CURRENT AND FUTURE ATTRIBUTES OF DIGITAL MEDIA

Milan Konvit, Galina Jasečková

Abstract

In this paper, by analogy with M. Heidegger's approach to solving the question of the nature of technology, we raise questions regarding the changing nature of digital (communication) media and outline possible answers. The aim of the paper is, based on a comparative analysis, to describe the current form of digital media and identify the attributes of its future development. Just as Heidegger distinguished ancient and modern technology, we distinguish two types of media: pre-digital and digital media. In the article, we paraphrase McLuhan's statement "the medium is the message" into "the medium is the milieu" and focus on finding evidence for this statement. We rely on the similarity of the characteristics of the concept of "milieu" with the elements of the "digital medium" concept.

Keywords: digital media, pre-digital media, communication, technology

Abstrakt

V tomto príspevku analogicky s prístupom M. Heideggera k riešeniu otázky o povahe technológie nastoľujeme otázky týkajúce sa meniacej sa povahy digitálnych (komunikačných) médií a načrtávame možné odpovede. Cieľom príspevku je na základe komparatívnej analýzy opísať súčasnú podobu digitálnych médií a identifikovať atribúty ich budúceho vývoja. Podobne ako Heidegger rozlišoval starovekú a modernú technológiu, rozlišujeme dva typy médií: preddigitálne a digitálne médiá. V článku parafrázujeme McLuhanov výrok "médium je správa" na "médium je prostredie" a zameriavame sa na hľadanie dôkazov pre tento výrok. Opierame sa o podobnosť charakteristík pojmu "prostredie" s prvkami pojmu "digitálne médium".

Kľúčové slová: digitálne médiá, preddigitálne médiá, komunikácia, technológie.

Introduction

Martin Heidegger became famous in 1954 for his essay "Die Frage nach der Technik", in which he defended three theses: the essence of technology is nothing technological, i.e. technology is not a tool, technology is not one hundred per cent under the control of man, and technology represents for man the risk of seeing the world through technological eyes (Heidegger, 1977, 33-35). In this article, by analogy with his procedure in the search for the essence of technology, we raise questions regarding the importance of (communication) media and outline possible answers. Like Heidegger, we distinguish two types of media: pre-digital and digital. In the group of pre-digital media, we include all the so-called analogue media, including analogue mass electronic media, such as radio and TV. It is valid for all these media that they are conceptually understood as a passive intermediary placed between the source of information and its recipient. Metaphorically, it is a pipe through which information flows. The most critical questions are the question of the capacity of the pipeline, its integrity and turbulences arising in it. A theoretical model of such a communication intermediary concept was developed by C. Shannon at the end of the 40s of the last century by C. Shannon (Shannon, 1948). In contrast, the digital medium is no longer just a passive intermediary. It is not only a supporting platform for an almost incalculable number of so-called new media and the reason for thinking about the end of the medium (Kittler, 1999) or the direction towards the occurrence of the so-called technological singularity (Kurtzweil, 2005), but above all the reason for the consideration of the need to move from the understanding of the medium as a passive intermediary, ideally functioning like a copy machine, to concerns of the ubiquitous medium embedded in a hybrid environment that interacts with humans.

In the article, we first recapitulate Heidegger's basic postulates about the effect of technology, then, through analogies, we summarise the impact of the digital medium, paraphrasing McLuhan's statement "the medium is the message" (Luhan, 1964) develop the idea of "the (digital) medium is the milieu". We are mainly based on Foucault and Canguilhem's interpretation of the concept of "milieu" (Foucalt, 2007; Canguilhem, 2008).

1. Technology and its nature

Heidegger emphasises that technology is more than just a "means to an end" or just a "human activity" and that "the essence of technology is nothing technological". Technology should be understood as a "way of revealing/revealing" the world/nature. (Heidegger, 1977, 12). From the point of view of the method of uncovering, he distinguishes between ancient and modern

technology. While obsolete technology releases and brings to the fore the natural telos (end) of something, current technology challenges to nature and approaches it in a Gestell way, i.e. as a source of energy, a process of never-ending search for other sources.

Modern technology dominates nature's power: "Nature, which appears to stand above and against technology, is already positioned as a usable stock" (Heidegger, 2012, 40). Historically, technology was first in the position of a tool supporting the extension of man. Currently, it is in the role of a man-controlled geological force, capable of adapting the environment/nature to the needs of man, and prospectively has the potential to autonomously transform nature into a qualitatively new form "nature, which stands above and against technology, it is already placed in the position of usable stock".

B. Stiegler also sees the effect of modern technology similarly: Man and technology are two mutually influencing entities. Man affects the development of technology, which controls the further development of man's possibilities and the shape of the biophysical environment. There is a destruction of the natural, geophysical milieu and the emergence of a global technological milieu (global technical milieu). Especially since the beginning of the so-called great acceleration, observable since 1945, modern technology has become a geological force confronting nature (Stiegler, 1998).

