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# The Meaning of Education in the Age of Technology

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## 1. Introduction

This paper presents an analysis of the meaning of technology from philosophical, sociological, anthropological, logotherapeutic and pedagogical points of view. The method applied is double hermeneutics - observation with participation, the author who evaluates social phenomena also takes an active part in them and a critical look at his own starting point. Since the paper is written from a humanistic perspective, a rather critical evaluation of new technologies is called for. Moreover, a review of sources is used, as are reflexion and an evaluation of the relationship between man and technology, as well as, in the conclusion, inductive generalization. The paper analyses positive and negative social and personal conditions as well as human capability to give meaning to life. Furthermore, there is an analysis of the failings of anthropocentric instrumentalism and attempts are made to provide a synthesis of a more complex comprehension of technology in the anthropocentric paradigm. We scrutinize the reasons for Christian ecological humanism. In the conclusion we shed some light on the repercussions of these dilemmas on pedagogy, in particular we probe into the existence of a possibility to educate man about the meaning of life.

The paper aims to show how the development of technology influenced the issues set forth in the proposal and it offers some comprehensive solutions. Since it is widely believed that the human kind does not have a structured idea how to steer technological development, it is only welcome to critically examine the impacts of technology on human welfare.

## 2. Is the man more than merely a product of technology?

Technology has been appraised in a positive or negative light. Hence, four theories: (1) apologetic, (2) negativistic, apocalyptic, (3) value-neutral, and the forth one on complex ambivalent comprehension, which has only been emerging and encompasses the three previous ones.

Ad1. An apologetic view of technology means that only positive and no negative impacts are claimed.

Ad2. A negativistic view comprehends the technology as something that merely poses threats and basically rejects it, which foretells the apocalypse.

Ad3. An instrumental rational interpretation of technology is value-neutral.

Ad4. A complex ambivalent view of technology is on the lookout for theoretical possibilities of a more comprehensive relationship to (man's) nature and technology.

The philosophy of technology<sup>1</sup> examines, as such, all these theories because technology has brought about an increasing number of negative and unwarranted effects. The explosion of the first two atomic bombs in Hiroshima and Nagasaki in 1945 made it clear that misuse of technical devices could jeopardise the existence of life on Earth. Mankind has had to partially face technical destruction (for instance, the damage done to the nuclear power plant in Fukushima in 2011, the oil spill on an oil rig in the Gulf of Mexico in 2010).

Technocentrism has an eccentric effect on man with the following consequences. First, that the boundary between our primary nature and the world of artefacts becomes blurred. Second, it creates an illusion that man could have everything under control, though he himself refuses to be completely controlled by technological production. Third, man no longer experiences either nature or technology from his spiritual depths and can thus not speak about a complete experience, which is why holistic thinking about technology has only just started to emerge.

In fact, a crisis has arisen because the man is no longer the subject of technology – as he used to be at the outset – but has become its object. Man's goal was to assume a superior role. However, he ended up being in a subordinate position.

Each new developmental stage of technology includes an implicit theory about the man. If the aim is to answer the question about whether and how man as a producer of meaning transcends technical devices<sup>2</sup>, one needs pose questions about how broadly or narrowly technology is comprehended. The man identified with the final developmental stage of technology is *homo technicus*. However, from a comprehensive anthropological point of view, no matter how highly developed technology is, it fails to replace the man himself and his belief in God.

One of the best-known and indisputable definitions of technology is that it is specifically a man's invention which takes into consideration the laws of nature with regard to certain goals. However, it considers them through the so-called cunning of reason (the original Hegel's expression is *List der Vernunft*). Technology has sometimes been interpreted as an almighty force and a substitute for God. But technology is only capable of doing what it has been programmed to. The development of technology has been argued to make up for human shortcomings (in comparison to the animals) (*Gehlen, 1961*), and his hostile attitude to nature. It is quite obvious that man is not capable of living in the wild without the help of technology - he has no animal instincts to do so. The return to nature is no longer possible. At any rate, the nature alone would not do, the man needs to see the meaning of life too.

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<sup>1</sup>Almost corresponding to this is the differentiation between the engineering approach (the *engineering of philosophy of technology* by the authors F. Kapp, P. K. Engelmeyer, F. Dessauer) and the humanistic approach (*humanities philosophy of technology* by the authors L. Mumford, J. Ortega y Gasset, M. Heidegger, J. Ellul, Berdjajev). The third type is the most complex one.

<sup>2</sup>In this paper, the term technology is used for the entire production of technical devices, tools, machines, as well as other products. When only their impact is described, they are all referred to as devices.

Technology has several functions, such as the incorporation, as well as the strengthening and relief (*Entlastung* in German) (Gehlen, 1961). The relief is a transfer of physical and mental functions to technical devices. For example: man uses means of transport instead of legs, a hammer to extend his arms, machines instead of muscles, and computers instead of his brain. By using a tool, he becomes dependent of all these devices. At this point, instrumentalization of all things available comes about. Through the process of mediation (*Vermittlung* in German) it seems that devices determine the goals of users, while in reality man is more productive because of them. Jonas (1984) thus established that *homo sapiens* has been replaced by *homo faber*. It was Marx (1969) who ascertained that the industrial production brings about new kinds of alienation, including a soulless situation. *Homo faber* becomes empty, while products available as part of consumption are full of spirit. Technology has become an imperial subject of history and is the principal determinant of man's evolution (Taylor, 2011).

The new global technology of power is incredibly complex (Fischer, 2010). Global mass media is aware of its power, which is why people are spontaneously afraid of it. Nevertheless, people want to make their bodies and mind stronger in order to better reflect the image digital spectacle and simulacrum are providing and thus partake in the game.

Inherent to the development of technology is utilitarian ethics, which examines the purpose of technology exclusively through its beneficial use or harmful misuse. There is no clear boundary between the two, but time and again we learn to recognize it by trial and error. Technocrats inevitably have a stake in technology, but since they do not acknowledge that, they consider their interpretation of technology to be value-neutral.

Generally it is believed that man has not adjusted industrial technologies (needed for the production of as many identical products as possible) either to himself or to the natural environment. He has installed them into the eco-system and in doing so he has also harmed it. It was Engels (1953), who established that the industry is destroying the previously clean nature and that a positive impact is only foreseeable in the first stage of changes whereas for all later ones it is not. Recycling of technological waste does not suffice, what is also needed is rehabilitation of the nature. An eco-centric paradigm has recently made developed countries switch from non-renewable to renewable energy sources.

