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Professional paper

RUSSIAN COSMISM (WITH THE SELECTIVE BIBLIOGRAPHY) AND ITS UPRISING EFFECT ON THE DEVELOPMENT OF SPACE RESEARCH

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SUMMARY: In this paper Russian cosmism and its uprising effect on the development of space research are presented. At the end a selective bibliography useful for Russian cosmists research is presented.

1. INTRODUCTION

An organism's life is –
– a part of the Universe.

Claude Bernard.

While certain basic tendencies and facts in the Europian tradition relating to dreams about the cosmos and the elucidation of its secrets, the devices for flying into those expanses, even about moving onto other planets in order to solve some earthly problems, are more or less known, Russia's achievements which preceded the spectacular cosmic flights, making them possible in some way, due to a concurrence of various circumstances, are very little known or are wholly unknown even in Russia herself outside of a narrow circle of experts. It is only since not long ago that are being published some results of researches from all manner of documents which have been more or less under embargo for decades. These documents are very important for the analysis of many philosophic and scientific situations of our time.

2. RUSSIAN COSMISM AND ITS UPRISING EFFECT ON THE DEVELOPMENT OF SPACE RESEARCH

In this paper discussed briefly are basic ideas, visions and scientific concepcions of Russian thinkers from the middle of the last to the middle of the present centuries, usually refered to by the synthagm *Russian Cosmists* not only in Russian literature but also in that of other countries. At the end a selective bibliography useful for Russian cosmists research is presented. Although some of the results of the Russian thinkers belonging to the *Russian Cosmists* circle were to some extent known not only in Russia but elsewhere too, the publication of other written documentation as well as the exploration made so far show clearly that one has to deal here with thinkers whose importance is by far greater than was thought of or assumed before. *The Russian Cosmism* is in fact a specific spiritual, philosophic-scientific orientation, demonstrating encyclopedic and self-relying, synthetic expression of Russian genius, not only in the domain of thinking and imagination but also in the domain of technics and construction etc. The

Russian cosmism bears the stamp of its time. It was often an expresson of a specific maximalism, developed about the middle of the last century in an effort to overcome the Russian slavery and century-old backwardness. The elitist brains from all sorts of philosophy, art, social and political movements and theology acted lonesomely, in a titanesque manner, led by the noble aims, in a country in which about 90 percent of population was illiterate, living in huts. The ideas about a wholly new man and about wholly new society, a totally new world, about posible moving to other planets, found there a fertile ground, there emerged maximalists who marked the development of Russia and, in a way, that of the world all through until the present time. Entire generations were being excited by the maximalists, in whom sometimes alternated angel-like and demonic characters, many of whom were imortalized by the great Russian writers through the main characters of their works (Turgenev, Dostoevski ect.)

The programmes relying on many ideas of the Russian cosmists, those maximalists of peculiar kind, formed for some time the foundation for the breakthrough into the cosmic expanses. At present, in a time of the epilogue of dramas and tragedies of gone by decades, all the aspects of these doubtless far-reaching and contradictory projects ought to be scrutinized. There is no doubt that we are faced here with some great "lessons" not only in the field of natural sciences but also in that of history of philosophy, philosophy of history, antropology, humanism, ethics... Here too, efforts will be necessary not only of philosophers and scientists but simultaneosly those of artists and theologians in order to fathom the past historic dramas, to grasp the causes of many unfulfilled expectations, but also the wider thought flights and the gigantic force of single individuals.

