

## THE SPLENDORS AND MISERIES OF TECHNOLOGIES

S.G. Dzhura, A.A. Chursinov, V.V. Yakimishina

Donetsk National Technical University, Donetsk, the DPR  
[dzhura@inbox.ru](mailto:dzhura@inbox.ru)

***Annotation** The practice of understanding of E.I. Roerich's heritage in respect of current problems of social communications, the global society, the global risks, the digital epoch, and artificial intelligence is analyzed in the paper. The recommendations to overcome the risks are given.*

***Key words:** Ethical Oriental Gnosis, metascience, Russian cosmism, artificial intelligence, digital epoch, blockchain, deep teaching, 3-D printing, the Internet of Things, cloud computing and GDV technologies.*

*The new generation will turn out to be the generation of civilized savages if it does not care about planting the great foundations of Culture and Agni Yoga, and if it does not protect cultural figures and their works. The nuclear bomb will be the top achievement of the practical purposes for such a new type of savage.*  
E.I. Roerich

**Introduction** The prophetic thoughts of the Great Family as to the New Epoch birth are especially topical in the year of E.I. Roerich's and N. K. Roerich's jubilees. There is a great need in discussing, philosophical, ecological and political understanding and many-sided analysis of the reasons and consequences of the global processes which have been taking place in the world during last decades due to the world geopolitical changes. N.N. Moiseev's idea that "... it is very important for the entire planet to have strong Russia and the resources which will be able to play an outstanding role in establishment of a new balance of the mankind and the nature..." correlates directly with the E.I. Roerich's idea: "**Russia's revival is the revival of the whole world. Russia's death is the death of the whole world.** Someone started understanding it. However all had thought quite recently that it was Russia's death which was the rescue of the world". [1]

**The problem statement** The 50<sup>th</sup> report of the Club of Rome reads: "**The mankind is moving on the trajectory of a suicide.** Until the prohibition strong deterrent rules are adopted, it will be reducing short-time utilitarian habits of our current economic paradigm... **The mankind needs at least a new thinking and a new philosophy as the growth old philosophy is obviously incorrect**" [2] and "chapter two of our book is devoted to philosophy with our hopes to find the keys to primary sketches of the improved philosophical belief system. The search can lead to the desire (if not the necessity) to arrive to new "Enlightenment"... Europe will hardly be the new

Enlightenment centre, the “Enlightenment 2.0”. The mankind should examine **great traditions of other civilizations**”. [2] This idea also correlates with E.I. Roerich’s thought: **“The destiny of the West is already solved. It has no future. Don’t look for it in any other European country; do not watch the disorder taking place there”**. [3]

Further on the report of the Club of Rome reads: “It would be wise to pay attention to spiritual and religious aspects of **all civilizations** which have recommended the restrictions like that... According to Pope “all this indicates the urgent necessity to move forward to the “active cultural revolution”. [2] Dalai Lama IV agrees with him: “The planet does not need a great number of “successful people”. The planet desperately needs peacemakers, healers, restorers, storey-tellers and all types of loving people. It needs people with whom it is pleasant to live. The planet needs people with morality, ready to join the battle to make the world alive and humane”. [4] Thus we see the principle necessity to change the objective of education, development of the mankind and interrelations in the world.

**Russian cosmism as a planetary phenomenon** The more traditional solution of the above mentioned problem, from our point of view, is in the concept of the **“Russian cosmism”**. We would like to emphasize that there is no such a concept as the “German cosmism”, or the “French cosmism”. F. I. Girenok, one of the researchers of the Russian cosmism, wrote: “The Russian cosmism is called Russian because the space in it originated from the word “the universe” meaning the home which we need to move into. However we should not do it one by one. We should do it by the whole world”. The idea of active evolution, the necessity to have a new conscious stage of the world development according to the mind and moral criteria is the main characteristic of the Russian cosmism. A human being in this sense is the creature summoned to transform not only the outer world but also the own nature. The intensive spiritual search, understanding of the own role in the Universe and the purport of existence and the place the human being occupies on the Earth is the goal of the Russian cosmism. According to F. M. Dostoevski the Russian individual absorbs the pain of the entire world and replies the pain. He gets global spiritual features and his mission becomes global (this is also caused by the greatest territory and the culture of the Golden and Silver Ages). That is why, in our opinion, Y.A. Gagarin was the first man to fly into the space.

