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Space exploration as part of the policy of shaping the state`s image

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Introduction of the dissertation

The scientific and technological revolution gave a strong impetus to the development of human civilization, providing people with technologies that continue to improve every day for years to come. Moreover, this technological breakthrough is irreversible - the development of computer technologies is exponential, and the development and implementation of various innovations is rapidly accelerating. Some technological processes will soon become so complex for human understanding that the technological revolution that began decades ago will radically change the face of our civilization. And indeed, the very development of cosmonautics serves as a clear example of this. Today, outer space is no longer something frightening and mysterious, although, of course, humanity is still very far behind in solving the galactic mysteries.

The development of outer space has always been perceived by the leaders of States as another area of competition on the world stage. Successful space activities are still considered as a certain tool for influencing the positions of other actors in the field of international relations. For example, if a state achieves certain significant results in this area, it has the opportunity to develop an appropriate international agenda, and therefore it has the opportunity to directly or indirectly influence other participants in international relations, strengthening its authority, «sharing experience» in exchange for cooperation, strengthening relations in which one of the participants will depend on the other, etc. In addition, there are quite successful political players today who skillfully use the soft power of space diplomacy to spread their influence to other states. Among such countries, the United States stands out, China is no less successful, and the Russian Federation is more backward from its rivals. The success and failure of projects is determined primarily by the extent to which the soft power policy of states is long-term and well-thought-out, whether the government adapts to the changing conditions of foreign policy and whether it is able to conduct a balanced policy, at the same time, constantly maintain the relevance of projects.

Countries managed to discover and explore space only in the middle of the last century. The first country to receive the status of a space power was the Soviet Union. The country received this status after the launch of the first artificial Earth satellite in the history of mankind, and a little later the first man in space. The new status acquired by the Soviet Union made it possible to loudly declare itself, in addition, to win the championship from the United States in the space race. The governments of the states realized that the exploration of outer space can become for the countries not only a springboard for military-strategic rivalry, exploration and colonization of

new territories, but can also become another instrument of influence on other countries. In addition to the tool of influence, the author is sure that the exploration of outer space can be an excellent tool for forming a favorable image of the state. To date, it has already been proven that a country that has the capabilities to develop its own space program and has a corresponding technological development can rightfully be considered a worthy rival and a full-fledged participant in international relations. However, the author should also note that the image of a country can not be formed only from whether the country has the status of a space power or not. To date, there are many different cases, some of which are considered in this paper, which will prove or refute the theory that the exploration of outer space can be a tool for building a positive image of the state. In addition, other cases will be considered, which will prove that the image of the state does not change with the acquisition of the status of a space power, or cases in which countries that have the image of an «unreliable» state will not be able to change their image in the opinion of the world community at all with any manipulation of outer space. **Based on the above, the aim of this study is to identify the role of space exploration in the implementation of policy the formation of the image of the state.**

In support of the above research aim, the objectives of this research are to answer the following questions:

- To analyze the main historical stages of space exploration and their impact on international relations
- To consider how soft power politics and space exploration interact
- To identify soft power tools in the policies of major space players
- To identify the main changes in the policy of the state, depending on the "acquisition" of the status of a space power
- To consider the main trends in the formation of the image of the state depending on the acquisition of the status of a space power
- To consider the development of outer space as an element of soft power in the foreign policy of the state

Scientific Novelty and Relevance of Research

The scientific novelty and relevance of this study lies in the fact that currently there is very little domestic and foreign literature on the topic of space exploration as part of the policy of forming a favorable image of the state. There is no comprehensive study of the activities of the leading space powers in the world political arena whose goal is to build a positive image of their own state through the implementation of a policy of soft power, in particular the policy of space

diplomacy. This research paper will help shed light on whether a calculated soft power strategy using space exploration as a political tool and space diplomacy in general can affect the image of the state.

Theoretical Framework and Methodology

The theoretical basis of the study is based primarily on the concept of "soft power" proposed by Joseph S. Nye in his works, which dealt with the concept of soft power in state politics, in addition, in some parts of the work, such concepts as "smart power" are involved. His writings have provided an understanding of soft power and its components to use this concept in analyzing the policies of the leading space players on the world political stage, who use space diplomacy and advances in space exploration as tools of soft power. At the same time, the author is convinced that it is the concept of soft power that underlies the formation of a favorable image of the state, through various tools.

Research methods:

1. Soft - Power concept:

The concept of soft power is one of the fundamental concepts in this research paper. Soft power is one of the tools for building a favorable image of the state, so with the help of soft power, cooperation with other countries, the dissemination of the culture of a particular country, assistance in space development, etc., the influence on other states is spread with the help of cooperation tools. (For example, China and its policy in the Southeast region aimed at helping "developing" countries to implement space programs. At the same time, China is spreading its influence through soft power tools).

2. Social-media analysis:

In this work, author use this analysis to analyze the relationship between the acquisition of the status of a space power and the discussion of this event in social and media culture. In addition, the analysis of newspapers and outdated sources is used to form an understanding of how much the image of the state depended on the status of a space power. And how much "popularity" this status can bring.

3. Case-study analysis:

This analysis is aimed at studying a specific event. This work is based on many such events, they are considered both in the historical part of the research work, and in the second part and in the third. That is, in almost every part of the study, the author gave specific examples that help to reveal the topic. We will pay special attention to the third part, in which, using the example of Russia, the United States and China, we consider how the status of a space power affects the

image of the country. Statistics analysis allows the use of statistical methods and models for statistical analysis of specific data in solving problems, for example, for the purpose of conducting sample surveys. (For example, the author can view how popular a country that has received the status of a space power becomes in social networks. You can track the number of hashtags or mentions of a particular country).

4. Content analysis is a method of qualitative and quantitative analysis of the content of documents in order to identify or measure various facts and trends reflected in these documents. The peculiarity of content analysis is that it examines documents in their social context. Thus, content analysis was used as one of the main research methods. This analysis was chosen because the author considers it necessary to study the history of the problem, to do this, it is necessary to study many sources, analyze information, and select only what is necessary to add to the research work.

5. Limitation method.

This method was used in order not to describe absolutely all countries that have the status of a space power. So, in the course of the work, the author explains why he uses certain countries as examples. That is, I limit the data in my research work. I choose only the necessary countries and after analyzing them, I write about these countries as an example in the third chapter. (For example, I take the Russian Federation since this country became the first space power in the world (the USSR), I trace the evolution of this status and draw conclusions according to the analysis - whether the status of a space power affects the image, and how a country can build a favorable image with this status).

The chronological framework of the dissertation covers the historical period of the beginning of the space age-from the launch of the first artificial satellite by the Soviet Union, to the current state of the space programs of the countries described in the third chapter of the scientific work (1957 - 2020). At the same time, the author should note that does not deepen into all the «minor events» in this historical period, touching on the most popular and important events in the author's opinion, which will help to prove or refute the problem raised in this study.

Literature Review. The documentary base of the dissertation consists of the following groups of sources:

Primary sources

The first group of sources is the official documents of the Ministry of Foreign Affairs, acts, pacts, bilateral and multilateral treaties of the Russian Federation, the People's Republic of China and the United States of America concerning various types of space programs, which were

analyzed by the author and used as the basis of this work.

First, the author would like to mention an extremely important site that has been fully studied and used during research activities - the site of Roscosmos (Russian Federation)¹. This site is important for its content. It contains all the necessary information for the dissertation-the section of international cooperation, federal space programs, launches, spaceports, launch vehicles, the international Space station, orbital groups, etc.

It is also necessary to note the Federal Space Program of Russia for 2016-2025 approved by the decree of the Government of the Russian Federation of March 23, 2016 No. 230². This document presents a detailed program of the Russian Federation's participation in outer space. In addition, the Roscosmos website notes the prospects for the implementation of this program, the approaches of the Russian Federation in space, the resources and potential of the Russian Federation.

Further, the author would like to note the Agreement between the Government of the Russian Federation and By the Government of the People's Republic of China on cooperation in the exploration and use of outer space for peaceful purposes³ от 18.12.1992. Agreement between the Government of the Russian Federation and Government of the People's Republic of China on cooperation in the field of manned space exploration of 25.04.1996⁴. These agreements are used to understand the historiography of relations between China and Russia.

They also used the bilateral agreements concluded between the United States and the Russian Federation - the Agreement between the Russian Federation and the United States of America on

¹ Официальный сайт Роскосмоса [Official site of Roscosmos], URL: <https://www.roscosmos.ru/>

² Федеральная космическая программа России на 2016 – 2025 годы. Утверждена постановлением Правительства РФ от 23 марта 2016 г. № 230, официальный сайт Роскосмоса, [The Russian Federal Space Program for 2016-2025. Approved by the Decree of the Government of the Russian Federation No. 230 of March 23, 2016, the official website of Roscosmos] URL: <https://www.roscosmos.ru/22347/>
Viewed 11.03.2020

³ Соглашение между Правительством Российской Федерации и Правительством Китайской Народной Республики о сотрудничестве в области исследования и использования космического пространства в мирных целях [Agreement between the Government of the Russian Federation and the Government of the People's Republic of China on Cooperation in the Exploration and Use of Outer Space for Peaceful Purposes] 18.12.1992 // URL: <https://docs.cntd.ru/document/1902981>
Viewed 11.03.2020

⁴Соглашение между Правительством Российской Федерации и Правительством Китайской Народной Республики о сотрудничестве в области пилотируемой космонавтики [Agreement between the Government of the Russian Federation and the Government of the People's Republic of China on Cooperation in the Field of Manned Space Exploration] 25.04.1996 , URL: <https://docs.cntd.ru/document/901876878>
Viewed 11.03.2020

Cooperation in the Exploration and Use of Outer Space for Peaceful Purposes of 17. 06.1992⁵. This agreement is valuable for scientific work as one of the fundamental documents concerning the bilateral relations between Russia and the United States in space. In addition, the author cannot fail to note the multilateral agreements between the Russian Federation, the United States, Canada, ESA, and Japan, which related to cooperation on the International Civil Space Station.

The author would also like to mention the American website of NASA⁶. This site helped the author to understand a lot of American space programs, in addition to finding a lot of data about American space history and the latest news of American space research. Among the American programs related to outer space the author highlights Apollo program⁷ - it's about landing people on the moon. Shuttle - Mir program⁸ - this program concerned cooperation between Russia and the United States. International Space Station⁹ - this program deals with international cooperation.

Next, the author suggests going to the sources concerning the People's Republic of China. The official website of the People's Republic of China was also used in English - China National space administration¹⁰. This site also contains all available information related to the space program of the People's Republic of China, the latest news and cooperation agreements. An important one is the «White Paper»¹¹ of China, in which the author was able to find the goals for the development of the Chinese space industry in the next five years. In addition, there are

⁵Соглашение между Российской Федерацией и Соединенными Штатами Америки о сотрудничестве в исследовании и использовании космического пространства в мирных целях от 17. 06.1992 [Agreement between the Russian Federation and the United States of America on Cooperation in the Exploration and Use of Outer Space for Peaceful Purposes of 17. 06.1992] // URL: <https://docs.cntd.ru/document/902116834>
Viewed 11.03.2020

⁶ Official site of NASA, URL: <https://www.nasa.gov/>
Viewed 11.03.2020

⁷ Apollo program, URL: https://www.nasa.gov/mission_pages/apollo/missions/index.html
Viewed 11.04.2020

⁸ Shuttle-Mir program, URL: https://www.nasa.gov/mission_pages/shuttle-mir/
Viewed 11.04.2020

⁹International Space Station, URL: https://www.nasa.gov/mission_pages/station/main/index.html
Viewed 12.04.2020

¹⁰ China National space administration, URL: <http://www.cnsa.gov.cn/english/>
Viewed 13.05.2020

¹¹ Full Text: China's Space Activities in 2016, URL: <http://www.scio.gov.cn/zfbps/32832/Document/1537024/1537024.htm>
Viewed 17.05.2020

several versions of such a book, for example, 2006, 2016. This book contains all the memoranda of agreement and China's vision for future cooperation in space. In addition, the Chinese government reflects in this book the line of China's behavior in the space sphere. This source is important from the point of view of understanding the specifics of state policy, as well as from the point of view of understanding China's interaction with other countries of the world community in space.

In addition, the scientific importance is Declaration on International Cooperation in the Exploration and Use of Outer Space for the Benefit and in the Interests of All States, with Particular regard to the Needs of Developing Countries¹² adopted by General Assembly resolution 51/122 of 13 December 1996. This document is important from the point of view of understanding the international climate of space cooperation among the countries of the world community. Further, the author would like to note Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies¹³. This treaty is also extremely important for research in terms of understanding the existing delineations in outer space. The UN Committee on Outer Space is also important in terms of understanding the cooperation of the countries of the world community in outer space and within the framework of the United Nations.

The paper also used other sources when writing the work. You can learn more about them in the literature lists.

Secondary sources

Among the studies of foreign authors, author would like to mention books of Joseph Nye «Bound to Lead: The Changing Nature of American Power»¹⁴, «Soft Power: The Means to Success in World Politics»¹⁵. These papers are important in terms of understanding the concept of soft power, which was studied in detail and applied in the third chapter of this study. In these books, Joseph Nam describes in detail the tools of soft power and how it is used by the American

¹²Declaration on International Cooperation in the Exploration and Use of Outer Space for the Benefit and in the Interests of All States, with Particular regard to the Needs of Developing Countries, URL: https://www.un.org/ru/documents/decl_conv/declarations/space.shtml
Viewed 17.05.2020

¹³ Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies, URL: https://www.un.org/ru/documents/decl_conv/conventions/outer_space_governing.shtml,
Viewed 18.05.2020

¹⁴ Joseph Nye «Bound to Lead: The Changing Nature of American Power», USA, 1991.

¹⁵ Joseph Nye «Soft Power: The Means to Success in World Politics», USA, 2005.

government, gives examples of the separation of concepts of force. Next, the author would like to touch on the work of foreign author James Clay Moltz¹⁶ describing specifically the basics of security in space. A distinctive feature of this work is the study of the formation of the American theory of space security and the identification of the main scientific schools. In addition, it describes some possible options for the development of the second race in space. In addition, the author of this study also describes the relationship between the United States and other countries of the world community during the Cold War.

It is also worth highlighting the work Kash D. Cooperation in Space¹⁷. This book describes in detail all the stages of initial cooperation in the space sphere, the first treaties developed as fundamental in space, and the comic programs that were developed on the basis of cooperation.

In addition, the analysis of Chinese soft power in space is based on a book edited by Hongyi Lai, Yiyi Lu¹⁸. This guide analyzes the growing power of China's soft power. The article considers the policy of soft power of the People's Republic of China in the main areas, including space cooperation and space diplomacy. In addition, this book covers not only the concept of China's soft power, but also foreign policy strategy and the relationship between its international position and that of the United States. Covers some of the most recent developments and is critical of China's soft power. This book assesses China's efforts to shape its international image, as well as criticizes Nye's soft power theory.

One of the most interesting works according to the author was a book dedicated to Diplomacy and space exploration¹⁹. This paper, written by Stephen N. Whiting, explores how the United States ' space systems can be used to directly achieve diplomatic objectives. While space systems are widely recognized as vital contributors to the creation of a land-based force, they are often overlooked as a critical component of national power that can directly pursue national objectives. The essay presents a model of space diplomacy that examines seven aspects of the diplomatic power of space assets and shows when they can be effective in a spectrum of conflicts: prestige, technological partnership, access to space services, legal precedent, objective information, presence, and the threat of punishment.

¹⁶ Moltz J. C. The politics of space security: strategic restraint and the pursuit of national interests. Stanford, CA: Stanford University Press, 2008. 367 p

¹⁷ Kash D. Cooperation in Space. Lafayette: Purdue University Press, 1967.

¹⁸ Hongyi Lai, Yiyi Lu «China's Soft Power and International Relations», Published October 7, 2013 by Routledge

¹⁹ Stephen N. Whiting «Space and Diplomacy: A New Tool for Leverage», published in International Journal of Space Politics & Policy, 04 Jun 2010

Among the studies of domestic authors, author would like to note Pavlovsky A.I.²⁰, which in its work analyzes the world-political aspects of space exploration. At the same time, the author pays special attention to the development of cooperation in the peaceful use of outer space, and also pays due attention to the issue of space pollution.

It is also worth noting the work of the Russian author Smirnov A. I. dedicated to global security and "soft power 2.0" challenges and opportunities for Russia Smirnov A. I. Global security and "soft power 2.0": challenges and opportunities for Russia. Moscow, 2012²¹. Despite the fact that from the title it can be understood that the book is primarily devoted to the Russian Federation, the reader can find here information on other countries, as well as their interaction. The book is devoted to the use of information and communication technologies in the modern matrix. This work is important from the point of view of the analysis of the Russian use of information technologies in the policy of soft power of the state.

Next, we note the domestic author of the Juk E. I.²² which is engaged in research on space activities and considers the race between the United States and the USSR. The paper presents the history of the Russian space policy in the field of improving the achievements of the manned policy of the Russian Federation. In addition, the author analyzes such an important concept for the author - space policy.

The author also analyzed the work written under the editorship of A. Arbatov and V. Dvorkin Cosmos: Weapons, Diplomacy, Security. This work describes in detail the militarization of outer space, the problems and prospects of preventing armaments, and also reveals the topic of the use of force in outer space. This work also touches on the diplomacy of countries concerning outer space conducted by the countries of the world community. The author used this research to analyze the diplomacy of the Russian Federation in space, as well as other countries of the world community.

In addition, the monograph of A.V. Yakovenko " Space projects. International legal problems"²³. This work helped the author to review the international legal framework for

²⁰ Павловский А. И. Мирополитические аспекты освоения космического пространства: автореф. дис. ... канд. полит. наук 23.00.04. СПб., 2011. 21 с

²¹Глобальная безопасность и «мягкая сила 2.0»: вызовы и возможности для России / / Global security and «soft power 2.0»: challenges and opportunities for Russia, МГИМО, 2012

²² Жук Е. И. Пилотируемая космонавтика в интересах национальной и коллективной безопасности: монография. Звездный городок: РГНИИЦПК, 2003. 406 с.;

²³ Яковенко А. В. Космические проекты. Международно-правовые проблемы: Монография. М.: Научная книга, 2002.

cooperation between countries in outer space. It is extremely important to understand the specifics of the legal framework and to understand the existing documents that are able to regulate today's relations in outer space.