From a historic perspective there are four stages of the development of technical goods, hand tools, industrial machinery, automatization and devices adjusted to the environment. Hand tools were predominant until the end of feudalism, machines started to prevail with the industrial society, while automatization was a result of information revolution. Our incomprehension of the mechanism of sophisticated devices puts us in a state of painful ignorance (as was the case with the Trojan horse). We ignore in what way technical devices impact our inner world and ourselves. The negative effects of overdoing it do not show until later.

The path to understanding is a dialogue with both extreme views, i.e. the apologetic and the apocalyptic ones. Apology of technology is on the one hand necessary, while on the other it is blinded as it fails to notice the boundaries of its positive effects. In this view all beings are techno-logos, which is the sense of totally institutional-instrumentalist engineering represented not only by natural sciences but also by social ones (Popper, 1950). This is reductive thinking does not look for the meaning. It is impossible to rationalize all of the

elements of technology, since man is also irrational, unpredictable. Furthermore, some technical devices have hidden defects. Likewise the misuse is a consequence of man's uncontrolled destructive motives. Still, the academic bias about a perfect rational control is rather popular.

The liberating knowledge comes from instrumental rationality being exceeded by purposive rationality (*Zweckrationalität* in German) (Habermas, 1971) which originates from comprehensive irreducible thinking. Since there is something specifically human in (ir)rational technology, it comes as no surprise that man has used technology to create and destroy the world, just like himself. (Urbančič, 2011).

Man may prevent certain negative effects of devices but he cannot defeat the evil totally. To address the issues concerning technology he has to open up to its essence (Heidegger, 1954). Reflection of technology is necessary for the sake of acquiring a free attitude to it. Accidents provide an opportunity to get familiar with its limitations. A free choice regarding the use of methods signifies many-sided and greater responsibility.

Heidegger (1954) discusses the sociological instrumentalist value-neutral interpretation of technology as a means to produce devices and machines for useful items. Modern technology poses a challenge to nature by pulling the energy out of it and redistributing it. The goal is to take as much hidden energy (the sun, the wind, the water) or substances (e.g. oil) out of nature as possible and keep the costs as low as possible. Having been transformed, the energy is then accumulated and redistributed for various different functions.

Since technical devices are idealized, or are - as this was a case of some primitive tribes - attributed some sort of magical power, there is nothing originally spiritual left in them.

From a religious perspective, man is not 'from this world'. If we try to reduce him to it, this means the sacred (*heilig* in German) is substituted by the secular. Heidegger did not determinedly say that the non-technical divine essence in the man radically resists digitalization. Derrida (1996) defines this as the difference between what can be simulated and what cannot be. This phenomenological remainder of technological reduction<sup>3</sup>, was previously already implied in Kant's concept of things in themselves (*Ding an sich* in German), which encompasses the so-called *noumena*<sup>4</sup>, the nature and God, and leads to the biblical secret of redemption. Heidegger reveals the difference between our authentic '*Dasein*' (the expression originates from German) and the impersonal they (*man* in German).

Technical devices alone are not nearly as dangerous as adrenalin-driven, competitive man full of uncontrollable inclinations and passions, oblivious of the stress, wounds and pain. There is no point in demonizing technology since it is a secret of God. Danger becomes solution when we remember and understand what we have forgotten. Failing to do so, we simply repeat mistakes (*Wiederholungszwang* in German).

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<sup>3</sup>Herewith Husserl's (Husserl, 1975) technical antipode of three reductions of recognition (i.e. epochs, eidetic and transcendental) is paraphrased. It is the last one (the transcendental one) that leads him to a meaningful world of life. From this perspective, the entire technology remains within a cognitively uncritical »natural disposition«. What used to be the appearance (*Schein* in German) is nowadays a disarray of the virtual and the real.

<sup>4</sup> *Noumena* is an expression specifically used by Kant and signifies the essence of human being.



Each new stage of technological development brings about new types of efficiency (e.g. multi-functionality) but also alienation. The age of access to information technology applies approximately to a quarter of 8 billion people, i.e. the majority of the world's population has no internet access. Its users are however increasingly dependent on it, especially the online generation.

In Ancient Greece man was the most 'powerful' species (*deinites* in Greek) whereas today he is endangered since he can destroy all life on Earth by means of technology. The essence of technology is twofold, since man is both a dangerous wolf and a peace-loving sheep (Fromm, 2004). In his ethical benevolence there is a promise of preserving life.

Seemingly paradoxically, man has become a machine ready to be used in neoliberal capitalism even though he believes himself to be the master of the world<sup>5</sup>. As a subject of modern times, he can preside only by subordinating the world as an object which he is part of. In doing so, he has jeopardized life through environmental pollution and genocide.

The illusion of domination is twofold. On the one hand, there is an enormous amount of energy outside man's control (e.g. volcanoes, earthquakes, tsunamis, tornados). On the other, unforeseen events upset carefully laid plans. Man fears natural and man-made disasters. He fears both extreme rationality and irrationality. While this has enslaved him, it has also turned into his vocation, since it calls on him to be creative. Technological innovations are merely a means to an end of amassing goods. These are mindless goals. Is a man (*homo humanus* in Latin) with his love of the world of life more than just a sum of technologies?

### 3. Apocalyptic threats of the instrumentalized society

The scientific technical revolution has leads to a new organizational culture, where cooperative, team and individually responsible, autonomous and meaningful work prevail. This however has drawbacks. Technocrats and technogarchs who stimulate technical development cannot conceive man's domination over nature is also domination over himself. The myth of enlightenment in the sense of a rise in rational science from 15th to 21st centuries is a myth about the general freedom. This supposed liberation is non-existent since man has turned into a function, a robot and superfluous material. In fact *Horkheimer* and *Adorno* (1989) have accused the Age of Enlightenment of being guilty of the Holocaust. The basis of the enlightenment is a citizen within a critical public as a rational being who manages the democracy by means of his knowledge, intellect, wisdom and information (*Habermas*, 1985).

However, enlightenment (*Aufklaerung* in German) has kept its double face. On the one hand, there is humanity, while on the other there is a severe instrumentalization of all living beings (*Mumford*, 1986). A constant battle between the two reflects the fact that on the one hand we are ever more connected to one another, whereas on the other there is an increasing inequality. The almost 100-year old prediction by *G. Wells* about the information technology connecting all people to 'the world's brain' is a reality thanks to technological inventors. This connection of people for better or worse does not seem to make us happy.

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<sup>5</sup>For more on the difference between negative characteristics of domination (*Herrschaft* in German) and positive characteristics of management see Chapter 1 of the book by *Novak, B.* (2006). To keep up with sustainable development we cannot speak in favour of domination, but only of management.

