Ecumeny and Law, vol. 12(1) (2024), pp. 83—102
ISSN 2391-4327

https://doi.org/10.31261/EaL.2024.12.1.05

Lucjan Klimsza
VŠB-Technical University of Ostrava, Czech Republic
https://orcid.org/0000-0001-7514-3813

The Influence of Technology on Human Thinking and Values

Abstract: This article argues that the contemporary world has transitioned from a natural to a "technical world," following Paul Tillich's terminology, dominated by technology. To understand this shift, we must differentiate between mere technique, technology as a system, and the underlying technological thought. However, the central concern lies not in technology itself, but in its profound impact on human values, language, and modes of thinking. This paper aims to elucidate technology as a human product and, crucially, to examine its subsequent, transformative influence on humanity, particularly within the realm of ethical and axiological frameworks.

Keywords: axiology, ethics, ontology, technology, technics

Introduction

The world in which we live has long ceased to be a world of nature and has become a world of human culture, dominated by technology. Human thought must grapple with the world that was given form by human being, that is, technology. Similarly, theological thought, trying to answer the question about the meaning of existence, must grapple with technology. In doing so, it must communicate in the language of technology and science. The Holy Scripture provided answers to the question of what the natural world is for human person in soteriological and axiological categories. Axiological evaluation is based on the concept developed by Arno Anzenbacher and concerns the hierarchical arrangement of values according to the categories of animality, humanity, and faith. The justification

for the value hierarchy will be presented in the next part of the article. Reading the Holy Scriptures and scientific investigations, one can notice many differences that separate the world of religion from the world of science. The most distinctive aspect is the axiological dimension of the language of the Bible and scientific papers. Science since the time of Max Weber has not sought to evaluate either the world or the knowledge of what we call the world. Positivism and neo-positivism deny the possibility of axiological evaluation of what we call scientific knowledge. The world has become neutral to positivists, because it is neither good nor beautiful.

Following Bertrand Russell, one could argue that scientific knowledge presents neither a good nor a beautiful world. And even one of the main terms of ontology and science — truth — has become a problematic term in relation to the knowledge of the world conceived of as an ontological unity. The language of religion is completely different, which deliberately uses axiological terms as well as ontological terms. The purpose of biblical language is to show man the meaning of his existence, his place in the universe and his relationship with the Creator. The Holy Scriptures refer to the world using axiological terms already in the first chapter of its first book, Genesis. The world is good. This is what distinguishes biblical language from neutral science. The language of the Holy Scriptures is a poetic language, which is beautiful in itself. The Holy Scriptures, through language, simultaneously tell about the beauty of life and existence, because God not only created being, but at the same time wants this being to continue to multiply. The Bible glorifies life and not only life eternal, but also temporal life. In the theology of the Old and New Testaments, earthly life is not understood as preparation for eternal life, as a kind of prelude to what is prepared for man. For the Holy Scriptures, life is a blessing that was created for man, and he has the task of guarding, protecting and multiplying this life. Therefore, the process of creation did not end with the work of creation itself, but this work is constantly perpetuated. Man continues the work of creation. Man's work differs from that of nature's in that it is made with a certain intention. And it is this aspect that gives us a lot to think about. Is the world that man shapes in his own image really axiologically neutral because it is created through scientific knowledge and technology? In this article, I put forward the thesis that no work of man is axiologically neutral and the same is true for technique and technology.

Technology as an instrument of man's rebellion against fate

Human work is fundamentally distinguished from God's work already in the first book of the Bible. In biblical language, God works while creating, and his action is defined by the word ברא.[1] However, when man begins his work, his action is characterized by the word עבד.[2] Such a difference is not only surprising, because it shows the qualitative difference in how God creates and how man creates, but it also shows us the unattainable aspect of God's action, which man has no way of grasping and achieving. This aspect of God's action is creation through the construction of that which originally exists only as an idea, as a thought, and whose shapes and substance are called into existence. Such an action can only be done by God, and man can only do one thing: work with what has already been created. Such an action by God equally becomes that which is envied by man, who in his work encounters obstacles such as uncertainty, risk, and chance. Many religious myths, including the Holy Scriptures, tell of man's rebellion against God or the gods. Man rebels to possess the same agency that God possesses. In the Bible, this is described in the sentence "That we might be like God." The text is not only about man living like the gods, but also about excluding from his existence or his being what Plato in his work *Laws* calls that which controls all human affairs. Plato calls that which is steering human affairs τυχή[3] and καιρος,[4] translated as 'chance' and 'luck'. A man who wants to act in the same way as God wants to act in such a way as to precisely control his own existence — to free himself from uncertainty, risk, chance and luck. It also means to create not by simply duplicating καινος,[5] but by producing νεος.[6] And here, at this point, we move from religious thought to philosophical thought, from the mythological rebellion of man against the limits of his own existence to transcending these very limits. We enter philosophical thought, which first calls such efforts of man κυβερνετικη[7] τεχνη.[8]

[1] ברא means 'to create', but also 'build' or 'supply'. W. Baumgartener, L. Koehler: *Hebräisches udn Aramäisches Lexicon zum Alten Testament*. Leiden 1967, pp. 146 ff.