In addition, many other studies have been used concerning space security, the history of space exploration, and the interaction of soft power policies and building the image of the state. At the same time, after analyzing a sufficient number of sources, the author can say with confidence that the topic stated in the title of the scientific research is little disclosed from the point of view of foreign and domestic authors. There are many works devoted primarily to international space security and cooperation between countries in the space sphere. However, the author did not find any works related to the interaction of international space activities and building the image of the state. Also, it is worth noting that the difficulty arose with access to the Chinese space program. It turned out to be the most difficult to access from the point of view of Russian-language and English-language sites. The author's main task is to analyze sources and research related to the concept of soft power and the image of the state, as well as space security and cooperation of the world community in space. After analyzing these sources, the author tried to create his own research in the course of processing them, which will describe the exploration of outer space as part of the policy of building a favorable image of the state.

The framing of research includes three chapters, each of these consist from three paragraphs, which includes historical exploration of the problem, modern state of problem and perspective of development of problem.

Approbation of the research results:

1. Safarova R.R «Space exploration as part of soft power policy in the word politics», Research Center «PERESVET», St Petersburg, 2020

Additional information

The author would like to explain why he uses the concept of soft power in chapter 3 and how it is related to building the image of the state and using space for these purposes. Indeed, today there are two opposing theories about whether image and soft power are related. According to the first theory, scientists define "the formation of the country's image" as an artificially and purposefully formed image, without considering this image as a component of "soft power", since it is a resource ("attraction"), and not a tool. Another group of scientists concludes that "image" can act as one of the tools of "soft power", and there are many historical cases in which this point of view is proved, in contrast to the first point of view, the evidence for which may be more vague. So, the author adheres to the second point of view and is convinced that the image

of the state and the policy of soft power are closely linked and with the help of soft power policies (space diplomacy, joint space projects, cooperation based on the development of space programs), the countries of the world community can thus build their own positive image of the country (image) in the eyes of those states that are the target audience of soft power, conducted by the state in order to form a positive image of the country. The reader can find a more detailed evidence base in section 2.1.

Chapter 1. Historical and theoretical aspects of space exploration in world politics

1.1. Prerequisites for space exploration

Today, outer space is becoming one of the most important in the life of many States. Not so long ago, space was a mystery for mankind and in many ways remains unknown and unconquered, however, there are many pre-references to the fact that space has become a field for struggle, confrontation and human life. Scientific and technological progress of the XXI century, which has a powerful impact on people, society and nature, is unthinkable without the active use of space technologies and materials. But space is important not only as a sphere of technological innovation, but, above all, as a space for cooperation between states, business structures, and civil society to create conditions for qualitative changes in the development of human civilization. Space activities may become in the near future a kind of universal project, the implementation of which will solve global problems. It is important to emphasize that the participation of many countries in space research is caused not so much by economic reasons, but by the awareness of the "status role of space exploration", which is becoming increasingly decisive in the international life of this century. This is also due to the fact that the solution of issues, both national and global security, is impossible without taking into account the space factor²⁴. And as in the case of nuclear status, the status of a "space power" will provide many countries with immunity, and the active development of space by a country, the development of "space" technologies, can give an advantage in creating an international agenda in matters of space law, for example, or in matters of space colonization. That is, getting the status of a space power, the country acquires a certain status, which naturally affects the image of the state, giving certain advantages and responsibilities. So we can see that space exploration is quite important for international politics, in terms of acquiring power, status, new territories, etc., so the prerequisites for obtaining all the above-mentioned powers appeared in the twentieth century, after the Second World War, when states realized that they needed to acquire new territories, create weapons that could become a deterrent. In particular, the development of space exploration began, and space played a certain role, especially for the Soviet Union and the United States.

The Second World War gave a powerful impetus to the development of the space industry, as a

²⁴ Мировая пилотируемая космонавтика: история, техника, люди / Под ред. Ю.М. Батурина. М.: РТСофт, 2005. [World manned space exploration: history, technology, people / Edited by Yu. M. Baturin. M.: RTSOFT, 2005.]

result of which two superpowers appeared in the world – the USSR and the United States²⁵. The United States had a monopoly on atomic weapons at the end of the war, demonstrating its capabilities by dropping bombs on the Japanese cities of Hiroshima and Nagasaki. The Soviet Union had to eliminate its backlog in the military industry as soon as possible. The arms race has begun.

In the five years after the war, the USSR created its own atomic bomb, while simultaneously working on the means of delivering nuclear projectiles-missiles. In the NATO countries, missiles of relatively small weight were on alert, which would have been enough for a few minutes to carry a deadly cargo to our territory. And the Soviet Union had no military bases near the shores of the United States. The USSR needed heavy intercontinental ballistic missiles with a warhead weight of 5.5 tons. A rocket of this type was commissioned to build a talented engineer of the Soviet Union-Sergey Korolev²⁶. Korolev was one of the most talented engineers and later became the founder of Russian cosmonautics. These developments were known only to a limited circle of specialists associated with the rocket industry. Only after his death, millions of people learned the name of the chief designer, who actually headed all Soviet space research for ten years – from 1957 to 1966. From an early age, the young designer had the idea to build a rocket plane-a rocket-powered spacecraft. Korolyov's dreams began to be realized quickly thanks to his acquaintance with the prominent interplanetary flight enthusiast Friedrich Arturovich Zander. Together with him, Korolev created the Jet Propulsion Research Group (GIDR) under Osoaviakhim, which soon turned into the Jet Research Institute (RNII)²⁷. The Queen appointed the Deputy Director for scientific research.

However, space development was interrupted by the so-called era of the Great Terror in the USSR. Almost all the main developers of the programs were arrested, while the programs themselves were curtailed. One of the most talented engineers of the Soviet Union was sent to prison and only in 1940 was returned to Moscow, included in the group of Andrei Tupolev, which was engaged in the creation of a new generation of heavy bomber. Two years later,

²⁵ Газета Известия «Миссия номер один: как СССР сумел вырваться вперед в космической гонке», <https://iz.ru/998408/arsenii-zamostianov/missiia-nomer-odin-kak-sssr-sumel-vyrvatsia-vpered-v-kosmicheskoi-gonke> [Izvestia newspaper "Mission number One: how the USSR managed to get ahead in the space race", URL: <https://iz.ru/998408/arsenii-zamostianov/missiia-nomer-odin-kak-sssr-sumel-vyrvatsia-vpered-v-kosmicheskoi-gonke>] Viewed 12.03.2020

²⁶ IBID

²⁷ Анастасова Л. И. «Космическая гонка США и СССР в период холодной войны», Санкт - Петербургский университет промышленных технологий и дизайна, 2020, С - 52-58 [Anastasova L. I. "The space race of the USA and the USSR during the Cold War", St. Petersburg University of Industrial Technologies and Design, 2020, P-52-58]

Korolev developed designs for a jet-powered interceptor aircraft, and in 1943 built a rocket booster for combat fighters. In September 1945, together with other Soviet specialists, he was sent to Germany to study captured equipment, in particular V-2 missiles, and a few months later a new industry was created in the USSR – rocket industry. On its basis, space programs were further developed. Sergei Pavlovich Korolev was appointed chief designer of long-range missiles. And in 1957, the Soviet Union launched the first artificial Earth satellite, surpassing the United States. Thus, the Soviet Union was able to draw global attention to itself, some countries admired such successes and also wanted to achieve certain goals related to space exploration, on the other hand, the Soviet Union unleashed a new round of the Cold War and began a new stage of human development of space technologies. Subsequently, the race for space will turn into the colonization of space and will lead to a real confrontation of the great powers in outer space. Thus, the Space Race became an important part of the cultural, technological and ideological confrontation between the USSR and the United States during the Cold War. This was due to the fact that space research was not only of great importance for scientific and military developments, but also a noticeable propaganda effect. As for the other "giant" of the space sphere of the United States of America, the history of American cosmonautics began with the creation in 1915 of the NACA, an advisory body that was engaged in the study of space. But this was only a theory; by 1958, NACA had become NASA, the American Aeronautics Committee²⁸. At the same time, a particularly active stage of the space race between the USSR and the United States began. To win it, active actions were required – satellites, crewed rockets, new discoveries. It is also worth mentioning that this is a civil organization responsible for scientific expeditions and commercial projects. All military developments are under the authority of the space units of the US Air Force and there is no access to information about them. As, indeed, in any other country with space programs. At the same time, it is worth noting that the prerequisites for the development of the space sphere in the United States were the USSR, which literally dragged the Americans into the space race²⁹. The launch of the first artificial Earth satellite by the Soviet Union caused such a stir among the public, fear, panic and respect among the population of many countries of the world. Some countries feared the power of the Soviet Union,

²⁸ Степанов А. С. «Военная космическая программа США: проблемы и перспективы», Институт США и Канады РАН, 2014, С - 4-5 [Stepanov A. S. "The US Military Space Program: Problems and Prospects", Institute of the USA and Canada of the Russian Academy of Sciences, 2014, P-4-5]

²⁹ Назаров А. Д. «Информационно - пропагандистское сопровождение космического соперничества СССР и США (по материалам отечественных и зарубежных публикаций)», журнал вопросы политологии, 2020, С - 1142 [Nazarov A.D. " Information and propaganda support of the space rivalry of the USSR and the USA (based on the materials of domestic and foreign publications)", Journal of Political Science Issues, 2020, P-1142]

fearing that if the USSR could deliver missiles into space, it would be able to hit any country in the world with its nuclear warheads. The United States had no advantages over the USSR and they were simply forced to join this race. It is also worth noting that the Soviet Union's desire for space was also due to military-strategic interests. The Soviet Union essentially needed missiles that could "fly" across the ocean and hit the territories of the United States. In simple terms, space exploration was a "side effect" of the Cold War.

During the great space race, the USSR and the United States became the first and main "space powers" capable of putting satellites into orbit with their launch vehicles, and "space superpowers" that began manned space flights.

Of course, the leaders of world science and technology (at least in these areas and in the years under review) were the USSR and the United States. But the process of space exploration and conquest took place not in an isolated space, but in the world community, and its reaction to the race of supertechnologies unleashed by the two superpowers was far from ambiguous. So the prerequisites for the development of outer space in other countries appeared as a reaction to the rapidly changing trends of the modern world. Not to be in the role of catching up in technical, scientific and technological development and not to become hostages in a military confrontation prompted the countries of the world to look for their own ways out of this situation. If the emergence of military-political blocs—first of all, NATO (1949) - became the deliverance of the European countries from the military threat, then it was not profitable for the superpower to share its scientific potential.

Space became a new "new light" for Europe, where two processes were unfolding, closely interrelated, but at the same time quite separate: competition in the scientific field and political rivalry.

To the greatest extent, these processes concerned, of course, the USSR and the United States. The competition between the superpowers followed rather strict and strict rules. With a little exaggeration, we can describe this period as a real game of "knockout". The right to correct mistakes was not given, because the stakes—political, scientific and commercial—were very, very high. Dividends on the latter were provided, however, in those years only in the distant future, but with almost 100% probability of achieving it. The political and military gains from the use of outer space were really tangible, but they were primarily interested not in the European states, but in the Soviet Union and the United States. However, it was not possible for other countries to enter this race on an equal footing and compete with two superpowers. At the same time, the countries did not want to fall so far behind that it became impossible to even catch up with one

of the superpowers in space exploration. So the countries of Europe saw no other way out but to join forces in order to keep up with the superpowers in the future and try to participate in the space confrontation. In addition, many countries did not seek to overtake the United States and the USSR, but only tried to repeat their experience. European countries would not have had enough funding to develop such serious space projects individually, so it was decided to join forces and create a pan-European project for the exploration of outer space. No European country alone could provide the infrastructure and equipment necessary to maintain the level of research in "big science", comparable in scale, for example, with the US. In addition, as mentioned above, space exploration caused such a stir and excitement among the entire population of the Earth that the status of a space power seriously affected the image of the state, its position on the world stage. So Europe succeeded in creating the first foundation of the organization ESA (European Space Agency—European Space Agency), which was proposed by a small group of scientists in the late 50s-early 60s. There were several motivations for the emergence of these projects: new technological horizons opened up with the launch of the first artificial Earth satellite by the Soviet Union in October 1957; purely scientific interest in outer space; The willingness of governments to support the development of space research, as evidenced by the rapid development of space programs not only in the United States, but also in other countries (for example, in France), and, of course, the conviction that European scientific cooperation will be truly productive for all European countries. At the same time, France has convincingly proved the success of CERN (Centre Europeen pour la Recherche Nucleaire), established in 1954. Thus, it follows from the above that the European states began large-scale exploration of outer space, however, with a rather large delay (more than 15 years) relative to the USSR and the United States³⁰. This can be explained, on the one hand, by the lack of technical and financial strength of individual European countries. On the other hand, they had to overcome great political difficulties and differences on the way to "space" integration. So, in the twentieth century, there were prerequisites for the development of outer space by world powers. First of all, these prerequisites were associated with the military-technical needs of the USSR, and a little later, the United States. The main goal of the USSR and the United States in space was the desire to overtake the rival in technical, military and political terms. It is also worth noting the prestige of the status of a space power, which was acquired by the state that achieved certain successes in space exploration, the development of technological and military potential. The launch of an

³⁰ Michael P. Gleason «European Union Space Initiatives: The Political Will for Increasing European Space Power», *Astropolitics / The International Journal of Space Politics & Policy*, 2006

artificial Earth satellite literally brought down the hype around the USSR, some countries began to fear the Soviet Union, others went to cooperate in order to achieve similar successes in the field of space exploration. While the United States was essentially involved in the space race, which subsequently provoked the development of space exploration technologies, the development of military-technical potential and various programs, including space tourism programs and the development of private entrepreneurship in the field of space.

1.2. Analysis of the main stages of space exploration in the XX-XXI centuries

For 60 years of space exploration, humanity has passed important stages on the path of space exploration. In order to analyze the main stages of space exploration, the author suggests considering international competition in this area and international cooperation, because it was competition and cooperation that prompted countries to actively "conquer" space. Also, we should not lose sight of the fact that space exploration was both strategic and political, and even moral and ethical in nature.

The first period of space exploration can be designated as the 50s - 60s of the last century (this stage can include such events as the first human flight into space (Yuri Gagarin, USSR, April 12, 1961), the first spacewalk of an astronaut (Alexey Leonov, USSR, March 18, 1965), the first expeditions to the Moon and to the Moon (USA, 1968-1969), the first human exit to an extraterrestrial celestial body – the Moon (Neil Armstrong, USA, July 21, 1969). In this period of time, there was, as already noted earlier, a struggle for spheres of influence. The two main players of the United States and the USSR fought over which of the two superpowers could conquer space first³¹. This was extremely important, namely the primacy in this case, since this success would bring the countries the expected, impressive "bonuses". Of course, the main such "bonus" was the political and ideological recognition by other countries in the international arena.

Attempts to explore outer space began much earlier than the first stage highlighted by the author. In addition, space tracking devices have already been developed, and scientists already had a minimal understanding of the space sphere and what is necessary for its development, that is, the first stage began long before the author indicated below, however, the author believes that

³¹ Анастасова Л. И. «Космическая гонка США и СССР в период холодной войны», Санкт - Петербургский университет промышленных технологий и дизайна, 2020, С - 52-58 [Anastasova L. I. "The space race of the USA and the USSR during the Cold War", St. Petersburg University of Industrial Technologies and Design, 2020, P-52-58]

it is necessary to determine the first stage from the first major event in the history of cosmonautics. So, the first stage of space exploration was opened by the Soviet Union, when on October 4, 1957, from the 5th Research site of the Ministry of Defense of the USSR, which later became known as the Baikonur Cosmodrome, the Sputnik launch vehicle (R-7) the first artificial Earth satellite was launched³². In September 1967, the International Federation of Astronautics declared October 4 the Day of the beginning of the space age of mankind³³. Also, the date of the launch of the first artificial satellite of the Earth is considered the day of the Space Troops. It was the launch and control parts of the spacecraft that launched and controlled the flight of the first artificial Earth satellite. In the future, the first human flight into space and many domestic and international space programs were carried out with the direct participation of military units of the launch and control of spacecraft. In connection with the increasing role of space in matters of national security, the Decree of the President of Russia in 2001 created an independent branch of the armed forces - the Space Forces³⁴. Today, the Space Forces are part of the VKS of the Russian Armed Forces. That is, this stage of space exploration is important in terms of the speed and quality of the launch of the first artificial satellite of the Earth. The USSR managed to get ahead of its American colleagues in launching the satellite. While in America, at this stage, the term "satellite crisis" has even been formed, which in fact means a chain of events associated with the beginning of the space race. The "crisis" began on October 4, 1957, when The Soviet Union launched the first artificial Earth satellite into space. There are two theories about how this action of the USSR was perceived in the west. According to one version, the United States knew nothing about the launches and this really shocked the states and activated America on the path of space exploration, which confirms the cost of space, the United States immediately after the launch was almost four times higher than the previous year, an organization such as NASA was also founded, in addition, the "National Defense Education Act in September 1958" was adopted³⁵. All this can prove the activation of the Americans and the intensive work to "catch up" with the USSR. According to another version, the launch of an artificial Earth satellite by the

³² Семиряд Н.Ю., Воскобойников С. Г. «Космическая отрасль СССР», Молодежь и XXI век, 2018 [Semiryad N. Yu., Voskoboynikov S. G. "Space industry of the USSR", Youth and the XXI century, 2018]

³³ IBID

³⁴ РИА НОВОСТИ «Космические войска ВС РФ: история создания и задачи. Справка», 2020, URL: <https://ria.ru/20081004/151863301.html>
Viewed 1.04.2020

³⁵ McDougall, W A «Heavens and the earth: a political history of the space age», 1985, P - 28