Technocrats and technogarchs should mostly worry about the negative impacts of technology by distinguishing between the use for the benefit of mankind's welfare and misuse intended for its destruction. If man is lacking a welfare mission in his strive for survival, he is also lacking a belief in the power of outstripping nihilism. This is why some<sup>6</sup> have declared the end of man on account of depersonalization, instrumentalization, violent unruliness, redundancy, obsolescence, raw materials and waste.

Man could still discover why such technology is expedient and reasonable, but due to »his stunted intelligence« (Zohar, Marshall, 2006) he cannot do it systematically. The evolution of technology points out to him the boundaries of man's cognition. Zohar and Marshall believe that developing the spiritual intelligence and the spiritual capital is the only road to salvation. Obviously the partial reforms used so far no longer suffice for the resolution of the complex social crises of the 21st century.

A one-sided Tayloristic division of labour resulted in workers being merely an appendage to machines or even the mega-machine. Man – worker (*homo faber* in Latin) is a device amongst many. Workers manipulate devices in such a way that the devices actually manipulate the workers (Anders, 1985).

According to Krishnamurti (2000) technology used for destruction does not make sense. "Exaggerated emphasis placed on technical ability turns out to be destructive in the long run" (Krishnamurti, 2000; p. 30). This happened during the Holocaust. According to Bauman (2006, p. 33) "concentration camps signified an expansion of industrial factories." H. Arendt (2003) likewise believes one of the factors of totalitarianism in World War II was the misuse of technology.

It is safe to assume that the use of mobile phones, Facebook and similar leads to narcissism. Elgan (2009) says: "If new technology really does promote narcissism, then younger people would be more narcissistic than older people, because they had mobile technology during their formative years, and have been shaped more by it."<sup>7</sup> Technology has been seized by various greedy technogarch (entrepreneurs, shareholders, anonymous structures). The oligarchic techno-science keeps telling us about unlimited progress and about how there is no need to search for the meaning as it is present in the proper use of devices.

Anders and Mumford (1986) both perceive the machine as a deformation of the organic world. While Anders sees it merely as a technical device, Mumford defines it in its broadest sense also as a social organization. He distinguishes between working, military and bureaucratic mega-machines. The communication machine is suitable for labour management, without it the mechanical engine cannot work. The working machine was invented in order to save and concentrate labour. It entails the idea of the minimum possible amount of labour force for the largest possible profit.

Modern-age Enlightenment is a process of progressive profanation. Despite the decline of communism there is the prevalent standpoint that the modern-age enlightenment has

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<sup>6</sup>The end of man signifies apocalypse. There are a number of representatives of the end of mankind: Anders, Lewis, Foucault, Fukuyama, Baudrillard, etc.

<sup>7</sup>For further information see: <http://www.infoworld.com/d/mobilize/does-mobile-and-social-technology-breed-narcissism-830>.

returned to a myth – since "things within the social entirety have turned into metaphysics, an ideological curtain, from which real evil is about to emerge" (*Horkheimer, Adorno* 1989). Keeping a positive rational core of experience is a difficult task. It is dangerous to retreat into rigid pre-enlightenment postures. However, in thousands of 'hallowed' masks it is possible to recognize idols of nihilism, behind which there is the intention of power, concealed in the background of the interested ideology (*Horkheimer, Adorno* 1989).

*Lewis* (1998) highlights the side effects of the strategy based on technical progress and the supremacy over nature. This brings us to a closed circle. By enslaving the external nature, man has basically enslaved himself (this is also a thesis of the Frankfurt School). *Lewis* considers this to be man's self-abolition, which was brought about by the elimination of the ethics and withdrawal from the natural order of the universe. He uses the Ancient Chinese term 'dao'.

Therefore, what negative social factors stand in the way of the quest for the meaning of life and consequently the meaning of education? The general factors are entailed in the characteristics of western societies and their thousand masks of evil. There is no spiritual meaning, as »God is dead« (*Nietzsche*, 2000) and anything is allowed. *Anders* (1985) advocated the motto for the era "to do anything that can be done, to exploit and even use oneself". At an individual's level this corresponded to '*do it yourself*'. *Feyerabend* pointed out the assumption '*anything goes*', which has its positive and negative sides. The negative is that man due to his destructive drive is not only mortal but is actually capable of killing and perpetrating genocide. This cannibalistic, suicidal trait gives the work a negative feeling of the Orwellian world.

In a crisis, the massified man acts on behalf of democracy. This is not a healthy society, it is a society of fear (*Furedi*), a risk society (*Beck*), liquid modernity (*Bauman*, 2006), a detraditionalized society (*Giddens*, 1991). A society of chaos and anarchy is created by individuals who exercise their right of choice despite the legally codified norms. They are enforcing the cult of innovation in place of the former cult of personality. In the early 1970s, the microchip and the computer changed the world and the number of technological inventions has considerably increased since. They have become multi-purpose and their effects go beyond the ideas of the inventors.

A new class of operators has emerged. *Geisler* (2001) writes about the transition from technocracy, i.e. technology managed by the society, to technogarchy, i.e. technology penetrating every single part of one's personal life. Technogarchy allows for a gap between those in charge of the technological-scientific development and having access to its positive effects and those who are poor since they have no such access. Standing on opposite sides there are the sophisticated *homo technicus* and the impoverished '*homo simplex*'. The gap due to the socio-economic inequality is not necessarily growing, there is however no consensus on how to eliminate it. Technogarchy is a matter of technocratism which manages all available means, including people.

The 1961 – 1965 Second Vatican Council, prior to the Club of Rome report (1973), established that this was a matter of boundaries of social progress. Like *John Paul II*, *Benedict XVI*<sup>8</sup> also

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<sup>8</sup>See the websites: <http://www.druzina.si/icd/internet.nsf/all/BCB6363DE375951AC12578AB002800F7?OpenDocument> (found 10th of July. 2011)



pointed out that the new technologies endanger people in many ways. They may lead to confusion and mistaking the real and the virtual worlds. Since the virtual may be completely separate from social reality, this may lead to unforeseeable consequences, amongst others to people becoming indifferent to their actual life. Even so, the Roman Catholic Church likes to use the new technologies. This shows that technology may be used for spiritual and religious purposes.

#### 4. Reflection on values, the meaning and ethics<sup>9</sup>

Thanks to the mass media various technical devices have already penetrated everyday (public) life and are an objective fact. Items of information have a life of their own, regardless of our stance, since "communication communicates" (*Luhmann*) as long as it propels a specific system. Total mobility is characteristic of the world of total(itarian) communications. Technology functions globally. As it is not subjective, it does not steer us towards any goal, does not give us any meaning, does not promise redemption, does not regret anything and does not uncover the truth. This is exclusively the task for man's reflection. That is why the paper puts the neo-liberal disorderly individual within an ecological-solidarity framework, his freedom is understood within the ethics of responsibility, the truth as a whole is strived for and various perspectives regarding the meaning of life and education for life are developed. This is not traditionalism from the pre-technological era, it is post-anthropocentrism.

