Global Warming:
The subversion of undefined terms by the conservative counter-movement

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Introduction

One of the most controversial and important scientific issues of our day is that of global warming. It is a trend which has been documented around the world by the scientific community, pointing toward positive feedback factors, such as an increase in greenhouse gas emissions, melting ice caps, and unsustainable practices such as logging and industrialization. The evidence is overwhelming, and there is a strong consensus among the scientific community that our climate is changing drastically. Even more important, any change will cause greater change. Therefore, even the smallest deviation from the norm will have strong repercussions in the near future, and may be irreversible. Therefore, it is recommended that we take serious action immediately to slow or reverse the trends of warming and change around the world before it is clear that they will do no good. This, however, is difficult news, and seemingly contradicts what we have lived for and thought of as a good, American, westernized, modern, life. The call for immediate action is costly, and the implications for the future are daunting. While the climate may be changing, it is unforgivable to accuse an entire population of causing their own destruction for their apparent values.

With all of the data, and all of the need for the implications to be false, a conservative counter-movement formed to argue for the other side: that we are not the cause, that we do not need to change, that the scientists are wrong. Indeed, this is how the argument started. It became more difficult to maintain as years went by, however, so the tactics have shifted. Now, the arguments are more based on proving the scientific community wrong on whatever front is most plausible and arguable, rather than specifically against the changing climate. The evidence has gotten too great, the popular films too convincing, and dramatic events such as Hurricanes Katrina and Rita brought the evidence out of an intangible trend and helped convince the lay community that trends are converted into disastrous events, even though this view is not entirely scientifically accurate.

The conservative counter-movement, as portrayed by news sources such as Fox News, and primarily constituted by the republican party, works to disprove the scientific community's understanding of global climate change by altering the undefined terms of science to have different understandings, while working under a virtually unchanged axiomatic system. However, the axiomatic system of sound science loses meaning when applied to the undefined terms as understood by the counter-movement, as the interrelationships between terms no longer holds.

Scientific Community

The scientific community is prolific in its publications and research on global climate change. They define this change as a measurable trend in the global climate toward an extreme. In particular, the scientists hold that this change is in the direction of warming, rather than cooling. This is a particularly difficult assessment to make, as the cloud cover will change with a change in climate, but the effect that they have on an altered climate is almost completely unknown. They are the unknown in the equation of climate change. However, it is well understood by climate scientists that there is currently a measurable trend to warming around the world. Using data from the past century, and ice cores dating back millennia, the results are difficult to refute. However, in every reputable publication there is a citing of the potential errors, the uncertainty, and the ways that the models and data could be used and understood differently. This is part of the scientific axioms: no matter how irrefutable the data, leave open avenues by which you can revisit and challenge your results and assumptions. Without this axiom, there is no science, as it presents bias and prevents us from better knowing the world in which we live when given new data. This openness provides a place for new information and ideas; it is the proverbial seat left open for Elijah. We set the place for the future, knowing that without the place, we will not recognize it.

The scientific community is careful to use well understood "scientific terms." These include such phrases as "trend," "change," and "uncertainty." These are terms that often seem obvious to those in the setting of a liberal arts or scientific institution, and are well understood if only from a required natural science course. However, there is a substantial portion of the country and the world that has never come across a strong science curriculum. Indeed, many states are instituting religious ideas into science classes, where data loses meaning and intelligent design claims scientific basis. While there is a place for such beliefs in many Americans' lives, it is by no means scientific. It is based on faith and a visceral understanding of the world in which we live. Science, however, may be motivated by visceral understandings or questions, but it is followed by investigation outside of the human experience. It requires a collection of data that is kept outside of ones self, and can be repeated by another. A spiritual or religious journey, however, can never be repeated, even within ones self. There is no data to collect and record, no trend will ever be the same as the last.

Thus, for the students who have not come across science outside of themselves, it is difficult and often impossible to expect an understanding of the undefined terms claimed by science. This section of the population cannot be expected to share an understanding of these concepts without the exposure to the way of thinking. For instance, it is impossible to expect a person who has never lived in a world with "straight lines" to be able to conceptualize a perfect and unending line in Euclidean geometry. They have no basis for analogy, nothing concrete on which to base the symbolic. When the scientific community uses these terms, they change meaning for the people who have not had the same type of education as the scientists. For those who read the articles, and then write separate articles using this changed meaning, it is easily understood as the truth by the rest of the community that makes up this scientifically illiterate part of American society.

Conservative Counter-Movement

The conservative counter-movement effectively subverts the meaning of the scientific terms, and presents them to a scientifically illiterate audience as science. The authors in this movement use a pseudo-scientific axiomatic system, where they read the scientific articles carefully, defined in this context as scientifically, and look to find where the scientists subvert their own meaning. This type of scrutiny, while apparently conducted scientifically, is the antithesis to science. The scientific papers are approached as known to contain at least one flaw, and so there is no room in the interpretation for the discovery of truth or increased understanding. Instead, the scientific terms such as "trend" and "uncertainty" are subverted to mean "unknowable," "not relevant to daily life" and "likely wrong." Conversely, the scientific understanding of these terms is "the slope of a set of data," or "a line that best fits a plot of a large sampling of data." Clearly, as these terms are undefined, it is impossible to provide a precisely worded, non-circular definition (such is the definition of undefined), however, the difference in visceral meaning is apparent. Here, science is based on a general visceral meaning, but the effect of such meaning is to increase the ability to understand non-visceral phenomena. The effect of the counter-movement's visceral understanding of terms is to subvert the meaning of a system designed to increase knowledge without visceral understanding. Thus, it negates the negation of meaning, and so the pseudo-scientific system as presented by the conservative counter-movement in terms of global warming subverts its borrowed axiomatic system.