[2] עבד means 'to work' and also 'to serve'. Ibidem, pp. 730 f.

[3] Τυχή 'fate'. V. Prach: *Řecko-český slovník*. Praha 1993, p. 531.

[4] Καιρος here means 'chance' or 'accident', but it can also be translated as 'time'. J.B. Souček: *Řecko-český slovník k Novému zákonu*. Kalich—Praha 1987, p. 130.

[5] Καινος means 'new, completely new, new as opposed to old'. Ibidem.

[6] Νεος means 'new, new in reference to the old'. Ibidem, p. 174.

[7] Κυβέρνησις in translation means 'leading, steering', or 'managing something'. Ibidem, p. 151.

[8] Τεχνη means 'skill, knowledge, craft', or 'art'. Ibidem, p. 257.

The word τεχνη plays a very important role here, because it is an oxymoron for fate and luck. It is Plato who uses this word to emphasize that man is a being who — with his τεχνη, or his skill — can counteract fate and luck. Τεχνη can be translated as technology, and at the same time as human skill. We can also say a technological skill of man. Plato emphasizes that a man who has the necessary τεχνη can reverse fate, chance and luck. He can even calculate the percentage of uncertainty, that is, risk. He can even do something more, such as calculate the amount of risk and say what is the chance for this or that to happen in a person's life. There is, however, a condition here, and this condition is the control not only of one's own existence, but also the control of nature, things, and the entirety of human society. That is why Plato invokes a term that was well known to all ancient Greeks, κυβερνετικη τεχνη, and gives this term a new meaning. The term κυβερνετικη τεχνη meant 'the ability to steer a ship'. Robert Piotrowski wrote about the term κυβερνετικη τεχνη: "Knowledge of steering has been accumulated since the dawn of humanity, but it was only the Greeks who gave it its current name. The term τεχνη means the art of steering a ship, so the first of more general considerations concerning cybernetics bears clear traces of the origin of this term, which was introduced to philosophy by Plato."[9] In the same article, Piotrkowski lists three classes of systems in which steering processes occur: organisms, mechanisms, and social systems.[10] Plato uses the term τεχνη as a human skill. In *Laws*, Plato highly values τεχνη. However, in the Socratic dialogue *Gorgias*, τεχνη is also described by Plato as a danger. It was in this work that Plato opposed technology to virtue, in Greek αρετή.[11] The term τεχνη is understood by Plato as a means to achieve goals.

Jan Patočka,[12] a Czech philosopher, in his interpretation of *Gorgias* claims that complete nihilism is the foundation of τεχνη.

Technical thinking implies that there is no ethical reasoning or virtue in technical cognition and does not attempt to answer questions concerning the meaning of all human actions. Τεχνη as a way of thinking knows only the will to power.

So, we have the oxymorons τεχνή and αρεθή, two words that are the opposite of each other. What they have in common is their origin; this is because neither technology nor virtues are natural phenomena, but are artificialities of human thinking. And we have to work very carefully with human products, because the domination of one over the other leads to

[9] R. Piotrkowski: "Filozoficzne założenia cybernetyki." *The Peculiarity of Man* 16 (2012), p. 134.

[10] Ibidem.

[11] Αρετή means 'virtue, ability'. J.B. Souček: *Řecko-český slovník*..., p. 45.

[12] J. Patočka: *Platon. Přednášky z antické filozofie*. Praha 1991, p. 154.

disaster. Heraclitus of Ephesus knew about this and perhaps even wrote about it, but to this day only fragments of his writing, Περι φυσεον,[13] have survived. However, we know from fragments of other Greek philosophers that technology did not earn a high esteem in the eyes of Heraclitus, because he feared the domination of technical thinking over man. Greek culture and its fruit, philosophy, found in technology attributes that can dominate thinking and *de facto* dehumanize man.

But let there be no misunderstanding. Philosophy does not refer to technology only pejoratively. In Platonic thought, we do not find an *a priori* negative attitude towards technology. Plato emphasized the balance of the relationship between technology and virtues. Plato was not a representative of the Cynicism school, so he did not reject culture or its achievements. However, Plato subordinated culture and its achievements to critical thinking. And here he saw the meaning of philosophical work in the assessment of the technical development of culture. He did not accept the achievements of culture jointly, but subjected them to critical philosophical thought. He feared that technical thought would dominate the entire area of thought and consequently also values. He gave us an example of critical thinking, and in this way, technology became a problem that must be thought through critically, and so does the domination of technical thought over axiological thought.

