ON THE NATURE AND RELEVANCE MARTIN HEIDEGGER'S CRITIQUE OF THE ESSENCE OF TECHNOLOGY

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Abstract

This paper reflects on Heidegger's idea of the essence of technology and its implication on modernity. Although, technology has its therapeutic functions it is nonetheless haunted by enthralling repercussions. Like the World War era, the society today is not spared of this domination. Modern technology, despite its advances, remains a means to an end, and can be both good and bad depending upon the purpose it is deployed. One disturbing reality about technology is its overwhelming dominance over humanity. To a greater extent, one wonders who controls who between technology and humanity. A reflection on modem technology is, by necessity, concerned with establishing how new technologies should be employed and which new possibilities to pursue. Many philosophers over time have questioned the overpowering consequences of science and technology as evident in torrents of literatures on the subject matter. However, their accounts fail in addressing the question of the essence of technology itself. In this paper therefore, Heidegger takes a phenomenological approach in articulating the essence of technology, its correct meaning and how humans relate with it. Heidegger also expressed his suspicion on the danger of technology while cautioning against its impact on account of human hostility and environmental distortion. He taught that the essence of technology is revealing or unconcealment of being. The paper found out that Heidegger recommends turning as solution to the danger of modern technology and hence, concludes that Heidegger's reflections on technology are not only insightful but revealing of the ills that come with technology.
Keywords: Technology, Ontology, Enframing, Being, *Turning*.

Introduction

It is no contradiction that technological devices are extremely ubiquitous in the modern world (Sloane 1). It would rather be outlandish and weird if one goes through the day without encountering some technological devices. Despite that, it is not so strange to go through a day without encountering any disaster caused by these devices. In general our clothes, food, water, and even our recycled air

are all technologies, just the same way as weapons of mass destruction and poisons are traced to the same source (Taylor 2-3). Man lives in an era where many of the things we interact with on a daily basis are artificial. Sometimes it seems that the only nontechnological devices in our world are ourselves.

Although many philosophers and authors over time have questioned the domineering nature of technology and the consequences of its products, Heidegger remains the most spectacular thinker who extended this question to the essence of technology (Inkman 4). Heidegger's notion of technology stems from his general ontology. He does not address our ordinary understanding of technology. He calls our everyday understanding of technology the 'instrumental definition' of technology. On this account, 'the manufacture and utilization of equipment, tools and machines, the manufactured and used things themselves, and the needs and ends that they serve, all belong to what technology is. The whole complex of these contrivances is technology (QCT 4-5). Specifically, his notion of technology as the 'enframing destining spirit of this age', is a revelation of being itself as technology in the modern age. The treatise which Heidegger devoted to the subject matter of technology was *The Question Concerning Technology* and *The Turning*.

This paper is a *critical* in two ways. First, it identified some flaws in Heidegger's critique, and secondly it insisted that, despite his flaws, Heidegger's proposal against the threat of modern technology remains overwhelming. His philosophy does not only aspired to truth or knowledge; it also and even more aspired to wisdom, to acquiring a specific "fundamental attitude. Inducing such a decision is the second major objective of this paper.

Technology: Towards a Definition

Etymologically, the term 'technology' derives from the Greek *techne,* which means "art, skill, cunning of hand", and *logos*, meaning, "to study" (Henry and Scott 321). However, over the years, the term has evolved into different meanings. For instance, Ofuasia and Ojieko maintained that "technology could represent anything built by humans, from their understanding of reality or nature for the advancement of the species" (31). Ofuasia and Ojieko's definition is wholistic and has exposed an understanding that technology is the result of human efforts and knowledge in practical skills. Brian Arthur sketched out three

conceptions of technology. He defines technology as: i) "a means to fulfill human purpose"; ii) "an assemblage of practices and components"; and iii) as the entire collection of devices and engineering practices available to a culture" (28).

From the point of functionality, Ellul saw technology as "the ensemble of practices by which one uses available resources in order to achieve valued ends" (141). This definition agrees with Arthur's third component above, that technology is practical. Indeed, technology is not just scientific knowledge but its practical application for human benefits. It can also be inferred that technology is man's long and painful efforts to control his material environment by the use of tools and by the application of his reason to the properties of matter and energy. Technology particularly became applied science towards the eighteen century and was closely connected to the society at large through the interrelation between the state of technological development and the projects, goals, and the problems that the society encounters.

