

# Climate Change Unconcern in Rural Pennsylvania

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On my honor as a University Student, I have neither given nor received unauthorized aid on this assignment as defined by the Honor Guidelines for Thesis-Related Assignments

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## **STS Research Paper: Climate Change Unconcern in Rural Pennsylvania**

Climate change perceptions are currently in a state of halted progress. Despite 97% of scientists agreeing that Earth has been warmed due to human causes, only 46% of people globally believe climate change is a serious issue (Scientific Consensus, 2020; Stokes et al., 2015). The results of climate change have formed trends of global temperature rise, shrinking ice sheets, increased sea level, and increased ocean acidification which have and will continue to cause and worsen extreme weather events and loss of life, yet the United States during Donald Trump's presidential term has dismissed at least 70 environmental regulations and 30 more are in progress to be reversed as of July 2020 (Popovich et al., 2020). In the rural areas of Pennsylvania, the heavy industrial presence of power plants, natural gas drilling, and farming operations contribute the fourth most greenhouse gas emissions of all states in the United States; projections predict that temperatures will rise by 5.4% and rainfall will increase by 8% on average in the state (Muschick, 2019). Outside of the six main urban sections of Pennsylvania, only 33% of residents were polled to strongly support a Pennsylvania specific carbon reduction plan (Metz et al., 2015). Many who criticize these groups who are not convinced of the magnitude of climate change as an issue believe they simply know more objectively, without considering the context in which opinions form about the issue. My objective is to analyze the unconcern or denial of climate change in rural Pennsylvania using the framework of experiential knowledge and the complexities of human social groups that direct climate change skepticism.

## **Review of Climate Change Unconcern Literature**

Explanations for climate change unconcern oftentimes use the argument of knowledge deficits, that those who do not recognize the severe dangers of climate change is a challenge that should be overcome by instilling a scientific consensus that should be recognized as an absolute truth. This model assumes that greater levels of scientific understanding and concern about climate change is ultimately superior, which when framed negatively can create polarization around policies and subject communication. The framework for applying climate change unconcern as an experiential development through the context of a person's life places value on the social systems that combine values and facts (Lucas & Davison, 2019).

The issue of climate change is one that has a limited scope of understanding and no distinct solutions to resolve it. It is generally unanimously agreed that anthropogenic warming of the Earth is real, but the subjectivity of its implications and imminence is wide. This has created a flux that different logics (organizations, industries, geographic communities, etc.) disagree upon, jostling for dominance of the public's emergent conception of reality. A logic schism has formed on the issue of climate change, which conflicts and tension challenge scientific research and politics (Hoffman, 2011). Among Heartland Institute conference presenters on the side of skepticism, it was found that they invoked issue with three categories to present evidence against climate change. The first questioned the motive of scientific reports, that the peer review and editing process is corrupt to a point that all the publishing of research is done by the same team for a biased objective. The second called out the ideology of science editors, asserting that they conform to their own political beliefs, which is typically labeled as liberal or leftist. The third claim was that climate change advocates are hurting the United States economy, and that doing nothing about changing our energy sources will provide economic advantages for the United

States. These arguments among the skeptical logics portray the upper hierarchical concerns that resonate with those in rural Pennsylvania.

These climate change skeptical logic schisms could be related to motivated reasoning, an information processing mechanism in which reasoning is directed not by an efficient process of information, but by a goal or conclusion which is desirable (Hennes et al., 2020). Motivated reasoning manifests in the desire to maintain prior beliefs or cognitive shortcuts that result from abstract and complex information. In terms of climate science, these cognitive shortcuts could go in ways of both skepticism and conviction, as ideology is the rationale for a distribution of both sides of the argument. Strategies of motivated reasoning against climate change feature selective exposure, the designated search for information that supports their beliefs, biased evaluation, which is constituted by underestimating the implications of an argument or doubting the validity of a correlation, and differences in recall, which entails distorting the relation of events with theories in order to maintain prior beliefs. The framework of motivated reasoning to explain climate change skepticism needs to be invoked in only appropriate circumstances, as overstating this framework can result in insufficient evidence that does not rule out unbiasedly motivated alternatives, or understating motivated reasoning, which would be a backwards approach. Both situations create distrust among those in the skeptical group but choosing to apply motivated reasoning appropriately could be facilitated by considering the experiential perspective of the skeptical individual in question.

