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A Phenomenological Discovery of Nature and Technology in the Contemporary Period in Africa

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Abstract:

This paper examines a scientific breakdown from an African perspective on three key components in the contemporary period, namely; phenomenology, nature and technology. These experiences are part of human nature and can be related to technology and the concept of phenomenology. However this paper attempts to investigate an influence of phenomenology on nature and technology in the 21st Century from an African perspective. What is the position of nature in Africa? Is there a relationship between nature and technology? These research questions are navigating our understanding and essence of this paper. The method conducting this research is a systematic review. The main objective of this paper is to expound the affiliation of the concept nature and technology in Africa and their effects in the contemporary period. This paper suggests that technology should be well invested rural areas because nature is still in rural areas plays a prominent role to the society. The conclusion in this investigation puts forward whether technology is in the position to replace nature and an analysis of how influential the advantageous and disadvantageous technology is in the contemporary period.

Keywords: Contemporary period, Phenomenology, Nature, Technology, Nature in Africa

1. Introduction

The emphasis on this paper is that of the influence of technology and nature in Africa using the interpretation of Heidegger's understanding of phenomenology and also on the relationship between nature and technology in Africa. An exploration will also be on the investigation on how nature and technology relate in the contemporary period. Technology is on the rise, which is to say that things are increasingly coming to reveal themselves to us as standing reserve, as mere resource[1]. The influence of technology in the contemporary period in Africa is considerably taking another approach; Technology can either affect nature negatively and positively. The negativity of this phenomenon comes into existence when technology influences nature and it is detrimental to human nature. The 'supreme danger' to which Heidegger refers is, one might say metaphysical, for he attributes to the technological mode of revealing the peculiar and dangerous power to encroach into all areas of life, driving out non-technological understandings as it does so[1]. The specific question navigating this research is; how does technology influences nature in Africa? This paper focuses on few countries in Africa affected by influence of technology and nature. The data collected in this paper is from various journals such as annual reviews and mdpi journals, respective books and trusted websites such as Google search. The lack of evidence led some scholars to suggest an independent invention of iron smelting in sub-Saharan Africa[2]. The first part of this paper explores on unpacking the topic (a scientific discovery of nature and technology in the contemporary period in Africa.) and also providing the background of phenomenology, nature and technology. The clarification of terms will be followed by the affiliation between these key concepts.

Some people claim that because we are an adapting species, we do not have to worry about the long-term effects of the loss of nature and the increase of technological nature however I think that is a huge mistake, even if this planet over the next hundred years could sustainably support 6 or 9 billion people as biologically living beings, it cannot sustainably support even one tenth that number in ways where humans fully flourish in their relationship with nature[3]. This analysis gives birth to a research gap that has been never been attempted. If we employed technological nature only as a bonus on top of our interactions with actual nature, then we would be in good shape. Unfortunately, we keep degrading and destroying actual nature, and are becoming increasingly impoverished for it[3]. This study investigates on how we keep on degrading and destroying nature and this predicament is resulted by the bad use or some technological inventions. Yet debates abound when it comes to deciding how best to carry out this phenomenological research in practice[4].

The conduct of method for this paper is a systematic review, in a qualitative approach because of its nature of exploring on the phenomenological understanding of nature and technology in the contemporary period. The nature of this approach is to interpret, analyse and describe some of the key contemporary issues affecting human nature and experience. Qualitative research can be emotionally taxing and extraordinarily time consuming[5].

Jonathan Knowles and Henrik Ryden felt in their account Pragmatism, Science and Naturalism presents Robert Sinclair essay on Anthropocentric Naturalism. Robert synthesizes the magnitude of anthropocentric pragmatism with philosophical naturalism. In his account of Anthropocentric Natural he criticizes John Dewey analysis on philosophical

dualism. Dewey argues that philosophical dualisms and distinctions should defer to both scientific advance and the use of empirical method, if they are to retain an important functional significance for philosophical conceptions of nature and human experience[6].

Misak postulates that one feature of the so-called 'new pragmatism' is its attempt to understand inquiry in terms of human practices while demonstrating that this anthropocentric emphasis does not compromise the objectivity of such pursuits[6]. This anthropocentric dimension of contemporary work on pragmatism has also appeared in some recent formulations of philosophical naturalism and the main focus of this essay is with some of the perceived problematic consequences of merging this anthropocentric side of pragmatism with philosophical naturalism[6]. One reason why this combination appears unworkable from a naturalist perspective stems from the pragmatist emphasis on human nature compromising the proper formulation and appreciation of a natural world independent of human perspectives[6]. The difficulty of this analysis came into existence as there is a specific analysis of philosophical naturalism, one that is often called 'scientific naturalism'.

The first component of this paper will pay attention on the historical analysis of contemporary period. This analysis will present an exposure of an essence of contemporary epoch. An account on phenomenological epoch will follow unpack a definition of phenomenology and present phenomenology as epistemology also known as a philosophical study of knowledge. A question on whether can Phenomenology be naturalized is expounded from different sources and lastly the analysis of technology in contemporary era will close the chapter of this paper with the advantages and disadvantages of technology.

2. Methodology

A method conducting this paper is a qualitative systematic review. A systematic review attempts to collect and analyze all evidence that answers a specific question. The question must be clearly defined and have inclusion and exclusion criteria. A broad and thorough search of the literature is performed and a critical analysis of the search results is reported and ultimately provides a current evidence-based answer to the specific question[10]. A systematic review allows a researcher to collect data in a systematic manner and also present as a manner of a framework. According to Cochrane Collab (2003) a systematic review is a special type of literature review that confers added advantages. It is 'a review of a clearly formulated question that uses systematic and explicit methods to identify, and critically appraise relevant research, and to collect and analyze data from the studies that are included in the review'[11]. Design in this research takes a sphere of the thematic synthesis of qualitative approach in a systematic appraisal. The method directs and also presents to us definition of the key concepts of this paper the historical background of the specific question to be investigated. Data analysis in this paper is served in a qualitative approach. The screening model is a research approach intending to describe a past state or current state as it is (Karasar, 2002, p. 77). The appraisal of reading materials is based on original articles and book chapters mainly but not limited to it. Books, review articles, and general media reports are also examined at the preliminary stage. The reading materials are identified by searching keywords mainly in Scopus. Web of Knowledge—n=17, and the web portal of the library in Zhejiang Normal University, Jinhua. Zhejiang. P.R. China[7].

