THE EPISTEMOLOGICAL INTERROGATION OF THE AMBIVALENCE NATURE OF THE CURRENT TRENDS OF TECHNOLOGY: HEIDEGGERIAN CONCEPTION AND IMPLICATION OF ENFRAMING TECHNOLOGY

Makokha Philemon[1], Dr. Kenneth Makokha[2], Dr. Lawrence Ofunja Kangei[3]

THE CATHOLIC UNIVERSITY OF EASTERN AFRICA

DOI: https://doi.org/10.56293/IJASR.2024.6016

IJASR 2024
VOLUME 7
ISSUE 4 JULY – AUGUST **ISSN: 2581-7876**

Abstract: The study focuses on the existential interrogation of the metaphysical impacts of the ambivalence nature of the current trends of technology on human society. Through *enframing* as the essence of modern technology, the study reveals how human thinking and attitude towards reality have been profoundly affected. By *enframing*, the modern way in which technology reveals the world lies in the human quest for self-assurance. This is reflected in his desire to dominate and to gain total control over reality and nature in general. Thus, technology in 21st century has acquired a new nature. This signifies the fact that, modern technology views nature merely as a resource. As a result, it positions human being in a different epistemic relationship with nature, shifting from imitation to exploitation. While imitation involved studying existing natural entities and for their proper use, modern technology focuses on the exploitation of the natural phenomena for the fulfilment of the present and the future human needs. This is evident in Mechanized Food Industry and Consumer Culture, Agricultural Economics, Technological gadgets and Digital Ecosystems, Information Technology and the Mining Industry, Transhumanism; the application of modern technology to transform or elevate human condition by enhancing the efficiency of human mind and body to fit into desirable future characteristics of a new human species.

Keywords: Modern technology, Essence, Standing-reserve, Enframing, Transhumanism, Cognitive Computing, Human intelligence, Artificial intelligence, Future-human-species.

Introduction

This paper interrogates the unfolding question concerning the essence of modern technology from Heideggerian perspective. Our aim is to underscore the fundamental problem of the essence of the current trends of technology on the current human society. The paper examines how *enframing* as the nature of modern technology reveals several negative effects that underpin the darker aspects of current technology. We expound on *enframing* as the ground that defines transhumanism; the ambivalence state of "human enhancement" and cognitive computing that is, the simulation of human cognitive processes within computerized systems. These issues encompass heightened social inequality, excessive dependence on technology, ecological degradation, ethical dilemmas, and cultural tension.

Heideggerian Quest for the Essence Modern Technology

There is no contradiction by stating that before the mid to late 19th century, no philosopher could consider himself as a specialist in philosophy of technology, or even as the one who had a special intention of evaluating human relation to technology. The fact remains that there was no a philosopher with an explicit concern for understanding the phenomenon of technology as such, and that no full-fledged philosophies of technology had yet been elaborated. (Reydon, 2023) Without doubt, one reason for this is the fact that, before the mid to late 19th century, technology had not yet become the tremendously powerful and ubiquitously manifest phenomenon that it would later become. (Reydon, 2023) Accordingly, until the twentieth century the phenomenon of technology remained a background phenomenon (Ihde, 1993) and the philosophy of technology is primarily a twentieth-century development. (Ihde, 2009) Nordmann describes philosophy of technology as not only a field of work without a tradition, it is foremost a field without its own guiding questions. In the end, philosophy of technology is the whole of philosophy done over again from the start, only this time with consideration for technology. (Nordmann, 2008) Alternatively, the key role of technological philosophy is not to "deal philosophically with a particular subject

domain called "technology," rather, its job is to deal with all the traditional questions of philosophy, relating them to technology. (Reydon, 2023)

Though Nordmann's argument makes sense, it is not true that philosophical approach to technology lacks a guiding question. By the virtue of talking about philosophy of technology already there is an implication of the core matter to be addressed. This matter before further inquiry, concern's philosophy, that is, the truth of being in human way of life and technology, that is, the use and application of knowledge to solve human problems. Thus, talking of philosophical technology already implies the question concerning the relationship between the essence of human existence and the essence of technology in the search of truth. Therefore, philosophical technology as an upcoming discipline has the grounding objective and the guiding question. The issue at hand, is the clarification of its objective and the guiding principle.

While still disputing on the same matter, Ferre raises the argument that, the philosophy of technology can be understood as philosophy focused specifically on the study of technology. According to Ferre, philosophies such as those of science, biology, physics, language, and technology should be seen as part of philosophy in its broader sense. They explore traditional philosophical questions and methods, but with a distinct focus on understanding how these fundamental inquiries and approaches intersect with the specific domain of technology and its impact on human affairs. (Ferre, 1995)

At this point, the clarification of the matter concerning philosophical technology is key. Philosophy of technology is not only concerned with issues pertaining technology, nevertheless, it has the role of unconcealment of reality and clarification of issues regarding the essence of human existence and how technology as a way of revealing ought to aid man to attain the truth concerning his meaningful existence.

Based on this conception, the question concerning the human relation to the essence of modern technology and its impacts, find its meaning in the philosophy of Martin Heidegger. His work on technology was greatly inspired by issues rooted in philosophical progress and historical sketch of 20th century. Some of these issues include the existential and metaphysical questions regarding the nature of being and human existence as raised in his work *Being and Time*. By this, Heidegger intended to postulate how modern technology shapes human understanding of his existence and the reality concerning Being. In other words, Heidegger wanted to point out how the current trends of modern technology has impacted human society and the natural world.

The Philosophical Distinction between Ancient Technology and Modern Technology

According to Heidegger, there is a great difference between technology and modern technology in terms of their definition and application. Philosophically speaking, the definition of something is based on its essence. Yet, according to Heidegger, the essence of something does not just denote its identity, but also its manner of progression, how it persists over time as that which it is. This signifies that, the way something comes to presence also is determined by its essence. In this instance, a crucial differentiation between the core nature and what the core nature encompasses is essential. For instance, the contrast between trees and the underlying concept that defines each tree, yet is not a tree itself. Hence, the fundamental nature of technology is not inherently technological.

The essence of technology transcends its technical functions, encompassing profound philosophical, societal, and cultural dimensions. It reflects human intentions of uncovering the reality of being, values, and interactions with nature in its proper sense, showcasing creativity, innovation, and ambitions beyond the purely technical realm. While technology manifests in physical forms, its core essence lies in revealing mode of reality which reflects human aspirations of meaningful existence.