In creating gateway to ubiquitous belief in climate change, some psychologists have pushed for a scientific consensus about the subject (Lucas & Davison, 2019). With such complex alternatives to solutions and the constantly changing environment, this process has been interpreted as truth creation, especially among those negatively impacted by direct effects of

policy. Logic schisms are thus created between the two groups, making it difficult to understand the true reasoning that shapes the opinions on either side. In order to fully understand the full experience that a person undergoes that form climate change skepticism, five main experiences for unconcern around climate change are laid out by the experiential framework. The first is ideological unconcern, which is the set of beliefs about a societies proper order and the ways to achieve it. Oftentimes ideological unconcern is manifested in politics, and the polarization of climate change is often a product of western English-speaking democracies; in the US, conservatives are more likely to be climate change skeptics. Conservatism values of tradition, conformity and security produces opposition of changes to the status quo, and relies on hierarchical systems that enforce rules, social order, and obedience which proliferates concern or denial about climate change on the right end of the ideological spectrum. Drawing this pillar of unconcern to rural Pennsylvania, these areas are becoming more conservative as unease around support coal industry increases (Dunlap & McCright, 2008; Nark, 2020), and Pennsylvania also did not require climate change education in the school curriculums until 2020, lacking pushback to skeptical ideals (Kubis, 2019). Secondly, group-based lack of concern occurs when a stance forms based on a societal group one exists in, and many times is a method to mitigate exclusion or rejection. While ideological unconcern is associated with those stances formed by ideals, group-based unconcern is shaped by the interactions of those around them. Partially an impact of partisan media coverage and social media algorithms boxing in groups that share the same beliefs, many of those who conform to climate skepticism do so as a security practice so that one is not excluded from a social group. Geography has a large role in group-based unconcern, which will be examined later. In rural Pennsylvania, small communities and acceptance of partial media narrows the scope of groups with alternative viewpoints, and those who express concern about

climate change could face the threat of ostracization. Religious influences of climate change views involve the doctrine and religious practices that shape one's perspective on the legitimacy or concern of climate change, which can manifest in viewing research on the subject a threat to divine understanding or interference with an inevitable judgment day. Religion may project that humans have limited influence on the Earth's climate, which is especially prominent throughout the Christian religions and those that interpret the Bible as literal truth. As Pennsylvanian adults are 73% Christian, and a direct association is found between conservative Christian faiths and climate change unconcern, religion may be a strong source of skepticism in rural Pennsylvania ("Adults in Pennsylvania", n.d.; Morrison et al., 2015). Self-enhancing sources of climate change unconcern stem from an individualistic mindset, where one prioritizes current concerns over drawn out and ambiguous issues. Attitudes that fit in self-enhancing unconcern feel that the free market fits an equilibrium of societal decisions, which relates to minimal regulation and government action to stop and reverse the effects of climate change. Perceptions on subjects like how low enough gas prices justify driving an inefficient vehicle or that big corporations and cities are responsible for driving change may shift the responsibility away from rural Pennsylvanians and drive unconcern. Lastly, self-protective sources of unconcern develop by way of uncomfortable knowledge, as denying and opposing the imminent threat of climate change aids the overwhelming helplessness an individual feels from the ominous environmental threat. Those who feel especially helpless around climate change may adopt fatalist perspectives, which entail denying responsibility for environmental change, labeling it unpredictable and resilient to human activity. This can be tied into the atmospherically harmful industries of rural Pennsylvania, and how unconcern shelters from the thoughts of dissolving economic foundations in these areas.