USSR was a deliberate move by the Americans, who "missed their turn" in the space race, for strategic reasons. Deliberately conceding to the USSR, the Americans hoped that the launch of the Soviet satellite and its flight over the territory of the United States would remove diplomatic restrictions on the implementation of the secret program of reconnaissance satellites "Corona" (since 1959), designed to track the placement of ballistic missiles of the USSR and China³⁶. Thus, the US leadership managed to overcome the USSR's disagreement with the concept of "open skies" after the fact. In any case, this stage of space exploration was not only a strategically important stage, but also a chance to get closer to one of the goals of the Cold War - to win the ideological recognition of one of the rival countries. Analyzing this period of time, it can be noted that this stage of space exploration was one of the most stressful stages. Not only because of the ideological and political confrontation, but also because of the short time frame and constant moment of rivalry between the two superpowers. Countries literally did not have the right to make mistakes. A mistake would cost countries very serious consequences. That is, the characteristic features of this stage are: tension, increased military confrontation, increased risks, and an ideological desire to improve the image of the state in the international arena by acquiring the status of a space power. After the successful launch of an artificial satellite of the USSR, the struggle for outer space was gaining momentum, the countries were preparing to launch a man into space. This event could allow not only to become a leading space power, but also a country that managed to achieve this goal would have the opportunity to "set" the international agenda in the field of space exploration. So, on August 19, 1960, the USSR successfully launched the "Sputnik-5" spacecraft. On board the ship were the dogs Belka and Strelka - the first animals that made an orbital space flight and returned to Earth. On April 12, 1961, the first manned human flight into space was carried out. The launch vehicle launched the Vostok spacecraft, piloted by the first cosmonaut Yuri Gagarin, into low-Earth orbit³⁷. The USSR really managed to vividly and quickly win the championship in the space race. The successes described above were received ambiguously in the international arena. On the one hand, the world literally rejoiced at such a huge leap in the scientific field. Many countries, including the DPRK, Europe, and even the United States, have congratulated the Soviet Union on such progress and a truly global achievement that will benefit the entire world. On the other hand, the

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³⁷ Самарский областной историко - краеведческий музей им. П.В. Алабина «Они были первыми», научная статья, 2019, URL: <http://www.alabin.ru/virtualnye-ekskursii/oni-byli-pervymi.php>
Viewed 19.03.2020

USSR won the primacy in the space race, overtaking the United States, the Americans could not even imagine what the next step of the Communists would be. Therefore, they only intensified their forces to try to overtake the Soviet Union. In addition, many other countries also believed that the USSR had become quite authoritative in terms of space exploration, some even forgot about the hostility to the Communists, talk about the Iron Curtain behind which there are no decent scientists has subsided. Such changes can rightly be associated with the image of the state. The USSR became more authoritative for some countries, and European countries were ready to cooperate to obtain the development of the punished space from the USSR. However, the primacy of the USSR in the space sphere was interrupted by the triumph of the United States, which was able to reach the surface of the moon. This is a truly incredible event, which we assume was also perceived ambiguously in the international community. On July 21, 1969, the first man on the moon, Neil Armstrong, confirmed the huge success of the United States, which in fact allowed the States to win the space race at this stage³⁸. However, the landing on the moon was met with ambiguity, especially in Russian society. There was a lot of criticism and distrust of the United States. To this day, there is debate about whether it was real or just a computer installation, there is a lot of evidence from the Russian side, the purpose of which is to undermine the image of the United States in the space race. They are aimed at proving that there was no landing.

The second stage of space exploration began with the formation of the sphere of space activity as a full-fledged sphere of activity of society, affected the 70s of the XX century – the 10s of the XXI century. A characteristic difference from the first stage is that this period of space exploration begins to affect not only national economies, but also the global economy. During this period, the presence of people on manned space stations outside the Earth in near-Earth orbit becomes permanent. So, in the 70s of the XX century, according to the author, humanity and world politics come to understand how important space and outer space as a whole is. First of all, we highlight the importance of space from the point of view of an important strategic object. In space, the giant states, in terms of owning one of the most dangerous weapons on Earth, are able to place their missiles in such directions that will threaten their opponents. On the other hand, you can place the so-called "space troops", which, by the way, is happening at the moment. That is, if major political players have the opportunity to colonize space, they will not only be

³⁸ Newsmakers NASA «1969 Moon Landing», 2021, URL: <https://www.history.com/topics/space-exploration/moon-landing-1969>
Viewed 14.05.2020

able to set the agenda, but at the same time, they will also be able to strengthen their military and strategic potentials, and thus strengthen their positions in the world in terms of power, which ultimately leads to increased international influence and strengthening the image of the state.

The second, but still important, reason for space exploration is basic survival. In a certain situation, humanity may be on the verge of extinction. It is assumed that only evacuation to another planet will help save the remnants of civilization.

The third, but important factor is mining. It is believed that the most valuable deposits are asteroids. Accordingly, therefore, human exploration of outer space plays an economic role. Rare Earth metals are not so rare in other star systems. So, this will solve a lot of problems. In addition, we note space exploration as an opportunity to counter global threats. Now comets and asteroids are elevated to this rank. Previously, these theories only frightened viewers from TV screens, but the Chelyabinsk meteorite that fell in 2013 near Chelyabinsk showed the full power of cosmic bodies³⁹.

The third period is the implementation of super-global space exploration projects (since the 20s of the XXI century). Super-global industrialization and post-industrialization of space activities for the security and development of mankind on Earth and off Earth, the development of extraterrestrial resources and objects, further expansion into space, to the Moon, Mars, etc., the creation (in the future) of bases, settlements, space humanity. The author identifies all of the above as the last stage of space exploration to date. To date, there are only two space stations in the world. One station is the International Space Station (ISS), and the Tiangong-1 spacecraft, which belongs to China⁴⁰. The ISS is a manned space station used as a multi-purpose space research facility. This station has been in operation since 1998 and will continue to be operated until 2024, in addition, it is planned to extend the operation until 2030⁴¹. At the moment, this international project involves 14 countries, including the Russian Federation. The idea of creating this project appeared after the conclusion of the agreement on cooperation in the space sphere, concluded on June 17, 1992 between the United States and the Russian Federation. After close cooperation, which was partly forced due to the fact that space development is too

³⁹ РИА Новости «Челябинский метеорит: что ученые узнали за год», 2018, URL: <https://ria.ru/20140214/994868497.html>
Viewed 22.05.2020

⁴⁰ Britannica «Space station», URL: <https://www.britannica.com/technology/space-station>
Viewed 23.05.2020

⁴¹ BBC News «Russia plans its own space station in 2025», URL: <https://www.bbc.com/news/world-europe-56812294>,
Viewed 14.06.2020

expensive for research alone - the Russian side proposed the project of the orbital station. Initially, this proposal was perceived negatively by the United States, there was a debate in Congress about whether to agree or disagree with this initiative. However, with a margin of only one vote (215 votes against construction, 216 votes for construction), the US Congress still approved this project. This is the first major joint work of the United States and Russia after a long standoff in space. The two leading space powers are creating an international platform for cooperation, which, of course, is an indicator of the desire of the countries to succeed in this area, while not letting «competitors into space».

The essence of the current state of the space age is the change of its historical periods: the end of the second and the transition to the third, the beginning of the transition to the practical implementation of super-global space exploration projects. On the agenda of the leading countries in the field of space activities, their space agencies, leading space corporations – the beginning of new large-scale projects for the exploration of the Moon, Mars and other space bodies of the solar system.

1.3. Space as a sphere of interaction of the leading world powers of the XXI century

First of all, the author proposes to define the concept of leading powers (great powers), and which specific countries the author will call leading in space and why.

Leading Power, according to the definition, means a conditional, non-legal designation of independent States (powers) that, due to their political influence, play a decisive role "in the system of international and international legal relations". It is no secret that the time of the bipolar world began when two countries divided the world into two poles, playing the role of superpowers, leading powers for their bloc. Such powers were the USSR and the United States. After the collapse of the Soviet Union, the United States was able to maintain its acquired greatness, remaining the leading power in the political discourse. So, let's figure out what properties a power should have in order to become a leader.

Many researchers distinguish the following "dimensions", which are used to assess the compliance of a power with the status of "great" (leading):

- the power of the state (its resource potential);
- «spatial dimension», or «the geography of interest» (a criterion to distinguish a great power from a regional); the leading power can be the lead in "the region", and in General in the international arena

- status (formal or informal recognition of state for the status of «great power»)
- recognition of regional countries relics of «the guardian» the leading powers on the continent
- military, political, and economic power that allows you to play a leading role
- natural resources, military and technical potential for the development of previously unexplored territories, the development of resource deposits

Such qualities for a long time, after the end of the Second World War, were first possessed by the so-called «world police», who took on the responsibility of keeping order in the post-war world and setting the agenda. Such countries include the Soviet Union, the United States of America, Great Britain, and China. However, a few years later, due to the difficult economic situation in Europe, some countries lost their former influence due to the fact that the "economic" sphere simply "sank" in these countries. Thus, with the help of the Marshall Plan, the United States of America was able to gain a foothold in western Europe as a reliable ally, which over time exposed Europe to dependence on the "senior ally". So the United States acquired the status of a leading world power, and later could become a superpower. An almost identical situation occurred with the Soviet Union and Eastern Europe. However, if in the case of the United States an approach based on soft power was used, with the addition of elements of hard power in extremely small quantities (the Marshall Plan, with a certain pressure/manipulation on the part of the Americans), then in the USSR hard power was the priority, with smaller elements of soft power. So the USSR became the leading power on its continent, and later acquired the status of a superpower along with the United States.

To date, according to the author, it is possible to distinguish several leading countries in the political discourse. Today, with the development of technology, the improvement of the policy of diplomacy, the policy of hard power goes to the background (but it remains an important part of politics), soft power or "mixed power", which is commonly called smart power, comes to the fore. If we choose the leading powers today, based on the " dimensions " highlighted by the author above, then we can see that a fairly large number of countries today, according to their indicators, will fit the status of a leading power. Among such countries, of course, we can single out China, which today plays an important role not only in outer space, but also is one of the strongest economic players on the world stage⁴². The indicators for 2020 alone prove that

⁴² Каменной П. «Космическая программа КНР», журнал проблемы дальнего востока, 2020, URL: <https://elibrary.ru/item.asp?id=9539771>
Viewed 17.06.2020

China's economy is one of the largest economies in the world in terms of GDP (PPP). Only for 2020, the figures, according to the IMF, amounted to 27,804,953 million dollars⁴³. At the same time, the US economy is 20,289,987, Russia 4,176,350⁴⁴. Although the Russian economy occupies only 5-8 place in the world "standings", it is still the leading one in "its own region". It is also worth noting that in order to get the status of a "leading country", it is necessary to have not only a serious economic potential, but also the ability to influence international political relations in the world. So, in this area, the Russian Federation can rightly be considered one of the central forces that can set the agenda and have weight in the political arena (it is only worth noting the important place of Russia in the Security Council and in the UN as a whole). In addition, we will highlight the geopolitical factor of the Russian Federation, which is the largest country in the world, which a priori gives Russia the right to participate in international relations and cannot but force other participants to take into account the opinion of the Russian government (whose authority was recognized by world-famous publications that awarded Putin the status of the most influential person in the world for several years in a row). Do not forget the triumph of the Russian Federation in space, which was recognized worldwide. The flight of the first man, the launch of the first Earth satellite into space, was a real breakthrough for the Soviet Union, and later for the successor of the USSR - Russia. The United States in the space race at first lost, however, came out victorious, made the first landing on the Moon in the history of mankind, created multiple projects related to the colonization of space and weapons, which of course, gives certain privileges to Americans in space. The Chinese space exploration program, in turn, began in 1956, almost simultaneously with the developments of the United States and the USSR, that is, China was not going to lag behind in the space race, although it did not want to directly interfere in the competition of the two giants⁴⁵.

Although historically China was the fifth space power (launching satellites independently), by the beginning of the XXI century it became the third such power in terms of potential. China has a variety of launch vehicles up to heavy, has an extensive set of applied satellites of almost all types, including geostationary, launches interplanetary stations (AMS) to the Moon and has

⁴³ GDP (PPP) data as calculated by the World Bank and the International Monetary Fund

⁴⁴ IBID

⁴⁵ Эпштейн В. А., Бочков Д. А., Мухаметзянов Р.Р. «Китайская космическая программа: 60 лет эволюции», [Epstein V. A., Bochkov D. A., Mukhametzyanov R. R. " The Chinese space program: 60 years of evolut] URL: <https://cyberleninka.ru/article/n/kitayskaya-kosmicheskaya-programma-60-let-evolyutsii> Viewed 2.07.2020

AMC programs to Mars⁴⁶. Over 40 years, more than a hundred satellites have been launched. By 2018 China has become the world leader in space launches, producing 37 launches in a year. In addition, China is one of the largest market players in providing launch services to other countries and organizations, and is also a developer and manufacturer of satellites on their orders (for example, for Nigeria) and participates in joint programs (for example, with Brazil). Since China considers itself a third world country (being their undisputed leader - the leading power among the third world countries), it is extremely interesting for the author to take as an example the country of the "third world", which has achieved impressive success in the exploration of outer space. So, in connection with the development of an independent program of national space stations, China does not participate in the International Space Station (ISS)⁴⁷. At the same time, it plans to provide its own ships and space stations with the possibility of flights of foreign cosmonauts (Nigeria, Sri Lanka, etc.) - just as it was previously started by the USSR/Russia and the United States. Therefore, the author considers it appropriate to take as an example Russia, the United States and China for further study of the relationship between space exploration and its impact on the formation of a favorable image of the state.

It is worth noting that the author does not deny the importance of other countries that have achieved impressive success in the space field over the past few years. Among such countries, we can mention India and Pakistan, whose space programs are developing quite quickly. However, here it is worth noting the moment of the competition of these two countries directly between themselves. As in the nuclear sphere of these two countries, whose nuclear programs were developed to direct missiles at each other, the space sphere is also considered here from the point of view of "not falling behind" each other so much as to be threatened by the other country. However, the Indian space program today significantly prevails over the space program of Pakistan. India has a well-developed space program and, in total, is currently the sixth space power in terms of potential (after Russia, USA, China, Europe and Japan). India is one of the very few space powers that independently launches communications satellites into geostationary orbit, returnable spacecraft and automatic interplanetary stations (AMS) to the Moon and Mars and provides international launch services. India has its own manned space program and is expected to launch its own manned space flights of gaganaut astronauts on the "Gaganian" spacecraft from 2021 and become the fourth space superpower.

⁴⁶ IBID

⁴⁷ Yingjin Zhang «Cinema, Space, and Polylocality in a Globalizing China», Hawai's Press, 2010

Pakistan has not yet managed to make as much progress in space development as India has. However, the leadership of Pakistan has ambitious goals for the development and establishment of a space exploration program⁴⁸. At a minimum, the goal of the leadership is to try to get closer to the developments of India, to prevent India from "monitoring" the Pakistani military from satellites. Therefore, the primary task of space exploration in these countries is the desire for military confrontation or control of the situation in the region, and not building a favorable image of the state, which will give certain privileges on the world political arena.

In addition, we note a potentially dangerous player in the space arena - the Democratic People's Republic of Korea. The space program is led by Committee of Aerospace Technologies of the DPRK. The first confirmed successful satellite launch on December 12, 2012 made the country the 10th space power capable of launching satellites (ISS) own launch vehicles, ahead of the South Korea⁴⁹. North Korea is one of the first countries in the Asia-Pacific region to develop missile technology. Work on the rocket and space program began in the mid-70s and was carried out using Soviet technologies. Based on the production of missile systems USSR and By the beginning of the 90s of the XX century, North Korean scientists came close to creating intermediate-range ballistic missiles (MRBMs).

Next, the author suggests moving on to a more detailed consideration of space and the cooperation of the leading powers, which were highlighted above. It is worth noting at once that the author mentioned only a few of the space powers (Pakistan is not yet a space power). To date, it is customary to allocate 11 space powers that were able to make their first orbital launches. Among these countries, we will single out the already mentioned ones - Russia (USSR), the United States, China, India, and the DPRK. In addition, other space powers that were not mentioned earlier are-Italy, France, Japan, the United Kingdom, the European Union (not a power), India, Israel, the Republic of Korea, Iran. The programs of these countries are quite diverse and pursue various goals from peaceful to more aggressive. However, the author highlighted and briefly outlined the space programs of some countries, in order to show by their example the difference in the goals of space exploration. According to the author, particularly interesting programs were identified in terms of their specifics - China is the leader of the third world and its program is interesting from the point of view of the leading power of the third

⁴⁸ Fazal A.A., Umbreen Javaid, Rabia Munir «Pakistan India Space Program and the Satellite System», Journal of Indian Studies, 2018

⁴⁹ Victor Cha and David Kang «Nuclear North Korea. A Debate on Engagement Strategies», Columbia University Press | 2018, P - 43

world countries, Russia is interesting from the point of view of the discoverer of the space world, the United States from the point of view of one of the strongest space programs in the world, India and Pakistan were identified in comparison between the goals of these countries in space and "traditional" space states. The DPRK is considered one of the most dangerous powers in space in terms of its unpredictability or even some kind of aggressiveness. At the same time, European countries and the European Union have really serious space developments, which today can compete with the developments of the United States and China. In addition, Japan is also the space leader today and is not inferior to China in technological development. At the same time, such space countries as Iran and Israel can be attributed to countries with more "moderate" developments in the space sphere. Again, it is no secret that these countries have been competing in the development of nuclear programs and the creation of nuclear weapons for many years. So in space today, countries are engaged in a certain kind of rivalry aimed at equalizing the odds, the efforts of countries are aimed at getting ahead of the opposite side, primarily in the bilateral space race.

So, over the past twenty years, space has been transformed by the latest technologies from an unknown space into an important sphere of human life, and more importantly, into an important factor in world politics. Today, space exploration, the space policy of the State, the use of outer space for military or political purposes is becoming one of the most important in the world political arena⁵⁰. The approach within the framework of political science allows us to consider space exploration as an integral socio-political phenomenon. At present, space is a sphere of active political interaction between States. The research and development of outer space, according to the author, is a global task that can not be handled by one country alone. This belief leads States to cooperate and interact in outer space. However, it is also worth noting that only those States that have the technical and financial capabilities to develop outer space can engage in space exploration. In other words, the leading space powers do not have any interests in interacting in space with states that are not currently «space powers».

