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Artificialisation Of Culture: Challenges to and from Posthumanism

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Abstract

Human societies reorganize both the surrounding environment and themselves. As a result, society is becoming more and more artificial. The driving force behind this process is constantly renewing technologies that are developed to increase welfare. Technology has moved from the reorganization of the physical environment to man's biological body, genome and consciousness. Transhumanist concepts concentrate on the biological and genetic amendment and improvement of the human being. By contrast, questions concerning culture have been insufficiently discussed. Culture, which greatly determines how to be a human being, is something very special to the human species, and appears to have been greatly undervalued in discussions of a possible posthuman future. Very obviously, culture is the factor that determines whether we will reach such a future and whether we will be able to use all the opportunities that it would offer to us. This study deals with culture from the viewpoint of artificialisation, and indicates some of the possibilities for creating artificial cultures.

Keywords: artificialisation; environment; culture; posthumanism

1. Artificialisation of the Environment

One of the most evident characteristics of the contemporary world is the disappearance of borders between what is natural and what is artificial. It is not only that the influence of mankind on nature has dramatically increased. The term "nature," which once used to be so clear, is rapidly losing its original meaning (Robertson et.al. 1996, 1-4). However, instead of differences between natural and artificial, we should talk about the process of artificialisation - the vanishing of a fundamental boundary between natural and artificial, as a result of the use of modern technology. The disappearance of such a clear distinction on human nature is most evidently influential in

biotechnology, where the borderline between man as a natural being and man as the outcome of technological production has become vague (Sagoff 2005, 67-98).

Artificialisation can be defined as an anthropogenic transformation of the environment that predominantly takes place under the influence of technological systems. At this point, the environment comprises the physical, biological and genetic environments, as well as human culture. The concept of artificialisation enables us to more easily cross the still unchanged semiotic border between nature and everything that is artificial, as stated by Christina Ljungberg (Ljungberg 2001, 183). The term "artificialisation" is not about borders, but rather concerns a complicated process. This concept is not as politicised as the categories of technology and nature. (Chase 2001; Forsyth 2003; Huber 1999).

Analysing the relations between culture, technology and environment, and their meaning, is crucial for the normal development of modern society. It is obviously very difficult, if not impossible, to anticipate the potential consequences of all new technologies.

Nowadays, transhumanism and posthumanism have together become one of the most important concepts, in the frame of which the influence of technologies on people and human society is discussed. Transhumanism and posthumanism have been described differently in scientific literature, but all these definitions involve the idea of changing and improving the mental and physical capabilities of people by the use of different technologies (Krueger 2005, 78-79).

Among these technologies are what are nowadays still considered to be completely utopian ones, or technologies that are still in the initial stages of their development, such as nanotechnology or uploading human consciousness. Besides such radical technologies, different methods have existed from ancient times for changing and improving the human body. Some technologies that can change the human body are used in all human cultures for medical, religious, social and ethical purposes (Gilman 1999). In modern Western culture the view that the human body is a means of self-expression, and because of that the place for cultural experiments, is widespread. Body perforation, cosmetic surgery, physical training programs, etc., have been created to change the human body according to the requirements of the individual. This implies the objectification of the human body (in other words, the human body is turned into an object), but on the other hand individual human nature will be tied more closely to the body, and therefore what a person thinks and feels will be directly expressed in the body. Art, especially performance art, is actively engaged in defining the body and finding the borders of corporal existence. The French artist Orlan can be considered as one of the most extreme examples of this, using plastic surgery to create works of art where she designs her face based on different classical examples (Venus, Europe, Diana, etc) (Popper 1993, 52).

If the human body could be changed at any time, then what kind of changes would take place with human "self-consciousness"? If the human body is considered to be the husk or the container of "self-consciousness," then what will happen if we change the husk (Davis 1997)? Projects that use the body as a means of achieving art are trying to find answers to these questions. Sport should be included as an entertainment, which, with permitted and non-permitted chemical substances, with physical and psychological influences, is being widely used to redesign the human body. Sport and art are also changing the cultural understanding of corporal existence.