Furthermore, Galbraith directly defines technology as "the systematic application of scientific or other organized knowledge to practical tasks" (Galbraith 12). Like Arthur and Ellul above, Galbraith understands technology from practical perspective. Gendron extended this definition to mention the organizational aspect of technology. He defines technology as "any systematized practical knowledge, based on experimentation and or scientific theory, which enhances the capacity of society to produce goods and services and which is embodied in productive skills, organization and machinery" (Gendron, 23). Similarly, Pacey saw technology as "the application of scientific or other knowledge to practical tasks by ordered systems that involve people and organizations, living things and machines" (Pacey 6).

Ofuasia and Ojieko observed that, not only has the term 'technology' evolved over the years, the products and machines that have been built during the Stone Age are obsolete. They are no longer paraded today. Technology has dovetailed into sensitive areas like Nuclear Technology, Genetic Biotechnology which equally raises the brow as to whether or not technology has done more good than harm to humanity (31). Giving Ofuasia and Ojieko's allusion to Stone Age era suggests that even the most crude of human crafts, as long as it served for a task, it is technological. Thus, the most sophisticated gadgets we see today are developments in time. For this reason, Callahan is convinced that technology is wedded to man. He cautioned that, "since we are by nature technological, men

must learn to live with it, not only that we might be better than it, but we should learn how to enjoy and profit from it, but also how to keep ourselves from being killed by it". In other words, to learn how to be healthy rather than sick technological slaves (61).

Callahan's conclusion here is evident that he, like Martin Heidegger suspected the probability of humanity being enslaved by the products of technology. But Heidegger offered a more unique and important insights into the literaure on technology, especially as it concerns the impact of technology in the moder world and the relationship between human beings and technology. In this paper, it is pertinent to mention some of the early ideas of Heidegger which ground his later thought on the essence of technology. The paper will pay a particular attention to the existential structure of Being-in-the-world. This plays a very important role in what Heidegger later described as the extreme danger of technology.

Heidegger on the Essence of Technology

Heidegger begins his discussion by making a distinction between technology and the essence of technology using a tree anology. For him, one has to understand the essence of technology from the way it is, through a free relationship with it. In his words: "when we can respond to this essence, we shall be able to experience the technological within its own bounds" (QCT 2-4). In the tree analogy, Heidegger declared that,

> When we are seeking the essence of tree, we have to become aware that, that which pervades every tree, as tree, is not itself a tree that can be encountered among all the other trees. Likewise, the essence of technology is by no means anything technological. Thus we shall never experience our relationship to the essence of technology so long as we merely conceive and push forward the technological, put up with it, or evade it. Everywhere we remain unfree and chained to technology, whether we passionately affirm or deny it (QCT 4).

For Heidegger, technology is not reducible to smart phones, cruise ships, airplanes and solphisticated weapons. It is rather, *being* itself. The *essence* of technology for Heidegger is quite distinct from what man does with his knowledge, tools, instruments, equipment, or the way of thinking about those

things. Likewise, modern technology is not reducible to technological artifacts, devices, or the techniques that produce those things (Godzinksi 2).

The essence of technology is not anything that is technological. This means that one can never experience a human relationship with the essence of technology as long as man merely concieve of the technological. The essence of anything is considered as that which makes that thing what it is. It is that which determines the conditions in light of which *beings* appear in the modern age. The essence reveals all entities as resources, and as either useful or useless (Taylor 39). Thus, by Heidegger asking the question concerning technology, his concern was exactly on what technology *is*.

In ancient thought, the essence of a thing is what the thing is. Thus, the conception of technology according to which it is a means and a human activity can therefore be called the instrumental and anthropological definition of technology (*QCT* 312). Heidegger gives an explanation of the instrumentality of technology by employing Aristotle's theory of causes while also, explaining the role they play in causality. The theory of causes became critical to understanding instrumentality, and with it, the *essence* of technology (*QCT*, 314). The four causes (efficient, material, formal and final cause) are properly unified as causality. Heidegger used analogy of silversmith creating a chalice in order to explain this unity. The causes do not create from nothing so much as they bring forth, and unify, what is in some sense already there. These let what is not yet present arrive into presencing. Accordingly they are unifiedly governed by a bringing that brings what presences into appearance. The modes of occasioning, the four causes are at play, then, within bringing-forth. Through bringing-forth the growing things of nature as well as whatever is completed through the crafts and the arts come at any given time to their appearance (*QCT*, 317).