However, we should not forget that the countries have developed relations not only in the spirit of cooperation, but also in the spirit of competition. The main trend is the establishment of relations between superpowers and small countries in this area. Thus, researcher A. E. Tarasov notes that " the complete refusal of a country from space activities entails not only a

⁵⁰ Павловский А.И. «Мирополитические аспекты освоения космического пространства», Санкт - Петербург, диссертация, 2011, [Pavlovsky A. I. "World-political aspects of space exploration", St. Petersburg, dissertation] URL: <https://www.dissercat.com/content/miropoliticheskie-aspekty-osvoeniya-kosmicheskogo-prostranstva> Viewed 23.07.2020

technological lag, but also negative political consequences in the form of a decrease in the country's authority on the world stage and the inability to use space exploration as an instrument of foreign and domestic policy»⁵¹. In other words, the authority and image of a state can directly depend on whether the state explores outer space, whether it is interested in space cooperation, and whether it is ready to adapt and develop its own technologies for the exploration of outer space and the development of cosmonautics.

The beginning of international cooperation in space should be considered the stage of successful launches of spacecraft. Perhaps, until the 90s, i.e. a new period in international relations, cooperation in space was carried out thanks to state projects, while partners for participation in joint space projects were selected at the highest state level, taking into account exclusively priority areas of foreign and military policy⁵². This circumstance was caused by the special status of space activities in the system of political priorities of the governments of the USSR and the United States, as well as other "space powers", the political importance of projects prevailed over the economic interest, which was a characteristic sign of the beginning of the space age, but remains important at the present stage.

It should be noted that the industrial potential created by the USSR and the United States in the space field simply could not be equaled. The Soviet Union also actively cooperated with its allies in the socialist camp, especially with the countries of Eastern Europe. Therefore, many countries in Eastern Europe have the opportunity to participate in various space projects, including manned ones. The Americans and their Western allies pursued an "identical" policy of implementing joint space projects.

It should be noted that at the initial stage, the projects were more of a general civil orientation, the goals were to solve scientific and practical problems. At the initial stage, the allies reduced the military use of outer space to the creation of so-called space communication networks, the task of which was to meet the needs of military blocs whose members were "space powers". It should also be noted that countries that had reconnaissance satellites sometimes shared the

⁵¹ Тарасов А.Е. Международное сотрудничество в космосе после холодной войны и интересы России: Дисс. канд. полит. наук. М., 2002, с. 155. [Tarasov A. E. International cooperation in space after the Cold War and the interests of Russia: Diss. cand. polit. M., 2002, p. 155.]

⁵² Сборник научных статей «актуальные проблемы МО и МП», Дип. Академия МИД России, 2019, URL: http://www.far.ru/org/faculty/jurfac/SiteAssets/Pages/nps/%D0%A1%D0%B1%D0%BE%D1%80%D0%BD%D0%B8%D0%BA_%D0%90%D0%BA%D1%82%D1%83%D0%B0%D0%BB%D1%8C%D0%BD%D1%8B%D0%B5%20%D0%BF%D1%80%D0%BE%D0%B1%D0%BB%D0%B5%D0%BC%D1%8B%20%D0%9C%D0%9E%20%D0%B8%20%D0%9C%D0%9F_2019_%D0%BF%D0%BE%D0%BB%D0%BD%D1%8B%D0%B8%CC%86%20%D1%82%D0%B5%D0%BA%D1%81%D1%82.pdf Viewed 24.07.2021

information they received with their allies. In fact, it is worth noting that space exploration initially had a military orientation. However, a little later, countries were able to use scientific achievements in space, its development, in order to form a favorable image of a technologically advanced and advanced power. The country with which they wanted to cooperate, the state became more attractive in the society of other countries. After all, previously, a technologically advanced country was equated with a modern state, a developed society, with which one wanted to deal. That is, the countries were able to balance between hard and soft power to create a favorable image of the state.

And today, the space activities of the leading states of the world, primarily the United States, despite its commercialization, are also primarily subordinated to the achievement of global military and political goals, which of course are hidden under beautiful slogans about strengthening national security⁵³. The ISS project was of great importance for the political interaction of the countries, as it united almost all the leading space powers, separated by the global confrontation. This is an amazing event when the space project was able to unite such different and warring countries. In the twenty-first century, cooperation in the space sector is entering a qualitatively new stage, becoming multi-level and multilateral. The beginning of the stage was marked by the end of the Cold War and the demilitarization of the international economy in the 80s of the twentieth century, which was also facilitated by the process of globalization of the world economy.

Chinese scientists, for their part have not once noted that a new type of space cooperation is a manifestation of new international relations in the field of cooperation in space, the purpose of these relations is to establish normative principles for improving international cooperation in space so that all countries of the world respect each other in space and contribute to the formation of a just space international order⁵⁴. To date, the countries of East and South-East Asia are actively cooperating in the space sphere. Currently, the countries of this region are involved in space exploration activities, while quite actively developing their own space policy, implementing bilateral international cooperation in various aspects of space activities, and have

⁵³ Бирюкова Д. Р. «Космическая Политика как один из механизмов обеспечения стратегических интересов России», текст научной статьи, Москва, 2018, [Biryukova D. R. "Space Policy as one of the mechanisms for ensuring Russia's strategic interests", text of a scientific article, Moscow, 2018] URL: <https://cyberleninka.ru/article/n/kosmicheskaya-politika-kak-odin-iz-mehanizmov-obespecheniya-strategicheskikh-interesov-rossii>
Viewed 3.08.2020

⁵⁴ Newspaper Space News «Russia, China to sign agreement on international lunar research station», 2021, URL: <https://spacenews.com/russia-china-to-sign-agreement-on-international-lunar-research-station/>
Viewed 23.03.2021

achieved incredible results in space activities, especially China, Japan and South Korea. At the same time, Malaysia, Singapore, and Thailand have their own space projects. But it is also worth noting the many problems that exist in the cooperation of the East Asian and Southeastern regions. These problems are mainly due to the different approaches in the countries of the region to the development scenario of space exploration, the lack of institutional norms, the geopolitical situation, and even the approval or disapproval of projects by society. Therefore, according to the author, until a global project of " new " space cooperation is created, which will have an institutional, regulatory framework for international space cooperation, which will provide a multi-level model of cooperation between countries, while certain mechanisms will be created that will reduce the possibility of negative consequences, including, for example, the unauthorized militarization of space by potentially dangerous regimes of some States.

Within the framework of global cooperation in space, a special place should be given to China as one of the largest space players and the main one for interaction with developing countries. Continuing the "One Belt, One Road" initiative, the People's Republic of China also seeks to unite the countries of Central and South-East Asia under its auspices in space, and to direct common efforts towards peaceful space exploration⁵⁵. At the same time, it is worth noting that the tendency of Asian countries to develop quite rapidly in space, gradually turning into a "new force" of international outer space. At the same time, the space cooperation of Asian countries is turning into a serious headache in terms of interaction with other countries, which requires a constructive solution. The main aspects of cooperation between China and South Asia are the achievements in the export of space technologies, joint development and information exchange, which can serve as a model of space cooperation between large and developing countries.

It is also worth noting the political significance of cooperation in the field of manned space exploration. This aspect is of interest in many countries, however, the high cost of developing and producing manned spacecraft is almost impossible for most countries. Therefore, many developing countries seek to cooperate with more developed ones in the field of space exploration. That is why the major comic powers are becoming more attractive to undeveloped countries in this area. And it is this circumstance that encourages international cooperation in the field of manned cooperation. To date, only China continues to implement a fully independent program of manned space flights, which of course cannot but distinguish it from other countries.

So, let's talk about the so-called space giants. An important place in space exploration belongs

⁵⁵ Francisco José B. S. LeandroPaulo Afonso B. Duarte «The Belt and Road Initiative», Book, 2020, P - 49

to the joint activities of China, Russia and the United States. This trilateral interaction has a rather complex content, since Russian-American space cooperation has a relatively long history of relations, while China and the United States have almost no points of contact in the space sphere, moreover, there is a complexity in relations between the two countries and a constant tense confrontation, at least in the economic sphere. Russian-Chinese space cooperation is actively developing and deepening. The fierce competition between the three countries in the space sector is determined by the different strategic goals of these countries. Space is linked to national security and economic interests, as well as to international strategic stability and the balance of power⁵⁶. Among the favorable forecasts for the Russian Federation in this triangle of cooperation, it is assumed that Russia and China will only strengthen their cooperation in the field of space technologies many times in the future, in order to counteract the space hegemony of the United States, to resist American superiority in this area. We should not forget that the two countries cannot always maintain only friendly relations in the conditions of such strong competition. One day, the alliance of these countries may grow from cooperation to rivalry.

At the same time, the United States and Russia represent a unique example of space cooperation. There are serious disputes between these states in the international sphere: from the Crimea and Syria to cyber attacks and interference in the presidential elections. The two countries have a clear understanding that humanity has reached the moon thanks to their two-way race for technological superiority. For almost three decades, the United States and Russia have collaborated on the construction and operation of the famous ISS⁵⁷. More interestingly, Americans continue to depend on Russia for the RD-180 rocket engines that the US uses to launch its spy satellites. In addition to the fact that in space cooperation, a ghostly, but rather harmonious joint development of countries is possible, in the field of space exploration, as in the case of China, there is fierce competition aimed at achieving certain successes, which will create an advantage for the country not only in the space sphere, in global influence, but also give the country an advantage over other countries, that is, the strongest space state will not only be able to impose its agenda on others, but also gain influence, power, and, of course, build a certain image on the world political arena. Thus, the history of mankind over the past 60 years in international space activities has experienced three cycles, including competition and cooperation. In the last 10 years, in the face of fierce competition, established cooperation has

⁵⁶ Brian Harvey, Henk H. F. Smid, Theo Pirard «Emerging Space Powers: The New Space Programs of Asia, the Middle East and South America», book, UK, 2010, P - 186

⁵⁷ IBID, P - 197

become a new qualitative feature of international space cooperation. The main task of States, according to the author, remains the prevention of space conflicts. Today, only the high cost of space weapons, the fear of unknown consequences, and the benefits of space cooperation contribute to this. At the same time, international space cooperation faces difficulties, including: the adjustment of the national nuclear strategy and the strategy of nuclear deterrence, the development of space technologies and space weapons, the development of space deterrence, all of which can increase the likelihood of an international space conflict⁵⁸. The main goal of space cooperation today is to establish links between major powers and developing countries in this area. At the same time, as noted above, China occupies a decisive role in this area. According to the author, China should continue the program of space cooperation within the framework of the "One Belt, One Road", and also contribute to the creation of a qualitatively new basis for international space cooperation. In other words, China should promote space cooperation with countries and regions within the framework of this initiative. This will not only transform China's international space cooperation from passive participation to active engagement, but will also expand and strengthen China's international role in the space field and in global influence.

Chapter 2. The exploration of outer space and the image of the state

2.1 Shaping the image of the state as part of a smart power policy

So, to begin this paragraph, the author suggests explaining how the policy of soft and hard power, the so-called smart power, space exploration and the image of the state are interrelated. To begin with, it is necessary to determine what soft power is and why the author is sure that it is connected with the image of the state.

The problem of "soft power" was first identified in the works of the American scientist Joseph Nye in the 80 - ies of the last century⁵⁹. At about the same time, the role of foreign policy stereotypes and "images" in international relations began to be studied in world politics, as well as in the sciences close to international relations. It is obvious that the interest in such a problem was associated with a natural stage in the development of international relations, the periods of detente and the decline of the Cold war, when politicians, realizing the impossibility or weak

⁵⁸ Колосов Ю.М. , Сташевский С.Г. «Борьба за мирный космос. Правовые вопросы» [Kolosov Yu. M., Stashevsky S. G. " The struggle for peaceful space. Legal issues»] URL: https://mgimo.ru/upload/2016/05/KOLOSOV_kosmos_prav_voprosi.pdf
Viewed 7.09.2020

⁵⁹ Joseph Nye «Bound to Lead: The Changing Nature of American Power», USA, 1991.

effectiveness of direct military confrontation and other violent pressure ("hard" force), began to search for alternative effective levers of influence on international actors. Since then, the real role of the attractiveness of the country's image in international relations has steadily increased, and research on the country's international image and "soft power" has been actively developed in various directions. There are several points of view on the relationship between the "image of the country" and soft power. On the one hand, scientists define the "formation of the country's image" as an artificially and purposefully formed image, without considering this image as a component of "soft power", since it is a resource ("attraction"), and not a tool⁶⁰. That is, the first group of researchers shares the "image" and soft power, talking about their difference, arguing that they can not complement each other, and even more so are not tools. However, the second group of scientists, on the contrary, concludes that "image" can act as one of the tools of "soft power", and there are many historical cases in which this point of view is proved, in contrast to the first point of view, the evidence for which may be more vague.

So, the author suggests to adhere to the second point of view and will try to prove this theory through the cases that he will describe in his work.

Next, the author will try to reveal the term hard and smart power, this is necessary in order to identify cases with countries that still use the development of outer space as a policy of hard and smart power. Namely, these tools (smart power policy) will be used to intentionally or unintentionally build a certain image of the state.

So, hard power is a form of power that operates with military and economic elements as objects of coercion. In most cases, when referring to the military aspect of hard power, they mean the resources used in the war, namely: weapons and human resources. At the same time, military resources and military behavior are used not only to wage wars, but also to help and protect allies, which is already part of soft power. Today, the use of tools of hard power is decreasing, the reason for this may be the high cost of this aspect, on the other hand, the use of tools of military intervention or threats can lead to the use of nuclear weapons, which today is one of the most destructive in the world. This aspect also acted as an aspect of deterrence. So, summarizing the conversation about hard power, it is worth summing up - Joseph S. Nye identifies four main actions of military power: military operations, force diplomacy (threats, display of weapons, deployment of ships in the vicinity of the borders of another state),

⁶⁰ Коптяева А.А. «Международный имидж государства как инструмент мягкой силы», журнал Арктика и север №23, Санкт - Петербург, 2016, С - 7 , [Коптяева А. А. "The international image of the state as an instrument of soft power", Journal Arctic and North No. 23, St. Petersburg, 2016, P-7]

protection and assistance⁶¹. To be more concise, it can be argued that military resources operate with both hard and soft forces. The important thing is that soft power can add leverage to hard power⁶². Nye calls the interaction of both forces a smart force.

So, it is now worth talking about the relationship between the image of the state and soft power. The image of the state is a stereotyped image of the country that exists in the mass consciousness due to its spontaneous and purposeful formation by the elite of the state in order to exert political and emotional-psychological influence on public opinion at home and abroad. Thus, the formation of the country's image takes place with the help of soft and/or hard/smart power tools purposefully or "accidentally" during the implementation of a certain state policy.

So, in the formation of a favorable image of the state, various tools are used, mainly soft power tools, however, some states prefer to leave behind the traditional or familiar tools of hard power for a particular state in the formation of the image of the state. It is also worth noting that not all countries are engaged in "branding" the country, or more familiar to us - the formation of the image of the state. Sometimes the image of a country is not created purposefully, and sometimes it is "accidental", in cases when a country takes a certain position in international relations, which may be condemned by other countries, or conducts an aggressive policy, violates international treaties or terminates agreements. All of the above events, for example, can lead to the creation of an unfavorable image of the state in the international arena, however, the country that takes the above actions can only see its further benefit, without caring about the specific perception of this country by other members of the international community.

So, turning to the topic of space exploration and building a favorable image of the state, it is worth noting the relationship between image and space. Let's start with how attractive the exploration of outer space is for world politics.

After developing nuclear weapons, the countries seemed to have achieved the goal of developing the most dangerous weapons in the world. The countries that possess nuclear weapons are by far one of the most influential in the world, however, immediately after the creation of such deadly weapons, the states decided to limit the number of "persons" to whom

⁶¹ JOSEPH S. NYE JR. «Public Diplomacy and Soft Power», 2008, THE ANNALS OF THE AMERICAN ACADEMY, URL: <https://courses.helsinki.fi/sites/default/files/course-material/4594675/Nye.pdf>
Viewed 23.09.2020

⁶² Joseph S. Nye, Jr. *Soft Power: The Means to Success in World Politics*. N. Y., 2004.

such weapons will be available⁶³. The fact is that the most destructive weapons can act as a deterrent to wars, but only if they are in "safe hands". At the same time, it is worth mentioning that after the development of this type of weapon, the countries accordingly looked for opportunities to threaten each other. This was especially true during the great confrontation between the USSR and the United States. Two countries that possessed nuclear weapons, two countries whose systems were determined to oppose each other, sought to find all possible ways to catch up and overtake each other technologically. After various confrontations and "directions" of nuclear warheads at each other, the politicians of these countries decided to explore the possibility of a space nuclear strike, the possibility of positioning their own nuclear warheads to threaten the enemy. So, the primary task of space exploration for countries has become a military task. Initially, countries explore space not in order to create a favorable image of a high-tech developed country, but only with one goal - to attack the enemy⁶⁴. However, over time, the countries realized that the space race that had begun was not only a tool for using hard power in future bilateral relations, but also an opportunity to be the first to receive the status of a space power, which carried certain privileges at that time:

1. First, the status of a space power allowed the country to set the agenda.
2. Secondly, the country that was the first to receive the status of a space power would have received worldwide fame and recognition. For example, the Russian Federation is still recognized as one of the most powerful space powers in many social surveys (including a survey conducted by the Jobee resource), although in practice the Russian Federation is seriously lagging behind the United States or China. After the launch of the first man into space, the Soviet Union received, in addition to world recognition, worldwide fame and an updated status of a space power. At the same time, the country managed to achieve a more positive attitude towards itself. Many other countries considered the USSR a technologically backward country, a machine that would soon stop working. And with these actions, the USSR proved its worth.
3. Third, the status of a space power is an opportunity to influence other states through the creation of special cooperation programs, that is, through soft power projects.