## **Climate Change Unconcern of the General Rural Population**

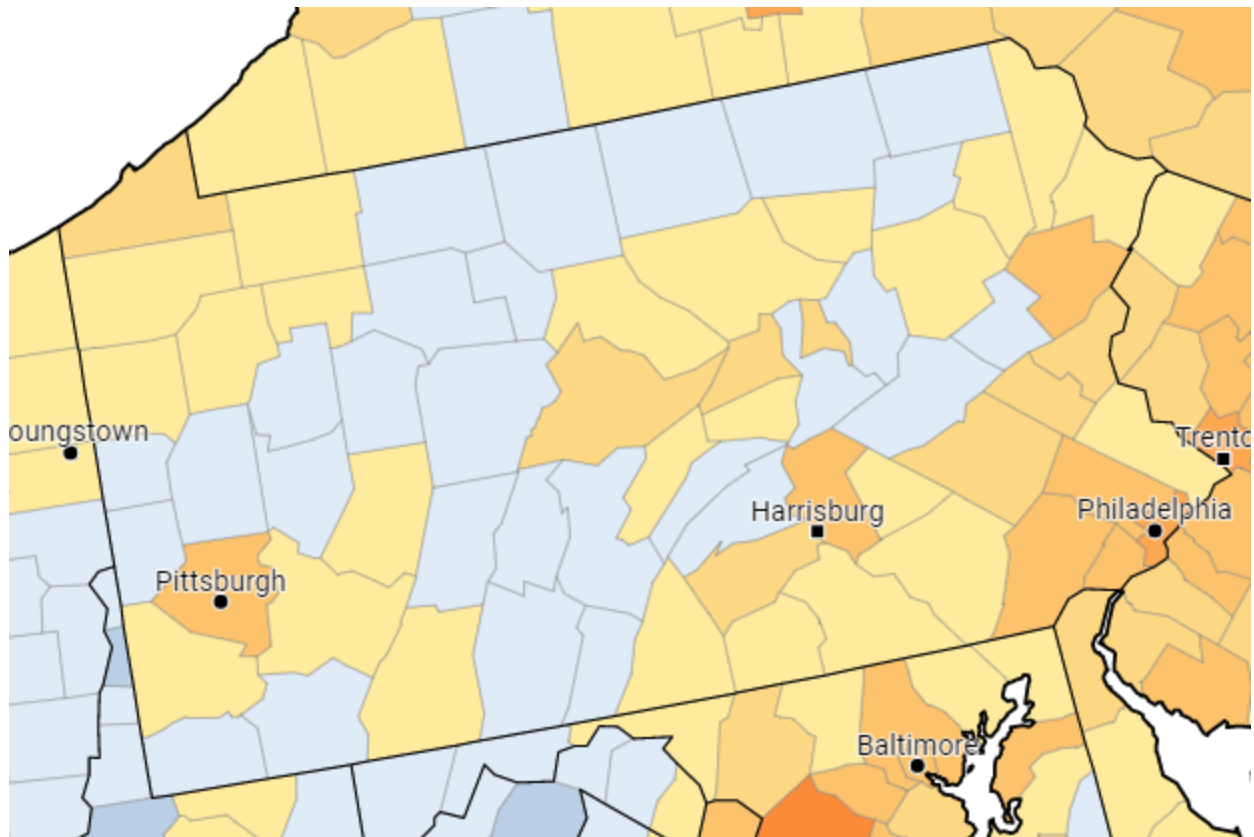
Collectively, concern about climate change in rural communities is highly polarized, as the difference in thinking climate change is very important encompasses 41% of the population compared to 44% feeling the issue is not important (Diamond et al., 2020). This opposing viewpoint becomes augmented when considering age, as the youngest surveyed age group of 18 to 34 years reported 78% yes response to the question “is it very important that the United States take action to reduce climate change?” Only 47% of the age group 35 to 49 responded yes to this question, which is a curious statistic to examine in a lived experience context. It is likely that there are different groupthink between the age groups, as young people are more recently educated and shifting education curriculum is likely a large factor in the conforming of views surrounding climate change. A Canadian study about climate change education policy found that schools which featured the most energy efficient upgrades included the largest investment in climate change curriculum objectives (Bieler, et al., 2018). The older group, having more years of experience as independents, are more of an individualistic population, trading a sense of compassion for the capacity to care for themselves and their growing families; the self-enhancing nature of individualism gravitates to policies that are less restrictive, and in the case of climate change, means less government action. Another marked statistic about the general rural population regarding environmental policy is that climate change was ranked the least important issue compared to other environmental issues, compared to the top-ranking issues of ensuring clean air and clean water; this portrays a self-enhancing lack of concern, as there is a need for clean resources, but individualism causes a short-term perspective that disfavors restriction of freedoms. Individualists are intent on preserving personal autonomy and individual uniqueness

