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New Models of Development and The Problem of Values

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Today contemporary civilization finds itself at a turning-point in its development. This is not a new idea. It has been asserted for some time by historians, philosophers and sociologists. It is clear that development strategy needs to be changed insofar as humanity is threatened by a worsening of global crises. But the following question arises: what should this change of strategy consist of? In general, when answers are given to this question, a change in goals is mentioned. But behind any set of goals there are values. Values support this or that activity and the goals specific to it. The issue of the development strategy for contemporary civilization then becomes one of values. It is essential to analyze this. What can philosophy suggest here? I think that what it can suggest is substantial, because the very nature of its knowledge draws on the fundamental values of social life. It is their foundation. It is able to develop a core of new directions as to worldview and put them forward for the culture to consider. Then the latter itself selects what it may find useful and when. The development of civilization cannot do without this philosophical activity.

In analysing trends in the development of civilization, philosophy is required to answer these questions: what is contemporary civilization's system of basic values? What can and must change in that system? But first we need to define the concept of civilization and give some idea of models of development for civilizations.

The concept of 'civilization' is used in many senses. In my view it is important to distinguish three main ones. The first refers to the totality of humankind's achievements that distinguish it from the animal kingdom and determine its social evolution. In this sense, by civilization's achievements we mean in particular the increasing systemic complexity and the extension of 'second nature', that is, the world of objects and processes created by humans, a world that surrounds them and ensures their survival in nature. In this sense we refer to technical and technological innovations such as the invention of the wheel, the steam engine, the car, the aeroplane and control of electricity and atomic energy, but also to mechanisms regulating social and

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interpersonal relations. The invention of writing, the appearance of law, the market and currency, democracy and human rights are also achievements of civilization.

The second meaning of the concept 'civilization' relates to a particular model of society which appeared at a precise moment in the development of history, when the transition occurred from the primitive state towards the agrarian and urban civilizations of antiquity. This notion rests on a systemic vision of society that emphasizes the cultural features, the basic values of the culture, the social relations and institutions, the ways of interacting with nature, the forms of individuality and ways of life that have succeeded one another throughout that civilization's existence. It was in this sense that Arnold Toynbee used the term 'civilization' to distinguish various kinds of civilization in the history of humanity. In this second sense civilization is perceived as a social organism characterized by the specificity of its interaction with nature, its social relations and cultural tradition. In this approach civilization and culture are not contrasted. Every civilization assumes a particular type of culture that ensures its continuity.

There is a third sense of the word 'civilization'. Oswald Spengler, for instance, thought that civilization and culture are distinct from one another. In this case, by civilization are meant technical and technological inventions and by culture the basic values and the states that characterize humankind's spiritual world. It is proposed that technical and technological progress does not lead automatically to moral progress, that sometimes it even results in moral regression. Civilization and culture do not coincide; they are seen as two different aspects of social history. This contrast seems appropriate only in a very limited context: for example, in relation to problems connected with the crisis of contemporary civilization and culture. Then it is possible to say that civilization based on technical and technological progress and culture as humanity's spiritual development do not coincide and may even be opposed to one another.

In the rest of this paper I shall use the term 'civilization' in the second sense, that is, I shall consider it as an integrated social organism which underlies a particular model of culture.

Representing society as an integrated organism has a long tradition. In European culture, in the period when the social and human sciences came into being in the 19th century, it can be found in Auguste Comte's work. In Herbert Spencer a conception of human history can be seen which focuses on the development of social organisms. Karl Marx also supported that idea and saw society as an organic, complex, evolving whole. This is a socio-historical analysis that proceeds for the most part by analogy with the development of biological organisms. It is true that all analogies have their limits, but they also make it possible to shed light on many points and imagine new ways of understanding social processes. Indeed there is a variety of kinds of social organism just as there is a diverse variety of biological species. Like living organisms, which compete with each other and adapt to natural conditions, the different kinds of society interact with one another and with nature.