In addition, the leaders of the countries absolutely understood the importance of convincing

⁶³ Фундаментальные космические исследования. Федеральное космическое агентство. [Fundamental space research. Federal Space Agency.], URL: <http://www.federalspace.ru/main.php?id=25>, Viewed 23.10.2020

⁶⁴ Смирнов А.И. Глобальная безопасность и «мягкая сила 2.0»: вызовы и возможности для России. М., 2012. [Smirnov A. I. Global Security and "Soft Power 2.0": Challenges and Opportunities for Russia. Moscow, 2012.]

the population of the country in the reliability of their actions. For some projects, it was necessary to obtain the approval of the population or the financial support of the oligarchy. That is, the country's leadership understood that space becomes an opportunity not only to cause damage to the enemy country, but also to earn a certain reputation both within the country and in the international arena. Many privileges carried the status of the first space power. The victory of the USSR in the issue of launching the first artificial satellite of the Earth and the first human Yuri Gagarin into space, left a huge mark on Russia until today⁶⁵. Today, for example, the annual Cosmonautics Day is celebrated, when the citizens of the Russian Federation can be truly proud of the achievement of the USSR, in honor of this event, parks, airports are built, holidays are organized and this day is celebrated in Russia on a grand scale. However, the population of the Russian Federation, which is not aware of today's successes and failures of Russia in space, does not even suspect that the Russian Federation, unfortunately, today is not a leading space power, and in many ways inferior to other countries in space. Today, many projects do not receive adequate funding from the government. That is, in fact, the policy of the state is aimed at celebrating the successes of the past, at shifting people's attention to historical successes, and not to the current results of the country. According to some polls, in the Russian Federation, the majority of the Russian population still believe that the country occupies a leading place in the conquest of outer space and is not inferior to America⁶⁶. That is, the management apparatus adjusts the policy to create a favorable image within the country, as well as in the international arena, focusing on serious successes (albeit historical), and not on the current ones. Moreover, the author should note that he does not consider that the celebration of the "Cosmonautics Day" is something outdated, on the contrary, the people should be proud and remember the feat of the Soviet people, however, the author emphasizes that it is necessary to celebrate the successes of the current government, the current achievements. The people of the Russian Federation should not only remember the historical achievements, it is necessary to give the country's population an opportunity to be proud of the current achievements.

So, next, the author suggests using the example of the Republic of China to explain how the image of the People's Republic of China is formed within the framework of the smart power

⁶⁵ Чернявский Г.М. «Космическая деятельность в России: проблемы и перспективы», Вестник российской академии наук, 2013, том 83, № 9, с. 799–806 [Chernyavsky G. M. "Space activity in Russia: Problems and prospects", Bulletin of the Russian Academy of Sciences, 2013, vol. 83, no. 9, pp. 799-806]

⁶⁶ Газета Интерфакс «Большинство россиян назвали Россию лидером в космосе», [Interfax newspaper " The majority of Russians called Russia a leader in space»] URL: <https://www.interfax.ru/russia/657985> Viewed 12.12.2020

policy and how space exploration could affect the image of the state.

The state's policy of forming its positive image is aimed at achieving foreign policy goals, protecting national interests, and creating an atmosphere of support for its course by the international community⁶⁷. Today, the People's Republic of China continues to assert itself as a power with a real opportunity to claim leadership in international relations, and is increasingly being promoted as a new global power. In recent years, China has attached great importance to the formation of its positive image in the international arena. However, it is impossible to increase the confidence of the world community without convincing answers to the questions raised by the concept of China's ascent to world supremacy. China's international image is influenced by a large number of factors. Currently, the economy is an important factor contributing to the improvement of the image of the People's Republic of China⁶⁸. A significant contribution to the creation of a positive image of China is made by the strategy of massive promotion on the world stage, which has been actively implemented in recent years by Chinese business. This is confirmed by the data of the CIPG opinion polls in 9 countries in 2014-2015, published on the GB Times website. Thus 36 % of respondents believe that Chinese enterprises will bring considerable capital and new technologies to their countries. The respondents also noted the growing popularity of Chinese brands, especially such as Huawei, Air China, Alibaba, Lenovo, and Haier, which also had a positive impact on the image of China on the world stage⁶⁹. Taking into account the fact that it is not enough for a state that is increasing its influence in the international arena to rely solely on economic and military power, Chinese theorists have taken as a basis the concept of J. R. R. Tolkien. They are developing a "soft power" with Chinese characteristics.

According to a number of experts, "soft power" in Chinese is a focus on a favorable image and information support for Chinese economic projects.

In connection with the growing power of the PRC and the improvement of its international

⁶⁷ Double Star Exploration Program (DSP). National Space Science Center, Chinese Academy of Sciences, URL: http://english.nssc.cas.cn/missions/PM/201306/t20130605_102885.html, Viewed 15.12.2020

⁶⁸ IBID

⁶⁹ Аветисян Э.Г. «Международный имидж КНР: факторы формирования и тренды», текст научной статьи по специальности Политология, [Avetisyan E. G. "The international image of the People's Republic of China: factors of formation and trends", the text of a scientific article on the specialty of Political Science] URL: <https://cyberleninka.ru/article/n/mezhdunarodnyy-imidzh-kr-factory-formirovaniya-i-trendy> Viewed 1.01.2021

image, the tools of Chinese "soft power" are more clearly distinguished, including⁷⁰:

- cultural dialogue (dissemination of Chinese language and culture);
- diplomacy of various levels (expansion of contacts and the content of diplomacy).

So, turning directly to China's space exploration, it is necessary to note the simply incredible program of China's cooperation with Southeast Asia in the framework of the "one belt one road" program for space exploration, described in the previous chapter. This program can rightly be considered one of the best in the entire history of cooperation in space. China is using this program to use two soft power tools at once-cultural dialogue and diplomacy at various levels. With the help of this cooperation program, China increases its own importance in the "eyes" of a certain group of countries, in addition, it achieves full control over the space research of these countries, namely, it increases its own importance and image among the population of Southeast Asian countries and increases its importance in the international arena, being an authoritative state that helps to raise the level of involvement of countries that are unable to achieve certain successes in comic research alone.

An important country to note in this paragraph is the Democratic People's Republic of Korea and the image of this country in the international arena, as well as space exploration. The author did not accidentally choose this country in the framework of the study. The fact is that the DPRK is a country with an ambiguous status in the international arena and quite controversial tools used by the country in achieving certain tasks. On the one hand, the DPRK is often perceived as an aggressive country that violates international treaties (it withdrew from the NPT in 2003), in addition, it has developed nuclear weapons, is exploring outer space, and often uses the tools of hard power in international research and development. It is this country that often forms its own image "accidentally", or rather does not have a "balanced" policy to form a favorable image of the state, rather receives certain images and associations depending on its actions in the international arena, and the actions of this country are condemned, sanctioned and are aggressive - hence the appropriate "image". However, returning to the topic of space exploration of the DPRK, it can be noted that space in the plans of the Korean leadership is perceived rather from the point of view of hard power. That is, the government of the state will seek to use the achievements in the development of outer space in order to protect its country, however, the government takes these steps in a slightly aggressive manner. The DPRK is a country that has lost the trust of the international community after the creation of nuclear weapons, despite

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sanctions and bans on the creation of these weapons, withdrawal from treaties, undermining the authority of the UN. So, some countries, especially the United States, are afraid of active space exploration by North Korea, as this circumstance can lead to a threat to the national security of many countries, if the DPRK begins to place nuclear warheads in space.

In addition, the very process of launching satellites by the DPRK raises serious concerns among States, since North Korea uses ballistic missiles, which are prohibited by the resolution. So, for example, in both launches of the DPRK artificial Earth satellite, the US authorities, Japan, South Korea, France, Russia and a number of other countries, as well as The European Union and the UN Secretary-General Ban expressed serious concern about the launch, which, according to them, violates the requirement of UN resolutions 1718 and 1874 of 2009 on the inadmissibility of using ballistic missiles to launch anything, and also called on the DPRK to refrain from launching. The US government also announced a possible complication in the implementation of the existing agreements of February 29, 2012 on the supply of food aid in exchange for the suspension of the DPRK's nuclear program and a moratorium on long-range missile launches⁷¹. In addition, the governments of South Korea, Taiwan, and Russia have also announced their readiness to shoot down a missile if it deviates from a given trajectory towards their territories.

In view of the sharp international reaction to the upcoming launch, the DPRK said on March 20 that it insists on its sovereign right to launch artificial Earth satellites and use outer space for peaceful purposes, that hostile forces, including the United States, Japan and South Korea, are trying to undermine the country's sovereign status and that, despite their pressure, the country will not cancel the satellite launch⁷².

That is, a country that has already lost confidence in the international arena, today can not be an authoritative state, whose satellite launches will be perceived joyfully in the international arena. And such stubbornness of the DPRK government, violation of international law and military threats can be considered a policy of hard power. That is, the DPRK achieves its goals without trying to soften other countries, gain trust, change its policy to soft power, soft influence

⁷¹ Мирзаян Г.В. «Внешняя политика США и северокорейский ядерный кризис», РАН, Москва, 2008 [Mirzayan G. V. "US Foreign Policy and the North Korean Nuclear Crisis", Russian Academy of Sciences, Moscow, 2008]

⁷² Википедия «Космическая программа КНДР», [Wikipedia, North Korea's Foreign Policy,] URL:https://ru.wikipedia.org/wiki/%D0%9A%D0%BE%D1%81%D0%BC%D0%B8%D1%87%D0%B5%D1%81%D0%BA%D0%B0%D1%8F_%D0%BF%D1%80%D0%BE%D0%B3%D1%80%D0%B0%D0%BC%D0%BC%D0%B0_%D0%9A%D0%9D%D0%94%D0%A0, Viewed 21.01.2021

through dialogue or cooperation - on the contrary, the country achieves its goals without paying attention to international deterrence, applying a policy of hard reaction. Thus, the concerns of countries may be well-founded. Just as the DPRK used to use a peaceful atom to further develop nuclear weapons, so now North Korea can easily use peaceful space exploration for military, aggressive purposes. As for the image of North Korea, it is worth noting that space exploration is used rather to create the image of a technologically advanced power that can strike even from space - that is, space is used here to intimidate other powers of the world community. So, as we could already understand the government North Korea has been pursuing an increasingly isolationist policy since the armistice in The Korean War. Ever since the signing of the Korean War peace Treaty with the United Nations, the DPRK has maintained diplomatic relations with the PRC, the USSR, and now with Russia, Pakistan, and limited relations with other countries⁷³. That is, as such, the image of the country for the DPRK does not have a determining value, so it can be called "random", an image that is created depending on the actions of North Korea in the international arena.

So, the image of the state can consist of different factors. The formation of the image of the state takes place with the help of soft or, in some cases, hard power tools. An image can be formed intentionally when a country is intentionally engaged in branding, sometimes as in the case of North Korea, the image can be created "randomly". The space sphere can seriously affect the image of the country, we can notice this both in historical retrospect and in modern times.

2.2 The impact of having the status of a space power on the image of the state

In the previous paragraph, the topic of the influence that a country with the status of a space power receives has already been partially touched upon, however, the author suggests to consider in more detail the political cases in which it is possible to trace the influence of the status of a space power on the image of the state.

The development of outer space has always been perceived by the leaders of States as another area of competition on the world stage. Successful space activities are still considered as a certain tool for influencing the positions of other actors in the field of international relations. For

⁷³ Википедия, Внешняя политика КНДР, [Wikipedia, North Korea's Foreign Policy,] URL: https://ru.wikipedia.org/wiki/%D0%92%D0%BD%D0%B5%D1%88%D0%BD%D1%8F%D1%8F_%D0%BF%D0%BE%D0%BB%D0%B8%D1%82%D0%B8%D0%BA%D0%B0_%D0%9A%D0%9D%D0%94%D0%A0
Viewed 22.01.2021

example, if a state achieves certain significant results in this area, it has the opportunity to develop an appropriate international agenda, and therefore it has the opportunity to directly or indirectly influence other participants in international relations, strengthening its authority, "sharing experience" in exchange for cooperation, strengthening relations in which one of the participants will depend on the other, etc. For the Russian Federation, the topic of space exploration is by no means new, as well as for the United States of America. Projects for the colonization of the Solar system took place in the 60s-70s of the XX century⁷⁴. However, it is worth noting that the potential of the Russian Federation in the exploration of outer space through the prism of "soft power" remains not fully disclosed. For the successful implementation of projects in this area, the Russian leadership should develop a long-term strategy for using "soft power". At the same time, it should be taken into account that the tools of "soft power" described by the American political scientist Joseph Nye can work effectively only within the framework of a long-term and well-thought-out strategy, when the condition of voluntary participation of all interested parties is necessarily met. The tools of "soft power" can bring effective results, but the implementation of political projects with their help can objectively be delayed for many years⁷⁵.

So, in the previous paragraph, it was considered how the status of a space power influenced the recognition of the USSR by the world, moreover, how this status - the discoverer of space, the first space power still affects international opinion about the image of the state of the Russian Federation. However, we cannot say that only the status of a space power affects the image of the state. The image, as we found out earlier, consists of many factors, a well-coordinated and consistent policy of the state. However, we will consider those cases in which the status of a space power had an impact on the image of the state. In addition to the Russian Federation, the image and connection with the status of a space power were discussed earlier, and the People's Republic of China was also noted, whose image is being strengthened in a favorable way when conducting a famous project for cooperation with developing countries in the south-eastern region. Now the author offers to consider in more detail how the status of a space power affected

⁷⁴ Сайфуллин Э. «Колонизация космического пространства и международное право», РСМД, 2019, [Sayfullin E. "Colonization of Outer Space and International Law", RIAC, 2019,] URL: <https://russiancouncil.ru/analytics-and-comments/analytics/kolonizatsiya-kosmicheskogo-prostranstva-i-mezhdunarodnoe-pravo/> Viewed 12.03.2021

⁷⁵ Сайфуллин Э. «Колонизация космического пространства и международное право», РСМД, 2019, URL: <https://russiancouncil.ru/analytics-and-comments/analytics/kolonizatsiya-kosmicheskogo-prostranstva-i-mezhdunarodnoe-pravo/> Viewed 12.03.2021

the image of the United States of America.

So, when the United States launched its first artificial satellite of the Earth, second only to the USSR at the beginning of the space race, it affected the US leadership in political and moral terms. However, the lag was not long, and even, on the contrary, such events forced the United States to more actively pursue its own goals in space and overtake the Soviet Union. To date, the United States has not only a civilian program for space exploration, but also a military program related to the construction of space troops⁷⁶. It is worth noting here how the space confrontation between the United States and the USSR has changed. Today, the two giants do not compete in space, the United States took the championship and China became a worthy rival today, both in space and in other areas.

However, speaking about the status and image of the state, it is worth noting that obtaining the status of a space power in the society of the United States and other societies of the world did not cause such a resonance as it was in the case of the Soviet Union. The author will try to explain why this happened:

Well, first of all, the USSR in many countries of the world, as in America, was recognized as a lagging power behind the Iron Curtain, which could not afford in technological terms what the United States could afford. Although, of course, the USSR already had nuclear weapons, various kinds of delivery rockets and potential by the time the space race began. That is, from the USSR, the launch of an artificial satellite into space was expected to be the first less than from the United States.

Secondly, Americans have always felt their superiority in many areas of political life. In addition, the belief in the success of the enemy, although there was, was not so strong. Each of the opponents believed that they would win the space race.

And thirdly, it is worth mentioning the theory that the United States knew about the launch of the first satellite from the USSR and deliberately allowed the Soviet Union to launch this satellite, based on a moral and psychological idea. It consisted in the fact that after the first launch of its satellite into space, the USSR would relax, spending huge efforts on preparation and launch, and subsequently would not continue such active activities in space. That is, the acquisition of the status of a space power by the Americans as the second in a row did not become something unexpected and unimaginable. They became the second and such a resonance as the formation of the USSR as a space power did not happen. That is, the impact on the image

⁷⁶ Научный журнал интеллект и технологии «Космические измерения», №3 (9), 2014 [Scientific Journal of Intelligence and Technology "Space Measurements", No. 3 (9), 2014]

of the United States almost did not happen, while these events affected the USSR and the image of the Union.

That is, continuing the topic of how the status of a space power still affects or does not affect the country, it is worth saying once again that the United States, after acquiring the status of a space power second in a row, did not receive such a high resonance as it did with the USSR. However, the status of the US space power has also played an important role on the world stage. The US allies became even more attached and more willing to "share their sovereignty" when building some joint projects. For example, the European Union and European countries have become even more attached with the opening of joint cooperation projects to send satellites into space. To date, it is impossible not to say that the status of the most developed space power does not affect the image of the United States. Despite the fact that China is catching up with the United States in space, the Americans still retain the primacy at the level of socio - political popularity⁷⁷. That is, in other words, the United States is still the leader in the space field in terms of public recognition. In addition, the US presidents pay quite a lot of attention to the space sphere and the creation of space troops. Today, although China is trying to overtake the Americans in the race for supremacy in space, so far, thanks to historical events, the United States remains the unchanged leader of outer space and this primarily reflects how the acquired status has affected the image of the state.

So it is worth moving on to the countries that were not originally participants in the space race, but unwittingly became part of the countries involved in the development of outer space. Today, there is no country that does not strive for technological development, excellence, or at least for decent technological progress in the country. Developing countries, developed countries, third world countries-all of them strive to develop primarily in terms of technology. Today, technology has taken over our daily lives so much that people can't imagine life without it, and new generations simply can't survive without technology. In addition, a technologically undeveloped power can easily become dependent on a more developed country. Usually, with the help of joint projects or programs for the development of technologies, a developed power gradually dominates over a less developed one. It should be understood that not one technologically advanced power will not help an undeveloped country for free, usually, the country has certain goals and interests in such cooperation. So, returning to the topic of the

⁷⁷ Are We Losing the Space Race to China? // Committee on Science, Space & Technology. URL: <https://science.house.gov/legislation/hearings/space-subcommittee-hearing-are-we-losing-space-race-china>
Viewed 22.03.2021

importance of technological development, the author can accurately conclude that today a country that does not have access to space, does not exist and does not plan to develop space programs - can rightfully be considered technologically undeveloped. Today, it is extremely important for the countries of the world community to explore space, because space is a new place for colonizing territories, and whoever is the first to reach these territories will be the first to colonize them⁷⁸. In addition, there is a huge potential in space to search for new plant species, minerals, life types, and new suitable planets for human life. Space is a great business for private companies and for public space research centers - private companies in the future will be able to make "excursions for ordinary citizens to outer space", which can bring them high incomes and so on. In addition, space is important from the point of view of military-strategic potential. You can deploy missiles, build military bases on distant planets, and have various evacuation plans in case of emergencies on Earth. And, of course, the space sphere is not fully explored and, accordingly, at the international level, there are still no treaties, pacts, contracts, legal agreements that would completely control the space sphere. That is, space is truly an important area of life in any country. However, not all countries have space programs today, and certainly not all countries have the opportunity for space research. Therefore, it is worth noting how the image of a country that does not have a space program changes depending on whether the country has the status of a space power or not.