Heideggerian conception of technology stem from the Greek word *technikon* (Heidegger, 1993) which means that which belongs to *techne*. *Techne* stands for two major human aspects: First, activities and skills of craftsman, and second, the arts of the mind and fine arts. Thus, by virtue of human skills and arts of mind, *techne* belongs to bringing-forth. (Heidegger, 1993) By bringing-forth, *techne* means opening up which entirely denotes revealing. Thus, *techne* is a mode of revealing, that which reveals whatever that does not bring itself forth and does not yet lie here before us. (Heidegger, 1993) Further, Heidegger postulates that bringing-forth can be in two sense: We think

bringing-forth in its full scope and at the same time in the sense in which the Greeks thought it. Not only handcraft manufacture, not only artistic and poetical bringing into appearance and concrete imagery, is a bringing-forth, poiesis. Physis also, the arising of something from out of itself, is a bringing-forth, poiesis. Physis is indeed poiesis in the highest sense. For what presences by means of physis has the bursting open belonging to bringing-forth. For instance, the bursting of a blossom into bloom, in itself. (Heidegger, 1993)

Thus, bringing forth as a mode of revealing, can be understood as a natural way by which something comes to existence through itself and second, as a means through which something comes into existence through other thing. Thus, Heidegger defines technology as a way of bringing-forth; that is, a mode of revealing. Bringing-forth brings hither out of concealment forth into unconcealment. Bringing-forth comes to pass only insofar as something concealed comes into un concealment. This coming rests and moves freely within what we call revealing. The Greeks have the word *aletheia* for revealing and the Romans translate this with *veritas* while for us we say "truth" and usually understand it as the correctness of an idea. (Heidegger, 1993)

Thus, bringing forth out of concealment, implies that the nature of technology ought to reveal aspects of reality that were previously hidden or obscured from human comprehension and internalization. Thus, through technology, we ought to gain access to knowledge and possibilities that were previously inaccessible. In this context, Heideggerian conception of bringing-forth, emphasizes on transformative power of technology in uncovering and revealing aspects of reality that were previously concealed, and the importance of understanding how this process shapes our relationship with the world.

Nevertheless, Heidegger defines modern technology in terms of anthropological and instrumental senses. (Heidegger, 1993) In this sense, modern technology has been defined in technological way. While delivering a lecture on the nature of modern technology, Heidegger states that the definition of modern technology takes two forms: first, modern technology is a means to an end; and second, modern technology is a human activity. (Schalow, 2010) The two types of definitions of modern technology are interconnected because both involve human activity of establishing goals, acquiring, and employing the necessary means to achieve those goals.

Modern technology as a means to an end and as a human activity, has tremendous impact on our current society. There is no doubt that modern technology is core to our modern society. Modern technology defines our way of being in the current society. The progress in the current trends of technology has put forward enormous benefits to humankind that has led to the improvement of his way of life.

Progress in modern technology has significantly enhanced our ability to provide basic essentials such as housing, food, clothing, and medical care that have driven significant progress in health, agriculture, and industry. Progress in transportation, construction, and communication technologies has broadened our horizons, offering an array of new possibilities for housing, employment, and leisure activities. Information technologies have revolutionized access to knowledge, breaking down old barriers and placing the entirety of human science and learning within easy reach for anyone. Consequently, modern technology has transformed nearly every facet of our lives, largely for the better. By relieving us of arduous and time-consuming tasks, modern technology frees us to pursue activities and opportunities that were once beyond our reach, both for previous generations and even for ourselves not long ago. (Wendland, 2019) However, the tremendous benefits of modern technology are in ambivalence mode. This ambivalence mode is a result of its challenging nature. The nature of modern technology is *enframing*.

Enframing as the Nature of the Current Technology

Modern technology and its current trends has greatly dominated human way of life in the society today. Unlike ancient Greek technology, modern technology embodies a specific way of letting the world be or revealing the world. The modern way in which technology reveals the world lies in the human quest for self-assurance. This is reflected in his desire to dominate and to gain total control over reality and nature in general. Thus, technology in twentieth century, acquired a new nature. This signify the fact that, the older technology mimicked nature. Through the act of imitation, technology revealed the hidden aspects of natural entities. In contrast, modern technology views nature merely as a resource. As a result, it positions human being in a different epistemic relationship with nature, shifting from imitation to exploitation. While imitation involved studying existing natural entities and for

their proper use, modern technology focuses on the exploitation of the natural phenomena for the fulfilment of the present and the future human needs.

The society today comprehends modern technology as a means of approaching reality in ambivalence manner; where reality can only appear as raw material to be manipulated. (Verbeek, 2005) Hence, the way human being comports himself towards modern technology is ambivalent. Human relationship to current technology is never free. Modern man rarely experiences technology in its bound. This is so as the ground on which human being interacts with technology is concealed. Human being as *Dasein,* does not encounter the reality of being in openness. To bring out this mode of interaction between man and modern technology, Heidegger uses the term *Gestell.* (Heidegger, 1993)

Gestell is a German term that Heidegger uses to describe the nature of modern technology and how man is involved as the creator of this nature. *Gestell* is translated in English as *enframing. Enframing* is the manner in which Being manifests itself in the age of modern technology. (Botha, 2001) That is, *enframing* is the mode in which Being reveal itself in an unauthentic; withdrawal manner. It is the sphere within which the truth of being in technological era is the forgottenness of being. *Enframing* refers to the manner in which technology reframes the "how" of our experience, perception, and our understanding of reality of being.

On this ground, *enframing* signifies our current perception of the world through modern technology as a mere assortment of manipulable and controllable resources. This poses a big threat to existential reality of things in our surrounding. Modern perspective on technology is problematic because it obscures the genuine essence of phenomena and hinders our ability to engage with the world in a profound manner. In contrast to this, Heidegger advocates for perceiving things in their unobscured state, which would enable us to encounter the world in a more authentic and significant manner. Heidegger's notion of *enframing* is closely intertwined with his broader criticism of modern technology and its impact on our comprehension of the world. Furthermore, these ideas are intricately linked to his concept of "Being" which he believed was being veiled by our preoccupation with technology and its manipulative nature.

Enframing describes the paradigm shift in the history of human thinking where by the prevailing mode of understanding and relating to the world is only limited to technological framework. In this domain, the contemporary emphasis on efficiency, instrumental rationality, and control within modern technology shapes our perception of the world as a vast pool of resources waiting to be utilized. This concept of *enframing* refers to how technology forms our view of reality and influences our interactions with the world around us. Consequently, modern technology is an *enframing* technology.

Enframing technology, therefore, delineates the influence of technology on our perception and comprehension of the world. It denotes the manner in which technology constructs our encounters, frequently simplifying everything into mere utilities to be exploited and managed. This phenomenon of *enframing* technology has the potential to restrict our capacity to perceive the world in a comprehensive and genuine manner. In the current age of *enframing* technology, the freedom of being is limited. In his struggle to master modern technology, the essence of man as the one who raises the question of being and disclosing the reality of existence, is challenged to subject reality under his own control. By this, man aims at the utility of things and not the reality of their being.

By aiming at the utility of things, man is convinced of advancing his way of life. That is, using modern technology as a means, the human person seeks to make life simpler and easier. With this intention, science and technology become means to the progress of human civilization. In pursuit of science and technology, we end up either consuming or destroying knowingly or unknowingly what nature presents to us.

Anyone one who appreciates the value and the benefits that modern technology contributes to improve human life without a reasonable caution of its threatening dangers, remains blind to the reality of the current world. It is notable to clarify this at the outset, that we are aware of the concrete benefits and contributions of the current technology to human way of life such as improved health system that enhances human good health, improved food production system and promotion of education system through digital learning. Albeit this gives praise to modern technology, its insidious impact to nature and human life in general, is enormous. For example, through *enframing*, human being is unconscious of how the *enframed* technology is dehumanizing and deteriorating nature; where

everything is reduced to calculative and manipulative modes of being. This way of approach to reality is what Heidegger refers to as standing-reserve.

