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#### SPACE FUTURE IN FICTION: FROM MYTH TO POSITIVISM

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#### *Abstract*

The article analyzes the idea of space habitability, discussed in the world and Soviet fiction of the XX century. Several science fiction writers' visions of the space future are compared. Sporadic manifestations of space knowledge penetration into social consciousness are characteristic of various types of cultures and different historical eras. The idea that someone can reach the sky, cosmic spaces, and the solar system planets has an ancient, at least antique tradition. Individual thinkers made a great contribution to the creation of the theoretical prerequisites for the emergence of cosmic school of thought. Russia's development feature in this sense was that only there cosmism becomes a certain spiritual, and later a philosophical tradition. The science fiction of the 20th century considered issues related to scientific and technological progress. Writers were trying to predict how a new type of person would emerge. He would be a communist society member, a fighter for scientific and social progress. Technical devices would free people from hard work, and they could devote themselves to rest, travel, and education. Statistical office would organize the labor, work would be automated as much as possible, and relations between people become sincere and harmonious. Science fiction writers believed that people would become equal partners for intelligent beings in the Universe and would be able to unite in the information community for mutual assistance. In fiction, the idea is traced that only various minds types union, whose knowledge mutually complement each other, is capable to comprehend the universe.

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## **1. Introduction**

The theme space knowledge penetration into social consciousness, the history of cosmism, the theoretical foundations and patterns of humanity's penetration into outer space has in recent years attracted a lot of attention not only of domestic philosophers, historians, psychologists and culturologists, but also of an increasing number of foreign experts. And this is not a random event. Cosmism, as a widespread phenomenon of the social spiritual development in the second half of the twentieth century, is the product of the entire course of the global cultural human development. On the other hand, cosmism is rightly considered and found by general theoretical, philosophical and broader ideological sources of theoretical and practical cosmonautics emergence – as our century science and technology prodigious phenomenon, which radically affects the worldview of modern man (Lytkin, 2012). Sporadic manifestations of space knowledge penetration into social consciousness are characteristic of various types of cultures and different historical eras. The idea that someone can reach the sky, cosmic spaces, and the solar system planets has an ancient, at least antique tradition. Individual thinkers made a great contribution to the creation of the theoretical prerequisites for the emergence of cosmic school of thought. Russia's development feature in this sense was that only there cosmism becomes a certain spiritual, and later a philosophical tradition. The ceaseless continuity in the views of Russian thinkers, starting at least from the first third of the 19th century is quite traceable (Lytkin, 2012). What is unique is that the tradition of Russian cosmism was practically not interrupted, generating, ultimately, the first theoretical and then practical cosmonautics.

## **2. Problem Statement**

Modern cosmonautics as a phenomenon of global culture has its own ideological, philosophical and general theoretical sources. Certain religious sources, ethical and moral grounds could be found among them. Moreover, it is within the Russian cosmism framework, we can find at least two philosophical teachings, connecting together cosmism and the rationale for the development of practical cosmonautics. No less unique and unusual is the fact that the creativity of the three largest representatives of Russian cosmism tradition — N.F. Fedorov, K.E. Tsiolkovsky and A.L. Chizhevsky (Tsiolkovsky, 1966) were being direct co-successors of the cosmism tradition; they lived and worked on Kaluga land in different years.

## **3. Research Questions**

Cosmism, as a universal and globally – cultural tradition originates, as it was found out earlier, in the deepest antiquity. Moreover, already in the most ancient period of development of human culture we can trace the formation of the idea of space travel. The idea that someone can reach the sky, cosmic spaces, and the solar system planets has an ancient, at least antique tradition. We can find the beginning of this tradition, first of all, in literature. The oldest mythical, epic and literary monuments convey to us evidence of this. Vedic tradition. "Ramayana" (from the I millennium BC). Here, the hero of the epic narrative Rama goes on a space trip in search of his kidnapped wife Zita. Vivid descriptions of impressions from this journey, sensations from being in space, vivid descriptions of Earth views from space, the epic battles between Rama and the gods, we find all this there (Mahabharata, 2017). Karelo is the Finnish folk epic

“Kalevala”. It contains a series of stories about people’s and animals’ travel to the heavenly bodies. (Kalevala, 2015). The Mongolian “Tale of the Big Bear Origin” tells the story of seven Mongolian brothers who learned to fly and settled in the sky.

Antique literature, in fact, begins the tradition of fantastic narration. It appears, first of all, as a satirical social narrative, where traveling into space becomes a method of transferring the reader to a different fantastic reality. In fact, this reality is a reflection of earthly problems. This began with Lucian of Samosata (2nd century AD). These were “True Stories”, “Ikaromenipp”, where Lucian acted as a satirist writer. For the first time ever, he used the genre of science fiction to criticize the existing Roman Empire’s social system. The storm had thrown his hero on a ship to the moon. The moon is inhabited, its social relations seemed to Lucian hero to be perfect, and moon habitant’s technical achievements appeared to be amazing (Lucian, 1991).

