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Quo Vadis Digitalis Homine? Digital Philosophy and the Universe

Abstract

To think about the metaphysics of our digital era – who are we? where do we come from? but, first of all, where are we going? – we have to notice that the majority of people, instead of interacting with the boring surroundings, is deeply focused on a neverending and nervous human-machine interaction, which has become a universal human trait. Unluckily, the discussion here will be about an anthropology of the homo digitalis, that is, about the possibilities/dangers of the undefined boundaries between the online and the offline life that unavoidably changes the same vision of the world, which finds in Descartes (ratio), and not in Bacon (experientia), its predecessor.

Key words: *antropo-digital philosophy, Descartes, human nature, mind, computer, internet, digital body, eternal data, humanism.*

According to digital philosophy, we are all (digitally) programmed.[97] Our life evolves according to the mathematical project of four nitrogenous bases [adenine (A), guanine (G), and the pyrimidine derivatives cytosine (C) and thymine (T)], which make up the genetic data contained in 23 chromosomal pairs constituting the DNA molecule.

It should be pointed out that the main difference between the analogue and digital worlds is in their representation of reality. The analogue world is a world of information with a sequence of continuous values, while the digital vision of reality uses "discrete", i.e. separate and different values.

Figuratively speaking, it is the difference between the second indication in a (normal) clock and the passing of seconds in the computer clock. This means that the digital philosophical school claims that, as a DNA script, the whole reality can be defined by means of discrete and integral numbers, as is well presented in Edward Fredkin's thought,[98] conceived as the "*atomic theory carried to a logical extreme*" (see www.digitalphilosophy.org): "*This means that, theoretically, any quantity can be represented exactly by an integer. Further, DP implies that nature harbors no infinities, infinitesimals, continuities, or locally determined random variables.*" Thus, digital philosophy understands the universe as a huge computer, entirely based on and composed of numbers; where matter and energy are secondary and complex manifestations in which dynamic processes appear in the form of transitions from one numerical state to another. As for the atoms, same as in the case of DNA, this theory is interesting and understandable.

However, if digital philosophy thus configured is applied to physics, it can never function by claiming that time and space are composed of integers, because this is clearly contradictory. If all of this were true, the history of the world would evolve like a game of chess, where every move is "discrete" and produces a different state – in contrast, for example, to a soccer match, where the ball is in constant movement and each shift in its trajectory might produce a new world.

It should be noted that there are certain correlations between this challenging ontology and the *M-Theory*,[99] a version of string theory proposed by physicist Edward Witten. This is all interesting material for the science, philosophy, and art of the future.

This leads us to an interesting premise: *Computo ergo sum* / I compute, therefore I am; which leads us to think about the metaphysics of our digital era – who are we? Where do we come from? But above all: where are we going? It is sufficient to note that most of our contemporaries, especially young people, tend to be mentally-digitally connected to their touchscreens instead of engaging in a living, direct, subjective, physical interaction with their grey, boring, and alienating environment. Even though a recent phenomenon, this continuous and nervous interaction between man and machine has become a universal feature of humanity.

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97 The word "digital" comes from Latin *digitus* (finger), and is synonymous to "counting" (by fingers).

98 He is one of the founders of this approach, together with Konrad Zuse, Stephen Wolfram, Gregory Chaitin, Seth Lloyd, and others.

99 For additional information, see: http://www.soulsofdistortion.nl/croatian/SODA_chapter2.html

It is, namely, about the anthropology of *homo digitalis*. The new type of man. If one starts from the fact that the fundamental nature of reality and existence, science and knowledge, mind and reason is constantly changing and transforming, one sees that the boundaries between our online and offline lives are becoming increasingly blurred, which means that our perception and vision of the world, i.e. our philosophy of life, is relentlessly changing as well.

