

Heidegger on Freedom and Technology: Rethinking the Technology/technologies Debate

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Abstract: The longstanding and often unproductive debates among North American philosophers of technology—particularly over the distinction between Technology and technologies—call for a renewed examination of Heidegger’s ideas. This paper argues that, despite their differences, both camps share a concern central to *The Question Concerning Technology*: the pursuit of a free relationship between human existence and technology. We show that Heidegger paradoxically holds that while modern technology reduces beings to mere resources, authentic freedom can emerge from within this very condition. Drawing on an existential rather than purely ontological reading of Heidegger, and engaging with figures such as Don Ihde, Peter-Paul Verbeek, and Andrew Feenberg, we reinterpret the notion of freedom in terms of horizontality and historicity. This approach, we suggest, offers a way to overcome the Technology/technologies divide and to revitalize contemporary philosophy of technology by bridging transcendental and empirical perspectives.

Keywords: *The Question Concerning Technology*, freedom, Heidegger, philosophy of technology, Technology/technologies debate.

1. Introduction

For decades, Heidegger has remained at the epicentre of the persistent debates among North American philosophers of technology. One camp in the debate opposes the transcendental philosophy of technology presented in

The Question Concerning Technology (QT). This group places a strong emphasis on the empirical exploration of specific technological things and activities. Conversely, the opposing faction criticizes these researchers focused on technologies for neglecting Heidegger's ontology of technology and getting mired at the ontic level. Despite the emphasis on this "ontological difference," this long-standing debate has yielded scant results. The principal reasons are that each side interprets the "ontological difference" through its own perspective, and that the argumentative strategies of the Heideggerians—who often introduce abstruse texts, metaphysical concepts, and theories of other philosophers—are generally not well received by their interlocutors.

In view of this, this paper endeavours to revive Heidegger's theory of technology in a way that will be appealing to empirical philosophers of technology: (i) the central text for interpretation is *QT*, and every effort is made to eschew Heidegger's abstruse jargon; (ii) the existential character of *Dasein* is adopted as the analytical framework, thereby averting the perpetuation of the controversy between the ontological and ontic; (iii) the issue to be tackled is the intricate concept of freedom expounded by Heidegger in *QT*. Since freedom is a concern common to both sides of the Technology/technologies debate and pervades Heidegger's entire philosophical oeuvre.

We begin by examining the optimism of scholars focused on technologies, as exemplified by Don Ihde, regarding the current state of technology and their own empirical research approach. The horizon, as a prerequisite for understanding, is closely associated with Ihde. This is especially the case when it is predominantly concerned with the context within which specific technological practices occur. Humans are invariably thrown into a particular horizon, and it is precisely this condition that enables them to confront things within a specific context. Moreover, the horizon is situational and unstable rather than fixed or static. From this perspective, freedom can be construed as the possibility for humans to constantly have the option to choose different horizons. This not only demonstrates the rationality of embracing contemporary technologies, but also accounts for the emergence of the empirical shift in the philosophy of technology.

In the subsequent section, Peter-Paul Verbeek's assertion that Heidegger's transcendental philosophy of technology reduces all specific technological entities to their conditions of possibility is corroborated. It is further elucidated that, according to Heidegger, the "condition" in the phrase "conditions of possibility" guaranteed rather than circumscribed the existence of "possibility." The analysis of the requisite "nothing" and "death" further illustrates the contingency and flexibility of the horizon. Thus, while being thrown into a certain horizon is our destiny, it is not a despairing fate. Only by recognizing and withstanding this destiny, can we enter into a free relationship with technology.

Finally, through an interpretation of history and destiny, danger and salvation, an effort is made to correct Andrew Feenberg's misrepresentation of Heidegger's philosophy of technology, namely, the claim that it is incapable of discerning

hope within. Even though we are destined to be sent into the dominant horizon of our era, Heidegger makes it clear in *QT* that destiny is historical. Given that there is no ahistorical horizon, there invariably exists another horizon from which to make a choice. In Heidegger's view, the gravest danger presented by modern technology lies in its attempt to conceal other possible horizons. However, since humans are fundamentally endowed with the capacity to freely choose their horizon and, as a result, their own existential possibilities, the more perilous the condition, the greater the likelihood that a saving power will emerge.

2. Is Heidegger's Philosophy of Technology Outdated?

North American philosophy of technology began with an empirical turn, influenced by engineering (Ihde 1995: 9–10), phenomenology, critical theory, and pragmatism (Ihde 2010a: 24). Heidegger's transcendental philosophy of technology stands in contrast to this empirical approach, which places emphasis on the exploration of specific technologies (Bosschaert and Blok 2023: 783–786; Ferreira De Barro 2024; Ihde 2000: 63–64, 66, 70–71; Ihde 2010b; Van Den Eede et al. 2017: 236–237; Verbeek 2010: 49–50). This opposition is manifest in the works of Don Ihde (2010a), Peter-Paul Verbeek (2005: 47–95), and Andrew Feenberg (2000a).