3. Results

3.1. Historical Background of the Contemporary Period

3.1.1. The Contemporary Period

The scholars have been battling on when contemporary period came in to existence. If there is one agreement between theorists of modernity and those of post-modernity, it is about the centrality of consumption to modern capitalism and contemporary culture[8]. The focus of this section will be on postulating on a brief history of contemporary period from American literature.

Contemporary history, in English-language historiography, is a subset of modern history which describes era from approximately 1945 to the present. The concept 'contemporary history' has been in use at least since the early 19th century[9].

3.2. Phenomenological Epoch

There are different approaches of the concept 'phenomenology' but the focus on this paper will be ascribed to Edmund Husserl account on phenomenology but first we will subscribe to a general definition of phenomenology then follow with phenomenology as epistemology

The term *epoch's* is the Greek word for 'bracketing' and Husserl uses this term to describe his method of 'detachment from any point of view regarding the objective world'[12].

Phenomenology is an attempt to capture experience in process as lived, through descriptive analysis [7]. Phenomenology is a discipline that investigates people's experiences to reveal what lies 'hidden' in them[13]. Phenomenology starts from the recognition that the outside world is 'really there'[14]. It studies how things appear to consciousness or are given in experience, and not how they are in themselves, even if it is known that the given contains more than or is different from what is presented. (For instance, assault victims may experience fear for months or years after the assault, even when no apparent danger exists [7]. What does this fear mean? Where does it come from? How is it experienced? The answers bring us closer to the phenomenon that is lived[15]. Investigators who use phenomenological approaches to understand experiences of human healing, caring, and whole-ness need to consider the differences that exist between descriptive and hermeneutic phenomenology[16].

A method of knowing that 'begins with the things themselves, that tries to find a 'first opening' on the world free of our perceptions and interpretations, together with a methodology for reducing the interference of our preconceptions[15]. The rich phenomenology illusion can be studied and described in terms of testable cognitive mechanisms[17]. In ordinary life, we 'capture' and conceptualize everything, using our preconceptions to turn everything into something other than it actually is, one or two steps removed from direct unfiltered experience. Phenomenology strives to clarify our receiving abilities and rediscover the actuality of what is'[15]. A second definition suggests that whatever experience we may encounter it starts first with us, this definition suggests that our intrinsic experiences shape our extrinsic experiences.

3.3. Phenomenology as Epistemology

Phenomenology, a philosophical method founded by Edmund Husserl is epistemologically important because it deals with the method of acquiring knowledge, a method which in its early phase is similar to Descartes' methodic doubt, Husserl believes that certain prejudices and influences which we acquired in the past can become obstacles to the acquisition of objective knowledge[18]. According to Joseph Omoregbe the first and very important step we should take in our investigation of anything, using the phenomenological epoch also known as 'the phenomenological reduction[18].' However this phenomenological reduction is a navigator of this article since it pays more attention to phenomenological approach on nature in the contemporary era. Phenomenology is interested in knowing the essence of things, not their peculiar, particular or existential characteristics[18]. In simple expression phenomenology investigates the nature of beings but their accidental exterior. Hence according to Husserl phenomenology is referred to as 'eidetic science'[18]. Husserl corrects Descartes and emphasizes contrary to Descartes that consciousness is always object-oriented; it is always consciousness of something outside oneself, therefore, there can be no such thing as *cogito ergo sum* (I think therefore I am) meaning that my consciousness (i.e. the act of thinking) it would have led him to discover not only his own existence but the existence of the world outside him- the object of his consciousness[18]. Husserl's understanding is that we cannot think of something that doesn't exist. Our experiences shape our thinking and conduct our way of life.

3.4. Phenomenology and the Naturalization of Phenomenology

The reworking of some additional subjects within Philosophy seems necessary to eliminate what amount to category errors, ascribing to natural phenomena logical properties which are essentially fictions [9]. This investigation is thus one of the focal targets for the naturalization proposed in this paper. A discussion is now turning on how this grid might apply to them, in other words, 'move' them to Natural Philosophy where possible. The precursor to naturalization as a process was 'scientization', defined as the incursion of empirical science into areas of knowing previously the purview of theology and philosophy. An example of this is the attempted naturalization of intentionality, which has been only partially successful. If one looks explicitly for precedents to naturalization in philosophy, one finds that the term is generally used to describe a kind of grafting of philosophy onto science studies. This conceptual dead end suggests that the entire domain requires reconceptualization[19].

3.4.1. On the Possibility of Naturalizing Phenomenology

This section attempts to respond to the two questions on the probability of naturalizing phenomenology, the first one is; Can Phenomenology be naturalized? Secondly 'how can phenomenology be naturalized.' The question on whether can phenomenology be naturalized is still controversial and several approaches have been presented in recent discoveries.

3.4.2. Can Phenomenology Be Naturalized?

It has been established that researchers are working on naturalizing phenomenology. Looking more closely at the relevant literature, however, the 'naturalizing phenomenology' proposals show the presence of different conceptions, assumptions, and formalisms, further differentiated by different philosophical and or scientific concerns[20]. However, there are grounds for holding that some experiential entities to which phenomenologists are committed must be intuition-transcendent or 'dark'. Examples of dark phenomenology include the very fine-grained perceptual discriminations which Thomas Metzinger calls 'Raffman Qualia' and, crucially, the structure of temporal awareness[21].

