



# Image of Science in Social and Political Mass Media of Russia

## Imagen de la ciencia en medios masivos sociales y políticos de Rusia

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### ABSTRACT:

The article deals with the current problems of the formation of the image of science in Russia, the creation of which is the result of the efforts of scientists, the media and the state. The authors prove the interest of the state in large-scale representations of scientific and technological achievements, which are considered an indicator of the socio-political significance of the country. The image of science is analyzed in the context of social and mass media inquiries, as well as a result of the activities of science communication aimed to ensure competent, systematic and operational interaction between science actors and the public. Image representations of Russian science are reviewed on the materials of Russian socio-political Internet media ("Rossiyskaya Gazeta", "Nezavisimaya Gazeta", "Komsomolskaya Pravda" and "Moskovsky Komsomolets"). The variants of scientific subjects are given and technologies of mass-media positioning of the image of Russian science are revealed. It is indicated that the image of science is created by means of ascertaining and recognizing the merits of Russian scientists, it is noted that image constructs arise through the repetition of the concept "Russian scientists", as well as in the context of news materials on scientific achievements and potential of different regions of Russia. The authors describe such technologies of creating the image of science as: appealing to the "glorious past"; using the image of "youth in science", mentioning the first persons in the country and large organizations (for example, state corporations) in the

### RESUMEN:

El artículo trata sobre los problemas actuales de la formación de la imagen de la ciencia en Rusia, cuya creación es el resultado de los esfuerzos de los científicos, los medios de comunicación y el estado. Los autores demuestran el interés del estado en las representaciones a gran escala de los logros científicos y tecnológicos, que se consideran un indicador de la importancia sociopolítica del país. La imagen de la ciencia se analiza en el contexto de las consultas sociales y de los medios de comunicación, así como el resultado de las actividades de comunicación científica destinadas a garantizar una interacción competente, sistemática y operativa entre los actores científicos y el público. Las representaciones de imágenes de la ciencia rusa se revisan en los materiales de los medios de comunicación socio-políticos de Internet ("Rossiyskaya Gazeta", "Nezavisimaya Gazeta", "Komsomolskaya Pravda" y "Moskovsky Komsomolets"). Se dan las variantes de los temas científicos y se revelan las tecnologías de posicionamiento de los medios de comunicación de la imagen de la ciencia rusa. Se indica que la imagen de la ciencia se crea mediante la determinación y el reconocimiento de los méritos de los científicos rusos, se observa que las construcciones de la imagen surgen a través de la repetición del concepto "científicos rusos", así como en el contexto de los materiales de noticias sobre Logros científicos y potencial de las diferentes regiones de Rusia. Los autores describen tales tecnologías para crear la

context of scientific reports; identifying the activities of Russian scientists with the achievements of their foreign colleagues.

**Keywords:** Image of science, science communication, popularization of science, mass media, journalism.

imagen de la ciencia como: apelando al "pasado glorioso"; utilizando la imagen de "jóvenes en la ciencia", mencionando a las primeras personas en el país y grandes organizaciones (por ejemplo, corporaciones estatales) en el contexto de informes científicos; identificando las actividades de los científicos rusos con los logros de sus colegas extranjeros.

**Palabras clave:** imagen de la ciencia, comunicación de la ciencia, popularización de la ciencia, medios de comunicación, periodismo.

## 1. Introduction

Scientific discoveries contribute to the systematic improvement of the quality of life and bring human civilization to a new level of social development. Without the achievements of science, it is impossible for a single social subject or institution to function. The direct dependence of social progress on science and high technologies naturally leads to a social demand for the popularization of scientific knowledge. This is due to the peculiarities of the development of the modern economy. According to the theories of economic growth (the author of studies on the integration of innovations into the economy of growth, Paul M. Romer **was awarded** the Nobel Prize in Economics in 2018 together with **William D. Nordhaus**), technological progress is currently considered as the result of investing in innovative ideas and projects. The press release of the Nobel Committee states «Romer demonstrates how knowledge can function as a driver of long-term economic growth. When annual economic growth of a few percent accumulates over decades, it transforms people's lives <...> Paul Romer solved this problem by demonstrating how economic forces govern the willingness of firms to produce new ideas and innovations. Romer's solution <...>, laid the foundation of what is now called endogenous growth theory. <...> it explains how ideas are different to other goods and require specific conditions to thrive in a market» (The official website of the Nobel Prize, 2018 ).

The involvement of mass media, which act not only as a channel for transmitting information to target audiences, but also as an indicator of the strategic importance of popularizing a scientific topic - social and political media is actual and timely in the implementation of the request for the popularization of science.

