

Narrative Analysis: Exploring the Connection Between Climate Doomism and Nuclear Power

Humanity has always been curious about what the end of the world would look like. An Armageddon that would erase humanity and its achievements, leaving nothing behind but ruin. Various cultures, religions, and even works of fiction have their own narrative of a major Apocalyptic event, and how humanity should prepare for its inevitable demise. The real-life Armageddon we are currently living through, however, is climate change. Climate doomism can be characterized by the idea that humanity has breached the point of mediating any of the damage that has already occurred. All people of differing political beliefs or socioeconomic standing will undergo the repercussions of excess consumption and emissions. The question becomes who is to blame for the situation we as humans have found ourselves in? Many turn to the government as countless times our representatives have failed us when it comes to exchanging our lives for oil or approving legislation that is, directly and indirectly, causing the sixth mass extinction. People have transitioned from fearing nuclear disasters to fearing catastrophic climate events. Author of *The Uninhabitable Earth* Wallace-Wells introduces the timeless black-and-white American film *Dr. Strangelove* as a satire of the US's involvement in developing the first atomic bomb and simultaneously is an allegory for physicist Edward Teller.

Wallace-Wells' *The Uninhabitable Earth*, uses the film *Dr. Strangelove* as a reference as it takes a critical view of the Manhattan Project and the nuclear arms race that followed. The film portrays the military and political leaders of the United States as being reckless and irresponsible, willing to risk the destruction of the world in pursuit of power and prestige. The race to develop nuclear weapons fear mongered society that humanity would be heading towards a catastrophic environmental disaster, and the idea of another country having access to this type of weaponry would signify the end of American life as once known. For us to truly understand the connection between nuclear and the environmental crisis, we must analyze how nuclear testing and research have had severe consequences on biodiversity and the quality of life for animals and humans. In Toshiro Higuchi's *Political Fallout: Nuclear Weapons Testing and the Making of a Global Environmental Crisis*, 'acceptable safe levels' of radiation considered by the US department of defense were not with the safety and well-being of the public in mind; more so, founded on the desire to pursue nuclear testing to maintain security during the Cold War in addition to non-military uses. One of the most notable impacts of nuclear energy extraction on the environment is the process of uranium mining. The drilling processes that are involved with uranium mining "...increases the exposure of water to contaminants," (Dewar, Harvey, and Vakil 469). According to the Center for Biological Diversity, these pollutants can contaminate and linger in aquatic ecosystems for years; in addition to poisoning fish, these pollutants can accumulate in food systems and cause further health ramifications for not only fish but for other connected species as well, including humans.

Another large concern that comes with nuclear testing is the room for little to no margin of error when calculating the safety of the testing procedure. As recently as 2011, *The Journal of Environmental Radioactivity* covers how short and long-lived isotopes from a nuclear accident in Fukushima have been found in Northwest Germany through rain and air samples. The most well-known example of the impacts of this isotope can be looked at the US's involvement in nuclear testing on US-occupied islands in the Pacific Ocean. In 1968, the indigenous peoples of Bikini Island were told by the government that their land would be safe to return to after testing, but, "exposure to radioactive isotopes resulted in miscarriages, stillbirths, genetic abnormalities, and numerous deaths until they were evacuated a second time in 1978," (Niedenthal, 2001). As a result, the indigenous people of Bikini Island became more reliant on imports after the US destroyed the resilience of their island to provide resources for food for them.

Another example is the ecocide of Amchitka, Alaska, due to underground detonations. This made the land virtually inhabitable for all life, despite Amchitka being a “wildlife refuge” (Jones and Thompson 487).

Wallace-Wells also explores the nuclear crisis as a political and moral plight. The author writes, "The world we are entering is profoundly different than the one we are leaving behind, and one that few of us have been prepared for." It is essential that we take steps to mitigate the environmental harm caused by technological advancements and consider the long-term consequences of our actions,”. The lack of action taken by our world leaders, who prioritize short-term gains over long-term sustainability, is contributing to the endangerment of the public and their health. These consequences include widespread famine, mass migration, and the extinction of countless species. *The Uninhabitable Earth* serves as a stark reminder of the potential consequences of technological advancements including major government-sponsored nuclear research organizations such as the Manhattan Project. Its controversial legacy warns of the possibility of mass environmental destruction and instills fear amongst the general public of a major destructive nuclear phenomenon; in current times, this has translated into the modern-day climate crisis.