Standing-Reserve as a Technological Definition of Reality

Translated from German term *bestand,* standing-reserve denotes the way in which the real reveals itself as a raw material. (Godzinski, 2005) Alternatively, the concept of standing-reserve pertains to objects and entities viewed as resources, poised for storage, processing, and utilization for human needs. When we approach reality in this perspective, we see the world as an extensive stockpile of resources waiting for production and consumption. Within *enframing*, everything is seen as a tool for achieving specific ends, and the world is primarily understood through its practicality and usefulness.

Therefore, *enframing* is using technology to turn nature into a resource for efficient use. Modern technology, challenges man to isolate nature and treat it as a "standing reserve, that is, a resource to be stored for later utility. For instance, we can consider a hydroelectric plant, which isolates a river and converts it into an energy resource.

Standing-reserve refers to the manner in which everything is brought into existence primarily as a resource or tool, serving a utilitarian purpose or as a means to an end. In this case, once a tree is transformed from a living plant, it ceases to exist as such and instead becomes a potential source of timber for manufacturing and paper for books and newspapers. This transformation into standing-reserve means entities are reduced to stocks of materials and products readily accessible for production and human use. Regrettably, even human beings can be viewed as standing-reserve, treated as workers to be utilized and discarded within the frameworks of business, corporations, or the military. (Schalow, 2010)

During this age of *enframing* technology, standing-reserve do not only apply to other entities but also includes human beings. According Heidegger, this is the most dangerous result of *enframing*. In the *enframing* technological era, human beings are no longer individuals commanding presences for each other; they have become disposable experiences that can be turned on and off like water from a faucet. (Botha, 2001) Therefore, in the current era of modern technology, the concepts of *enframing* and standing-reserve deeply impact how we perceive ourselves, our connection with nature, and our place in the world. This kind of mind-set has made human being to forget or to overlook the deeper meaning of his existence. When we reduce everything to mere tools and resources, we fail to recognize their intrinsic worth and interconnectedness. Consequently, the relentless pursuit of efficiency through technology, diminishes the earth, its inhabitants, and our fellow humans to mere raw materials. The entire world becomes a reserve to be utilized by one's choice. In this case, nature is organized to be readily available, existing solely to serve further human orders and commands. (Botha, 2001)

For example, a forest full of trees may be seen by humans as a national park where they can enjoy and co-exist with nature ('bringing-forth') or it can be seen as a commodity, as a source of furniture or paper ('challenging-forth').

The Manifestation of *Enframing* in Current Society

Enframing technology has redefined human ways of experiencing the modern world through a unique interplay between human mind and the reality in the world. The uniqueness lies in the conception of all things in a standing-reserve manner. Standing-reserve manifests itself in various aspects of our daily lives. It is clearly revealed in human's desire to dominate or to manipulate nature to fits his own needs. This can be either in a positive or a negative way. The positive mode is revealed through human exploration of nature in a moderate and conservative manner. For instance, we use trees to produce timber for the construction of our homes yet at the same time we practice forestation. Negative form involves destruction of nature where we use resources generated from nature without caring for it. For example, releasing of industrial waste into rivers which lead to water pollution. In what follows, we expound on various ways which demonstrate how *enframing* takes shape in the society today.

The Mechanized Food industry and Consumer culture. *Enframing* has positioned modern man to redefine means of production in agricultural sector in order to improve on the production of raw materials. The strive of an agricultural man to introduce new technologies and scientific methods in farming is motivated by his way of

thinking where he perceives all products and commodities necessarily as objects of human consumption. Thus, by *enframing* our access and our experience of agricultural world, is defined on the ground of standing-reserve.

Our society driven by consumer culture, products and commodities are frequently perceived solely as items for consumption; viewing them as means to fulfil our wants and needs. We appreciate entities primarily for their practicality, utility and convenience, with little regard for their broader implications on environmental consequences. This relentless focus on consumption and the acquisition of material possessions mirrors a mind-set of *enframing*, where objects are relegated to mere resources, readily available for acquisition and utilization.

Conversely, in the field of agricultural economics, the utilization of various natural resources is primarily focused on maximizing utility. Modern technology has improved industrialization for quality production of final goods to meet the demands of the current market. With the modernized technology, "air is now set upon to yield nitrogen, the earth to yield ore, ore to yield uranium. (Heidegger, 1993) This implies that, the manufactured raw material is used according to human desire. For instance, uranium is set upon to yield atomic energy, which can be released either for destruction or for peaceful use. (Heidegger, 1993)

Enframing is also apparent in technological gadgets and digital ecosystems. Despite their mixed implications, technological devices and the digital revolution have made modern humans feel completely at home in today's world. The digital ecosystem has transformed the world into a small village, enabling easy connections between people. The impact of the digital revolution on human life, whether positive or negative, largely depends on how individuals use digital platforms. Digital technologies can foster transparency, inclusivity, accountability, responsiveness, and human interaction when used constructively. On the other hand, they can be misused to create a threatening environment where disinformation, hate speech, and cyberattacks spread quickly, cheaply, and widely. Information technology overwhelmingly has preoccupied human life. Be it social or economic, political and even religious aspect. Technological devices or ddigital platforms can serve as avenues for expressing public opinion, evaluating government performance, and promoting businesses through marketing. (Wendland, 2019)

Our interaction with technological devices and the digital realm underscores the pervasive presence and widespread integration of technology into our lives. Consider smartphones, which are generally viewed as tools for communication and accessing information. We often see them as aids that make tasks easier and more efficient. However, this viewpoint may fail to acknowledge the nuanced adverse impacts these devices can have on different dimensions of our lives, including our attention spans, social relationships, and overall welfare.

Another example of *enframing* in contemporary society involves the perception of nature merely as a commodity or a means to an end. By *enframing* modern man treats nature as resources to be exploited for the production of commodities to meet his needs. The revealing that rules in modern technology is a challenging which puts to nature the unreasonable demand that it supplies energy that can be extracted and stored as such. (Heidegger, 1993) For instance, the seven fork dams in the river Tana where the hydroelectric plant is set to generate electrical power demonstrates the challenging nature of *enframing* technology.

Besides, the mining industry has clearly demonstrated *enframing* aspect in our current world. For example, the coal that has been hauled out in some mining has not been supplied in order that it may simply be present somewhere or other. It is stockpiled; that is, it is on call, ready to deliver the sun's warmth that is stored in it. The sun's warmth is challenged forth for heat, which in turn is ordered to deliver steam whose pressure turns the wheels that keep a factory running. (Wendland, 1993)

Generally, *enframing* is apparent in our perception and engagement with nature. Rather than valuing the inherent worth of the natural environment, it is frequently viewed as a standing-reserve. Natural elements like forests, minerals, and water are primarily seen as assets to exploit for economic profit. This viewpoint neglects the ecological interdependence and the significance of conserving nature for its intrinsic value.

