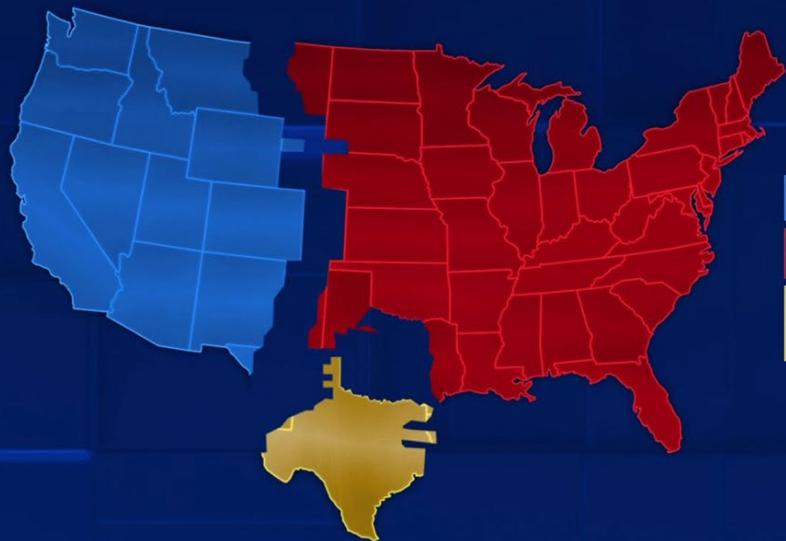
Base: Registered American Voters 18+. November 2016.



# Tribulations of Texas

## NORTH AMERICAN ELECTRIC POWER GRIDS

Source: EPA.GOV



WESTERN INTERCONNECTION

EASTERN INTERCONNECTION

ELECTRIC RELIABILITY COUNCIL  
OF TEXAS





# Masculinity Norms Framework

Conformity to Masculinity Norms Inventory  
(CMNI, Mahalik et al., 2003)

- Winning
- Emotional Control
- Risk-Taking
- Violence
- Dominance
- Playboy
- Self-Reliance
- Primacy of Work
- Power Over Women
- Disdain for Homosexuals
- Pursuit of Status

