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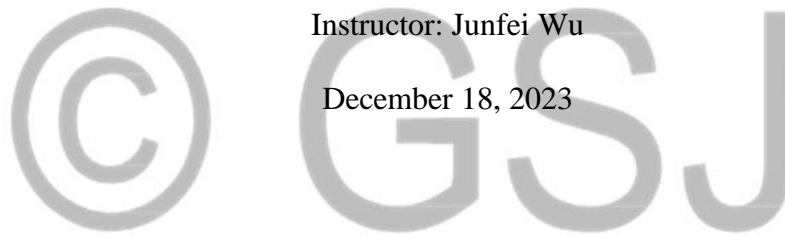# The Applicability and Value of Heidegger's Philosophy of Technology in "The Question Concerning Technology" on Modern Digital Information Technology

Daiwei Wang

Shenzhen Vanke Meisha Academy

Instructor: Junfei Wu

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Abstract

This essay discusses the applicability of Heidegger's philosophy of technology based on industrial technology to modern digital information technology. The author demonstrates that Heidegger's philosophy of technology is a feasible and valuable entry for considering the impact of modern digital information technology on humans. By explaining this conclusion, the author captures two critical similarities between modern information technology and industrial technology: human beings' excessive pursuit of efficiency and the distortion of material existence. These two characteristics are why industrial technology prevents humans from revealing the world, which is the central point of Heidegger's philosophy of technology. Since modern digital information technology also has these two characteristics, it can be applied to Heidegger's philosophy of technology.

Keywords: philosophy, technology, Heidegger

The Applicability and Value of Heidegger's Philosophy of Technology in "The Question Concerning Technology" on Modern Digital Information Technology

Martin Heidegger presented his philosophical ideas on technology in his work "The Question Concerning Technology" in the 1950s. For Heidegger, industrial technology tries to get more profit, become more efficient, and turn everything into resources waiting to be used. Heidegger argues that to become more efficient, humans may over-seek the speed and, therefore, overlook the process of producing, which is also the process of revealing the truth. Since Heidegger considers truth as a thing that humans want to seek in the ground of their senses, he proposes the danger of industrial technology: if humans allow industrial technology to develop without limitation, they will become further away from the truth of the world (Carman, 2015, p. 2). In Heidegger's research, the object is usually industrial technology. However, due to the rapid development of modern technology in recent times, Heidegger's philosophies have been re-examined to see if they can be reconciled with the characteristics of modern technology. According to Wendland et al. (2019), people have begun to experience fatigue and anxiety about modern technology because they are constantly exposed to it in every aspect of their lives (p. 9). This is the reason this essay will explore whether Heidegger's philosophy of technology applies to modern digital information technology. If applicable, Heidegger's theories will make a significant impact and warning on the direction and extent of the development of information technology, beneficial to mitigate the fatigue led by the overuse of modern technology.

Literature Review

In his famous philosophical work "The Question Concerning Technology," Heidegger (2009) argues that modern technology obscures the truth of the world since it over-seeks efficiency and turns everything into energy (p. 9). He believed that both Germany and Japan, the

advanced industrial nations of the time, were subjected to this deleterious effect of modern technology at that time, which was industrial technology (Wolin & Naess, 2023). In recent years, with the development of modern digital information technology, some scholars have started pondering to what extent information technology prevents people from discovering and revealing the world and the truth like industrial technology does in Heidegger's words.

Many scholars have different understandings of digital information technology. Thus, there is a debate about whether information technology better reveals the world or hides truths. Baez (2021), a philosophy professor at California Polytechnic State University, argues that some elements of the modern information world, such as social media, allow us to freely alter and appear different on the web, creating distinctive selves different from our real-world selves. For example, while using Photoshop, we change and hide our actual appearance, which leads to the cover-up of truth. In addition to Baez, N. Katherine Hayles, a scientist at Duke University, investigates information technology from a more fundamental perspective. Hayles (1999) argues that digital information is a pattern, not a presence; this leads to the fact that once the digital code is altered, even in a tiny way, the information taken by this code is changed dramatically (p. 31). She considers that all things become and are confined in codes with a specific order. This digital pattern is, in fact, the changing of a real, existing item into a new form. Similar to the theory of digital pattern proposed by Hayles, Heidegger argues that one reason modern technology hides the truth is that "everything approaches us merely as a source of energy" (Blitz, 2014); energy is converted from varied sources but eventually becomes the same, which makes people difficult to find the essence of the original thing, and digital information also has this characteristic. To summarize the opinions of Baez and Hayles, they illustrate the fact that modern digital information technology discourages people from discovering the nature of the world. Therefore,

their statements agree that Heidegger's philosophy of technology is feasible for information technology to a great extent because it hides the truth of the world.

