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ON THE ROLE OF ENLIGHTENMENT IN THE MODERN EDUCATION

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The paper analyzes notions 'education' and 'enlightenment', their commonalities and differences. It is proven that though in ordinary perception these notions are treated as synonyms, from the standpoint of philosophical discourse it is not quite so. It makes sense to understand 'enlightenment' as the most profound cultural level of education, cultural maturity of a person (a society), a high level of personal development (both moral and intellectual), mental development, freedom from ignorance and prejudice. Enlightenment is opposed to 'the smatterers' (a term introduced by the famous writer), which tends to combine superficial awareness with cultural immaturity and even moral savagery. The paper presents the author's reflections on promotion of enlightenment in our times and challenges on this path. Each era brings forth its own Enlightenment, its own ideas of education and ignorance, intelligence and stupidity, and eventually of the good and the evil. Enlightenment principles in very general terms may look the same for the 17-18th centuries and for modern times (for example, Descartes principle 'to doubt everything'), but it is hardly probable that antischolastic, antimedieval nature of this principle is highly relevant for the present days. Many ideas of the New European Enlightenment great by their nature did not withstand the tough test of the 20th century: blatant idealization of man and social relations was erroneous, and emotional and irrational side of the human nature, its potential propensity to nihilism and destructiveness, to the lust for power and violence was underestimated. Abilities of the mind, justified in scientific knowledge and technology were not justified in moral, political, social, and ideological sense. The 'light of mind' as a basis of any Enlightenment turned out to be too faint to illuminate the paths of people and enlighten them despite great achievements in science and technology. The spirit of Enlightenment by the beginning of the 21st century has not yet defeated the spirit of violence, fanaticism and irrationalism. Apparently New Enlightenment is needed, which will not just illuminate the path of an imperfect man, but will teach him to live with dignity, skillfully using his own 'lamp of Diogenes'.

Everything said about the role of enlightenment in the modern education has direct implications for the educational process at the St. Petersburg Mining University, the goal of which as recently formulated by the Rector in his address to the associates of the Mining University is not only to train highly qualified specialists, but to raise 'real Russian intellectuals, distinguished by their high level of education, high moral and ethical standards, decency and nobility of the soul'.

Key words: enlightenment, education, philosophy, science, criticism, scientism, popularization, educational philosophy, 'a lamp of Diogenes', New Enlightenment.

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Putting question in this way requires some terminological clarification. In most scientific, pedagogic and literature texts as well as in ordinary discourse the terms 'education' and 'enlightenment' are used and perceived as synonymous. The agencies managing the educational process are usually called either ministries of education or ministries of enlightenment. The same is true about the publishing agencies (for instance, publishing house Prosveschenie /Enlightenment/). And it's unlikely that those who named one of the avenues in St. Petersburg the Prosvescheniya /Enlightenment/ Avenue, meant something different. As concerns certain school subjects, the term 'enlightenment' is for some reason most frequently used with regard to the mathematical education [10].

Thus at the first sight it seems that there is no special problem here and this is a purely terminological issue. But nevertheless this is not the case. It's enough just to ask a simple question: 'Is every person who has received certain school or even university education is enlightened in a broader sense?' Language and cultural intuition suggests that in certain contexts the terms 'education' and 'enlightenment' are not always synonymous, that education can be different and under the enlightenment a certain qualitative property of education is often implied. While 'education' usually refers to a formal statement of the fact, the term 'enlightenment' rather carries a positive connotation in respect of education. It is a sort of archetype of the 'Light' as the antithesis of the archetype of the 'Darkness' (for example, expression 'Ray of light in the darkness', 'Obscurantism', etc.). Solzhenitsyn's 'smatterers', as clear from the word itself, is obviously referring to anything, but not to the enlightenment [20]. 'Long live the sun, so the darkness will disappear,' A.S.Pushkin – refers to the same. 'Science is like a candle in the darkness,' Carl Sagan. It is this understanding of the Enlightenment and its role in education, in social and cultural life, that is echoing with the ideas of the European philosophy of Enlightenment existing in the 7-8th centuries [16].

But a question appears: to which extent are the ideas of the European Enlightenment of the past consonant with and relevant to understanding of the enlightenment as an essential element of the modern education.



