

Anthony Mania

Planet Earth Section 92

Dr. Donald Monteverde

May 2nd, 2022

### **Optional Term Paper: The Climate Change Debate**

The Global Climate Change debate is one that has been talked about in the public eye since the mid 1900s. It was once a very debated topic in the scientific community, and although it still is talked about and researched by scientists alike it has become more of a political and social debate in the public eye. The debate for those who don't know is essentially the argument that the climate has been increasing exponentially throughout recent years due to human activity, and that because of this it is going to lead to the eventual extinction of the planet. Most scientists today agree that climate has been changing and that it has most likely been because of human activity, but the main point that is debated is the fact that this is going to lead to the planet's extinction; although some also believe that that climate has not been drastically changing as scientists claim. Both sides of the argument have some valid points and credited believers but ultimately one side seems to be more based in facts than the other. In this paper I am going to critically evaluate both sides of the argument by showing the similarities and the differences of each side and by breaking down each argument to determine which one seems the most substantial with the information present to us.

Although the two sides of the debate are different and have strong beliefs for their respective sides, there are some similarities that the sides share. One similarity to both sides is that there are scientists that back up both sides. Many scientists who deal in specific fields of climate, weather, and Earth agree with both sides of the overall issue. Another similarity is the

fact that both sides of the argument have statistical evidence to back their sides up. The side that is for the idea of humans causing an increase in the climate have technology such as satellites and machines that trace the temperature that they use to back up their case. Many statistics about the increase of greenhouse emissions, and general charts. The side against the idea of humans causing an increase in the climate also have technology and statistics that back up their side and try to point out the flaws in the opposing argument. Both sides have also gotten political as many politicians have vouched for a particular side. It has even gotten to the point where this debate about climate change and global warming is usually brought up in presidential debates. Overall, both sides share ways in which they function, but when it comes down to their overall argument it becomes evident where one strives more than the other.

Let's first start by breaking down the argument that is in favor of the idea that human activity has caused an increase in the climate. To begin with, it has been stated by many sources that over 97% of active scientists agree that global warming caused by human activity exists. Some might think that this fact alone should end the debate but giving the other side the benefit of the doubt let's continue to dive into both sides of the argument. The scientists that study this matter specifically are called climatologists, and although an enormous amount of them are in favor of this side of the argument, it's imperative to look at what is actually argued and what facts and or statistics are used in the argument. Overall while researching, I've found that almost every article and source about this side of the argument has many statistics cited. This makes sense as an argument that makes a claim that something is happening should have evidence to back it up, as this can be compared to the justice system in America where you are innocent until proven guilty. If scientists are making a claim that humans are contributing to global warming then they need to prove the culprit (humans) guilty. In the article, "Climate Change: How Do We

Know?” by NASA they provide specific evidence with statistics of the global temperature rise, warming ocean, shrinking ice sheets, extreme weather, etc. Within each example are other articles and or sites that are cited with specific numbers and overall numbers of how the climate has changed in recent years. Scientists in favor of climate change also tend to relate statistics to what they were years, and decades ago. They do this to show a comparison of how the temperature and weather as a whole has changed drastically and how this has lined up with the increase of human activity ramping up (generally around the start of the industrial revolution). I have also noticed that the argument also revolves around more than just the statistics or what is seen by the eye. The argument also has some physics in it with how the gasses that are produced from things such as, for example, burning fossil fuels then absorb heat and as a result increase the temperature. This essentially means that when fossil fuels are burned the temperature is going to naturally get hotter. One flaw however in this argument is the fact that many scientists have made false claims or predictions about how the earth would be in a certain number of years or that the earth would be destroyed in a certain number of years. These claims have either been disproved or seem unlikely as the years go on. Despite this there has been evidence of increased temperatures as the years go on, and an increase in bad and severe weather.