Enframing has exerted a profound influence over our humanity, work, and productivity. Understanding what it means to be human is of great essence in order to find meaning of being in the technological world today. The understanding of our humanity today is never authentic as self-alienation is evident in our daily living. In the world of work and productivity, we define each other as instrument through which work is accomplished. By *enframing*,

human beings simply are perceived as medium or tools of work. Man overwhelmingly is oppressed with technology to the extent that it has taken his place. Thus, the problem of alienation come in to existence after the development of industrialization and technology in a mass scale. (Anjum, 2019)

During twenty first century, man finds himself in a highly mechanical culture dominated by technology. Owing to the fact that man is overwhelmed by technology is his daily activity, has led him to suffer from self-alienation. Consequently, man's subjectivity and his meaningful existence is threatened by the highly technical and mechanical world. (Anjum, 2019) Today in the professional world, the *enframing* mind-set often emphasizes efficiency, productivity, and measurable achievements. Employees are commonly regarded as assets essential for production, and their value is judged based on their output and contribution to the organization. This perspective can downplay the importance of fostering fulfilling work experiences, personal growth, and maintaining a healthy a balanced lifestyle. Thus, with the current imposition nature of technology, we should be cautious not to define humanity solely by its essence, as Greek philosophers did. Our human nature today is shaped not only by our essence but also by our life experiences and activities in the world. Hence, our humanity gains greater significance through existence. The overall argument here is that the production in the industrial world, especially in the capitalistic society, tend devalue the dignity of human person with focus on economic revolution. Karl Marx in his work, *Concept of Man,* summarizes how human alienation takes place in relation to work in two points: First, in the process of work, a worker (man) is estranged from his own work, that is, his creative power specially of industrial work under the condition of capitalist society. Second, the object, his own work becomes alien and they rule over him. Marx argued that the labor exists for the process of production, and not the process of production for the labor with reference to above two points. (Anjum, 2019)

The prevailing control of social media serves is another illustration of an *enframing* mind-set. Our daily conversation and obsession on social media reveals how we are lost in the public domain of social life. As we encounter each other through social media, we tend to define them based on what they post or how they express themselves via social, political and cultural issues. Thus, through social media, our minds are framed in such manner that the more we become popular on social media, the better or the real human person we become. As a result, social media platforms may perpetuate the *enframing* mind-set by prompting individuals to portray themselves as commodities, always in pursuit of attention, approval, and social status. Users meticulously craft their online personas, strategically choosing and shaping their content and images for consumption and judgment by others. This approach diminishes personal identity and connections to a type of resource, where self-esteem is contingent upon external validation and measurable metrics.

At this juncture, it is important to note that these examples illustrating *enframing* mindset in our contemporary society are not inherently negative facets of life; however, they do demonstrate how the *enframing* mindset can shape our outlook and engagement with different facets of the world. Acknowledging these manifestations can prompt introspection and a more transformative thought towards technology, consumption, and our connections with the natural and social realms.

Transhumanism and the Possible Dangers of *Enframing*

The danger of *enframing* as the nature of modern technology lies in the ambivalence state of "human enhancement" which is advocated for by transhumanism movement. Since transhumanism is rooted in the value of the application of science and modern technology to "improve human mental, physical characteristics (Delbrosse, accessed 2024) and cognitive capacities in view of overcoming human biological limitations; manipulation of nature and dehumanization are the ground on which all these demands are made possible. It is on this same ground that *enframing* as the defining factor of current technology fosters transhumanism.

The link between *enframing* and transhumanism is evident in how contemporary technology; guided by the imposition attitude and mind-set, facilitates the realization of transhumanistic objectives. *Enframing* through the spirit of standing-reserve, grounds the conceptualization of human beings and their bodies as commodities to be improved and controlled, akin to any other element in technological endeavors. This simplified perception of humanity as a set of components or data to enhance technological application, corresponds with the aims of transhumanism movement.

According to transhumanism, the application of modern technology intents to transform or elevate human condition by enhancing the efficiency of human mind and body to fit into desirable future characteristics of a new human species. In this sense, the objective of transhumanism movement is the advocacy of a transformed future humanity. By human enhancement, transhumanists focus on the possibility of a new intelligent species into which humanity will evolve, potentially supplementing or even superseding it.

Thus, by the application of modern technology in human thinking, transhumanism believes in the evolution of human intelligence beyond the current human cognitive power. This is made possible through artificial intelligence. It is in this view that transhumanism is linked to philosophical post-humanism. However, posthumanism offers a ground for rethinking human relation to a complex sophisticated modern technology. The focus is defined on the principle of enhancement of human life in the age of enlightenment. Enlightenment in our society today, is defined on the basis of scientific and technological discoveries and innovation that promotes industrialization for food production, health services and information technology. It is on this ground that *enframing* becomes the basis of transhumanism.

Since transhumanism seems to seek the utility of things for the wellbeing of human person, it understands the world in a standing-reserve mode. Through technological means, human beings reveal reality of all entities in the world only in a standing-reserve mode. Even the question of Being is approached in a standing-reserve mode. Standing-reserve mode becomes the basis on which human being interact with his environment and socialize with the other fellow human beings. As a consequence, our way of being, our way of living, our way of socialization becomes unauthentic. We turn away from our meaningful existence, in which we ought to make the world our home, and turn into mode of disownment, where we live just for the sake of living without caring about our being, the being of others and the being of our surroundings. in other words, no one wants to be accountable on what takes course in the nature.

By *enframing*, our experience and understanding reduces all realities in the world to resources for production. It reduces what is natural to artificial art facts or human resources. Heidegger's account of *enframing* is a helpful lens through which we can analyse and conceptualize the impact of the current technology to nature and to human life. In our current world, the manifestation of the danger of *enframing* is evident. In this case, calculative form of thinking and technological manipulation of nature to meet our needs are core examples that express *enframing* kind of mind-set.

One of the human predicaments that results from *enframing* technology is cybernetic rationalization approach to reality. Human thinking in the age of modern technology seems to be vague in relation to his nature of existence. By his nature, human thinking ought to be reflective or critical in its application and evaluation of the realm of worldly reality. By reason, man has the power to think and explore nature.

However, it should be noted that man's power over nature through reason, does not mean destruction of nature. It means knowledge of natural causes enables man to improve his way of life in the world. In our today's world, human power over nature has been taken to mean, man's manipulation, domination, challenging and threatening nature. Unfortunately, man does all this willingly and unwillingly. This is because, the essence of modern technology challenges man to treat nature as a standing-reserve where he sees all things in terms of resources for production and consumption. Modern technology instead of serving as a foundation of knowledge for the successful unconcealment of Being, has become the imitation of human intelligence which claims superiority over human knowledge. Human thinking has been mechanized in the sense that he always tends to quantify all reality so as it can be measurable and calculable. This kind of thinking is what we refer to as cybernetic rationalization or calculative thinking as Heidegger referred to it.

