PEDAGOGICAL IMPLICATIONS OF TRANSHUMAN AND POST-HUMANISTIC COGNITIONS ON MAN AND THE ROLE OF SCHOOL IN THE IMPLEMENTATION OF EDUCATIONAL VALUES

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Abstract

The genesis of man’s development points to the fact of his constant fluctuations and asymptotic nature. Therefore, different philosophical-anthropological conceptions view man as an open creature which constantly defines itself. The anthropological understanding of man as an imperfect being with a sense of its own existence in the constant process of overcoming his own limitations with work and creation points to the fact that man’s development depends more on educational and cultural encouragement than on the unconscious fluctuations of evolution. Man, thus, constantly realizes and self-realizes, grows, develops, advances, and defines himself by influencing his own anthropogenesis and evolution. In that sense, his activity presents a significant educational and self-educational action because precisely the educational process enables him a transition from lower to more perfect and complete forms of humanity. Historically speaking, there has always been a changing tendency to advance man. The cause of this is the difference in understanding the concept of man, the degree of his development, science and technology, society i.e. creativity in the wider sense, which points to the difference in vision of an educational goal and an ideal to which man strives. It is in precisely this later part where we find the common tendency which reaches above man’s attempts in the educational area in the sense of time, space, and creativity-development. The educational ideal, therefore, reflects the common values and positive attempts of the human community in achieving those highest values and ideals. It marks an ideal state of perfection and a final value. An ideal is set as a role-model, somewhat out of reach. As such, it is always a motive to move forward, towards something better, more perfect and wholesome with an eternal drive towards the improvement of man. The question of ‘improving’ a man in the circumstances of today’s quick technologization without a doubt involves a discussion on what it means to be a man, a person i.e. what is the point in which a human being stops being human and becomes something else. In previous works, this later was called Robo Sapiens, Cyborg or, more generally, Super-man by putting the attempts to define man so far into the circumstances set by post-humanism and transhumanism. This paper represents the philosophy of transhumanism and post-humanism as well as the idea of forming a completely new superman as a continuation of his own evolutionary process. The potential positive and negative sides of such a nearly futuristic pondering on man and his role in the world are highlighted by connecting the future we speak of with the traditional humanistic and pedagogical presumptions on man, education, and values which make it. The role of school is highlighted in the implementation of educational values, awareness, new meanings and future generations of young people who will, undoubtedly, live a transhumanistic reality in which the question of freedom is the key notion to understand one’s own life and a guiding question towards the sustainability of the life of a community.

Keywords: human, transhumanism, post-humanism, humanism, education, freedom, school.

1 INTRODUCTION

Almost all social sciences and humanities always attempted to provide a definition of man, from various perspectives. Many great minds attempted to explain what it means to be a man, but this definition was always a relational, dependent on the individual, place, and time. The definition of man, therefore, can be found in many philosophical, biological, and religious discourses i.e. in the “I think, therefore I am” of Descartes, “the human ability to understand the world” of Heidegger”, the evolutionary theory of Darwin and the Biblical interpretation of man, but also in many other ideas and thoughts which connect their idea of existence to man. This differentiation of the notion of man is a consequence of the development of science and technology, cultural development, religious interpretations, the development of art i.e. man’s wider sense of creation. As there has been a significant progress in the quality of life in the recent decades regarding medicine, technology, and science in general, the notion of man also gained a new dimension. Human genome research, with the goal of identifying disease [1], the appearance of the first humanoid robot, Sophia (2017)
characterized as a person that has been granted citizenship by Saudi Arabia, attracted international attention not just to her cognitive abilities, but also the rights of citizenship belonging to her. This is a consequence of the general robotization, cyborgization and technologization of the human life. The obvious changes in the concept of what is humane are now gaining wider dimensions, include genetic engineering, the development of artificial intelligence, cyborgs, robots, and artificial materials making up the human body. There is a new movement of post-humanism and transhumanism, ideas, opinions, and ambition trying to improve man’s capabilities and advance him in every way using technological progress. There are obscurities surrounding these terms, as well as the conceptual framework of post-humanism and transhumanism. Considering the unclear concept of each notion, those two notions are sometimes used synonymously and wrongly as the same one [2]. It is significant to make clear the differences in defining these notions, which we will attempt to do in this paper.