According to the Marxist approach social development is determined by a change in the mode of production of material goods. Here the mode of production seems to be a specific form of selection among viable societies. The society that survives in the competition with other societies and with nature is the one where the mode of produc-

tion opens up broader prospects for development of productive forces, creates better opportunities for controlling nature and allows for development of more sophisticated technologies. We may see in this an analogy with the Darwinian idea of natural selection. And if we take into account the fact that Marx and Lenin often pointed to a parallel between Darwin's conception of evolution and the materialist interpretation of history, that analogy is absolutely acceptable. But classical Darwinism did not consider the factors that carried heredity. It was attributed to the total organism, which inevitably resulted in paradoxes when it came to accounting for the preservation of indicators of heredity. These difficulties were resolved by the development of genetics in the early 20th century. If Marx could have suspected its existence he would probably have amended his conception of society.

Nowadays the general theory of systems shows that every complex, evolving system must contain information that ensures its stability. The system carries on exchanges of mass and energy with the external environment and reproduces in accordance with the information it contains in coded form. This information fixes experience of the system's previous interaction with the environment and determines the modes of its subsequent interaction. If we accept this view, we need to identify the information structures within social organisms that play a similar part to that played by genes in the formation and development of biological species.

It is the culture's basic values that have this role. They are represented by the culture's categories, those universals that define the worldview, allow the functioning of a multitude of supra-biological programs associated with human action, behaviour and communication and are diversely encoded in 'the body of the culture'. These universals fulfill the same function in the life of society as the genes in a living organism. They organize into an integrated system an extremely complex group of cultural phenomena and act as basic structures of the social code, in a way playing the part of the DNA of social life. Categories such as 'nature', 'cosmos', 'space', 'time', human being', 'freedom', 'justice', etc. form an integrated image of the human world and define a given culture's hierarchy of values. In this way they determine the fragments of social experience, constantly renewed, that enter into the evolutionary process and those that must remain outside it, not be passed on to new generations and playing no part in their upbringing. They select the knowledge, beliefs, value hierarchies, goals, models of action and conduct that will have priority in regulating human behaviour, communication and activity – in short, that will shape social life. In this respect the working of cultural universals is very similar to the role of DNA as the matrix of the synthesis of albumen and other materials that make up cells and pluricellular organisms and determine those organisms' basic structure and functions. This system of universals is a particular cultural and genetic code according to which social organisms are reproduced. Without altering that code no new form of society can appear.

So the problem can be stated in the following terms: if we consider types of social organisms as civilizations, it is not enough to examine the way their economic life is organized. We have to understand economic life in the light of the dominant cultural and genetic codes, the basic values of civilizations. And here two approaches are in conflict. According to the first, which corresponds to Marxist ideas, the mode of production is the essential element that determines both a society's social structure

and its spiritual life. But we can also identify another approach according to which the economic model is related to the culture's basic values and is rooted in them. Max Weber developed this approach. He tried to explain the economy of capitalist society with reference to the capitalist spirit, the system of basic values which have gradually become established since the Renaissance and the Reformation and have brought about a particular form of social organization. Despite the alternative represented by these two approaches, both of them have a positive content and each one stresses an important aspect of social life. It is only taken together and as mutually complementary that they form a global vision which makes it possible to describe that social life.

Karl Marx emphasized the role of technical and economic development, seen in a way as a 'natural selection' factor in social organisms. On the other hand Weber focused attention on the spiritual foundation of social life, its basic values and their radical changes, comparable to genetic mutations in living things. In order to understand the historical working and evolution of a civilization, both factors have to be taken into consideration. Examining society as an integrated system evolving historically, in which cultural and historical codes have the role of programs determining the system's type of reproduction and functioning, is fully consonant with Marxism's initial position, which states the need to analyze social life as an objective, natural, historical process. It is an approach which is not the least bit subjective or idealistic, just as there is no idealism in recognizing the role of genetic programs in the reproduction and development of biological organisms.

From these positions it is possible to tackle in a new way the task of assessing the two approaches – one of them based on the idea of training and the other on that of civilization – as applied to the analysis of humanity's history.