Digital media is one of the manifestations of modern technology. It affects the form of the environment (e.g., the concepts of augmented reality and the Internet of Things) and how a person functions (e.g., the idea of so-called wearables that people wear).

2. Digital media characteristics

Pre-digital media

Pre-digital media correspond in our analogy to Heidegger's ancient technology. Their mission is to inform the mind of the addressee of the message mediated by the medium. Mediation uses a communication channel between the information source and its recipient. The characteristics of the track are adapted to the type of message (audio, text, image, video, or multimedia). Therefore, every kind of pre-digital media uses its specific mediation principle.

On the other hand, all these media are characterised by the firm binding of the message to the natural information carrier (Stone, clay tablet, papyrus, paper, metal wire, glass fibre, electromagnetic waves, etc.). In this, we can see an analogy with the concept of "logos" in ancient media. All these media leave more or less room for the imagination of the message's

recipient.[26] Starting with written media, they also represent a kind of external memory for humans. C. Shannon developed a theoretical description of the functioning of pre-digital media. The essential characteristics of his communication model are linearity, the entropy of the information source, the transmission capacity of the channel, emphasis on the fidelity of information transmission[27] and above all, the passivity of the medium concerning the surroundings, in other words, the absence of interaction between the medium and the surroundings, or environment - medium. It wasn't until McLuhan brought into the media discourse the thesis that the medium itself, i.e. the mere fact of the medium's existence, is news in itself, regardless of the information the medium conveys. In McLuhan's time, it was television that, as a medium, influenced the shape of society at that time. In hindsight, we can talk about the community before and after the advent of television, regardless of what programs were broadcast.

Digital media

Digital media is conceptually only one, i.e. exists only in the singular. As if it integrates all forms of media in that everything that comes to its input is transformed into a digital format – into a stream of bits. In this respect, digital media is a metaphorical mill into which sounds, images, videos, etc., enter. And from it emerges a homogeneous mixture of bits that cannot be distinguished to what they correspond. In this sense, unlike the pre-digital media, the digital media acts on the surroundings in Heidegger's Gestell way: the digital media enables the multiple processing of digital content (remix, update, collage, media, e-literature, etc.). The information content is a raw material that can be processed x times in x ways. Algorithms are used during processing, so a person tries to understand the processes in the medium. In addition, the diffusion of computing capacities into the medium brought the so-called pervasive computing and changed the form of media from a point-to-point connection to a network connection. From an economic point of view, the value of the medium has thus increased.[28] However, we are primarily interested in the erosion of the borders of the digital medium – the surroundings/environment, to which the following paragraphs are devoted.

[26] Oral and written media create space for imagination by providing a description, not a picture, of an object. In general, pre-digital media provide space for the analysis of the intentions of the authors of the news (e.g. what does Mona Lisa's smile mean?)

[27] Shannon was of the opinion that semantic aspects are not relevant in solving the engineering problem of media transmission.

[28] In general, the value of a network depends on the square of its users (Vartiak, Gogolova, Majerova, 2022).

3. The concept of milieu and digital media

Because the digital medium exists only in the singular, the end of media occurs. At least this is how Kittler (1997, 4) sees the situation: "Media ... will end when all information becomes digitised". Later this categorical statement about the Armageddon of the media is specified in the sense that the history of the media will reach its end as soon as "machines not only handle the transmission of addresses and data storage but are also able, via mathematical algorithms, to control the processing of commands" (Kittler, 1997). In other words, when the computer reaches such a level, it can "simulate all other information machines" (Kittler, 2013, 187). In such a case, the need to communicate information would disappear, and thus the need for the existence of a medium would also disappear. According to Bolter and Grusin, the theory of remediation is also applied in this case (albeit in a specific form). Its result will be the diffusion of digital media into the environment and the creation of a "digital milieu".

The concept of "milieu" generally refers to the environment in which something is embedded, the atmosphere in which something takes place, or the circumstances under which something happens. In old French, there was the word milliu, meillieu, mileu meaning "middle", i.e. the same as the Latin medius meaning half, middle, lieu, respectively leu meaning place, and locus meaning place, specific location. In modern French, milieu refers to the physical or social environment or a group of people with the same view of a thing (OED Online, keyword milieu). We can trace the need for the milieu concept to antiquity. Hippocrates taught his followers the importance of examining the patient's problems and the nature of the environment in which they live or come from. In modern times, Newton similarly applied the milieu concept when he solved the issue of the action of forces at a distance. For our needs, the idea of a milieu developed by G. Canguihem for the field of biology and also Foucault's concept of milieu is more interesting. Georges Canguilhem referred to a milieu as a set of external conditions necessary for the existence and survival of a particular organism; the organism remains in the middle of a favourable environment for it as long as this, and its characteristics enable it to survive. At the same time, he tries to adapt the background to his needs. The relationship between the organism and the environment thus resembles a discussion in which the organism "brings its proper norms of appreciating situations, both dominating the milieu and accommodating itself to it" (Canguilhem, 2008, 113). or, more precisely, "the environment [milieu] of the living being is also the work of the living being" (Canguilhem, 2008, 178-179). from our point of view, there is a two-way interaction between the organism and the environment. M. Foucault put the milieu concept more into the human domain when solving