The problem of axiological valuation

One of the great premises of science is the belief in the axiological neutrality of the world, scientific knowledge, cultural achievements and technological development. Neutrality means that the world is neither good nor evil. The external world — that is, the object — has no subjectivity, that is, no moral basis. Only man has moral subjectivity; in other words, he meets the basic criteria that constitute a morally responsible being. The attributes that can describe a moral subject can be derived from the philosophy of Immanuel Kant. We will define a moral subject based on four fundamental premises. The subject must be endowed with free will, must be endowed with reason and must have a conscience. Only such a being can be morally responsible for his work. The subject is distinguished from the object precisely by attributes such as freedom, conscience and thinking. According to Immanuel Kant, man is a rational being

[13] V. Jaksicová, M. Suchý: *Antologia z diel filozofov.* Vol. I. Bratislava 1991.

because he can connect his thoughts with objective reality. Human being is also an axiological being, meaning that human being can judge or assign value to the universe.[14]

The scientific basis is the radical separation of the knowing subject from the known object. The scientist, just like the technician, is supposed to stand at a distance from the object that knows or constructs reality. This neutrality was described by Max Weber, who, in his work *Verein für Sozialpolitik*,[15] shows that separating the subject from the object of knowledge leads to the objectification of cognitive results. In this way he created the axiological neutrality of science and technology. He concluded that scientific and consequently also technical thinking cannot be judged axiologically. After all, one cannot evaluate scientific knowledge and technological solutions. There is no good or bad axiological knowledge. Likewise, there is no such thing in the world of technology. Science and technology are axiologically neutral. Therefore, we can agree at the outset that the moral subject who considers, acts and bears responsibility for his actions is man. The world is an object that neither considers nor acts according to free will and therefore cannot bear moral responsibility for what ensues.

From an ethical and axiological perspective, neither knowledge itself nor, as Max Weber argued, technological solutions can be inherently judged. Thinking that values knowledge or its methods cannot, by that very fact, make ethical judgements of the knowledge or technology. Value judgments cannot be applied to technologies *per se*, because science investigates the world in its natural state, as Max Weber so eloquently put it. Furthermore, technology aids in the exploration of this very world. Philosopher and ethicist Arno Anzenbacher explains why this is the case in his book *Introduction to Ethics*, stating, "Of course, moral assessment primarily concerns actions and secondarily persons and social formations. We judge persons morally on the basis of their actions, and we evaluate social formations because they are the result of actions and can be shaped by actions."[16] Anzenbacher's argument seems very logical, because only a subject who is endowed with free will, a mind and a conscience can both value and be valued. As a consequence, one can conclude from this argument that science, knowledge and technology stand despite the possibility of any axiological valuation.

Technology, being a non-sentient artifact without inherent will, cannot be the subject of axiological valuation. It is a man-made tool, primarily subject to economic valuation — its utility for human purposes.

---

[14] I. Kant: *Základy metafyziky mravů*. 2024.

[15] M. Weber: *Verein für Sozialpolitik*, 1913.

[16] A. Anzenbacher: *Úvod do etiky*. Trans. K. Šprunk. Praha 2001, p. 14.

Axiological meaning, the assignment of value to a technological object in relation to humans and nature, remains the sole province of the human creator. Humans, who both generate knowledge and develop technology, bear the ethical responsibility for their use.

Therefore, one may construct a very basic logical argument from Max Weber's premises. To be more precise: technologies and the world are axiologically neutral. They do not have the possibility of defining the value of themselves or the world around them. But is this a correct judgment? Before we answer this question, let us ask another one that will help us define human action axiologically: *Is it possible to separate a human-made object from the human who made it? Is the natural world, whatever this term means, the same as the world that man created?* Let us first try to answer this question theologically.

The work of God and the work of man

The Book of Genesis speaks of the creation and work of God, and in categories that are very clearly distinguished from those that describe the work and works of man. This difference is quantitative and qualitative. We recognize the work of God by the fact that it was called into existence, as if from matter, or primal matter, as some translate the word ברא. Marcin Majewski writes about the formation of nature from chaos: "In Genesis 1, God resembles a tailor who cuts out a beautiful dress from material (ברא). The idea of divine creation through the chapter can be summed up in these words: in the beginning God created distinction, form from formlessness, structure from a turbid mass, composition from blurred chaos."[17] The natural world was called into existence and this existence continues to multiply. In God's work, we can therefore observe a certain fundamental aspect that can simply be called life. God's creation is full of life. In the language of the Bible, which is a very beautiful language full of poetry, this fact is recorded in the Book of Genesis in verse 21 as follows: "And God created great whales, and every living creature that moveth, which the waters brought forth abundantly, after their kind, and every winged fowl after his kind: and God saw that it was good."[18] The waters teemed. A characteristic sign of God and his work is that life multiplies.

[17] M. Majewski: *Pięcioksiąg odczytany na nowo. Przesłanie autora kapłańskiego (P) i jego wpływ na powstanie Pięcioksięgu*. Kraków 2018, pp. 120—121.

[18] See: https://www.kingjamesbibleonline.org/Genesis-1-21/ [accessed 26.09.2024].