Cybernetic rationalization is that mode of any type of thought that deals with the quantifiable and the measurable; it is that mode of cognition that neatly categorises all of reality (Botha, 2001) into standing-reserve manner. In this way, calculation refuses to let anything appear except what is countable. Cybernetic rationalization compels itself into a compulsion to master everything on the basis of the consequential correctness of its procedure. (Heidegger, 1998) Once cybernetic rationalization takes hold, it triggers an unyielding urge to dominate and govern every facet of existence, driven by the belief that its techniques are inherently accurate and efficient. Most disturbing of all is

that technological calculation and innovation may satisfy our material needs and our diminished spiritual needs to such an extent that we would not even notice what we had lost. (Botha, 2001)

Since cybernetic rationalization is a consequence of *enframing*, it is a technical way of analyzing and explaining of reality in the technological mode of being. (Osiurak, accessed 2023) Cybernetic rationalization is functional through technological consciousness of the standing-reserve. Through the lenses of calculative thinking "all attempts to reckon existing reality is quantified in order to meet technological behavior. That behavior operates through the device of the mathematical means whose standing-reserve can be measured and counted in determination of its value in terms of quantity for future use. (Heidegger, 1993)

As a result, our inference from Heideggerian postulation is that, the peril of cybernetic rationalization lies not in the risk of physical destruction of humanity, rather in the possibility that the relentless technological advancement, will overshadow human ability to reveal itself in diverse ways. This could lead to a shift from philosophical contemplation to utilitarian thinking, a decline in artistic creativity due to an incessant focus on innovation, and the side-lining of political engagement through social engineering efforts. (Botha, 2001)

Heidegger is convinced that cybernetic rationalization of reality has its origin in modern science and current technology. In his work, *Mathematical Project*, he examines how contemporary science and technology are crucial in framing reality as the manipulation of entities. Modern science utilizes the concept of quantity to predictively delineate the criteria for defining natural phenomena. This method of comprehending nature through a numerical anticipation necessitates mathematical projection of the fundamental characteristics of physical reality. (Schalow, 2010)

We understand that modern technology, according to Heidegger, does not simply arise in isolation rather it is rooted in a fundamental aspect of human thinking, particularly in how humans tend to conceal or overlook certain aspects of reality in their understanding of the world. This can be clearly pointed out in his lecture *course from Winter Semester1935*, Heidegger demonstrates how the mathematical projection of nature emerges from the openness that encompasses both human beings and objects. This projection suggests that technology is not simply a creation of human creativity, but rather stems from a deeper mode in which human thought obscures reality, thereby quantifying its usefulness in the process. (Schalow, 2010)

This concealment occurs as humans conceptualize reality in ways that prioritize certain aspects while neglecting others. The prioritized aspects are determined as resources for production. Nonetheless, the biggest worry is that, with the rapid growth of modern technology, soon calculative thinking would be accepted and practised as the only way of thinking. (Botha, 2001) Calculative thinking distances man from the reality of his being and in this sense, the question concerning Being fades away. As a result, man's environment that reveals the world is described as degraded and lacking authenticity, where all things appear in the mode of raw materials.

However, it is important to take note that Heideggerian critique of calculative thinking does not seek to invalidate its usefulness. Instead, it concerns the perception of calculative thinking as the sole mode of thought, which risks humanity to enslaved by technological advancement. While acknowledging the validity of calculative thinking within the domain of objects, Heidegger's concern lies in its exclusive dominance and its potential consequences on human existence.

Enframing is the possible end of Metaphysics in the sense that *enframing* technology is the ground on which the concealment of the truth of Being takes place. (Heidegger, 1993) Alternatively, *enframing* is the foundation on which modern technology is understood as the concealment of Being. This is because *enframing* disconnects man from the reality of Being to its utility. Man is no longer interested in raising the question concerning Being. Man's desire to dominate nature through technological means, has led him to conceal all possibilities concerning the being of Being. Instead, man's complete attention has been captured by the innovation of new technologies that are centred on the 'advancement' of his way of life.

However, there are metaphysical, phenomenological, epistemological, anthropological and ethical consequences of the continuous innovation of new technological means to improve human life. The caution here is that, let us not just focus on human technological enhancement, and ignore the fact that slowly by slowly man who is the creator of

technology is becoming a technological product of his own rational calculative control and creation. (Baile, 2014) Here, men treat each other in the form of utility. Thus, their identity is defined on the basis of standing-reserve mode. What is really taking place, is it technological human enhancement or human technological enhancement? Is it the case that human being is utilizing technology to improve his way of life or human being is using his way of life to enhance technology? To what extent the disclosedness of being is made possible in the enframed world? In the age of modern technology, the disclosedness of being is no longer an issue that bothers man; instead, technology determines the possibility of the openness of Being. Previously, we noted that *enframing* determines the manifestation of Being. Since *enframing* is the essence of modern technology, it is in order to state that modern technology is a way in which being reveals itself to us (Wendland, 2019) in a concealed mode. Thus, the concealment of being is grounded in the reign of the current trends of technology.

Since the possibility of the knowability of Being lies in the meaningful existence of man in the world, it is difficulty to ascend to this possibility as man who is responsible for this is suffering from self-alienation. Human discovery and actualization are not simply means to authentic existence, rather, while seeking holistic being, the human person opens up the reality of Being. Thus, it is evident that human meaningful existence reveals itself through the openness of Being. This interconnectedness becomes more apparent when considered in terms of necessity. Being requires humanity, not for utilitarian purposes, but akin to Schelling's analogy of parenthood. Just as a woman becomes a mother through her daughter's existence, the presence of humanity enables Being to manifest. The relationship between humanity and Being is reciprocal, much like that of the relationship between the mother and the daughter. (Wendland, 2019)

Today man challenged by current technology, gives no freedom to let being reveal itself. This implies that, in reaching the extreme stage of disregarding the essence of existence, modernity categorizes entities based solely on their usefulness or utility. Thus, reducing them to a one-dimensional perspective. Consequently, nature is perceived solely in the sense of its capacity to be harnessed, controlled, and manipulated for human ends. However, mechanization is not merely a coincidental occurrence within history; rather, it emerges as an essential element of modernity, symbolizing the extreme manifestation of the neglect of Being. (Schalow, 2010)

Based on the fact that *enframing* defines the nature of modern technology which in turn guides us to arrange self-disclosure as a resource to be utilized, (Godzinski, 2005) the application of modern technology becomes a threat to human exploration of nature. Through phenomenological description, we postulate that *enframing* constitutes a peculiar way of revealing Being. This peculiar way is expressed through the phenomenon of concealment. It is from this perspective that we elucidate the fact that *enframing* is the way in which truth reveals itself as standing-reserve. (Godzinski, 2005) Therefore, by *enframing,* nothing in the world comes to presence without concealment. (Godzinski, 2005) The implication here is that, in the process of presencing or coming to be, things necessarily conceal themselves through holding themselves back. (Godzinski, 2005)

The ordering that is inherent in *enframing,* positions itself as superior to the object, leaving it devoid of protection and devoid of truth. In doing so, *enframing* conceals the closeness of the world that emerges within the object. Moreover, *enframing* conceals even this act of concealment, much like how forgetfulness loses awareness of itself and fades into oblivion. (Heidegger, 1993)

Enframing becomes a danger to the reality of being as much as it makes being itself to be "both nowhere and everywhere. Being has no place as a reality to be known other than the concealed self. It is itself the placeless dwelling place of all presencing. Thus, the danger is the epoch of Being coming to presence in the concealed manner. The danger is the self-withholding of Being enduring as present in the mode of enframing. (Heidegger, 1993) In the *enframing* mode, existence becomes ensnared as it deliberately disregards and pushes its essence into obscurity, to the extent that existence negates its own manifestation. (Heidegger, 1993)