Therefore, post-humanists are trying to think in a non-anthropocentric or non-dualistic way in order to develop a concept of humanity. These movements are present in many aspects of everyday life but people don’t notice them so much. Furthermore, transhumanism is not only a common project or vision of modern technology, but it bases its ideas in the Enlightenment philosophy and transhumanists see themselves as the heirs of philosophy of humanism by justifying their claims with the idea of Enlightenment philosophy that man’s nature may be corrected. Also, they promote the Enlightenment superiority of the mind and the idea of using science to overcome human limitations. Nevertheless, by not accepting the basic role of humanity in developing man, transhumanism goes past humanism. Transhumanism is a movement of exceeding man and, therefore, not a humanistic and anthropocentric one, but a progressive one. Man is understood to be the highest moral value but in the sense of highlighting progress which is the center of everything, according to the post-humanists. Transhumanism, therefore, is often called evolutionary humanism, wherein evolution is understood to be a process starting from man, going through trans-human up until the post-human [3].

This reorganization of viewpoints and the attempt to improve man with the help of modern technology is related to the changes in values, man’s consciousness, nurturing new meanings of life and educational goals changing the horizons of our existence. With it is brought a series of implications of traditional humanistic viewpoints. Constant questioning of the role of man in the world is encouraged. In that sense, our goal is to overview new transhumanistic and post-humanistic philosophy which, undoubtedly, roots its existence in the contemporary age, to highlight transhumanistic critique by connecting the cognitions to traditional humanistic and pedagogical assumptions on man, education, and educational values, and to make aware the educational role of the school in the implementation of it all.

2 TRANSHUMANISM AND POSTHUMANISM AS IDEAS ON THE FUTURE POST-MAN

Posthumanism appears as an attempt to cut the tie to humanism and anthropocentrism, which is used to highlight the internal change from the humanistic to the post-humanistic understanding of the “human condition” and is also often used as a marking for future generations of beings evolutionary connected to the human species [4]. Similarities and differences between posthumanism and transhumanism are often misinterpreted, the reason being that both movements became more concrete in the late 80s and 90s of the 20th century with their interests being similar. Even though they share the perception of man as a non-fixed and changeable state, their roots and perspectives are significantly different. Transhumanism, with its roots in Enlightenment, takes humanism to a new level and, in that sense, may be determined as an “ultrahumanism”, while posthumanism as a philosophy offering the possibility to think in relational and multi-level terms by widening the focus to a “non-human area” enables the imagining of posthuman futures radically expanding the limits of human imagination [5]. Apart from a relationship towards humanistic values, one of the most important differences is the understanding of the term posthuman. While transhumanism sees the posthuman as a real entity, one who is a future version of the current man if he accepts technologies to perfect his physical and mental abilities in this current (transhuman) phase, for post-humanists the posthuman is not an entity of some imaginary future. He exists here and now i.e. man is already posthuman and, in some sense, always was. According to Ferrando [5], while the post-humanists consider that the posthuman state may be achieved by a simple change in perspective and way of thinking, transhumanists stay firmly convinced that the only way to achieve the posthuman state is a radical technological change in human nature. Therefore, “transhuman” is an “intermediate man” striving to become posthuman and attempting certain steps (for instance, technological improvement) towards
that goal. The “posthuman” is an ideal and goal of transhumanists, a being so radically different in its physical, cognitive, and emotional capabilities.

One of the most famous representatives of the philosophical posthumanism is N. Katherine Hayles in whose influential work *How We Became Posthuman* (1999) are stated the consequences of transferring the body into information. Hayles [6] explains that the limits of the body have been compromised and that the current era is characterized by a desire to erase the burden of the body i.e. to transform the body into information, non-matter. For Hayles, posthumanism is marked by a loss of the subject based in the loss of the boundaries of the body. By leaving the criteria of nature, myths, religion, evolution, culture, politics, and nation, posthumanism, in determining the differences of human and after-human, takes over the criteria of technology and science. Furthermore, when talking about transhumanism, Max More [7] considers transhumanism to be a class of life philosophies seeking continuation and a speed-up of the evolution of intelligent life outside of its current human forms and limitations using science and technologies, but also the potential dangers of technologies which will enable the overcoming of human limitations, as well as ethical questions involved in the development and usage of such technologies. The *World Transhumanist Association* [8] considers, therefore, transhumanism to be an intellectual and cultural movement affirming the possibility and desirability of the fundamental improvement of the human condition by way of applied reasoning, especially the development and designing of widely available technologies to remove aging and a significant improvement of human intellectual, physical and psychological capacities [9]. For transhumanism, technology represents a means to achieve greater control over the natural world, the human body, and evolution itself in which there is no significant difference between the existence of the human body and a computer simulation, cybernetic mechanism and bio-organism, the purposefulness of a robot and human goals [6]. Transhumanism attempts to perfect man by using science and technology and is connected to the process of technological transformation of society and the human condition. In the center of the transhumanistic philosophy stands the search for immortality, human perfection, dominating nature and surpassing the limits set on man by time and space. It is often compared to religion in the sense of sharing a vision on the new, improved level of existence in which people will reach heaven, or Utopia. Surely, the way that the transhumanistic vision will be achieved depends entirely on the usage of technology and science to improve the current human capacities and abilities. Similar as in religion, the transhumanistic utopia is not for everybody, only for those who accept science and technology as a tool used to go into a new, higher, posthuman state of existence [10].