Obviously we have fallen behind on account of going too fast. *Virilio* (1996) believes that due to the speed of the technological liberation, the world has become smaller, it has flattened and the time has become thicker.<sup>10</sup> What counts today are firsthand experiences (brutality), omnipresence and the latest special offers of inexpensive products. Disciplinary capitalism (an expression used by *Foucault*) finds the slowing down of the development unacceptable. Technology has obviously made us lose our primal contact with nature and thus also with the meaning of life but the economic slowdown has forced us to reconstruct the meaning.

Spiritual freedom does not come with technological virtual standards. The meaning does not become obsolete like the everyday products do, and does not lag behind the way supply does. Otherwise *Heidegger* with his ontological difference and *Derrida* with his radical difference would not be topical anymore. The pragmatic misuse of technology happens by ignoring own consciousness and interests of others. The evil becomes something trivial and bites itself despite the friendly face of the casino capitalism. Humanistic thinkers, such as *Marx*, *Scheler*, *Berdjajev*, *Fromm*, *Fink*, *Husserl*, *Heidegger*, *Krishnamurti* do not see any meaning or purpose in technology. It takes meaning and purpose to have a functioning individual and social regulation.

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<sup>9</sup>This part reflects on the first dilemma, which pertains to the question whether man gives priority to material production of goods or the spiritual production of the meaning. This is also the topic addressed in the second part of the seventh dilemma.

<sup>10</sup>*Friedman M.* (2010) also speaks in favour of the ecological paradigm by establishing that the world we live in is hot, flattened and overpopulated.

Already prior to World War II, *Husserl* (originally 1933, 1990) perceived the crisis of the European consciousness in its naturalized and technicized nature. Spiritual consciousness was therefore not uniform but rather partial. It was based on the responsible freedom of individuals. These individuals make the community function at the interpersonal, intercultural and international levels. The openness of Europe to a world of life relies on the individual responsibility and the common discourse. The essence of Europe is thus to 'care for the soul' (an expression used by *Patočka*), something the present-day of European Union has let slide. The EU has not decided whether to give preference to material or spiritual evolution.

Nietzsche's revaluation of all values (*Umwertung aller Werten* in German) may be understood as his will to power or his will to meaning. The revaluation requires special spiritual intelligence. For some authors spiritual intelligence<sup>11</sup> is the capability to rehabilitate spiritual values. Man's love for life (what Fromm calls biophilia) may thus become stronger than his love for death (necrophilia) and his authentic being more important than his personal belongings.

*Zohar* and *Marshall* (2000, 2006) have both written about the stunted spiritual intelligence as the capability to give meaning. Spiritual activity is the highest quality of man's life, characterised by values, positive motives and patterns of the functioning of personality. This intelligence may foster through spiritual culture. The more people opt for it, the easier it is to achieve the critical mass needed to transform destructive capitalism

#### 4.1 Monopolistic or pluralistic views of the meaning?<sup>12</sup>

Why search for the meaning? Searching for meaning is proper to man since it provides him with the feeling of »ontological safety« essential for the development of his identity (*Giddens*, 1991). However, it is unclear how to put this uncompleted project of modernism into practice in today's uncertain world.

The concept of meaning is understandably viewed in various ways. We are interested in finding theoretical and practical possibilities of re-discovering personal and common meanings. Man has lost the meaning due to his selfish partial disposition, so to find it he needs a comprehensive approach. He may look in a comprehensive anthropological vertical since this is not only a matter of an uneven socio-economic development, but also of an uneven structurally anthropological one. The part of personality to develop the fastest is the sensory-expressive one, while the spiritual side is the slowest. The spiritual development must not be forced upon, or it may not happen. The meaning is often quite elusive and with some individuals it does not emerge until the old age (*Lukas*, 1999).

Several recent materialistic-economic crises produced the loss of meaning during the processes of modernization, pluralization and, in Europe in particular, secularization (*Berger* in *Luckmann*, 1999; p. 8). The era of individualism emphasizes a particular meaning each individual has due to their specific values. Still the meaning has to be unified or it is

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<sup>11</sup> For further information on the authors of different definitions of spiritual intelligence see the website: [http://en.wikipedia.org/wiki/Spiritual\\_intelligence](http://en.wikipedia.org/wiki/Spiritual_intelligence). (10th of July 2011)

<sup>12</sup> An analysis of the second dilemma is provided here.

impossible to identify it. The fragmentation of culture also signifies broken up personalities.

By escaping into a virtual world, an individual escapes into his own psychological imaginary world. In order to survive, man's love for life must be stronger than his love for death and his will to meaning stronger than his will to power. He thus puts his being before his possessions and his humane ethics before the ethics of authority. Since the world of intelligent technology encompasses only a simulation of the meaning, we must learn to create meaning; experience teaches us that technical devices without ethical meaning for the common good are misused.

The search for the meaning is possible within nihilism. There is no point in doing everything we can, as this is an act against our soul. Our soul calls for a time of rest, of quiet, of being absorbed in oneself in order to study the impressions. Overstimulation may breed aggression.

#### 4.2 Logotherapeutic comprehension and constituting of the meaning

Nowadays the deprivation of will to meaning is on the increase resulting in being-related deprivation or emptiness. Symptoms include boredom, lassitude, apathy, torpidity, depression, purposelessness. It is partly induced by various social factors, such as greed for possessions, extended periods of unemployment, decay of cultural values, pervasive nihilism. The present-day youth (squatters according to *Galimberti*, 2009) exhibits the being-related emptiness through intoxication, despair, aggressions and other forms of pathology, suicide.

The path to a comprehensive meaning of the family was described by *Frankl* (1994) as the act of knowing oneself through another. The more you are somebody else, the more you are yourself. According to *Frankl* (1994, 2005) the will to meaning fundamentally drives a person to find the meaning and the intention and to act upon them. This was an axiom of his logotherapy, empirically tested on his patients. He encouraged their spiritual motivation. The will to pleasure (Freud's expression) and the will to power (*Adler*, 1999) are both derivatives of the man's main concern: his will to meaning. Personal power is a means of getting the ultimate objective, i.e. the meaning, while pleasure is a side-effect. Another side-effect is self-actualization (*Maslow*, 1982). The meaning is a comprehensive spiritual encounter and happiness (*Frankl*, 2005). To him cohabitation and cooperation make sense, as they help us avoid neurosis. He believes the meaning of suffering lies in the love for life. The overcoming of suffering involves personal growth, which can be achieved by working on oneself. The existential absurdity and emptiness only emerge on the surface of the personality and not deep inside it where the hidden God resides. The meaning of life lies in creativity, experience and the values.