The four causes bring something forth out of concealment into unconcealment, and this carries some very significant ideas. What is brought forth into unconcealment was not previously present, but was being. The quest for understanding the proper realm of instrumentality has led to truth through causality. This is relevant to the definition of technology as instrumentality, but it did not hit at the true essence of technology. Although the path to truth is this revealing, bringing-forth out of concealment into unconcealment, then perhaps the *essence* of technology must be unconcealed, Heidegger returns to language for a further inquiry. He points out two significant ideas from Greek *techne* thus:

> One is that *techne* is the name not only for the activities and skills of the craftsman, but also for the arts of the mind and the fine arts. *Techne* belongs to bringing-forth, to *poiesis*; it is something poetic. The other thing that we should observe with regard to techne is even more important. From earliest times until Plato the word *techne* is linked with the word *episteme* (*QCT*, 318).

The meaning of the Greek word for technology is *techne*, which is linked with making and knowing. This making involves not only technical construction, but also art (Taylor 44). Heidegger acknowledges art as another revealing, as that which unconceals the concealed truth just like technology accordingly, is no mere means, but a way of revealing. Heidegger observed that "if we give heed to this, then another whole ream for the essence of technology open itself up to us. It is the realm of revealing, that is, of truth" (QCT 12).

Whoever builds an aircraft or a ship or forges a spear reveals what is to be brought forth, according to the terms of the four modes of occasioning. It is as revealing, and not as manufacturing, that *techne* is a bringing forth (*QCT* 319). The four modes of occasioning are the four modes of causality, and indeed all causality is a bringing forth of what was previously concealed. All manufacturing is more properly understood as a revealing, and what is being revealed is the truth, the *aletheia* (Taylor 38) of what already *is*. Thus the essence of technology is that technology is a *revealing*. It is that which reveals and unconceals the true essence of an entity. For Heidegger, modern technology is a revealing of a unique but challenging kind and yet the revealing that holds sway throughout modern technology does not unfold into a bringing-forth in the sense of *poiesis*. The revealing that rules in modern technology is a challenging [*Herausfordern*], which puts to nature the unreasonable demand that it supply energy which can be extracted and stored as such (*QCT*, 320).

Heidegger's Critique of Modern Technology
The lacuna Heidegger identifies with modern technology is that it is a threat to man. Man, apart from being a resource is likewise enslaved to technology (QCT, 322). Again, Heidegger elucidated quite a lot about the nature of being and the supreme threat posed by the essence of technology as enframing. This enframing is being as it is revealed in this age, or as it is destined, and this sheds light on the

supreme danger of the enframing. The danger is that being itself might be entirely closed off from humanity, and that it may only be revealed in the form of the enframing (Taylor 48). This entrapping disguises itself, in that it develops into the setting in order of everything that presences as standing-reserve (Heidegger, *Turning* 37-38).

Godzinksi presented the lacuna in duality. He stated that, "Heidegger maintains a double movement of concealment within the overall movement of enframing" (5). The enframing conceals its true nature as being, by revealing itself as that which orders the standing reserve. It also conceals its nature as the ordering of the standing reserve by revealing itself as technology, that is as the instrument and tool of humanity (Taylor 50). Heidegger explains that the supreme danger is the concealing and disguising of being in the form of the dual concealment of the enframing. The enframing only reveals itself as *instrumentum*, the tool for humanity.s mastery over the earth. .But in truth, it is the coming to presence of man that is now being ordered forth to lend a hand to the coming to presence of technology (*Turning* 37). It seems that humanity is utterly lost deceived by the very forces they believe themselves to control.

Following this threat, modern technology, according to Heidegger reveals what a thing is quite right, but its revelation takes place through a kind of violence. Ofuasia and Ojieko observed with Heidegger that "man's arrogation to himself of the role of subject in philosophy; his objectifying of nature, life, and history in dealing with them in 'the sciences' and his calculating, cataloguing and disposing of all manner of things through machine technology, all these are expressions of that essence and of that revealing" (36). Technology, so understood, is in no sense an instrument of man's making or in his control. It is rather a phenomenon, ruled from out of Being itself, that is centrally determining all of Western history. The failure to comprehend and understand this has led precisely to some of the sufferings humanity faces in modern times (37).

The foregoing poses a challenge from the technological dimension. For Heidegger, Modern technology in its essence is a challenging revealing (Durkheim 386). It involves a contending with everything that is. For it sets upon everything imposing upon it a demand that seizes and requisitions it for use. Under the dominion of this challenging revealing, nothing is allowed to appear as it is in itself (Ofuasia and Ojieko 37). The main dissimilarity between ancient

and modern technology lies in how modern technology reveals the world as resource.

