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### Critical Analysis: The Root Cause of Climate Change

People and wildlife are suffering from the effects of climate change throughout the world. The earth's polar ice caps are melting at a rapid rate. Polar bears are losing their habitats and their population is decreasing. Farmers are experiencing extreme droughts that are causing their crops and livestock to lose quality. Snow has begun to fall on the warmer regions of the world. The oceans are getting warmer threatening the sea creatures underneath. The summers have become hotter and during winters, snowfall has increased in volume. These are some of the results of climate change. Some say that climate change is a natural process while others point the blame towards humans.

People often use the terms climate change and global warming interchangeably. Though the two terms are related they are not synonymous with each other. Global warming refers to the rising average temperature of the earth while climate change refers to the impacts global warming has caused on the world's climate ("Center for Climate and Energy Solutions"). Understanding the fundamental meanings of these words is a good first step in determining the causes and finding a solution for this global problem.

The temperature of the earth's surface has been increasing for years before humans started to produce large amounts of greenhouse gasses. Volcanic eruptions

and natural methane emissions have caused the earth's temperature to rise. However, the majority of scientists agree that humans are the root cause of climate change ("Center for Climate and Energy Solutions"). Humanity's pursuit for progress and technology has been the main distributing factor of climate change. The Industrial Revolution was a big step for mankind. It introduced the steam engine that allowed humans to travel long distances in a short amount of time. However, the steam engine required the burning of coals to power up the massive trains. Burning coals produced carbon dioxide and nitrous oxide. The emission of these gasses produces intense heat in the atmosphere. With the continuous use of the steam engine during the Industrial Revolution, one can only imagine the magnitude of the gasses emitted by the trains.

The Industrial Revolution was a pivotal point in the history of man. With the creation of the steam engine, inventors were able to create the first car. This allowed humans to become closer to one another and expand their territory. This also led to the great emission of greenhouse gasses. Some of the greenhouse gasses stop the sun's heat from exiting the earth's atmosphere causing global warming. Of course, during the time of the Industrial Revolution, humans have no idea of the lasting impact the steam engine would leave. The people back then only wanted to improve the quality of their lives and explore the other parts of the world. They were oblivious to the changing climate and the heat trapped inside the earth's atmosphere.

Being able to explore more areas in a short amount of time allowed humans to expand their territories. Small villages grew into larger towns and so expanding in the nearby grasslands and forest was unavoidable. The large towns and cities required a huge amount of food, which required farmers to also expand their farmlands. People

began cutting down whole forests and rehabilitating grasslands to better fit their needs. Biology students know trees are the lungs of the earth. They absorb carbon dioxide and produce oxygen. Carbon dioxide is another greenhouse gas that is a great contributor to global warming. When humans started the acts of deforestation, they were cutting down vital parts of the natural world. Without the trees to absorb the carbon dioxide in the atmosphere, the greenhouse gasses remain inside the atmosphere thus causing an increase in the earth's average temperature.

The progress in agriculture also contributed to climate change. Besides the forests being cut down to provide more space for crops, the innovations in handling livestock and fertilizing crops are sources of greenhouse gasses as well. Methane is a greenhouse gas produced mostly from organic waste. With farmers being able to raise a large population of livestock, the creatures can produce a huge amount of methane. Storing manure and other organic waste also produce this natural gas.

Climate change also affects agricultural land and farmers' lives. Droughts have become longer and with the unpredictable climate, some crops fail to grow healthy. Agriculture is one of the contributors to climate change yet it is also a victim. Due to the high demands from highly populated cities, farmers have no choice but to practice these harmful methods. This selfish solution for the growing demand is continuing until today. Farmers, scientists, and the government should develop and enforce new sustainable methods to help solve the climate change crisis.

Factories and other industrial buildings are the most common contributors to air pollution. These types of businesses often produce synthetic compounds that are very harmful to the environment and the atmosphere. Fortunately, governments have

created strict regulations to control the production and effects of synthetic compounds (“The Causes of Climate Change”). This is another example of the negative effects that human progress has on the environment. Factories provide many people with jobs and some produce necessary daily products. However, to be efficient and to earn more profit, these businesses neglect the impact they have on the environment. Even when they are made aware of their environmental impact, some continue to produce their products inefficiently. The government should legislate stricter rules and heavy punishments for organizations that refuse to shift into a more sustainable way of production.

The root cause of climate change is without a doubt the selfish progression of mankind. Human progress only focused on improving the quality of life of humans and failed to take into account the impact they could have on the environment. Global warming may have been happening even before humans created the steam engine, but due to our innovations, the rate at which the temperature is rising is increasing rapidly. Individuals and businesses should not wait for their government to take action and create laws to solve climate change. Each individual and business should do their part and practice a more sustainable way of living. Humans are the root cause of climate change and it should also be humans to solve the problem.

## References

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