We can bring these two visions together by means of the concept of the *development model for civilization*. This refers to certain general features common to various kinds of civilization and typifying their cultural-genetic code. In human history we can distinguish two great development models for civilization: the *traditionalist* model, which is historically prime (most of the civilizations described by Toynbee belonged to this model) and another model, which is often called western after the part of the world where it appeared, but which is no longer solely the preserve of western countries. I prefer to call this civilization *technogenic* because the continual search for and use of new technologies (including those associated with social orientation and communication) play a decisive part in its development.

In recent years I have analyzed, and covered in detail in my writing, the difference between these two development models for civilization (Stepin 2003, 2004, 2005). So I shall simply give a summary of my ideas in the form of theories. I stress once again that, in a standard 'civilizational' approach, emphasis is laid upon the distinction between civilizations. Of course the traditional cultures of China, India, antiquity, the European Middle Ages have their clearly marked specific character. Nevertheless it is possible to identify in them invariants which characterize the traditionalist development model. In the same way we can identify common signs in many technogenic civilizations, where the invariants of this given development model mingle with their historical and particular features.

Technogenic civilization began to be formed in Europe more or less between

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the 14th and 16th centuries. Between the Renaissance, the Reformation and the Enlightenment the core of its value system, which included a particular concept of humans and their place in the world, was built up. Humans were represented as active beings by contrast with nature, and they were intended to transform it and subject it to their power. This idea is organically connected with the idea of action as a process aimed at changing the objective world. This transformative, creative action has value only for technogenic civilization. In traditional cultures we find a different conception, expressed by a famous principle from the culture of ancient China: *'wu wei'*, the ideal of transformative action based on active involvement in the unfolding of natural and social processes. Traditional cultures never saw as their aim transformation of the world, achievement of humanity's power over nature. In technogenic cultures this idea dominates and is extended to both natural and social objects. Added to that there is an image of nature as an inorganic, ordered world, from which can be taken material and resources for human action. These resources were thought to be unlimited and it was felt that humans could use them without restriction. At the opposite extreme the traditionalist conception saw nature as a living organism of which humanity was just a tiny part.

If, in traditional cultures, the individual is defined first through a network of strictly determined relationships, often fixed from birth and connected with the family clan, the caste and the order, in technogenic civilization a prime value is the ideal of free individuality, an autonomous individual who has the same rights as others and can move between different social communities. Associated with that idea is the priority accorded to individual and human rights, which traditional cultures do not have.

The value of innovation and progress has a special place, which is not the case in traditional societies either. Here we should remember the Chinese saying which today could be put as follows: 'There is nothing worse than living in a period of change.' For our civilization it is the reverse; change and progress become values in themselves. It is like a two-wheeled bicycle that is stable only when it is moving and falls as soon as it stops. Innovations are a crucial value, unlike traditional cultures, where they are limited by tradition and concealed behind it.

The success of reforming action, which is the source of social progress, is conditioned, in technogenic culture, by knowledge of the laws for changing the object. Hence the prime value accorded to science, which makes it possible to know those laws. Scientific rationality dominates the system of human knowledge and has an active influence on all its forms. Finally, among technogenic culture's values, we should emphasize a particular idea of the power and force that are directed to humans (as in traditional societies), and especially to objects both natural and social. From these values flow a number of other cultural characteristics of technogenic civilization. They function like a particular genome specific to the civilization, like its cultural and genetic code according to which it reproduces and develops.

From their appearance technogenic societies began to influence traditional civilizations, forcing them to change. Sometimes those changes resulted from military conquest or colonization; more often they were the effect of a catching up and modernizing process which societies had to embark upon under pressure from technogenic civilization. This is the path taken by Japan after the Meiji era reforms. On a number of occasions it was also the option preferred by Russia, which went through

several periods of modernization inspired by western experience. The most significant reforms occurred under Peter I and Alexander II, but the transformation of our country after the October 1917 revolution might also be seen as a particular case of catching up with the modernization process. It accepted the historic challenge to industrialize the country very rapidly.

