Fall 12-5-2018

# Sources of Fear in Climate Change

Ryan Shiri
*Chapman University*, shiri105@mail.chapman.edu

# Sources of Fear In Climate Change

## Ryan Shiri
## Department of Political Science, Chapman University; Orange, California

## Abstract & Methods

- This study explores the varying sources and potential determinants of the public's perception in climate change.
- The research project will focus on six vital variables regarding the public's fear of the following in climate change.
  - Air Pollution
  - Pollution in Drinking Water
  - Pollution of Oceans, Rivers, and Lakes
  - Extinction of Plant & Animal Species
  - Oil Spills
  - Global Warming and Climate Change
- The data will cover years 2014 until 2017
  - Unfortunately the data available in 2014 is limited to solely to variables of fear in global warming/climate change as well as pollution of rivers and streams rather than oceans, rivers and lakes in the later years
  - These two data points should serve as a good substitute in capturing the overall attitude toward climate change for 2014
- This project will attempt to identify major contributors to the public's fear in climate change
- To well-equip policymakers, businesses and non-profit associations, as well as environmental agents can utilize this research to better understand the timing of the public's concern and react to this concern

## Research

- On average, climate change and the general fear of climate change has been attributed to a series of underlying social characteristics such as gender, age, and ideology
  - The younger the person is, the more likely to fear climate change
  - If female, the person is more likely to fear climate change
  - If the person has a liberal stance they are more likely to fear climate change
- However there is belief among scholars in the climate change research community to believe that there are overall links between the general attitude to climate change and major trends in society
  - The economy, when doing poorly, has been noted to be a key link for public's declining attitude toward fearing climate change.
  - The current administration, when rolling back environmental regulations has been noticed to increase fear in climate change or inversely if implementing more environmental regulations
  - Finally, actual changes in the natural environment has been noted to be a constant contributor toward a person's fear of climate change

## Hypotheses:

H 1: The public's fear in climate change has been growing.

H 2: Exposure to more media outlets will result in greater fears of climate change.

H 3: Concern for economic well being will result in reduced fears for climate change.

## Data

**H 1: "Growing Fear in Climate Change?" (2014-2017)**
Frequency Results:
- Afraid or very Afraid of Air Pollution:
  - 2014: N/A
  - 2015: 20.7%
  - 2016: 45.3%
  - 2017: 55.2%
- Afraid or Very Afraid of Pollution in Drinking Water
  - 2014: N/A
  - 2015: 27.9%
  - 2016: 52.8%
  - 2017: 60.8%
- Afraid or Very Afraid of Pollution of Oceans, Rivers & Lakes
  - 2014: 18.3% (Rivers and Streams Only)
  - 2015: 30%
  - 2016: 54.1%
  - 2017: 61.7%
- Afraid or Very Afraid of Extinction of Plant and Animal Species
  - 2014: N/A
  - 2015: 27.9%
  - 2016: 45.8%
  - 2017: 54.1%
- Afraid or Very Afraid of Oil Spills
  - 2014: N/A
  - 2015: 26.8%
  - 2016: 39.2%
  - 2017: 44%
- Afraid or Very Afraid of Global Warming and Climate Change
  - 2014: 19.7%
  - 2015: 32.3%
  - 2016: 46.9%
  - 2017: 53.3%

### H 2: More Media, More Fear (2017)

Coefficients[a]

| Model | | Unstandardized Coefficients B | Std. Error | Standardized Coefficients Beta | t | Sig. |
|---|---|---|---|---|---|---|
| 1 | (Constant) | 2.505 | .094 | | 26.518 | .000 |
| | 10f. How afraid are you of the following environmental issues? Global warming and climate change | .010 | .034 | .009 | .299 | .765 |

a. Dependent Variable: 38a. On a typical day, how many hours do you spend... Watching television