Patience is required by the search for the meaning since we are in a discovery learning stage. The meaning does not elucidate us once and for all, does not respond to advertisements and it is irreplaceable. If young people knew that in time everything "gets tuned and fulfilled" (*Lukas*, 2002), they would not forcefully demand that the present moment yields all they command. *Lukas* (2002) sets the next formula for the search for the meaning: thought, emotion, experience, enchantment, discovery, vision. Thus meaning is made up of parts and developmental stages, and it is not just a thought, vision or experience lacking cognition.

According to *Lukas* (1999), meaning-related upbringing starts within a family and lasts the entire lifetime as we learn to fill the negative poles with the positive ones, in other words we learn how to get back on our feet again after we have fallen.

The meaning expresses a positive attitude to life, while the lack of meaning expresses the opposite.<sup>13</sup> A positive way of thinking, feeling and communicating reflects our acceptance of life as is. It takes an affirmative attitude to it and says 'yes' (the so-called *Ja-Sager* according to *Scheler* and *Frankl*). On the other hand, engaging in negative, aversive emotions and thinking says 'no' to life (the so-called *Nein-Sager* as described by *Scheler*<sup>14</sup>) and rejects it. *Fromm* (2004) describes necrophilia as the love for death and rejection of life. In Western societies this is manifested as xenophobia, a lower demographic growth and war against Muslim terrorism. There is also Catholic differentiation between the culture of life and the culture of death. *Habermas* (1985) distinguishes between the lifeworld (*Lebenswelt*) and its colonization.

Potentially, we could pick the effects of technology. Technology helps us out and makes our lives easier, while it may also make them more complicated. There are safe and dangerous technologies. Industrial waste for instance pollutes the water, but the waste water treatment plants clean it. Military technology puts potential enemies at risk on purpose, while the pharmaceutical technology may cure potential patients by new medicines or put them at risk (by man-made viruses).

## 5. A conflict or reconciliation between the anthropocentric and ecocentric holistic paradigms<sup>15</sup>

In order to maintain a natural and normal life cycle, environmental education adopts a positive and attentive attitude to nature, as well as an altruistic, emphatic, symbiotic, cooperative and selfless attitude to others. Such an open framework established within a temporary mastery and with a self-restrictive authority enables the man to find the meaning of life.

A manifestation of nihilism is instrumentalism which halts the development of ecological ethics; it does however sustain utilitarian and hedonistic egocentrism. The ethics of solidary personalism initiates a universal dialogue. This is a fertile ground for solving world problems. The origins of solidary personalism can be traced to *Gadamer's* (1961) idea that we are at the same time others and ourselves. *Levinas* (1998) introduces the concept of a 'face-to-face' encounter. Such encounter of the Other makes one responsible for the Other and motivates one to get out of oneself and offer help. One is even ready to die for the Other (*Levinas*, 1998).

A comprehensive understanding of sustainable development calls for a reduction of the consumption of natural resources by approximately ten times, whereby the quality of life is improved. In essence, sustainable development is compatible with nature. Nevertheless, it has been exploited for the continuation of the existing economic patterns, i.e. striving for a constant "sustainable" economic growth without considering the environmental limitations.

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<sup>13</sup>This question is part of our sixth dilemma.

<sup>14</sup>See the website on Max Scheler: [http://sl.wikipedia.org/wiki/Max\\_Scheler](http://sl.wikipedia.org/wiki/Max_Scheler) (20th of July 2011).

<sup>15</sup>The ninth dilemma regarding alternative ethics is closely connected to the tenth dilemma regarding alternative pedagogical concepts defined in section 4.1. Each ethical relationship is considered ethical education within the family- and school-related communication.

This however is anti-sustainable. The Green movement has been fighting a corner with partial interests for the fastest technological-economic development. This is a conflict between the anthropocentric and ecocentric paradigms and between the utilitarian and ecological ethics.

The meaning<sup>16</sup> has been defined by ancient practical, moral philosophical disciplines and the modern French and British moralists as well as by more recent ethics. The search for the meaning reflects values and ethical beliefs of a given discipline. Since the ancient times there has been a conflict between hedonic and ascetic ethics. As part of the capitalism of 'obligatory pleasure' (*Žižek's expression*), ascetic ethics is a barely palatable alternative encountered within the policy of belt-tightening.

On account of man's harmony with nature, mankind and God, *Kant* (1956) developed deontologically rigorous ethics. The categorical imperative enforces the law in a formal, autonomous, dignified manner and is duty bound. He formulated it in several ways, for instance as the norm according to which man always acts as if he was setting example for the most general law. It acts without any material imperatives, such as education, sense of morality, God's will, aspiration for happiness, etc.

Since the good will, which is autonomous, needs to be respected with regard to other people as well, one needs to act in such a way that the mankind, either in the form of oneself or any other person, will always be used as a goal and not as a means to achieving something (*Kant*, 1956). It is essential to derive from inner values everyone is familiar with. *Habermas* (1985) defines this method as a communicative action and a dialogue with arguments.

*Jonas's* ethical imperative tasks the contemporary man with responsibility not to 'cause' harm to the livelihood of future generations (*Jonas*, 1984). Unlike other animal species, man is aware that he is a part of nature and that his own attitude towards nature is the same as towards himself. The same principle applies for his attitude towards the future generations and his ancestors. He is completely responsible for his own humanity. These considerations make up the complex will to meaning. This is also the broadest context for the face of the Other (the already deceased one or not yet born one) within the realm of giving meaning to the controversial impacts of technology.

Deformations of *homo technicus* are possible at all layers (from sensory fascination, emotional rapture, collective mass emergence to spiritual deceit). By the same token, the meaning helps to patch up these layers. *Schweitzer* (1931) expresses concern for all the life on Earth with awe. All ethical imperatives strive for a consensus and symbiosis with simultaneous awareness of vulnerability and the risk of injuries. The greater the power, the bigger is the responsibility for its consequences.

*Geršak* (2009) hermeneutically explores the meaning of Christian ecological humanism in new interpretative dimensions of biblical texts. *Geršak* (2009), *Žalec* (2010), *Matulić* (2005) all

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<sup>16</sup> Various different things have been mentioned with regard to man: that he has a meaning organ (*Frankl*), a layer of consciousness which gives meaning (*Husserl*), a practical sense of orientation (*Bourdieu*), the choice criteria - (*Glasser*), in short, that he has the ability to distinguish between good and evil.



favour a universal dialogue with unlike-minded people. Moreover, Žalec (2010), like Juhant<sup>17</sup> (2009), flags up solidary *personalism* as a future prospect.