For example, let's talk about a fairly strong player - Canada. Canada today has its own space agency, even has its own astronauts and a space exploration program. However, from the very beginning of its presence in space, Canada began to cooperate with the United States of America. And to this day, Canada is a country that launches astronauts into space mainly on American ships, or on the ISS. That is, despite the fact that Canada has a huge potential, developed technologies, has the opportunity to sponsor the space sphere and spend enough money on the development of technologies in space - it uses mainly American technologies, allowing the United States to offer its own conditions and programs for cooperation in space. In addition to the fact that almost all Canadian astronauts make space flights almost exclusively on American spaceships on the basis of bilateral agreements with NASA, in addition, Canada represents robotics in joint projects, which is more advanced than robotics in leading technologically

⁷⁸ Moltz J. C. The politics of space security: strategic restraint and the pursuit of national interests. Stanford, CA: Stanford University Press, 2008. 367 p

developed countries⁷⁹. That is, Canada, having the capabilities and potential to create its own individual space program, with the possibility of developing really serious robotics programs, space object research, and so on, chooses to cooperate with the United States. At the same time, the image of Canada will not change in the international arena. The society that is interested in such projects and space exploration will know what Canada is doing in bilateral cooperation with the United States, while the image of the country will not change. However, it is worth noting that Canada, provided that space exploration through cooperation with the United States, in fact has the status of a technologically advanced power, which means that the image of the state will be formed in this case from various factors that are not directly related to whether Canada has an "individual" status of a space power and how it explores space.

However, if we take any country for comparison, for example, country X of the African region, which is currently a third world country or a country that is not technologically developed, and note the fact that the country does not have the status of a space power, does not have any kind of software development in the space sphere - in the international arena, such a country will be considered. In the "general" conditions, the absence of the status of a space power will not directly affect the image of the country in the international arena, however, in the "special" conditions, when, for example, the signing of any legal guarantees of countries with the status of a space power is on the agenda, this country of the X African region that does not have the status of a space power will simply not have weight and the right to vote in the "redistribution of the world in space". That is, the image of the country in special conditions can be undermined by other countries, space giants. That is, first of all, today the most important is the technological development of the country. Whoever has the most advanced technologies owns the world. That is, if a country is technologically advanced, it will have the status of a space power, because it will strive to go into space for the sake of the brewing "new redistribution of the world" in space. If a country aspires to space and pursues its own interests in space, it develops its own technologies. It turns out that space and technological development are quite strongly linked. That is, a country that has technologies and develops its space program will seek to influence other countries that seek to enter outer space, thus, developed countries will influence less developed countries through joint projects. That is, sometimes the status of a comic power still allows countries to build their own image in such a way as to influence less developed powers.

⁷⁹ Stephen N. Whiting «Space and Diplomacy: A New Tool for Leverage», published in International Journal of Space Politics & Policy, 04 Jun 2010

Summing up, we can say that the status of a space power individually affects the country that has this status. On the one hand, this status can help the country build a certain image of the state for many years to come, as was the case with the USSR and subsequently with Russia, which is still considered the leading power in space, after its success as the first space power. On the other hand, the status of a space power may not change the image of the state, if the country is so recognized as highly technologically advanced, such as Canada, for example. In addition, acquiring the status of a space power may not change the image of a country if it is poor and technologically undeveloped. It is also worth noting such cases when the acquisition of the status of a space power is simply recognized as dangerous for the world community, as was the case with the DPRK and Iran's attempts to become a space power. That is, the initial unfavorable image of the country on the world stage cannot be corrected by acquiring the status of a space power - on the contrary, the acquisition of this status can exacerbate international unrest. At the same time, we should not forget that if a country does not have the status of a space power, it will not participate in the division of space and the drafting of legal norms and rules of conduct in space. That is, in fact, the image of the country will be hurt due to the lack of the status of a space power and in the future the country may not participate in "space issues", as, for example, it became in the case of the acquisition of nuclear weapons (the leading club of nuclear weapons is the five countries, the rest do not have such rights in the UN Security Council and in solving important issues on nuclear weapons).

Chapter 3. Space exploration as an element of soft power policy in modern world politics

3.1. Space as a policy of "soft power" of the Russian Federation

The first plans for long-distance flight and their gradual implementation began in the XIX century⁸⁰. Then scientists came to the conclusion that at a certain stable speed, the aircraft can not only overcome gravity, but also fly out of the Earth's atmosphere. However, the existing engines at that time could not provide such a speed of flight. The engines with weak power did not reach the desired speed, and the strong ones threw out energy in spurts. Such an object not only could not fly to its destination, but it was also impossible to control the trajectory of its

⁸⁰ Павловский А. И. Миropoliticheskie aspekty osvoiniya kosmicheskogo prostanstva: avtoref. dis. ... канд. полит. наук 23.00.04. СПб., 2011. 21 с
[Pavlovsky A. I. Miropoliticheskie aspects of space exploration: autoref. dis] 23.00.04. СПб., 2011. 21 p.

movement. The beginning of the XX century was a landmark period for the implementation of space flight. In the space industry, they began to create experimental rocket engines running on liquid fuel. With the help of such an engine, it was possible to lighten the mass of the rocket, and also the rocket had to move forward due to the released energy. The first rocket to fly into outer space was designed in 1903⁸¹. Its designer was the famous inventor Konstantin Tsiolkovsky.

The first practical step towards making the Tsiolkovsky project a reality is the creation of an experimental Soviet rocket powered by hybrid fuel GIRD-09. Its performance was much weaker than that of modern rockets, but the results of an experiment conducted in 1933 were impressive at the time⁸². For many years, Tsiolkovsky also studied the theoretical side of finding a person in space weightless space. His works listed the methods of movement in zero gravity, its effects and the impact on any living organism. The inventor described exactly what the shape of the spacecraft should be. All his descriptions will later be confirmed by the first person to fly into space - Yuri Gagarin. He described his feelings exactly like those that Konstantin Tsiolkovsky wrote about in his works.

The Soviet Union began space exploration with the construction of the Leningrad "Gas Dynamics Laboratory" in 1921⁸³. Many years of research and design work bore fruit in 1957. On October 4, the first artificial satellite of the Earth, Sputnik - 1, was first launched into extraterrestrial space. The spherical object sent a signal to Earth about a successful launch and was in orbit for 92 days. The object was put into orbit using the R-7 rocket. This intercontinental ballistic missile was designed under the direction of Korolev. All subsequent missiles in the Soviet Union were designed on the basis of the R-7 silhouette. And even today, the design of the modern Soyuz rocket, which delivers heavy cargo and tourists to orbit, resembles the image of the former rocket. The first satellite of the Earth spent three months in orbit, covering a distance

⁸¹ Жук Е. И. Пилотируемая космонавтика в интересах национальной и коллективной безопасности: монография. Звездный городок: РГНИИЦПК, 2003. 406 с.; [Zhuk E. I. Manned cosmonautics in the interests of national and collective security: monograph. Star City: RGNITSPK, 2003. 406 p.;

⁸² Яковенко А. В. Космические проекты. Международно-правовые проблемы: Монография. М.: Научная книга, 2002. [Yakovenko A.V. Space projects. International legal problems: Monograph. Moscow: Nauchnaya kniga, 2002.]

⁸³ ТАСС История ракетно-космической промышленности СССР. Досье// [TASS History of the rocket and space industry of the USSR. Dossier] URL: <https://tass.ru/info/4616112>, Viewed 12.05.2021

of 60 million kilometers⁸⁴. Its launch and stay outside the Earth became such a significant event for earthlings, in addition, this event was celebrated by the whole Earth despite the confrontation between the United States and the USSR, this event was not only a landmark in the history of cosmonautics, but also became one of the most important for the leadership of the USSR and Russia in the future⁸⁵. This event was perceived not only as a victory over the United States, or a breakthrough of humanity, but also as a potential for using the acquired influence as a tool of soft power. The Soviet leadership understood the importance of using this potential and the need to use the status of a space power, the most technologically advanced.

Despite all the efforts of the Americans, the Soviet Union was the first to conquer outer space and test the theoretical side of space exploration in practice. Now space exploration has become a real task, not just a dream.

Since then, the day of the first human flight into space in Russia is celebrated as the Day of Cosmonautics. And in honor of Yuri Gagarin, streets are named in every city of our country and even abroad. By the way, this tradition is one of the tools of soft power politics through a historical event. That is, the first person to fly from the Soviet Union into space was a resonance for the entire planet, and the Russian Federation still uses this event both in domestic politics and at the international level, in order to confirm the importance and potential of Russia in space. It turns out that this historical event is still a tool for building a favorable image of the country, the image of a technologically advanced country that managed to "visit" space first. However, ending the prehistory of Soviet achievements in space, it is worth moving on to the discussion of how the exploration of outer space can be a tool of soft power aimed at building a favorable image of the Russian Federation.

It is worth noting that space exploration projects have long been successfully used in Russia's foreign policy as elements of a "soft power" strategy. They were one of the few tools to implement this strategy in the 1990s and 2000s, when Russia had few other options. An example of such a project is the International Space Station (ISS), which since 1998 has been a

⁸⁴ Статья в Tadviser «Российская национальная орбитальная служебная станция (РОСС)», [Article in Tadviser "Russian National Orbital Service Station (ROSS)»] URL: https://www.tadviser.ru/index.php/%D0%A1%D1%82%D0%B0%D1%82%D1%8C%D1%8F:%D0%9A%D0%BE%D1%81%D0%BC%D0%BE%D0%BD%D0%B0%D0%B2%D1%82%D0%B8%D0%BA%D0%B0_%D0%A0%D0%BE%D1%81%D1%81%D0%B8%D0%B8_%D0%B8_%D0%A1%D0%A1%D0%A1%D0%A0
Viewed 31.05.2021

⁸⁵ Жук Е. И. Пилотируемая космонавтика в интересах национальной и коллективной безопасности: монография. Звездный городок: РГНИИЦПК, 2003. 406 с.; [Manned cosmonautics in the interests of national and collective security: a monograph. Star City: RGNIICTSPK, 2003. 406 p.];

springboard for joint cooperation and exchange of experience in the field of space technologies between Russia and other countries⁸⁶. This project can not be perceived unambiguously. On the one hand, this project shows how important space is for Russia and how the Russian leadership can skillfully use space achievements to pursue a policy of soft power. Through these projects, Russia would be able to make many developing countries somewhat dependent on technological cooperation with Russia in space for many years to come. Through this tool, the Russian Federation could try to manipulate countries, taking a leading position in outer space, providing technological assistance in the development of space programs and joint flights with developing countries, while it can partially influence the world political system by influencing developing countries and countries dependent on the Russian space program.

In addition, the author would suggest expanding the policy of soft power through space, as it is done at the domestic level, and also trying to spread Russian influence through space to the outside world. Today's target audience should primarily be chosen by young people and schoolchildren. It is proved by many works that young people are the most dangerous audience for revolutionary uprisings, as they are susceptible to influence. So, the author could suggest that it is possible to create projects on the part of the Russian state in honor of the anniversary of the discovery of space by Yuri Gagarin, which will award foreign students and schoolchildren for essays or the best projects on the topic of "Russian space". Unfortunately, at the moment, there are not enough such projects in Russian foreign policy, and if they exist, they are aimed at their own population within the country. Returning to the reflections on how space can be an instrument of soft power, it is worth noting that the Russian Federation still tried to actively participate in various projects aimed at spreading soft power. In addition to those mentioned above, it is worth telling about Russia's participation in European automatic missions to Mercury and Venus; with China-the launch of a Chinese microsatellite on board the crashed interplanetary station Phobos-Grunt; with India-the involvement of the Indian side in the Luna-Resource project, etc⁸⁷. Despite the quite positive results of the Russian side, these projects do not have a systemic foreign policy effect, as Russia and its partners in these projects are trying to solve mainly economic and technological problems. Accordingly, the potential of soft power, which is felt at the beginning and at the time of negotiations on these projects and the conclusion of

⁸⁶ Официальный сайт Роскосмоса [Official site of Roscosmos], URL: <https://www.roscosmos.ru/>
Viewed 19.05.2021

⁸⁷ Safarova R.R «Space exploration as part of soft power policy in the world politics», Research Center «PERESVET», St Petersburg, 2020, P-74

intergovernmental agreements, is also likely to be eroded here. There are many reasons associated with this situation, however, the author suggests that there are only a few main ones:

- the first and one of the main reasons for this situation is the short - term nature of the projects. That is, as soon as a particular project finds its implementation, the project becomes a routine activity, or is curtailed without bringing results (for example, the AMROS system), that is, the project simply loses its political relevance. Such projects are created "impulsively", without having a constant supply, stimulation, without having the desire to continue and develop mutually beneficial cooperation, gradually influencing the participating countries, obtaining certain benefits.
- the second reason for the failures, the author highlights the incompetence of structures or people who provide and prepare soft power projects based on space activities. This incompetence lies in the fact that the designated projects for their political purposes initially had a horizon of only short-term benefits and were not aimed at extracting long-term foreign policy dividends. That is, the prepared projects are only a one-time benefit, without certain long-term plans.

Thus, in order for the soft power resource to work, constant replenishment is necessary and long-term planning is certainly necessary. As for the object of soft power, if the results of space activities are used as such, it is necessary to use mainly not society as a whole, but only the political, economic and intellectual elites. This is due to the fact that the direct results of space exploration affect the society and the people of the state very rarely. Society is more important than the results of political life in general, the political decisions and economic activities of the state, as well as the successes and failures of its own government in general. In contrast to the intellectual, political and economic elite of the state, which often directly become sponsors of many soft power projects and space exploration projects. It is also important to take into account that the soft application of space achievements in foreign policy activities is effective for solving several groups of tasks, which the author will highlight later:

- qualitative strengthening of partnership and / or good-neighborly relations, as well as its place in the world among the leading powers;
- expanding access to foreign markets for space goods and services;
- shaping the international agenda and rules for the use of outer space;
- attracting external sources of intelligence and finance, as well as creating cooperation chains in the interests of developing their own high-tech industries. It should be emphasized here that

both joint and purely national space projects have the potential of soft power, but only if they have a high scientific or applied significance and a high degree of technical and technological complexity

Today, the Russian space program faces structural contradictions within the state, which correspondingly affect the foreign policy component of the country's space exploration. It is worth noting here that, largely due to the efforts of Russian diplomacy, in 2010 the life of the ISS was extended until 2020, while the contradiction is that the Russian segment of the station is quite limited in its research capabilities⁸⁸. At the same time, the United States, which has gained a foothold on the ISS, is using the site as a testing ground for its private space companies and an international institution to monitor the space programs of its partners; at the same time, active participants in the space space of the EU and Japan are actively gaining experience in long-term space flights and the operation of orbital laboratories, while Russia occupies a leading role in preserving the station. At this time, Russia's participation in the ISS is carried out from the point of view of scientific and practical and political inertia, while it is time to change the strategy to a more active one regarding the operation of this station, it is time to compete with other space powers⁸⁹. Secondly, a series of unsuccessful or postponed scientific missions in 2009-2011 raises questions about changing approaches to the planning and implementation of the space program as a whole, as well as about the strategy of transformation in the domestic space industry. These problems have a negative impact on Russia's space potential, and in some places they can even undermine the image of the state among competitors, who, unlike Russia, are more actively using the station. In addition, this situation undermines the ability of the Russian leadership to use the potential of the state in international space affairs. At the same time, the planned projects under the federal space program, the implementation of which is aimed at the next 6-8 years, have mainly scientific and foreign policy potential, in terms of soft power. Many projects are of high importance for fundamental science on a global scale and can make a significant contribution to its development. It also suggests either using this scientific potential for the benefit of the Russian Federation, sharing the experience of various developments or using tools for spreading influence through scientific projects through soft power, or changing the paradigm and paying more attention to military and strategic developments. At the same time, the author

⁸⁸ Safarova R.R. «Space exploration as part of soft power policy in the world politics», Research Center «PERESVET», St Petersburg, 2020, P-75

⁸⁹ Павел Лузин «Космос как инструмент мягкой силы внешней политики Российской Федерации», Пир-центр, С-203, // Pavel Luzin " Space as a Soft Power tool of the Foreign policy of the Russian Federation», P-203

suggests noting promising R & D on the creation of new launch vehicles, manned spacecraft and the development of spacecraft with nuclear engines. The planned and successful implementation of these initiatives by the Russian Federation will have a positive impact on Russia's solution of the above-mentioned groups of tasks in the external world.

In addition to the domestic policy aspects described above, it is necessary to take into account the external factors of space use and exploration. For example, there are about 60 countries in the world that are implementing their own space programs, and therefore today there is a request for a global space agenda, which should outline the range of main problems and put forward long-term guidelines in this area. This, by the way, is one of the main tasks of every leading space power - to try to make every effort to become the leading "builder" of a new international order in the space sphere. For the country that will be the first in this aspect, it will be possible to set the agenda. These actions will ensure a favorable image of the state for many years to come. Today, the United States is the main source of the key elements of such an agenda, among them are the following: deep space exploration and the bodies of the Solar system; the problem of asteroid danger; clogging of the near-Earth orbit and a shortage of the frequency resource for satellites; private space exploration, etc. All this not only contributes to the strengthening of their positions in space as such, but also forms a paradigm for the goal-setting of space policy by other States and creates prerequisites for the further development of international legal regimes regulating the use of space. However, any agenda is subject to change and dilution; In addition, the leading foreign players (the EU, China, etc.) also generate their own space exploration strategies and put them into practice, which allows them to maintain their political positions in this area, increase the resource of soft power, while increasing the favorable image of the state. In this situation, Russia needs to act much more actively in creating an international political discourse on space issues, especially since the Russian Federation has a high level of potential for this. Unfortunately, today Russia is only active in countering the militarization of outer space, where significant results have also not been achieved. The leadership of the Russian Federation today has no understanding of the integrity of the Russian policy in the field of space activities. At the same time, Russia has the potential to achieve positive results in this area. First of all, the country is able to generate long-term guidelines for basic space research, which will help to develop a common program, lead it to a common goal, and besides, Russia may well be able to influence the goal-setting of foreign players. In addition, Russia's proactive participation in solving the problems of orbital debris is relevant, given the fact that Russia is one of the main

pollutants of near-Earth space⁹⁰. Such projects can enhance its role in international space affairs. It is also worth doing the development of private space exploration, as Russia has all the opportunities and potential for this. Today, there are many non-governmental Russian organizations engaged in space research, in addition, political grants and research institutes that are ready to engage in this kind of activity are not excluded. A striking example here is the participation of the Russian company Selenohod in the Google Lunar X-Prize competition to create a private lunar robot and send it to the Moon — this company operates more in spite of Russian conditions than because of them.