In the Russian New Philosophical Encyclopedia, which is presently the most authoritative, in the article 'Enlightenment' there is not even a hint in this regard. But some philosophical reference books, for example the International Philosophical Encyclopedia, provide a broader and more modern understanding of the Enlightenment, bringing the latter beyond the known philosophical concept of the 17-18th centuries: 'Enlightenment is a current in the cultural and spiritual life, pursuing a goal to substitute the outlook based on religious and political authority with that deriving from the requirements of the human mind and able to withstand a criticism by any individual. This concept of enlightenment, constituting *not once* (emphasis with italics by authors of this article) a historic epoch of spiritual development (in ancient world, for example, a period after the death of Socrates), became an expression of a general process embracing a number of countries, and first of all the Europe (17-18th century), while in different countries and different areas of life this process ran differently' [6, p. 369]. These ideas were most vividly formulated and expressed in the European Enlightenment of the 18th century – ideas of humanism, rationalism and skepticism, freethinking, religious tolerance, human rights, a critical approach to traditional authorities and beliefs, refinement of public attitudes and morality by combating prejudice, ignorance and stupidity, an appeal to common sense, etc. The main ideas of the Enlightenment referred to above clearly go beyond the scope of one philosophical direction of the 18th century and, in our opinion, are quite appropriate to become an ideological guidance for the modern enlightened man.

We have had already several opportunities to express our position in this regard [18, 19]. Its essence is that Enlightenment in its broadest sense is not necessarily limited to the ideas of separate philosophical directions called 'the philosophy of the Enlightenment', that the enlightenment in one form or another in response to the needs of any given society has always had place in different educational and cultural concepts and has been included in the progressive systems of education and personal development. Therewith a question 'What is the Enlightenment?' has numerous times become a subject matter of philosophical reflections. Thus back in the 18th century a Berlin author I.F. Zollner raised this question in his article, criticizing, as he put it 'a mess called the enlightenment'. This article gave rise to a discussion, joined by a famous German philosopher and enlightener M. Mendelson, who published an article 'On a Question 'What Does It Mean to Enlighten?'' Even such a prominent personality as I. Kant took part in this discussion, publishing an article 'What Is Enlightenment'. More than two and a half centuries passed, and again one of the most prominent contemporary French philosophers Michel Foucault returns to this question. 'What event do we call the enlightenment – Foucault asks, – predetermining to some extent what we think and what we do today?' [23, p.335]. The answer given by Foucault is unexpected and though-provoking: 'The modern philosophy is the philosophy trying to answer a question, imprudently planted two centuries ago: 'What is the enlightenment?' [23, p.335-336].

Contemplating on this subject, one of the most authoritative Russian philosophers B.V. Markov proceeds from the assumption that the Enlightenment in our times is nothing else, but *humanistic education* [9]. Erich Fromm in his works develops an idea that the task of the Enlightenment is to instill the guiding values and norms of our civilization in people [22]. In one of the authoritative international humanitarian dictionaries [7] in the article of a French sociologist M. Crubellier 'The Education' the following thought is expressed: 'We cannot evade a questions of whether education is the social service similar to others? *Isn't it serving a special function* (emphasis with italics by authors of this article), reaching far beyond the social and economic frames? Should not education preserve knowledge of the greatest achievements of humanity and respect thereto or at least indicate the landmarks for their search in a perplexed labyrinth of succession of generations and cultures?' [7, p.167]. This special function of education is in our opinion what can be referred to with a term 'the Enlightenment'.

The Enlightenment is exactly what is clearly often missing in the modern education and personal development. This concerns both school and university education, in Russia and abroad. But a question appears – how shall the enlightenment process be exactly implemented in the field of education and personal development. The global history of education proves that there is no hope for this question to be answered soon. There were always those who criticized the education systems adopted, including for that they were missing what is called 'the Enlightenment'. Apparently, this is one of the 'eternal questions' of human culture, and it can not be resolved by finding only one possible 'technology' of education and even more so of the 'enlightenment' process. It is especially difficult to be done for the mass education. First of all, who shall and can become the enlightener for the young generation? Apparently, only those who themselves have attained the enlightenment can become the enlight-

eners for the others ('The enlightener get enlightened yourself first'). Only the best school and university teachers, the most talented popularizers of science become such enlighteners, including the scholars themselves able to present the modern knowledge in a comprehensible, convincing and emotional manner, the writers and journalists, writing about science and other most educated and culturally mature people.