In the everyday life of our new millennium, we are involved in continuous computations by means of microprocessors: posts on Facebook, Amazon recommendations, Google searches, Minecraft games, and so on. Thus we can rightly paraphrase the famous Cartesian syllogism "Cogito, ergo sum" as "*Computo, ergo sum*". More precisely: I twit, so I exist. After all, it is also evidence that the communication technologies continually redefine the multi-secularized speculations about the fundamental nature of human existence.[100] The consequence is that an increasing number of data available to man ruthlessly perverts and inverts all previous knowledge. Historical studies, for example, are constantly transformed due to an increasing number of data, not to mention geography, which is increasingly under a direct influence of communication. It becomes more and more evident that while knowledge distribution and accumulation enhance and expand knowledge, globalization reduces the number of spoken languages. In this constant and unstoppable transformation of the reality, mathematical logic and mathematics are more than ever an integral part of the space-time fabric that surrounds and encompasses us. The question is to what extent, if there is any measure, will it extend to the future? And what will be the role of man, as we perceive him today, in all this?

In order to realize somehow the seriousness of the problem – in terms of the reality we are facing – we should know that, according to the Cisco Systems estimates,[101] there were as many hardware devices in 2008 connected to the Internet as there are people on our planet. And today there are more than 25 billion, with around 50 billion expected by the end of this decade, in 2020. That means: seven times more than the world's population. Even though, unfortunately, only a third of it currently has access to the Internet.

In the so-called "*Internet of Things*," which is in the process of being implemented – today millions of thermostats, dozens of millions of light bulbs, hundreds of millions of cameras are integrated in the Internet system – more and more electronic devices will communicate with the reality: recognizing it (by way of sensors), acting upon it (by way of wireless communication), and possibly modifying it (by way of actuators). In fact, we live in the time of infosphere sublimation.

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100 The Italian philosopher Luciano Floridi has argued in his book *The Fourth Revolution* (Oxford University Press (UK) 2014) that this is the fourth shift in thinking about human existence. According to him, our first discovery was that we were not standing immobile in the centre of the universe (the Copernicus revolution). Then we realized that we were not special or different from the rest of the animal world (the Darwinist revolution); and that we were not completely transparent to ourselves (the Freudian revolution). Now the technologies make us realize that we are not separate agents, but informational organisms that share with others a global environment basically comprised of information (the infosphere). Floridi calls it "the Turing revolution" after Alan Turing, the founder of computer sciences. Therefore, according to the Italian philosopher, our worldview is about to change radically in the near future. Namely, this fourth "revolution" creates the need for a new philosophy, the philosophy of information, because we are only at the beginning of the Turing revolution.

101 https://en.wikipedia.org/wiki/Cisco_Systems

But the final blow to the traditional understanding of the world comes from two new hybrid technologies. The aim of the first is to enhance the perception of the reality by combining biological sensory inputs, such as hearing and vision, with digital information.[102]

The second is artificial intelligence, which uses different types of hardware and software increasingly successfully to replicate every trait attributed to human intelligence, from learning onwards. Although for now, but only for now, the most obvious and for many insurmountable difference between the so-called "biological intelligence" and the so-called "artificial intelligence" is consciousness.

Interestingly, even today, although everyone knows that the artefacts of modern technology lack consciousness, many well-known scientists such as Stephen Hawkins, entrepreneurs such as Elon Musk, and philanthropists such as Bill Gates believe that further development of artificial intelligence poses a threat to humanity, because the machines[103] might become powerful and intelligent enough to reach a state in which they will develop some kind of independent consciousness and decide to subject humans or that humans were unnecessary. This fear is manifest regardless of the fact that most scientists, including experts in artificial intelligence, exclude this possibility, at least for now and in the near future. But "for now" does not mean "never". The doubt remains and it will surely become the central philosophical dilemma of the third millennium. And it will address questions such as: what is real life, if it does not differ from the artificial one? Is there some cyber-ethics independent of software? Is there some sort of digital free will?

The crisis is not new. Back in 1979, modern philosophy displayed a growing sense of insecurity in Richard Rorty's book *Philosophy and the Mirror of Nature*. This made the philosophy of science move away from its traditional rhetoric, based on the fundamental ability of predicting events, to consciously accept uncertainty.[104]

As we are rapidly entering the zone of information (the infosphere), marked by the uncertain boundary between the analogue and digital worlds, contemporary pragmatic philosophy must further adjust its course by adopting an approach to ethics capable of incorporating both the natural world and the artificial one of man-built devices, characterized by growing intelligence.