Medicine, which concerns us all, has been one of the most influential means for designing and influencing the human body. The transplantation of organs and tissues, together with the use of artificial organs, has become a very normal part of medicine in Western societies. In the USA, 68 people receive organ transplants each day (White House 2003). In the year 2005, 28,110 organ

transplants and approximately one million tissue transplants were carried out in the USA (United Network). By means of xenotransplantation, live animal cells, tissues or organs could be introduced into the human organism. Xenotransplantation is basically in the research phase today, but experiments in transplanting the pancreas have been promising (Taniguchi and Cooper 1997). Replacing human organs, or complementing them with artificial additions or systems, has become commonplace in recent decades. Appliances such as dialysis machines, which help compensate for decreased kidney function, or artificial cardiac valves and cardio stimulators, have saved millions of lives.

The modification of the immune system can be tracked back to the beginning of vaccination, two centuries ago. Vaccinations are one of the main methods of protecting human beings from infectious diseases. Thanks to their discovery, infectious diseases such as smallpox, diphtheria, lockjaw (tetanus), yellow fever, whooping cough, poliomyelitis, measles, mumps, and German measles are under control. The development and introduction of effective vaccines would have a great benefit in the fight against AIDS.

Connecting the human body to various technical devices is one option for supplementing and improving it. The term “cyborg” was initially brought into use in the sixties, celebrating the incorporation of the biological organism and the cybernetic system into one body (Tomas 2001, 175). To such a technical approach the literal and philosophical background has been added later on. Donna Haraway is one of the most famous writers in this field. In her masterpiece, “A Cyborg Manifesto,” she develops the feminist theory of cyborgs. The category of cyborg, which unites the human being and the machine, is not only a vision of future technology, but also a description of reality today. According to Haraway, the very concept of a cyborg enables us to surpass the differences between the human being, the machine and the animal, and, with that, also all the traditional binary and oppositionist discourses in society (Haraway 2001; Dusek 2006, 152-153).

Actual achievements incorporating the human organism and technical devices are scarce when compared to predictions by visionaries. There is nothing new in transplanting ordinary microchips into the human body, but as a rule these devices are not directly connected to the body. They involve radio frequency identification devices (RFID), which are similar to devices used with domestic animals. These can be used to identify people, as well as to monitor their health (Murray 2002; Ethical aspects 2005). It is a much more complicated task to put the human organism and technical appliances into direct communication with one another. In one case, Professor of Cybernetics, Kevin Warwick, allowed the transplantation of an implant into his left arm, which connected his nerve fibres to a computer. Signals from the nerve fibres were caught and then directed to the computer and back to the arm. Warwick's aim was to prove that direct communication between the human body and the computer is possible (Warwick 2002). Great success has been achieved in the area of electronic brain implants. These neuro-prostheses turn brain commands into electrical impulses, with which devices outside the body are conducted; the the aim of this is to help paralysed patients communicate with the world and hopefully regain control of their limbs (Editorial 2006).

New reproductive technologies are one of the means of controlling and artificialising human biological processes. Among these are artificial fertilization, the process of supplying donor sperm or eggs, embryo transplantation, preserving sex cells and embryos, and most obviously, human cloning. Although the human genome project has been successfully completed and has given us a map of the human genome, very little is known about the influence of particular genes, about relations between genes and the interaction of genes and the environment. The opportunities offered by gene technology in changing the human body are promising. Gene technology investigations into the human brain are considered to be one of the most promising

areas. In addition to the treatment of neurological diseases such as Parkinson's disease and Alzheimer 's disease, these studies should also enable the increase of human intellectual capabilities. Although our technology develops exponentially, human abilities are still limited and do not grow over the course of time. Our neurons do not work faster, memory capacity does not increase, and we neither learn nor think faster than before. Changing the human being using the techniques of gene technology is one possible way to decrease this gap. What will be the consequences of this development?

According to the supporters of transhumanist philosophy, different technologies (gene, nano, and infotechnology) should essentially be used to change the human being as a biological species , and with that bring mankind onto a new level. New technologies, above all bio, info, and nanotechnology, will change the world so much that our descendants will not be human beings but posthumans. The process of embracing the human body and mind with technology is constantly increasing, and in the not-too-distant future will result in the development of a new human race, living in complete symbiosis with machines.