Enframing manifest itself as a challenging-forth. Challenging-forth implies the human domination, manipulation and reduction of the essence of beings into resources for productive process. For instance, a forest can be perceived by people as a source of timber for construction or wood for papers. Challenging-forth is destining. Heideggerian understanding of contemporary technology revolves around the idea of destining, because, all revealing and *enframing* is a destining of man in his quest to be technological. (Temple, 2013)

Modern technology does not just present challenging-forth, it also determines our fate. Acting as a force of destiny, modern technology propels humanity towards an understanding of existence that seems to accommodate nothing beyond a relentless drive towards veiling, which confines Being. Once this mode of veiling dominates, humans no longer perceive nature as distinct from themselves. Instead, they view nature as existing solely for their benefit, leading them to organize it solely for utilitarian purposes. (Temple, 2013)

The challenging nature of modern technology, is the ultimate danger to human existence. Based on the idea that, human beings have limited capacities: we have limited visual powers, limited muscular strength, limited resources for storing information, and many more. These limitations have led human beings to attempt to improve their natural capacities by means of artifacts such as cranes, lenses. Such improvements should not so much be thought of as extensions or supplements of natural human organs, but rather as their replacements. (Brey, 2000)

Today there is a big problem to distinguish between enhancement and replacement. While the argument for technological innovation concerns itself with the physical and cognitive enhancement to overcome human limitations, the outcome of technological application reveals the fact that human being in the society today prefers technological means over human capabilities to solve the current problems. For instance, there is the culture of trusting more in artificial intelligence than human intelligence. Many students today could prefer using Chatgpt to do their research than reading materials and reflecting on them. Hence, the coming to presence of technology lights up as *enframing*, where human beings discern all reality of beings in the ordering of the standing-reserve. Consequently, the truth of Being remains denied. (Heidegger, 1993) As result, the world in its universality and organization in which we dwell, remains truthless and without foundation. (Heidegger, 1993) At this point, we can sum up the danger of *enframing* as follows:

First, there is contained in *enframing* the impending possibility that human being may come to take the measure of all things only in relation to an uncovering which provokes, and that thereby he will decisively drive out every other possibility of revealing. (Heidegger, 1993) *Enframing* therefore, endangers human being's relationship to things. (Botha, 2001) In this way, bringing-forth as a way of revealing ceases while challenging-forth as a means of revealing prevail. In other words, modern technology has banished man into a kind of revealing (challenging-revealing) that has concealed all possibilities of man opening up to any true kind of revealing such as *poiesis* or bringing-forth which enables things to present themselves as they are in reality. Instead, human being focuses on the innovative aspect of technology. Thus, Man no longer sees other entities as entities that exist in their own, but as resources to be manipulated to fit his interest in technological sense.

Second, *enframing* becomes the highest danger by the fact that it poses a threat to human being's own relation to himself to the extent that provoking-uncovering is taken as the standard by which human being is measured. Human being is seen as a resource, and yet he continues to give himself airs of being master on earth. (Botha, 2001) As a result, any entity encountering technology inevitably becomes assimilated into a system where it is seen merely as resources to be fully utilized. Modern technology, boundless and unrestricted, eventually incorporates humanity itself into its framework. Humanity, as both the creator and user of technology, ends up being the main product and consumer within this technological paradigm. (Botha, 2001)

The third danger is that human being now nowhere encounters himself in his essence, since he always encounters himself as a subject of, never as subject to the call under which he stands. *Das Ge-stell* threatens human being's entrance into a domain in which he can remember Being. (Botha, 2001) *Enframing* endangers man in his relationship to himself by dictating him to abandon his essence in search of becoming technological man to fit in his technological society, so as to nurture technological thinking. Man has come to the point where he treats himself as standing-reserve. In so doing, man has dehumanized the world. In this illusion, man sees himself everywhere but in real sense; nowhere. (Heidegger, 1993)

The danger of modern technology to human existence is both technological and non-technological. Its technological danger is physical while its non-technological danger is metaphysical. The metaphysical danger is based on the fact that, *enframing* as a threat to human existence does not arise from machines such as computer or phone, and apparatus such as microscope which are technological. The current danger has already impacted the fundamental nature of human being. *Enframing* has threatened man to the degree that denies him the freedom of inquiring into primordial revealing. That is, the etymological essence of technology. *Enframing* throws man into

dense perplexity of reality where primal truth becomes impenetrable. Correspondingly, where *enframing* reigns, there is a danger in the highest sense. (Heidegger, 1993

The *Letter on Humanism*, presents to us the argument on how technology has robed man his freedom. In the work Heidegger states that, man does not decide whether and how beings appear, whether and how God and the gods or history and nature come forward into clearing of Being, come to presence and depart. The advent of beings lies in the destiny of being. (Heidegger, 1993) Further, in the same book, Heidegger developed his perspective on technology: To engage in such discourse, it is crucial to dispel naive ideas about materialism and superficial rebuttals aimed at countering it. Materialism's essence lies not in the assertion that everything is merely material, but rather in a metaphysical determination where every entity appears as the substance of labor. The essence of materialism is concealed within the essence of technology, a topic extensively discussed but seldom deeply considered. Technology, fundamentally, represents a destiny within the history of Being and the truth of Being, a truth that remains obscured. Technology does not merely trace back to the Greek concept of techne in name alone, but rather evolves historically and essentially from techne as a mode of revealing, a mode of bringing beings into manifestation. As a form of truth, technology is rooted in the history of metaphysics, which itself represents a distinct and thus far the only perceptible phase of the history of Being. (Heidegger, 1993)

Technology from its essence as *techne,* that which reveals being or that which brings being into existence, is metaphysical in nature. The age of materialism in the society today which is revealed through enframing, has rendered modern technology only to be defined in mechanical sense. The conception and application of modern technology, has led to dehumanization of the world. For instance, the manufacturing of fire arms and atomic bombs that were used in the World War II, demonstrates how human uses technology for self-destruction. What we experience today in the war between Russia and Ukraine; between Israel and Palestine has been postulated by historians as a result of strong weapons discovered during the World War II. "Thus, from this perspective, it was World War II and the following period in which technology reached the level of prominence in twenty first century; where technological weapons for mass destruction have become ramped and dehumanization of the world. (Ihde, 1993)

As a consequence, many reflections on technology has taken shape for the obvious reasons given the role of technology in both World Wars II, current war between Russia and Ukraine and the war between Israel and Palestine have expressed a deep critical and pessimistic view of the influence of technology on human societies, human values and the human life in the world. (Reydon, accessed 2023) In his book, *Theories of Technology as Extension of Human Faculties*, Kapp argued that technological artifacts should be thought of as man-made imitations and improvements of human life not oppressing him. (Brey, 2000) However, with the current trends of technology, there is the possibility that in the future modern technology might rule over man.