Man's work is different. The Book of Genesis presents two types of man's work here. The first one in the Garden of Eden is described with the word "guard." Man was to guard what God had begun — that is, he was to protect life. He had authority over creation, and this authority is described in the Book of Genesis in terms of care and guarding. The Bible thus conveys to us a very important message that man is not to have the authority to create life, but to take care of what is.[19] It is only after the fall of man that we encounter the term defined by work. But this work does not bring man the same use as God's work. Man's work brings hardship and the results of this work are short-lived. In other words, man was to first protect and then work. Both of these terms differ from each other in the very meaning of what man is to do. The second term is significantly different, because man is to tear his own existence out of the earth with his work. Here, the value of man's work changes, and what Martin Heidegger calls "forcing into being?" begins. However, this is a philosophical category. Nonetheless, in the biblical description, the unity of God's creation and the world of human culture is questioned. The first is the purpose of God's action, which can be briefly described as life. In the Holy Scriptures, God calls everything into existence and life. Man's work is different. It is not for life, but rather, to be better said, for survival and at the price of negating life. And here an instrument appears, which is technique and technology. Furthermore, these advancements in technology are tools that help humans impose their will on the means of survival.

Work as coercion

Philosophy also questions the unity of the natural world and the cultural world. There are reasons for this. The first is the difference between the natural world, which has its own form, and the world dominated by human culture, which also has its own form. The second reason was justified in Martin Heidegger's work *Science, Technology, and Meditation*.[20] Man coerces his own existence on nature using the *instrumentum*, or technology, for this purpose. Heidegger writes, "Technology encompasses the

[19] See Z. Gleaser, W. Skomudek: *Teologia — technologia — ekologia. Ku integralnej odpowiedzialności za dzieło stworzenia*. Opole 2019.

[20] M. Heidegger: *Věda, technika a zamýšlení*. Eds. and trans. J. Michálek, J. Kružíková, I. Chvatík. Praha 2004, p. 7.

production and use of tools, devices, and machines, encompasses this 'I' created and experienced, encompasses those needs and goals that these means serve. The totality of these devices is technology. It itself is certain of this device, in Latin: *instrumentum*."[21] The world of human culture is a world that was created by coercing resources from nature to build the world. Human action is possible through instrumentalization, or new technologies. However, the fundamental moment that enables man to instrumentalize this is the opposition of the world to man as an object. Hans Ebeling finds in Heidegger the phenomenon of the existence of the world as an object: "Heidegger considered a very important feature of self-esteem in traditional theory to be that 'subjects' were set against objects, and this was supposed to be the only significant result of people's self-esteem as people learning about the 'world'."[22] Martin Heidegger criticizes the idea of the neutral world. Man as a subject is not completely separated from the object, especially when man is the creator of an object that was created for a certain purpose and this purpose is fulfilled. Knowing the world and enforcing means through technology is not axiologically neutral. In his more famous work *Being and Time*,[23] Martin Heidegger argues that the world always relates in some way to the existence of man. Science that studies the world approaches it as if man were not in the world, as if the subject that studies and knows the world were suspended in a vacuum, and looked at the world through a lens. But man is constantly in the world and in the universe, and all this — time, space and things in the outsmarting and the whole universe — somehow relates to the existence of man. Vice versa, man existing in the universe somehow relates to the existing universe. The surrounding reality relates to the existence of man. Following Anzenbacher,[24] we can state that the reality of the existence of the world and things in it do not bear moral responsibility for what happens to man. However, what cannot be ruled out is the axiological sphere. The being of the entire universe is a value for man. The first thing is the question of the moral responsibility of being, which in itself does not bear any moral responsibility. The second thing is the value of existence in relation to man.

The existence of things in the world is not axiological in itself. But at the moment of the existence of a being that can linguistically formulate its existence, things in the world cease to be axiologically ambivalent. Postpositivism takes up such a view, and this can be seen in the considerations

[21] Ibidem, p. 7.

[22] H. Ebeling: *Martin Heidegger. Filozofie a ideologie*. Praha 1997, p. 22.

[23] M. Heidegger: *Bytí a čas*. 3rd edition. Trans. I. Chvatík, P. Kouba, J. Němec. Praha 2018.

[24] A. Anzenbacher: *Úvod do filozofie*. Trans. K. Šprunk. Praha 1990.

of Karl Raimund Popper and Thomas Kuhn, as Břetislav Fajkus reports: "However, the development of scientific theories and the deepening of their significance in scientific research has caused in the post-positivist philosophy of science (Popper, Kuhn) the question of whether observation as such exists, whether and to what extent are observable facts (independent of the accepted theory or vice versa theoretical assumptions, paradigms) infiltrated (theory in facts, burdened with theory)."[25] We thus encounter a certain feature of axiological judgments that result from the fact of man's existence in the world. This feature is the reference of things to human existence. The study of these things and, above all, the study of the impact of these things on man is no longer as neutral as Weber thought.

However, the question arises whether human culture and technical achievements are also axiologically neutral. Has not the world of human culture changed the face of the natural world to such an extent that we can now speak only and exclusively of the anthropological face of the world? And if man has changed the face of the earth, has man, by his work changing the face of the earth, not created the basis for the possibility of axiological valuation? For what we can value axiologically is human thinking, speaking and action. If man has changed the face of the earth, then in such a council, can we value his action? Technology and the technification of the world belong among the cultural achievements of man. In connection with the technification of the world, we must ask the following questions: In what way does technology change the world, but also in what secondary way does it affect human thinking and human values? In order to answer these questions, let us apply a few partial questions:

- What is technology?
- How can we grasp the existence of technology through philosophy?
- How can we grasp the existence of technology through theology?
- How does technology relate to the value of man?