As we have seen, transhumanist concepts concentrate on the biological and genetic amendment and improvement of human beings. By contrast, questions concerning culture have been insufficiently discussed. Culture greatly determines how to be a human being, and is something very special to the human species. It seems to me that its role of culture has been greatly undervalued in the discussions to date. Very obviously, culture is the factor that determines whether we will reach a posthuman future and whether we will be able to use all the opportunities that such a future would offer to us.

Below, I will deal with culture from the viewpoint of artificialisation, and will indicate some of the possibilities for creating artificial cultures.

2. Artificialisation of culture

"Culture" is a term that is used very widely in the arts and social sciences, and the treatment of culture is clearly becoming more and more important. The term "culture" has been considered one of the most powerful and widely-spread analytical tools in contemporary social sciences. At the same time, it is one of the most complicated and complex terms - with almost countless definitions and explanations. Several researchers have had the feeling that because "culture" means everything, the term is useless as an explanatory tool. However, culture in a broader sense is an unquestionable precondition for the survival of the human species.

There are probably as many metaphors to describe culture as there are definitions. Culture has been seen as "The Other," Group Self, Machine, Computer, Organism, Personality, Code, Text, Game, Story, etc. All these metaphors render one or another aspect of culture. In today's post-industrial society, the term "culture" is about to obtain yet another meaning. It can be said that culture has come to be seen as a unique wilderness. This metaphor has a long history during which the meaning has considerably changed (Rolston 1989,118-143). From an opposite standpoint, Henry David Thoreau, one of the wilderness apologists, speaks about the wild nucleus of culture, about the core around which real culture is based (Thoreau 1862, part 2).

However, when we use it to describe culture, "wild" still means something hostile towards man: a strange area of darkness, hostility and desertion; an area impossible to understand. It is not a safe and pleasant place. On the contrary - it is an unfamiliar area full of dangers. Today it is cultures

and not nature that are intimidating and awesome and provoke hostility, aggression and violence. The natural environment that used to be described with the metaphor of wilderness has lost all the characteristics used in that description. Wilderness has become a positive concept. In fact, wildlife was domesticated a long time ago and turned into parks and objects for sightseeing. We make leisure trips into wilderness and no longer consider it a source of danger. Describing culture with the wilderness metaphor puts culture in a new, slightly strange perspective and provides new opportunities for understanding it. There are a number of reasons why culture is seen as wilderness and they are related to the development of modern societies. Declining and aging populations, increasing immigration, globalization and an explosive growth in tourism – all this leads to a continuing expansion of variety, even in countries with a relatively monolithic population. After the successful expansion of the liberal democratic cultural model, it has become clear that cultures alien to it (e.g. Islam) have intruded into our societies. We enter another culture as tourists, researchers, consultants or immigrants.

Either way, we are unable to escape other cultures in today's world. The world has dramatically shrunk and mixed different cultures, thereby making groups of people define their cultural identity. The global domination policy of western capitalism inevitably leads to local resistance movements that, in turn, facilitate the separation of local cultures. Culture provides the justification of ethnic, national, sexual, religious, regional, etc. identities and limitations. The variability and uncertainty of the global world has caused, on the one hand, the need to reinforce identities and, on the other hand, the flexibility of those identities. Ever faster globalization happens simultaneously with local ethnic and cultural rebirths. The desire to belong and know one's roots keeps producing ethnic conflicts and even wars. Declaring a culture – usually one's own – sacred and superior inevitably leads to fundamentalism and nationalism. Culture affects politics and ideology in many unpredictable ways by incorporating patriotism, historic memory and national, ethnic and regional identities. Surprisingly, it may seem at first glance that globalization has in a way even facilitated those developments and resulted in separations. As Dorothèe Bauerle-Willert writes: "We might point out that today culture is no longer part of the solution, it has turned into part of the problem and into a battlefield." (Bauerle-Willert 2003, 151). Cultures lose their compactness and endurance; already for a long time, their boundaries have ceased to coincide with those of nations, countries and states.