Authors who advocate the transhumanistic viewpoints highlight that the biotechnological modification of the human nature will represent an improvement of our basic humanity [11]. Therefore, transhumanists state that transhumanism “shares many elements of humanism, including the respect of reason and science, a devotion to progress and the value of human (or transhuman) existence in this life, not some supernatural “afterlife”” [7], while Bostrom [12] identifies “Rational thinking, liberty, tolerance, democracy, and care for our fellow man” to be humanist values taken over by transhumanism. According to that, transhumanism justifies its tendencies by defending itself with a continuation of humanist tendencies, but also their expansion. Humanists believe people and individuals to be important. Maybe we are not perfect, but we can improve things by promotion reasoning, liberty, tolerance, democracy, and a car for people around us by highlighting the fact that people have a potential to be something more. As we use rational means to improve the human condition and our environment, we can also use them to improve ourselves. By doing so, we are not limited to the traditional usage of the humanist method, such as the educational and cultural development. We can also use technological means which will enable us to surpass what others might consider “human” (Humanity+. Transhumanist FAQ 3.0.). This transhumanist viewpoint lies in the logic of technology which will bring people from a state of frailty to a state of posthuman gods [12].

Nevertheless, the transhumanism of today differs from previous movements for human perfection in the form of eugenics in the highlighted argument of the individual and free choice of every individual. Transhumanists highlight the importance of individual liberty and choice because people should have a choice in the techniques they use to improve themselves. The main viewpoint is that, if the ways to improve ourselves are applied by taking the individual into consideration and if they are done through a democratically regulated economic market, then improvement becomes an expression of liberty and not repression. Besides, complete liberty for transhumanists means a surpassing of the nature in man and the achievement of a dream of bodily immortality with the difference being that the body is no longer human, but rather posthuman. In order to understand motive and the sustainability of transhumanist ambition, we need to highlight the attention to metaphysics making up the basis of their movement. It is an old humanist ideal of absolute liberty of an aware individual brought to the
explication of its ultimate consequences. The individual is what can be divided no more and whose only limitation is another, equal, individual. The point of the definition is plastically expressed in the *homo mensura* of Protagoras i.e. in the proposition that man is the measure of all things, those which are that are, those which aren’t that aren’t. This is the attitude that the Modern Age from Descartes, Hegel, and the Modern developed with the idea of the subject and the possibility of the absolute in science. At a high level of the Modern, between the two world wars, there came a final development of this subject, but not its abandonment. We still cannot cease to start from the fact that we are human. However, in order to put ourselves in the basis of all things – in fact, in order to make ourselves gods – we must surpass reality and transform itself and ourselves according to our will. This process may be called virtualization i.e. a condition in which man lives and behaves like a man, but thinks and works as if he ceases to be one. This is the age in which the Postmodern began, in which our lives are happening and at the peak of which there comes a final decision of the human being: will he stay human or will he finally cease to be one i.e. the question becomes – what are the limits of humanity?

3 HISTORICAL, PHILOSOPHICAL, AND CULTURAL DETERMINATIONS OF TRANSHUMANISM AND POSTHUMANISM

The human tendency to achieve posthuman characteristics is as ancient as the human species. People always attempted to expand the limits of their existence. Ceremonial burials and kept fragments of religious texts show that pre-historic people were deeply disturbed by the deaths of their loved ones and tried to diminish their fear by thinking about life after death. Nevertheless, in spite of the idea of afterlife, people still tried to prolong life. This is visible in Sumerian texts, where in the Epic of Gilgamesh (roughly 2000 years before Christ) a king goes into a search for herbs which can make him immortal. It is important to note the assumption that mortality, in principle, is not inevitable and that there is (if only a mythological) way to surpass it.