The new cataclysm associated with the collapse of the USSR turned back the thinking of the majority of the mankind. **Bringing up of the society of consumers, not only in the west but also in Russia, is exactly the opposite to the ideas of the Russian cosmism and leads to the mankind’s death** ( the report of the Club of Rome signifies the fact). We think this to be the main problem of today!

It is important to note that the Russian cosmism figures had the original thinking which covered the entire space and brought the mankind beyond the Earth gravity. It was the pleiad of such Russian cultural workers as N.F. Fyodorov, K.E. Tsiolkowski, V.I. Vernadski, A.L. Chizhevski, I.A. Ilyin, V.S. Solovyov and others.

I.A. Ilyin writes: “Revival of St. Russia is not only possible reality, but also the necessity. The Russian nation can be preserved only under these conditions”. E. I. Roerich, an expert on the Ethic Oriental Gnosis, agrees with him. She compares the mission of the Russian individual with that of the English. She uses the term “the good old England” meaning its traditions. However the most ancient occupation had its

traditions too. So it can hardly be the guideline. When we speak about the Germans we often mention their ideal of the German order. However, there was the German order in their concentration camps... It is the Russian individual whose ideal is the concept of "Saint Russia". The word 'saint' here means not rich in money but reach in God).

**The Russian cosmism culminated in Agni Yoga** which is the doctrine the modern mankind is actively coping with. Agni Yoga being the triune metascience – theosophy, Agni Yoga and THE [5] - speaks on space thinking, which is called Ethic Oriental Gnosis, in the modern philosophical literature. The new science is being developed. There is no doubt that creative effort of cosmism followers did not become the thing of the past. That is why the future world order forms have been described in the book "The World Community is the Future Society Model". [6]

**Solution in metasciences** One of Gödel's theorems on the complex system is "contradictory and incomplete inside" can be applied to the concept "Russia's strategy" which is a complex system by itself. As far as the classical science approach does not solve the problems which appear inside, the solutions should be looked for outside. The concept of the metascience which was above mentioned is outside. According to L. Landau "there are natural, unnatural and supernatural sciences". That is there are technical sciences, liberal arts and metasciences or, in another classification, physics, metaphysics and hyperphysics. V.I. Vernadski embodies physics, Pierre Teilhard de Chardin – metaphysics, and Édouard Louis Emmanuel Julien Le Roy- hyperphysics. Metasciences give the mankind concepts of new energy, social world order, the coming world way of thinking.

**Cycles and metacycles of science** A prognostication function is known to be the main task of science. Ancient science including metaphysics did it. Every scientist who has self-respect knows the limits of his competence. That is there is a certain forecast horizon for the traditional science (for example, the weather forecast for a month. The longer forecast can't be made with the application of the traditional methods). We understand that the potential of the classical science is limited. The Russian scientist-encyclopaedist L.V. Leskov wrote: "First, scientists were unable to predict a single big turn of the world history of the XX century. Second, the number of strategic system errors had spiked in some countries, in Russia, for example, by the end of the century. The payment for the errors appeared to be extremely high. The scientists failed to give decision makers strong evidence of the strategic decisions badness". [7] More than that, the economic problems outnumber any other one. Thus the problem is as follows: the prognostication device of classical science is not efficient enough.

We need the long-run prediction as the longer the period is, the more accurate the prognostication is. Prof. V.V. Puck (the Department of Mathematics of DonNTU is named after him) expressed the nontrivial thought [7]. It was Prof. V.V. Puck who spoke on two prognostication versions – a short and a long one- and showed the advantages of the long one. As far as the classical science is hundreds of year old, and the metascience is hundreds of thousands years old, there are some rather solid grounds for studying the metascience data and synthesizing it with the classical science data on the example of economic cycles and the mankind technological structure change which is done in the paper [7].