The aforementioned scholars, significantly influenced by phenomenology and existentialism, generally espouse the equipment theory in *Being and Time* (*BT*). However, due to their own pragmatic inclinations, they dissent from the essentialist perspective of technology presented in *QT* (Feenberg 2000c: 445–446; Scharff and Dusek 2014: 301). They assert that Heidegger's philosophy of technology has three principal flaws, that is, its abstract transcendental approach, its dystopian stance towards modern technology, and its lack of compatibility with the history of technology. In brief, it fails to conduct an empirical analysis of emerging contemporary technologies or to provide targeted solutions to current technical issues.

Both the “Heidegger's true believers,” who uphold the transcendental philosophy of technology, and the “revisionist Heideggerians,” who advocate for an empirical philosophy of technology, have refuted the aforementioned interpretation (Ihde 2010a: 117; Ihde 2022: 852). They predominantly employ the concept of “ontological difference” to advance their polemics. Here, the ontological difference implies that the research of these technologies scholars operates at the ontic level. This involves examining how individuals interact with specific technological things and how diverse technological practices impact daily life. In contrast, Heidegger's defenders argue that Heidegger primarily offers an ontological analysis of technology. This entails considering the underlying causes of the above-mentioned interactions and effects. Of course, these causes ultimately point to the ontological atmosphere that shapes how people engage with technological products (Dreyfus 1995: 98–101; Dreyfus

and Spinoza 1997; Thomson 2000a: 206–210; Thomson 2000b: 432–440; Thomson 2005: 44–77).

Furthermore, these scholars aligned with Heidegger assert that, for researchers focused on technologies, ontological reflection on Heidegger's ideas and their own stance is crucial (Rae 2014: 44–47). They mainly propose this by introducing Heidegger's works that were either contemporary with or subsequent to *QT* (Dreyfus and Spinoza 1997: 166; Thomson 2005: 44–77). In the view of Heideggerian thinkers, empirical philosophers of technology would be less optimistic about the state of contemporary technology once they engage in such reflection, and they may well come to recognize that Heidegger's philosophy of technology is not an "essentialist assertion" (Scharff 2006; Scharff 2010: 107). This is because Heidegger emphasizes that the concept of essence is not only not "disconnected from social-historical reality" (Thomson 2000b: 440) but also does not adopt an entirely critical attitude towards modern technology (Dreyfus and Spinoza 1997: 169–170; Thomson 2000a: 210).¹

However, this response strategy suffers from the following problems. First, pragmatist empirical philosophers of technology seldom show interest in abstruse texts detached from specific technical contexts (Ihde 2000: 59–64). Second, these scholars concentrated on technologies who are well-versed in existentialism are actually not unfamiliar with the "ontological difference" and Heidegger's unique interpretation of essence (Feenberg 2000c; Feenberg 2006: 193–196; Ihde 1979: 104–115; Verbeek 2005: 60–76). Nevertheless, they hold the view that since Heidegger makes it clear in *QT* that "the essence of technology is by no means anything technological" (Heidegger 1977: 4), both technological things and human beings seem to lack agency within his ontology of technology, and the only option for them is submitting to the top-down domination of Being. Indeed, through engaging in certain technological practices, such as promoting democratic revolutions or improving equipment designs, we can go beyond the current apprehension of technology and liberate ourselves from the all-encompassing essence of modern technology as characterized by Heidegger.² Consequently, the introduction of the "ontological

¹ In fact, the climax of the Technology/technologies dispute emerged precisely regarding whether Heidegger rejected all modern technologies. In the face of the rare cases in Heidegger's corpus where modern technology was praised, Feenberg's response was that a single instance does not prove a rule (Feenberg 2000b: 226), while Iain Thomson's response was that a single instance is sufficient (Thomson 2000b: 439). In response to Thomson, Feenberg countered that the Heideggerians' response did not conform to Heidegger's original intention (Feenberg 2000b: 225–229), and finally admitted that his dissatisfaction with Heidegger fundamentally stemmed from the latter's critique of modernity (Feenberg 2000c: 450). In other words, the whole dispute seemingly largely turned into a debate over stances of either supporting or opposing modernity.

² Compare: Dreyfus understands the ontological difference as "the difference between the understanding of being and the beings that show up given an understanding of being" (Dreyfus and Spinoza 1997: 160), while Feenberg defines the ontological difference as "[t]he ontological appears in the ontic; the ontic strikes back at the ontological" (Feenberg 2000c: 449). Perhaps precisely because expressions like "the nihilation of the nothing" (Heidegger 1998: 92) and "[t]ruth

difference” actually exacerbates the distinctions between Heideggerian thinkers and empirical philosophers of technology to such an extent that the two camps may even interpret the same concept, text, or evidence in opposed ways.