3.4.3. How Can Phenomenology Be Naturalized?

It is worth investigation on whether should phenomenology be naturalized. Formalizing phenomenology One approach to naturalizing phenomenology, proposed by Roy, involves translating the results of phenomenological analysis into a formal language that is clearly understood by science, namely, mathematics[22].

3.4.4. Neurophenomenology

The aim of neurophenomenology is to incorporate phenomenological investigations of experience into neuroscientific research on consciousness. Neurophenomenology focuses especially on the temporal dynamics of conscious experience and brain activity [22]. The authors investigate the neural and phenomenal signatures of prodromes, the warning symptoms prior to seizure onset, as a case study of self-consciousness[23]. At a theoretical level, neurophenomenology pursues an embodied and large-scale dynamical approach to the neurophysiology of consciousness[24]. According to Lutz At a methodological level, the neurophenomenological strategy is to make rigorous and extensive use of first-person data about subjective experience as a heuristic to describe and quantify the large-scale neurodynamics of consciousness[25]. Definitions of consciousness need to be sufficiently broad to include all examples of conscious states and sufficiently narrow to exclude entities, events and processes that are not conscious[26].

4. The Concept of Nature

In this section the notion of nature is explored by different scholars with different perspectives. Some argue that advanced technologies in Africa appear and disappear and thus do not indicate complex cognition exclusive to early modern humans in Africa[27].

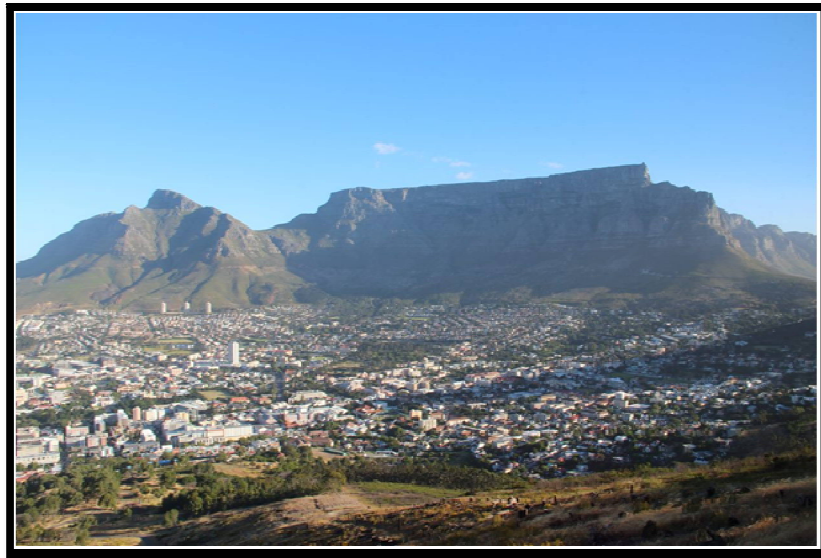


Figure 1

Source: Table Mountain in Cape Town, South Africa.[28]

4.1. What is Nature?

Nature in the broadest sense is equivalent to the natural world, physical world, or material world. 'Nature' refers to the phenomena of the physical world, and also to life in general moreover it ranges in scale from the subatomic to the cosmic[29].

The term 'nature' may refer to living plants and animals, geological processes, weather, and physics, such as matter and energy. The term is often refers to the 'natural environment' or wilderness—wild animals, rocks, forest, beaches, and in general areas that have not been substantially altered by humans, or which persist despite human intervention, for, example, manufactured objects and human interaction are generally not considered part of nature, unless qualified as, for example, 'human nature' or 'the whole of nature'[29]. This more traditional concept of 'nature' implies a distinction between natural and artificial elements of the Earth, with the artificial as that which has been brought into being by a human consciousness or a human mind[29].

4.2. Our Place in Nature

A sense of wonder and joy in nature should be at the very centre of such ecological literacy[30]. Being in the world. According to a long-standing tradition, the term nature denotes the part of reality that is material rather than soul or mind like, *res extensa* as opposed to *res cogitans*. On this dualistic conception, human beings are thought to be partly natural (on account of their having bodies) and partly non-natural (on account of their having souls or minds).[1] This connotes the essence of human beings as Aristotle suggested in his account of defining the human nature that the body and soul together constitute the nature of a human being. The phenomenological approach in this account of knowing our place in nature will be presented. For the phenomenologist, however there is nothing obvious about how things present themselves to us in experience.[1]

Phenomenology as an approach emerges with the work of Edmund Husserl and was developed in original ways by Martin Heidegger, Jean-Paul Sartre, Maurice Merleau-Ponty, Alfred Schutz, and others, to become one of the major philosophical movements of the twentieth century[31]. Phenomenology begins from the recognition that conscious life is intentional, that is, that all conscious awareness is directed at something, and that there is a complex correlation between the subjective act and the object apprehended, such that the object is said to be 'constituted' by the subject.[31] In order to lay bare this intentional constitution, phenomenologist apply a procedure of bracketing or phenomenological reduction that strips away presuppositions embedded in the natural attitude [31].

Husserl and his successor stress that an adequate phenomenological description must come not at the beginning of one's inquiry but at the end, as accomplishment, the fruit of rigorous and disciplined attention and reflection[1]. This analysis just reminds me of a cause and effect phenomenon. This calls an account of Heidegger of unitary complex of being in the world. According to Heidegger Being-in-the-World is not primarily a process of being conscious or knowing about the world. Science is not the primary concern of *Dasein*. *Dasein's* immediate relation to the world is better captured in the image of the craftsman, who 'knows his stuff,' to be sure, but might not be able to explain it to you nor even know how to show it to you [1]. What he can do—what he does do—is engage in his craft. He shows you that he knows how to do this and that by simply doing it [1]. This knowing *how* is prior, Heidegger tells us, to knowing that. In effect, our world is essentially one extended craft shop, a world of 'equipment' in which we carry out various tasks and only sometimes—

often when something goes wrong—stop to reflect on what we are doing and look at our tools as objects, as things[1]. His analysis holds for trees and monkeys no less than for hammers; when he speaks of ‘technology’, he has little to tell us about specific high-tech instruments[32]. They are, first of all, just tools and material to be used, and in that sense we take them for granted, relying on them without noticing them. Our concept of ‘things’ and our knowledge of them is secondary and derivative[31]. Furthermore, if I find myself already in-the-world in this sense, unreflectively engaged with it, then the world for its part bears the stamp of my being, which among other things is to say that it reflects my concerns—projects, purposes, practical commitments and the emotions to which they are connected[1]. The same phenomenon goes to an example a stone or a rock that reveals its existence because of the place it exists.