Persia did not remain aloof from the socially - satirical fantastic tradition. Ferdowsi, Persian poet, creator of the epic poem "Shahnameh" (1010). One of their heroes, Shahnameh, Prince Kay-Kaus, who subdued all the kingdoms of the world, was sent to conquer the sky. (Ferdowsi, 1984). To do this, the wagon drawn by four giant eagles was used.

The medieval Western European tradition followed the Lukian tradition. Thus, Dante (2018) in the Divine Comedy (1321) describes a fantastic journey through planetary spheres, where the sunlight energy is the source. Space travel was used there as a metaphor for ascending from the darkness of Hell to the light and perfection of Paradise (Dante, 2018; Ariosto, 1993). Natural philosophical space travel background. The idea of heavenly and the earthly similarity was the main natural philosophical idea. In Lukian social satire tradition continuation Astolf goes to the moon in search for a lost mind. Means of travel were traditionally mythological. In this case, it was the Elijah chario (Ariosto, 1993). The English writer had published his fantastic work “Man on the Moon” (1595, publication 1638), where the Lukian and J. Bruno ideas’ influence is clearly trace. Travel to the moon was realized due to the fundamentally new means. This was no longer a parody and not a myth, but the creation of human hands. Seville nobleman Dominique Gonzales had tamed wild swans, and flying on them, he, in spite of his will, went on a space trip (Godwin, 1967). His journey to the moon was described amazingly vividly and reliably.

Modern time epoch. It is largely determined by the natural science progress and the process of a radical change in the scientific paradigm and social outlook connected with the “Copernican revolution”. Wilkins in the book “A Discourse, Concerning a New World and Another Planet” (1640) sought for positive means of traveling into space. He had formulated the idea of the possibility of creating a flying chariot based on the Arhitas Tarentsky (compressed air) works (Cyranov, 1931). “Voyage Dans la Lune”. (1649). “Histoire Comique des Stats et Empires du Soeil”. (1652). Describes 8 imaginary ways to travel to the moon and 4 to the sun (Cyranov, 1931). One way is to use dry-fuel rocket as an engine. Kepler I. Publishes a short essay “Somnium, Seu Opus Posthumum de Astronomia Lunari” (1634). Space travel idea transition on the sci-fi development stage. The flight takes place in the Copernican - Keplerian space. And although the means of travel are still mystical (spirit of the moon), the details and sensations of flight are quite real (Kepler, 1982). He considered his work important for future travelers who will soon go to space. Voltaire. “Micromegas. Histoire Philosophique”. (1752). Described in the form of social satire is the journey of the inhabitant of Saturn Micromegas (32 km in height) to the Earth, using the forces of gravity, rays of light

and comets (Voltaire, 2011). Traveling facility is an airship with sails and oars and 6 light balloons, removing the air. On the journey, they had met heavenly world's residents, who were able to travel at a speed of 1 million miles per second. They had reached the satellite of Mars, lived there, and then came back (Rynin, 2010). Le Fort and Countess (2011) in the story "Around the Sun". (2011) had already described the various possible space traveling principles. The engine of Martians ship, which brought them to their satellites, was huge spiral gondola. The ship for travel to Jupiter and Saturn included the Archimedes screw, sucking in the flows of asteroids and rejecting them (jet thrust), and also the ability to create a ship, casting sunlight (photon thrust).

Finally, science fiction appears in its classical form as an independent literary genre. Verne (2014) deserves significant credit for this. His "Unusual Journeys" is a giant series of books consisting of 64 novels. Created a new type of novel, sci-fi. It includes scientific credibility, scientific foresight, scientific heroism, propaganda of the greatness of science. Living at the turn of epochs, Verne (2014) foresaw the enormous role of electricity, the idea of mastering the oceans and the depths of the Earth, the reality of mastering outer space. All this is possible to achieve, as he believed, for the community of scientists from different countries. "From the cannon to the moon" (1864). Problems of space travel subsistence, celestial mechanics, flight control, planetology, etc. (Verne, 2014). Wells (2018) interests were very diverse. His main idea was the progress. "War of the Worlds" (1898). The planets' habitability idea is dating back to antiquity (Lucretius, Plutarch, etc.). Mars is inhabited but differs from Earth. Martians, this is the distant future of human evolution. Humanity must accelerate the process of its technical development. "War in the Air" (1908), "The Freed World" (1913) – novels that predicted some features of future man-made disasters (world war, atomic weapons) (Wells, 1964).