The explorers of the Russian thought and spiritual tradition in general include in the Russian cosmists circle or into that orientation a rather great number of thinkers, creators of various expressions, whose work contains certain really common starting points, making open many perspectives. Concerning the question as to who among them might be considered cosmists and to what measure, one may deliberate only after all relevant sources have been studied. On the basis of researches performed up to date herein may be ranged first of all: V. F. Odoevski (1803-1869), artist, philosopher, *utopian sui generis*, whose writings attract attention even in our days, his work "Russian nights" in the first place; A.V. Suhovo-Kobilin (1817-1903), an unusual thinker, dramaturge, who regarded philosophy as his vocation, at the same time a man of varied interests and unusual life, therewith ressembling the "Renaissance man" in some measure. He spent almost four decades translating Hegel's writings, developed a specific concepcion of the Universe but the greater part of his works was burnt in a conflagration. The remnants of his writings and other materials testify to an original phenomenon which exercised influence on other creators; N.V. Fedorov (1828-1903), philosopher, theologian, scientist, ascetic, puzzling the academic Moscow at the end of the last century not only by his ideas but also by his ascetic life, as well as by his encyclopedic knowledge; V.S. Solovev (1853-1900), one of the most reputed Russian philosophers in the world, the so called world theologian and poet, having greatly influenced the later thinking not only in Russia; N.V. Umov (1846-1913), mainly known as a theoretical physicist, striving for wider and metaphysical syntheses; S.N. Bulgakov (1870-1944), philosopher, theologian, economist, one of the most prolific and well-known Russian thinkers, having spent part of his life in France as an emigré, where he left behind a distinct trace in the intellectual, particularly in ecclesiastic circles; F.A. Florenski (1882-1937), philosopher, theologian, mathematician, physicist... an encyclopedic brain, representing in a specific way the originality of Russian thought and spirit in general. As a priest wearing his garb, he participated as an expert in the state projects, writer of more than hundred and twenty articles in the first edition of the great Soviet Technical Encyclopedia. This thinker, called "Russian Leonardo da Vinci" or "Russian Pascal", creative in various fields, did not escape the tragic fate of the Russian elite intelligentia after the revolution - he died in a concentration camp after long sufferings; N.A. Berdiaev (1874-1948), philosopher, neochristian thinker, well known throughout the world, living after the revolution, since 1922, mostly in Paris exerting influence on many intellectuals the world over; V.N. Muravev (1885-1932), philosopher, jurist, public man - he overtly opposed the bolshevism by his work in the famous collection of articles *De profundis*, which was immediately suppressed, after the revolution repeatedly arrested, to be afterward sent into concentration camp where he died. His principal work "Mastering the Time" was published in 1924; A.K. Gorski (1886-1943), a follower of N.F. Fedorev, an interesting figure, some of his works having been published only recently for the first time; K.E. Ciolkovski (1857-1933), well-known as the cosmonautics pioneer. Much less is known of his having been the creator of cosmic philosophic conception, a writer of other works published by him privately as these did not conform with the spirit of that time in the Soviet period, even though he was a scientist popularized and suported on the part of the topmost state and party leaders (one of the highest honours was accorded to him shortly before his death in 1933, when he was invited on the occasion of the state holiday to stand on the gallery of the Lenin mausoleum beside the state and party leaders Stalin and Molotov; V.I. Vernadski (1863-1945) "Lomonosov of the 20th century", laid foundations and developed several scientific disciplines and teachings on the biosphere and ionosphere, geochemist, mineralogist, science historian, philosopher of exeptional synthetic capabilities, invited professor at Sorbonne; A. L. Chizevski (1857-1964), world renowned scientist, a nominee for the Nobel prize, the founder of heliobiology, philosopher, artist and - sufferer, a "first-circle" inmate of the Stalinist hell, calling himself sun-worshiper; he devoted himself to the investigation of the cosmic effects on the Earth and man, about which he wrote a great number of articles, many of which are known throughout the world and published in a number of

countries. Apart from his doctoral dissertation, defended in March 1918, subsequently supplemented with new results (about 900 pages) he published under the title "Physical factors of the historic process" (1924), which later provoked a strong echo and attacks. In a climate of vulgar socialism the author was required to modify his standpoints. Standing up to his defense was Ciolkovski, pointing out that the works of the young scientist show in a convincing way that "physics and astronomy were interfering with the history", that the scientist was attempting to disclose the functional interdependence between the humanity's behaviour and the fluctuations and activity of the Sun; G.A. Tihov (1875-1960), an astronomer, astrobotanist; N.S. Holodni (1882-1953), biologist, ecologist who pointed out the substantial limitations of antropocentrism, endeavouring to formulate a new conception of nature and man - antropocentrism; V.F. Kuprevitch (1897-1969), biologist, who after having achieved results in particular fields, engaged in the problem of life extension and prevailing over the death; A.K. Maneev (1921-), a philosopher, logician.

The above adduced philosophers, scientists, theologians, advanced many and greatly varied, original conceptions, teachings bearing on philosophy, but they all have certain common foundations which only at present can be perceived with relevant sources having been made accessible. A retrospection of these conceptions, be it even in the form of a survay, is not possible here, nor was it the purpose of this paper. What we are most interested here in are the ideas of the philosophers and scientists, found first as anticipations in the works of the thinkers originated as far back as the times of Odoevski and Fedorev. These anticipations were later variously developed, especially by Ciolkovski, Vernadski and Chizevski, but formulating them on the level of philosophic and scientific conceptions. Many of these ideas constituted later in the Soviet period the foundation of great projects, thus initiating the cosmic era of science and technology, marking the triumph of man's intellect and his doings in general.

These projects aroused unprecedented hopes of quick transformation of human life, society, instigating old hopes that some of the problems facing humanity might be solved much quicker with the breakthrough into the cosmic expanses. Looking at this specific "storming the heavens", the elan in a country which had given birth to marvelous creators, dreamers and such men who materialized many of these dreams, but which at present is in a nightmare, facing various catastrophes which are converging (social, economic, moral, ecologic, demographic, national, governmental), one may put a number of questions, philosophic, scientific and other, taking into account the traversed roads and the perspectives.

