The Association Between Religious Beliefs and Attitudes Towards Climate Change in the U.S.

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Introduction

- **Threat of Climate Change Today:** Changes to the climate resulting from human activity pose a significant threat today to water supplies, agricultural systems, transportation and power systems, the natural environment, and human health (EPA, 2017).
  - Since 2008, there has been a decline in American public concern for climate change (Kilburn, 2014).
- **Religion and Climate Change:** Multiple studies have identified religion as a possible factor explaining variations in one's belief in the severity of climate change, such as its role in shaping human experiences and responses to climate change (Jenkins et al., 2018).
- **Current Findings:** One of the most potent factors to discuss is how religious beliefs work in tandem with political ideologies to influence individuals' perceptions of climate anxiety significantly (Toros, 2025).
  - One study has indicated that more religious respondents tend to be less knowledgeable about climate change (Lowe et al, 2022).
  - Surveys have indicated that U.S. evangelicals less likely than other religious groups to express affirmations for the reality of climate change or to accept human explanations for it (Jenkins et al, 2018).

• **Climate Change Belief among non-Evangelical faiths:** Islamic teaching of Khalifa (stewards of the earth) has been found to have actually promoted environmental stewardship (Albaker et al, 2025). Pope Francis, "On Care for our Common Home," countered this dominion-based doctrine as a misinterpretation of the scripture, instead pushing Catholics to engage in environmental conservation (Francis, 2015).

• **Gap in Literature:** Not well understood how relative belief in climate change varies among those belonging to the evangelical faith, other Christian denominations, and other religious groups across different age groups.

Methods

Sample

- Eligible Voters in the U.S (ages 18 or older) were interviewed over the web, the web, and the phone, or over the phone as part of the 2020 Edition of the ANES Time Series Study.

Measures

- To assess one's **level of religiosity**, the following pre-election survey were aggregated.
  - *"Is the Bible word of god or man?"* ranging from 1(word of god, to be taken literally) to 3 (word of man),
  - *"Is religion an important part of a respondent's life?"* ranging from 1(extremely important) to 5 (not important at all),
  - *"Attend religious services how often?"* ranging from 1 (every week) to 5 (never).
  - Scaled based on individuals' response to questions so respondents marked as having **high religiosity, moderate religiosity**, or **low** religiosity.
    - Individuals marked according to their highest score, (ex. individuals who score a 4 on question 2 but a 1 on question 3 will be marked as high religiosity).
- Demographic information of respondents such as **age, political party, religion, gender**, and **race** were included.
- One's **belief in climate change** was assessed using the respondents' answer to the question *"How much is climate change affecting severe weather /temperatures in the US?"* 1 (not at all) to 5 (a great deal).

Research Questions

1. What is the relationship, if there is any at all, between **religious belief** and **belief in the existence of climate change.**
2. If there is a relationship, how does the correlation vary across **religious denominations, age groups, political affiliations**, and other relevant background information.

Results

Univariate

- 37.9 % of individuals were identified as having a **high religiosity** score, 37.9 % of individuals were identified as having a **moderate religiosity** score and 23.9 % of individuals were identified as having a **low religiosity** score.

Bivariate

- **Figure 1**, shows that the average **belief in climate change** is higher for those with **low religiosity**, then those with **high** and **moderate religiosity**.
- The Chi Square test indicated that overall, those with a **low level of religiosity** (14.4%) were more likely to **believe climate change is having a severe effect today** than those with a **moderate** level (7.8%) and a **high** level (4.3%).
- Post hoc tests for the Chi Square test, confirm a significant relationship in which individuals with **a low religiosity,** have a greater **belief in climate change** then those with a moderate and a **high religiosity** and those with a **moderate religiosity** are greater than a **low religiosity.**
- A simple logistic regression, in which responses are collapsed into weather **one believes** (1) or **doesn't believe** in the severity of **climate change** today revealed that the odds ratio that individual does believe in **the severity of climate change** is higher for individuals with **low religiosity** (OR 3.54) then those with a **moderate religiosity** (OR 1.72) and a **high religiosity** (OR 1.954). Shows significant and positive association between **religion** and **belief in severity of climate change today**.