However, some scholars, such as information network technology specialists Waymond Rodgers and Soloman Negash, are against the view that information technology hides the truth of the world and the essence of the object. Rodgers and Negash (2007) believe that network technology makes people more creative and capable of problem-solving (p. 121). Thus, people are more likely and willing to reveal the truth. Another scholar, Kim (2001), a famous semiotician, believes digital objects possess the same physicality as natural objects (p. 91). His view contradicts Hayles' argument by pointing out that digital information technology copies the natural world and does not impact people's ability to reveal the world, although the form of the being of objects is different. This means that people can still reveal the essence and the truth of the objects in the digital world as the real world. To sum up, Kim, Rodgers, and Negash consider that digital information technology does not prevent people from revealing the world and even promotes it, disagreeing that Heidegger's philosophy of technology can apply to modern digital information technology.

In general, scholars who believe that digital information technology is in line with Heidegger's philosophy of technology are aware of the destruction of the form of objects. On the contrary, some scholars argue that digital information technology can help people think and discover, and the digital form does not affect people's revelations. Each scholar explains one function or characteristic of information technology to convey the extent to which it helps reveal the world. All of their attitudes are justified and can determine whether modern digital information technology may prevent students from revealing the world, just like Heidegger says in "The Question Concerning Technology."

Body 1: Result

In his great philosophical work "The Question Concerning Technology", Heidegger explores the essence of technology and the dangers that modern technology (industrial technology) poses to humans: preventing humans from revealing the truth of the world. This theory is meaningful for humans to investigate the disadvantages of industrial technology and the extent to develop it. Many people want to apply Heidegger's philosophy about industrial technology to modern digital information technology, so they have to consider the applicability of Heidegger's philosophy on information technology. Heidegger's philosophy of technology in "The Question Concerning Technology" is highly applicable and valuable to modern digital information technology because information technology has characteristics similar to industrial technology that prevent humans from revealing the world: seeking efficiency and distorting the form of Being.

First of all, in Heidegger's eyes, the differences between industrial technology and previous technologies are that industrial technology makes people easily over-seek efficiency and distort the form of Being. Human beings will over-exploit efficiency in the use of industrial technology. In "The Question Concerning Technology," Heidegger (2009) argues that in a world dominated by industrial technology, humans exploit the energy of nature based on the purpose of getting as much benefit as possible with the least amount of consumption (p. 7). This suggests that to maximize benefits, humans must find ways to get as much output as possible at the most minor input, such as time and money. The above opinion is close to the concept of efficiency. According to Clouse (2023), efficiency refers to getting a higher output per unit of input from a business. This aligns with what humans aim for when using industrial technology. Hence, industrial technology makes people pay much of their attention to seeking efficiency. In addition

to this, the use of energy by industrial technology changes the form and value of some objects.

According to Heidegger (2009), industrial technology replaces the Being of air, land, and ores

with the resources they contain, such as the replacement of air with nitrogen material (p. 7). This

means that humans do not directly use the objects themselves, but only use the energy they

contain. In this way, for humans, the form of Being of those natural objects changes from

themselves to the energy. Compared to industrial technology, however, conventional technology

does not make humans pay much attention to seeking efficiency and not change the form of

Being. Heidegger uses the production process of silver products to explain this point. In

Heidegger's view, the transformation of silver into a silver object is determined by four strict

factors: causa materialis, causa formalis, causa finalis, and causa efficiens; the final factor, the

causa efficiens, is what the humans are responsible for bringing the first three factors together to

form the final object (Waddington, 2005). Moreover, Heidegger (2009) also mentions that in this

process of creating silver products, artisans must be attentive to their vital fusing role so that the

first three factors can come together perfectly (p. 3). Therefore, the artisans' work must not only

aim at efficiency but also at quality. In the process of making silver, the artisans are always in

contact with the object itself instead of the object with a changed form. Thus, comparing the

characteristics of industrial technology and conventional technology, it can be concluded that in

Heidegger's eyes, the difference between industrial technology and traditional technology lies in

the fact that industrial technology makes people easily over-seek efficiency and distort the form

of Being.