The creative genius of the "Russian Cosmists" moved from the vague images and visions, across the more or less developed theoretical systems, all the way until the final act which led to the great changes. The novelty in the creation of these thinkers, who tried their hands both in theory and practice, consists first of all in their thinking style, in their striving for the integrality of the conception of world as a whole, in which the phenomena of most different kind possess some common foundations and regularities. They were searching just for these common foundations and regularities; striving to transcend partial approaches they boldly set about solving even the most complicated, the so called bordering questions of human existence. In a society bearing a semi-feudal character great dreamers set themselves exeptional aimes, conceived utopias, tending to a total remodeling of the existing. Nikolai Kibalcic, one of the young men participants in preparation of attempt on Czar Alexander II, dreamt not only of the technique of manufacturing dynamit intended for that attempt, of the justice on Earth for all men, social harmony but, while serving his sentence and right before his death, produced projects of rockets by means of which flights into cosmos might be realized. His project was discovered in the files of the imperial secret police as late as 1918. In a certain way Kibalcic symbolizes the particular forms of maximalism, even messianism in the Russian thought, which did not remain whithout its echo. The narodniks and other fighting and fearless revolutionaries aroused attention outside Russia too by their peculiar feats alike in the domain of thought and in that of action. Suffice it to point at some pages from Cammy's work about these rebels and utopians *sui generis*. The road of these ingenious dreamers, scientists, constructors and martyrs is a good deal more personified by S. F. Korolev, the creator of rockets, a man of extraordinary intellect and exceptional energy. As a young enthusiast he traveled to Kaluga as a kind of pilgrim to visit K.E. Ciolkovski, already an old man. There, with small group of collaborators-enthusiasts he started the work on the projects which only later was supported by marshal N.N. Tuchatchevski, deputy people's commissar for defense, but who had in mind first of all the military aspect of these projects. The support was substantial but soon was to lead Korolev onto a road of suffering, into concentration camp following Tuchatchevski's death by firing squad in 1937, on the strength of special verdict of the Military Council of the Supreme Tribunal of SSSR, without any trial. In the camp Korolev, like some other inmates, was working in a special bureau on projects, being at last set free after many pleadings. During the war he was engaged in the most important projects and right until his death he intensivelly laboured, styled in the documents merely by "chief constructor" for security reasons for safeguarding the projects in complete secrecy. Even after proposals arrived from the USA the Nobel prize to be alloted to the individual most deserving for the Soviet cosmic programme, the state and party leader Chrustchev declined disclosing the constructor's name. Thus it was how the awarding the Nobel prize to this scientist - constructor was missed. Only after his death, which occurred on the surgery table in 1957, the Soviet and the general public the world over learned who in fact was hiding behind the enigmatic term "chief constructor", for years figuring in the documentation, arousing attention in certain countries in the West. All this Korolev experienced in a specific way; the byword he most often used, according to some testimonies,

was "what is one to do, they will chatter and there will not be so much as an obituary". However, when he died an obituary appeared, an uncommon at that, on the front page of "Pravda", signed by the topmost leaders of state, party, Academy of Sciences, army ect. The urn with his ashes was immured in the Kremlin walls... There was no end to honours. The testimonies by Leonid Vladimirov, as well as the material published in the collection of articles entitled "Mysteries of the star-studded Islands" about how work was being performed during the war and in the post-war years on the cosmic project in the USSR, in the conditions of an economy just beginning to open itself toward the world, when there was shortage of technology and other necessities important for this project to be accomplished, induce one to ponder about many questions: about the relation of the science and the society, science and utopia, science and ethics, science and the system of values, about what is the progress, the relation of the science and humanism and the relation science-future of humanity. These complex problems absorb in a singular way the attention not only of philosophers and scientists but also that of men at large, worried about the survival of human species and the planet we live on. The men's intellect, even and mostly belived in, not only by cosmists but likewise by all others, thanks to which all has been achieved, that intellect of which Ciolkovski belived being the highest value in the Universe, At present is being put to test and facing greatest perils. The question is whether the science were capable by its results to lead men to happiness or else its results were to slip out of control and lead to the planetary disaster. We are left with the hope for the posibility of evading the latter.

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РУСКИ КОСМИЗАМ (СА ИЗАБРАНОМ БИБЛИОГРАФИЈОМ) И ЊЕГОВ РАСТУЋИ УТИЦАЈ НА РАЗВОЈ ИСТРАЖИВАЊА КОСМОСА

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Стручни рад

У раду се говори о руском космизму и његовом растућем утицају на развој истраживања васионе. На крају рада дата је изабрана библиографија корисна за проучавање истраживања руских космиста.