Soviet socialism and western capitalism were in competition for more than half a century: two different versions, two strategies for developing technogenic civilization. Having entered the post-industrial phase of development, that civilization embarked on a new cycle of expansion throughout the various countries and regions of the globe. The model of technogenic development unifies social life to a far greater extent than traditionalist development. Science, education, technological progress and widening of the market give rise to a new way of thinking and living. What today we call the globalization process is the product of that expansion of technogenic civilization. It is infiltrating into different regions of the world and helping to modernize traditional societies in a way that is really causing them to leap eras and it is now directing them towards technogenic development.

Technogenic development has brought humanity a substantial number of achievements. Scientific and technological progress as well as economic growth have led to a new quality of life, made possible a rise in the level of consumption, improved public health services and increased average life expectancy. Most people associated the hope of a better future with that model of progress. Half a century ago there were very few who thought that this technogenic civilization would lead humanity to the brink of a global crisis and its self-destruction.

Ecological crisis, anthropological crisis, increasingly rapid alienation processes, invention of more and more new weapons of mass destruction, these are all products of technogenic development.

Much has been said about the ecological crisis. It is getting more serious as a growing number of countries realize their aspiration to attain the lifestyle of consumer societies. Nowadays maintaining the western way of life places an increasingly heavy anthropogenic burden on the biosphere. Five per cent of the earth's population, living in the USA, is responsible for almost 45 per cent of worldwide energy use and more than two-thirds of polluting emissions – a figure that takes into account multinationals controlled by the United States.

The predicted doubling of the earth's population in the next fifteen to twenty years, together with the foreseeable increase in worldwide energy consumption, will inevitably lead to an unprecedented ecological catastrophe.

Equally dangerous prospects for humanity are becoming clear as regards the anthropological crisis. It is manifested in a number of guises and trends. One of the main ones is the change in humanity's genetic heritage. The growth in factors altering genes as a result of the direct influence of a polluted environment (chemical and radioactive influences), and the indirect influence brought to bear through the appearance of ever more new strains of pathogenic microbes and viruses, is likely to result in dangerous changes in that genetic heritage. Biologists talk of growing damage to the structures of human genotypes produced by millions of years of evolution. The action of natural protective factors in the genetic heritage (natural selection) is very much restricted in human society, whereas social processes of biological

selection such as wars act in the opposite direction. In wars a large number of young, healthy individuals perish without leaving any descendants. Furthermore, contemporary genetic research has shown the negative influence of certain wounds on the human organism's genetic structures, particularly as regards mutation of genes.

The growing pressure on human beings from stress factors is a second significant indicator of an anthropological crisis. Contemporary life, with its rapidly changing social situations, its instability, the fierce competition that typifies all fields of human action, forces people into a succession of stressful states. These excessive tensions promote development of cardio-vascular, oncological and psychic diseases. A condition as serious as depression comes top of the commonest illnesses between the late 20th and the early 21st centuries. To escape from overwhelming psychic states people are turning increasingly often to psychotropic methods. As Francis Fukuyama (2002) notes, one American in ten uses the antidepressant Prozac or its equivalents. If we think only of the adult population of working age, that proportion is doubled. The antidepressant increases self-esteem, blocks uncontrolled aggression and provides a confidence that helps people achieve an objective in a competitive situation. However that kind of medication also has side-effects, causing episodes of weakness, memory loss, sexual dysfunction and brain lesions.

The third group of factors aggravating anthropological crisis are contemporary trends affecting human biological heritage. They have become more prominent as a result of achievements in genetics and the development of new biotechnologies. Deciphering the human genome theoretically opens up possibilities that would mean not only curing hereditary diseases but also strengthening certain human abilities (intellectual or physical). Research is already underway today which aims to make hereditary an increased level of blood haemoglobin. What is being punished as doping among sportsmen and women could become a genetically constructed property of the organism with the goal, for instance, of manufacturing future Olympic champions. Other research is attempting to develop electronic chips that can make the human nervous system function better. Already operations can transplant silicon chips into the brain in order to restore functions lost through Parkinson's disease.