The Greeks were fascinated by the idea of overcoming human possibilities, which is visible in the myth of Prometheus, who stole the fire from Zeus by giving it to people with the intent of permanently improving human possibilities. Greek philosophers, in turn, attempted to create systems of thought which are not based exclusively in religion, but also logical reasoning. Socrates and the sophists expanded the application of critical thinking from metaphysics and cosmology in order to include the studying of ethics and the question of human life and human psychology. That is how cultural humanism came to be, a very important movement in the history of Western science, political theory, ethics, and rules.

In the Renaissance, human thinking woke up from its Middle Age and scholastic ways of thought which were dominant for millennia, and the human being and the natural world once again became legitimate objects of study. The humanism of the Renaissance encouraged people to rely on their own observations and judgement, instead of recognizing religious dominance in every matter. It also created the ideal of a well-rounded personality, a person highly scientifically, morally, culturally, and spiritually developed. Mirandola’s “Oration on the Dignity of Man” (1486) is thought to be a turning point. It states that man has no preordained form but that his mission is to form himself, which caused the formation of modern science of the time through the works of Copernicus, Kepler, and Galileo.

It may be stated that the age of enlightenment began with the *Novum Organum* (1620.) of Francis Bacon in which he suggested a scientific methodology based on empirical research, not an *a priori* way of judgement. Bacon here advocates a project of “achieving all possible things” by which he meant becoming a master of nature in order to improve the condition of human beings. The legacy of Renaissance is combined with the influence of Isaac Newton, Thomas Hobbes, John Locke, , Immanuel Kant, and others, in order to create a basis for rational humanism which highlights science and critical judgement as ways of learning about the natural world and the fate of man and gave the basis for morality of that time. Transhumanism places its roots in this rational humanism [12]. One of the inspirations of transhumanism was also Friedrich Nietzsche, known for his Übermensch doctrine: “I am teaching you about a super-man. Man is something to be overcome. What would you do to overcome him? All beings created something above themselves: and you want to be the ebb of this great tide and rather return to an animal than overcome man! What is an ape to a man? A ridicule or a painful shame. That is precisely what man should be to a super-man: a ridicule or a painful shame. You have come a long way from a worm to man, and many things in you are still worm-like. You were once apes and even now man is still more of an ape than any ape.” [12]. However, in later remarks we will attempt to explain Nietzsche and his understanding of super-man.
A significant incentive in the forming of transhumanism was the *Daedalus or Science and Future* (1923) essay of the British biochemist J.B.S Haldane [14] in which he discusses how scientific and technological findings can influence society and improve the human condition. He predicted a richer society with available clean energy where genetic made people higher, healthier and smarter and in which the principles of out-of-body multiplication would be acceptable and normal. It is important to mention the essay "Icarus: the Future of Science" (1924.) by Bertrand Russell [15], who had a more pessimistic view by stating that, without more kindness in the world, technological power will mostly serve to increase the ability of males to harm one another.

One of the often-quoted works is the "Brave New World" (1932) by Aldous Huxley [16], a dystopia in which psychological conditioning, promiscuous sexuality, bio-technology, and opiates are used to keep the population peaceful and satisfied in a static, totalitarian society in which an elite of ten World Controllers rules. Huxley [16] warned of the dehumanizing potential of technology used to stop growth and reduce the volume of human nature, instead of improving it.

FM Esfandiary [17] was an influential transhumanist. Later on, he changed into FM-2030. One of the first professors of futuristic studies, FM taught at the New School for Social Research in New York in the 60s and founded a school of optimistic futurists known as the UpWingers. In his book *Are you transhuman?* (1989), he described what he saw as a sign of the appearance of a transhuman person in his terminology which pointed to an evolutionary connection towards post-humanity. According to him, a transhumanist is a transitional man, someone who constitutes a relationship with an oncoming era of posthumanism with the use of technology, cultural values and a style of life. One highlighted voice from the viewpoint of strong transhumanist elements in this time came from Marvin Minsky, an acclaimed researcher of artificial intelligence. It is needed to mention Hans Moravec [18] and his works *Mind Children: The Future of Robot and Human Intelligence*, and the recent bestseller by Ray Kurzweil [19] *Age of Spiritual Machines* (1999), which contributed to the spreading of transhumanist ideas.

