

The Energy Crisis in the Godzilla Film Series

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Abstract

Since the publishing of the first film “Godzilla” by Toho Corporation in Japan in 1954, the story of the monster Godzilla has been constantly portrayed and retold. Godzilla has been a symbol of the global popular culture. This paper analyzes the nuclear crisis in the Godzilla film series, reexamines the global energy crisis since the 21st century, explores the ideological connotations of ecocriticism and ecological literature, explains the transformation of value when people are in the face of the energy crisis, to reflect on the energy choices and changes in human lifestyle in the new era.

Keywords: Godzilla, energy crisis, ethical choice

1. Introduction

Monster Godzilla first appeared on the screen in the 1954 Japanese film “Godzilla”. Until 2020, a total of 29 Godzilla movies, 3 manga versions, 1 Hollywood version, and 2 Monster Verse versions have been released, advertising Godzilla as a global symbol of the global popular culture. In the film, there is an ancient monster deriving from the hydrogen bomb explosion. Its form is a combination of dinosaurs and whales, and its image is a product of collective consciousness based on human beings’ nuclear fear, which is also synonymous with the environmental crisis.

The Japanese name Gojira for Godzilla comes from a combination of Gorira (gorilla) and Kujira (whale), which shows Godzilla’s large size, aquatic habitat, and power. The setting of Godzilla’s image also conforms to humanity’s reverence and fear of the unknown world. Scholars generally regard the first generation of Godzilla films as the anti-war theme, but behind the Godzilla phenomenon lies an unprecedented energy crisis and ethical choices of humanity, as well as a competition of natural resources among countries. The emergence of the first generation Godzilla was precisely due to the use of nuclear energy. In the face of catastrophic consequences, scientists Yamamoto Kohei and Ujinze Daisuke have a completely different attitude. The former is not willing to kill monsters, but to use and control them as much as possible; the latter predicts the consequences of the nuclear crisis and resolutely calls for the oxygen destruction to kill the monster.

Two scientists’ different attitudes essentially reflect human beings’ confusion when facing technology represented by the nuclear energy: whether nuclear energy is a device for the social progress or a force for destroying the world. Should human beings control nuclear technology or avoid it? The recent development of the nuclear energy leads to the discussion about the ecological justice. The changes of ethical values are brought about by the nuclear confidence or panic. This article reveals the energy crisis behind the Godzilla phenomenon, explores the development of energy, reflects on the technology polarism, advocates the global energy ecological cooperation, and constructs ethical values based on the ecological justice.

2. Literature Review

The American scholar Peter H. Brothers points out that “from the ashes of World War II, including the devastation caused by two atomic bombs, arose most misunderstood monster in movies. Godzilla is in fact a virtual re-creation of the Japanese military and civilian experience during the final months of WWII, even to Godzilla itself, as Honda insisted that the monster’s roar sound like an air-raid siren while its footsteps should sound like exploding bomb” (Peter, 2011, pp. 36–37). David H. Stymeist (2009) advocates that Godzilla movies collectively represent different threats to the survival of industrial civilization, and actually Godzilla is the symbol of technological and ideological infrastructure of modern life, showing anthropocentrism.

Some scholars in China point that Godzilla is the embodiment of nuclear weapons. Through the various scenes

of Godzilla attacking Tokyo, people seem to see the devastating scenes that the atomic bomb attacks on Hiroshima and Nagasaki. Nuclear radiation and raging flames can instantly engulf Tokyo, and people have no chance of escaping. The Chinese scholar Fang Yu (2018) believes that the current “Godzilla heat” comes from the film “concretizing environmental issues and the threat caused by the pollution”, and the environmental crisis in the concept has evolved into an imminent threat. Liu Jian (2017) also pointed out that the Godzilla film series show Japa’s post-war process of modernization, as well as the continuous evolution of Japanese collective social consciousness during this process.

However, it is controversial about the cultural symbolism of Godzilla and how to eliminate monsters like Godzilla. This paper analyzes the nuclear crisis in the Godzilla film series, reexamines the global energy crisis since the 21st century, explores the ideological connotations of ecocriticism and ecological literature, explains the transformation of value when people are in the face of the energy crisis, to reflect on the energy choices and changes in human lifestyle in the new era.

3. The Global Energy Crisis

Godzilla film series seem to be science fiction films about monsters’ appearing, reflecting the unity and conflict between human beings and nature. These films obviously show the consequences of the environmental degradation, namely the reappearance of ancient monsters. However, the environmental crisis in the movies originates from the global energy crisis, which in turn gives rise to nuclear panic and threat, reflecting the current technology polarism and concepts of the ecological justice.