A special place in the Tsiolkovsky (1966) work, interplanetary travel and the basics of astronautics theories proponent, is occupied by his science fiction works: "On the Moon", "Dreams of the Earth and the Sky", "Out of the Earth", "On the West", "Changing the relative gravity on the Earth", "Goals of star-sailing", "Living Beings in Space" "For the atmosphere of the Earth". All these works are united by one theme, devoted to the space colonization problem. The whole world knows the name of the rocket and interplanetary communications theory creator – Konstantin Eduardovich Tsiolkovsky. The great Soviet scientist who made an enormous contribution to science through his works in the field of cosmonautics, aerodynamics, aeronautics, was also the author of many remarkable science fiction works. In the process of research work of K.E. Tsiolkovsky, they were sometimes, as it were, the first, initial "estimate" of developing new ideas. The scientist himself remarkably said about this sequence of the creative process: "first, inevitably, thought, fantasy, and fairy tale come. These are followed by scientific calculation. And in the end, the performance crowns the idea (Vorobyov, 1960).

Science fiction literature covers a wide range of issues, concerning humanity. In fantasy literature of the 20th century, the idea of an inhabited space becomes relevant. Science-fiction writers create an utopian society of the future in space, where humanity finds the way to a happy life. One of the first Russian fantasy utopias associated with space travel, belongs to the writer and ethnographer Infantiev (1990). His novel "On another planet" was written in 1901 and describes the Martian society (Infantiev, 1990). The author assumes that both social and economic problems can be resolved after scientific discoveries are invented and put into practice. The Martian swell society, described in the novel, can afford not to work

thanks to high technology. Technical devices have freed people from hard work, and they devote themselves to rest, travel, and education.

In 1908, the first communist utopia, written by Bogdanov (2009), a prominent figure of the Bolshevik Party, appeared. The science fiction novel “Red Star” tells about the stay of a socialist scientist on Mars. The hero of the novel, Russian revolutionary Leonid, meets Manny the Martian, who was sent to Earth in order to find out if it is suitable for colonization. Leonid was invited to Mars, where he traveled in a special ship “eteronefe”, a moving reactive force of radioactive decay products accelerated in an electric field (essentially, this is anticipation of the idea of an ionic jet engine) (Nudelman, 2007). The main character got to know the Martian civilization, based on socialism and the power of reason. The leadership of the Martian society is carried out by the Council of Scientists. The organization of work is carried out by the statistical office, work is automated as much as possible, and relations between people are sincere and harmonious, which has a significant impact on the upbringing of children. Everyone has the right to set goals for themselves; they understand reason for being in faith in a collective force and a great common life. A. Bogdanov, in his utopia, succeeded in description of another civilization development, as well as of the possibility of this civilization impact on a person from planet Earth.

After the events of 1917, the idea of a world revolution became one of the leading in literature. Alexey Tolstoy in his novel “Aelita” offers the reader the idea of a cosmic revolution. Aelita was first published in 1922 in the journal “Krasnaya Nov”. The novel describes the adventures of the engineer Los and the Red Army soldier Gusev on Mars. Author’s thoughts about the revolution, the history and the place of man in it are rather curious. Tolstoy (1959) offers a version of the mankind technocratic development. The solution to the complex current problems, according to the author, involves the technocracy cold rationalism precisely. Mars is governed by the Council of Engineers, but this does not save society from class stratification. The Council turns into power over the people, which leads to revolution. The revolution in Aelita is seen as an attempt to come to the renewal of society, which basis would be the love of life (Tolstoy, 1959).

Later, another line appears in Soviet fiction. Writers strive to show how, by conquering nature, by conquering space, a new type of person emerges. He would be a communist society member, a fighter for scientific and social progress. This is traced in the works of I. Efremov (the novel *The Andromeda Nebula*, 1958, *The Bull Hour*, 1968) and A. and B. The Strugatsky (the trilogy: “*The Country of Crimson Clouds*”, “*The Path to Amalthea and The Trainees*”, 1958 —1962; “*Return. Noon. XXII century*” (1963), etc.)