The World Transhumanist Association was founded in 1998 by Nick Bostrom and David Pearce as a coordination and non-profit organization of all transhumanist groups and interests by focusing on the supporting of transhumanism as a serious academic discipline and the promotion of public awareness of transhuman thinking [20] by publishing the *Journal of Evolution and Technology*, the first scientific magazine for transhuman studies in 1999 and creating their own Constitution (FAQ1). In the last few years, transhuman movement is spread into all corners of the world and it represents a vision of technological transformation of the human condition.

### 4 A CRITICISM OF TRANSHUMANISM AND THE POSTHUMAN CONDITION

The attitudes mentioned so far on the significance of artificial intelligence, upgrading man, advancement of biotechnology and bioscience, computer technology and making man into a cyborg suffered much critique. Contrary to the transhumanistic and post-humanistic viewpoint stand the bio-conservative movement which is explicitly against the usage of technology in the attempt to change human nature. Many respected authors, such as Francis Fukuyama, George Annas, Wesley Smith, Jeremy Rifkin, and Bill McKibben attempted to highlight the central problem of improving man using technology, and that is the dehumanization of man. In the next part, we will deal with some of his works in more detail.

Transhumanists justify themselves by also using Nietzsche’s vision of the Super-man. However, what Nietzsche had in mind was not a technological transformation, rather something along the lines of a personal and cultural uplifting of an individual for whom he thought would surpass the slave moral relationship with Christianity. In spite of some surface similarities with Nietzsche’s vision, transhumanism, with its roots in Enlightenment and a highlight of individual freedom, a humanist concern for the welfare of humanity and other creatures, probably has more in common with the English liberal thinker John Stuart Mill, according to whom everybody must act so as to produce the most happiness for as greater a number of people as possible [21]. Mill advocates a principle according to which we can only limit the liberty of people if they harm others. The principle of harm, as it is often called in its application to the ordering of social relations, excludes all despot and authoritative forms of government suffocating the liberty of an individual and their individuality.

1 See more on this on The World Transhumanist Association website: Transhumanist FAQ, available on https://humanityplus.org/philosophy/transhumanist-faq/
Furthermore, Habermas characterized transhumanists as “self-proclaimed Nietzschean’s” [22]. Within the transhumanist ideas, there are multiple and divergent viewpoints. Bostrom, for example, sees only “some surface similarities with Nietzsche’s vision” [12] while Max More observes “fundamental similarities” with between Nietzsche’s concept of the Übermenschen and the concept of the transhumanism of the post-human. This lack of consensus is not surprising. On the one hand, statements like that the humanity of today does not need to be the ultimate point of evolution [10] seems to directly reflect such Nietzschean proclamations as is “Man is a rope, tied between beast and a bailiff – a rope over an abyss […] The thing that is great in a man is that he is a bridge, not the end” [23] while, on the other hand, Nietzsche famously criticized humanism and humanist values such as equalities, which are still being advocated by transhumanists today.

Transhumanists claim that in every phase of the already present and upcoming progress, man will become (or is already becoming) “less human”. This process eliminates all human and natural shortcomings and forms superhuman, non-human, supernatural, unnatural properties. Moreover, dehumanization is a process which creates the artificial by replacing the biological (naturally human elements and characteristics) with technical products (artificial elements) [3]. However, according to transhumanists, man should not be afraid to be dehumanized, even if the result of that process is a separation from the homo sapiens species. A loss of belonging to a species, according to them, is no longer a threat, it is not connected to the status of extinction. “The post homo sapiens state is posthuman (non-human), but not post-existential” [24]. For instance, Francis Fukuyama, author of the controversial book The End of Man? Our Posthuman Future: the Consequences of a Biotechnological revolution (2003) highlights that the “most important danger from contemporary biotechnology lies in its possibility to change the human nature, which would bring us into the “posthuman” phase of history – that would be the end of man” [25]. He states that “the first step towards a greater supervision of parents of the genetic makeup of their children will come not from genetic engineering but with a genetic diagnosis and an overview of the embryo before implantation. In the future, the procedure of handing embryos over for testing for many diseases may become regular, in order to implant only the embryos with the “real” genes into the womb of the mother, and remove the rest [25]. For Fukuyama, the ultimate goal of contemporary biotechnology and bioscience is a “tailored child” or the possibility of “ordering a child” [25]. It remains questionable what will happen to the possibility of human self-modification with the appearance of technological possibilities. However, we can already see the attempts, from prescribing medicine to changing the behavior and personalities of our children. The ecological movement taught us humility and respect to the integrity of non-human nature. In that sense, similar modesty is required for our nature. If we do not develop it quickly, it is possible that we will unconsciously call upon the transhumanists to mutilate humanity with their genetic bulldozers, thought Francis Fukuyama [25].