According to L.V. Leskov “building of a new theory will be possible only beyond the frameworks of the current scientific paradigm”. [7] T. Koon, the author of the scientific paradigm concept thinks that the standard science develops in such a way “as if the nature is inserted into the paradigm being the previously nailed box. Phenomena for which there is no room in the box are often, if not totally, missed. The standard science researchers do not have a goal of creating new theories and, besides, they are intolerant to those who try to create them”. [7]

**The correct choice of the objective** As far as everything which works or is planned should be optimal the optimization objective needs to be chosen. In our case it's the mankind existence goal. According to all above mentioned and works of E.I. Roerich this goal is a saint individual or, in the secular coordinates, perfect, spiritual, and refined. The problem definition influences the education vector too. The vector has shifted from its previous state aimed at developing of a comprehensively advanced individual to a specifically pragmatic one. The task of the Soviet universities was to train a professional able to think and analyze information. The task of the modern education is to get skills of working with developed facilities and software that is with the so-called competencies (the western approach which is called blind in the report of the Club of Rome).

The problem, from our point of view, is to keep balance between the spiritual and corporal. First of all, the spiritual is to be the priority. E. I. Roerich said: “The world's rescue is in new formulae, a new spiritual and cultural approach to all life issues, both state and private”. [3] The way has been developed in details at a number of international interdisciplinary conferences [8] and candidate and doctoral dissertations [9]. The Ethical Oriental Gnosis reads: “The goal is to arm a human being without any device, as all facilities, which are more perfect than any other mechanical device, are concentrated inside the human being in its potential state. This fact awareness will open new ways of search and chances for amazing new achievements. All the inventions and devices created by the mankind's genius are necessary until his own device starts working in its full power. To understand it one should think about far high level planets where there are not plants and factories, machines and devices. Life, in all its phases, is controlled by a creative thought and the spirit power. All the human being needs for living is created”. [10] This is, from our point of view, an analogue of 3-D printing of nowadays. We will speak about it in details later. Now the civilization pays all its attention to the external which gives material wealth, the internal is forgotten both on the state level and in everyday life. Russia's policy and its objective is a nice exception.

There is an important parallel in the correspondence of E.I. Roerich with F. Roosevelt: “...Russia is an equal balance of America, and it is the construction under that peace in the entire world will be the solved problem. The refusal from the loftiest principles is unable to provide protection”... [1] It is per se the foreign policy of today's Russia: “St. Petersburg, June 1<sup>st</sup> 2016. / TASU/. The reasons of Russophobia in the west are related to the multipolar world which becomes firm and which monopolists do not like. The President of Russia V. Putin stated it at the meeting with the heads of the key international information agencies when answering the question about the attitude to the RF in the world ... [11] “Problems which appeared in previous years in the world are connected with the world's unipolar nature after the Soviet Union's collapse. Now everything is being restored, and the world is getting, if not already, multipolar. This will

lead us to the inevitable necessity to restore the significance of the international law and such universal international institutions as the UNO”, said the Russian leader on 18.10.2018 [12].

**Two ways of the civilization development** According to a number of scientific forecasts (for example, [13]) the mankind is in the bifurcation point which the entire further way depends on. It will either develop the human being (his inner characteristics) or it will be based on external development and lead to transhumanism or the mankind’s cyborgization. E.I. Roerich warned of it in 1952: “The mankind cannot turn into the civilization robots. In this case it will exist for some centuries only. It must be aware that nothing can stand without roots and basis. That is why the basics of humanism must be protected in any country which would like to live and flourish. Thus **the fate of many countries and maybe the existence of our entire planet are in mankind’s hands**”. [3]

We would like to analyze the trend in details as the mankind is going this way now and cannot see the alternative. The forced trend, which is economics digitizing, is imposed by the west and is important now. The matter is how to make the forcible action reasonable.