In such a scenario, it becomes evident that as the polemic intensifies, effective communication between the two camps will increasingly prove challenging (Thomson 2005: 77). Significantly, in light of the recent rapid advancements in automated technologies, along with bio-engineering technologies, and particularly with the advent of the “Anthropocene” concept, the excessive animosity of the empirical philosophy of technology towards the classical/transcendental philosophy of technology has come under scrutiny (Bosschaert and Blok 2023: 799; Cera 2020: 80–81; Lemmens and Van Den Eede 2022; Smith 2022; Van Den Eede et al. 2017: 239–241). Nevertheless, in the ongoing conflict between transcendental and empirical philosophers of technology, the defensive strategies employed by Heidegger’s defenders in previous disputes are being reproduced. Transcendental philosophers of technology endeavour to underscore the importance of transcendence by introducing giant philosophers and their obscure writings that empirical philosophers of technology are unlikely to find engaging.³

In summary, interpreting Heidegger’s philosophy of technology through the lens of ontological difference does not resolve the ongoing Technology/technologies debate that has persisted since the inception of the philosophy of technology. Nevertheless, it seems that neither Heidegger’s philosophy of technology nor this long-standing debate has become obsolete (Zwier et al. 2016: 330). As a result, given that the philosophy of technology once again stands at a crossroads (Feenberg [2000] 2014; Lemmens and Van Den Eede 2022), perhaps we should attempt to consider whether Heidegger’s question concerning technology can be reinvigorated in a way that resonates with researchers concentrated on technologies.

is un-truth” (Heidegger 2001a: 58) are bound to be widely misunderstood, Heidegger considered abandoning the concept of “ontological difference” in his later career. However, although Dreyfus pointed this out very early (Dreyfus and Spinoza 1997: 175), unfortunately, it was not taken seriously by both sides of the debate. More importantly, in fact, at the beginning of *BT*, Heidegger clearly pointed out that although “[t]he being of entities ‘is’ not itself an entity” (Heidegger 1962: 26), “[b]eing is always the Being of an entity” (Heidegger 1962: 29), in order to avoid drawing a sharp line between Being (and the ontological) and beings (and the ontic), and thus misinterpreting the “difference” in ontological difference as “dichotomy.”

³ For instance, they continue to emphasize understanding *QT* from the ontological rather than the ontic level (Hui 2020: 88; Van Den Bossche 2017b: 267), to highlight the texts prior to *BT* (Botin 2022; Reijers 2019: 606–609; Scharff 2022: 113–116; Zwier et al. 2016: 321–324), to introduce the works later than *QT* (Keiling 2018; Van Den Bossche 2017), and to quote philosophers such as Friedrich Wilhelm Nietzsche (Ferreira De Barro 2024: 72; Scharff 2022), Michel Foucault, Jacques Derrida, and Gilles Deleuze (Smith 2015). In contrast, the citation of Graham Harman (Van Den Eede 2022) might have a slight chance of attracting the attention of empirical philosophers of technology. After all, he has at least been mentioned by Ihde (Ihde 2010a: 117).

3. *A Free Relationship between the Human and Technology*

The two parties can still reach an accord. Heidegger and his followers, along with empirical philosophers of technology, all strive to establish a free relationship between humans and technology by considering the actual technological situation, be it abstract or concrete. More importantly, the concept of freedom, which permeates Heidegger's entire philosophical oeuvre, suggests that we can attempt to link the equipment theory in *BT* with the reflection on technology in *QT* by introducing an existential rather than ontological-difference-based analytical framework.

The initial step towards attaining a consensus is to revert to Heidegger's classic text in the philosophy of technology, *The Question Concerning Technology*, rather than those works that hold little interest for scholars concentrated on technologies. In fact, Heidegger poses the question of the free relationship between humans and technology right at the outset of *QT*:

We shall be questioning concerning technology, and in so doing we should like to prepare a free relationship to it. The relationship will be free if it opens our *human existence* to the essence of technology. When we can *respond* to this essence, we shall be able to experience the technological within its own *bounds*. (Heidegger 1977: 3–4, emphasis added)

This suggests that, despite being frequently overlooked,⁴ it can be contended that the subject of freedom is what *QT* truly concerns (Rojcewicz 2006: 132). Given that freedom was once the focal point of Heidegger's thoughts (Guignon 2011: 79), and even after his *Kehre*, when the topic of freedom was no longer at the forefront of inquiry, "Heidegger's work can also be interpreted and described as a philosophy of freedom" (Ruin 2008: 280, 297), the concept of freedom serves to establish a continuity between Heidegger's early and later analysis of technology. This renders it more appealing to empirical philosophers of technology who generally support the equipment theory in *BT*.

We are thus led to the second step in attaining a consensus, which is to explicate the free relationship between humans and technology from an existential perspective. This is because the two parties' insistence on the "ontological difference" has, for the most part, rendered the Technology/technologies debate

⁴ Perhaps because Heidegger's later reflections on technology are extremely obscure (Dreyfus 1995), the discussions about freedom in *QT* have not received sufficient attention in the debates. For example, earlier, when Ihde also quoted the same passage at the beginning of *QT*, he said that "[t]he query is into the *essence* of technology in its *relationship* with human *existence*" (Ihde 1979: 104, emphasis in original). Even Albert Borgmann, who clearly emphasized that "technology is the most important topic of Heidegger's thought" (Borgmann 2005: 420), only simply mentioned that the view of freedom presented by Heidegger in *QT* obviously attempts to go "beyond the antinomy between liberalism and determinism" (Borgmann 2005: 431), but he was vague about how to understand this free relationship and how to distinguish between fate and destiny.