To discover what really nature is, the phenomenologist maintains, we must set aside the abstractions of science and scientist metaphysics to examine the nature we encounter in the living of our lives and this nature, the nature we inhabit, is shot through with our distinctively human concerns.[1] According to Merleau-Ponty phenomenology is also a philosophy for which the world is always ‘already there,’ before reflection, like an inalienable presence, and in which every effort is made to rediscover a naïve contact with the world furthermore, It is the attempt at a direct description of our experience such as it is and it is in ourselves that we will find the unity of phenomenology and its true sense[33]. The description of nature in this context is in the etymological sense.

4.3. *Naturalism in Contemporary Philosophy*

In the debate about naturalism today it seems for many the term ‘naturalism’ has become devoid of interesting content[6]. No serious philosopher in the 21st century, it is often said, countenances strange supernatural entities like elves or demigods intervening in the day to day operations of the world, nor do they have any truck with the superficially less naïve but equally delusory ideas of psychic and spiritual forces of New Ageism[6].

4.4. *Being with Nature and Being with the Other*

We are from the outset, together with other human beings in our being-in-the-world, and this being-with-the-other, just like being-with-nature, contains the basic potentiality of otherness and difference[34]. This analysis supplements how our nature impacts our wellbeing. In this chapter I have preferred to analyze illness and health primarily from the viewpoint of the alienness of nature at the heart of our being, but being-with-nature is always already a being-with-the-other, since we are thrown into the meaning structure of worldliness[34].

The University of Minnesota has presented an article which connotes the connection of nature and our health being.

According to a series of field studies conducted by Kuo and Coley at the Human-Environment Research Lab, time spent in nature connects us to each other and the larger world. Another study at the University of Illinois suggests that residents in Chicago public housing who had trees and green space around their building reported knowing more people, having stronger feelings of unity with neighbors, being more concerned with helping and supporting each other, and having stronger feelings of belonging than tenants in buildings without trees[28]. In addition to this greater sense of community, they had a reduced risk of street crime, lower levels of violence and aggression between domestic partners, and a better capacity to cope with life’s demands, especially the stresses of living in poverty[35]. Being in this respect is descriptive manner.

4.5. *The Rise of Naturalism and the Collapse of Reason*

Is it the collapse of reason and the rise naturalism? Before answering the question ‘What is phenomenology?’ it is helpful to ask, ‘What prompted Husserl to invent phenomenology in the first place?’[12]. Husserl’s philosophy grew out of his deep conviction that Western culture had lost its true direction and purpose[12]. The problem of derailment of culture in Africa is the current research gap to be explored. Husserl described the ‘crisis’ as the seeming collapse of rationalism, and he set his lifetime objective as ‘saving human reason,’ however what human reason has to be saved from, according to Husserl, provides the background for his phenomenology[12]. Husserl postulated an account of phenomenology to bury the school of rationalism.

Technology has a significant role in our daily lives. In most cases technology simplify life even though its effects are negative to human nature and the community. Below we will present the advantages and disadvantages of technology in contemporary period.

5. **An Exploration on Technology**

The question ‘What do we really mean by technology?’ has initiated a rich discussion among researchers and students, as well as consultants and lecturers, on a website during and after the summer of 2011[36]. Early research studies assumed technology to be an objective, external force that would have deterministic impacts on organizational properties such as structure[37]. The technology world has been growing and flourishing the interest in designing technologies that mediate and create a feeling of relatedness within interpersonal relationships beyond the explicit verbal communication[38].

Philosophers and sociologists of technology suggest that a better understanding of the relationship between technology and society ‘is the key to building a better world[39]’. This relationship in the contemporary period has an influence especially in the society where the life is modernized.

Humans are users and builders of technology, and historically, technology created by humans has been designed primarily as external devices used as tools allowing humans to explore and manipulate the environment[40]. By definition, technology is the branch of knowledge that deals with the creation and use of ‘technical means’ and their interrelation

with life, society, and the environment. Considering the long history of humans as designers and users of technology, it is only recently that technology has become implanted within the body in order to repair, replace, or enhance the functions of the body including those provided by the brain[40].

The influence of technology has taken another sphere in the 21st Century. The Internet is the latest of a long series of information technologies, which includes printing, mail, radio, television and the telephone[41]. Every aspect of life being technologies. This topic of technology will draw an attention to Heidegger's understanding and critique on the concept technology. No matter what the ultimate computing power of the brain is, given the magnitude of 85–100 trillion synapses to describe the complexity of the brain, it is relevant to ask—will our technology ever exceed our innate capabilities derived from the process of evolution? If so, then it may be desirable to enhance the body with technology in order to keep pace with the rate at which technology is advancing and becoming smarter ('smartness' in the sense of 'human smartness'). In considering Heidegger's views on this topic, the first thing to use is that he uses 'technology' (*die Technik*) as a term of art and for one thing the technology of which he writes is not a particular kind of artifact.[1] Heidegger brings a broader picture on revealing the influence of technology in this study. However in order to understand an account of Heidegger's technology, it is would be essential first postulating the essence of technology.