**Digital Hiroshima** S.Y. Klyuchnikov, the famous scientist and the expert on the Ethical Oriental Gnosis, made a speech at the party to celebrate the 140<sup>th</sup> anniversary of E.I. Roerich in which he said:”Russia is the country of a word, not a numeral”. He proved his words by a poem of N. Gumilyov. There are two concepts in it: “there were numerals for a poor life” and “a clever or reasonable numeral”, that is “spiritual” in our understanding. The absence of urging towards spirituality in the civilization liberal model leads to the numeral poor life (pragmatics); it does not put forward lofty goals and even laughs at them. This is a humanitarian or philosophical approach to the problem.

Let us examine the point of view of engineering professionals. The key professor on artificial intelligence L.N. Yasnitski who is in the top 100 scientists of the RF, has published a paper **“The Artificial Intelligence Past is Instructive, the Present is Brilliant, and the Future is Doubtful”** which is in the open access. [14] He was not afraid to deviate from the main western trend of the mankind’s cyborgization. More than that he risked his highest scientific reputation (along with some other researchers) and gave a positive reference to the book “The Universe Ethic Algorithms” [15] written in the DPR in which the approaches to the mankind’s development are examined in a synthetic vein and are based on the Roerich’s inheritance. We would like to express our sincere gratitude to the professor.

There also are brave scientists in the west who support this approach. Gerd Leongard wrote in his book “Technologies against the Mankind” [16]: “When the issue is discussed, people say it is good but they have neither time nor resources for it. It is a great mistake because **the society which has the technological progress limitless power and does not have ethic is doomed**”. The conclusion fully coordinates with the conclusion made in the report of the Club of Rome the key ideas of which we mentioned above.

The matter is that there are **several levels of the problem solving**. The first is pragmatic, the second is moral and the third (the highest one) is ethical. The modern civilization will have to rise to the third level if it wants to survive. That is why the mankind’s teachers got the doctrine of Agni Yoga through its mother E.I. Roerich.

Here are some interesting, from our point of view, Gerd Leongard's arguments which are parallel to E.I. Roerich's thoughts [16]: "People's happiness caused by complete dissolution of their own human nature in new technologies seems rather a crazy idea". It is hard to disagree with the thesis. We spoke about goal-setting above. E.I. Roerich's important statement corroborates it: "Understanding of supreme laws will place machinery under spirit which will cause understanding of lofty goals and the entire material nature transformation. The transformed nature, the people's transformed spirit will suggest new, better forms of life order". [17]

Further on the author [16] develops his idea: "I think the decisions made in the field of scientific and technological research, their financing and control should be resolved for the benefit of happiness and well-being of the mankind. Eventually the cognition process goes on with the help of technologies but not for the sake of them". There is some difference with E.I. Roerich's position here. Is the mankind's well-being the mankind's goal? The position is criticized in the heritage of the Great Family (in the book "Community"): "When lightning burns wings, when thunder disturbs hearing, **when well-being anchors disappear, our messenger will knock on the door.** A satisfaction smile will not answer the knock". [18] Another book of Agni-Yoga "Hierarchy" reads [19]: "We disposed to the words which include the idea of good. However one of them contradicts our customs. It is well-being. Research the mankind's history and make sure that nothing great has ever been created in the well-being. I have been repeating over again about blessed obstacles for a long time. However nobody likes fighting in the feat. But the fighting is unavoidable; otherwise the blade of spirit will not be hardened. The obstacles and the ability to overcome them are necessary for the terrestrial movement and for the distant worlds. Calm is not suitable for the Hierarch".

We agree with Gerd Leongard's opinion on **digital obesity**. In 1981 the first personal computer had the same computing power as all USA's and Soviet Union's computers had at the moment of the first Earth satellite launching... Now a computer on any user's table outperforms the power by many orders of magnitude. What does the user usually do on it? The question is a rhetorical one.