which result in placing personal goals over group goals (Xiang et al., 2019). Acknowledging the importance of climate change implies agreeing with climate change policy, which is a societal restriction is on the spectrum of self-transcendence, in which the individual acts as one with society. The polarization increases into politics, in which when asked the question “when do you expect the effects of climate change will begin to happen in your area?” democrats responded 71% in favor of “have already begun” while republicans only responded 25% to have seen local effects of climate change. This is a definite example of ideological unconcern, with the two main United States political parties differentiating almost half of all responses in the survey.

### **Climate Change Unconcern in Pennsylvania Uncovered**

In the last section there were statistical differences that represented the categorization of matters of unconcern, but the motive for participating in these sources of lack of concern were undetermined. In order to feel the perspective of those who were measured as unconcerned in the last section, this section concentrates on specific articles in rural Pennsylvania that explain their unconcern. News articles allow for explicit opinions from authors which is helpful to piece together the opinions of people in certain geographic locations, as the articles frequently fall into the logic group that it serves. Focus was directed towards news sources in areas that were shown to be both rural and most skeptical, as displayed by the following figure (Marlon et al., 2020):





Counties filled in with grey have a proportion of less than 50% of agreeing with the statement “global warming is caused mostly by human activities,” indicating that these areas will be the ideal part to explore the experiences and formed truths of residents.

In an article titled “Can Biden add energy jobs? Hope mixes with doubt” published by The Sentinel, a Carlisle, Pennsylvania based newspaper, the debate of economics, fossil fuels, and renewable energy is in full effect (EXPLAINER: Can Biden Add Energy Jobs? Hope Mixes with Doubt | Nation | Cumberlink.Com, 2021). Biden’s plan to acquire 100% renewable energy in the power sector by 2035 is scrutinized by the article, noting that replacing the current fossil fuel jobs is going to be a challenge both because of the new skills required and how renewable energy industries are not going to require as many workers. The current renewable industry employs 410,000 people, which is less populous than multiple subsections of current fossil fuel

industries; workers are also concerned about wages, but it is evidenced that the renewable energy jobs would pay \$25,000 to \$27,000 more per year. It is clear from the article that transitioning away from fossil fuels creates fear in those whose means depends on the industry, and this fear takes precedence over the imminent issue that is the effects of a warming climate. This portrays a rationale for individualistic basis for unconcern; although the article does not produce skepticism about climate change, it is implied that there is a level unconcern to maintain current fossil fuel practices. The threat that democratic politicians pose in their anti-fossil fuel policies could be interpreted as creating ideological sources of unconcern, although the pro-fossil fuel ideology of the republican party is formed through the development individualism on the subject.