The Manhattan Project began in 1942 and was an effort to build an atomic bomb before Nazi Germany could develop its own. The project was successful, and the United States dropped atomic bombs on the Japanese cities of Hiroshima and Nagasaki in 1945. However, the project also had a significant impact on the environment. The testing of nuclear weapons in the Nevada desert and the Pacific Ocean led to radioactive fallout and contamination of the environment. The Manhattan Project and the subsequent development of nuclear weapons contributed to the rise of nuclear doomism, which served as a precursor for climate doomism. One of the primary environmental impacts of the Manhattan Project was the production of nuclear waste. The production of nuclear materials such as plutonium and uranium created large amounts of radioactive waste, which must be disposed of carefully. This waste remains a significant environmental hazard to this day, and some of it has leaked into the environment, contaminating soil and groundwater in several locations.

Edward Teller is a Hungarian-American physicist most known for his work in nuclear weapons and the research for the Manhattan Project and the development of the atomic bomb. During World War II, Teller was a key figure in the Manhattan Project and is heralded as ‘the father of the atom bomb’ As an outspoken advocate for nuclear power, Teller believed that nuclear power was the key to solving the world's energy problems. Nuclear energy is cleaner than its alternatives such as oil and coal, and it has a high energy output with the ability to provide electricity-demanding services to more people. He argued that the benefits of nuclear power outweigh its potential risks. Teller’s character and legacy are complex. Some view him as a visionary scientist and others as a dangerous idealist. In the words of physicist Freeman Dyson, Teller was "a person who had the courage to be hated." Teller often clashed with his peers because he was not afraid to take controversial positions. His most notable rivalry is with the head of the Manhattan Project, J. Robert Oppenheimer.

Teller and Oppenheimer’s conflict began with the denial of Teller’s request to fund research that would go into developing the hydrogen bomb. Given the destructive power of the atomic bomb, Oppenheimer believed that the need for this weapon was unnecessary and violent. His concern about the destructive power of weapons such as the atomic and hydrogen bomb didn’t phase Teller. Remaining a strong advocate for these types of weapons, Teller continued to clash with Oppenheimer who advocated for their disarmament. The moral differences between the two scientists resulted in the destruction of their credibility. After World War II ended, Teller focused on developing the fusion bomb, which could be made more powerful. As opposed to Oppenheimer, who wanted to make nuclear bombs smaller and use

them as weapons against invading armies, despite the impracticality and ecological harm that would be committed. Nevertheless, these competing scientists continued their respective research while also trying to obtain resources from the government. Oppenheimer had been approached by someone about moving secrets to the USSR and kept this information secret for months by lying. When Oppenheimer's security clearance was suspended due to allegations of being a communist; Teller testified against Oppenheimer, stating that he did not understand Oppenheimer's actions and disagreed with him on several issues, and believed that Oppenheimer should not have security clearance. The removal of Oppenheimer's security clearance and his removal from his field of work invited rumors and speculation regarding Teller's character. Despite staying in the science community, Teller greatly suffered from a damaged reputation. He is still seen as the one who caused the feud that impacted Oppenheimer's life and reputation. This clash in morality emphasizes the difference between realism and idealism exhibited by Teller and Oppenheimer respectively. The legacy of the Cold War and the world leaders participating in the race towards nuclear arms allowed the United States to stand where it is in modern times. The idea of freedom was at stake and the US government did what it had to do in order to protect the rights of its citizens. But we're their intentions truly in the best interest of the American people?

In conclusion, the modern-day climate crisis' origins can be traced back to the initial fear of the development of nuclear technology and weaponry. The Manhattan Project and the subsequent nuclear arms race contributed to the rise of nuclear doomism and served as a precursor for climate doomism. Nuclear testing and research has been shown to have severe consequences on biodiversity and the quality of life for animals and humans, as demonstrated by the case of the indigenous peoples of Bikini Island, the traces of isotopes found in Germany, impacting agriculture, and the ecocide of Amchitka, Alaska. The endangerment of public health due to the lack of action by world leaders prioritizing short-term gains over long-term sustainability can also be tied today as recently as 2023 with the approval of the Willow Project to exploit Alaska further for its natural resources. The Uninhabitable Earth is a reminder of the potential consequences of our actions and the urgent need to mitigate environmental harm caused by technological advancements. Despite the real damage that is occurring, we must consider that fearmongering the public about climate change will not result in action, especially if people feel as if there is no hope. For instance, generations of BIPOC activists have been fighting for their existence and the environment; change can start with something as abstract as a dream for a better future. Activism aside, scientists are also discussing ways to mitigate climate change through geoengineering. As a potential solution to climate change, geoengineering would require the deliberate manipulation of the earth's climate to counteract greenhouse gas emissions. This idea, unsurprisingly suggested by Edward Teller himself, would incorporate the usage of nuclear explosions to alter the Earth's climate. While some experts argue for its effectiveness, others warn of unforeseen and potentially catastrophic consequences, suggesting that more research and public discussion are necessary before implementing any geoengineering or Earth modification measures. Looking at the severity of climate change, can we afford to take more risks?

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