Generally speaking, the energy crisis refers to the impact on the economy due to energy supply shortage or the rise in price, which usually involves the shortage of oil, electricity, or other natural resources. Since the energy crisis in 1973, there have been four global energy crises, accompanied by localized energy issues in various countries. The modernization of the global economy benefits from the widespread use of fossil fuels such as oil, natural gas, coal, and nuclear fission energy. However, the resource carrier of this economy will rapidly approach depletion in the first half of the 21st century. According to the comprehensive estimation of oil reserves, the limit of available fossil energy is about 1180-151 billion tons. If the annual output of global oil in 1995 is 3.32 billion tons, the oil reserves will be exhausted around 2050. The estimated natural gas reserves are between 131,800 and 152,900 trillion cubic meters. The annual mining output is maintained at 2,300 trillion cubic meters, which will be exhausted in 57–65 years. The reserve of coal is approximately 560 billion tons. In 1995, the mining output of coal was 3.3 billion tons, which can be supplied for 169 years. The annual mining output of uranium is 60,000 tons, which can be maintained until the middle of the 1930s according to the estimate of the World Energy Commission in 1993. The exploring of nuclear fusion has not been yet realized by 2050. The shortage of fossil energy and raw material will inevitably lead to the worsening of the global economic crisis and conflicts, ultimately devastating the modern market economy.

Faced with the global energy crisis, different countries are actively investing in the development of alternative energy, mainly focusing on solar energy, tidal energy, wind energy, hydropower, etc. According to calculations by astrophysicists, the solar system can still exist for 4.5 billion years, and the energy provided by the sun each year is 15,000 times the world’s population’s commodity consumption. In some areas such as Central and Northern Europe where sunlight is not enough, there have been some buildings that rely entirely on sunlight for heating. Hydrogen energy utilizes a large amount of water present in nature to produce hydrogen through electrolysis or through solar photocatalytic water splitting. Small hydropower and tidal power generation can also provide considerable electricity. Denmark is a major country to use wind power with 6,300 wind turbines, providing 13% of its electricity demand. In short, the utilization potential of renewable energy is great and can fully meet the energy needs of sustainable development in human society. However, there are also many drawbacks to energy development, such as wind power generation endangering the local ecological environment, damaging vegetation, altering topography, causing soil erosion, and desertification. From the production, storage, transmission, and the use of renewable energy, there is still a long way to go in terms of technological progress. As a result, nuclear energy development has become an important way to eliminate the global energy crisis.

Considering that the supply chain issues caused by geopolitical conflicts lead to the turbulence in the global energy market, many countries around the world are rethinking their energy security and paying more attention to the diversity of energy and self-controlled energy supply. For many countries, developing nuclear energy is a practical choice to ensure energy security. In recent years, many countries have shown their ambitions and commitments to achieve zero emissions, and some countries have become more aligned in their goals of seeking for clean and low-carbon energy development. Although wind and solar energy is expected to lead the global energy sector, due to their uncertainty and flexibility, new energy resources such as the nuclear energy are still

needed as important supplements. The International Energy Agency (IEA) has shown that to adjust to the climate changes mentioned in *The Paris Agreement*, global capacity of nuclear power needs to double by 2050. According to the updated International Atomic Energy Agency (IAEA) power reactor information system on April 19, 2023, there are currently 420 operating nuclear reactors worldwide with a total installed capacity of 374,827 MWe, and 56 under construction of nuclear reactors with a capacity of 58,595 MWe.

4. The Technology Polarism and the Nuclear Crisis

Based on different countries' actively developing nuclear energy, it seems that the nuclear energy has become the key to eliminating the global energy crisis. But it is not true. The nuclear fear and threat brought about by nuclear energy is also a challenge for the global ecological protection in the 21st century. The Chernobyl nuclear accident on April 26, 1986 resulted in a reactor explosion and meltdown. The explosion and fire released a large amount of radioactive materials, polluting large areas in the Soviet Union, Europe, and North America. The number of people who died from nuclear radiation is 9,000, and there are still 7 million people living in areas with high levels of nuclear radiation. And other recent studies show that the long-term effects of the Chernobyl nuclear accident may lead to an additional 66,000 deaths from cancer. After the accident, about 350,000 people were forced to leave towns and villages located in heavily polluted areas and began to live as homeless refugees. Some of them have various diseases due to radiation; some have fallen into depression and suicide due to fear and stress, and some have lost their dignity and hope due to discrimination and isolation. The total radiation dose released by accident was more than 400 times that of the Hiroshima atomic bomb explosion. These radiation not only pollutes soil, water, plants, and animals, but also transmit to other organisms through the food chain, causing consequences such as genetic mutations, deformities, and cancer. The Chernobyl nuclear accident also triggered a series of political and economic impacts. This accident also accelerated the disintegration of the Soviet Union and the end of the Cold War, and had a profound impact on the world order. The 2011 Fukushima nuclear leak in Japan caused approximately 27 PBq of cesium-137 to be released into the sea, with approximately 82% being released into the sea before April 8th. This is the largest amount of radioactive material ever released into the ocean.