These questions are interconnected, for it is man who, through his thinking, through the possibility of language and action, creates technology. However, his work, through innovation, slowly blurs the boundary between human thinking and technology. The question of "how does machine thinking affect human thinking?" is no longer an unfounded question. Technology changes not only the face of the world but also man himself.

[25] B. Fajkus: *Současná filozofie a metodologie vědy*. Praha 1997, p. 83.

Technology

We therefore have terms that need to be defined more closely — namely, technique and technology. These terms cannot be understood as synonyms. Martin Heidegger was interested in the differences in the meanings of these terms and wrote in his work *Věda, technik a zamýšlení*[26]:

- Technique is a means to perform a certain activity.
- Technology is a process that leads to a certain goal.

To further describe the process by which technology dominates the world, we introduce the term "technification." Technification is defined as the implementation of new techniques and technologies within a specific activity or domain.

- Technification is a process that implements new techniques and technologies for a certain activity.

Technique is understood in philosophy as an method that can be used, and technology is a process that leads, using technique, to a certain goal. Defining technique as an instrument that leads to a specific goal is equally problematic. The mutual reference between technique and technology is very important, and its description points to technology as a general term under which technique falls. By technique we mean all individual activities such as methods, procedures but also skills, for example how to handle individual tools.

One of the problems concerning the definition of technique and technology lies in the fact of their temporality and changeability. Therefore, we cannot talk about technique and technology as one internally defined structure. Robert Piotrkowski lists twelve postulates defining cybernetics. Among them is postulate number seven, which defines this property not only of cybernetics, but of all technology as a principle of system characterization: "There are certain properties of created systems, which control alone cannot change without disturbing the 'identity' of the system (or even its existence). Sets of such properties are 'cybernetic natures' or 'characters' of systems. They are also called 'rigid' control properties — rigidity means independence from control and environmental influences, not immutability. If the character of the system changes, it does so spontaneously, for instance, when its properties change as a result of ageing."[27] Any system that is created as a certain instrument ages through changes occurring in it.

---

[26] R. Piotrkowski: *Filozoficzne założenia cybernetyki*..., pp. 142 ff.

[27] Entry: "Industrial Revolution," https://www.britannica.com/event/Industrial-Revolution [accessed 9.08.2024].

Rather, we can speak of techniques and technologies that are developed and in the last three decades have been developing by themselves. Technology is a variable phenomenon. Technology, when changing, shows a certain feature that is a non-human feature. When developing, it negates previous stages of development. The stages of technological development differ from each other, and the older previous period is negated by new periods. Technology from the beginning of the 18th century is spoken of differently than in the 21st century. Innovation entails the obsolescence of prior technical achievements, replaced by entirely new ones. Technologies and devices from earlier stages of development are often relegated to museums or, more frequently, discarded as scrap. In connection with technology, we speak of phases of technological development. How may we define these phases of development? In this case, industry and the main phases of technological development can help us. So, we can divide industry into four phases of development[28]:

1. The first phase of technical development is associated in philosophy with the appearance of philosophers focused on empiricism, namely, Francis Bacon, John Locke, and David Hume. Their considerations are partially concurrent with the first experiments in the field of computing machines, which were performed by Blaise Pascal. We can therefore propose the dating of the first development to be from the second half of the 17th century until the end of the 18th century, when in England we encounter the first weaving loom which is driven by the power of water and steam.
2. The second phase of technical development is related to the invention of the electric current and its application in industry. Machines are driven by electricity. The invention that was used on a large scale in the production line. This phase took place in the 19th century.
3. The third phase of technical development (the 20th century) is related to the invention of nuclear energy and its application in industry, and to the invention of the programmable logic system, that is, the computer. The first computer was created by Alan Turing at Bletchley Park, with which he cracked the code of the German Enigma cipher machine.
4. The fourth phase of technical development is in the process of expansion, and technologies are characterized by a slow blurring of the boundary between autonomous human thinking and machine thinking, which is slowly acquiring the features of autonomous thinking. We call this phase the Industry 4.0 and. it is characterized by:

- an internet of people, or the internet that connects people through social networks;

[28] M. Heidegger: *Věda, technika a zamýšlení…*, p. 7.

- an internet of things, or machines that operate on the basis of software, can collect data and share data via the internet to achieve better results (e.g. smart vacuum cleaners);
- an internet of services, or the internet that is related to logistics;
- an internet of data, which is related to the management of large complexes, for example large constructions, which are managed through big data, that is, through operations on extremely large data sets.

The third and fourth phases are interconnected; namely, computers that were created at the beginning help in the construction of newer, more advanced computers. However, in this example it is very clear that progress in this field means the termination of older types of computers. Specifically, a computer that helps create a better model is doomed to destruction after the introduction of a better model. This technology thread is one of the very significant characteristics of technology. One of the steps that can be identified is Industry 4.0. Industry 4.0 is defined as the industry of AI, or artificial intelligence. However, we will look at technologies that have a relationship with Industry 4.0 — that is, technologies that we refer to as artificial intelligence. These technologies learn one of the aspects that we refer to the subject, that is, the aspect of independent thinking in the external world. If technology that learns to think and makes independent decisions is able to do so, then this is a step towards assessing such thinking and the decisions related to it. This is therefore a step towards evaluating such thinking.