Now let's break down the other side. If the opening sentence of the last paragraph regarding “that over 97% of active scientists agree that global warming caused by human activity exists” was any indication of how this side of the argument would be broken down, it should be known that this side is not nearly as strong or credible as the other. To begin, this side of the argument is the clear minority side of the argument. Although there are scientists that agree with this side, the “term” scientist is something that should be noted. Throughout this paper I have used the term scientist and climatologist pretty loosely, but the fact of the matter is that just

because someone is a “scientist” does not mean that they are necessarily credible. A scientist can be defined as “a person who is studying or has expert knowledge of one or more of the natural or physical sciences” according to google, and this definition shows that you don’t need to necessarily be credible to be labeled as a scientist or as a researcher. According to the definition you merely need to be studying the field to be considered a scientist. Thus, credibility is something that is very loose in all research done for this argument. Many scientists on the side that human activity doesn’t cause climate change usually don’t refute climate change itself. There is a lot of irrefutable evidence that the climate is changing so many scientists on this side agree that it is changing but just disagree with the fact that human activity (greenhouse gasses more specifically) cause it. Still, there are people who believe that the climate is not changing at all, but I digress. Regardless, there are many generic claims regarding climate change that this side makes in their argument. While researching and breaking down the argument I found that are many instance of claims such as but not limited to “These changes happened long ago”, “This data shows no increase”, “This is just absurd”, and “Sounds awful, to put it mildly” (Kerr-Lazenby and Feulner). The problem with claims like these are that they are baseless and lack substance. Anyone in an argument can say that something is incorrect or can insult the other side by calling them names but if you don’t present a counter argument with evidence then the claims you made are baseless. Generic claims as well are poor to use in an argument, saying something happened long ago or that there isn’t an increase but not saying how long ago or what the increase or decrease specifically contributes to this. Overall between the weak claims and the differing arguments for this side, it's clear that this side is not as stable as the other.

In conclusion, it becomes clear that after breaking down both sides, the argument for climate change being caused by human activity is the much stronger argument. The argument of

climate change not being a thing or that human activity doesn't affect it really just lacks major substance and has such a small following to begin with. The more I researched the side against climate change the more I found that articles seemed more and more like opinion pieces rather than research papers. The side for climate change has many examples backed up with data of parts of the environment that have been affected by climate change along with real life physics and science of what is happening. Although not all predictions of what the earth will be like in the future have come true, there has been evidence of climate change affecting the earth thus far. It's a shame that public opinion and politics have taken hold of this argument where the science of it seems like an afterthought sometimes, but it is clear which side is the superior argument. As technology advances it seems that many companies and leaders are focusing on ways to reduce the use of fossil fuels including trying to make all cars electric eventually instead of using gasoline. Hopefully, the earth can survive longer than its demise is predicted.

### Works Cited

Feulner, Edwin. "Warming Up to the Cold Facts About Climate." The Heritage Foundation, <https://www.heritage.org/environment/commentary/warming-the-cold-facts-about-climate>. Accessed 30 Apr. 2022.

Kerr-lazenby, Mina. "The Climate Change Debate: We Look at Two Different Sides of the Argument." Denizen, 23 Jan. 2020, <https://www.thedenizen.co.nz/culture/the-climate-change-debate/>.

"Climate Change Evidence: How Do We Know?" Climate Change: Vital Signs of the Planet, <https://climate.nasa.gov/evidence>. Accessed 30 Apr. 2022

Jericho, Greg. “‘Both Sides’ of the Climate Change Debate? How Bad We Think It Is, and How Bad It Really Is.” The Guardian, 3 Aug. 2019. The Guardian, <https://www.theguardian.com/business/grogonomics/2019/aug/04/both-sides-of-the-climate-change-debate-how-bad-we-think-it-is-and-how-bad-it-really-is>.

“History of Climate Change Debate - ProCon.Org.” Climate Change, <https://climatechange.procon.org/history-of-climate-change-debate/>. Accessed 30 Apr. 2022.