unproductive. According to Heidegger's existential analysis, although *Dasein* is undoubtedly a form of being, what sets it apart from non-human beings is its constant possession of a specific understanding of its surroundings and even of the entire totality of beings. In other words, "*Dasein* is ontically distinctive in that it is ontological [...] *Dasein* has therefore a third priority as providing the ontico-ontological condition for the possibility of any ontologies" (Heidegger 1962: 32, 34). More importantly, the understanding of the surroundings that *Dasein* already invariably has simultaneously circumscribes *Dasein*'s existence and constantly opens up new possibilities for its existence. For *Dasein* to interact with things, it must first possess a particular understanding regarding them. However, *Dasein* is always and precisely thrown into a certain understanding. This is why Heidegger characterizes existence as "[t]hat kind of Being towards which *Dasein* can comport itself in one way or another, and *always does* comport itself somehow" (Heidegger 1962: 32, emphasis added). This essentially implies that *Dasein* is always capable of choosing its own possibilities of existence: "*Dasein* always understands itself in terms of its existence—in terms of a possibility of itself: to be itself or not itself" (Heidegger 1962: 33).

When the aforementioned line of argument is translated into Heidegger's philosophy of technology, it implies that we are able to engage with a piece of equipment, because we invariably possess a certain total understanding of everything else associated with this equipment in advance. For example, prior to actually making AI accessible and operational, an undergraduate student endeavouring to utilize AI to complete a course paper must first understand entities such as a computer, a Wi-Fi network, a keyboard, a search engine, and so on. In other words, this student must first be situated within a particular horizon that can afford him an understanding of all the entities relevant to his current objective. However, in Heidegger's view, the scope of this horizon, which renders AI manifest, encompasses not only technological artifacts, such as the equipment we commonly understand in the everyday sense, but also natural substances:

Hammer, tongs, and needle, refer in themselves to steel, iron, metal, mineral, wood, in that they consist of these. In equipment that is used, "Nature" is discovered along with it by that use—the "Nature" we find in natural products. (Heidegger 1962: 100)

This passage appears to proffer a rather astonishing interpretation, specifically that even Nature is initially presented to us in a state of being ready to serve some human existential end. The quandary here lies in the fact that if *Dasein* seemingly unavoidably apprehends the totality of beings first as a form of utilizable equipment, then, when *Dasein* itself is entirely construed as a standby resource available at any moment, much like the extremely perilous technological horizon (enframing) depicted in *QT* (Heidegger 1977: 17), how can we meaningfully discuss the freedom of *Dasein*? This is precisely the issue

that this paper will endeavour to address. In brief, for Heidegger, precisely because we are invariably and unavoidably cast into a destined horizon, we are enabled to understand all things (Section 4). The key here is that there are always possible horizons from which we can freely choose, given that there is neither an ultimate (Section 5) nor an ahistorical (Section 6) horizon. In sum, only when people withstand and even embrace this destiny can they genuinely attain their freedom of existence.

In any event, to this point, we have reached a certain consensus: both parties in the Technology/technologies debate aspire to attain a particular type of free technological existence. Neither side ought to underestimate the significance of the free relationship between technology and humanity. Consequently, it will prove more straightforward to reconcile the two camps by deliberating on the interpretation of freedom in *QT* through the existential analytical framework rather than from the vantage point of the “ontological difference.”

4. *The Possibility of Optimism about Technology*

The pessimistic stance on modern technology adopted by classical philosophers of technology is often challenged by philosophers such as Don Ihde, who advocate a more affirmative and context-sensitive approach. Nevertheless, this optimistic disposition towards the current state of technology and the empirical shift within the philosophy of technology actually aligns precisely with Heidegger's existential analysis of *Dasein*. We are capable of freely apprehending diverse technological entities, forming distinct understandings of the same technological entity, and selecting different paradigms within the philosophy of technology. This is because the horizon, which serves as the background of *Dasein*'s existence, is perpetually in operation.

The post-phenomenology pioneered by Ihde can be broadly construed as a pragmatized form of phenomenology (Ihde 2012a: 117). Specifically, it is “the empirical inquiry into the structural ways in which particular technologies mediate experiential correlations and associated subject-object constitutions that appear in specific contexts of technology use” (Zwier et al. 2016: 317). A key contribution of Ihde's philosophy lies in its detailed exploration of how humans interact with technology across contexts (Ihde 1990: 72–108). Ihde persistently identifies himself as a phenomenologist since, in his research, he posits that the technical object and the technical subject are both derived from specific practical contexts.

The concept of the horizon, as discussed in the preceding section, is closely intertwined with the notion of context. To elucidate these two concepts more vividly, let us continue with the example of AI. As the semester nears its end, a student endeavours to utilize AI to generate ideas for his course paper. By engaging in continuous interaction within the bustling school library, he promptly finalizes the paper's outline. In this instance, for the student to focus

on the content presented on the screen, both the AI software and the entire usage context must recede into the perceptual background. According to Ihde, the context suitable for the application of AI is the primary focus of this case, as it initially establishes the setting within which this technological practice can occur. However, if empirical philosophers of technology truly place significant emphasis on the interaction between humans and technology,⁵ the horizon that renders this context conceivable is also worthy of analysis. This is because the pre-understanding of AI and the entire constellation of beings in which it is situated represents a necessary condition for the emergence of this context. Humans would never engage with AI if no one had any comprehension of it. Evidently, we must invariably be operating within the purview of a certain horizon before interacting with other entities within any specific context.