Ontology of technology

Now we need to ask ourselves a question. Do these phases of development have anything in common? Do they feature something that constitutes the foundation of technological thinking? Can we define something that can be regarded as common ontological basis of technology? This question may not seem very sensible. After all, why should we look for the essence of technology? Why look for something that is not fundamentally the same in what is variable? After all, the development of technology has shown that technology is a variable phenomenon, and is therefore relative. However, technology is a human product, and if there is a certain human achievement, we must also say in meaningful sentences what technology is.

Martin Heidegger is one of the philosophers who tried to understand the problem of technology. Namely, his book, which was published in

2004 in Czech translation is entitled *Věda, technik a zamýšlení*.[29] Heidegger managed to open up a topic that is certainly not easy, but is very necessary and contemporary. Heidegger himself says at the beginning that we suffer the worst consequences as humanity when we posit technology as a neutral phenomenon.[30] In Heidegger's words, we are at the mercy of technology when we think that it is something neutral for us.[31] At the same time, he emphasizes that the existence of technology is not technical. What does this mean? Heidegger wrote: "We know two sentences about technology that answer this question. One defines technology as a means serving certain goals. The second sentence says technology is human activity. Both of these definitions belong together. For to constitute goals, to find means to them and to use them means to act as a human being."[32] We find two characteristics of technology here:
1. Instrumental character, and
2. Anthropological character.

Ad 1. The first is the instrumental nature of technology. It is an *instrumentum*, or that which can improve the human body and its senses and help it conquer the world. Heidegger says that in order to do that, man needs an adequate instrument. An instrument is nothing more than an extended human body, an extension of the hand. Agree. an instrument that allows him to see, hear, etc. better, further and more. The instrumental nature of technology does not include existence. In instrumentality, we should distinguish two moments: the means and the goal. The goal is the same as the cause. The means is that with the help of which something is realized.[33] Heidegger referred to the Aristotelian causes of existence, and said that instrumentality is characterized by four causes of the existence of the universe. But causes, or *causa*, mean the implementation of certain goals. The instrumental nature of technology is discovery. In particular, man discovers such means that help him live.

Ad 2. The second is the anthropological nature of technology. This is no longer characterized by discovery, but by coercion. With the help of technology, man coerces energy, raw materials and natural food deposits. Coercion is more dangerous than discovery, because with the help of technology understood in this way, man rules the world. Heidegger notes that technology first served to take care of the world. However, the anthropological nature of technology tends towards domination of the world and

[29] Ibidem, p. 7.
[30] Ibidem, p. 7.
[31] Ibidem, p. 7.
[32] Ibidem, p. 9.
[33] J. P. Tillich: *Systematic Theology*. Volume III. Chicago 1963, p. 58.

its slow annihilation. In technology understood in this way, man does not take care of the world, but by claiming the right to enforce obedience on earth, he transforms it into his dominion. This is coercion, extraction and accumulation of energy, which will later be consumed through culture. And in this way of thinking Heidegger criticizes the anthropological nature of technology. It is not the instrumental way of using technology, but its anthropological approach that is more dangerous. It is a way of thinking in which man coerces and takes away nature's foundations. He changes nature and its structure into culture.

If we define technology in this way, we must also mention the aspect of faith that is present in this definition. Technology defined in this manner is linked to the belief that the anthropologization of technology can change the world into a better place to live. This belief is equally dangerous. If we accept the axiom that technology changes the world into a better place to live, then we also assume that the natural state of the world is not good for life. Nature, living and non-living, fauna and flora, and finally man, are understood as objects that need to be improved. The question that needs to be asked here is this: will this way not make man and nature only a certain phase in the development of technology, and thus only a certain stage that will be negated in the process of innovation in favor of the new man? The tragedy of such a development of technology is only the technological state. It will be necessary to create technological possibilities that will be able to create a better man — that is, a man who, thanks to technology, will free himself from his "imperfections." A better life, or an axiological category, is derived here from the state of technological advancement. Good is no longer hidden in the existence of man, but from the state of technology. The tragedy of technology becomes visible when what is instrumental begins to transform into anthropologized technology, when technology takes not only nature's ontological structure, which it later transforms into another form of energy, but when it takes away man's humanity by turning/transforming him into a cyborg. Technology then ceases to be an instrument, and it becomes anthropologized technology. According to Heidegger, it is not the instrumental nature of technology that poses a threat to man and the world. It is the anthropological nature of technology, in which man no longer discovers the possibility of using the world, but seeks to transform the reality of the natural world into the technical world. Said in the terms of Paul Tillich, the human person builds the Technical City.