So turning to the conclusions about the soft power of the Russian Federation through the exploration of outer space, to begin with, it should be noted at once that in fact, the one-time use of various tools of "soft power" is not enough to achieve high-quality results⁹¹. This strategy involves constant stimulation, feeding. At the same time, it is important to avoid stagnation, a rollback from the results already achieved. Thus, we can distinguish the following «political decisions» aimed at strengthening the Russian policy of «space influence».

First, it is necessary to maintain the constant political relevance of a space project, in no case should we allow stagnation of projects with high potential.

Secondly, you should pay attention to the retrospective of projects that have already been started and implemented, since the success of a project depends on what goals were set within the framework of a particular project. As mentioned earlier, soft power goals and tools can change and adjust over the long term. At the same time, in the short term, they may not bring any dividends for the state at all, since the implementation of the "soft power" policy is in itself an exceptionally long – term project. In other words, the state needs to develop a long-term action plan, a long-term "space" strategy, which will be constantly updated and improved depending on the conditions and requirements of the international agenda and foreign policy realities. In addition, it should be noted that it is important to study the target audience to which the soft power strategy should be directed. It is necessary to understand that there is a certain target audience in relation to the interest in space, especially since the success or failure of their own government in space exploration will necessarily be noted in the public consciousness. It is important to identify the target audience in order to get certain results in this area. Thus, in order

⁹⁰ Роговский Е.А. Борьба за контроль в космосе // Международные процессы. Т. 5. №. 1 (13). Январь—апрель 2007, С-217//Rogovsky E. A. Struggle for control in space // International Processes. Vol. 5. no. 1 (13). January-April 2007

⁹¹ Safarova R.R «Space exploration as part of soft power policy in the world politics», Research Center «PERESVET», St Petersburg, 2020, P-75

to achieve foreign policy goals through "soft power" promoted on the basis of space cooperation, it is necessary to attract funding, intellectual support for relevant projects, as well as to develop a positive political agenda for their public approval.

Third, it is necessary to understand the importance of projects aimed specifically at the state's foreign policy. If Russia today is more successful in scientific terms, then it is worth focusing on the use of soft power through scientific projects of space exploration, rather than practical activities. That is, the strategy involves choosing the strongest side of state activity in space and the development of soft power through these projects.

For the Russian Federation, the topic of space exploration is by no means new, just as it is for the United States of America. Projects for the colonization of the Solar system took place in the 60s-70s of the XX century⁹².

However, it is worth noting that the potential of the Russian Federation in the exploration of outer space through the prism of "soft power" remains not fully disclosed. In modern history, the most clear use of space as an instrument of Russian foreign policy soft power was manifested in 1993 — the early 2000s in the framework of the project International Space Station (ISS). At that time, Russia converted its experience of long-term manned space flights and the construction of habitable orbital complexes into strengthening its own position on the world stage, despite the fact that there were objectively few other positive factors for such strengthening at that time. For the successful implementation of projects in this area, the Russian leadership should develop a long-term strategy for using "soft power". At the same time, it should be taken into account that the tools of "soft power" described by the American political scientist Joseph Nye can work effectively only within the framework of a long-term and well-thought-out strategy, when the condition of voluntary participation of all interested parties is necessarily met. The tools of "soft power" can bring effective results, but the implementation of political projects with their help can objectively be delayed for many years.

Soft power is not an easy component in the state's arsenal of means of influence. Its effectiveness, as D. Nye himself pointed out, is much more difficult to change, compare or predict, as it is used to do in the case of traditional, hard power. Nevertheless, it is obvious that conflicts, disputes, and even just the conduct of politics now and in the future are inextricably linked with image technologies and concepts of the attractiveness of the state as a partner, recipient of investment, ally or enemy. The development of one of the most knowledge-intensive

⁹² Kash D. Cooperation in Space. Lafayette: Purdue University Press, 1967, P-119

industries, which includes both abstract theoretical research and the most pragmatic projects, seems to an increasing number of actors of the Ministry of Defense as a way to ensure not only their sovereignty, but also their attractiveness and maintain a proper image at a much more subtle, spiritual and ideological level. Thus, the Russian Federation, which has all possible resources and potential, can truly become one of the most influential players in outer space through soft power tools based on the exploration of outer space.

3.2. Space exploration as part of the «soft power» policy of the USA

The history of American space exploration began with the creation in 1915 of the NACA, an advisory body that dealt with the study of space. On July 29, 1958, U.S. President Dwight D. Eisenhower signed into law the creation of the National Aeronautics and Space Administration (NASA)⁹³. It is this date that can be considered the beginning of the development of American cosmonautics. Before that, the development of space was the exclusive prerogative of the military. So, by 1958, NACA became NASA-the American Committee on Aeronautics. At the same time, a particularly active stage of the space race between the USSR and the United States began. To win it, active actions were required – satellites, crewed rockets, new discoveries. It is also worth mentioning that this is a civil organization responsible for scientific expeditions and commercial projects. All military developments are under the authority of the space units of the US Air Force and there is no access to information about them. As, indeed, in any other country with space programs.

From the beginning of the space race, countries have already begun to use the first levers of soft power aimed primarily at the population within the country. The government of states, especially in such a democratic society as the United States, needed to prepare the population for the conquest of space. So, in the United States, the entire 57th year on television, the main topic was the planned launch of the world's first artificial satellite⁹⁴. Numerous TV shows talked about how America is preparing to conquer space, experts explained the importance of this event, and the military involved in the space program drilled holes in the tunics for awards. In addition, the United States is still adept at using television as one of the tools of soft power. Today, efforts are

⁹³ Official site of NASA, URL: <https://www.nasa.gov/>
Viewed 11.03.2021

⁹⁴ Stephen N. Whiting «Space and Diplomacy: A New Tool for Leverage», published in *International Journal of Space Politics & Policy*, 04 Jun 2010

directed not only at its own population, but also to the outside world, through the creation of films and new films to demonstrate the potential power of the United States in space.

In addition, after the stunning launch of their Soviet satellite, the Americans realized that it was necessary to work on the mistakes and make every effort to get ahead. Even then, in 1958, it was clear that the creation of NASA alone would not be enough to gain leadership in the space industry⁹⁵. In addition, in 1958, DARPA was created — the Office of Advanced Research Projects of the US Department of Defense, a special agency responsible for the development and creation of new technologies that can help the armed forces of their country⁹⁶. Further, the Americans undertook a plan that was simply ingenious, according to the author - an education reform in order to raise technical specialists in their country. This is not just brilliant from the point of view of the future successes that these steps will definitely bring, but also brilliant from the point of view of the planned long-term implementation of the soft power policy. The result of the education reform in the country was to be an army of technical specialists, young engineers and designers who could work in the space industry and create new launch vehicles and ships. In order to improve the teaching of physics and mathematics, school curricula were revised, and many specialized scholarships and competitions were created. Even in universities, mathematical and physical disciplines have gained a lot of weight. In addition, Americans began to use the system of grants for schoolchildren and students from other countries, and a well-known mechanism, which we call the "brain drain", began to work. A huge contribution was made to the future of the country, the focus was on the younger generation, the goal was not to win here and right now, but to show an excellent result in the future. And the Americans managed to do it.

For 60 years of existence, the American space program has made many suborbital (on ballistic trajectories) and orbital flights. The US forces have organized huge campaigns with many missions⁹⁷:

- Apollo (Apollon) it is a project of exploration the Moon, created in 1961 in the midst of the "lunar race" with the Soviet Union;
- Explorer-a series of satellites and research stations;
- Viking - a program to study the surface and subsurface of Mars;

⁹⁵ Official site of NASA, URL: <https://www.nasa.gov/>
Viewed 11.03.2021 // Historical section

⁹⁶ IBID

⁹⁷ Official site of NASA, URL: <https://www.nasa.gov/>
Viewed 11.03.2021 // Programs section

- Echo - project for establishing satellite communication systems;
- Mariner-missions to explore Venus, Mars, and Mercury;
- Mercury is one of the most famous research programs with work on the ISS;
- New Frontiers is a program for exploring the most distant and little - known regions of the Solar System.

In addition to national projects, private space projects have also appeared in the United States. The most famous of them is Space-X under the leadership of Elon Musk. Space-X production ships are currently the most advanced and popular in the world.

There are also big dramas in the history of American space exploration. So the crash of the shuttle " Challenger "(1986) and "Columbia" (2003) led to the death of 14 crew members and the suspension of flights. In the aftermath of these disasters, there was a fierce public debate about the feasibility and risks of space programs. Activists called on politicians to stop competing with the USSR: there were slogans that the Soviets would never reveal the real number of victims in space, and because of this, America could continue to consider disasters and victims as exceptional cases.

The last passenger ship was the shuttle "Atlantis", which worked mainly for the maintenance of the ISS and the needs of the US Department of Defense. Since 2011, the United States has not launched passenger ships. All American astronauts are delivered to the ISS in the crews of Roscosmos ships⁹⁸.

So, the author suggests that we proceed to the discussion of how the space program and the status of a space power affect the United States.

The development of space technologies is a traditional area of interest for the United States. Ever since the launch of the first artificial Earth satellite in 1957, the United States has engaged in a "space" race with the Soviet Union. From the very beginning, they sought total domination in outer space, the use of its resources and the restriction of competition. If you pay attention to the policies of the US presidents, you can see that each of them paid special attention to the issues of space exploration. Starting with the educational projects described above by Dwight Eisenhower and ending with the plans of today's president Joe Biden. Moreover, a little earlier, the 45th President of the United States, Donald Trump, quite clearly outlined the priorities of the American military-political strategy in space. Trump's predecessor, Barack Obama, surpassed his colleagues in the number of approved doctrinal documents related to US activities in outer space.

⁹⁸ Shuttle-Mir program, URL: https://www.nasa.gov/mission_pages/shuttle-mir/
Viewed 11.04.2021

These are, in particular, the "Space Operations Doctrine" (2009), the "Space Policy Review" (2009) and the "National Security Strategy in Space" (2011). In other words, we can note the purposeful strategy of the United States aimed at dominating outer space. Today, the United States is trying in every possible way to emphasize its leadership in the space sphere, including through military and technical achievements. It is also impossible not to mention American private companies, whose activities have already become an integral part of a common strategy aimed at creating a positive image of the state through the prism of space exploration. The soft power of the United States in the field of space, experts say, is expressed precisely in close cooperation with other nations in working on global projects such as the ISS by attracting partners from around the world, which in the future can become an element of military supranational structures.

At the same time, private companies focus on the attractiveness of space programs for the ordinary population. That is, in the United States, the emphasis is on attracting increased attention to the "space agenda" from not only the world community, but also the American society. And in this case, the media, feature films, documentaries, TV series, and TV shows are involved, which are also instruments of soft power aimed at influencing the country. In the foreign policy arena, the United States uses soft power by engaging other countries in joint cooperation programs, sharing experience and technology, and, of course, intellectual exchange. An example of successful cooperation is the Agreement between the Russian Federation and the United States on Cooperation in the Exploration and Use of Outer Space for Peaceful Purposes of 17 June 1992. Subsequently, such cooperation resulted in a full-scale cooperation on the creation of the ISS, and the Star City near Moscow became an international platform for training cosmonauts for flights into orbit. It is worth mentioning the fairly successful cooperation of the United States with European countries and Japan.

So, it can be noted that the American space exploration strategy is aimed at a long-term perspective, has a high potential and a clear structure. Private companies, especially Elon Musk's SpaceX, play a major role in promoting and popularizing this strategy. The success of the strategy is largely due to the long-standing US policy of "brain drain" from other countries. The outflow of highly qualified scientific personnel and service personnel from third countries, in addition to schools and institutes for training their own personnel, the offer of grants and the attractiveness of American education, all this flows into the implementation of soft power. It is no secret that the United States is thus preparing the ground for traditional hard power. Finally, it is necessary to note the active promotion of the national space program through the media sphere

and in the foreign policy arena, which is so lacking in modern Russia. If you turn to the sources, it is worth noting the financial side of the issue. The National Aeronautics and Space Administration (NASA) can spend about \$ 20 billion a year on space programs, which is very different from the indicators of Russia⁹⁹. By the way, Europe ranks second after the United States in terms of funds invested in the space program, which also indicates the serious interest of the European community in space exploration. As for the use of "soft space force", which the EU intends to use to achieve certain political and economic goals, the EU's aspirations here are not as ambitious as, for example, America's. In general, the EU has many programs for joint space exploration. An important emphasis is placed on student and scientific exchanges, during which talented young scientists are attracted to work in the European Union. The EU as a whole intends to gradually move away from cooperation with the American side in matters of space exploration. At the same time, the Russian Federation is considered as a potential ally. So, the Americans today still remain in the leading positions in the use of space as one of the tools of soft power. What is really interesting is that America's soft power is aimed not only at young people and attracting personnel, which is, by the way, one of the most relevant, but also affects joint projects in space with other countries to spread their own influence (here a good example is the cooperation of Canada and the United States), in addition, such levers as space diplomacy and private space exploration are also involved in the role of spreading their influence not only through state structures, but also through non-governmental organizations. This is extremely important, since non-governmental players, according to the liberal theory of international relations, will become full participants in world politics and will be able to influence the international agenda.

Here, it is necessary, at least briefly, to note the increasing importance of China, which has recently become quite strong and is already ready to seriously "play" in outer space from the point of view of both "soft" and "hard power". Therefore, the author considers it appropriate to talk about such an important player in outer space and one of the most skilled players using soft power as a strong tool of influence on the world community - China.

3.3 Space exploration as part of the "soft power" policy of China

To begin with, the author suggests noting such an important component of Chinese policy in

⁹⁹ Safarova R.R. «Space exploration as part of soft power policy in the world politics», Research Center «PERESVET», St Petersburg, 2020, P-77

space - China is the birthplace of rocket technology. Missiles appeared in the Middle Kingdom about two thousand years ago-first as a means of entertainment (festive fireworks), and soon as a weapon system. It was not until 1956 that they returned to work on rocket science in China¹⁰⁰. It is believed that this year was the beginning of the Chinese space program. At that time, the USSR and the PRC had close friendly relations, and within the framework of bilateral intergovernmental agreements, some samples of rocket technology (including R-2 medium-range ballistic missiles), as well as documentation for them, were transferred from the Soviet Union to China. Many Chinese specialists have been trained in the basics of rocket science in the Russian Federation. In 1960, the first Chinese BB-1 ballistic missile was successfully launched, which was practically a copy of the Soviet R-2 missile.

Qian Xuesen led the rocket-related work in China. He lived in the United States for many years, participated in the creation of American intercontinental ballistic missiles, but during the "witch hunt" was suspended from work and forced to return to his homeland. It is he who is today called the "father of Chinese cosmonautics" for the contribution he made to the formation of China as a space power¹⁰¹.

The complication of relations between Russia and China in the early 1960s led to the termination of the Soviet-Chinese "rocket cooperation", but accelerated the independent development of rocket and space technology in China. These works at that time were largely of a military nature. The first research center associated with the space industry, founded in October 1956, was the Fifth Research Institute of the Ministry of Defense. However, since 1968, the range of tasks to be solved has significantly expanded. The Research Institute of Space Medicine and Engineering was established in China, training programs for taikonauts (Chinese cosmonauts) were launched, and the government paid great attention to the development of space technologies, including for the peaceful use of space. The result was the launch of the Dongfang Hong-1 satellite on April 24, 1970¹⁰². This simple spacecraft allowed China to become the fifth country in history to have the technology to launch a satellite. In the 1970s, the

¹⁰⁰ThoughtCO newspaper «The History of the Chinese Space Program», URL: <https://www.thoughtco.com/chinese-space-program-4164018>
Viewed: 12.05.2021

¹⁰¹ Желязняков А. Б. «Опыт освоения космоса китайской Народной Республикой», научная статья cyberleninka, 2018, [Zhelyaznyakov A. B. "The experience of space exploration by the People's Republic of China", scientific article cyberleninka, 2018] URL: <https://cyberleninka.ru/article/n/opyt-osvoeniya-kosmosa-kitayskoy-narodnoy-respublikoy>
Viewed 17.05.2021

¹⁰² IBID

formation of Chinese cosmonautics took place. The pace was not too high — between 1970 and 1979, eight Chinese satellites were put into orbit. But in these years, it was possible to lay the foundation for the further development of space facilities. Even then, plans for manned space flights were being considered.

Between 1980 and 1989, China had 15 successful space rocket launches. But still, compared to the space achievements of the USSR and the United States, the success of the PRC looked modest. The last decade of the twentieth century is characterized by the rapid development of the Chinese economy. Its growth rate, especially against the backdrop of geopolitical changes in Europe, is more than impressive. This allowed China to become one of the world's leading powers at the turn of the millennium.

So, turning to the conversation about soft power in China, which quite skillfully uses space as one of the most important tools for building a favorable image of the state, cooperation with Asian countries that are quite willing to "share sovereignty" in exchange for China's developed technologies.

The historic moon landing of China's «Chang'e - 4» marks a symbolic victory for the emerging space power¹⁰³. But the lack of transparency, along with concerns about dual-use plans and surveillance, is undermining China's efforts to convince the world of its peaceful rise. For Europe, Beijing can at best be a selective partner on space issues.

NASA administrator Jim Brindestein called it "an impressive achievement." On January 3, the Chinese National Space Administration (CNSA) successfully landed the Chang'e-4 probe on the unexplored side of the moon. A remarkable scientific success, the landing also raised fears in Washington that China could use the remote dark side of the moon to hide anti-satellite weapons. That is, on the one hand, the success of the Chinese space program leads to the recognition of China in the international arena as one of the strongest space players at the present stage, on the other hand, the PRC can be perceived as a dangerous threat to other space powers. However, according to the author's observations of reactions from state governments-China is a threat primarily in the opinions of the United States, due to the high level of competition.