Heidegger postulates the essence (the nature); of technology into four categories. *First*, the essence of technology is not something we make; it is a mode of being, or of revealing. This means that technological things have their own novel kind of presence, endurance, and connections among parts and wholes. They have their own way of presenting themselves and the world in which they operate. The essence of technology is, for Heidegger, not the best or most characteristic instance of technology, nor is it a nebulous generality, a form or idea. Rather, to consider technology essentially is to see it as an event to which we belong: the structuring, ordering, and 'requisitioning' of everything around us, and of ourselves. The *second* point is that technology even holds sway over beings that we do not normally think of as technological, such as gods and history. *Third*, the essence of technology as Heidegger discusses it is primarily a matter of modern and industrial technology. We can only understand the phenomenon of time from our mortal or finite vantage point[42]. He is less concerned with the ancient and old tools and techniques that antedate modernity; the essence of technology is revealed in factories and industrial processes, not in hammers and prows[43]. And *fourth*, for Heidegger, technology is not simply the practical application of natural science. Instead, modern natural science can understand nature in the characteristically scientific manner only because nature has already, in advance, come to light as a set of calculable, orderable forces — that is to say, technologically[44].

According to Heidegger the essence of technology, however, has another aspect; Enflaming comes to pass for its part in the granting that lets man endure-as yet unexperienced, but perhaps more experienced in the future-that he may be one who is needed and used for the safekeeping of the coming to presence of truth, thus does the arising of the saving power appear [34].

5.1. Technology as Revealing

Heidegger's concern with technology is not limited to his writings that are explicitly dedicated to it, and a full appreciation of his views on technology requires some understanding of how the problem of technology fits into his broader philosophical project and phenomenological approach. (Phenomenology, for Heidegger, is a method that tries to let things show themselves in their own way, and not see them in advance through a technical or theoretical lens.)[1]. The most important argument in *Being and Time* that is relevant for Heidegger's later thinking about technology is that theoretical activities such as the natural sciences depend on views of time and space that narrow the understanding implicit in how we deal with the ordinary world of action and concern[1]. We cannot construct meaningful distance and direction, or understand the opportunities for action, from science's neutral, mathematical understanding of space and time. Indeed, this detached and 'objective' scientific view of the world restricts our everyday understanding. Our ordinary use of things and our 'Concertful dealings' within the world are pathways to a more fundamental and more truthful understanding of man and being than the sciences provide; science flattens the richness of ordinary concern[3]. By placing science back within the realm of experience from which it originates, and by examining the way our scientific understanding of time, space, and nature derives from our more fundamental experience of the world, Heidegger, together with his teacher Husserl and some of his students such as Jacob Klein and Alexandre Koyré, helped to establish new ways of thinking about the history and philosophy of science[44].

In this passage Snippet Heidegger introduces another interesting term in the field of technology, namely Science. His exploration of analyzing our scientific understanding of time, space and nature take us back to the origins of our fundamental experience of the world.

Two points need to be emphasized here. First, Heidegger stresses that technology may be associated with certain norms, In a technological world, he maintains, the primary end is that of efficiency and the primary task is that of managing the world so that things may run more smoothly[1]. Indeed technology has advanced today's life and it is much easier than previous centuries. The second point that needs emphasizing is that, according to Heidegger, technology is on the rise, which is to say that things are increasingly coming to reveal themselves to us as standing reserve, admire resources and again, the possibility that everything might come to reveal itself as standing reserve is, for Heidegger, certainly deplorable[1].

5.2. Medicine: Practice, Science and Technology

According to Gadamer 1996 In addressing the alien life of the body in stories of illness, we are approaching a situation in which illness is not only experienced by the suffering person, but also discussed with and examined by the expert in terms of health and disease[34]. This takes us back on Heidegger's account on the relationship of science and

technology. The idea that medical practice is not only an application of medical science and technology but also an instance of interpretation at a phenomenological hermeneutical level is developed in a late work by Gadamer entitled *The Enigma of Health*[34]. We can change our current path, but this will take an energy revolution in which low-carbon energy technologies will have a crucial role to play[45].

5.3. Advantages of Technology

5.3.1. The Easy Access to Information

Information is power. Those who find information and use it well, always succeed with smart gadgets like (iPad – iPhone – tablets). Users can easily get access to information, for example: Google – Wikipedia and YouTube.[46]

In the case of computer technology, there can be no disputing that the computer has increased the power of large-scale organizations like military establishments or airline companies or banks or tax collecting agencies[47]. Technology has registered an advanced access to information to that enable us to more informative in an easier and simple way. Today is easy to receive or sent information worldwide because technology has introduced mobile phones, social media in its different ways.

5.3.1.1. Improved Communication

It is shown that the information conveyed by a frequency band in a given time-interval can be analysed in various ways into the same number of elementary[48]. The field of information extraction has its genesis in the natural language processing community where the primary impetus came from competitions centered around the recognition of named entities like people names and organization from news articles[49].

Modern technology has blessed us with advanced communication technology tools. These can include Emails, Mobile phones, Instant text messaging applications like WhatsApp, Viber, Messenger and social networking applications like Face book[46].

We can easily talk to relatives overseas using a mobile phone or video chatting services like Skype[46]. Technology has a positive impact on communication department. It has replaced the ancient way of communication with more advanced means of communication mentioned above.

5.3.1.2. Convenience in Education

Technology in education plays an important role in improving the educational skills, This is manifested through the use of computers and smart boards[46].

The findings show that students use a limited range of mainly established technologies[50]. Learning the same exact way from the same person everyday can really get boring. This boredom turns into a lack of motivation to the students[46].

Computers and mobile phones have improved the education sector in various ways as mentioned above. It is an advantage for students as they find it easy to have an access to learning skills. In contrast to social isolation, loneliness is the subjective experience of a situation as one of an undesired lack of (quality of) certain relationships[51].

5.3.1.3. Improved Entertainment

Modern technology has played a big role in changing the entertainment industry. We have video games, good music to listen to and visual systems like smart Televisions[46].

A girl named Karmain Grade 2 said that 'I like to play games and dance in my leisure time and I watch wonderful choreography on YouTube'[46].

Mariam a student in Grade 2 added 'I like watching cartoons, playing videogames and solving riddles'[46].

