

Original Paper

Philosophical Questions Concerning the Anthropocene and the
Plasticene to ChatGPT and the Moderate Perspectives Derived
from Their Responses

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Abstract

ChatGPT, an AI (artificial intelligence) model developed by OpenAI was posed various philosophical questions about the Anthropocene and the Plasticene. The model opined that the naming of the Anthropocene holds significance, that the term Plasticene accurately encapsulates contemporary realities, that the expansion of the concept, such as through the lens of plastic ecology, will foster further study, that plastic rocks are important from the perspective of the Earth's environment, and that although no one sees the Anthropocene in the traditional sense, future scientists may glean insights into the impacts of humankind's activities from geological samples. From these moderate responses, we may have the utility to modify our opinions and create opportunities for novel anthropological questions.

Keywords

Anthropocene, Plasticene, plastic pollution, new stone, plastic ecology, artificial intelligence, ChatGPT

1. Introduction

It is posited that the modern age is the Anthropocene, in which humanity has exerted a profound impact on the global environment (Crutzen & Stoermer, 2000; Bonneuil & Fressoz, 2016). Plastic pollution in the environment, the magnitude of which becomes increasingly apparent, is considered as one manifestation of the Anthropocene (Zalasiewicz et al., 2016). There is growing concern over the effects of plastic waste on living organisms. Microplastics, small plastic particles present in the environment, are disseminated through land, sea, and air, and their ingestion by various species has been documented (Rios Mendoza et al., 2021; De S á et al., 2018). The humankind is not immune to this phenomenon and are also affected (Ragusa et al., 2022). These instances exemplify the impact of the anthroposphere on

the biosphere, yet now, plastic overflow is beginning to merge with rocks and give rise to new stones (Hällgren, 2019) in accordance with natural laws. These new stones, also called novel plastic forms (new plastic forms, Furukuma et al., 2022; De-la-Torre et al., 2021), are the result of humankind's activities, and include plastiglomerate, pyroplastic, plasticrust, anthropoquina, and plastitar (Corcoran et al., 2014; Turner et al., 2019; Gestoso et al., 2019; Fernandino et al., 2020; Dom ínguez-Hern ández et al., 2022). The Plasticene (Stager, 2011; Corcoran et al., 2014; Rangel-Buitrago et al., 2022), a substage of the Anthropocene Epoch, is occurring during the Great Acceleration (Steffen et al., 2015), and the anthroposphere, which generates vast quantities of plastics, is giving rise to the plastic ecology (Schaag, 2020) that is intermingled with the biosphere and lithosphere.

ChatGPT (Generative Pre-trained Transformer, OpenAI, 2023) is a powerful natural language processing tool that utilizes AI technology that is making a multitude of social impacts and is also influencing the academic field of science (Stokel-Walker, 2023). Some researchers posit that it lacks the capability for thorough examination in specialized fields (Cahan & Treutlein, 2023), while others assert that it can offer valuable perspectives and aid in the development of individual's ideas (ChatGPT & Zhavoronkov, 2022). Additionally, there are concerns surrounding the use of ChatGPT for automated generation of thesis abstracts, and involvement in the production of student reports, as well as the potential for facilitating the proliferation of fake news. In this paper, philosophical questions were posed to ChatGPT regarding the Anthropocene and Plasticene, and what kind of responses were obtained, and what kind of perspective could be gained from these responses.

2. Method

Five philosophical questions (Q1-Q5, Note 1) concerning the Anthropocene and the Plasticene were posed and responded by ChatGPT (OpenAI, 2023, Note 2). This question-and-response session was conducted on January 25th, 2023. The ChatGPT at the time of conduct was the Jan 9 version. The references and notes appended in the results were composed to supplement this paper and were not appended at the time of questioning ChatGPT.

3. Result

Below are the questions asked and the responses from ChatGPT.

Question 1 (Q1)

Should the modern age be called the Anthropocene as a geologic age?

When considering who has had the greatest impact on the Earth and its ecosystems, the developed countries is the main factor. Considering this, the Capitalocene is considered an appropriate name (Haraway, 2015; Bonneuil & Fressoz, 2016).

But from the perspective of humankind as a whole, should it be called the Anthropocene as a problem for humankind as a whole?

Response to Q1

“The naming of the Anthropocene as a geologic age is a topic of ongoing debate in the scientific community. Some scientists argue that the term “Anthropocene” is appropriate, as human activity has had a significant impact on the Earth’s geology and ecosystems. However, others argue that the term “Capitalocene” would be more appropriate, as it emphasizes the role of capitalist economic systems in driving environmental degradation. From the perspective of humankind as a whole, the Anthropocene can be seen as a problem for all people, not just those in developed countries. Climate change, pollution, and loss of biodiversity are global issues that affect people of all nations and cultures. Therefore, the naming of the Anthropocene as a geologic age reflects the collective impact of human activity on the planet and the shared responsibility to address these issues.”

Question 2 (Q2)

In the present day, environmental pollution caused by large amounts of plastic waste has become a problem. Considering this situation, is plasticene appropriate as a substage of the Anthropocene?

Response to Q2

“The concept of "Plasticene" as a substage of the Anthropocene is not an official term recognized by the scientific community, but it is an informal term used to refer to the geological time period marked by the widespread presence of plastic debris in the fossil record. The increasing amount of plastic waste that has accumulated in the environment, particularly in the world’s oceans, is a major environmental problem that has attracted global attention. Plastic pollution harms marine life, including fish, birds, and sea turtles, and can also enter the human food chain. So, it is an appropriate term to reflect the impact of plastic pollution on the earth.”