Modern technology reveals the world as resource, and it also sets upon the entities in the world in order to extract those resources. These resources have no inherent purpose, but rather they only exist to further the process of resource gathering and storage. In order words, modern technology reveals the being of all entities as purely functional or instrumental. Heidegger has a particular phrase for the revealing of entities as resources. He calls it the standing-reserve, *Bestand* (QCT, 322). For instance, humans are often used as resources or specimen for scientific and technological inventions. This is common in medical clinical trials of vaccines and drugs. The COVID-19 vaccine is a recent example. Thus, modern technology somewhat controls man. To quote Heidegger,

> Only to the extent that man for his part is already challenged to exploit the energies of nature can this revealing that orders happen. Yet precisely because man is challenged more originally than are the energies of nature, i.e., into the process of ordering, he never is transformed into mere standing reserve. Since man drives technology forward, he takes part in ordering as a way of revealing (*QCT*, 323-324).

The urge to count humanity amongst the standing reserve (or as mere tools) is strong, but they participate in the ordering of the world in such a way as to resist this. Although they drive the ordering, they are not its authors. The essence of modern technology extends even beyond the human will to master or control it. The more that man asserts that technology provides new potential and scope for action, the more noticeable it is that it can be both beneficial and dangerous. This can be seen clearly in such areas as genetic engineering, nuclear energy, and modem information technologies. Potentially, these technologies can produce both great good and great harm (Sloane 200).

Heidegger considers the essence of modern technology as a mode of revealing that challenges forth. He explains that what brings man into a relation with the world, such that he is ordering it as standing reserve, is best understood as a gathering. That original gathering from which unfold the ways in which we have feelings of one kind or another is disposition (*QCT*, 324). The gathering is that which motivates the being of entities in one-way or another. It is that which is responsible for how entities are as they are, in the way that they are (Taylor 43).

The gathering is best understood as the work or act of the revelation of the being of entities. The gathering that Heidegger is most concerned with here is the kind of gathering that is responsible for how humanity orders the standing reserve (tools, equipments, nature).

Heidegger talks about *Enframing* as the way of revealing that holds sway in the essence of modern technology and that is itself nothing technological (QCT, 325). The enframing is not machines and it is not technological, it is rather the true essence of technology. The enframing is the gathering that reveals the being of man, in this technological age, as the being who orders the entities of the world as standing reserve. It is what reveals the being of man as orderer, and in turn reveals the other entities of the world as ordered. Enframing is the mode of revealing that holds sway, that is to say it is the mode that is chief and unassailable in the essence of modern technology. It is also significant to point out that the enframing reveals itself as truth, as *aletheia* (QCT, 326). From Heidegger's perspective, enframing is the way in which truth reveals itself as standing-reserve (Godzinksi 3).

Since the essence of modern technology is the enframing, then what remains to be asked is how does this relate to humanity? It is nothing technological, nothing on the order of the machine. It is the way in which the actual reveals itself as standing reserve (Taylor 42). The enframing not only reveals our world, through us, as standing reserve, but it also reveals history itself in the same way. Heidegger explains that the enframing sends humanity on the way of revealing entities including man as standing reserve in the form of a destining. It is from this destining that the essence of all history is determined (*QCT*, 329). This destining is what the enframing is as much as it is also what the enframing does.

Borgmann corroborates that, "destiny is neither an inevitable fate that descends on humanity, nor the result of human willing; disclosure of destiny and human freedom are one and the same" (429). For Heidegger "Freedom is that which conceals in a way that opens to light, in whose clearing shimmers the veil that hides the essential occurrence of all truth and lets the veil appear as what veils" (*QCT*, 330).

According to Botha, technology is neither neutral nor instrumental. The enframing has a special danger associated with it in the sense that it transcends all other modes of revealing as the supreme danger. If every entity makes an

appearance as only standing reserve then man himself will come to be ordered as standing reserve. Botha further explains this threat when she averred that, "the horror of the technological age is that human beings are also seen as raw material. Thus, the question concerning technology is ultimately a question about human dignity" (160). It is not only our dignity that is at stake, but in a unique way our humanity itself. In the words of

Meanwhile, man precisely as the one so threatened, exalts himself and postures as lord of the earth. In this way the illusion comes to prevail that everything man encounters exists only insofar as it is his construct. This illusion gives rise in turn to one final delusion: it seems as though man everywhere and always encounters himself (*QCT*, 332).