Initiators of the new ecological ethics put the values of the nature in the centre of civilization. This idea met at first with resistance of the establishment. The escalation of ecological crisis, however, has strengthened ecologists' influence and the ecological paradigm. A spontaneous response to the global mega-machine is the rise of alternative movements and protests.

The back-to-nature movement is an umbrella term for environmentalists with deep-seated or superficial beliefs, the pagan ones who swear by the secrets of native tribes, or even terrorists. However, the Christian ecologists are willing to talk to utilitarians, hedonists, sceptics and ecologists of other religious convictions. Geršak (2009) proposes reconciliation between the anthropocentrism and respect for the nature, as well as the ecocentrism and the respect for the man in his personal and collective relations. According to Geršak the state of (man's) nature indicates the degree of compliance with God's will. The degradation of the environment reduces chances for a dignified, fulfilled and meaningful life. It signifies a creeping apocalypse (Jonas, 1984). To prevent it various ethical movements have come together.

Since it is an illusion that the science and technology will address their own shortcomings, "ethics acquires the role of their critical self-limitation" (Lukšič, 1999; p. 125). Self-limitation originates in the values of frugal, quality survival by means of ascetic ethics.

### 5.1 Alternative types of pedagogy

We have discussed social and personal conditions of the search for the meaning because of ambivalent role of technology. Let us now turn to the role of education. School subjects such as industrial arts (shop class) should consider various views on technology, its use, misuse and risks. In view of a complex comprehension of technology, it would make sense to connect industrial arts within school with ethical, historical, aesthetic, civic spiritual and religious education as well as education for peace.

Education in its broadest sense has since the ancient times been defined as humanization of the man, which includes formation of the meaning of one's own existence (Fink, 1989). Transmissive pedagogy is reduced to didactic technology, since modern science characterized by the question »how« is implicitly technical. Simultaneously with the new information and communication technologies (ICT), pedagogical praxis should likewise be given meaning. If ICT enables dialogue within school, it acquires a transformative role.

Contemporary pedagogy perceives education as nothing more than technical production according to a set model (Fink, 1989). Fink believes education functions to transmit specialized knowledge to future generations, since this enables undisturbed functioning of society. However, according to H. Arendt (2009) the exact opposite is achieved – within the school system designed the way it is and the system of lifelong learning, behavioural and personality disorders are a necessary and ever-present phenomenon.

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<sup>17</sup>Juhant (2009) provides a systematic overview of ethical disciplines in the history of the philosophical thought. He analyzes the present-day state of the society and at the same time explains why unethical deeds of contemporary man are only making it worse.

Education which has no spiritual component, leads to barbarity. (Fink, 1989)<sup>18</sup> Even today, the mission of upbringing and education should be the formation of a single meaning of life. Fink has observed that "education which is limited only to a function of transmitting specialized knowledge, is not based on a spiritual way of life" (Fink, 1989, p. 135) that: "The meaning of being is a signpost of a meaningful regulation of the entire education" (Fink 1989, p. 10). The problem is that some people see no meaning of life, since education as a collection of techniques does not form it in spite of emphasizing children's rights, school does not enable any learning for being or cooperative learning. Instead it is more focused on the knowledge and work, which is insufficient according to Delors' four pillars of learning.

Education is a primordial phenomenon of the human society (Fink, 1970, 2005). It has been and it will be an issue since various social interests are at play there. Education is a creative process of self-comprehension of our *Dasein*, it is an ever-conscious attempt at giving life to a spiritual meaning, either from an intellectual, moral or artistic insight. "The absence of the final and the highest collective goal indicates questionability of the present-day pedagogy." (Barbarić 2005, p. 151) This state of absence of a uniform meaning is known as nihilism. Massification (*Vermassung* in German) is also present in schools in the form of barbarian violence.

Man needs self-comprehension and self-actualization. Formation is possible only if based on some primordial-picture, a role model, an idol. The history of role models and primordial-pictures is at the same time the history of understanding pedagogical concepts (Fink, 1992). Even as an original and independent being, man needs to perform the bureaucratically prescribed acts that fall into his "field of action, while he keeps his personality to himself for the sake of his own functionality" (Galimberti, 2008, p. 51). This means that, in a competitive society, personal growth techniques and educational subjects (art, music, civic education and ethics) are also translated into the language of efficiency.

To find meaning in the time of nihilism, man needs to have full consciousness.<sup>19</sup> In times of being-related emptiness, education can do much better than merely hand down traditions and knowledge, namely it can empower to look for the meaning of autonomous and genuine decision-making.

Galimberti (2008) sheds some light on transformation brought about by the age of technology. We barely notice the transformation since we perceive technology as being a tool rather than the environment. As such technology has a bigger impact on our (trans)formation. In addition, it adheres to the rules of rationality, functionality, and efficiency, whereby man's needs easily become subordinate to the needs of a technical device. Anders (1985) observes that devices actually educate us. An interactive relationship between devices and their users is possible, but in this case the teacher is required to do more preparations and the learner to show more readiness to critically respond to challenges.

It is a good idea for an ethics teacher (a class teacher, a school counsellor) to inform students about the history of the search for the ethical meaning. Even logotherapy is doable in schools in the form of 'aid for self-aid'. Since Frankl finds all reality to be meaningful, we do

<sup>18</sup>The occurrence of youth violence resulting in fatalities in Norway, Germany, the USA and Great Britain is an indication of barbarity.

<sup>19</sup>Conscience (*Gewissen* in German) is in the etymology of the German expression connected with knowledge (*Wissen*).

not create the meaning, we rediscover it time and again. *Frankl* derives from this a key thesis for pedagogy, i.e. we cannot give man the meaning through either therapy or education; we do however need to encourage him to start discovering it for himself responsibly (*Lesar* 2002).

In each developmental stage of making a moral judgement, every person encounters a special logical construction of the meaning shaped by the realization that the perception and the logical construction of the reality may be different. The development and education thus constantly disrupt old patterns and search for a deeper truth of being (*Kroflič, Kovačič-Peršin*, 2005).

We must not be frightened of the inner journey. "In all professions that have a profound impact on other people and where our psyche is our main tool, the mental state is of utmost importance" (*A. Guggenbühl-Craig* 1997, p. 170). We enter such professional relations "with our soul, with our own person; machines, methods and techniques come second. Ourselves, our integrity and veracity, our personal connection with the unconscious and the irrational – this is our tool" (*ibid.*, pp 38–39). This realization is often neglected in pedagogical practice. Man is unruly only when there is no human quality left in him.