The critique of the development of contemporary biotechnology and bioscience, in the aforementioned sense, can also be found in the works of Jeremy Rifkin, who poses the question “whether the artificial creation of life might foreshadow the end of the natural world?” [26]. Rifkin warns that the “tailored infants might pave the way to the creation of a eugenic civilization in the 21st century” [26]. Rifkin warns that this might lead to a loss of our humanity [26]. Furthermore, posthumanism is also reflected in the thoughts of many scientists, such as Lyotard who expressed concern over the relationship between man and machine which dramatically changed in the previous decade. While it was once a firm domination and control on the side of man over a machine, today we are talking more and more about cooperation, even domination by the machine side. We can certainly state that today it represents the most important moral dilemma so Jean Francois Lyotard himself, in his book The Inhuman asks himself: “…what if human beings, in the humanist sense, are forcefully in the process of becoming inhuman? And what if the inhuman inhabits everything inherently human?” [27]. The first question relates to the development of what represents advanced capitalism with an endless appetite for spreading and technological innovations. The other question relates to artificial intelligence and artificial life with its colonization imperative which is being hurried from all sides. Development, in Lyotard’s sense, does not pretend towards the interests of an individual, but rather the subjugation of human interests to its own will in the name of progress in which efficiency and the improvement in performance are what moves development, with the goal of saving time (in production, delivery, etc.). In other words, Lyotard, as an unflinching anti-capitalist, doubts the property of development running for a certain goal and becoming its own purpose. In his work The Postmodern Condition – A Report on Knowledge, Lyotard criticizes the efficiency of systems of production: “Technology is, therefore, a game which does not relate to what is true, right, beautiful etc., but rather to efficiency: a technical ‘move’ is ‘good’ when it is more successful and/or spends less energy than another.” [28]. Under such circumstances, morality disappears and this moves man away from what is truly human. Generally
speaking, Lyotard is on the side of what the system cannot comprehend and is defined by the notion of difference. Difference, according to him, is an important characteristic of the elusive and what characterizes the humane. In that context, he highlights the importance of the notion “thought” and the philosophers in charge of spreading and developing it: “Philosophers are responsible for thinking and that relation goes much further than the pragmatism of the techno-scientists” [28]. Therefore, if thought can be preserved, it should be a human one, not a computer one. A computer thought is mechanical, with a mechanical response to binary code. Human thought greatly depends on intuition, difference, and it carries within itself creative and archaic elements inherent to human diversity. While technology deals in precision, thought resists it. In other words, computers neither recognize nor respect difference. They care about standardization and optimal efficiency of a system in which difference is contrary to a computer mode. For Lyotard, difference represents “the thing which makes up life itself, an element without which we lose what is most important for humans” [27]. Therefore, in spite of all the arguments for computers as alternative forms of life, it cannot be said that they satisfy all the human criteria, such as thought, because they lack unpredictability and creativeness because they are too focused on productivity, punctuality, efficiency, and performance. Without such creativity, there cannot be thought and, in that sense, computers fail the test. It is necessary to oppose all attempts to equalize or erase the boundaries between man and machine. Another difference becomes obvious in the realm of senses and feelings, because machines are void of such human traits. This also relates to the problem of gender because computers are void of gender differences which, in spite of man’s strong attempts to overcome gender differences, are very much welcome. Those difference bring man to the highly unpredictable world of lust. Lust is, from the perspective of technoscience and a techno-scientist, a problem which can definitely complicate matters. This is a unique and irreplaceable characteristic of a man.

In order to make the right decisions, humanity needs much more than sole technology, scientists, and technical experts, and that means that it needs emotionally and intellectually mature individuals with a vast feeling of humanity and an awareness of the evolutionary path which man had to walk in order to reach the stage at which he is now, but also the vast richness and diversity of human cultures, personalities, experiences, and achievements. Just the same, by enhancing the change in human awareness from a biological aspect to a technological one, a question is raised on who should decide on the standards of such a civilization and to what end. In that sense, we cannot talk either of building ourselves or the self-building of man who uses education to reach himself, a man who is liberated, who is his own, something that many thinkers, such as Nietzsche, advocate. The purpose of education, according to Nietzsche [13], is to make man his own: “You’re your own, You are not all that you now do, think, and want!” In other words, the purpose of education and self-education is to build your own free self. In this anti-transhumanistic interpretation of Nietzsche, the self is not something man is born with, but rather something that stands high above him and that he must yet reach. Nietzsche wants man to use true educators and his own work to reach all of his capabilities and make real the purpose of his existence. Therefore, the educational goal is a whole man, not a fragmented personality. In other words, the striving for a superhuman being, a super-man can be reflected also in a way contrary to a transhumanistic and biotechnological vision of man. It is a matter of change in perspective of a man in the sense of the complete affirmation of what makes super-man better than man. The super-man, therefore, is not Superman i.e. his superiority is not in the extraordinary technological abilities, which is something many authors often forget, but precisely in the cognition of himself, a change in perspective, the acceptance of life’s circumstances and the re-validation of values, as well as the affirmation of man and his humanity in the entirety of his being.