Over-seeking efficiency and distorting the form of Being make people further away

from the essence and truth of the world. First, when humans use industrial technology and seek

efficiency, they ignore the process of revealing the truth. Heidegger uses the development of

agricultural technology as an instance to illustrate it. Heidegger (2009) argues that in the past, farming meant to care and concern, and humans got in touch with and have a deeper understanding of the natural power shown by the crops, making them understand the truth of the plants' growth; however, after the invention of industrial, agricultural technology, humans started to use it to maximize their profits by asking machines to replace labors to do lots of tasks (p. 7). Hence, humans do not participate in the growing process as in the past which contains revealing the truth of the crops. As a result, humans are getting further away from the truth of the world due to the use of industrial technology. At the same time, in industrial agriculture, humans use resources in objects like air and soil instead of directly using the object, leading to a harder revelation of the world. For instance, humans can extract nutrients and energy, such as nitrogen, from the soil and directly replace the soil with them in agricultural activities, changing the Being of soil for humans. Heidegger (2009) considers that objects exist in one place due to the energy they have since humans only want to use them to finish tasks. This weakens humans' revealing of soil, as many other parts of the soil are not extracted in energy, and energy is a standard form waiting to be used and not what it originally was. If humans try to investigate the distorted form of objects, which is the energy, they will not reveal their original Being. To sum up, two characteristics of industrial technology, over-seeking efficiency and distorting the Being, are the reasons why Heidegger considers it preventing humans from revealing the essence of the world.

Compared to industrial technology, modern digital information technology also has the characteristics of over-seeking efficiency as well as distorting the form of Being. The quest for efficiency in using information technology is reflected in the speed at which information is viewed and accessed. When using online social media and video websites, users want to be informed of the latest breaking news and hottest topics in a fast and efficient way without having

the patience to spend much time at once; the average browsing time on Facebook is only 18 seconds (Wochit, 2016). Online social media and video software are new methods of assembling information in the age of information technology. They collect and provide a large amount of information from all over the world to their users. This satisfies the users' curiosity for all sorts of exciting things and motivates them to browse quickly because the increased speed and efficiency allow them to get as much new information as possible. In summary, information technology provides a tremendous amount of information, and people are seeking efficiency in acquiring information to learn as much as possible about it. Not only that, digital information technology has changed the way things exist. According to Hayles (1999), digital information is a pattern instead of presence (p. 31). Random numbers are the only thing that exists in the digital information world. When some numbers are arranged in a particular pattern, they express a particular message. Thus, the essence of digital information is regularity and randomness. However, in the real world, it is not the regularity that makes an item exist, but whether it is present or not. Therefore, when using digital information technology, people focus on regularity, while real things are altered in nature when they appear in the information world.

Body 2: Discussion

Some scholars, however, do not consider digital information to make things different from their original form. A famous semiotician scholar, Kim (2001), argues that digital objects possess the same physicality as real objects (p. 17). If so, digital information technology does not distort objects like industrial technology since digital information technology can mimic the objects in the information world, which is different from the energy in industrial technology. However, Kim is referring here to the properties of objects similar in the digital world and the real world, but not at the essence level. In the digital world, humans can form codes that simulate

the features of natural objects by giving them specific patterns. However, if humans investigate the objects more deeply, they can only find the codes with patterns. Because we are talking about the revealing questions, we should focus on the essence of the things instead of their surface properties.

In fact, industrial technology and digital information technology have many unique characteristics that are different. These characteristics may cause problems applying Heidegger's philosophy on digital information technology since they make the impact of humans' revealing varied. For instance, industrial technology turns humans from the subject of controlling and revealing into a resource, but information technology does not. This lack of a specific characteristic of information technology can make it less severe in preventing humans' revealing, so information technology does not fit Heidegger's philosophy. Similarly, other varied characteristics can also impact the applicability.

Conclusion

Making people over-seek efficiency and distorting the form of Being of objects are characteristics that we can both find in industrial and digital information technology. In Heidegger's opinion, these two characteristics are why industrial technology prevents humans from revealing the truth of the world. When digital information technology also possesses these two characteristics, it has a substantial similarity and substitutability with industrial technology in revealing the truth. Therefore, the discussion of industrial technology in Heidegger's philosophy of technology can be applied to modern digital information technology. What is more, the application of Heidegger's philosophy of technology to digital information technology is precious because information technology is a contemporary innovative invention that people still need to deeply study its adverse impacts on human beings. Heidegger's philosophy of

technology is a good entry point for it. This paper explores the feasibility of such an approach,

while the actual methods and impacts require further research and reflection.

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