Although in front of (our own) touchscreen we feel secure concerning our existence, in the form of *computo ergo sum*, this does not mean that many of the ancient dilemmas have not remained (fatally) open. Needless to say, in the meantime we have also added some completely new queries and uncertainties. From "online psychology" to the "digital divide". From attacks on privacy to attacks on the freedom of expression in the WikiLeaks style. From robotic tutors to cyberwars.

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102 Google Glass is only the first and rather clumsy attempt in this direction.

103 Resembling some future Transformers or Terminators.

104 In some ways, this transition can be explained by the transition from a rigid Newtonian mechanics that dominated the gravitation of celestial bodies to quantum mechanics that – completely non-deterministic – governs the world of subatomic particles. "God does not play dice," was a famous commentary by Albert Einstein regarding the unexpected and uncertain. Today we know that the greatest physicist in history was wrong. God does play dice: in the subatomic world, electrons in fact follow the principle of uncertainty pronounced by his colleague Werner Heisenberg. But there is not just physics. Seismologists, climatologists, and even biologists and pathologists must face such uncertainty, to the extent that the old idea of knowledge as a faithful mirror of nature has itself been challenged.

It is true that we have answered many questions with the help of technology. However, this has opened (several) additional Pandora's boxes of questions in return, more than ever before.

We are our minds

("Except our own thoughts, there is nothing absolutely in our power." R. Descartes)

It is interesting to note, within this worldview, that these topics suggest that the vision of human nature in digital culture has essentially all the traits of the traditional Cartesian perspective, although it was initially rejected by the philosophers and criticized by the anthropologists. I am referring to the vision that "we are our minds." No more, no less!

Namely, in digital culture, the fundamental feature of man is the mind. This means that our body, our sex, race, age, ethnicity, and nationality are "absolutely" irrelevant when it comes to defining what we really are in cyberspace. Because our identity, in the form of qualities that we identify with, can easily be changed by simply changing several text lines.

Namely, in cyberspace one exists in a purely bodiless state (one might traditionally say: in an inhuman state). We are information, modelled words and ideas. In this sense, one of the advocates and defenders of "digital freedom", artist John Perry Barlow,[105] has rightly argued that, in the quiet world of cyberspace, all conversations are digital rather than spoken. In order to join them, we do not need the body; and the space of action becomes a place consisting of words alone. Barlow describes cybernetic space as the new headquarters of the mind, in which there is no room for weary bodies.

A renowned women rights activist, Elizabeth Reid,[106] believes that in the dimension of computer-mediated conversation (CMC), the body becomes an entity of relative significance. Freed from the physical entity, which is perceived as a limitation, man fully enters the domain of symbols, unlimited by any physical means.

Likewise, Hans Moravec,[107] an artificial intelligence expert, believes that the future of humanity is digital. He imagines a future where it will be possible to free the mind from any aggravating and

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105 John Perry Barlow (1947-2018) was an American poet, essayist, activist, and the former author of The Grateful Dead songs. He is also known as a defender of digital freedom and a co-founder and vice-president of the Electronic Frontier Foundation (EFF Board of Directors). From May 1998, he was a Fellow at the Berkman Klein Center for Internet & Society at the Harvard University. The Time magazine has proclaimed him "one of the 10 superintelligent rock musicians." His most famous work as an activist is *A Cyberspace Independence Declaration*, published in February 1996 in response to the US *Telecommunications Act*.

106 Elizabeth Anne Reid is an Australian expert in development, a distinguished feminist and academician. She has made a significant contribution to both national and international public service. She has founded, established, and cooperated with a number of pioneering and specialized UN institutions, governmental agencies, and non-governmental organizations.