Many arguments produced by the counter-movement follow an effective progression to divert the reader from trusting the scientific community. For instance, the article "Dust, Not Humans, Chief Cause of Atlantic Warming" written by the website LiveScience is initially consistent with scientific language, and claims that global warming would have a large effect on oceans and storm systems, a common understanding in the scientific community. The article goes on to quote a scientist, but immediately works to undermine his statements by noting that the same scientist "had thought" something different, but now sees that he was wrong. Therefore, they indicate to the readers that he may be wrong this time as well, and may not be trusted. Next, the article pulls in some data about dust storms, but uses data from only a few years, (not statistically significant) and refers obliquely to an "issue of Science magazine" as proving that such dust storms are the primary cause of what we classify as global warming, discounting all of the other data that has been collected and research that has been conducted. The article ends by again noting the uncertainty of the scientist who was referred to earlier in the article, further subverting his views as a scientist. This is particularly interesting, because he was not opposed to the idea that dust storms are statistically significant. However, his role as a scientist who also considers global warming to be a valid theory makes it important for him to be undermined. The undermining does not effect the argument that dust storms are important, but instead subverts the scientific view point while still sounding scientific by quoting data.

Another article, “Ice Cover on Great Lakes Declining, Scientists Say” published on the Fox News website, accepts that global warming is occurring and that it is affecting the thickness of ice on the Great Lakes. This initial acceptance allows the authors to align themselves with the scientific community, and thus appear less combative. The next step of the argument again quotes uncertainty, continuing the pseudo-scientific approach. While most of the article discusses some of the issues with less ice on lakes, it ends on a positive note: less ice allows for more consistent shipping routes and improves the economy. This type of argument aligns the article with a standard view of the Republican Party, which makes up most of the reader population, where the economy is more important than altering habits having to do with global warming. While it is unfair to claim that this is the view of all in the Republican Party, republicans constitute the conservative counter-movement almost exclusively. Thus, the article aligns itself with both the scientific community, and the counter-movement. This hides almost all combative behavior, and challenges the scientific community by showing that their own pseudo-science comes to a different conclusion, even while accepting a majority view-point that is substantiated by evidence.

One of the most insidious ways that the counter-movement creates the belief that scientists are wrong is by claiming a scientific view point and showing that scientists are against a scientific view point. As an example, the article "Sooty Scheme to Stop Climate Change Could Backfire," also published by LiveScience, highlights an uncommon idea that sulfur particles could be sprayed into the atmosphere to prevent global warming. This idea is based on the change in albedo and incoming radiation when particulate matter is high, such as after a volcanic eruption. The article takes this idea, not accepted by many scientists, and only refers to scientists who believe that this method may help prevent global warming. Then, without referring to the majority of the scientific community, the authors present the idea that this may be more harmful than helpful, as increased sulfur in the atmosphere would create acid rain. This is a documented and well understood phenomena of aqueous H_2SO_4, which has been of great concern due to coal-based power plants. The authors present the idea without mentioning that most of the scientific community agrees that this would be a poor choice in methods to remedy the situation, and that it is simply an amusing idea. Thus, the authors appear to be the scientifically minded thinkers, while the scientists do not think through the implications of acting in a rash manner and will likely harm the American population.

All of these structures for articles produced by the conservative counter-movement work together to create a body of text that subverts the scientific understanding of scientists, and claim scientific understanding instead for the counter-movement. In addition, they claim that global warming has positive benefits for the economy, and that preventing global warming would be harmful both to the economy and the population of the United States. All of the structures used in articles produced in the past few years and widely publicized hide combative arguments by opening the article with a concession to the scientific community or evidence to suggest that the authors are more scientifically based than the scientists that they challenge. In fact, the counter-movement even produced studies that are designed to create camaraderie among the readers by showing that "Sixty-six percent of self-identified Republicans thought publicized warnings about climate change were exaggerated." Thus, the heavily republican readership of Fox News feels that their counter parts believe that global warming is not as great a threat as made out by "the media." It is interesting, however, that Fox News is also media, and does not claim that global warming is a particularly important issue. The authors are therefore apparently successful at removing themselves from the popular conservative understanding of media.

By changing the understandings of "trend" and "uncertainty" and then claiming superiority at scientific understanding over the less informed scientific community (primarily understood as liberals) the conservative counter-movement is effective at creating a general understanding that global warming is not a significant threat, and that action to prevent it is dangerous. It is true that such action requires a change in the way of living in America by not "living large" and dependently on excess in grocery stores, electricity, and water availability, and by requiring great cost in the short run to produce new technology that is consistent with decreasing the anthropogenic positive feedback loops in the climate. It may be that the cost is easily outweighed by the savings in health costs as the particulate matter increases and causes respiratory distress, or the deaths caused by extreme heat during the summer, or the decrease in biodiversity as species fail to adapt quickly to climate change, but that view toward the future is impossible to comprehend without allowing it a place at our table.

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