All these experiments affecting the biological component of human life have far-reaching consequences. The concept of 'post-human' is already in common use and, though it is not always defined precisely, it contains the idea of changing the human biological heritage. Technogenic civilization is opening up a new area of risk. The systemic structure of the genetic factors of human existence is such that we have no guarantee that manipulating a gene that programmes particular properties of the organism will not produce a distortion of other properties. But there is also a social component to human activity. We cannot lose sight of the fact that human culture is profoundly connected with corporality and the emotional structure that goes with it. What if we imagine that the famous character in Orwell's dystopia *1984* managed to succeed in his baleful intention to modify genetically the feeling of sexual love. For people in whom that sphere of emotion had disappeared, neither Byron nor Shakespeare nor Pushkin would make sense any more – whole stretches of human culture would disappear for them. Biological foundations are not simply a neutral backdrop to social existence but the soil from which human culture has grown up

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and without which the moods typical of our spirituality would not have been able to exist.

Worsening global crises caused by technogenic civilization make us ask this question: is it possible to emerge from these crises without changing technogenic civilization's basic value system? I fear it may be necessary to alter that value system. The ability to overcome global crises requires a change in the goals of human action and its ethical regulators. This radical transformation means moving from technogenic civilization to *a new model of development different from the traditionalist and technogenic models.*

There are differing ways of understanding post-industrial society. It is often seen simply as an extension, a stage of technogenic development. In this case the problem of altering basic values does not arise. It is merely a matter of changes associated with introducing new technologies into the lifestyle, social communication and relations between states. It is in the context of this type of approach that the idea of sustainable development appeared as an extension of technological progress, accompanied by a few restrictions aimed at protecting the environment.

But it is possible to defend another viewpoint and another strategy. In this case post-industrial development is not simply an extension of technogenic civilization. Instead it means moving to a new kind of development of civilization. Can we see in contemporary culture the basis for that transition?

The idea that we must change our relationship with nature has been expressed many times in contemporary philosophical and social research. It is already part of the studies carried out by the Club of Rome. We are also aware of work on ecological ethics, in the context of which the most radical groups announce their refusal to see humanity's domination of nature as an ideal, and advocate abandoning any feeling of superiority to animals and plants and ceasing to see them simply as means to satisfy our basic needs. Among western supporters of this new ethics we should mention the work of Baird Callicott, Lynn White and Robin Attfield, as well, of course, as their original source, the ideas of Albert Schweitzer on the supreme respect we owe to life. Today attempts are aiming to widen the conception of the categorical imperative by applying it not only to the sphere of moral relations between humans but also to human beings' relations with living nature. Among most researchers and intellectuals defending ideas of a new ethics, theories of a new relationship with nature run alongside references to the experience of traditional eastern cultures and pay particular attention to the conception of nature peculiar to traditional societies.

But what chance do these new ethical regulators have of becoming rooted in mass consciousness? Through these positions we can see reappearing a contemplative relationship with nature which is more typical of traditional than technogenic cultures. Yet a return to such a traditionalist model is not credible. It has only been able to ensure that a small fraction of the earth's population could enjoy the good things of life. At the time of the Renaissance, when the rise of technogenic civilization was in its early stages, 500 million people lived on our planet. Nowadays the world's population is six billion, and without today's technologies it would be impossible to support that population even at a minimal level. In addition the attention paid to nature, the respect shown to it in traditional cultures, went together with a certain contempt for humans, whose existence was secondary in the hierarchy of values.

That is why, when we talk about the potential of eastern cultures, we need to be selective in order to preserve everything that attributes a value to human beings, to their spirit and to their actions.