Nadaa student in grade 2 also said that 'I like modern technology especially cameras as this helps me to get a lot of photos and keeping memory of each event or outing'[46]. Entertainment industry in the 21st Century has been advanced by technology in various aspects as mentioned above. It is easy to watch different sports from all over the globe.

5.3.1.4. Health Industry Revolution

Most hospitals have implemented modern technology in surgical rooms, medical equipment and X-rays; this has reduced many mistakes made by doctors. Nowadays we have applications, which can be used on mobile phones, in order to have users monitor their health and weight any time of the day[46].

In this regards, Omar a Grade 4 student said that ' My dad is a Neurologists and he told me, that he is using modern technology almost in everything during his working day starting from the medical examination, medical tests and ending with the surgical equipment'[46]. The effective communication of information on medical conditions and healthy lifestyles has played an important part in the improvement of the health status of the American population[52]. Technology is indeed advantageous to the industry as stated above that most hospitals have advanced their equipment; however this advantagiousity only applies to those developed countries because they afford to buy such equipment. And it also raise another investigative research gap on whether does technology in the contemporary period only applies to both developed and developing world.

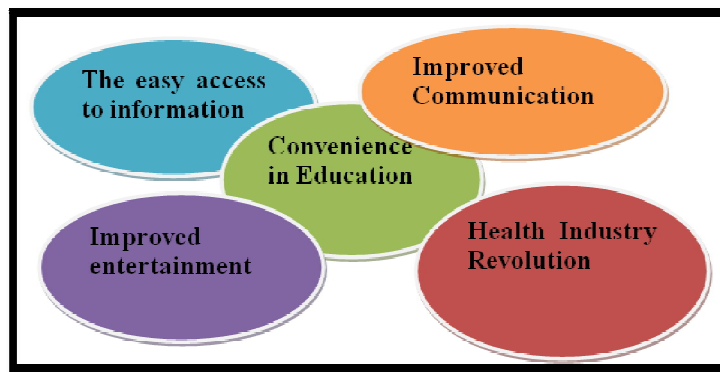


Figure 2: Represents Advantages of Technology

5.3.2. Summary

Figure 2 analyses the advantages of technology and we have cultured that these five categories depicted.

5.4. Disadvantages of Technology

5.4.1. Increased Loneliness

Social Isolation is on the increase. People are spending more time using modern technology, social networks and neglecting their real life[46]. From a sociological perspective this behaviour gives birth to a lack of communications within a society or families. It results a selfishness character. Social species, by definition, form organizations that extend beyond the individual[53]. Experimental and quasi-experimental studies of humans and animals also suggest that social isolation is a major risk factor for mortality from widely varying causes[54]. The Concepts of Loneliness and Social Isolation Loneliness The oldest publication about loneliness is Ubt, die Einsamkeit (Zimmermann, ry8j- 1786)[55].

An increased loneliness as a result of technology has brought lot social isolation in the societies however lot of families have divorced their account of socialization.

5.4.2. Excessive Dependency

Increased dependency on modern tools and applications like calculators and spelling checkers have reduced creativity. This affected the way we use our brains. Also depending on machines and modern transportation put people at a distinct disadvantage, because they became less self – reliant[46].

Ahmeda student in Grade 4 said that 'We almost depend on machines in everything - in our daily lives, in housing, our life style, at schools and in using modern transportation'[46].

5.4.3. Inevitable Cheating

While having an easy access to information may seem like a great thing, it can become a real problem. Cell phones and internet have made cheating easier as you can get any information from the internet[46].

A boy in Grade 2 named Al-Tayeb stated that 'I can get any information from the internet and then say that I invented or wrote it '[46]. The velocity of cheating in schools has taken another level and as a result it springs cheating from learners using mobile phones in class.

5.4.4. World Destruction Weapons

Modern technology has been the main aid in increasing endless wars through manufacturing modern war weapons and testing them[46].

Omar a student in Grade 4 stated that 'There is a huge revolution in the weapons field and criminals can use them for selfish reasons'[46].

5.4.5. Laziness and Forgetting the Basic Way of Studying

Computers and internet make it too easy to find information. This may result in having poor study habits and developing a lazy attitude. Students would no longer rely on books that are lent by their teachers, since they are only interested to study using computers[46].

Ahmed a student in Grade 4 said that 'I know many of my friends that rely on calculators and computers instead of using their brains or referring to books'[46]. The impact of technology on academic field has recently gave birth to laziness and forgetting the basic way of studying like depending on books rather than technological inventions like mobile phones and computers.

5.4.6. Job Loss

Modern technology has replaced human power. Machines and computers become even more advanced and efficient. This will continue to be growing disadvantage of technology and an issue that has a global impact[46].

A girl in Grade 2 named Karma stated that 'I watched many movies that robots are doing most of the work humans used to do'[46]. This technological negativity takes me back as my father lost his job in 1998 as a result of installation of

modern technology in the mining sector. Many Southern African miners have lost their job during the invention of technology as mines. It also injected a negative impact on the phenomenon of unemployment that is still a major concern even today.

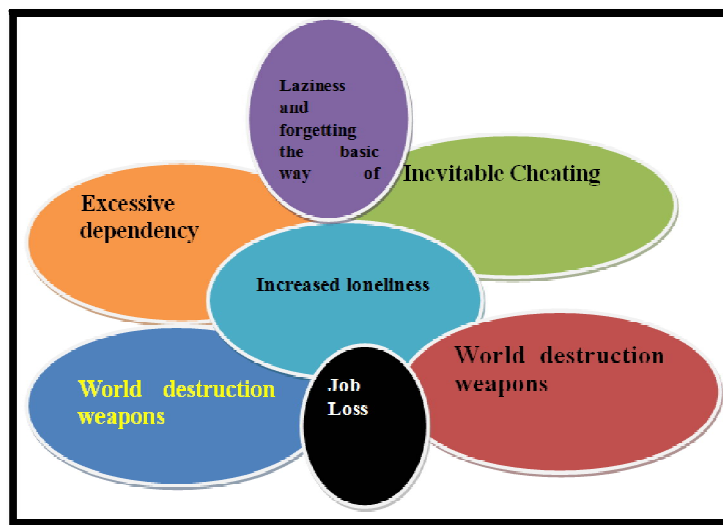


Figure 3: Disadvantages of Technology

5.6. Summery

Figure 3 unpacks the disadvantages of technology on its influence on nature and from social aspect of view as a result disadvantages' of technology affect the society negatively. Loss of job in South Africa unemployment is potentially a matter of serious concern--for its effects on economic welfare, production, erosion of human capital, social exclusion, crime, and social instability. Some view the level of unemployment and its rise as the most serious threat facing South African society and its governance[56].