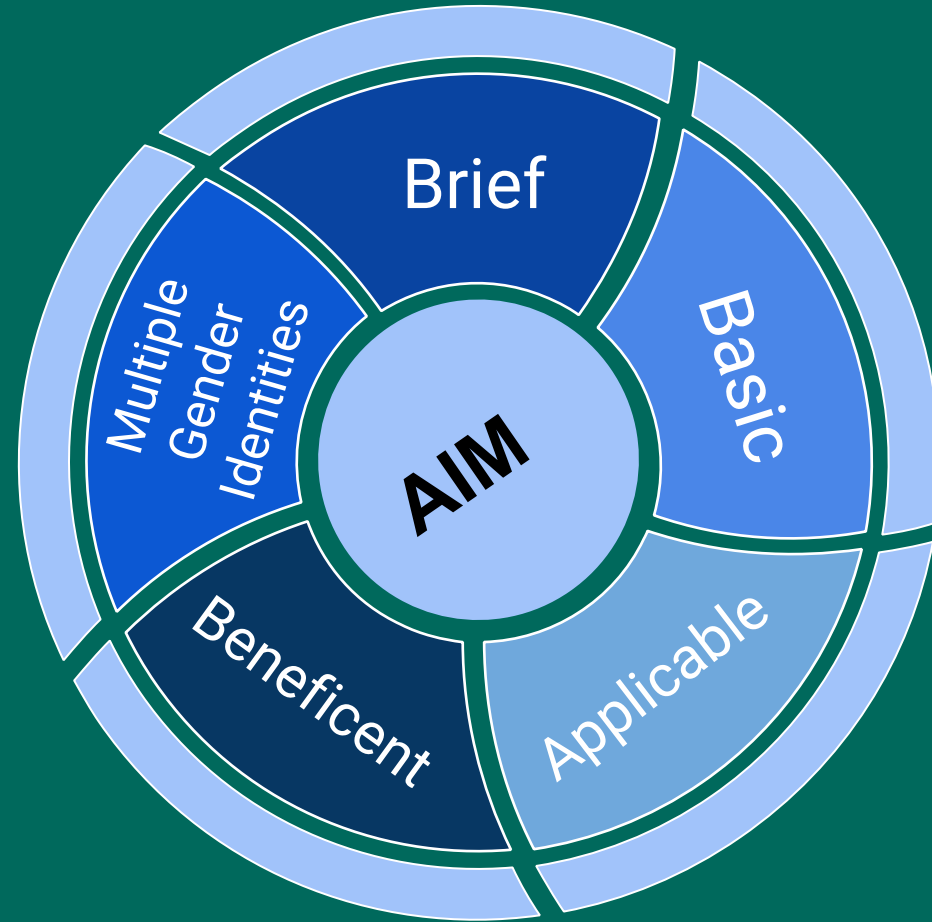


# Shifting our AIM

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From masculine toxicity to Anchored  
Interdependent Masculinity (AIM)

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## Survey Item (Low AIM – High AIM)

Strength is demonstrated mostly... (*Physically – Intellectually*)

Crying is a sign of... (*Weakness – Strength*)

Men in today's society... (*Face Discrimination – Have privileges*)

In general, I would rather... (*Gamble – Play it safe*)

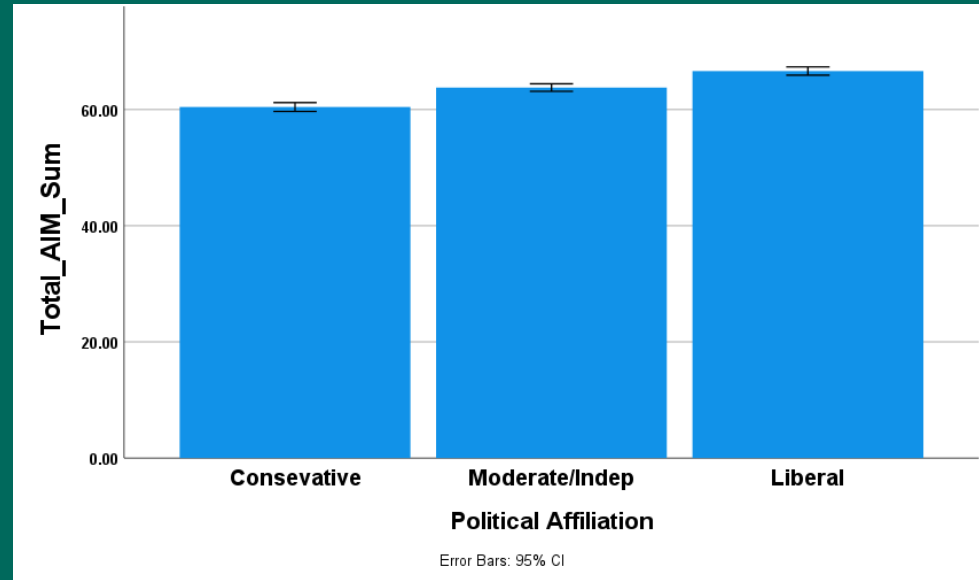
It is more important to be... (*Self-sufficient – Help others*)