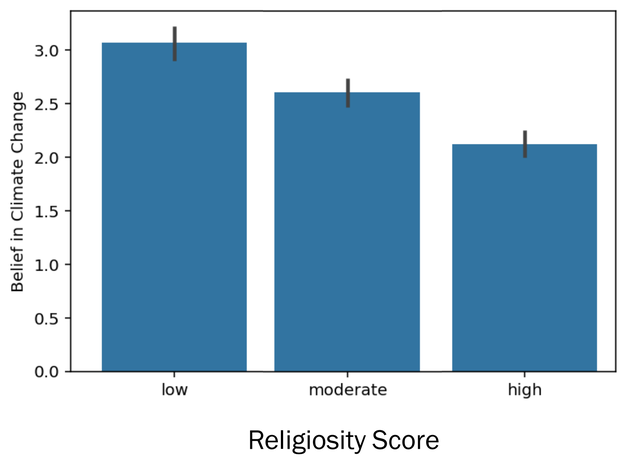

Figure 1. Belief in Climate Change Across Varying Levels of Religiosity.

Multivariate

- **Figure 2** shows how **average belief in climate change** differs for respondents across different **political parties.**
  - The **religion** an individual belongs to was found to not have a significant relationship due to **political party** being a confounding variable.
- Running a logistic regression with the variables **religion**, **age**, **political party**, **gender**, **race**, **education**, with **religiosity score** revealed a significant relationship with **belief in climate change** is present only for **low** or **moderate religiosity** and **political party**.

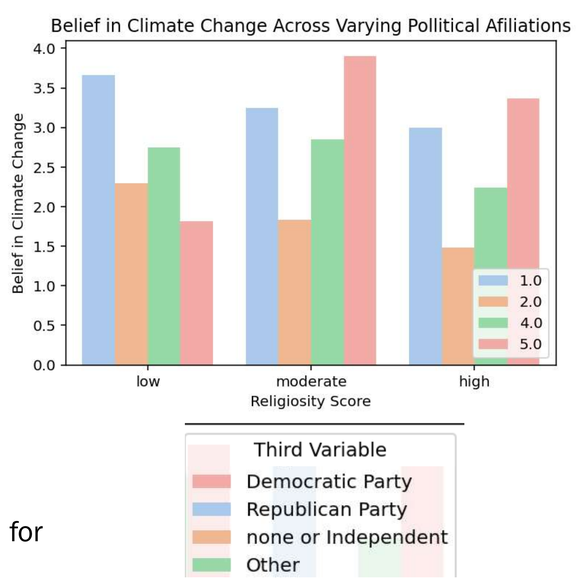

Figure 2. Belief in Climate Change across Different Political Affiliations

Discussion

- The significant and negative relationship between **religiosity score** and **belief in climate change** corroborate previous findings in the scientific literature linking the two variables.
- Surprising that the logistic regression found a greater association between individuals with **high religiosity** and greater **climate change belief** then **moderate religiosity**.
  - Could be skewed due to "climate change belief" binary variable encompassing all responses from 2-5 of original question.
- Establishment of relationship of **political party** as a confounding variable with **belief in climate change** supported by literature .
  - Non-confounding nature of other demographic variables such as **age, religion** and **education** somewhat surprising due to literature discussing links between them and climate change belief.
- **Issues with the sample may limit legitimacy of the results**
  - Further studies must consider/include the following
    - Use larger sample size.
    - Confirm presence of individuals who lack **belief in climate change** overall.
    - Clearly establish demographic information about participants.
      - To determine if errors did or did not contribute to findings of lack of confounding nature for multiple demographic variables.

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