Of high importance is also the content and selection of knowledge put into the center of enlightenment. Apparently it is impossible to create a universal and sufficient for everyone compendium of compulsory stock of enlightenment, although such attempts are made quite often in the form of producing lists with recommended books for educative reading, compulsory sciences to be studied, etc. One of the most interesting projects of this kind in our time is the research of B.D. Hirsch, an American Professor from the University of Virginia, 'Cultural Literacy', where he attempted to draw up a basic body of knowledge necessary for the modern American to become culturally literate (the terms 'cultural literacy' and 'enlightenment', in our opinion, are identical in meaning). But it's hardly possible to speak of any enlightenment 'minimum' universal and compulsory for different cultures and times. Thus such minimum in the era of Greek Enlightenment could not be the same for the enlightenment in later centuries.

Usually, as it was noted earlier, people write and speak about the epoch of European Enlightenment of the 18th century. But it's more correct to speak of different *Enlightenment epochs* and of different enlighteners, living in any of the epochs. The phenomenon of the Enlightenment is such a state of spiritual culture when the human spirit finds a new reference point in the Mind. In the history of each major culture there was the time when the former traditions of life and thought were questioned. All the past experience of this epoch is put to doubt. Place of authority is taken by the power of reasoning ('Doubt the truth of everything,' R. Descartes); only the mind is recognized as their foundation ('Enlightenment is the ability to use one's own mind,' I. Kant). Requirements of the unfettered mind, expressed in the principles of rationality, gain a universal and unquestioned meaning. The mind becomes a foundation, a measure, a benchmark, ruling all areas of human life. And no matter how authoritative and indisputable something may be, it must prove its significance to the world of rational thinking ('It's time we find out what is true and what is false,' J.P. Moliere).

Any Enlightenment is usually the least driven by the momentum of destruction; on the contrary, it is saturated with an aspiration for creativity and a search for truth [11]. After all, the mind can only reject what is contradicting its nature: delusions, lies, illusions. Enlightenment marks the triumph of the human spirit, reason becomes the ideal and the symbol of the Enlightenment ('Long live the sun, long live the mind,' A.S. Pushkin).

Desire of the mind to become a universal foundation and a measure may seem an outrageous challenge, and from the standpoint of human life organization it is really such. All life moments and undertakings can not be based only on reason in general sense, because much in it has no reason at all. In the human experience there is always something, which is vague and obscure in its existence. At the same time pretensions of the mind are by no means fake or groundless. They are extremely fertile for the development of culture and that is why the enlightenment epochs are always one of the brightest manifestations of their growth and strength [24].

Great trust in the mind, which was at the outset of the enlightenment epochs, was not fully justified neither in the past nor now. At least in the form as was aspired to by those professing the spirit of Enlightenment [3]. The ideals of the Enlightenment in many respects turned out to be utopian, especially for those epochs for which they were created. However, it was owing to these ideals and efforts of the enlighteners that the reasonableness became one of the key norms and principles of life. From now on the mind is an independent participant in all human affairs. The enlightenment teaches culture a great lesson – it teaches it to be rational [14]. Only the society which has lived through the epoch of Enlightenment thanks to this epoch gets a life, where rationality is a permanent and stable factor, and gets vaccinated against madness or apathy.

The main idea of any Enlightenment is the reliance on Mind. But the understanding of the mind at different epochs of Enlightenment was different. When European enlighteners of the 17-18th centuries started talking about the mind ('As it is known, the golden age of rationality was the era of the New Age and the Enlightenment,' V.S. Shvyrev) [24, p.5], they meant thinking free from prejudice and bias, oriented towards finding the objective truth and organizing itself in accordance with the ideal of scientific research. But different was meant under the mind by the ancient Greek philosophers, who are usually associated with the first epoch of Enlightenment – the sophists. They also doubted the past cultural experience, the conventional wisdom and generally accepted principles. But for them the bearer of mind is *not a scientist*, a rigorous researcher of nature, but *a citizen*, having his viewpoint on the most important matters of life and able to defend this viewpoint and to convince others of its correctness.