the question of the optimal urban design of the city of Nantes to meet the urban community's requirements. The urban population is bound to the urban milieu. This represents "the conjunction of a series of events produced by these individuals, populations, and groups, and quasi-natural events which occur around them" (Foucault, 2007, 21). here again, the two-way interaction between man and environment comes to the fore. Simondon (2005) introduced the concept of "associated milieu" in this spirit. This milieu performed a stabilising function in maintaining the system in equilibrium. As an example of an associated environment, he mentions the cooling of a turbine with circulating water. Here, water is part of the functioning of the technological system, but it is not directly part of it (Simondon, 2005). Deleuze and Guattari (1988) defined a milieu as a particular way of thinking. Thinking "par le milieu" can be explained either as thinking "in medias res", i.e. without an introductory discussion, definitions, or of teleology, or as thinking "with an emphasis on the surroundings", trying to clarify the connection of the given object with its environment.

The conclusion of this short historical excursion into the areas of use of the milieu concept is straightforward. Suppose we do not want to describe or analyse the processes around us only as isolated from each other, or independent processes. In that case, we must consider different interactions between them. And here is precisely the space to move from "medium" to "milieu". In the context of the digital milieu, this means that "in the game" are not only agents participating in the communication, generating and processing information but also a relevant set of relations between agents and the environment. As a result, the boundary between the agent and the atmosphere becomes blurred, as well as the division into subject and object of communication (Simondon, 2005; Garbárová, Fabuš, 2021).

Let us now turn to the need for a "digital milieu". First, let's recapitulate the consequences of the advent of digital media through the phenomena it brings to the discourse on the nature of media (Canguilhem, 2008; Javorský, 2020):

- global technological, social, and cultural networking,
- digitisation of everything,
- diffusion of the digital medium into the physical environment, or, generally, distribution of the digital domain into the physical one,
- pervasive, ubiquitous computing,
- datafication,
- algoritmisation of processes.

The joint action of these phenomena creates the digital milieu, a metaphorical digital placenta that extends over real physical and digital space. Thus, a new type of space is designed – a hybrid space. The process of penetration of the digital milieu into the physical environment results in the creation of a hybrid environment or, in general, in the creation of a hybrid space. Hybrid space is, metaphorically, a space of fluid presence in time, place, and social relations. We understand the space of a liquid company as "a free (in the sense of liquid) spread of matter and information". A person with his activities constantly dynamically "overflows" from the genuine part to the virtual domain and vice versa, without realising which amount of the hybrid space he is currently implementing his activities. At the same time, a human affects the form of both actual physical and digital space and vice versa. These spaces affect how a human functions (Canguilhem, 2008; Schlesinger, 2020).

The fundamental physical space based on matter, in which Newton's laws and Euclidean geometry apply, enters the process of hybridisation with the digital space based on information, which as "the new home of the mind ... is both everywhere and nowhere, but not where bodies of flesh and bones survive ..." (Barlow, 2019). This interaction results from a hybrid – a hybrid space filled with hybrid objects located in mixed places. A hybrid place is by nature an innovation of McLuhan's global village concept (McLuhan, 1991) – one real place is (temporarily, fluidly) connected to a theoretically arbitrary number of digital places where everyone knows each other through chats, likes, posts, etc. The concept of "I" is a hybrid of the physical "I" and informational (data) "I". Fluidity here manifests itself in the material "I" from the genuine part of the hybrid space that spills over into the digital aspect of a specific data set, like a particular person's digital imprint. Technology in the hybrid area acts as a duplicator (real space duplicates by adding digital space, physical identity duplicates by adding digital identity, privacy in real space is added to informational privacy in the digital area, etc.).

Conclusion

We have shown that digital media is a revolutionary new means of communication based on digital technology embedded in a digital milieu. The digital medium no longer acts as a passive intermediary in communication but becomes an active technological milieu.

Digital media has, from the perspective of media theory, a multi-layered structure. In the lower layer, it acts, following the original Latin meaning of the word medium, as a passive intermediary inserted between communication agents. In the middle layer, it creates a network communication infrastructure. In the upper layer, it turns into an active milieu in which there is

a dynamic interaction between a person (or an agent in general) and a medium, and vice versa, a functional interaction between a medium and a person.

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Contact details:

prof. Ing. Milan Konvit, PhD.

Univerzita Komenského v Bratislave, Fakulta sociálnych a ekonomických vied, Ústav mediamatiky, Mlynské luhy 4, 821 05 Bratislava

milan.konvit@fses.uniba.sk

ORCID ID: https://orcid.org/0000-0002-4959-7819

doc. Galina Jasečková, CSc.

Univerzita Komenského v Bratislave, Fakulta sociálnych a ekonomických vied, Ústav mediamatiky, Mlynské luhy 4, 821 05 Bratislava

galina.jaseckova@fses.uniba.sk

ORCID ID: https://orcid.org/0000-0002-3699-8082