Technology and theology

Theology has also become concerned with the problem of technology. First of all, there is the Protestant theology of the 20th century, and this is due to the scientific work of Paul Johannes Tillich. He assumes that man cannot help but change the natural world in his actions. By changing the world, he gives it new forms, and he does so through technology. It is therefore about changing form, theory, and practice. Here, Tillich uses the terms perception for theory and reaction for practice. Technology is a combination of ways of perceiving the world and, consequently, ways of grasping the world through language. Technology is primarily related to the way of knowing the world and expressing this knowledge through language. It is through language that man grasps the world and the world is given through language. Tillich writes in *Systematic Theology*, "Man is conscious of language because he is in the world. He is conscious of the world because he is in language."[34]

According to Tillich, technology itself is within the capabilities of man to express his thoughts through language. Through language he expresses his goals and ways of achieving goals. And here comes technology. In order to survive in the world, man must create a convenient place to live. Tillich, as a theologian, recalls here the First Book of Moses, in which man was given two tasks: to name all animals and to cultivate the earth. In other words, these two abilities were given to man: language and technology. According to the Holy Scriptures, man is to use both abilities to cultivate the earth. However, modern technology no longer cultivates the earth. Modern philosophical concepts prepare man's thought for domination over the earth. Tillich mentions pragmatism as a philosophical trend that justifies every innovation within technological possibilities. In other words, every idea that can be technologically implemented must be implemented. In other words, what is technically possible is axiologically justified. What is technically possible is good. In his book *Auf Der Grenze*, Tillich wrote a chapter entitled "Die Technishe Stadt als Symbol."[35] Tillich writes that every man produces objects — technical objects — and if he does not produce them, he uses them. He writes thus, "One human work is a symbol. Either the symbol is a work and the best through which it is done. Either the symbol is a work and the best through which it is done."[36] Technology has two meanings for man:

---

[34] J. P. Tillich: *Systematic Theology*. Volume III. Chicago 1963, p. 58.
[35] J. P. Tillich: *Auf der Grenze*. Stuttgard 1962, p. 220.
[36] Ibidem.

1. Technology as an instrument, and
2. Technology as a symbol.

Ad 1. As a technical thing it serves a certain purpose, and is determined by this purpose.

Ad 2. As a symbol, it is that through which man expresses something about his own existence. Human existence is directed towards death. Technology as a symbol is an attempt to rebel against what man considers evil, that is, against death. Technology was created by man not only for the extraction, enforcement and domination of the world, as Heidegger wrote, but it was created by man so that through technology man could save himself by perfecting his own body. Tillich defined the modern aspirations of technology in theological language, showing technology in soteriological categories. In this case, technology becomes the aspiration to guarantee life, without being too modest, we will say to guarantee eternal life.

Technology and axiology

The positivist assumption is that technology is excluded from axiological evaluation, because just as science cannot be good or bad in itself, in the same way it seems to be wrong to look at the development of technology from the same perspective. From the point of view of ethics, this is a correct assumption, because technologies do not (in the meantime) have moral autonomy. But from the point of view of axiology, this is a wrong assumption. Human products cannot be excluded from evaluation. They acquire values by the very intention of the man who produces them. Heidegger explains that the instrumental nature of technology helps man in his existence in nature. However, the anthropological nature of technology releases forces that can ultimately become the cause of man's death. This is a certain paradox, because technology was created with the intention of life, and a good life for man in the universe. This intention contains an axiological aspect in itself, speaking of a better world and man's life in it. These axiological categories exclude the basic thesis of positivism, which excludes technology from the sphere of axiology. Technology is a profound subject of axiological inquiry, demanding deeper evaluation than mere judgment. As Tillich shows, technology has also crossed the threshold of religion, desiring to save man from the worst evil, that is, death. Philosophy and theology show technology as man's rebellion against fate and evil.

The thinker who took up the challenge of technology in relation to axiology was Józef Stanisław Tischner. In his work *Filozofia dramatu* he dedicated a chapter to contemporary technology. Tischner reaches similar conclusions as Heidegger in philosophy and Tillich in theology. He noticed the fact of the double influence of technology on human thinking. He noticed that man, when building technologies, builds them under the influence of a certain thinking. This thinking has its philosophical foundations and also has axiological foundations. And when he creates this technical object, this object influences human behavior and human values. Tischner writes, "We are all under the influence of technical sciences. The consequences of technology affect the coexistence of man with objects, but also the coexistence of man with other people."[37] According to Tischner, this is a secondary influence on man, which affects not only the existence of man in the multitude of technical objects, but also the existence of man in the multitude of people. The question is whether this is still the world of human hope.

References

Anzenbacher A.: *Úvod do etiky*. Trans. K. Šprunk. Praha 2001.

Anzenbacher A.: *Úvod do filozofie*. Trans. K. Šprunk. Praha 1990.

Baumgartener W., Koehler L.: *Hebräisches udn Aramäisches Lexicon zum Alten Testament*. Leiden 1967.

Ebeling H.: *Martin Heidegger. Filozofie a ideologie*. Praha 1997.

Fajkus B.: *Současná filozofie a metodologie vědy*. Praha 1997.