Antique enlightenment rationalism of the sophists grew up on the basis of rationalization of the civilian life, social norms, customs and morals. The mind of the Greek Enlightenment – is the ‘political’ and moral mind; its main feature is the ability of a free individual to correctly realize and implement its interests, commensurating and correlating them with the interests of other citizens and the society in general.

Enlightened person in antiquity – Homo Dicens (Man Talking) – is a man having speaking skills, able to maintain a relaxed conversation and to make a public appearance, to defend his views in front of the opponents, disprove arguments of other people and find convincing arguments in his own favor. It is no wonder that in the mid-5th century BC *the rhetorics* appeared, the founders and paid teachers of which were the sophists, i.e. the first Greek enlighteners. The ability to speak is inseparable from the ability to think. A structure of the speech is predetermined by the logic of thinking. It is no coincidence that the first teachers of eloquence were called the sophists (the wise men). Talking, speculating, thinking, understanding became a single process and a single skill. It gained special relevance due to the changed role of traditional authorities in classical epoch. In the 5th century BC the first in the history ‘age of mind’ came, it was *the epoch of the Greek Enlightenment*.

But the brightest and the most significant Enlightenment, which influenced the subsequent culture and the closest to us in its spirit was the epoch of the European Enlightenment of the 17-18th centuries. The mind of Enlightenment of the New Age in contrast to the mind of the Greek sophists is not the mind of rhetoric, but first of all *the mind of knowledge, intelligence and science*. The arbiter of truth is not a dialogue of opinions (as in the Greek Enlightenment), but scientific experience and experiment. Mind, which in ancient times was immersed in the element of speech and action, in the modern European culture becomes with the help of science the knowledge of things ‘per se’, i.e. *the objective knowledge* [13].

Both epochs of the Enlightenment – the Greek epoch and the New Age – had a significant impact on the development of progressive for their time education systems. For the Greeks the rhetorics became the basis of *sophistic education*, distinctive features of which till now attract the attention of researchers [5]. The sophistry first transformed education and personal activities in independent activity requiring special social organization and specialized professional effort. It showed that for the development of the human mind, morality and professional skills the natural flow of life itself is not enough. For our consciousness this principle seems self-evident, but once it was needed to open it, it was done by the sophists. One might say that the sophists established *the institute of education*, which since then became an inseparable element of cultural life.

Until recently mainly pragmatic approach to the analysis of the principles and the objectives of education prevailed in the modern educational and pedagogical literature, while the enlightenment issues, as mentioned earlier, were considered only in the light of the Enlightenment philosophy of past epochs. At present the enlightenment issues get not only historical, but also modern status. More and more often the questions are raised not only about the modern education, but also about the modern enlightenment [2, 4, 12].

The modern education (both school and university) is severely criticized today largely due to the deficit of enlightenment in education, that is an ability to speak and think, a common culture, independence and critical thinking and many other aspects, formulated long ago by the enlighteners of the past. This raises, however, a fundamental question: is it possible that our time requires its own unique enlightenment ideas, being in some respects a continuation of the old ones, but basing on new achievements in science and on new life experience. Acquaintance with contemporary literature convinces us that, apparently, it's time to speak about the epoch of enlightenment of our time [8]. Thus, for example, Bertrand Russell, a famous contemporary enlightener and an English philosopher, in his works examines the issues of the modern rationalism of modern philosophy, science and superstitions, fanaticism and tolerance, freedom of thought, and others [26]. Undoubtedly, among the greatest contemporary enlighteners are Stanislaw Lem, Isaac Asimov, Ray Bradbury, Stephen Hawking, Carl Sagan, Leonard Mlodinov, Richard Feynman, Arkady Migdal and others. Researchers also examine evolution of enlightenment ideas, links between the enlightenment of the past and of the present [15].