The most interesting was the idea of space civilizations joint activities, which was considered in works of K.E. Tsiolkovsky (“*Unions of the nearest suns, unions of unions*”, etc.), R. Bracewell (“*Galactic Club*”), A. Azimov (“*Galactic Empire*”), L.V. Leskov (“*Meta-civilizations*”), I. Efremov (“*Andromeda Nebula*”, “*Hour of the Bull*”). In the “*Andromeda Nebula*”, for the first time, there was an attempt not only to present the future of universal communism, but also an opportunity to see the place of the communist Earth in the galactic union (Tenyakova, 2011). In his novel the author showed that we are not alone in the universe, and that the unification of worlds is a necessary and natural stage in the cosmic mind evolution. In his interview, Efremov (1988) said: “I don’t imagine the further development of humanity without entering the outer reaches of space, without contact with other civilizations. All the talk about the fact that we allegedly do not understand other civilizations, which emerged on other planets and in other conditions,

seems to me to be groundless” (p. 103). (The great ring of the future). In the novel, the planetary community is connected through the Great Ring - a community of an infinite number of inhabited galaxies, communicating both via radio exchange and starships. The community was created to share scientific and technical achievements and to maintain cultural ties. Thanks to this, noospheric communism has been achieved, there is no economic rivalry, the threat of the outbreak of war disappeared. The goal of the development of this civilization and human existence Efremov (1988) considers the knowledge of the universe. The study of the infinite Universe, the intelligent worlds of other galaxies, as well as ways to interconnect with extraterrestrial civilizations became one of the main directions in the Great Ring era. Each civilization develops on its own, as spatial disunity limits the opportunity for mutual aid. Efremov (1988) was sure “that we will find a workaround through space and time. There are already some proves of this in science, for example, the recent discovery of tachyons — particles with subluminal velocities” (p. 39).

#### **4. Purpose of the Study**

The main goal of this research is to study the cosmism sources. Cosmism, as a widespread phenomenon of the social spiritual development in the second half of the twentieth century, is the product of the entire course of the global cultural human development. On the other hand, cosmism is rightly considered and found by general theoretical, philosophical and broader ideological sources of theoretical and practical cosmonautics emergence – as our century science and technology prodigious phenomenon, which radically affects the worldview of modern man. Sporadic manifestations of space knowledge penetration into social consciousness are characteristic of various types of cultures and different historical eras. In this case, our main task is to trace the cosmism sources in the world’s science fiction literature related to the idea of space flight. Identify the main problems were raised in it.

#### **5. Research Methods**

Comparative research method was widely used in the article. It allows analyzing scientific literature, literary fiction heritage, and comparing the most important and socially significant trends in literary life, different cultures’ and different time-periods’ characteristic. The method of analysis was used in this study. It made possible to study complex large-scale scientific problems. It allows investigating separate minor problems, so that, using scientific synthesis, we can combine the results obtained and draw general conclusions. Thus, having studied the most significant trends in the science-fiction literature of various eras, we have identified some general tendencies in them.

#### **6. Findings**

As a result of the study, we come to the conclusion that the idea of space flight, closeness and reachability of “heavens” and the cosmos has the deepest historical, philosophical and human cultural tradition. The idea that someone can reach the sky, cosmic spaces, and the solar system planets has an ancient, at least antique tradition. We can find the beginning of this tradition, first of all, in literature. The oldest mythical, epic and literary monuments prove this to us. Antique literature begins the tradition of

fantastic narration. It appears, first of all, as a satirical social narrative, where traveling into space becomes a method of transferring the reader to a different fantastic reality. The medieval tradition in Western Europe follows the course of the ancient Lukian tradition. The modern times epoch in science fiction is largely determined by the natural science progress and the radical change in the scientific paradigm and social outlook connected with the “Copernican revolution” process. There were attempts to find positive means of traveling. Finally, science fiction appears in its classical form as an independent literary genre. Verne (2014) deserves significant credit for this. He created a new type of novel, science fiction. It includes scientific credibility, scientific foresight, scientific heroism, propaganda of the greatness of science. A special place in the Tsiolkovsky (1966) work, interplanetary travel and the basics of astronautics theories proponent, is occupied by his science fiction works. During Tsiolkovsky research work, they appeared sometimes to be the first, initial “estimate” of developing new ideas in the cosmonautics and their popularization field. Science fiction literature covers a wide range of issues, concerning humanity. In fantasy works of the 20th century, the idea of an inhabited space becomes relevant. In space, science-fiction writers create a utopian society of the future, where humanity finds the avenue to a happy life.

## 7. Conclusion

Thus, the idea of space flight, closeness and reachability of “heavens” and space has the deepest historical, philosophical and universal cultural tradition. The fantasy authors assume that only the different minds’ unit, whose knowledge complement each other, is capable of knowing the complexity of the Universe. In space, science-fiction writers create a utopian society of the future, where humanity opens the way to a happy life. Fantastic literature becomes a tool in the hands of the researcher. This allows simulating and analyzing possible options and ways of humanity, society, culture, science and technology, their interaction and interaction development. In the science fiction literature, models of the future society, the future man appearance, the ways of human civilization development, and possible contacts with other civilizations are created (Alepkov, Finney, & Lytkin, 1995). Some of them disappeared completely, but some become reality.

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