# Study 1

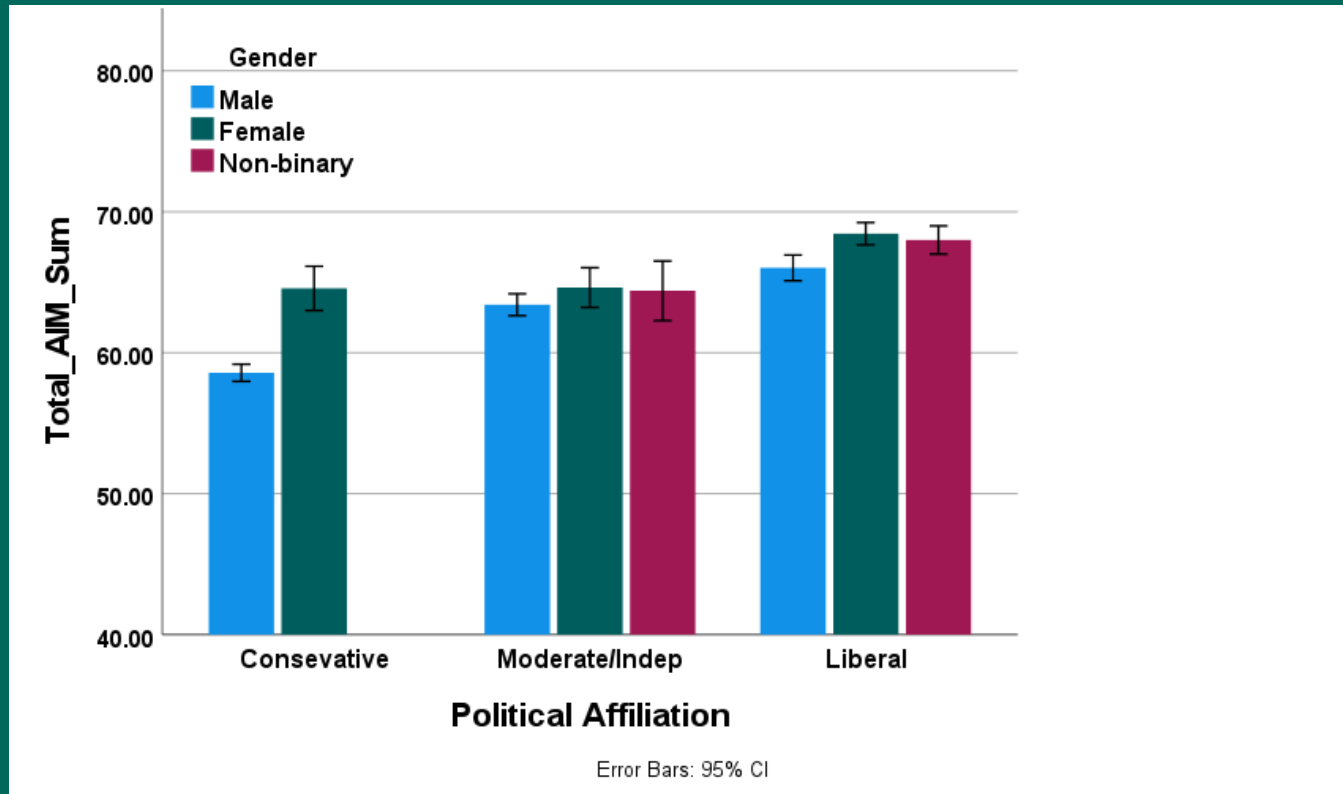
- Recruitment ( $n = 168$  adults; 18 and older)
  - Facebook advertising methods
  - Broad geographic representation
  - November, 2020
  
- Was the 5-item AIM Scale associated with...
  - Preference for authoritarian vs. *collective* leadership?
  - Beliefs in climate change risk (Six Americas scale)?
  - Political affiliation?