Thus, at present there are many wonderful enlightening books and outstanding enlighteners in different areas. Still this line of enlightenment is still outside the general mainstream of the modern educational process and captures only some curious people in the context of their self-education. While the general mainstream has clearly a pragmatic coloring and continues to raise professionals more or less knowledgeable in certain areas (engineers, doctors, economists, etc.), receiving secondary and higher education, but in their majority being far from that enlightenment, which we are talking about and which the enlighteners wrote about. Modern English physicist and philosopher David Deutsch in his recently published work ‘The Begin-



ning of Infinity: Explanations That Transform the World' made, in our opinion, true judgments on the issue of the modern education and the lack of enlightenment therein. 'The modern methods of education still have a lot in common with their predecessors from static societies. Despite the current talks on the encouragement of critical thinking, still learning by repeating and standard behavior models instilling through psychological pressure are an integral part of education, even though in an explicit theory those are totally or partially rejected... It is still taken for granted that the main purpose of education is the faithful transmission of the standard curriculum. One of the consequences is that people absorb scientific knowledge in the bloodless, instrumental form. Without critical, differential approach to what they are studying, most people do not efficiently replicate to their minds the memes of science and reason. And that is the reason why we live in a society where people can all day long count cells in the blood samples using laser technology, and in the evenings sit cross-legged and chant in an attempt to extract supernatural power from the Earth' [4, p. 494-495].

What are the theoretical and especially the practical possibilities today that education and enlightenment get interwove together, if the latter refers to the mature consciousness of a person, his manners and culture? From theoretical and conceptual point of view it seems that a lot here is quite clear [17]. But the implementation of theoretically clear conclusions into the mainstream educational practice is as far away as it was tens of years ago. Still prevailing is, as Deutsch put it, the very 'instrumental knowledge' that fills the pages of countless textbooks in almost all disciplines, which resemble not so much the enlightening works, as according to the witty expression of the famous scientist 'the manuals for vacuum cleaners'. In this connection, let's recall a well-known movie on this topic 'We'll Live Till Monday'; even though after this movie filming many years have passed, virtually nothing has changed in education. Here apparently social demand plays a huge role: the society (teachers and students) upon completion of curriculum needs to get individuals able to successfully pass tests and other exams, requiring unambiguous answers to unambiguous questions, and everything else is just optional 'lyrics'.

A view generally accepted for a long while is that what we call enlightenment is a task of mainly humanities and social sciences, while natural sciences provide only accurate knowledge, having no direct relation to the enlightenment. With this approach many people see solution to the problems of enlightenment, culture, education in adding to the curricula of technical and other universities several social sciences and humanities (philosophy, history, etc.). However, enlightenment can hardly be associated only with the humanities; any scientific knowledge, including the natural sciences and even mathematics [1] can enlighten people not worse than the humanities provided proper presentation, and on the contrary, even the humanitarian area may lose its enlightening value if the presentation is poor.

Issues of enlightenment and success in this regard, as already noted, ultimately depend on the availability of talented 'enlighteners', since not every teacher having expert knowledge in certain field is able to handle this task (let's once again recall 'We'll Live Till Monday', which is just about this). And if a sufficient number of such enlighteners gather together in any educational institution (school or university), an enlightening pedagogical collective of like-minded individuals is built, separate classes, schools and universities appear capable of instilling culture in people through the knowledge and appropriate lifestyle. But they are always few in number, although their role in the society is not measured solely by their number.

Thus in the society there is always a certain number of broadly-educated, cultured people, able to influence the enlightenment of some individuals and the society as a whole. As noted earlier, that can be people of different professions – researchers, science popularizers, philosophers, writers, science fiction writers, or workers of culture. Thus in the last decade in Russia much has been done in the field of the enlightenment, both theoretical and practical, by V.A.Kuvakin, a Professor and a prominent philosopher of the Moscow State University. He is the author of several books and articles on enlightenment, education and humanism, was a chief editor of educational magazine 'Common Sense' and the head of the Russian Enlightenment Humanist Association. One of the most prominent modern Western enlighteners is Paul Kurtz, an American philosopher, who for many years was the President of the International Humanist and Ethical Union. According to the educational concept of P.Kurtz [25] and V.A.Kuvakin 'the original idea of enlightenment does not change, it only gets more precise with the development of the mankind' [8, p. 10], and at the turn of the 21st century gradually New Enlightenment is coming into existence, on the basis of which New Modern Education can and shall be developed [21].