As per *Kroflič* (2010) the socialist monopolistic-ideological school was not a good one. However, the Pluralist School faces the same pitfalls mentioned by *Berger* and *Lukman* about the society. *Kroflič* highlights the need for solid (pre-) ethical safeguards in the pluralistic public school and the society, since these safeguards fine-tune the language of human and children's rights (*Levinas, Todd, Galeotti and Frazer*).

Such a conception of a personal meaning does not support the transmissive conception of education since education should not merely transmit the existing moral values and social norms of "the objective meaning". According to *Frankl, Buber and Gogala*, the key dimension of education is a personal relationship between the teacher and the learner. Similarly *Frankl* points out that logotherapy presumes a profound humanization of relationships and must not be viewed as a new therapeutic method. A personal relationship between the teacher and the learner is to be fostered because the meaning as a spiritual category can only grow within a spiritual dimension of a reciprocal connection (see *Frankl*).

All alternative types of pedagogy follow pedocentrism, i.e. seeing a child as a whole and putting children's active and independent experience in the centre of attention. They all do so in order to use a new method to achieve the conventional ideal of being in harmony with God, oneself and others. Man lives within a constant identity and diversity of changes. The entropy of technical changes undermines his positive self-image. There is a lot of talk about integrative curricula and inclusive types of pedagogy. Nowadays the identity-related harmony with oneself, which is not given by birth or social status, needs to be learnt.

From a comprehensive anthropological perspective, man is by nature a being of dialogue on biopsychosocial and spiritual levels of his personality. The need for the school of dialogue (the medieval, Renaissance school, reform pedagogy, transformational, *Ignatian*, *Gestalt* pedagogy) has been emphasized ever since Socrates. To oppose mechanism and positivism, *Steiner* developed the concept of eurythmy as part of his anthroposophical teaching. Eurythmy was known in ancient times as contemplative practice.

The Italian pedagogical movement '*Reggio-Emilia*' has spread the idea of a feasible "new utopia" and of a "proper" way of acting. This movement pushes towards uncertainty, towards a place where everything is acceptable, while having deep roots in political values and developmental theories.

The pedagogy of listening is another practical approach to education. It puts into practice the pedagogy of relationships which it builds on theoretically. Ethically, the pedagogy of listening has most convincingly been explained by *Todd* (2003): listening to the story of another person is a tool to stop projecting one's own prejudices to the image of another person and thereby it is possible to recognize the other as different. The practice of the pedagogy of listening was most comprehensively developed by *Rinaldi* (2006) within the concept of *Reggio Emilia*. Most importantly, the concept of listening positively validates (acknowledges) the partner in a dialogue as one's equal, which is in particular important between two people with different levels of social power (an adult and a child).

Waldorf pedagogy is practiced at the levels of nurseries and primary schools as well as secondary schools and higher education institutions of various professional profiles. It is associated with some similar social activities, which have their roots in the anthropo-philosophical cognitive method (for instance medicine, nursing homes, various social, medical and drug addict therapies, etc.). Teachers act according to children's nature while keeping the real life practical and safe, leaving aside the abstract. Everything is the rhythm. The Waldorf school strives for a comprehensive development. It is therefore paramount for pupils and teachers to be partners in the teaching process. Similarly to other alternative types of pedagogy, the Montessori pedagogy deems technology to be part of a supportive environment for the child's development. Their motto is "Help me do it myself".

To some extent all schools are transmissive. However the transformative school strives to reform them. Transformative pedagogy studies and sets objectives for the transformative school. Its aim is to encourage various forms of transformative learning<sup>20</sup> and to address how to make the society of knowledge/learning function, what determines it, what is the relation between (constant) school reforms and social needs, etc. (*Senge*, 2006)<sup>21</sup>. Clearly this type of learning is meant to be socially interactive, even though it does not change the society.

The plurality and heterogeneity of the school space calls for a considerably more complex comprehension of conditions necessary to create an environment of symbiosis, than what was characteristic for the conceptually monolithic social environments at the time when nation-states were established in Europe. Nowadays there is a need to exceed the merely rational school with concepts of symbiosis and solidarity while accepting the individuality as a cultural value.

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<sup>20</sup>There are several definitions. One of the most comprehensive definitions of transformative learning is the transformation of pupils into efficient personalities, because it empowers them for 1. the development of healthy and productive relationships, 2. solving productive relationships by helping develop emotional intelligence, 3. guiding oneself and achieving goals, 4. the attention for good healthy results, 5. maintaining wise responsibility. Transformative learning is oriented towards pupils and the dialogue with them.

<sup>21</sup>For more on the differences between the qualities of transmissive and transformational schools see a book by *Novak B.* (2006, Chapter 3, pp. 112-146)



A contemporary classroom provides for technical visualization with electronic boards, interactive classrooms and cameras. These devices may aid comprehensive learning providing that studying takes place, the teacher's hierarchic or status authority is undermined in a democratic communication with pupils and in a dialogue between visible and invisible pedagogy. Meaning is not only found in the visible world but also in the invisible one, which is why pedagogy of the visible and the invisible worlds needs to be harmonized (Bernstein, 2007). Another argument is that the meaning is either there or it is not (Frankl, 2005, Lukas, 2002, Krishnamurti, 2000).

To put it in a nutshell, in the age of technology, education is not superfluous since there is the need for personification, humanization and compensation for shortcomings. Technology may partially dim people; education though may open them up to a multi-dimensional development. Technology may be harmful to them but education may help them heal wounds of the mind. Where technology makes them dependent, education introduces them to independent thinking. Where technology fragments them (the patchwork identity), education puts them back together. Man is capable of finding the lost meaning again, that is why education should not be left to machines. Being able to operate in the world is equal to the invention of the meaning.

## 6. Synthesis of conclusions

Unlike other animal species, man is the only spiritual being. However he is also the one with the greatest ability to destroy all life on Earth.

Modern technology may help or hinder our search for the meaning. All four technology theories are topical; however the apologetic theory, which sees no risk, needs to be transcended. The neutral theory places technology in the role of even greater rational control and is therefore instrumentalistically apologetic. Its weakness is that it hands over the responsibility for dehumanization to technologists and inanimate devices. The apocalyptic theory magnifies risk into total disaster. Since it demonises technology, it predicts the end of the human race. Moreover, it stigmatizes decadent nihilism. The only remaining options are either to fight or escape to the clean nature.