5 PEDAGOGICAL IMPLICATIONS AND THE ROLE OF SCHOOL IN THE IMPLEMENTATION OF EDUCATIONAL VALUES

When we talk about education and pedagogy, it is without a doubt always about the education of man. Given the fact that pedagogy bases its educational goal and ideal precisely on the human being, and scientists unequivocally interpret that notion, we have the consequence of difference and diversity in the interpretation of educational goals, as well. This difference in the sense of the perspective on man and his characteristics results in many determinations of man, such as animal rationale, tool making animal, homo ludens, homo informaticus etc., which contributes to the murkiness of the definition of man. Therefore, Plessner’s (1965) thesis on the hidden man (homo absconditus) remains valid [29]. The hidden nature of man is mirrored precisely in his ontological incompleteness i.e. in the openness to the world as a whole. The reason and impossibility of defining a man is the changing human nature, as well as the environment in which he finds himself and which he is changing using his creative
instincts, which he adapts to himself by creating his culture. Therefore, the characteristic of a human being is his changeability. What is constant in man is his general structure, expressed in one ideal as “a free man”. What changes are the possible goals which man can influence.

Man confirms himself through the changing of the nature around himself, as well, and thereby changing his reality he conditions his limitless progress from *homo sapiens* to the *homo cyber* of today, progressing towards the new forms which certain futurologists, anthropologists, biologists justifiably call *homo cyborg* and *robo sapiens* in the current post-humanistic interpretation. Nevertheless, dialectics and the dialectic way of thought resist every dualism of separating the individual and possible in man, trying to relate the two extremities – the status quo in man as a measure of the given, adopted humanity and liberty and the status ideals as a measure of the maximal possible liberty and humanity realized by man’s creation. It is precisely in the space between those extremities that education lies, with the goal of realizing the individual in the autonomy of man.

In the context of transhumanism and post-humanism, a question is raised on what kind of education is needed in the oncoming time that history foreshadows? It is very hard to speak of this in a scientific way, but certain paths might be predicted. It is possible to expect that the man of tomorrow will be able to change his existential structure, which presents a great revolution in the area of education because it enables man his own production and choice, without any undesirable characteristics. In that sense, it is possible also that the science of education, pedagogy, if it continues on the current path, will be a science of the qualitative transformations of man, and that education will become a process of the successful transformation of lower forms of human existence into the more perfect ones. Little by little, the image of a new type of humanity comes into light, one that states a reasonable reaffirmation and transformation of all spheres of human existence from the viewpoint of the coming future, which is especially related to education as a phenomenon which realizes man. Nevertheless, in the coming world in which millions of machines and robots are attempting to replace man in work activities, one thing remains out of reach for technology, and that is man. This means all the human characteristics, thinking, thoughts, ideas, unpredictability, resourcefulness, passion. In that sense, we can talk about the return of man as the measure of all things and a point of orientation pointing to an eternal and everlasting purpose of education which does not hide in something outside of man, but in himself. The measure is man himself, in his own notion. It is precisely in the notion of man that we find the purpose of pedagogy. Man is not raised and educated to be something outside of himself, but to be himself. Every true education has a character which can be encompassed in the sentence to Become who you are. According to this, for contemporary pedagogy it is important that it redefines its attitudes and, with the help of other scientific disciplines in an integrative cohesion, comes out to meet new cognitions and creative achievements of man in the age and time in which he lives now, as well as the future, thereby thinking of man, education, and the goal of education in a wholesome, dialectic, and qualitative manner. This undoubtedly also means the educational values which would attempt self-realization with education. The matter of man’s improvement in the transhumanistic and post-humanistic, even the bio-conservative standpoint, is reduced to one thing, and that is the understanding of what it means to be a person.