Our relationship with nature cannot be reduced to contemplating it and adapting to it. Human beings will carry on altering nature. It is very likely that our ability to ride out the current ecological crisis will depend less on preserving wild nature worldwide than on an increased 'culturalization' of the natural environment. In this process an important part will be played by protection measures designed to preserve this or that ecosystem, as well as by the creation of new biogeocenoses to ensure the essential diversity of those ecosystems as a condition of the biosphere's sustainability. It is quite possible that, in this human-friendly scenario, the environment that surrounds us may become increasingly like a park or artificially created garden that will no longer be able to reproduce without human action directed to a precise goal. By and large these are ideas already expressed by Russian cosmist philosophers and developed in the work of Vladimir Ivanovich Vernadsky.

In the system of values and representations through which (western) technogenic culture's worldview is expressed, humans are contrasted with nature, since their action is directed outwards and towards transforming the world. The eastern value system, on the other hand, sees humanity as included in the organism of nature, as merged with it, so to speak; human action is directed less outwards than inwards, towards self-formation, self-limitation, participation in tradition.

The basis of a synthesis between these two representations does not come only from awareness of the ecological and anthropological catastrophe threatening us. It is also determined by contemporary trends in scientific and technical development. I have analyzed these processes and focused my attention on three essential elements where a correlation is starting to take place between contemporary science and the traditional values of oriental cultures.

First, representations of our environment as a living organism are today being integrated into the scientific view of the world through the conception of this global ecosystem called the biosphere. Secondly, scientific and technical control of complex, evolving systems that have synergetic characteristics makes it possible to develop new strategies for action echoing the traditional Chinese principle of '*wu wei*' as well as principles of non-violent action developed in Indian culture. Thirdly, through the study of complex systems on a human scale, contemporary science is linking the quest for truth with a broader application of the ethical regulators of scientific research. This linkage is taking place in the course of the ethical assessment process for scientific and technological programmes and projects and seems to be a condition for gaining true knowledge. Here a western idea, which makes truth a dominant value, is beginning to accord with the ancient eastern ideas that see morality as an essential basis for truth.

The ideas of the new ethics and the new structures of values linked to contemporary scientific and technological development are conditions for new strategies for action and a new conception of nature. But we are still far from realizing them in practice. What stands in their way is largely the attitudes dominant in economic thinking and the organization of the global economy.

In his book *Macroshift* Ervin Laszlo (2001), taking up the Club of Rome's ideas on

limits to growth, pointed to a set of myths on which contemporary economic activity is based and which we must abandon. In the first place we find consumer society's fundamental principle ('the more you consume the better you live'). This principle has a crucial role in the organization of the contemporary market since a rise in output is connected in a circular effect with a rise in consumption.

Laszlo quotes Victor Lebow, an American analyst of retail business, who in the 1950s formulated the following theory as regards contemporary consumption: 'our extremely productive economy demands that we make consuming our way of life, that we turn buying and using goods into rituals, that we seek out spiritual satisfaction in consumption, that we burn, wear out, throw away and replace objects faster and faster.' Laszlo stresses that over the last 50 years contemporary civilization has consumed as many goods and services as all preceding generations put together.

It is unarguable that this state of affairs is based on a relationship with nature which sees it as an inexhaustible reservoir of resources. But rejecting that situation involves radical changes in the contemporary strategy for economic development and in consumer societies' way of life. So we need to know whether the conditions for these changes exist in the contemporary economy. That is an issue which must be analyzed, taking into account the changes brought about by the knowledge economy, the growing use of information and the general spread of energy-efficient technologies.

Transition to a new type of development is linked to opening 'growth spaces' for the new values that are emerging in various areas of technogenic culture, including religious and politico-legal awareness. For example, in the religious sphere, contemporary Protestant theologians are actively developing the idea that God may not have completed the process of creating the world, a process that is still going on today (Holmes Rolston, Arthur R. Peacocke). So the world is not simply created by God, who sees and observes it, as it were, from the outside. God takes part in that process, which is also influenced by the bad things done by people on earth. This produces a representation where human beings are also responsible for cosmic evolution and which throws a new light on the principles of humanity's responsibility for nature, itself and future generations.