As the data shows, the Godzilla film series not only represent the energy crisis, especially the many problems brought about by the nuclear energy use, but also show the anthropocentrism, such as human beings' desire to conquer nature, and the technology polarism that humanity upholds behind the energy crisis. The technology polarism refers to the one-sided belief that technology can solve all problems, or that all problems are technical problems. In the film, humans regard technology as the sole driving force behind the development of human civilization, attempting to gain unlimited power from technology and solve various problems. The Godzilla films of the 1960s fully demonstrated Japan's technological vision. After the Meiji Restoration, Japanese society began its own modernization process. Large industries such as steel mills and shipyards are considered synonymous with "modernization". After World War II, Japan achieved "modernization" by joining into the third wave of technological revolution represented by atomic energy and semiconductors worldwide. At this time, the high voltage transmission network, large hydropower stations, large chemical plants, highways, radio and television towers, nuclear power plants, and Shinkansen depicted in Godzilla's films precisely shows Japan's technological vision. However, since the 1970s, Japan has experienced an environmental crisis in Godzilla films: dirty and messy streets, exhaust emissions, and genetic mutations caused by pollution. Humanity no longer benefits from technology, but lives in anxiety and panic.

In films before 1984, Godzilla was often portrayed as a natural enemy against humans and the punishment for human destruction of the environment. In the 2014 film "Godzilla", Godzilla evolved into a maintainer of ecological balance, reflecting the process of transforming from the binary opposition of human confrontation with the environment to the holistic ecologism. Ecological holism is the core of ecologism, which regards the overall interests of the ecosystem as the highest value rather than the interests of humanity, and regards whether it is useful to maintain and protect the integrity, harmony, stability, balance, and sustainable existence of the ecosystem as the fundamental measure of all things. From the initial scientists' attempts to destroy Godzilla by using weapons, to the Japan's Self-defense Forces fighting against monsters, even using King Kong to destroy Godzilla and the emergence of mechanical Godzilla, all have shown signs of anthropocentrism. Human beings believe that the current human civilization is sufficient to fight against Godzilla, and then enslave another prehistoric monster, King Kong, to drive him to fight against Godzilla. Then, by producing a mechanical Godzilla, humans assume themselves as the ruler of the Earth, treating all creatures that are not subject to humans' control and conquest as enemies that should be eliminated and suppressed. Therefore, humans desire to use King Kong to mimic Godzilla. Human beings do not have a reverence for nature, but blindly place themselves above it. What's more, it manifests as a desire to control human beings themselves. A large amount

of artificial fluoride is added into tap water to force humans to be gentle and obedient. In other words, human beings require the use of bleach to gain freedom. Some people, led by entrepreneur Walter Simmons, believe that the Earth is the private property of humans, so they have the right to acquire and develop resources on Earth and even in space. It can be seen that the so-called technology polarism is just a true portrayal of anthropocentrism.

However, facing Godzilla which devours nuclear energy, humans have not truly master tools to combat it. Godzilla has always transformed into contempt for humanity. Human beings manipulate King Kong with Indian girls' help. King Kong must obey human will. Even if he returns to his inner earth home, he must be a victim of technological researches, for humans' conquest. But when humans attempt to destroy Godzilla with technology, they only gain control of the mechanical Godzilla, and technology evolves into an accomplice in slaughtering humanity. Just as Heidegger reflected on the effects of modern technology on "dasein", he believed that modern technology had constrained the human nature in things, broken the traditional state of integration in the technological stage, and made people become the "Bestand" of technology. Humans' idolatry of technology will inevitably lead to the uncontrolled development of technology, ultimately resulting in ecological imbalance and alienation of human nature.

Max Weber, a theorist of the Frankfurt School, once put forward the dualistic theory of "rationality", which emphasizes formal rationality over substantive rationality. He eulogized the maximization of effects while ignoring human emotional and spiritual values. Protagoras also believed that man is the measure of all things, which means that humans are seen as the purpose itself and nature is in a position of obedience. In Godzilla films, military enterprises ignore human life and choose mechanical Godzilla, making up the excuse of developing human welfare to conquer and control nature, separating humans from nature, which will lead humans into infinite desire and become slaves to technology.