However, for Heidegger, the horizon is neither an objective space nor a static comprehension framework. In this particular case, the student deliberately distances himself from other elements to focus on the AI-generated content displayed on the computer screen. Conversely, should the dialog box suddenly cease loading content, the student will commence troubleshooting. For example, by pressing the restart button, the keyboard will seem closer while the screen appears farther away for him; or, by checking whether the Wi-Fi is working properly, the computer will seem farther away and the library information desk will seem closer for him, and so forth. This indicates that such fluctuations in distance and nearness are always feasible when we engage with technological entities. In other words, there is always a likelihood that the equipment and its associated context will transform in tandem; technological entities may not always present themselves to us in their current guise. The key aspect is that, since our understanding of technology is closely intertwined with the context in which we utilize it, this further illustrates that the horizon is always contingent, signifying that it can change at any moment during its continuous operation.

⁵The key here is that if these researchers focused on technologies recognize statements similar to “what an item of equipment *is* is entirely dependent on how it is incorporated into a total equipment context” (Dreyfus 1984: 29–30, emphasis in original), “tools occur within an equipmental-referential context *in terms of which* a particular thing can reveal itself as a tool” (Zimmerman 1990: 139, emphasis in original), then they must also admit the presence of the horizon and its crucial role in enabling technological objects to be understood and thus encounter us in an appropriate context. Although it seems that the horizon and the context are often not deliberately distinguished, the difference between them adhered to in this paper, that is, the horizon (in which things can be apprehensible) is the prerequisite for the occurrence of the specific context (in which things will obtain specific meaning), can be regarded as following the ideas in *QT* about the unconcealment and the realm: “Since man drives technology forward, he takes part in ordering as a way of revealing. But the unconcealment itself, within which ordering unfolds, is never a human handiwork, any more than is the realm through which man is already passing every time he as a subject relates to an object [...] Wherever man opens his eyes and ears [...] he finds himself everywhere already brought into the unconcealed” (Heidegger 1977: 18–19).

Consequently, when we come to realize that our understanding of specific technological entities actually emanates from a particular horizon, and that this very horizon has the possibility to undergo change, it becomes reasonable to call into question our current conception of technology. More importantly, once we acknowledge that there invariably exists the possibility of diverse horizons for us to select from, freedom reveals itself to us. It appears that we are perpetually endowed with the freedom to choose the horizon within which we are positioned.

This suggests that, from the perspective of philosophy of technology, we consistently have the option to either adhere to the “instrumental and anthropological definition of technology” (Heidegger 1977: 5) or explore an alternative interpretation. That is, we can endeavour to view technology as more than merely a neutral means of achieving human goals. In this regard, during the era when classical philosophy of technology was dominant, Ihde did not directly criticize Heidegger. On the contrary, he both affirmed a practical and empirical approach to the philosophy of technology (Ihde 2010a: 22–24) and, in an ironic mimicry of Heidegger’s style, characterized a nuclear power plant as an artwork (Ihde 2010a: 82–83). One could even say that he precisely answered Heidegger’s call to “persist in questioning” (Scharff and Dusek 2014: 319).

In contrast, the flaw in the argumentative strategy of Heidegger’s followers in the Technology/technologies debate is their excessive depreciation of the ontic analysis of specific technological practices. Astonishingly, they fail to recognize a fact clearly presented in *QTI*, namely, that the instrumental and anthropological understandings of technology are correct. When interpreted through existential analysis, it reveals that everyone is already situated within a particular horizon. This socialized conception of the totality of beings is often correct for the community to which one belongs. However, precisely because we start within this horizon, we can comprehend everything, including ourselves. Based on this understanding, we can then embark on our own existence. Although Heidegger would stress here that “the merely correct is not yet the true” (Heidegger 1977: 6) and that “in the midst of all that is correct the true will withdraw” (Heidegger 1977: 26), he also concedes that ultimately “we must seek the true by way of the correct” (Heidegger 1977: 6). That is to say, we can only choose, or refuse from choosing, a new horizon when we are already within one. The freedom to select a horizon and, consequently, the possibilities of our own life simply do not exist if we cannot comprehend beings from the very outset. Heidegger’s use of “the true” here actually refers to the horizon we choose for ourselves. The crux is that “[o]nly the true can bring us into a free relationship with that which concerns us from out of its essence” (Heidegger 1977: 6), regardless of whether this horizon is correct or not. According to Heidegger, preparing a free relationship with technology requires first recognizing that we are always capable of and required to make our own decisions regarding our understanding of technology, whether it is abstract or concrete. “The genuine free relation to modern technology must

be more *authentic*, that is, it must involve an *autonomous, self-chosen* attitude towards it” (Rojcewicz 2006: 141, emphasis added).