The spread and promotion of liberal democracy has triggered, as a reaction, the formation of a number of closed cultures. However, pluralistic ideology sees this phenomenon as something that increases cultural variety. At the same time, from the global viewpoint, the western world does not seem to hold as good a position in cultural wars as commonly believed. While elite culture is too hidden to act as an effective political power, most of the post-modernist culture is too fragile, rootless and depoliticized. Neither seems strong enough compared to Islam, which has a historically well-grounded, and thus inevitably political, culture (Eagleton 2000, 81).

The spread of cultural relativism makes it difficult to identify a culture by opposing it to other cultures, or to define the functioning of cultural hierarchies. Reorganization of the existing system causes frustration, increases nationalist tendencies and may even lead to intercultural violence. Cultural relativism, which expresses the identity crisis of the post-modernist western world, is associated with separatism and principality in post-colonial countries. In the Third World, it has provided a theoretical basis for and generated the progressive appearance of fast-spreading anti-modernist, nativist and cultural-religious rebirth movements. The globalization of information systems and a considerable rise in information generation and exchange have made it possible to reflect and create cultures. The internet leaves the impression that the number of different cultures is endless. Despite "cultural pluralism" and "political correctness," or perhaps because of them, we will never understand most of these cultures. To a great extent, our own culture is also

produced and delivered by the media and there is no way to establish direct contact with its origin and nature. Most modern societies are a collection of subcultures entangled with each other (Eagleton 2000, 75). Deciding which subculture originates from which normative culture is getting harder and harder. It even seems inappropriate to use the term "subculture", because it presumes the existence of a superior culture.

Groups with common interests gather into real or virtual communities that have spread all over the world with the help of computer-based communication tools. The values and identity that hold the communities together are becoming more and more specific. Since cultural relativism is generally recognized, there are no suppressions or "cultural wars" between different stakeholders. The emerging communities are independent and flexible, usually not very numerous, and with unstable memberships. Such communities have little influence on their members and few ties to other similar communities. Subcultures are linked by antagonism towards other cultures, introversion and communitarianism. Sub-cultural worlds are fragmentary. Figuratively speaking, from a distance a culture looks like a nebula which, on closer observation, breaks down into independent stars.

3. Artificial cultures

The transformation of culture into "wilderness" inevitably leads to the recognition that, at least for western society, the domestication or taming of culture, as Heiner Mühlmann (Mühlmann 1996) has put it, has become the greatest challenge. In reality, it means the artificialisation of culture as the last stronghold of naturalness and the creation of artificial cultures.

Along with scientific development, it has become irrelevant to distinguish between metaphysical nature and culture. Both are seen as specific forms of information and its processing (Sloterdijk). The idea of treating culture as an object of technology comes from the development of technologies and society. Achievements in the field of information technology provide a technological basis for the creation of a civilization with an artificial culture. Technical metaphors are extended to culture. Contemporary communication and information theories offer attractive metaphors for redefining cultural phenomena. Such a linguistic shift is extremely important. In principle, the idea of correcting culture is no different from the idea of improving a computer program. New programs are created for new tasks, and the more the program are improved, the more new opportunities will arise – which will again create new tasks.

We can talk about two approaches to artificial culture. The users of the "bottom-up" approach resort to agent-based computer simulations and try to reproduce the system, in our case the macro-behavior of culture, by changing the properties of micro-agents and of interactions between different agents or between agents and the environment. This is not direct modeling of real cultures. More likely, the aim is to understand the fundamental processes that may occur in very different situations. This approach relies on a rather solid theoretical and technological basis, but practical achievements have been modest so far (Gessler 2002, 1995, 1994).

With a "top-down" version of synthetic culture, methods-modelling begins with largescale cultural events. Such culture-modelling events are represented by virtual worlds or synthetic worlds, and the term "digital worlds" has also been used. Online games, the Metaverse, cyberspace, etc., are also included. Ideas about virtual worlds appeared first in science fiction. Neal Stephenson's novel, *Snow Crash* (Stephenson 1992, 23-24), a classic of the cyberpunk sub-genre, espouses the idea of such a technical virtual world as follows:

> Down inside the computer are three lasers - a red one, a green one, and a blue one. They are powerful enough to make a bright light but not powerful enough to burn through the back of your eyeball and broil your brain, fry your frontals, lase your lobes. As everyone learned in elementary school, these three colors of light can be combined, with different intensities, to produce any color that Hiro's eye is capable of seeing.
>
> In this way, a narrow beam of any color can be shot out of the innards of the computer, up through that fisheye lens, in any direction. Through the use of electronic mirrors inside the computer, this beam is made to sweep back and forth across the lenses of Hiro's goggles, in much the same way as the electron beam in a television paints the inner surface of the eponymous Tube. The resulting image hangs in space in front of Hiro's view of Reality.
>
> By drawing a slightly different image in front of each eye, the image can be made three-dimensional. By changing the image seventy-two times a second, it can be made to move. By drawing the moving three-dimensional image at a resolution of 2K pixels on a side, it can be as sharp as the eye can perceive, and by pumping stereo digital sound through the little earphones, the moving 3-D pictures can have a perfectly realistic soundtrack.
>
> So Hiro's not actually here at all. He's in a computer-generated universe that his computer is drawing onto his goggles and pumping into his earphones. In the lingo, this imaginary place is known as the Metaverse.

As can be seen, technical solutions for virtual worlds are concentrated on the fact that a person perceives the artificial environment created by the computer as being as real as possible. For that purpose, efforts are made to transform the world generated by the computer (and above all the world's visual side), so that it matches (and is corresponding and relevant to) the real world as much as possible, and can transfer data to people via their sensual organs. From that idea, monitors situated in front of the eyes came into being, with these usually being connected to virtual reality and data gloves that mediate information related to (bound by) touches and the position of objects.

However, it has been discovered that technical solutions are not primary in creating a feeling of being–in-the-world. It seems that what is happening in this world is actually much more important. There is nothing strange in this, as it is well known that a spellbinding novel will draw us into its fictional world without any technical devices. When we consider a world as a place where human communication takes place, the first virtual worlds were based on text, being more similar to a book than to a common understanding about the virtual world. In such worlds, all worlds which possess activities and communications are delivered by the text. When computer networks became common at the end of the 1970s, the first online virtual, multi-player worlds, which were based on text, appeared (Bartle 2003). The worlds that came into being were quickly transformed into places with real and complicated dynamics (Dibbell 1999).

With the advent of a game called "Meridian 59," which came onto the market in 1996, the visual side was added to these worlds, making them more easily acceptable. Experience with these games showed that a game which was attracting people need not be a fighting or adventure game. People often prefer a communications environment, and players want to participate actively in creating a game environment and the objects in it. The game "Active Worlds," which entered the market in 1995, provided users with the opportunity to create for themselves the essence needed

by them inside the game. In that game's synthetic world, each person is represented by an object called an “avatar.” Avatars are used in the virtual environment, which is within the computer network. An avatar can communicate, indicate to other avatars, to other objects, drive a virtual motorcycle, etc. Written communication between avatars is being replaced by audio interaction, and, thanks to the development of 3D technologies, the visual interpretation of worlds is becoming more perfect.

Nowadays, the synthetic world can be defined as a physical space that has been generated by the computer and which many people are experiencing simultaneously (Castronova 2005, 22). Synthetic worlds use communications technology based on computer networks in order to interact with the new cultural medium. Synthetic worlds, being initially born from games, are gaining wider meaning and use. These days they are created for very different aims: entertainment, social communications, for learning or for scientific purposes, etc.

The popularity of synthetic worlds is growing steadily. It seems that they are better places than our world in which to spend time. Social synthetic worlds (SSW) have become especially popular in recent times, with the aim of creating a communications environment for people. The players do not have certain roles in these games. People visit clubs and art exhibitions, study, go shopping, make objects and bargain with them, and of course, there's the main idea – to communicate with other players. In that way, societies of players come into being with their own languages, cultures and norms.

The leading SSW world at the moment is “Second Life,” whose number of users is increasing by an average of 20% a month. The game's own money is valid in this world (its currency being Lindens, $L). This can be used to buy objects, and a vast range of virtual objects can be bought and sold within the world of Second Life. A simple programming language exists which enables users to build virtual objects; with this it is possible to make whatever the user wants - houses, cars, clothes, weapons, etc. The trade taking place within synthetic worlds has merged with real world business: for example, Lindens can be exchanged for dollars and vice versa. The digital objects in a synthetic world can be sold and bought. At the time of writing, the turnover of virtual trade is approximately 100 million dollars a year throughout the world.