If the only choice is for man to control machines or for machines to control man, then peace with technology is not possible. The last developmental stage of technology has in fact provided man with great benefits and, simultaneously, with the risk of destruction. Consequently, only a complex theory is dialogically productive since it recognises both positive and negative aspects of technology and enables the search for the meaning. This search presumes that the will to meaning is stronger than the will to technological power: *homo spiritualis* is ahead of *homo technicus*.

Technology alone is not enough for human survival but we cannot live without it either. Believing in a better world of technology does not mean we should abandon our faith in the meaning or the meaning of redemption. At any point meaning may be found or lost. It is therefore not ethical if *homo technicus* stops his project of humanization on account of technology. We are responsible for living, and we are accountable to ourselves, our ancestors and posterity. Since we are the only technologically skilled species on Earth, we have already reached the developmental stage where we constantly make decisions about



whether we want to carry on our evolution or put an end to it through a global genocide. This is the first hypothesis.

The second hypothesis was investigated by means of transcending the enlightenment anthropocentric paradigm of industrial divided man (*homo duplex* in Latin) with an ecological humanistic paradigm which is unifying, holistic and ecological.

An ethic of solidary personalism is feasible within Christian, ecological, humanistic ethics. The quality of being different hinders the propensity to sameness. It acts as a corrective to decadent nihilism, instrumentalism, particularism of interests, the culture of death (necrophilia), pragmatic utilitarianism and all other risky instances of one-side exaggeration. In postmodernism a rise of the individual brought about a plurality of meanings, but without a uniform spiritual meaning of solidarity.

The third hypothesis advocates the possibility of educating man. The dilemma between the permissive or repressive education is one-sided. Nowadays the education is necessary and meaningful in a family, schools and other educational institutions as a corrective of negative impacts of technology and as an encouragement of the positive ones.

Global techno-culture is governed by codes and by increasingly demanding customers who are paradoxically the worst of all parasites. They trigger hyper-competitiveness in the face of which people should develop their own lifestyles to be able to give more meaning to limitations (the »defiance of the spirit« (*Frankl's expression*)). This is education for a modest but spiritually and culturally rich life.

From the theological and eschatological perspectives, the blind will see, the spiritually illiterate will become literate, mankind will move to a higher level of self-awareness. This is a general answer to the question about when and how man will stop being 'crooked wood' (*Kant*), a sliding thinking avalanche (*Sloterdijk*), a sick animal (*Nietzsche*). The school should teach how to have a critical attitude to technology.

The aim of spiritual education is to develop spiritual culture. In doing so it is necessary to first distinguish between soulless circumstances resulting from the education of devices and spiritually rich circumstances which have resulted from the education of the meaning. It does matter what state the spirit is in. As we know, the spirit can be both: bad and good, limited or free. The fact that not everyone gets to experience the free spirit of love is not a proof that no one can experience it. The fact that some people do get to experience it is enough for others to remain hopeful. The meaning of communication technology is collecting and transmitting information. The meaning of education is transmitting personal patterns.

The feeling of meaningfulness is a matter of relationships within a family and elsewhere, it is a matter of the life orientation and the lifestyle, which enables us to be joyful, creative, free and responsible all at the same time. It is a matter of a lifestyle which our era might not be too friendly towards, there is however still a very wide path leading to it. Education is thus not so much science as it is an art (*Zalokar Divjak, 1998, 2010*).

The first nine dilemmas implicitly provide an answer to the tenth one. The answer to the first dilemma on materialistic or spiritual values is that the man as a subject of technology has recently become its object and has no distinct spiritual values. The second dilemma is

the dilemma between one monopolistic and several individual meanings. The answer is that there is no uniform meaning within the modern secularized society. The third dilemma concerns the development of the society. It is a matter of predominantly instrumentalist development of a society of fear and confusion. The fourth dilemma is a continuation of the first one and is closely related to the fifth one. According to the fifth dilemma man cannot be his own goal unless he has spiritual and ecological values and the ethics suitable for these values. Nihilistic orientation of destruction and creativity is predominant. According to the sixth dilemma he thus has no positive attitude to life but a negative one. The seventh dilemma regards theories of technology whereby the complex ones combine best a positive and a negative attitude towards technology. The eighth dilemma concerns the possibility of going beyond nihilism and is analyzed by contemplating the values of the meaning. The ninth one is closely connected to dilemmas number eight and ten. It concerns the choice of modern ethics, which are, in our opinion, suitable for resolving the crisis. These are the ethics of Christian ecological humanism and personalistic solidarity. As part of the tenth dilemma, it has been pointed out that the principles of the search for the meaning can be implemented in sample schools, and also that education as a compensatory activity is the domain of alternative private schools. A uniform meaning is obtained in private alternative schools through spiritual education.

New technologies should be environment-friendly and in harmony with the human nature. The rate of new inventions should mirror the level of our spiritual maturity and updates in technology reflect our self-improvement. This means the reversal of the developmental trend.

Supposedly information technology maintains and even develops the traditional and contemporary meaning; otherwise it is not supportive but destructive. An individual is rarely confronted with their own mortality (what Heidegger calls *Sein zum Tode*). The confrontation though is empowering and contributes to fearless management of technology, especially if the social environment is supportive. This however is often lacking, so it comes as no surprise that despite the progress, people are unable to change their old or new bad habits. In this respect education for sustainable development could prove useful.

In this technological age many favour reconsideration of the civilizational and cultural values. We are convinced such a thorough and generally acceptable, historically comparable analysis is underway and we hope that by exploring this complex topic we have contributed to the realization about the need for the world ethos and the need for a universal dialogue.

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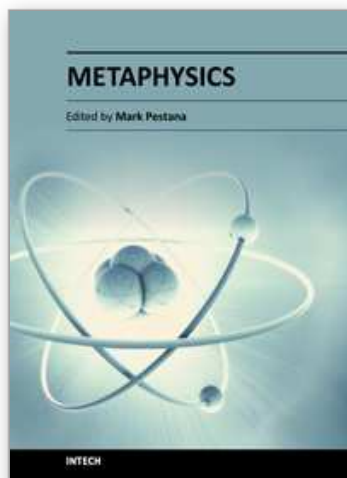


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## **Metaphysics**

Edited by Dr. Mark Pestana

ISBN 978-953-51-0646-3

Hard cover, 148 pages

**Publisher** InTech

**Published online** 13, June, 2012

**Published in print edition** June, 2012

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### **How to reference**

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Bogomir Novak (2012). The Meaning of Education in the Age of Technology, Metaphysics, Dr. Mark Pestana (Ed.), ISBN: 978-953-51-0646-3, InTech, Available from: <http://www.intechopen.com/books/metaphysics/the-meaning-of-education-in-the-age-of-technology>

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