Thus, Heidegger explains that the danger of technology is not from the machines of war, or from any destruction that it creates. The rule of enframing threatens man with the possibility that it could be denied to him to enter into a more original revealing and hence to experience the call of a more primal truth. Thus where the enframing reigns, there is a *danger* in the highest sense. As a solution to the danger of technology, Heidegger proposed a *turning* to man's essence thus;

> Only when man, in the disclosing coming-to-pass of the insight by which he himself is beheld, renounces human self-will and projects himself toward that insight, away from himself, does he correspond in his essence to the claim of that insight. In thus corresponding man is gathered into his own (*ge-eignet*), that he, within the safeguarded element of the world, may, as the mortal, look out toward the divine. Otherwise not; for the god also is when he is a being and stands as a being within being and its coming to presence, which brings itself to pass out of the worlding of world (*Turning*, 47).

The passage above expresses Heidegger's mystery of the *turning*. He argued that in humanity's renouncement of *will* and *action,* the *turning* comes to pass. Once the *turning* passes and humanity is freed into its *essence*, then humanity is given to understand its place in the world. Thus, understanding human essence is foundamental to understanding the essence of technology. According to

Heidegger, "that is a place where mortal, finite, humanity looks out towards the divine, to God" (quoted in Taylor 65).

What Heidegger's proposed in *The Turning* answered the supreme danger of technology. Though the enframing holds sway, it especially conceals what it truly is. Technology conceals itself as instrument, and then conceals itself as the enframing, when it's true identity is that of being itself as the destining of this age. The turning takes place when technology is revealed as being, and when it is so revealed the danger is surmounted by a saving power. Where technology is revealed as being, the danger of technology cutting off all revelations, except resource, is conquered by the saving power that reveals being itself in technology. Though technology cannot be overcome by humanity it can be surmounted if humanity will cooperate with the enframing in revealing its true essence as being. In so doing humanity may once again uncover its true essence as the safe keepers of being.

Relevance of Heidegger's Critique of Technology
Looking at the problems that technology creates, is Heidegger's solution really of help? How can a passive waiting for a turning deliver humanity from the threat of nuclear weapons, terrorists attacks, religious and ethnic wars, plain crash, structural failures, chemical poisoning, global warming, or the depletion of the ecosystem? Apart from that, Heidegger's solution seems to be more abstract to be practical. Some critics have reached the conclusion that it cannot. In fact much of the criticism of Heidegger's answer to the danger of technology hinges on the distinction between technologies itself, and the particular technologies.

In spite of the very abstract and distressing nature of Heidegger critique remains relevant. His writing about technology is often in a manner that makes it appear that he is the first to recognise in it a philosophically interesting problem. His characterization of the 'everyday' understanding of technology furthers this impression. Although the instrumental definition that he describes is still quite common, many philosophers had come to see it as an inadequate account. In Heidegger's analysis of technology, humanity will understand its essence when that essence is revealed in their coming to presence. Our coming to presence is deeply connected with the coming to presence of being (*Turning* 39). This is vital, for as much as humanity is being ordered by the enframing they may still defeat the enframing through a deeper connection to being.

Again, Heidegger is concerned with understanding the essence of humanity and its connection to the essence of being. Before the essence of humanity can be grasped, the essence of being must be questioned. Therefore, Heidegger has come to that most troubling of questions that must always precede any project, the question concerning action. The realization is that the act of thinking is action, and it is the action that must be taken if the essence of humanity is to be understood. In addition one realizes that questioning about being cannot begin until thinking is questioned. This very act of questioning thinking reveals the correspondence that is needed for humanity's coming to presence with the coming to presence of being.

Conclusion

In the foregoing, attempts have been made to explicate on a discourse on Heidegger's critique of the essence of technology. His contributions to the discourse on technology began as a question in the work entitled *Question Concerning Technology*. At the heart of the work is the question of what is technology? Heidegger distinguished between the common understandings of technology as instrument and the essence of technology. Despite this knowledge, the question of what technology *is* sought the *essence* of technology and the essence of technology is enframing. The enframing causes all entities, and particular beings to be revealed as resources for use. Heidegger conceived enframing as the destining of being, since it is being that reveals entities for what they are. Technology is being itself as a force in this age that causes all things to be revealed as resource. Heidegger is of the view that, humanity is deceived into thinking that they are the masters of technology when technology truly masters them, since being is beyond human mastery. He identified the supreme danger of technology lies in that it denies every revelation of an entities being except for the revelation of that being as resource. That the being of all entities is limited in this way cuts off the revelation of being itself as being, and causes humanity to lose sight of its own essence. Yet in this danger there is a *turning* that takes place. This *turning* can be interpreted to mean freedom and independence of thought, a self-awakening, and deliberate efforts to act morally. The paper concludes here that, Heidegger remains the most critical thinker on the subject matter, and if his recommendations are strictly applied, the danger of modern technology will be surmounted.

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