Synthetic worlds are more than games. Where they are considered to be games, we can speak about a very special kind of game that would better be termed “communicating in places.” What happens in these places is, in fact, neither a game nor communication. It could be considered to be a combination of real communications and a game-like context (Castronova 2005, 68-69). An activity can take place in a medieval world or in a space station. Characters can be wizards, witches, dwarfs, aliens. The way they discuss the killing of dragons or conquering the planet is absolutely real communication, with planning and coordinating activities. The fact that real people act in the synthetic world means that in these worlds, independent of their physical shape and the environment that has been created, communications, trade, sex, and any other human activities can and do occur. These worlds could, in a physical sense, differ greatly from our real world. In spite of that, human worlds are still very much concerned, because people, who can be represented by avatars with different appearances from their own, act in these.

As a result, fully working virtual worlds, where hundreds of thousands of people constantly spend their time, have come into being. While the early understanding of the virtual world concentrated on techniques, technology, and manipulation with human sensory input, a present-day virtual world such as Second Life concentrates on the society that evolves within it. It is not necessary to imitate the real world completely to create a feeling of reality, but events that interest us in the real world and make the world worth living in must happen, in some form. As with computer

simulations that are based on agents, the processes are researched at the micro level, and then in synthetic worlds at the macro level. These virtual societies serve as laboratories in which it is possible to investigate social and cultural processes.

Basically, the synthetic world enables us to investigate any theories and hypotheses regarding human society. Present-day synthetic worlds are so complex and sophisticated that they can reflect all aspects of the real world. In addition, they enable much that is not possible in the real world. Synthetic worlds have been created by people, but the people and societies and cultures in these worlds are real. The conditions in which these worlds will come into being and operate can therefore be predetermined. For example, we can allow each citizen to have cash money and observe predetermined hyperinflation. We can change the rules of the world and see what happens after that. Experiments can be repeated, and we can choose the people participating in them.

Areas in which the methodology of an artificial culture can easily be applied are modelling the interactions between cultures, the division of cultures into subcultures, how they influence each other, and the formation of hybrid societies. The given methodology can be used to play through alternative scenarios in cultural evolution and to carry out experiments of the "what will happen if…" type. Investigating cultural variety, which especially characterises modern societies, and dealing with cultural conflicts, collisions, competition and invasion, are particularly relevant and attractive research topics.

4. Discussion

Culture is a phenomenon that concerns humans alone. Of course, it has not developed only alongside human development, since other animal species may also have their "protocultures." However, *Homo sapiens* is the only species whose culture-transmission is steady enough for co-evolution with the genetic heredity system.

If humans are the creators of culture in a direct or indirect way, then how can we speak about artificial culture? If for us the word "artificial" means something created by humans, then the whole of culture is artificial. Nevertheless the real situation is not at all so simple. The relationship between humans and culture is very complicated. On the one hand, humans create culture, but at the same time culture designs humans. The cultural reality seems to exist apart from the individual person. We all live within culture, but every one of us is quite limited in our ability to direct and influence it. Cultural information is being forwarded from person to person and from generation to generation without anyone intentionally directing it. So, culture is similar to language. Fundamentally, natural language has been created by humans. Every person can invent words. At the same time, language is something more and is somehow given to humans. It is the same with culture. We can create some parts of culture, but culture as such has been given to us.

Heiner Mühlmann is one of the authors who describes the development of culture as a natural process. In many ways, the cultural process is similar to the natural one. Humans have not consciously initiated it, nor do they design it. We do not know exactly how the development of culture is dependent on human activity. Mühlmann (1996:5) writes:

> Culture is a living system. It is, so to say, an animal, a wild animal whose behaviour can not be directly influenced by mankind. If it were conceivable that rational people could

> beneficially influence this wild animal, then this form of influence would correspond to the act of domestication. We would have to tame culture.