We must also look carefully at how political consciousness changes, at what margin for growth the new values have in that area. Many problems arise here. In his time Winston Churchill liked to say that, despite its many faults, democracy was the best thing humanity had invented up to the present day. Indeed democracy ensures very efficient management of complex social systems, since it assumes a reciprocity of relations which corrects rulers' decisions. In monarchical and autocratic styles of government those relations are very weak. But when social life is going through rapid changes the defects of democracy are accentuated. To take the example of Russia or the USA, a president is elected for four years (or even eight, with two terms), which of course favours tactical, short-term objectives, whereas we need a long-term strategy making it possible to control changes on a global scale that are likely to transform the situation of the contemporary world. There must be some human responsibility towards future generations.

Current political and legal situations are destabilizing many of technogenic culture's norms and values. New techniques for manipulating mass consciousness

lead to practices of force-feeding information which are passed off as individuals' free choices. In this way the very idea of human rights begins to waver. As Eduard Soloviev's work shows, the development of that idea through the three declarations of 1776, 1786 and 1948 took into consideration the negative experience of arbitrary action by the monarchy, wars of religion and 20th century totalitarianism. But today the problem arises of defending the individual against oppression by information.

Recent years have shown that the values of the free, sovereign individual and the slogan of defence of human rights may be used as pretexts for military action which unleashes humanitarian catastrophes. In the globalization process the problem of the articulation between the idea of human rights and that of the rights of peoples is becoming increasingly acute.

But issues around human rights have another important aspect connected with the increasingly widespread use of biotechnologies. The prospect of extending life expectancy to 120 or 150, the possibility of programming human biological properties, the use of new-generation neuro-pharmacological substances that strengthen the memory and other cognitive capacities confront society with new ethical and legal problems. As Francis Fukuyama (2002) observed, the biological revolution has in the end revealed the existence of 'something that is a relationship with the nature of humans, of the properties specific to the species and shared by all human beings'. But originally the idea of human rights was formulated as an idea of natural rights, which presumes a certain invariance of human nature. If biotechnological applications are destined to create differences between individuals with their biological heritage – for instance using expensive technologies that could lengthen life or provide qualitatively new cognitive functions, and which would be available to the wealthiest – there would in fact come about something comparable to caste divisions between superior and inferior races. In this situation what would become of the idea of human rights?[1]

The increasing speed of social development is in the process of bringing about considerable changes in human culture and activity. A whole set of basic values for technogenic civilization is being called into question. 'Growth spaces' for new values, as well as new prospects for intercultural dialogue, are today opening up. We need to identify and expose them, assess how far they are viable and understand the consequences they might bring with them. This analysis assumes that we make explicit the new universals that might be created in the sciences, the technologies, art, morality, political and legal consciousness. That work is precisely the aim of philosophy. It is an occupation which is by no means abstract, for it comes out of the need to define possible development strategies for civilization. At the same time it defines the most promising task for contemporary philosophical research.

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Notes

1. These topics have been discussed recently by the Rand Corporation with President George W. Bush. They were not seen as fantastical ideas situated in a distant future but as real possibilities for our era.

References

Fukuyama, F. (2002) *Our Posthuman Future: Consequences of the Biotechnology Revolution*. New York: Farrar, Straus and Giroux.

Laszlo, E. (2001) *Macroshift: Navigating the Transformation to a Sustainable World*. San Francisco: Berrett-Koehler.

Stepin, V. S. (2003) 'Modern Technologies and Perspectives of Civilization' in P. Hershock, M. Stepaniants, R. Ames (eds) *Technology and Cultural Values: On the Edge of the Third Millennium*, pp. 17–25. Honolulu: University of Hawaii Press.

Stepin, V. S. (2004) 'Science, Education, and the Transformation of Civilization in the Twenty-first Century', in Alan M. Olson, David M. Steiner, Irina S. Tuuli (eds) *Educating for Democracy: Paideia in an Age of Uncertainty*, pp. 31–41. Lanham, MD: Rowman & Littlefield.

Stepin, V. S. (2005) 'Theoretical Knowledge', *Synthese Library* 326: 1–10.