Glaeser Z., Skomudek W.: *Teologia — technologia — ekologia. Ku integralnej odpowiedzialności za dzieło stworzenia*. Opole 2019.

Heidegger M.: *Bytí a čas*. 3rd edition. Trans. I. Chvatík, P. Kouba, J. Němec. Praha 2018.

Heidegger M.: *Věda, technika a zamýšlení*. Eds. J. Michálek, J. Kružíková, I. Chvatík. Praha 2004.

"Industrial Revolution," https://www.britannica.com/event/Industrial-Revolution [accessed 9.08.2024].

Jaksicová V., Suchý M.: *Antologia z diel filozofov*. Vol. I. Bratislava 1991.

Kant I. *Základy metafyziky mravů*. Praha 2024.

Majewski M.: *Pięcioksiąg odczytany na nowo. Przesłanie autora kapłańskiego (P) i jego wpływ na powstanie Pięcioksięgu*. Kraków 2018.

King James Bible, https://www.kingjamesbibleonline.org [accessed 26.09.2024].

[37] J. Tischner: *Filozofia dramatu*. Kraków 2001, p. 226.

Patočka J.: *Platon. Přednášky z antické filozofie*. Praha 1991.
Piotrkowski R.: "Filozoficzne założenia cybernetyki." *The peculiarity of man* 16 (2012), pp. 134—150.
Prach V.: *Řecko-český slovník*. Praha 1993.
Souček J. B.: *Řecko-český slovník k Novému zákonu*. Kalich—Praha 1987.
Tillich J. P.: *Auf der Grenze*. Stuttgard 1962.
Tillich J. P.: *Systematic Theology*. Volume III. Chicago 1963.
Tischner J.: *Filozofia dramatu*. Kraków 2001.
Weber M.: Die Texte Max Webers werden nach der *Max Weber-Gesamtausgabe* (MWG I, II und III, 1984—2020) zitiert. Die Gesamtausgabe umfasst drei Abteilungen: I. Schriften und Reden, Nr. 1 bis 25, darunter vier Doppelbände und fünf Teilbände (MWG I); II. Briefe, Nr. 1 bis 11, darunter drei Doppelbände (MWG II); III. Vorlesungen und Vorlesungsnachschriften, Nr. 1 bis 7 (MWG III). Der zitierte Aufsatz findet sich in MWG I/12, S. 445 ff. Die ursprüngliche Fassung von 1913 ist auch abgedruckt in Baumgarten 1964, S. 102 ff. Einzelne Bände sind auch als Max Weber Studienausgabe (MWS) veröffentlicht.

Acknowledgements

This paper benefited significantly from the support of the Student Grant Competition, Faculty of Economics, VSB-Technical University of Ostrava, for the project "Diversity of Sustainable Development: Interaction of Economic, Social and Environmental Aspects" (project number SP2025/050). The author express his sincere gratitude.

Lucjan Klimsza

L'Influence de la technologie sur la pensée et les valeurs humaines

Résumé

Le monde naturel, en réalité, n'existe plus. À sa place, a émergé un monde que nous pouvons, suivant Paul Tillich, appeler *la ville technique*. C'est un monde qui devient une ville globale unique dominée par la technique. Cette domination de la technique impose à l'homme des défis entièrement nouveaux. Pour définir avec précision le monde de la technique, il est nécessaire de distinguer la technique de la technologie, ainsi que les technologies de la pensée technologique. Cependant, la question la plus importante par rapport à la technique n'est pas la technique elle-même, mais son influence sur les valeurs, le langage et la pensée humaine. L'objectif principal de cet article est de présenter la technique comme une création humaine et d'examiner l'impact de la technologie sur l'homme, et en particulier sur le monde des valeurs humaines. Cet article avance la thèse que le monde des valeurs, ainsi que la science qui l'étudie, l'axiologie, ne font pas partie intégrante de la technique, ni même de la pensée technologique.

Mots-clés : axiologie, éthique, ontologie, technologie, technique

Lucjan Klimsza

L'Influenza della tecnologia sul pensiero e sui valori umani

Riassunto

Il mondo naturale, di fatto, non esiste più. Al suo posto, è emerso un mondo che possiamo, seguendo Paul Tillich, chiamare *la città tecnica*. Si tratta di un mondo che sta diventando un'unica città globale dominata dalla tecnica. Questa dominazione della tecnica pone all'uomo delle sfide completamente nuove. Per definire con precisione il mondo della tecnica, è necessario distinguere la tecnica dalla tecnologia e la tecnologia dal pensiero tecnologico. Tuttavia, la questione più importante rispetto alla tecnica non è la tecnica stessa, ma il suo impatto sui valori, sul linguaggio e sul pensiero umano. L'obiettivo principale di questo articolo è presentare la tecnica come una creazione umana e analizzare l'impatto della tecnologia sull'uomo, in particolare sul mondo dei valori umani. L'articolo sostiene la tesi secondo cui il mondo dei valori e la scienza che lo studia, ossia l'assiologia, non fanno parte integrante della tecnica, né del pensiero tecnologico.

Parole chiave: assiologia, etica, ontologia, tecnologia, tecnica