Robert Ornstein and Paul Ehrlich also write that cultural evolution is still developing in an undirected way, and that it is too slow to meet the demands of contemporary society. According to Ornstein and Ehrlich, biological as well as cultural evolution is inappropriate to adapting humans to the environments which we ourselves have created around us. These authors see the only solution as turning previously unconscious cultural evolution into consciously directed evolution by humans (Ornstein, Ehrlich 2000: 4, 12, 64). They write:

> The potential exists for a new kind of educated evolution, which we call conscious cultural evolution, or conscious evolution, to supplement unconscious cultural evolution. There is nothing magical or bizarre about conscious evolution, it is a step that is already being taken by some. But we need to teach children about what is "natural" in our evolution and what now needs to be changed. (Ornstein, Ehrlich 2000: 202).

I use the wilderness metaphor to indicate and stress that culture does not have a direct dependency on humans. Nature has always been a metaphoric parallel to society (Franklin 2002: 49). They have always reflected each other, as well as being tools for constructing each other. Metaphors change our concepts about problems, broadening discussion and introducing new analogies to indicate new relations and connections.

Natural metaphors have always been used to describe culture. Analogies from nature speak about culture's emergence, birth, bloom, growth, development, vitality and extinction. Of course, these analogies are not just accidental, but reflect culture's extreme complexity, abundant and various relations, and ability to adapt to the environment. Like nature, culture is essential for humans; without it humans as such would not exist.

In recent years, the idea of culture has clearly moved from that of a reality controlled by humans to something more like the exterior distinct world. Culture which was ordered - being useful and beautiful - has changed to become disordered, and a malignant source of risks. Nature and culture have changed places as the sources of the main risks to society. An obvious necessity has come about for human beings to intervene in the natural development of culture and to start directing it according to human needs. However, it is far from clear which way the essence of current cultures should be changed. Changing culture is a complicated task. According to Eagleton: "the transmutation of a whole culture would be more laborious than damming up a river or destroying a mountain. At least in this point nature could be processed more easily than culture"(2000: 93).

The main difference between artificial and natural cultures lies in their adaptability to our purposes. We can compare this with the phenomenon of language. In addition to natural languages, human beings have created several artificial languages that have definite, delimited functions. Taking into consideration the ever-increasing accumulation of problems related to culture in the world, the development of artificial cultures has become a significant task. Yet is obvious why developments in that direction have been quite scanty - culture is the most complicated phenomenon that science has ever had to deal with.

The more technology develops, the more the ever-expanding ethical and philosophical questions related to it arise. Whilst mankind has not entirely prohibited any of its developed technologies - not even weapons of mass destruction that could undoubtedly extinguish life on the whole planet - it is crucial that we learn to adapt to new and ever-faster changing technologies. Paradoxically, to be able to manage with contemporary technologies we have to know not only the technologies

themselves, but their impacts on people. For that reason, it is becoming increasingly important to give due consideration to the cumulative effect of culture and technology. From the viewpoint of posthumanist/transhumanist theory, culture has been left out. It seems to me that the role of culture has been greatly undervalued. Very likely, culture is the factor which determines whether we reach a posthuman future, and whether we can make use of all the opportunities that such a future would offer us.

5. Conclusion

Human societies reorganize both the surrounding environment and themselves. As a result, society is becoming more and more artificial. The driving force behind this process is constantly renewing technologies that are developed to increase human welfare. One characteristic of technological development is that it moves inwards from the outside world: closer to man, closer to the intimate core of an individual. Technology has moved from the reorganization of the physical environment to manipulation of man's biological body, genome and consciousness. There is only one more border area to colonize - the cultural resources of mankind. The culture that we have always considered man's naturally evolved environment should be redefined as an artificial environment with countless opportunities.

The artificialisation of culture necessitates actually creating artificial cultures according to our aims and needs. Two directions for creating artificial cultures are being evolved. The first is the computer modelling of cultures, with which completely artificial simulations of cultures are being formed, while the second is with synthetic worlds, which are simulated communications environments with which people are interacting.

Progress in the arts and information technology provides a realistic opportunity for mankind to reorganize the cultural structure of society. The goal of artificial cultures is clear – technologically modified or constructed cultures. One day in the future it may mean totally new, artificially constructed cultures. For now, it means the modification, alteration and adaptation of the existing ones.

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