5. Conclusion: Ethical Value Based on the Ecological Justice

At the 14th Summer Davos Forum, Simon O'Connell, CEO of Netherlands Organization for International Development Co-operation, stated that the global energy transition should be sustainable, secure, inclusive, equal and fair. The transition cannot be completed in the short term and requires many steps to accelerate the transition process. He used his working experience in South Sudan as an example to introduce: "currently, only 7% of the population in South Sudan has access to electricity. From 7% to 100%, from energy to clean energy, this popularization process cannot be achieved overnight and requires 'climbing the stairs'" (Jiang Pengxin, 2023, p. 1). Since the 20th century, the nuclear energy development has been seen as the key to solving the global energy crisis, but just as O'Connell said, energy transformation cannot be achieved in a short period. When formulating energy transformation schemes, local realities should be considered more and the international cooperation should be strengthened. Feasible solutions tailored to local characteristics should be launched, advocating for global ecological cooperation based on the ecological justice.

Ecological justice refers to behaviors of individuals or social groups conform to the principles of ecological balance, biodiversity, the desire and global awareness to protect the environment, the global common interest of "only one earth", and especially the sustainable development concept of protecting the environment for future generations. The Godzilla film series portray the ecological justice issues based on the energy crisis. In 2015, French company Areva extracted 114,000 tons of uranium in Niger and earned 2,300 billion francs from exports, but Niger only received 260 billion. After 47 years of mining, the largest underground uranium mine in Niger, Akata Uranium Mine, finally ceased production in 2021 due to the resource depletion. The natural environment in Niger has severe damage, and the risk of cancer among African local people living below the poverty line has doubled. In September 2023, a rare sandstorm occurred in Paris, France, and the radioactive element cesium-137 particles hidden in the dust caused public panic. The main source of the dust was the Sahara Desert in Africa. With global warming, overgrazing, and agricultural expansion, the desertification process in Sahara are accelerating, and the incidence and intensity of sandstorms is gradually increasing. This not only affects local residents' lives, but also has profound impact on the global environment and climate,

In the original Godzilla films, the Japan's Self-defense Force appeared as soldiers defending the environment. They wear American uniforms and use American weapons to resist monsters. In the 1984 film, the weapons of the Self-defense Force had been upgraded from ultra-high voltage power grids, armed helicopters, and giant balloons to Japanese made high-tech weapons; In the 1999 release of Godzilla 2000, the Japanese Self-defense Force made its first appearance in Godzilla films in an actual combat state, using weapons such as the Type 74 main battle tank, Type 90 main battle tank, AH-1 Cobra armed helicopter, and 6x6 wheeled infantry tank. The Air Force dispatched the most advanced F-15J fighter jet in Asia at the time to carry out the bombing mission against Godzilla. It can be seen that the Japanese Self-defense Force's goal of expanding its social influence by

participating in popular commercial films is obvious. In the 2016 New Godzilla, the Self-defense Force conducted a complete process of exercising force in domestic defense within Japan's existing legal framework, including political decision-making, campaign planning, troop deployment, firepower configuration, joint operations of Japan's armed forces, and the actual combat. Guided by the political slogan of "normalization of Japan again", Japan has begun to attach importance to the construction of the practical combat capabilities of its self-defense forces and is striving to transform them into a general defense force. This phenomenon reflects Japan's attempt to break away from the image of victims of nuclear disasters in Hiroshima and Nagasaki, and strive to become a strong country with control over nuclear energy and nuclear capability. It is not difficult to see that emphasizing nuclear energy development can be seen as a remnant of colonialism in a sense, rather than a simple ecological issue.

At the 2023 Davos Forum, the Chinese government expressed its willingness to strengthen exchanges and cooperation with other countries around the world, and share achievements of the sustainable development. In the future, China will strengthen cooperation in the development and utilization of green energy and the interconnection of energy infrastructure, strengthen the integration of energy planning and policies, and collaborate with enterprises, universities, research institutes, and international organizations to explore basic theories and applied technology of the energy transformation. China will actively participate in the formulation of international standards and strive to contribute more Chinese wisdom and solutions in promoting global clean and low-carbon energy transformation. It can be seen that problems caused by the energy crisis are global, so the energy development should not be a unified standard, but rather to be considered from different perspectives based on the rule "putting aside minor differences so as to seek common ground". Fundamentally speaking, humans need to uphold the concept of the green development, abandon anthropocentrism, and make careful energy choices in order to eliminate monsters in human hearts brought by nuclear panic and create a peaceful ecological earth.

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