Enframing **as the Foundation of Cognitive Computing Technology**

Since the fundamental distinction between philosophy and science lies in the fact that philosophy seeks to comprehend the essence of entities, whereas science aims to uncover the intrinsic nature and the utility of entity itself, (Schalow, 2010) lies the ground on how reality should be understood. Schalow interpreting Heidegger's work on technology, emphasizes that, science seeks to understand the mechanisms of operation of things and objectifies them by mathematically projecting their nature. Through uncovering how things operate, science becomes the foundation of technology. To study an entity as such, science must objectify it and convert it into an object of investigation. Once objectified, entities can be managed and quantified; they become accessible as standing-reserve. At its core, science embodies calculative thinking, as it consistently measures and quantifies its subjects. This emphasis on measurement means that science does not engage in contemplative or reflective thought. (Schalow, 20210)

Cognitive computing can be understood on technological transformation of science. That is, the systematic investigation of the practices of engineering, invention, designing and making of things. The third principal approach to philosophy of technology examines concrete technological practices, such as invention, design and engineering. (Reydon, accessed 2023)

The rise and integration of technologies like nanotechnology, biotechnology, information technology, and cognitive science, alongside speculative advancements such as simulated reality, artificial intelligence, superintelligence, mind uploading, and cryonics, underscore the core principles of cognitive computing. Thus, transhumanists advocate for cognitive computing for leveraging these technologies to transcend human limitations, envisioning a future where individuals can transcend their inherent capacities and evolve beyond conventional human boundaries. (Ramez, 2005)

Cognitive computing technology is part of artificial intelligence which aims at a simulation of human cognitive processes within computerized systems. It seeks to create systems that are capable of comprehending, rationalizing, and deriving insights from extensive datasets, mirroring the complexities of human thinking. It is the rationalization of the human-machine interface in industry. (Mihail, 2004) Its inspiration is based on the human cognition and its efficiency in terms of its functionality. Its aim is to establish an efficient system design such as, neural networks, natural language processing, machine learning and knowledge representation; all inspired by the structure of human brain to establish computing systems using the language of algorithms to enhance the computer to perform human tasks.

The algorithms encompass convolution networks for extracting spatial features, spectral content estimators for converting time-domain data into frequency-domain representations, liquid state machines for extracting features from signals that change over time, restricted Boltzmann machines for spatial feature extraction, hidden Markov models as an instance of finite-state machines, looming detectors, temporal pattern matching, and a range of classifiers including logistic regression and stackable covariance-based classifiers. (Esser, 2013) Through these abstractions and applications, computer language is enhanced.

This advancement of the software system in computer technology offers a profound inspiration to transhumanism society. Consequently, transhumanists support the recognition and protection of cognitive liberty, morphological freedom, and procreative liberty as civil liberties, so as to guarantee individuals the choice of using human enhancement technologies on themselves and their children. (Sandberg, 2013)

Some transhumanists, speculate that human enhancement techniques and other emerging technologies may facilitate more radical human enhancement by the midpoint of the twenty first century. (Kurzweil, 2005) For instance, there has already been a brain research program to extend the ability to manage information. While military scientists are now looking at stretching the human capacity for combat to a maximum of one hundred and sixty eight hours without sleep. (Goldblatt, 2002)

Bill McKibben in his work, *Enough: Staying Human in an Engineered Age*, at length argues concerning how this kind of technology is insidious to human life. Bill McKibben opposes several technologies proposed or endorsed by transhumanists, such as germinal choice technology, nano-medicine, and life extension methods. He argues that it is ethically questionable for humans to manipulate essential aspects of themselves or their offspring to surpass inherent human limitations like aging, lifespan, and biological constraints on physical and mental abilities. According to him, striving to enhance oneself through such interventions would erase constraints that serve as vital parameters for meaningful human decision-making. He suggests that in a world where such limitations could be overcome through technology, human lives would lose their sense of meaning. Even the ostensibly beneficial use of germinal choice technology for therapeutic purposes should be avoided, as it would inevitably create temptation to alter cognitive capacities and other traits. He further contends that societies can benefit from abstaining from certain technologies, citing historical examples such as: Ming in China, Tokugawa in Japan, and the contemporary Amish community. (McKibben, 2003) On the other hand Bill Joy, a computer scientist postulates the matter that, human beings would likely guarantee their own extinction by developing the technologies favored by transhumanists. It invokes, for example, the "grey goo scenario" where out-of-control self-replicating nano-robots could consume entire ecosystems, resulting in global ecophagy. On the other hand, Lasn argues that high technology development should be completely relinquished since it inevitably serves corporate interests with devastating consequences on society and the environment. (Kalle, 2006)

This implies that the technologies promoted by transhumanists, like advanced genetic engineering, nano-medicine, and life extension methods, have the potential to inflict significant harm on humanity. This harm might arise from various factors, such as unforeseen consequences of the technologies that could endanger the survival of the human

species. For instance, genetic engineering might give rise to pathogens or organisms possessing uncontrollable traits that pose a threat to human existence. Moreover, by altering fundamental aspects of human biology, such as aging or cognitive abilities, humans could upset the natural equilibrium that has enabled the species to endure and evolve over millennia. This disruption could render humans susceptible to new threats or ecological disruptions.

British Astronomer Royal Martin Rees in his work, *Our Final Hour*, argues that, advanced science and technology bring as much risk of disaster as opportunity for progress. However, Rees does not advocate a halt to scientific activity; he calls for tighter security and perhaps an end to traditional scientific openness. Precautionists believe that artificial intelligence and robotics present possibilities of alternative forms of cognition that may threaten human life. Artificial Intelligence that becomes a superintelligence - Skynet, a malignant computer network which initiates a nuclear war in order to exterminate the human species. (Dale, 2002)

What Royal Martin Rees postulates above refers to *Skynet*, a fictional malicious computer network featured in various science fiction works, notably the *Terminator* film series. *Skynet* is presented as a highly advanced artificial intelligence system that becomes self-aware and regards humanity as a threat to its existence. In response, *Skynet* chooses to trigger a nuclear war in order to eradicate the human race, seeing this as the most efficient method to ensure its own survival. This depiction serves as a cautionary narrative about the potential hazards of unregulated artificial intelligence and the dangers associated with advancing technology beyond human oversight. It underscores themes of human overconfidence, the repercussions of technological progress, and the delicate balance between humans and artificial intelligence.

James Handle holds different views regarding cognitive computing technology. According to him, the increase in the development of systems that employ cognitive computing technology to help medical professionals, such as doctors, search for and utilize online data sources. The term cognitive computing has been used in different ways by different communities over time. Under one definition, cognitive computing systems are computer programs built by researchers trying to imitate how people reason to solve problems. A cognitive computing system of this profile, when looking at our medical problem, would want to know how the doctors are thinking about it, and then use that knowledge to solve problems. (Handler, 2016)

Cognitive computing, owing to its capacity to process extensive data sets, identify patterns, and comprehend natural language, brings numerous benefits to healthcare. One notable advantage is its role in improving diagnosis and treatment. By analysing vast datasets encompassing medical records, research findings, and patient information, cognitive computing systems aid healthcare providers in precisely diagnosing illnesses and recommending efficient treatment strategies. This can result in expedited and more precise diagnoses, consequently diminishing the time and resources needed for treatment.