# Study 1 Proof of Concept Results

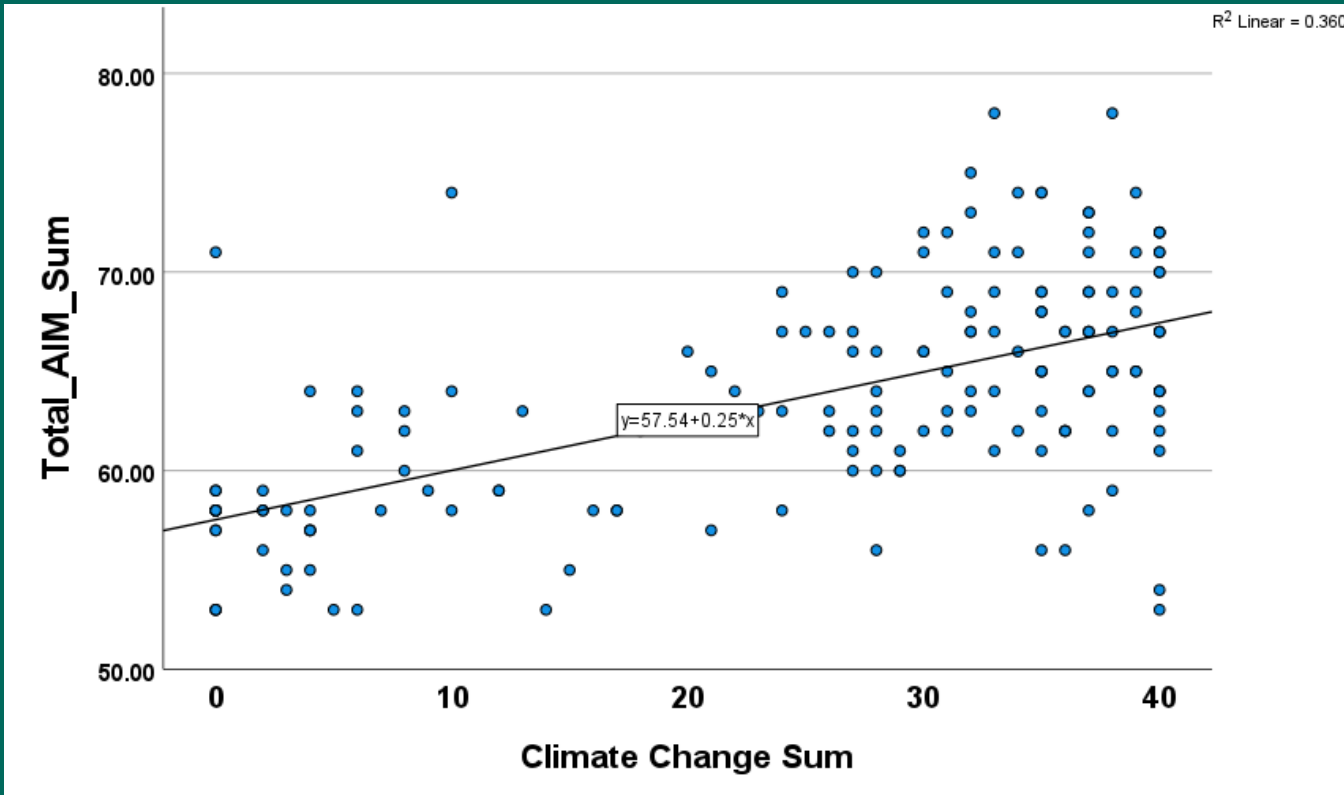
- High AIM score significantly correlated (moderate strength) with greater perceived value of teamwork over authoritarian leadership