We stand on the relation of Fukuyama’s concept of human dignity as the basic human quality which assumes certain minimal levels of respect [25]. He claims that this cannot be reduced to a mediation of a moral choice, reason or language, sociality, sensitivity, emotions, awareness, or any other quality exposed as human dignity. All those characteristics unify in the whole of man by making up human dignity. Fukuyama [25] further suggest that this assumes the need to preserve what is biologically natural in order to ensure “genetic satisfaction” of the entire humanity of the future generation. In the sense of transhumanism, this means that every morphological change (upgrading the mind, genetic engineering) influencing our genetic richness would be a violation and an offense against human dignity. In that sense, man is, by his human characteristics, a value creature, apart from being a moral one, which takes certain value and moral-ethical standpoints towards everything surrounding him. Vukasović [30] states that man estimates, measures, and focuses his actions according to his value criterion. Without a sense of values, without value criterion and sensations, man would lose the ability to humanely evaluate, the feelings of humanity and human dignity, ideals, humanity as an important human and individual determination would disappear. Values, therefore, point towards goals, purposes, ideals according to which we focus are human attempts. This means that value criterion and the level of values are above the cognitive level. Values are also educational goals. Value considerations and experiences pervade every attempt of man. “Value is not only what is wanted, but what is desirable.” [31]. Therefore, we consider values to be all those desirable goods to which man strives and which have some sort of value in human life. In that sense, values are, by themselves, an educational goal to which we strive or, generally speaking, the educational goal is based on desirable
educational values. This raises a question – what is the difference between an educational value and other values? The fact that pedagogical values are comprised of an objective good and someone’s subjective striving towards it makes them a value like any other. What makes them educational values is the existence of another factor giving them pedagogical relevance. This is their educational influence. It is insufficient for a value to only exist in the objective sense, without influence on man and his dignity. It is also insufficient for it to have any sort of influence if it is void of educational dimensions. In order for a value to truly be pedagogical, it needs to have an educational influence on a creature in development, considering its content and striving [31]. Therefore, we consider that educational values give a very significant dimension to human dignity.

According to this, educational values are educational goals and the characteristic of pedagogy which aims to realize man with an immanently humane, but also individual, personalities. As school is an educational institution, we consider it to be important to remind of its role and the importance of it in the implementations of precisely the aforementioned values. In that sense, we highlight the humanist school model which understands it as a place where an individual is receiving help in his/her development in self-realization and the realization of his/her own individuality and human dignity, as well as the development of humane relations. It is a school model which rejects the instrumentalized understanding of education as a process focused on achieving economic goals and advocates an education which is the process of developing a whole person. If we consider education in school (the cognitive and affective domain of it), we conclude that the value and educational neutrality in schools is impossible. The reason for that are the educational values which are, at least on the level of a hidden curriculum always present. Therefore, the educational action of an educator and pedagogist are imperative for the implementation of educational values for a person, representing a huge contribution to human dignity which cannot be fragmented in the transhumanistic and post-humanistic spirit.

6 CONCLUSION

According to the aforementioned contemporary anthropological thought and futuristic predictions, it is significant to notice that man’s evolution is in a very sensitive place for his humanity and the understanding of his nature and dignity. The directions in which man’s evolutionary development will go are a very slippery and dangerous road which man takes alone. Will he fail the test, and lose his humanity in the process, is a question many contemporary scientists and pedagogists ask themselves, along with an ever-present fear for the future of man. The answer lies in the constant questioning of what is characteristic for man and what is humane, such as emotions, thoughts, opinions, unpredictability, lust, individual difference which lifts man up and makes him unreachable to the techno-scientific revolution and its digital and binary calculations, all the while taking man’s dignity into consideration or, as Max Scheler [32] states that "man is, man is developing, man lives and creates as a unique self-aware and self-creative subject in which many instinctual impulses, emotional contacts, a desire for power and discourse thought cross. He is born into an environment of a world and society, he is also determined by this environment, but he is also free, living with his ‘open horizon’ in the center to which he is not completely tied to or helplessly drowned in. His free self-awareness enables him creativity and so it is only he in cosmos who creates the works we call civilization and culture. In that sense, man has many responsible roles, one of which is, undoubtedly, to remain his own in a world which forces alienation from everything, even himself, in such a forceful way. Education and school are significant elements of man’s creation, his individual growth and collective progress. They represent a space for the implementation of humanistic educational values which are an answer to the post-humanistic and transhumanistic reality and predictions of man’s position in the world."

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