Investigating further into the opinions and discourse of public officials in Pennsylvania, there is notable skepticism expressed by state senator Gene Law, who serves as the chairman of the Senate Environmental Resources and Energy Committee in the state (Stanley-Becker, 2014). The politician expressed apprehension about climate change's relation to anthropogenic industrialization, claiming the formation of some topographical features of the Earth would not have been possible without atmospheric contaminants that are new in the past 200 years and proven to be the product of human created processes. He is acclaimed to have said that the issue of global warming has never come before his committee, which is candid example of ideological unconcern driving truth creation, as the complete ignorance of the issue by a group whose job is to regulate and legislate states natural resources and energy generation shows that it was never a question of if climate change was an issue needed to be addressed, but instead an instance of motivated reasoning to mitigate discourse surrounding climate change. Only 51% of those in Law's elected county, Lycoming, believe that global warming is caused mostly by human activities; the county industry is dominated by manufacturing, specifically Lycoming Engines, a

relatively small aviation engine company. The threat of climate change regulations on the aviation industry does not favor the smaller businesses, as efforts to find alternate energy solutions in the industry favors the juggernaut companies, Boeing and Airbus (Capoccitti et al., 2010). To the lawmakers in a region whose welfare depends in many ways on one company, it may feel like a duty to preserve the wellbeing of their citizens, and adopting the anti-climate change logic is necessary to conserve the counties economy. Another state representative, Ron Miller, was quoted on the sentiment in which he was “sitting on [his] porch near the end of July, and the temperature is in the 70s. Why is no one yelling about global cooling?” (Stanley-Becker, 2014). In addition, representative Miller labeled calls to implement short-term solutions that would lay a foundation to build a carbon free future “scare tactics.” The outright denial of climate change as an issue portrays the complete schism that has formed ideologically in some instances, perhaps a result of it becoming increasingly difficult to argue against climate change regulation; if one accepts that climate change is indeed an anthropogenic effect, then the exponential detriments that our planet is observing leads to a stronger push for environmental regulation. Unequivocally refuting that human causes are polluting the air and increasing the temperature is a loophole to avoid admission that increased regulation is necessary, and this is the reason the mentality that climate change is not due to human factors is so prevalent in these areas.

Despite the clear signs that climate change unconcern is present in the rural parts of Pennsylvania, that skepticism is not something that the media or other public information sources share. In attempting to find pieces of media that expressed unconcern in the areas where polling showed small rates of worry about the anthropogenic climate change, the newspapers and networks were pushing information that was more in line with the scientific understanding that

action is needed to prevent environmental disaster. The media might not play a large role in influencing those who have ideological or group-based unconcern though, as general rhetoric in the media do not entertain the arguments that climate change skeptics present, and instead attack anyone that disagrees with scientific claims (Schmidt, 2010). Criticizing without entertaining conflicting opinions so that a level-headed discussion can be carried out allow those leading the skeptical logic to fixate on isolated events that portray extremism among public figures in the climate change movement, undermining evidence for global warming in some instances.

Schmidt also highlights the fact that much of the information that climate change skeptics share is through non-peer-reviewed or nonpublished sources, for example a Facebook group or far-right news outlets. In the rural sections of Pennsylvania, the contradicting opinions of surveyed people against the information presented in their media suggest that strength of group-based unconcern within social groups creates enough bias to undermine the peer-reviewed news sources that verify the alarm around anthropogenic climate change.

### **Conclusion**

Unconcern about global warming could cause disastrous delays in implementing solutions to mitigate and reverse our decaying planet. Issues that become ideologically polarized like climate change are difficult to work out, especially when the problem is difficult to fully understand and rapidly changing. The literature about climate change skepticism is vast with many competing psychological and sociological theories, but the simplest way to understand it involves observing the experiences an individual undergoes. This framework's application allows us to see that the most common reasons for doubting the human effect on global warming in the rural regions of Pennsylvania start from self-enhancing unconcern, which is incited by the threat to local industries that climate change regulation might bring and how climate change is

difficult to be directly observed because of Pennsylvania's location. These individualistic sources of unconcern spread into an opinion that is accepted throughout region-based societies, as those that may believe in anthropogenic climate change are more inclined to hide their opinions to mitigate social rejection. Group-based unconcern from there stems into ideological concern, which influences state politicians to appeal to this unconcern, and implement anti-climate friendly policy.

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