# AIM Differences by Gender Identity and Political Affiliation



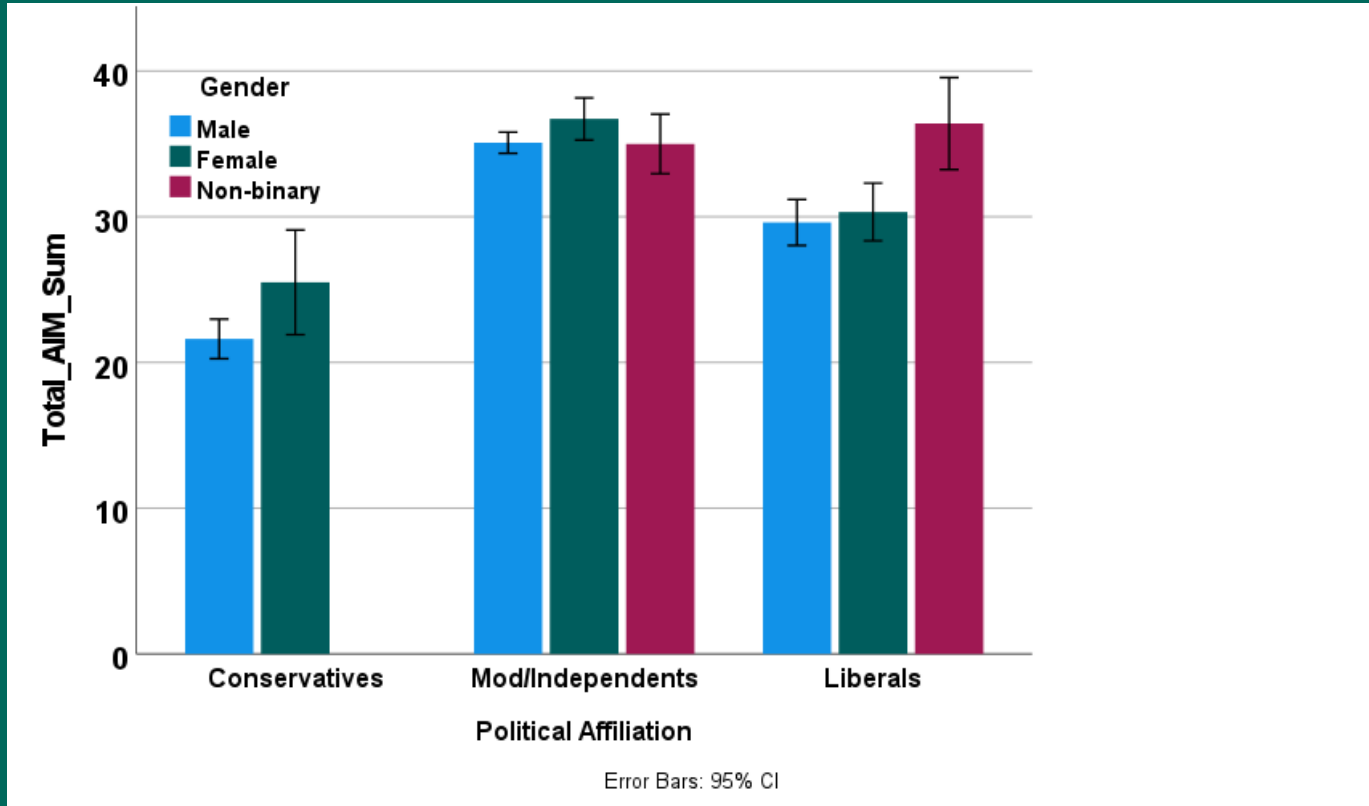
# AIMing for Beliefs in Climate Change



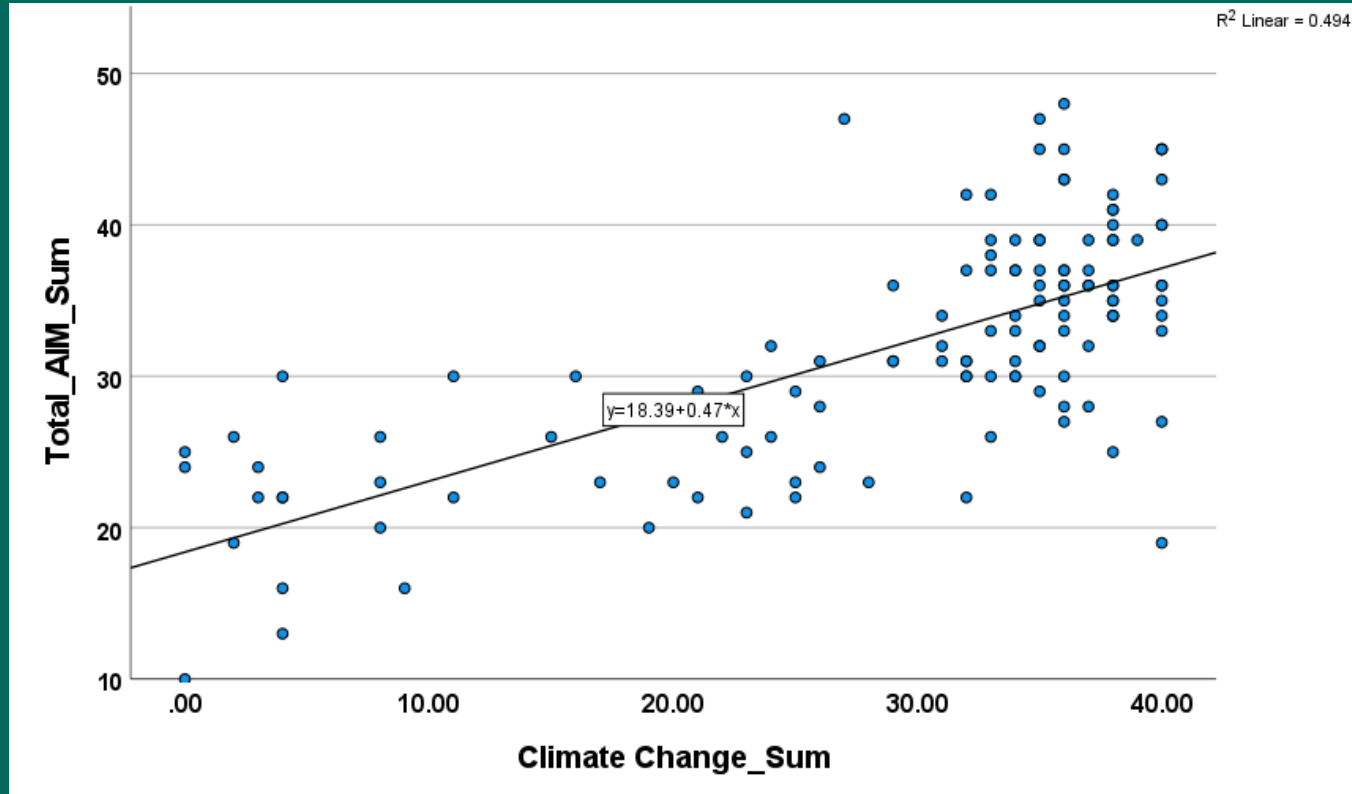
# Study 2

- Recruitment ( $n = 125$  adults; 18 and older)
  - Facebook advertising methods
  - Broad geographic representation
  - January, 2021
- Was the 5-item AIM Scale associated with...
  - Preference for authoritarian vs. *collective* leadership?
  - Beliefs in climate change risk (Six Americas scale)?
  - Political affiliation?
- *Does the AIM correlate with a standard scale in this domain?*
- *Does the AIM Scale relate more strongly to Climate Change than the CMNI (Standard approach)?*