A good example of this New Modern Enlightenment is, for example, the work of P. Kurtz 'New Skepticism: Research and Reliable Knowledge' [25]. Skepticism, as is known, goes alongside the philosophy throughout its entire history; it played a particularly important role, as was mentioned earlier, in the epochs of the Greek and the European Enlightenment of the 17-18th centuries. In his work, Kurtz suggests that every epoch, including our time, needs skepticism (the same as other worldview orientations, corresponding to the level of development of science, historical events, culture, etc.). Kurtz researches New Skepticism in the aspects that became highly relevant and even paradoxal in our time. The latter is characterized by an unusual combination of a high level of scientific development, unprecedented progress in technology, universal compulsory mass education (at least in the civilized societies), and at the same time the unprecedented spread of various kinds of mythological beliefs in the paranormal, in miracles, in astrology, in the omnipotence of psychics, etc. Book stores are literally filled with esoteric literature, on our TV screens we daily see different magicians, psychics and healers, advertisers promote suspicious medical prescriptions, etc. People are traveling into space since long ago and have even visited the Moon, but polls still show that there are plenty of people who are convinced that the sun orbits around the Earth, and the American astronauts as it appears visited not the moon, but Hollywood. Scientists-enlighteners in response to this growing mass obscurantism wrote a book titled 'In Defense of Science' or 'Against Quackery' and RAS scientists in 1998 even established a special 'Commission to Combat Pseudoscience and Falsification of Scientific Research', which is currently headed by E.B. Aleksandrov, a St. Petersburg academician and physicist, and one of its members was a Nobel Prize winner and an academician V.L. Ginzburg.

Pseudoscience currently exists in a variety of different forms and directions. In addition to various kinds of Chumakov, Kashpirovskiy, Uri Geller, it becomes, especially in Russia, almost an official attribute of society, is organized into academies, scientific communities, it has backers in mass media and even in some of the state structures. Attempts are made to introduce pseudoscience into official classifiers of the State Commission for Academic Degrees and Titles, and it is probable that soon thesis on parapsychology, extrasensory, biopathogenic zones, etc., will be defended.

All this is convincing that even higher education without proper scientific enlightenment is not always able to protect the science and the education itself against various pseudo-scientific and anti-scientific ideas, including in the education itself. References just to the enlightenment ideas of the past here are not always convincing enough.

Many ideas of the ancient Enlightenment, and especially of the new European Enlightenment in the 20th century great in their gist have been through a tough test, and it turned out that they were not quite ready for this [3]. One of the grave mistakes of the Enlightenment of the past was a blatant idealization of a man and an overly utopian optimism in comprehension of the social life. It openly ignored emotional and irrational side of the human nature, its potential propensity to nihilism and destructiveness, to the lust for power and violence. The abilities of the mind were overestimated, and the freedom was mainly associated with the freedom of mind and knowledge, with little regard to the fact that freedom can be irrational and destructive power, uncontrollable by the voice of reason. In the light of the greatness attached to the mind, the greatness of a man was diminished. As a result the products of mind, i.e. ideas, theories, ideologies were valued more than a real individual, his rights and decent living conditions. The shortcomings of the classical Enlightenment became especially pronounced on the background of the tragedies of two world wars of the 20th century and establishment of despotic regimes in some countries. The spirit of Enlightenment has not yet defeated the spirit of violence, fanaticism and irrationalism.

After these political and ideological catastrophes of the 20th century and the above-mentioned unprecedented spread in the mass consciousness of different kinds of mythology, anti- and pseudoscience the modern Enlightenment can no longer be understood the same as previously: like the light streaming top-down from the great philosophical and political minds, and a man shall passively absorb it, thereby getting enlightened and gaining eternal truths of the reasonable, the good and the eternal. The classical idea of the enlightened man and an enlightened society should probably be substituted with something else.

In light of this new understanding of the Enlightenment, the main task today is not just to 'give light to' ('enlighten') the human, as already mentioned, in top-down direction, and of course not to manipulate him, but offer a concept that could teach a man to enlighten himself on his own from the inside and be able to use his own 'lamp of Diogenes'. It is hardly possible to implement it at the level of modern mass education. But it is necessary to seek to this as a positive purpose. If at least a minority of society is not only be professionally trained, but also enlightened, this is a great social achievement.



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