6. Synthesis

A synthesis of advantages and disadvantages of the use of internet of internet as a result of technology. A data collected from this figure is adapted from United Nations statistics division.

United Nations Statistics Division	
Advantages/Disadvantages of use of the Internet	
Advantages	Disadvantages
<ul style="list-style-type: none"> <input type="checkbox"/> Reduced resources necessary for form handling and data capture <input type="checkbox"/> Better opportunity to enumerate difficult to reach and to enumerate geographic area and population groups <input type="checkbox"/> Automatic filtering of irrelevant questions <input type="checkbox"/> Better quality data due to in-built interactive verification mechanism <input type="checkbox"/> Faster availability of census results through simplified data entry and editing 	<ul style="list-style-type: none"> <input type="checkbox"/> Requires that respondents have a computer with Internet access <input type="checkbox"/> Management of responses can be problematic, e.g., that households have responded once and only once <input type="checkbox"/> Requires high security system to ensure safe transfer of data <input type="checkbox"/> Need to build parallel processing system as not everyone will use the Internet <input type="checkbox"/> Requires mechanism to check for omitted and duplicate submissions <input type="checkbox"/> Is costly and requires a lot of resources for setting up and adequately test the system
<p>2010 World Population and Housing Census Programme UNSD Regional Workshop on Census Data Processing for the English speaking African Countries: Contemporary technologies for data capture, methodology and practice of data editing Dar es Salaam, Tanzania, 9-13 June 2008</p>	

Figure 4: Dipicts Advantages and Disadvantages of Internet Adapted from [57]

Thus, African governments need to take this opportunity to scale up policies that spur democracy, creating the enabling environment to build prosperity in Africa through concrete priorities such as job creation, regional integration, and economic engagement[58].

7. Conclusion

Having taken a diminutive journey of the phenomenological understanding of nature and technology in the contemporary period we have discovered the connection between phenomenology, nature and technology in the contemporary period. It is worth investigation to explore on these burning concepts that cannot be separated from the contemporary period academics. The investigative gap about separation of these concepts, therefore it came to my senses

that nature, phenomenology and technology be applied in our daily lives harmoniously as we have learned about the effects of the use of technology can negatively affect nature, as a result it will disturb the relationship between human beings and nature in a contemporary epoch. We have seen how technology plays a pivotal role in nature and nature is moreover is one of the key components of technology, phenomenology supplements these concepts by facilitating their exposure to human kind in the 21st Century. Moreover the question of whether can phenomenology be naturalized has been addressed in compound ways. Moreover the use of internet in Africa has been discussed in this paper.