# Study 2 Results

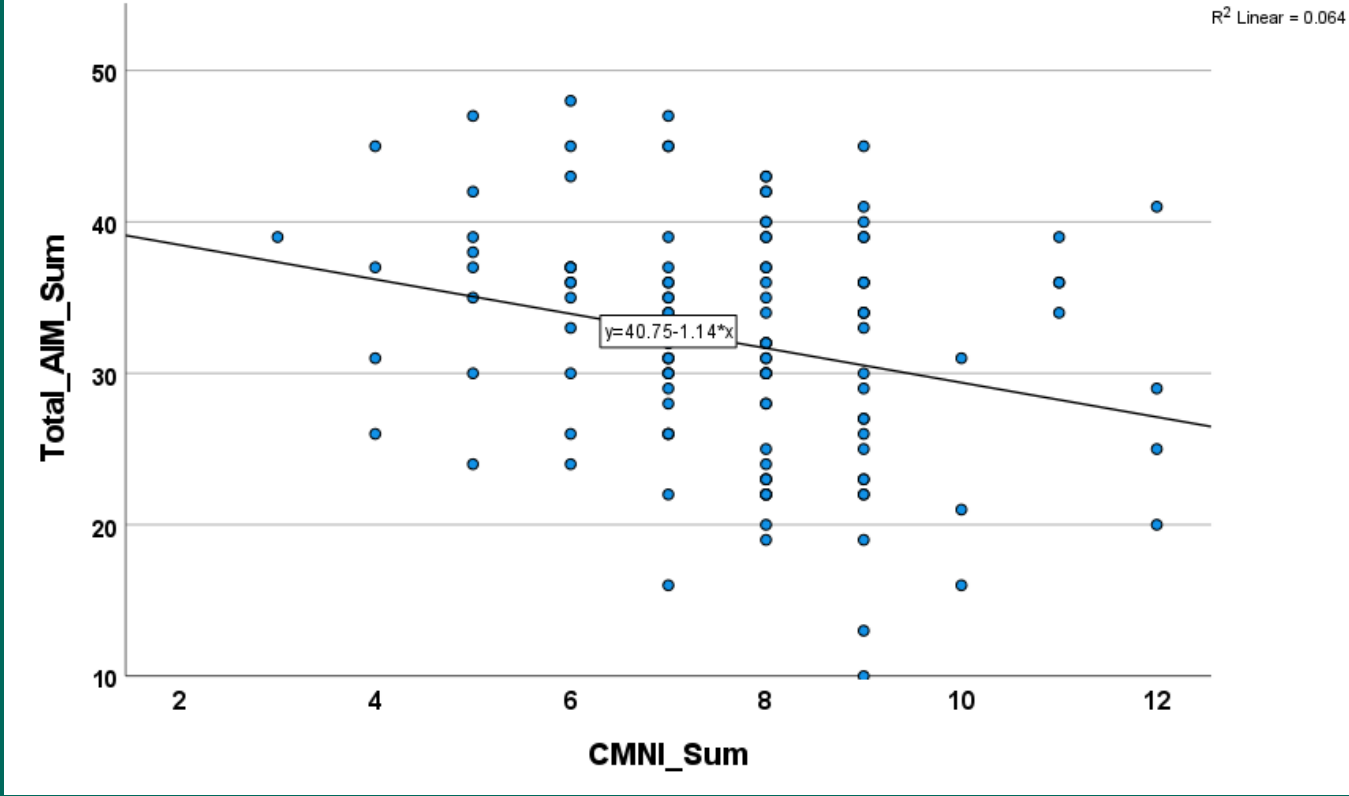


# Study 2 Results



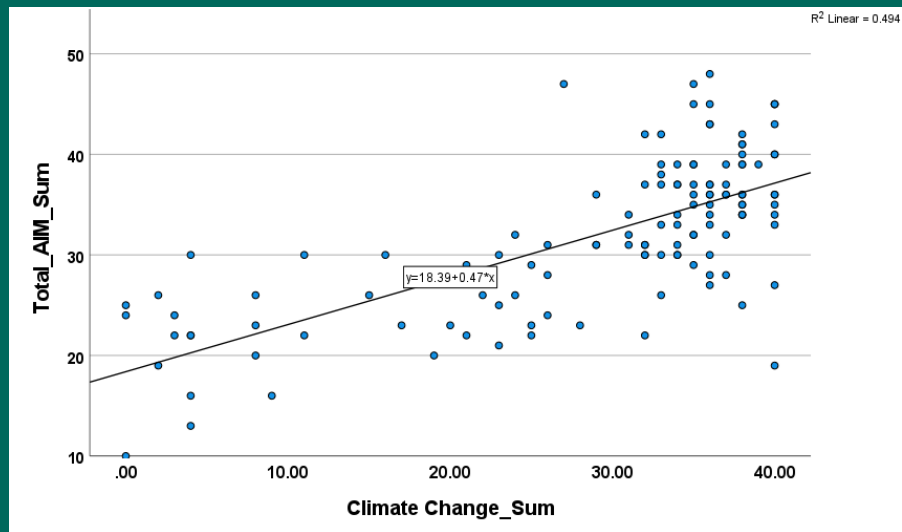


# Establishing Concurrent Validity for the AIM Scale

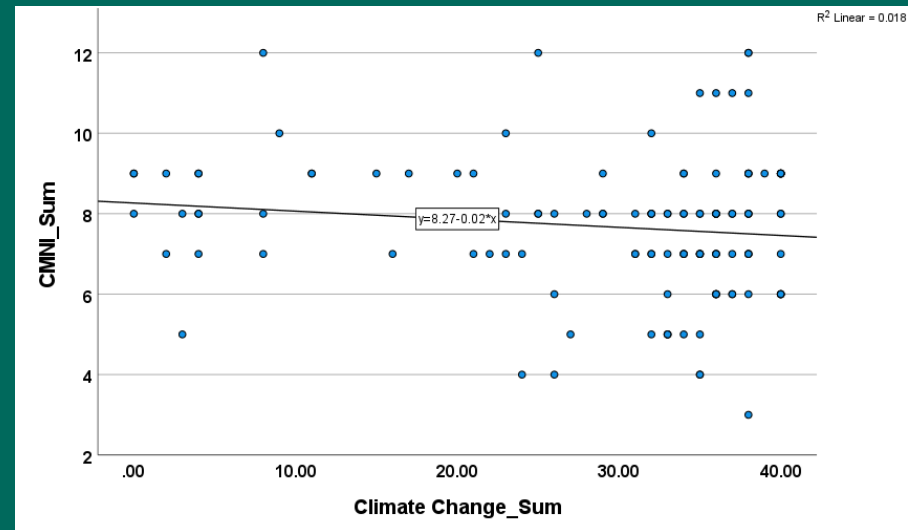


# Comparing to Standard Approach

## AIM Scale



## CMNI Scale

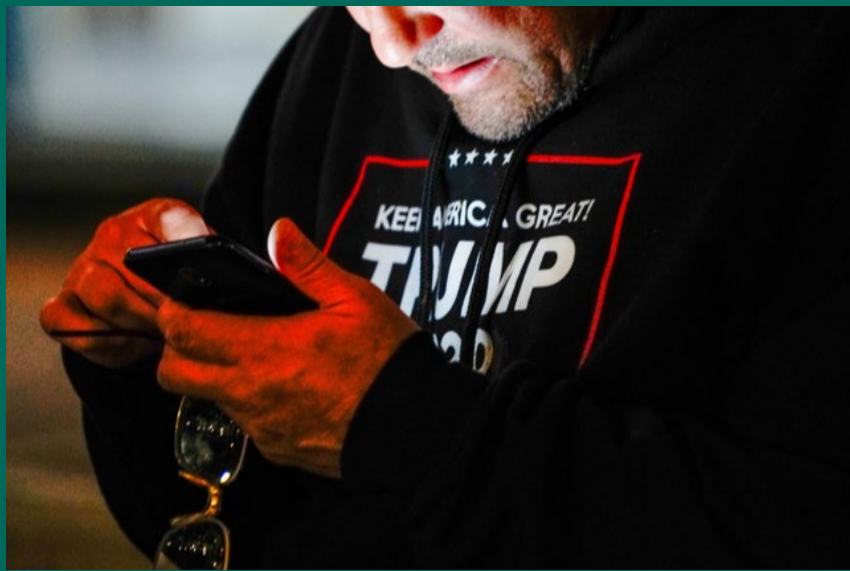


# AIM Scale Takeaways

- Predictably associated with....
  - Political affiliation
  - Gender identities
  - Perceived value of authoritarian vs. collective leadership approaches
  - Climate change beliefs
- All findings replicated in large U.S. samples
- Corresponded with traditional approach
- Demonstrated stronger relationship with climate change beliefs and perceived value of authoritarian leadership relative to CMNI

# Limitations and Potential Improvements

- Cross-sectional samples limit inferences of causality
  - Prospective designs would provide considerable value
- Limited racial/ethnic diversity (i.e. about 10% of samples)
  - Recruiting on multiple social media platforms could help
- Do not account for socioeconomic status
  - Employment and education focused questions could address this without offending participants
- Sample sizes still too small to establish a statistical model that accounts for all variables of interest



# Future Directions



We extend our gratitude  
and invite your insight

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# Please reach out!

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