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Writing 159A

Assignment 1: Area of Expertise

Part 1A: Topic
Climate change: how it occurs, the effects, and why it is different from previous climate changes, using data from the IPCC or other climate projection research papers.

Part 1B: Outline current state
Currently, the conversation surrounding climate change has evolved to finding solutions to mitigate rising global temperatures and detrimental effects to the public. While many entities are developing strategies to lower the climate impact, others have already started to decarbonize and minimize their impact. In contrast, the U.S. government has several barriers that prevent infrastructural change and decarbonization of the U.S. For example, there are opposing political views, political favoring of fossil fuels, financial interests, public fear of losing jobs, disinformation about climate science (i.e., what is the difference between climate and weather), and lack of affordable fuel/transportation/infrastructure alternatives. I am particularly interested in how climate change affects public health and aim to explore strategies and responses regarding this topic. In the next 10 – 20 years, I anticipate that the world will experience many tragedies regarding climate health crises, particularly in low income, communities of color. I hope that we engage in clean solutions faster than anticipated.

Part 1C: Map collaborations and camps
The top three researchers/developers within the climate change science realm are Wallace Broecker, James Hansen, and Michael Mann. These individuals were monumental in the raising awareness and understanding of how climate is being affected by human drivers. These people have collaborated with scientists like Gerard C. Bond, Sergei A. Lebedeff, and Cheng Lijing. The intellectual camps include the science behind climate change (climate projections, atmospheric and ocean drivers), the effects of climate change (each effect can be its own camp), health impacts, and solutions to mitigating climate change.

Intellectual camps:

- Science behind climate change (greenhouse effect and the pollutants that affect atmosphere)
- Climate change effects (sea level rise, endangered species, habitat destruction, intensified storms and fires, disease, food scarcity, etc)
- Health Impacts
- Solutions

Researchers within area of expertise: IPCC provides consensus

- Wallace Broecker – Grandfather of climate science; popularized the term “global warming” and described how the ocean’s conveyor belt affects climate
    - Collaborated with Gerard C. Bond (studied climate change by interpreting seafloor sediments)
- James Hansen – Father of climate science; Professor of Earth and Environmental Sciences at Columbia University; testimony on climate change in the 1980s to raise awareness global warming

    - Collaborated with Sergej A. Lebedeff (co-author of papers that connect global trends of surface air temperatures).
- Michael Mann – IPCC author, professor of atmospheric science, director of earth system science center at Penn State; contributed to the scientific understanding of historic climate change is based on temperature records
    - Collaborated with Cheng Lijing (Lead author of IPCC Ch 1 and other assessments), Ruth McDermott-Levy (Director for Center for Global and Public Health)
- Ben Santer – Identify humans' role in driving climate change