As we are now aware, Heidegger’s critique was not directed at a particular understanding of technology, but rather the notion that this understanding, without contemplation, was the only one worth pursuing. We cannot authentically choose our own horizon unless we first recognize the existence of the horizon and acknowledge its inherent contingency. Certainly, once we are clear about the horizon under which we operate, we can, like the majority of technology researchers, embrace modern technology with optimism. As Robert C. Scharff (2010: 108) repeatedly emphasized throughout his years-long debate with Ihde:

we can love our information technologies and we can analyze their power and promise and fun just as concretely as we like—as long as we also consider how all this power and promise and fun happens in an ontological atmosphere that encourages us to define “knowledge” as information processing, to define “thought” as neural networking, and to reduce “intelligence” to having a big memory and an ability to manipulate symbols very fast.

Indeed, similar to what is presently transpiring within the field of philosophy of technology, we can also identify the flaws of an overly empirical philosophy of technology, thereby rejuvenating the transcendental philosophy of technology.

5. *The Possibility of Letting Technologies Be*

Peter-Paul Verbeek, one of the representatives of the new philosophers of technology (Ihde 2012b: 331), has reconstructed and refined the criticisms against Heidegger. He does this from a more “internal” ontological level (Verbeek 2005: 60–76), drawing on the perspectives of Ihde (2010a: 56–73, 91–113), who represents the perspective of the history of technology, and Feenberg (2006: 192–196), who represents the technology politics field. Even if we concede that Heidegger’s philosophy of technology does “reduce concrete technologies to the sending of being that forms their *condition of possibility*” (Verbeek 2005: 65, emphasis added), his focus here is on the “possibility” rather than the “condition.” Moreover, the “conditions” are precisely the guarantee for the emergence of “possibility.”

Subsequent to *BT*, Heidegger offered a more lucid interpretation of freedom and explicitly correlated it with destiny: “[F]reedom places *Dasein*, as potentiality for being, in possibilities that gape open before its finite choice, i.e., within its destiny” (Heidegger 1998: 134). How can it be claimed that *Dasein*, being situated within its destiny, possesses freedom? Heidegger’s elucidation on this matter is as follows: “If in the ground of its essence *Dasein* [...] were not in advance holding itself out into the nothing, then it could never adopt a stance

toward beings nor even toward itself” (Heidegger 1998: 91). Evidently, the nothing is what endows us with freedom by enabling us to confront entities within the horizon. Therefore, how should we interpret this nothing?

Let’s return to our example. Suppose a primitive mindset suddenly takes hold of our student. Not only will he fail to recognize the computer, the screen, and the AI before him, but he won’t even be able to identify the very library. It’s not that a specific piece of equipment malfunctions at this moment; rather, the horizon, or the totality of beings, collapses. In a manner that is utterly unfamiliar and unfathomable, the entire realm of beings that should have receded into the background now stands directly before him: “they are beings—and not nothing” (Heidegger 1998: 90). It seems that our normal survival activities can proceed smoothly precisely because of this mysterious nothing that, in the context of our AI example, causes entities other than the content on the screen to withdraw on their own. Conversely, when nothing reveals itself under certain extreme conditions, we are compelled to confront the entirety of entities that we have previously deliberately ignored, but that have always existed as the background. Naturally, they will seem utterly strange and even alien, as the functionality of the horizon is currently disrupted. Unsurprisingly, Heidegger contends here: “Only on the ground of the original manifestness of the nothing can human *Dasein* approach and penetrate beings” (Heidegger 1998: 91). In other words, nothing is the sole foundation for our existence and the source of all comprehensibility and possibility. In reality, this also suggests that there is no absolute basis for any horizon—that is, no ultimate horizon (Keiling 2018: 103–107)—because this nothing is by no means a thing. Consequently, any horizon can be reasonable (as in the case of the student using AI) and absurd in an instant (like the primitive person directly encountering the AI). In this regard, we can even assert that “human existence is interpretation ‘all the way down.’ There is no ‘foundation’ for it” (Zimmerman 1990: 147).⁶ The freedom discussed in the previous section has now been further elucidated: We, who are always already thrown into nothing, although necessarily situated within a certain horizon, precisely because of this, always have the freedom to choose our own horizon.

Let’s go back to our example once more, assuming the student finds out he has a terminal illness at this very moment. When he encounters the AI, he may experience the same emotions as the primitive person, which is that the familiar and significant surroundings could suddenly become strange and indifferent. He is quite likely to cease finishing his paper right away, and instead focus on what he now views as his top priority. In other words, things that are familiar

⁶ In fact, Heidegger also said at the same time: “freedom is the *abyss of ground* in *Dasein*” (Heidegger 1998: 134, emphasis in original). While an abyss generally refers to a certain foundation, that is, “the soil and ground toward which, because it is undermost, a thing tends downward” (Heidegger 2001b: 90), Heidegger is more inclined to refer to the absolute loss of the foundation.

and meaningful in our everyday lives—like finishing a course paper—may likewise lose their meaning and become utterly bizarre when one faces his own particular death head-on. This serves as a reminder that if there is absolutely no foundation for the fact that we are thrown into a certain horizon, then every horizon—whether correct or wrong—into which we are sent is likewise without foundation. Right now, freedom is demonstrated by the realization that human existence is inevitably full of possibility due to the horizon's variety, contingency, and even absurdity. We can therefore confirm that we always have the option to select different horizons, and in doing so, we can select a true existential possibility for ourselves.