8. References

- i. S. P. James, *The Presence of Nature*. New York: PALGRAVE MACMILLAN, 2009.
- ii. S. T. Childs and D. Killick, 'INDIGENOUS AFRICAN METALURGY: NATURE AND CULTURE,' 1993.
- iii. P. D. Peter H Kahn Jr., 'Can Technology Replace Nature?,' 2011.
- iv. L. Finlay, 'Debating Phenomenological Research Methods,' *Phenomenol. Pract.*, 2019.
- v. M. C. Hoepfl, 'Choosing Qualitative Research: A Primer for Technology Education Researchers,' *J. Technol. Educ.*, 2016.
- vi. J. K. Rydenfelt, *Pragmatism, Science and Naturalism*. New York, 2011.
- vii. U. Sattar, 'How Societies Move on? Conceptualising Societal Transition Processes and Its Implications on Climate Change Adaptation,' vol. 9, no. 1, pp. 61-90, 2020.
- viii. F. Trentmann, 'Journal of Contemporary History,' *Publ. J. Contemp. Hist.*, 2004.
- ix. 'Contemporary history,' wikipedia.
- x. S. B. Thacker, 'Systematic Reviews,' 2019.
- xi. [11] A. P. Siddaway, A. M. Wood, and L. V. Hedges, 'How to Do a Systematic Review: A Best Practice Guide for Conducting and Reporting Narrative Reviews, Meta-Analyses, and Meta-Syntheses,' *Annu. Rev. Psychol.*, vol. 70, no. 1, pp. 747-770, 2019.
- xii. S. E. Stumph, *Socrates to Sartre, A History of Philosophy*, Fifth Edit. London: Mc Grawhill, 1993.
- xiii. G. A. Matua and D. M. Van Der Wal, 'Differentiating between descriptive and interpretive phenomenological research approaches,' *Nurse Res.*, 2015.
- xiv. C. Wilson and C. Wilson, 'What is Phenomenology?,' in *Introduction to the New Existentialism*, 2019.
- xv. google scholar, 'LECTURE ON PHENOMENOLOGY.' [Online]. Available: <http://web.sonoma.edu/users/d/daniels/phenomlect.html>.
- xvi. D. M. Wojnar and K. M. Swanson, 'Phenomenology: An Exploration,' *J. Holist. Nurs.*, 2007.
- xvii. S. Kouider, V. de Gardelle, J. Sackur, and E. Dupoux, 'How rich is consciousness? The partial awareness hypothesis,' *Trends Cogn. Sci.*, 2010.
- xviii. J. Omeregbe, *Epistemology: A systematic and historical study*. Lagos: Joja Press Limited, 1998.
- xix. J. Brenner, 'The Naturalization of Natural Philosophy,' *Philosophies*, vol. 3, no. 4, p. 41, 2018.
- xx. L. Albertazzi*, 'Naturalizing Phenomenology: A Must Have?'
- xxi. D. Roden, 'Nature's Dark Domain: an Argument for a Naturalised Phenomenology,' *R. Inst. Philos. Suppl.*, 2013.
- xxii. S. Gallagher, 'On the possibility of naturalizing phenomenology,' : Oxford University Press.
- xxiii. A. Lutz, 'Neurophenomenology and the study of self-consciousness,' *Conscious. Cogn.*, 2007.
- xxiv. A. Lutz and E. Thompson, 'Neurophenomenology: integrating subjective experience and brain dynamics in the neuroscience of consciousness,' *J. Consciousness Study*, 2003.
- xxv. F. H. Peters, 'Neurophenomenology,' *Method Theory Study Relig.*, 2010.
- xxvi. M. Velmans, 'How to Define Consciousness and how Not to Define Consciousness,' *J. Conscious. Stud.*, 2009.
- xxvii. K. S. Brown et al., 'An early and enduring advanced technology originating 71,000 years ago in South Africa,' *Nature*, 2012.
- xxviii. google scholar, 'TABLE MOUNTAIN,' 2020.
- xxix. 'What is Nature,' *Environ. Ecol.*, 2019.
- xxx. H. Washington, 'Education for Wonder,' *Educ. Sci.*, vol. 8, no. 3, p. 125, 2018.
- xxxi. 'GoogleScholar.' [Online]. Available: <http://www.oxfordhandbooks.com/view/10.1093/oxfordhb/9780198803157.001.0001/oxfordhb-9780198803157-e-26>.
- xxxii. G. Harman, 'Technology, objects and things in Heidegger,' *Cambridge J. Econ.*, 2009.
- xxxiii. G. Bateson, 'The Roots of Ecological Crisis,' *Steps to an Ecol. mind Collect. essays Anthropol. psychiatry, Evol. Epistemol.*, vol. 4, no. 1, pp. 494-498, 1987.
- xxxiv. A. W. H. L. D. and Mark, *A Companion To Phenomenology and Existentialism*. 2006.
- xxxv. E. E. Bakken, 'How Does Nature Impact Our Wellbeing?,' 2006.
- xxxvi. P. Luna, 'Technology,' in *History of Oxford University Press: Volume IV 1970 to 2004*, 2017.
- xxxvii. W. J. Orlikowski, 'The Duality of Technology: Rethinking the Concept of Technology in Organizations,' *Organ. Sci.*, 2008.
- xxxviii. K. M. Hertlein and K. Ancheta, 'Advantages and Disadvantages of Technology in Relationships: Findings from an Open-Ended Survey,' *Qual. Rep.*, 2014.
- xxxix. E. Paredis, *Sustainability transitions and the nature of technology*, vol. 16, no. 2-3. 2011.
- xl. W. Barfield, 'The Process of Evolution, Human Enhancement Technology, and Cyborgs,' *Philosophies*, vol. 4, no. 1, p. 10, 2019.

- xli. P. Kumar, 'Information Technology: Roles, Advantages and Disadvantages,' *Int. J. Adv. Res. Comput. Sci. Softw. Eng.*, 2014.
- xlii. L. Alweiss, 'Heidegger and 'the concept of time,' *Hist. Human Sci.*, 2002.
- xliii. G. Markle, 'Understanding pro-environmental behavior in the US: Insights from grid-group cultural theory and cognitive sociology,' *Sustain.*, vol. 11, no. 2, 2019.
- xliv. M. Blitz, 'Understanding Heidegger on Technology,' *J. Technol. Soc.*, pp. 63-80., 2014.
- xlv. 'TECHNOLOGY ROADMAP,' in *Encyclopedia of Production and Manufacturing Management*, 2006.
- xlvi. 'What are the advantages and disadvantages of Modern Technology?,' 2016.
- xlvii. *The Nature of Technology*. 2013.
- xlviii. D. Gabor, 'Theory of communication,' *J. Inst. Electr. Eng. - Part I Gen.*, 2014.
- xlix. M. Kejriwal, 'Information Extraction,' in *SpringerBriefs in Computer Science*, 2019.
 - l. A. Margaryan, A. Littlejohn, and G. Vojt, 'Are digital natives a myth or reality? University students' use of digital technologies,' *Comput. Educ.*, 2011.
 - li. J. de Jong Gierveld and T. G. van Tilburg, 'Social Isolation and Loneliness,' in *Encyclopedia of Mental Health: Second Edition*, 2015.
 - lii. R. K. Thomas, *Health communication*. 2006.
 - liiii. J. T. Cacioppo, L. C. Hawkey, G. J. Norman, and G. G. Berntson, 'Social isolation,' *Ann. N. Y. Acad. Sci.*, 2011.
 - liv. S. Cohen, 'Social relationships and health,' *American Psychologist*. 2004.
 - lv. J. de J. Gierveld, T. van Tilburg, and P. A. Dykstra, 'Loneliness and Social Isolation,' in *The Cambridge Handbook of Personal Relationships*, 2009.
 - lvi. G. G. Kingdon and J. Knight, 'Unemployment in South Africa: The nature of the beast,' *World Dev.*, 2004.
- lvii. U. Nations, 'Advantages/Disadvantages of use of internet,' 2008. [Online]. Available: https://www.google.com/search?q=advantages+and+disadvantages+of+technology+in+Africa&sxsrf=ACYBGNSR8ROu1QD_mc149SV_plAnbNEI5g:1581173926325&source=lnms&tbm=isch&sa=X&ved=2ahUKEwjhpNPxm8LnAhUBG6YKHZrLBA4Q_AUoAnoECA4QBA#imgrc=JyWeDf-SqzbsjM
- lviii. A. B. Kwemo, 'Making Africa Great Again: Reducing aid dependency,' 2017.