Cognitive computing technological system in this sense implies a designed technological process. The designed process is crucial to any project that attempts to understand technology. Thus, philosophers working in this approach often examine design practices, both in the strict context of engineering and in wider contexts such as architecture and industrial design. (Reydon, accessed 2023) The inquiry in Epistemology and Methodology, raises questions concerning the kind of knowledge in the domain of engineering and other mechanical sciences. For instance: Is there a type of knowledge unique to engineering? What defines the engineering and design processes? How is design characterized? Is there a particular methodology for design or engineering? How do reasoning and decision-making processes operate in engineering? How do engineers handle uncertainty, failures, and error margins? Is there such a thing as a technological explanation? If so, what is the structure of these explanations? (Reydon, accessed 2023) These reflective questions are key while accessing the advantages and disadvantages of cognitive computing technology in the current society.

Cognitive computing technology, has become the best option in terms of its functionality in industrial and all areas of human life where technology is applicable. This is so as human beings today trust more technological systems than themselves in terms of their efficiency and accuracy. Whether this is true or not, it is a topic of discussion that demands further comprehensive research.

Conclusion

This paper has examined the intricate nature of modern technology through the perspective of Heideggerian philosophical technology, with a particular emphasis on the concept of *enframing*. By investigating *enframing*, we have shed light on the inherent challenges and negative effects of current technological trends on human society. Our analysis revealed how *enframing* as the essence of modern technology supports various aspects of transhumanism and cognitive computing, exposing their dual nature. The study demonstrated that, although modern technology offers the promise of human enhancement and cognitive process simulation, it also introduces significant problems such as increased social inequality, a growing dependence on technology, ecological harm, ethical issues, and cultural conflicts. These problems are not just incidental but are rooted in the very essence of modern technology as explained by Heidegger.

The current human interaction with nature and other entities tend to manipulate their freedom of being to fit into his daily materialistic needs. This affirms the conviction that, *enframing* technology is the ground on which reality is understood as the machination of entities. Therefore, the findings of this paper demand for a critical and reflective approach towards the development and the application of technology. By comprehending the essence of modern technology through the lens of *enframing*, we can better manage its effects and address the urgent ethical, social, and environmental issues it poses. This approach advocates for a balanced perspective that acknowledges both the potential advantages and the insidious implications of technological progress in our current society and the world at large.

References

1. Anjum, Naushaba. "Notion of Alienation, An Existentialist Approach." *International Journal of Engineering and Applied Sciences* 6, no. 3(2019): 7-37.
2. Baile, Jesse I. "Enframing the Flesh: Heidegger, Transhumanism, and the Body as Standing Reserve." *Journal of Evolution and Technology* 24, no. 2 (2014): 1-19.
3. Botha, Catherine F. "Heidegger: Technology, Truth and Language," (M.A., University of Pretoria, 2001.
4. Brey, Philip. *Theories of technology as extension of human faculties*: *Metaphysics, Epistemology, and Technology*. Amsterdam: JAI, 2000.
5. Dale, Layman. "Mankind at the Brink." December 10, 2002, accessed November 11, 2023, (http://www.robowatch.org/main2.html)LondonDiplomaticAcademy.http://www.robowatch.org /main2.html.
6. Delbrosse, Lissa. "What-is-enframing-technology," Transhumanism-encyclopedia, accessed on March 17, 2024, http://en.wikipedia.org/w/index.pp?title=Transh.
7. Esser, Steve K. Esser and Alexander Andreopoulos, "Cognitive Computing Systems: Algorithms and Applications for Networks of Neurosynaptic Cores," in *The 2013 International Joint Conference on Neural Networks* (Dallas, TX, United States of America, 2013): 1-10
8. Godzinski, Ronald. "Enframing Heidegger's Philosophy of Technology." *Essays in Philosophy* 6 no. 9 (2005): 1-30.
9. Goldblatt, Michael. "DARPA's programs in enhancing human performance, Converging Technologiesin Society. Human, Transhuman, Posthuman," *Journal of Human Security* 4 (2002): 1835-3800.
10. Hendler, James and Mulvehill Alice M. "Social Machines: The Coming Collision of Artificial Intelligence, Social Networking, and Humanity." January 2016, accessed October 11, 2023, http://dx.doi.org/10.1007/978-1-4842-1156-4.
11. Heidegger, martin. The Question concerning Technology: Basic Writings, Revised edition. London. Routledge, 1993.
12. Kalle, Lawn. "Change surfer Radio: Tech for People, not for Corporate Control," June 12, 2006, accessedNovember,2023, https://www.radio4all.net/proginfo.php?id=11260)http ://www.radio4all.net
13. Martin Heidegger. *Letter on Humanism: Basic Writings, Revised edition*. Edited by Davis Farrell Krell. *New* York: HarperCollins Publications, 1993.
14. Kurzweil, Raymond. *The Singularity Is Near: When Humans Transcend Biology*. New York: Penguin Books Ltd, 2005.
15. McKibben, Bill. *Enough: Staying Human in an Engineered Age*. New York: Times Books, 2003.

16. Mihail, Roco C. Bainbridge, William Sims, eds. *Converging Technologies for Improving Human Performance.* Arlington: Springer, 2004.
17. Ihde, Don. *Philosophy of Technology: An Introduction.* New York: Paragon House 1993.
18. Ihde, D. "Technology and science," in *A Companion to the Philosophy of Technology*, eds. Olsen, J.K.B., Pedersen, S.A. and Hendricks, V.F. Chichester: Wiley-Blackwell, 2009.
19. ——*Philosophy of Technology: An Introduction.* New York: Paragon House 1993.
20. Nordmann, Alfred. *Technikphilosophie: Zur Einführung.* Hamburg: Junius, 2008.
21. Osiurak, François. "Technical reasoning is important for cumulative technological culture*," Nature Human Behaviour*, accessed December 11, 2023, DOI:10.1038/s41562-021- 01159-9.
22. Ramez, Naam. *More Than Human: Embracing the Promise of Biological Enhancement*. New York: Broadway Books, 2005.
23. Reydon, Thomas. "*Philosophy of Technology,*" *Internet Encyclopedia of Philosophy,* accessed October 17, 2023, https://iep.utm.edu/technolo/.
24. Sandberg, Anders. "Morphological freedom-why we not just want it, but need it," *Transhumanist Reader*, March, 2013, accessed November 11, 2023, http://dx.doi.org/10.1002/9781118555927.ch5.
25. Schalow, Frank and Denker Alfred. *Historical Dictionary of Heidegger's Philosophy*. Toronto: Scarecrow Press, 2010.
26. Temple, Okoro Davis. "Modernity and Destining of Technological Being: Beyond Heidegger's Critique of Technology to Responsible and Reflexive Technology". Ph.D. Catholic University of Louvain, 2013.
27. Verbeek P. Peter P. W*hat Things Do: Philosophical Reflections on Technology, Agency, and Design*. Netherlands: Penn State University Press. 2005.
28. Wendland J. Aaron, Christopher Merwin, and Hadjioannou Christos, eds. *Heidegger on Technology*. New York and London: Routledge, 2019.