107 Howard Rheingold is an American literary critic, sociologist, and essayist specialized in the cultural, social, and political implications of the new media. He has introduced the notion of virtual community, in which he sees an instrument for the affirmation of decentralized democracy, since the links of public life tend to disintegrate in networks. This has led him to suggest a global virtual community without warning about the dangers and losses it might bring.

limiting biological substrate, because the mind will be transplanted layer by layer into the computer. Moravec suggests that personal identity could be preserved in this process, because the essence of a person, his or her self-identity, consists of the models of processes that can be preserved and saved. This body is obsolete because it will not be functional in the times we are heading towards. It has become superfluous to our existence and appears as the background glamour of human essence. It is viewed as a source of failure, disgust, and constraints, and must therefore be overcome in order to turn humans into pure minds.[108]

Many contemporary researchers who identify themselves with this worldview look at the body as a prison from which we must break free and turn into bodiless consciousness. Freed from these physical limitations, our minds can freely wander through the ethereal spheres of electronic space: humans can only reach perfection by shaking off the limitations of our DNA, which can be done by developing such nanotechnology that will "enter" the human body and mould it according to one's personal intentions, giving us freedom to transcend the boundaries of our personal DNA.

Beyond social and physical differences

In the digital dimension thus envisioned, the highly praised slogan "*vive la difference*" loses its raison d'être. In this future world of cyberspace, where life is digital and we exist only as information, sex, type/race, and ethnicity are irrelevant categories that no longer have their "traditional" meaning. Information is free from any individual identity; it has no sex/gender or race/type and is not distributed according to an accent that would geographically determine a person.

Thus, in Croatia one would not be marked as Slavonian or Istrian. Internet communication reinforces the conviction that the mind is all that matters: ideas and words, not the person to whom they belong. The major factor of levelling and equality is based on the fact that online nobody can reliably determine the age, race, skin colour, hair colour, body shape, voice, or any other physical trait of another person. So it is only ideas that matter. In cyberspace, age, race, and gender are mere "noise" disturbing the flow of pure information. To really enter the cyberspace, they must be rejected: all individual specificities must be abandoned in search for a pure communion of minds. In this sense, the Internet technology allows us to ignore the differences and focus on ideas, which everyone can do.

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108 The influence of Christian rejection of the sinful human nature in its corporeality is quite evident, even striking.

From a fluid society to flexible and obedient individuals

The digital allows for the already intrinsic flexibility, pliability, and plasticity of human nature and the "self" to be brought to the extreme. In the trans-humanistic Estropica philosophy, we find ourselves in an age in which finally anything can be done. Modern technology has given us such powers that we are not only able to manipulate the external reality, the physical world, but we can also manipulate ourselves. We can become everything we want. In the culture of information, the human being becomes a plug-and-play of various possible entities; composed of different parts that can be updated by simply clicking the mouse or by inserting a new line of code. This may soon lead us to perform all our activities, to live and work in cybernetic space, where our ideas will no longer depend on a single and unchangeable body.

The body will therefore be fully flexible and variable depending on the situation, since some organs might work better in some situations, while others may be preferable in other conditions of possible lives. And all that according to our desire and will. This ability to radically and convincingly change one's appearance-body is bound to produce a profound psychological effect on our personality, since we will question only what we want to be; and nothing else.[109] Eventually, it should be pointed out that Eric Gullichsen,[110] an expert in cyberspace, even imagines a future in which our demand for new identities will become an integral part of human life.

Networking the world in order to rule it

But that's not all. Namely, through the network we will be able to rule the world. In this way, the web (network) will become our new home.

To man as a thinking being, digital culture gives the feeling of home, a kind of cosmos in which to experience and even control one's own life. The computer offers a world of order and logic by building a world that is fully rational. Because, as a formal mechanism, it works according to the principles of logic, creating a world whose building blocks are the logical algorithms of the program that we feed into them. And which operate, at least that is what we believe, according to strictly defined rules, because they are micro-worlds that can be completely deciphered as programs.

So, instead of the chaotic and hard-to-understand world that we consider as real for now, the computer offers a (picture of the) world of order, which is more logical, rational, and transparent.