In summary, even though we have always been thrown into a particular horizon, this is not to be interpreted as an unchangeable fate. Even if the student is unable to use AI, he can still do the assignment using other technologies, or he might even give up completing the course paper due to the lack of suitable tools. Just as death and nothing are unavoidable, the horizon must always control us, but it also guarantees that we can selectively engage with different technological things in particular contexts. Precisely for this reason, “the differing contexts and multidimensionality” (Ihde 2010a: 115) as well as the “subtle and ambivalent” (Verbeek 2005: 144) cultural roles of technologies, become possible.

Heidegger's investigation into technology does draw attention to the condition of possibility of technology. However, he places more stress on the “possibility” than the “conditions” thereto.⁷ According to him, human freedom is simultaneously restricted and necessary. We cannot assert that “by proving boundedness, one has neither impaired freedom nor curtailed its essence” (Heidegger 1992: 196), unless we comprehend why freedom is human destiny rather than fate.

6. *The Possibility of Addressing Technical Issues*

Andrew Feenberg of the Frankfurt School has long contended that Heidegger, after his disastrous relation with and subsequent separation from the Nazis, particularly in his later career, lost his early activism. Due to excessive entanglement with nihilism, he could merely exhort us “to use technology indifferently” (Feenberg 2000c: 445). It seems that Feenberg never clearly differentiated between fate and destiny within Heidegger's corpus. This is precisely why he failed to perceive hope in Heidegger's philosophy of technology (Thomson

⁷ With the help of a set of terms (the Earth/the World) from *The Origin of the Work of Art*, it is helpful to understand the conditions/possibility here. Roughly speaking, the Earth is the inexhaustible source of comprehensibility, and it is that “whence the arising brings back and shelters everything” (Heidegger 2001a: 41). In contrast, the World is the prevailing horizon for different communities in different eras. The Worlds of different eras present different aspects of the Earth. For Heidegger, the Greek temple as a work of art must be built upon the Earth in order to open up a World.

2000a: 209). For Heidegger, destiny is, in fact, the guarantee of freedom and even the hope for the future, specifically, the possibility of attaining a new horizon, distinct from enframing.

In *QT*, Heidegger established a profound link between history and destiny. Indeed, the “sending-that-gathers” (Heidegger 1977: 24) to which he refers here precisely corresponds to the destiny we previously discussed, signifying that we have always already been sent into a particular historical horizon. Consequently, the same question re-emerges: If we are destined to commence our existence by entering this horizon defined by the community to which we belong, and if it appears that this horizon is intrinsically destined to be technological, then where does freedom lie (see Section 3)?

To address this query, Heidegger expounded on the historical variability of the horizon in *QT*. Notably, there are marked differences between the modern horizon (technology as challenging-forth) and the ancient Greek horizon (*technê* as bringing-forth), despite both being technological. As Heidegger states, “[t]he field that the peasant formerly cultivated and set in order appears differently than it did when to set in order still meant to take care of and to maintain” (Heidegger 1977: 14–15).⁸ The key insight here is that we should not presume that destiny is an immutable fate. Heidegger further develops the point we mentioned earlier about the horizon from a diachronic perspective. That is, while we are destined to be placed within the prevailing horizon of our era, the presence of different horizons across different epochs implies that there is no ahistorical and absolute horizon. Therefore, there are always diverse horizons from which we can freely choose. In essence, history cannot be negated or dismissed. The only way to initiate a new historical beginning is to fully endure it, or rather, to embrace it, both ontologically and ontically.

⁸ It must be mentioned here that, according to Dreyfus’ (1984) inspiring statement, the attitude towards equipment in *BT* is in a transition between the *technê* horizon and the technology horizon. This view, obviously, also acknowledges the historical variability of the technological horizon, just like this paper does. As Dreyfus’s student, Iain Thomson further organizes Heidegger’s history of Being into five stages by using the concept of ontotheology (Thomson 2005: 25). For Heideggerians, ontotheology is certainly a crucial concept, which is obviously helpful in clarifying those ambiguous statements in *QT*. However, this is still a concept that emphasizes the ontological more than the ontic. Let’s return to the Technology/technologies debate again: since Thomson believes that when Heidegger’s critique of enframing is “recognized as following directly from Heidegger’s understanding of ontotheology, however, their full philosophical depth and significance begins to emerge with new clarity” (Thomson 2005: 77), he attempts to refute Feenberg’s criticism of Heidegger’s essentialist philosophy of technology by introducing the direct influence of Nietzsche’s ontotheology on Heidegger’s interpretation of the essence of modern technology, that is, “Nietzsche, on Heidegger’s reading, understood the totality of what-is as eternally recurring will-to-power, an unending disaggregation and reaggregation of forces without purpose or goal” (Thomson 2000b: 433). However, the feedback he finally receives is “[w]hile I can appreciate the complexity of Heidegger’s position, I cannot absolve him of his reactionary attitude toward modernity and specially toward modern technology” (Feenberg 2000c: 450).