Question 3 (Q3)

The plastic ecology is envisioned in which the anthroposphere, which releases large amounts of plastics, is intermingled with the biosphere and lithosphere. Is there any future significance in extending the ecosystem framework to consider plastic ecology?

Response to Q3

“The concept of a “plastic ecology” that intermingles the anthroposphere (human-made environment) with the biosphere (living organisms) and lithosphere (Earth’s crust and upper mantle) is an important one that highlights the pervasive impact of plastic pollution on the environment. Plastic waste can have a wide range of negative impacts on ecosystems, including the physical entanglement and ingestion of plastic by wildlife, the transport of invasive species on plastic debris, and the release of toxic chemicals from plastic into the environment.

There are many studies that have been done to understand the role of plastic waste in the ecosystem, but there is still a lot of research to be done in this area. Thus, it is important to continue to study the effects of plastic pollution on the environment and to develop strategies to mitigate its impacts. Extending the ecosystem framework to include plastic ecology can help to better understand and address the issue of plastic pollution and its effects on the environment.”

Question 4 (Q4)

Plastic rocks such as plastiglomerates and plasticrusts have been reported as new stones that represent the Anthropocene. Can these stones be considered beautiful?

Response to Q4

“The term “plastic rocks” refers to new types of rocks that form when plastic debris and natural materials, such as sand, shells, and volcanic ash, are fused together by heat or pressure. Plastiglomerates are one example of these types of rocks, they are formed by the melting and welding of plastic debris, shells, and other natural materials, and plasticrusts are formed when plastic debris is coated with minerals like manganese or iron oxide.

It’s a matter of perspective whether these types of rocks can be considered beautiful or not. Some people may find them interesting and unique because of the way they are formed and their rarity, others may find them as a symbol of human’s impact on the environment. From an aesthetic perspective, these rocks are not considered traditionally beautiful, but from an environmental perspective, they are a reminder of the consequences of human actions, which is crucial for the preservation of the planet.”

Question 5 (Q5)

Geologic age is usually defined as the past history of the earth and its creatures from the record left in rocks and strata. Do you think there is anyone who can witness the Anthropocene in this sense (Note 3)?

Response to Q5

“Geologic ages are typically defined based on the rock and fossil record, which provides a record of past events and conditions on Earth. The Anthropocene, as a proposed geologic age, would represent the current period in which human activity has had a significant impact on the Earth’s geology and ecosystems.

In this sense, it is unlikely that anyone alive today will be able to witness the Anthropocene in the traditional sense of observing and studying rock and fossil formations. However, it is possible that future geologists will be able to study the impact of human activity on the Earth’s surface and subsurface through the analysis of sediments, ice cores, and other materials that are being formed today.

It's also worth noting that the Anthropocene as a geologic age is still a topic of debate and not officially recognized by the scientific community, so it is still uncertain whether it will be included in the geologic time scale or not.”

4. Discussion

The responses from the ChatGPT were generally like honors students. There were no radical or extreme responses to any of the questions, and they contained some thought-provoking comments, the answers were moderate and balanced. And then it settles on the landing point that the concepts and ideas are important in raising the issue. The ultimate conclusion was a safe, conventional, and academically-sound comment. No biased meta-perspectives or value-turning ideological comments, such as those found in philosophical discussions, were identified. The discussion of the Anthropocene and the Plasticene was primarily derived from the scientific community, and the responses from ChatGPT were also highly scientific in their consideration. As the preceding review points out (Cahan & Treutlein, 2023), the responses did not yield any particularly novel or groundbreaking findings. Technological singularity has not yet been reached.

However, the lack of striking responses may not necessarily be detrimental. It may be valuable to have the ability to produce moderate responses in a systematic manner. Unconsciously, personal experiences and understanding can result in prejudiced perspectives. The presence of moderate perspectives may serve to increase the recognition of the extent of bias in one's own thoughts, and may have the potential to rectify extremely biased thought processes in certain instances.

In Zen philosophy, there is a maxim that asserts, “the answer is in the question” (Cleary, 2002). It is crucial not to be content with simplistic answers, but to incessantly ask questions and thereby expand the breadth of each discourse, and generate new inquiries based on the responses received from the ChatGPT. If the questions and responses to the ChatGPT could be used appropriately, it could be useful for education with discussion.

5. Conclusions

ChatGPT was posed various philosophical questions about the Anthropocene and the Plasticene. The model opined that the naming of the Anthropocene holds significance, that the term Plasticene accurately encapsulates contemporary realities, that the expansion of the concept, such as through the lens of plastic ecology, will foster further study, that plastic rocks are important from the perspective of the Earth's environment, and that although no one sees the Anthropocene in the traditional sense, future scientists may glean insights into the impacts of humankind's activities from geological samples. While these responses did not yield novel discoveries, they may provide the means to adjust our perspectives and elicit novel anthropological questions.

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Notes

Note 1. There is no clear agenda for the selection of these questions, as they vary from general discussions to those involving the author's research interests.

Note 2. I have informed ChatGPT of my desire to include it as a co-author; however, it has denied my request on the grounds that I am not a living person and, thus, am not a suitable candidate for co-authorship.

Note 3. This question was set with reference to the Nakamura (2017) article.