This means that instead of the real world, in which we often lose our direction and sense, the computer serves as a better and more optimistic replacement. In the form of a pre-programmed, intact, and orderly diagram line of our life course, as a new image of a well-ordered and computable nature. This means that in the near future flowcharts, programs, and microchips will be part of the

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109 After Rheingold, *Virtual Reality*.
110 Eric Gullichsen, "Metodi cibernetici per raggiungere l'immortalità (vita artificiale 'in silicio')," in: Timothy Leary, *Caos e Cibercultura* (Milan: Libri Urra, 1995), 40.

new cosmology. For the homeless of this (still) real and fragile world, images of the web crossing the world, the Internet surrounding the planet, will comfort all human beings at the metaphysical level, assuring us that we also, each one of us, have the ability to rule the world and keep it in our hands.

Back to the 17ᵗʰ century

All these issues of digital philosophy reveal that the dominant image of human nature in the 21ˢᵗ century is very similar to that of the 17ᵗʰ century. Especially when it comes to the superiority of mind over body, the efforts to achieve the transcendental state of pure mind, liberated from the prison of the body; the disparagement of sex and gender, race and ethnicity as accidental and worthless qualities; and the desire for an untouched nature within a mathematically ordered universe.

This vision of reality is incredibly similar to that of the traditional Cartesian and Christian thought. The irony is in the fact that most philosophical movements during the last century tried to eradicate all traces of Cartesian thought, and yet it is at the heart of computer culture in a modern form of Cartesianism. However, the limitations of this vision of human nature are obvious.

It is certainly not true that the vision of human nature is entirely contained in computer culture, which suggests that our bodies, our sex, race, and countless other factors are irrelevant. In this theory, the body is perceived as a limitation, subject to disease and corruption. The central role is given to the rational nature, ignoring many other human traits, such as the significance of the biological nature of man: the fact that human beings belong to particular social and cultural environments, as aspects of human nature that do not belong to computer culture. This means that while thinking about the essence of philosophy, including the education of mankind, it is necessary to develop the awareness or conviction that the philosophers have the responsibility to focus their attention and their critical abilities on the issue of human nature in the modern world. And that means human nature in its totality. The modern man, as a thinking/feeling social being, must not allow this apparent void, a result of insufficient consideration of these issues, to enable technology to keep philosophically discrediting the entire human nature in favour of the digital one. Our modern politics is also responsible for this situation, since it entrusts our future to technology rather than the social system and turns man into a mere technician, seeing him as a means to realize technological potential rather than the goal in himself (in his human totality).

Therefore, today more than ever, the renewal of philosophical anthropology and the related anthropological issues is quite vital. These questions have intrigued the human mind since ancient times: "What am I as a human being?" and/or "What is my place in the universe?" Questions that are today, at the beginning of the new millennium, which is certainly digital, more urgent than ever. They also include Shakespeare's *to be or not to be*, and Kierkegaard's *aut-aut*. Is it for us to decide whether the dice has already been thrown and we are only a consequence of that?

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Quo vadis digitalis homine?
Digitalna filozofija i svemir

Sažetak

Da bi razložno razmišljali o metafizici naše digitalne ere - tko smo mi? odakle dolazimo? ali prije svega: kamo idemo? – treba primijetiti da većina ljudi umjesto interakcije s dosadnom okolinom, udubljuje se u neprestanoj i nervoznoj interakciji čovjek-stroj, što je postala univerzalna osobina čovječanstva. Radi se naime o antropologiji 'homo digitalisa' o kojoj će se ovdje raspravljati, tj o mogućnostima / opasnostima sve neodređenijih granica između online i offline života što neumoljivo mijenja i samu viziju svijeta, koja u Descartesa (ratio) a ne u Bacona (experientia) ima svoj presedan. O tim mogućnostima / opasnostima bit će ovdje riječ.

Ključne riječi: *antropo-digitalna filozofija, Descartes, ljudska priroda, um, računalo, internet, digitalno tijelo, vječni podaci, humanizam.*