Finally, to better address Feenberg's scepticism regarding the nihilistic aspects of Heidegger's philosophy of technology, we must also illustrate his opaque argument on danger and salvation. In this regard, the first point we need to note is Heidegger's claim: "The destining of revealing is in itself not just any danger, but danger as such" (Heidegger 1977: 26). The key issue here is that any horizon reveals one feature of something while concealing others, or, it uncovers one aspect of an entity while hiding others. If nihilism is construed as the region where the light of the horizon cannot reach, then Feenberg's accusation that Heidegger is overly influenced by nihilism is, in fact, quite accurate. However, at least in *QT*, Heidegger's primary focus is on how to overcome the extreme nihilism engendered by enframing, rather than on how to avoid or to eliminate it. Enframing is the most dangerous destiny because it leads people to regard themselves solely as standby resources that can be utilized at any moment. This confines us to the enframing horizon and even prevents us from recognizing that, in any event, it is merely one of the historical horizons. To put it differently, enframing "has already affected man in his essence" (Heidegger 1977: 28).

Nevertheless, since the essence of humanity lies precisely in possibility, and we believe this possibility is manifested in the freedom to always choose the horizon in which one is situated. Moreover, crucially, as previously elaborated, this freedom is precisely guaranteed by destiny. That is, we are always sent into a certain horizon, but due to the impossibility of an ahistorical horizon, we always have the possibility to freely select different horizons. Thus, Heidegger can assert with conviction that there remains a possible saving power even within the most dangerous horizon of enframing. Furthermore, it seems that the more a person fails to understand their surroundings or to perceive other possibilities of their existence, the more mysterious intelligibility and possibilities will emerge, similar to the examples of nothing and death we have discussed. Therefore, even though "humanity is destined to reveal all entities as standing-reserve for technological domination" (Zimmerman 1990: 147), there will always be the possibility of maintaining a free relationship with technology as long as we continue to contemplate and uphold the essence of humanity:

But when we consider the essence of technology, then we experience Enframing as a destining of revealing. In this way we are already sojourning within the open space of destining, a destining that in no way confines us to a stultified compulsion to push on blindly with technology or, what comes to the same thing, to rebel helplessly against it and curse it as the work of the devil. Quite to the contrary, when we once open ourselves expressly to the *essence* of technology, we find ourselves unexpectedly taken into a freeing claim. (Heidegger 1977: 25–26, emphasis in original)

In sum, within Heidegger's philosophical framework, the concept of destiny encompasses at least three layers of meaning. First, we are destined to be thrown

into a particular horizon. Second, we have always already been sent into a destined horizon. Third, we are destined to exist within a horizon. Notwithstanding our perpetual existence under the sway of a horizon, it is precisely due to the horizon's continuous provision of an understanding of all entities that we can interact seamlessly with technologies. More importantly, given that the horizon into which we are sent is essentially historical and our thrownness is fundamentally groundless, we always possess the capacity to choose different horizons. By doing so, we open up diverse possibilities for our own existence. Thus, destiny ought not to be construed as fate; rather, it should be understood precisely as freedom.

7. Conclusion

The emergence of the discipline of philosophy of technology signals the success of its empirical turn. The new philosophy of technology diverges from the classical philosophy of technology, as exemplified by Heidegger, in that it rejects Technology and instead emphasizes technologies. In other words, it now conducts empirical research on a broad spectrum of diverse technologies, rather than distilling technology into a single fundamental concept.

In this decades-long debate, the Heidegger's defenders have primarily sought to respond to the criticisms levelled by technology researchers against Heidegger by clarifying the concept of ontological difference. However, according to the latter, Heideggerian scholars, much like Heidegger himself, persist in introducing abstruse metaphysical concepts to emphasize Being's all-encompassing dominance over beings. Evidently, they cannot countenance such a claim that essentially negates the agency of beings, including both humans and objects.

This paper endeavours to render Heidegger's questions concerning technology more palatable to empirical philosophers of technology, considering the resurgence of the transcendental approach within the discipline of philosophy of technology. Both parties in the debate advocate for the goal of a free interaction between humans and technology, which also constitutes the central premise of *QT*. Heidegger, remarkably, perceives this freedom as the capacity to listen to our destiny. From an existential point, what he truly intends to convey is that *Dasein* is always already groundlessly thrown into a particular horizon that shapes the everyday understanding of all entities within a specific community. This is both an inescapable destiny of *Dasein* and a necessary condition for *Dasein* to open up its own possibility of existence. To put it differently, precisely because this enigmatic and groundless destiny horizon is neither static nor ahistorical, *Dasein* always has alternative horizons to freely choose from.

As per *QT*, modern individuals are destined to regard everything, including themselves, as a reservoir of resources that can be mobilized at any moment. However, since this horizon indeed is not a fate that nullifies our agency, we might discover a possible saving power, while enduring this most dangerous

destiny of all epochs, provided that we recognize it; or, to be more precise, if we choose to withstand it.

Indeed, Heidegger's aforementioned interpretation of freedom precisely furnishes the legitimacy for the emergence of empirical philosophy of technology. Precisely because human beings can perpetually choose different horizons, we have every justification to embrace diverse contemporary technologies, as empirical philosophers of technology do, and to maintain optimism regarding the empirical approach within the philosophy of technology. The current trend within it, namely the resurgence of transcendental philosophy of technology in response to the extreme empirical orientation, was, of course, also foreseen by Heidegger. Evidently, the philosophy of technology has always needed and will continue to unfold, much like human existence.

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