Coefficients[a]

| Model | | Unstandardized Coefficients B | Std. Error | Standardized Coefficients Beta | t | Sig. |
|---|---|---|---|---|---|---|
| 1 | (Constant) | 2.371 | .094 | | 25.316 | .000 |
| | 10f. How afraid are you of the following environmental issues? Global warming and climate change | .155 | .034 | .133 | 4.633 | .000 |

a. Dependent Variable: 38b. On a typical day, how many hours do you spend... Surfing the internet/visiting websites

Coefficients[a]

| Model | | Unstandardized Coefficients B | Std. Error | Standardized Coefficients Beta | t | Sig. |
|---|---|---|---|---|---|---|
| 1 | (Constant) | 2.263 | .110 | | 20.485 | .000 |
| | 10f. How afraid are you of the following environmental issues? Global warming and climate change | .155 | .040 | .113 | 3.907 | .000 |

a. Dependent Variable: 38c. On a typical day, how many hours do you spend... Using a cell phone

### H 3: "Economic Concern over Environmental Concern" (2017)

Coefficients[a]

| Model | | Unstandardized Coefficients B | Std. Error | Standardized Coefficients Beta | t | Sig. |
|---|---|---|---|---|---|---|
| 1 | (Constant) | 1.699 | .084 | | 20.125 | .000 |
| | 11a. How afraid are you of the following? Not having enough money for the future | .313 | .029 | .303 | 10.922 | .000 |

a. Dependent Variable: 10f. How afraid are you of the following environmental issues? Global warming and climate change

*Significant at <.05

## Findings

H 1: "Growing Fear in Climate Change?"

The Results of that data backed the initial hypothesis. People are becoming more fearful of global warming and climate change, as well as every one of the other 5 statics used to track fear in the environment. Every year the public's fear grew in every single category.

H 2: "More Media, More Fear"

These three regression models were focused on the amount of media exposure through cell phones, the internet, and television with the correlating change in climate change. All forms of media exposure resulted in increased fear for climate change with the internet generating the most fear. Although the television regression turned out insignificant, the other two regression models proved to be of valid significance.

H 3: "Economic Concern over Environmental Concern"

According to the 2017 data, people who fear their economic safety are less likely to fear climate change. Keep in mind that the variable order for climate change is not afraid to very afraid while the ordering for concern of money is very afraid to not afraid. Therefore the Beta, aka the correlating variable, represents an inverse relationship to these two variables. This regression analysis proved to be significant and confirms my initial hypothesis. and for further experiments I should be keen for questions that ask about the health of the economy rather than fixating on the fear.

## Conclusions

- **H1: People have become more fearful of climate change. This will most likely be felt in policymaking where I would expect more environmentally friendly legislation to be passed.**

- **H2: Media exposure has been attracted to a small increase in fearing climate change. However this small increase can be postulated to be a result of more respondents becoming more aware of actual catastrophic events intensified by the consequences of climate change**

- **H3: People do prioritize economic interests over environmental interests. For further research between the link of the environment and the economy I would suggest using a multitude of polling questions relating to a respondents overall understanding of the nation's economic health and then see how that would correlate to a fear in climate change.**

Daniels, David P., et al. "Public Opinion on Environmental Policy in the United States." *Oxford Handbooks Online*, Oct. 2012, doi:10.1093/oxfordhb/9780199744671.013.0021.
Bellamy, Rob, and Mike Hulme. "Beyond the Tipping Point: Understanding Perceptions of Abrupt Climate Change and Their Implications." Weather, Climate, and Society, vol. 3, no. 1, 2011, pp. 48–60., doi:10.1175/2011wcas1081.1.
Lu, Hang, and Johnathon Schuldt. "Exploring the Role of Incidental Emotions in the Support for Climate Change Policy." *Leatherby Libraries*, Springer, link-springer-com.libproxy.chapman.edu/article/10.1007/s10584-015-1443-x.
Boykoff, Maxwell T. "The Culture Politics of Climate Discourse in UK Tabloids." *Leatherby Libraries*, Elsevier, www-sciencedirect-com.libproxy.chapman.edu/science/article/pii/S0962629808000425?via=ihub.