According to the author, Chang'e-4 is just the tip of the iceberg of Beijing's long-standing space ambitions. As early as 2019, a follow-up mission deliver samples of lunar soil to Earth. In

¹⁰³ Эпштейн В.А., Бочков Д.А., Мухаметзянов Р.Р. «Китайская космическая программа: 60 лет эволюции», статья на cyberleninka, 2018 [Epstein V. A., Bochkov D. A., Mukhametzyanov R. R. "The Chinese space program: 60 years of evolution", article on cyberleninka], URL: <https://cyberleninka.ru/article/n/kitayskaya-kosmicheskaya-programma-60-let-evolyutsii>
Viewed 19.05.2021

addition, in 2018, China launched more space rockets than any other country¹⁰⁴. The domestic technological base is steadily improving, closing the gap with the established space powers. Since the Chinese president opened the space industry to private players in 2014, a host of new space startups have been competing with state-owned aerospace giants. By 2020, China's commercial space sector is worth, according to some experts, about 120 billion US dollars.

However, in this situation, China does not abandon its attempts to present the space program only from the point of view of the peaceful use of space. At the same time, China is one of the main space powers that uses space as a soft power in relations with neighboring states. In line with the main message of the 2016 White Paper on Space Activities, China seeks to present itself as a peaceful and credible space power, opposed to an arms race in outer space and committed to multilateralism. The Chinese government has openly stated that it views space policy as a tool to strengthen its "all-encompassing national power" gain international prestige through space and soft power, and advance its commercial and geostrategic interests. "The space dream is part of the dream of making China stronger," the new Chinese president said in 2013 shortly after coming to power. China's main goal is to become a world leader in space technology by 2045. That is, China does not just use space as a soft power, but also recognizes this fact in the country's foreign policy discourse.

At the same time, the focus on international cooperation is central to China's space rhetoric, as one of the main components of spreading its influence through soft power to the countries of the world community. As the United States banned Taikonauts (Chinese astronauts) from working with NASA and thus the International Space Station (ISS), China backed down, promising to open its own space station, scheduled for 2022, to all UN member states. In addition, the most interesting example of the spread of influence through space diplomacy (or soft power using space as a tool) is China's program in Asia, which aims to create a new regional institution of the Asia-Pacific Space Cooperation Organization (APSCO), and China's goal is developing countries. In addition to entering the multibillion-dollar market, China is seeking to strengthen ties with individual countries through space diplomacy. Beijing has sold low-cost commercial satellites to several countries, such as Brazil, Nigeria and Pakistan, and offered a dozen others money, training and technology to launch its own space programs. In Venezuela, about \$ 145 million in space aid was provided in exchange for natural resources. This is the clearest example

¹⁰⁴ Dillow C., Lin J., Singer P.W. China's race to space domination // Popular Science. -2016. - 20 Sept. - URL: <http://www.popsci.com/chinas-race-to-space-domination>
Viewed 18.05.2021

of space diplomacy or the spread of influence through soft power tools based on space assistance. Satellite launches are also part of the «One Belt and One Road» initiative. As early as 2020, China's local network of 35 BeiDou navigation and positioning satellites will provide services to more than 60 BRI countries, challenging US GPS and European Galileo¹⁰⁵. That is, Chinese initiatives and soft power policies have been so successful that today they can seriously compete with the space diplomacy of the United States and the EU, not to mention the Russian successes.

However, there is also a "dark side" of China's space diplomacy. The Chinese government is much less open about other important aspects of its space ambitions (including budgetary ones), causing absolutely expected fears of the world community, which undermine China's desire to be perceived in other countries' societies as a reliable space nation¹⁰⁶. The outdated 1967 Outer Space Treaty has gaps when it comes to regulating, say, asteroid mining. Chinese engineers are working on ways to capture small asteroids, as well as harvest natural resources in orbit. The moon's minerals, including rare-earth metals and helium-3 (which can be used for nuclear fusion), also attract energy-intensive Beijing, which cannot but cause concern among world leaders. However, space law, which in fact does not exist today, is a huge gap for relations in outer space, and also threatens future problems or even conflicts during the colonization of outer space.

Last year, China signed a memorandum on space cooperation with Luxembourg, the country that codified a law granting companies rights to the materials they mine in space (the United States passed a similar bill)¹⁰⁷. The 2016 White Paper says surprisingly little about space mining, but as Chinese lawmakers formulate an overdue legal framework for space activities, it will be interesting to see how they address issues of territorial sovereignty in space and resource appropriation¹⁰⁸. Taking into account Beijing's actions in some terrestrial arenas, such as the South China Sea and Antarctica, international trust can be difficult to secure.

Let's not hide the fact that in addition to the riches that space possesses, this territory is also

¹⁰⁵ China National space administration, URL: <http://www.cnsa.gov.cn/english/>
Viewed 13.05.2021

¹⁰⁶ Hongyi Lai, Yiyi Lu «China's Soft Power and International Relations», Published October 7, 2013 by Routledge

¹⁰⁷ China National space administration, URL: <http://www.cnsa.gov.cn/english/>
Viewed 13.05.2020

¹⁰⁸ Full Text: China's Space Activities in 2016, URL: <http://www.scio.gov.cn/zfbps/32832/Document/1537024/1537024.htm>
Viewed 17.05.2021

considered as a strategic area for China's national security and defense, as clearly stated in the Military Strategy of 2015. In addition, China seeks to dominate this territory. Xi Jinping created the PLA Strategic Support Force (PLASSF) in 2015 to support joint combat operations in space and integrate them with electronic warfare and cybernetics capabilities. Last year, a report by the US Department of Defense warned that China would increase the militarization of space through the development of anti-space capabilities. That is, as we can note, China uses space not only from the point of view of the policy of soft power, but also from the point of view of the policy of hard power, otherwise why would China need such advanced weapons and various space exploration projects from the point of view of strategic profitability. That is, China uses a policy of smart power, which combines soft power-the spread of its influence through peaceful cooperation with developing countries, assistance in the development of space programs, and so on, while China is preparing a springboard for the spread of hard power in the future, on the one hand, it will be able to control developing countries, while building the image of a country that has directed efforts to help and develop space technologies in developing countries, on the other hand, China may lose this image if it takes any aggressive actions. The image can be broken at any time, as there is a distrust attitude towards the People's Republic of China. In other words, China's lack of transparency about its ambitions for civil-military integration undermines its own efforts to build up its soft power through space exploration. It may also fuel self-fulfilling prophecies of a new space race: largely in response to China's actions, US President Donald Trump signed a directive on February 19 to create a previously planned military space force.

Amid growing concerns about the lack of transparency in the BRI, space cooperation with developing countries is also receiving close attention. Satellites are the channel through which countries access information. They are also vulnerable to cyber attacks. Just as the digital infrastructure funded and built by China facilitates government surveillance, censorship, and espionage in some cases, the Space Silk Road may well increase China's influence over these countries. Which for China can be a victory for the soft policy of the state, while building a positive image for China's partners (image) China through space diplomacy, and for the rest of the countries, especially for the United States, this will be a real threat of losing their positions, in particular the inability to conduct a policy of space diplomacy. Despite all the threats posed by China to the world community, the European Space Agency is ready to work with China. This is also due to the fact that the space program announced by Donald Trump earlier did not cause any confidence in the European society. However, in this situation, according to the author, the European society will choose according to the principle of "the lesser of two evils».

So, summing up, it is necessary to start by saying that Beijing is really far from being a reliable partner in space. Despite its openness on the one hand, the opaque role of the military in the country's space program, combined with China's behavior in equally uncertain legal spaces on earth, requires a cautious approach in the countries of the world community. If Washington's zero-sum stance fuels greater competition and distrust of China, a soft approach may underestimate the very real risks. The countries of the world community should demand greater transparency from China, and it is also necessary to build a consistent and well-thought-out "skeleton" of the countries' space relations in order to learn how to control joint and individual initiatives in space. For the author, space is a dangerous space and not fully explored, so in his opinion, countries need to make only common efforts to explore outer space. If we turn to the discussion of soft power, space diplomacy and building a positive image on the world stage with the help of space, it is worth noting that the author today remains in his opinion that China is undoubtedly one of the strongest countries in the use of space as a tool of soft power. China is indeed adept at using the tools of space diplomacy to create a certain positive image of the country in the public opinion of other countries. However, China still lacks transparency and patience in the transition from soft power to hard power.

Conclusion

Moving on to the final part of the research work, the author suggests to begin by expressing his own opinion on how the development of outer space affects the formation of the image of the state and how soft power helps to build a positive image, then the author will proceed to conclusions on each specific task set in the conduct of this study and will finish with his forecast on whether space exploration will be used as a tool for building a favorable image of the state.

Speaking about the importance of the issue of space exploration in the context of the soft power of the state, it is necessary to note the key aspect of space activities related to its international nature. The so-called Outer Space Treaty of 1967 emphasizes that each of the interested nations has the right to develop peaceful space programs, including with the support of the world community. The author of this study believes that there are indeed notable initiatives and projects that use space exploration, the development of new technologies, and joint projects of stronger players in space with developing countries as a tool for building a positive image on the world political arena. However, it is worth noting at once that the author came to the conclusion that the development of outer space and various cooperation projects are not the only tools for building the image of the state. The image of the country consists of a huge number of factors, and must be constantly supported by various projects. This aspect also has a negative side - the positive image of the country is too easy to undermine or destroy when it comes to any actions of the state recognized by the international community as aggressive. Further, a favorable image of the country will be difficult to restore for a very long time. Here we can say, for example, about the DPRK. To date, the space program of this country is perceived quite negatively, against the background of violations by this country of a number of treaties related to the development of nuclear weapons. To date, the DPRK's space program is perceived negatively, as the countries are sure that the North Korean leadership is pursuing purely aggressive goals in space. In addition, the Russian Federation, which received the status of the first space power in the world, received a "lifetime" image of a successful country in the space plan. To this day, despite the fact that Russia is no longer the first state in space in terms of success, it still has the status of a successful country, since the launch of the first satellite and the sending of the first person into space left a very serious imprint on Russia. According to surveys, the societies of some states still consider Russia to be quite successful and a leading country in outer space. That is, the image created through space exploration many years ago still leaves a positive imprint on the country. In this regard, the author really believes that there are political

examples of how the image of the country is affected by the development of outer space. In addition, for the author, it is obvious that space can be used as a tool of soft power to spread its influence over some countries. In this regard, the author can suggest recalling the example of China in the issue of spreading its own influence, through the prism of soft power based on space diplomacy, on cooperation projects with developing countries within the framework of space.

Thus, in the course of performing research tasks, the following results were achieved:

1. In the first chapter of this research paper, the historical retrospective of space exploration was considered. The author highlighted the main stages of space exploration and how the development of outer space affected the image of the first two countries that acquired the status of a space power. The prerequisites for the exploration of outer space were formed long before the first stage of space exploration, which was defined in the author's psovey work. The governments of the countries have always sought to go beyond the Earth, with the aim of developing new territories, finding new forms of life and colonizing untouched lands. Therefore, since the beginning of the XX century, the first prerequisites and plans for a flight beyond the Earth's orbit have appeared. However, at that time there was neither the technical capability for such development, nor enough knowledge for such flights. After the Second World War, the desire for space in various countries increased, this was due on the one hand to the desire for rivalry between the two blocs into which the world was divided during the Cold War, on the other hand, this desire was due to the desire to conquer new territories, strengthen their own borders, open up new opportunities. So, as mentioned above, the Cold War and certain political conditions of those times pushed the two opposing countries to the space race. This gave a huge impetus to the development of cosmonautics. Thus, the author defined the first stage of space exploration in the 50s-60s of the last century (this stage includes such events as the first human flight into space (Yuri Gagarin, USSR, April 12, 1961), the first spacewalk of an astronaut (Alexey Leonov, USSR, March 18, 1965), the first expeditions to the Moon (USA, 1968-1969), the first human exit to an extraterrestrial celestial body – the Moon (Neil Armstrong, USA, July 21, 1969). During this period of time, there was, as noted earlier, a struggle for spheres of influence. The two main players - the United States and the Soviet Union-fought over which of the two superpowers would be the first to conquer space. This was extremely important, namely the primacy in this case, because this success would bring the countries the expected, impressive "bonuses". Of course, the main such "bonus" was the political and ideological recognition of other countries in the international arena and the new status

of a space power, which allowed not only to set the agenda, but also with a certain policy could build a positive image of the state. The second stage was marked by the author - the stage at which the sphere of space activity was formed as a full-fledged sphere of activity of society, which affected the 70s of the XX century – the 10s of the XXI century. A characteristic difference from the first stage is that this period of space exploration begins to affect not only national economies, but also the world economy. During this period, the presence of humans on manned space stations outside of Earth in near-Earth orbit becomes permanent. So, in the 70s of the XX century, according to the author, humanity and world politics come to understand how important space and outer space as a whole are. The third period is the implementation of super-global space exploration projects (starting from the 20s of the XXI century). Super-global industrialization and post-industrialization of space activities to ensure the security and development of humanity on Earth and beyond, the development of extraterrestrial resources and objects, further expansion into space, to the Moon, Mars, etc., the creation (in the future) of bases, settlements of space humanity. The author defines all of the above as the last stage of space exploration to date. Thus, the author in this chapter has fulfilled the task of describing the main historical stages of space exploration, the importance of space exploration and how the acquired status could affect the first countries that received the status of a space power, set in the jurisdiction of this study. In addition, the author touched upon the topics of the prerequisites and the confrontation in space of the leading world powers, which are also closely related to the task assigned to this research work.

2. In the second chapter of this study, the author describes how the image of the state and the development of outer space are connected. Examples of states that use the policy of smart power to build a favorable image of the state are given. In addition, the author reveals the concepts of soft power and how soft power is related to the image of the state and how with the help of soft power and the development of outer space, the state can build a favorable image of the country. The instruments of soft power in the politics of major political players are defined. For example, China understands the role of such an actor, in addition, the policy of the Russian Federation, the United States, the DPRK and some other space powers is partially affected. In addition, these countries are analyzed from the point of view of how the acquired status of a space power affected the image of the state. The author also comes to the conclusion that the acquisition of the status of a space power determines the technological development of a particular state. The development of a

space program is currently one of the main goals for developing countries that are striving to become full-fledged players in solving issues related to the use of outer space. Today, it is extremely important to have a space program, since according to the forecasts of some scientists, space will become the main territory of competition in the future, since in addition to minerals, it carries a huge number of advantages that will be available only to those states that have the opportunity to participate in space projects. That is, today's image can directly depend on whether a state has the status of a space power or not, whether it has the technological ability to ensure this status or not, whether it will participate in setting the agenda or will not have a direct opportunity to participate. That is, the author would like to note that the image can not be formed only from whether the state has the status of a space power or not, however, through space diplomacy and space exploration, the state can extend its influence to other countries and thereby build a favorably image of the state. At the same time, there are cases in which even the acquisition of the status of a space power and attempts to build systematic relations with other countries in space cannot change the unfavorably image previously acquired by this particular state. Thus, the author in this chapter has carried out the task of determining the instruments of soft power in the policy of major space players, identifying the main changes in the policy of states depending on the " acquisition " of the status of a space power, considering the main trends in the formation of the image of the state depending on the acquisition of the status of a space power.

3. In the third chapter of this research paper, the author describes specific countries and their soft power policies based on the development of outer space. Many countries today have various projects and institutions that implement soft power policies. Indeed, this policy occupies the right place in the foreign policy discourse of the leading countries of the world. This policy began to gain popularity after the countries realized that the policy of hard power had exhausted itself. Today, there is a perfect weapon that can destroy the enemy in a matter of minutes, so in order to avoid such cases, countries have "switched" to a policy of soft power, namely, the spread of their influence through diplomacy. In this chapter, China is recognized as one of the most successful players on the world stage, which uses space diplomacy and space in general as a tool for spreading soft power and its influence. In addition, the US policy in this area is also quite successful, especially if you look at the cooperation and influence of the United States on Canada in matters of joint space exploration. Although the Russian Federation has some success in this area, it is not

the leading country in the manifestation of a policy of soft power based on cooperation in outer space. By the way, it is worth noting that Russia was quite successful in this area at the beginning of building "space relations", the country's leadership enthusiastically approached various joint projects on space, cooperation and assistance to developing countries with space programs. However, due to the unwillingness or inability to maintain the relevance of such joint projects, the Russian Federation has not been able to achieve serious success. In addition, the author also notes how space diplomacy manifests itself in the foreign policy of states. However, it is also worth noting that the policy of soft power traditionally prepares the ground for further policies of hard power. In this case, some countries, such as China, for example, may partially or completely lose the trust of the world community in the event of incorrect or covert actions on the part of the country's government. The countries of the world community are so distrustful of the PRC because of its opacity, so China should be more honest in joint projects. In addition, the author has prepared a number of policy tips for a more balanced soft power policy based on space cooperation or space diplomacy in the conclusions to each paragraph of each country described in chapter three. Thus, the author fulfilled the task set in the conduct of the research work, namely, the author managed to consider the development of outer space as an element of soft power in the foreign policy of the states of the United States, China and the Russian Federation.

It should be noted that it is almost impossible to make predictions about possible ways for the world's leading states to use outer space within the framework of the "soft power" strategy to build a favorable image of the state. This is explained by the fact that the very specifics of the implementation of this strategy and its tools are quite unpredictable, as they need to be constantly updated depending on the changes in the foreign policy agenda of each sovereign state. Today, the United States and China can rightly be considered leaders in the use of the space industry as an element of the state policy of "soft power", because in these countries at the moment there are serious working tools that really bring the corresponding results. In this situation, Russia needs to take a more active part in the development of the "space" agenda, offer its own solutions to topical issues, and develop a long-term strategy aimed primarily at the systematic development of relations with other countries in the field of space exploration. In this regard, an extremely important direction of Russian foreign policy is not only to counteract attempts to militarize outer space and tough competition, but also to pursue systematic, constructive and mutually beneficial international cooperation. Together, these tools of the long-

term soft power strategy can provide Russia with a favorable position in the future struggle for space, and will also contribute to building a favorable image of the state.

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