A single question is the chapter on **digital feudalism**. Everything goes to that. We have participated in the conference on digital technologies lately [20]. There were profound and many-sided discussions on blockchain, deep learning, artificial intelligence, 3D- printing, and the "Internet of Things" there. One of the participants stated that our position tracing by the mobile Internet, release of the advertisement when we pass by a shop ( some "electron barker") or a video camera, the complete report on the trajectory of visiting the Internet sites and, in addition, way physical tracing made people's life so open for interested organizations ( western secret intelligence services, marketers, psychologists, and every colour political manipulators) that one might as well speak not only about the digital feudalism but also about **digiphrenia** [16] a new special privilege of being "off-line" being its polarity. What role does the human being play in the web: that of a spider or a fly? It is one more rhetorical question.

Nowadays the blockchain technologies which allow recording everything to the web and guarantee the impossibility to delete the information ( however the issue is debatable) is almost the complete analog of the concept introduced by the Ethic Oriental Gnosis – the "Akasa chronicles". However today it is used in a totally different

viewpoint, for example to depict the “agreement to have sex” and to have no chance to deny it during an investigation... These are “high technologies” acting nowadays. “Magnificence and misery of technologies” indeed! We are not going to develop the issues as some of them are not ethical even to discuss.

According to E.I. Roerich philosophical meaning of technologies is in the fact that while creating them we inevitably study ourselves that is we fulfill the prophecy of the Delphi oracle “know thyself”. This is the most important thing. Meanwhile we understand that now we are unable to stop our technological development and using the digital technologies like a biker can’t stop not to fall down... The cloud computing does the same. It trains us to space data bank, the noosphere and God.... The concept of the digiphrenia (which means being in different social networks [16] at the same time) trains us to the spirit divisibility about which E. I. Roerich writes.

**The middle way** There is to be some compromise between digitization (**a true technology obsession**) and the common sense. How to pass between Scylla and Charybdis or Pandora’s Box and Aladdin lamp? The mankind is to answer the question. We do not know wiser advice given by E.I. Roerich and written by her heart and hand in her “Leaves of Morya’s Garden” II. 135: “When we have to destroy many terrestrial devices because of their danger, the time to make the mankind closer with the help of the natural device will come. The device is a primary stage. It will be a true achievement when spirit replaces all devices. **Isn’t arming of the human being without any machine the achievement?!**” [21] The development of the human being’s heart which is the most perfect device is at issue. One of the books of Agni Yoga is called “The Heart”... [22]

**Modern trends and ethic standard in robotics** The current scientific problem is as follows: are machines able to state whether a solution is ethical or unethical? We remember Isaac Asimov’s robotics laws:

1. A robot cannot do harm to a human being or allow doing harm to the human being because of its inactivity.
2. A robot must not obey all human being’s orders if the orders do not contradict the First Law.
3. A robot is to take care of its safety being not in contradiction with the First and Second Laws.

Nowadays the laws do not work (they are not obeyed, to be exact). We can see it on the example of Donbass: the rival’s drones which coordinate fire with the help of artificial intelligence fly over the territory (shock drones can attack people themselves). We cannot speak about the triumph of mind and technologies in the situation.

The issue of development of ethical standards in the artificial intelligence is in the agenda of the international scientific community today. [23] The standards are to be adopted no later than early summer of 2019. How will the robot define ethicality of any action? This is the question. Research [24] is one of the trends, and it causes even more questions...

In 2016 a structure of the IEEE (Institute of Electrical and Electronics Engineers) in parallel with some other organizations (the UNESCO, for example) launched a new initiative in the field of the artificial intelligence (hereinafter AI) ethic [21]. The importance of the IEEE efforts is defined by its key role in the community of scientists

and engineers working in electrical engineering, electronics, information technologies, telecommunications etc. This will have the direct influence on the AI developers. As a result “Ethically Aligned Design” was developed [23]. The IEEE document describes the main topical threats and risks related with introducing of AI based autonomous systems. A number of releases [25, 26] have been issued to discuss the problem. We expressed our grounded opinion in English to solve the task [27].

However the modern scientific paradigm uses the physical concept (and does not include metaphysical and hyperphysical one). It remains the colossus with the feet of clay. It makes up a separate research the ways of making of which should be looked for in the Great Family’s heritage, in the field of the gas discharge visualization technology (GDV) to be exact. E.I. Roerich paid our attention to it in her works. The issue is planned to be examined at the seminar of the RF Roerich National Committee.

Our opinion on the issue is expressed in the book “The Universe Ethic Algorithms” [15] which has been awarded the diploma of the Prize-winner of the All-Russian Contest of Scientific Publications [28]. By the recognition the DPR’s representatives were introduced into the education area of the RF. We are very grateful to our destiny and people who bore in it. We hope this book will be useful for the Big Russian World as it was being written under the attacks of neo-Nazi chastisers in Donetsk in 2014. It is per se a public definition of the doctoral dissertation which the author failed to do at the profile institution in Kiev on the eve of the war. Anyway, we will go on working at it.

**The problem solution** is offered, from our point of view, in E.I. Roerich’s heritage: **“The mankind can’t turn into the civilizations robots as in this case it will exist for some centuries only.** Nothing can stand without roots and base. That is why every country which wants to live and flourish should protect humanism basics. Thus the destiny of many countries, and may be, the existence of our planet is in the hands of the mankind.

Can we be so crazy not to understand the dangerous moment space and atmospheric vibrations warn us about? The elements activated by the atmospheric vibrations can destroy all flourishing continents. However they can lift new lands having new potential from the bottom of the oceans. But a lot of irreplaceable things will go never to return!

We will have to be careful not to cause the vibrations and breakages in the atmosphere which covers the Earth from many spatial accidents and visitors with a protective net.

It is high time the mankind realized the gigantic patrol and protective work which our great safeguards do constantly and strictly. They have been raising the alarm for a century trying to warn us about the disaster which threatens us if we do not educate our consciousness in the universal sense and do not cooperate with people instead of spreading corruption, hostility and conquest of power. Any enslavement and conquest in any sphere of life should sink into oblivion. The future construction is to be based on conscious labour and conscientious attitude to everything and everywhere”. [3]

**Conclusions** 1) The mankind’s development vector is to be immediately changed into the new one which is a middle vector. Its versions were mentioned above, and we would like to mention the symbolic statement of P.F. Belikov, an expert on the Ethical Oriental Gnosis: “The world politics and economics have never been and will never be

the evolution decisive moments. The evolution goal is not to create a human being who thinks politically correctly, but the human being who is able to think by space categories. Politics, economics and all social structures created by them teach the human being to know things in existence on smaller and temporary examples. It would be ridiculous to think that fairness and unfairness of the short-lived forms of the mankind's social life are yardsticks inherent to the space mind". [29]

2) The plan implementation forms are in the heritage of the great family of Roerich and modern scientists' developments.

3) We have no doubts as to the great future of Russia and its key role in the world. The methodology of this complex process is stated by a famous Russian poet and writer Y.M. Klyuchnikov: "I am sure that many space ideas of Agni Yoga will be included into the world outlook of the future Russian elite and the mankind's vanguard. The world outlook main point for an average person is to recognize the energy which runs through the world. The person is a part of the energy and can master it gradually. The recognition will happen not by the use of force or due to a missionary propagation or religion official change. It will happen due to the change of the atmosphere on the planet. The process is natural and gradual, and the new world outlook will not cancel the ideas of other religions and doctrines including Christianity.

I would like to emphasize that it is to become a secular world outlook but it should not replace the existing religions. Let them remain in the form their leaders and followers would like to have them. I am sure that the modern human being will fail to answer numerous challenges of the epoch and forthcoming trials without acceptance of these ideas and their practical implementation. Chaos, both natural and controlled, human's aggression and damages both natural and generated by the civilization will be so strong that a separate person and entire states can be lost.

To cross the storming worldly sea any ship and person need, first of all, a lighthouse and a compass. I do not see any universal means except for Agni Yoga with its sacral knowledge based on an ancient tradition and the latest achievements. Traditional religions are nice, but insufficient, from my point of view, as they are unable to explain the meaning of what is going on in a new language which would meet nowadays". [30]

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