The aim of the article is to analyze the role of science communication in popularizing scientific knowledge, characterizing the image of science and identifying the technologies of its creation in the Russian news political editions of state relations.

The image of science as a social institution and a complex of ideas in the system of social consciousness has repeatedly become the object of scientific understanding in many scientific papers. The attention of researchers focused on the role of the media in shaping the attitudes of target audiences.

The study of the impact of scientific and technical support of the state on the formation of the image of science in Russia, the identification of strategies and technologies for the popularization of science has become the object of consideration by a number of Russian scientists: R.N. Abramov, R. P. Bakanov, E.E. Yemelyanova, V.V. Omelaenko, A.G. Vaganov, V.G. Surdin, A.V. Yurevich, I.P. Tsapenko, N.V. Litvak. Characteristics of the image of science were analyzed in the articles of E.A. Volodarskaya The problems of the activities of science communication as a public relations sphere have been repeatedly investigated by foreign researchers: B. Trench, G. Gauchat, M. Shipman, J. Franklin, B. Terrill, K. Makino, W. Göpfert, and others.

## 2. Methodology

The methodological basis of the study is based on systemic, interdisciplinary, functional, instrumental and informative approaches.

Analysis of the formation of the image of science in Russian media is impossible without a systematic understanding of its status in the scientific, technical and socio-economic policy

of the state. The system approach allows to consider the conditions of scientific representations in modern mass media, as well as reveal the outcome of relations between science actors, target audiences and the state. The system approach is applicable in describing the role of science in the development of the state and in creating a public demand for its popularization in the media. The interdisciplinary approach used when considering the image of science takes into account its information and communication specifics, social and psychological role. The sociological approach to the study of mass media is conditioned by the study of objects within the framework of their interaction with social processes, and the philological approach makes it possible to analyze the language features of popular science texts. To characterize the socio-political mass media from the point of view of their fulfillment of informational, ideological, educational and ideological functions, a functional approach is used. Within the framework of the instrumental approach, the analysis of the media is carried out as a means of solving strategic or tactical decisions on the popularization of scientific knowledge. The studied mass media materials represent the actualization of opinions and judgments about reality, which makes it necessary to use a meaningful approach oriented to the consideration of media content.

The study used a set of methods: a literature review, description, comparative analysis, content analysis, synthesis, induction, and monitoring.

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### **3. Results**

An integral part of the socio-economic policy of the state is its science and technology policy, since science is involved in meeting social needs. Yu.T. Sharabchiev writes "... among the diverse functions of science, one of the most significant is the social one, which considers science as a social system. The social functions of science include social relations connected with science and scientific activity, the relationship of science with the external environment, the influence of science on society and society on science" (Sharabchiev, 2014, p.134). The State strategy of Russia in relation to the development of science is reflected in the document "Strategy of the Scientific and Technological Development of the Russian Federation", approved by Decree of the President of the Russian Federation of December 1, 2016 N 642. In section II. "Strategic guidelines and opportunities for the scientific and technological development of the Russian Federation" it is indicated "... the scientific and technological development of the Russian Federation is one of the priorities of state policy and is determined by a set of external and internal (in relation to science and technology) factors that form a system of major challenges" (Strategy of innovative development of the Russian Federation for the period up to 2020, 2018). As stated in the Strategy of innovative development of the Russian Federation for the period up to 2020, "... the purpose of the scientific and technological development of the Russian Federation is to ensure the independence and competitiveness of the country through the creation of an effective system for building up and making the most of the intellectual potential of the nation." According to this document, the state policy in the field of scientific and technological development of the Russian Federation is based on the principles of freedom of scientific and technical creativity, systematic support, concentration of resources, rational balance, openness, targeted support and fair competition (Strategy of innovative development of the Russian Federation for the period up to 2020, 2018).

For the evaluation of the state policy of Russia in the field of research and development, implemented national projects are important. The main goals in the national project "Science" are the entry of the Russian Federation into the top five countries, which demonstrate high achievements in prior scientific and technological spheres, ensuring the attractiveness of research work in the Russian Federation for young and foreign scientists, as well as ensuring faster growth of domestic economic research costs and development versus a country's GDP growth.

At the same time, the high status of scientific knowledge is impossible without creating a positive image of science, which is an image purposefully shaped in the minds of target audiences. The image is a mental representation of a person, party, idea, etc. Like any image, it has a virtual nature and always looks simpler than the object it represents. The

image is emotionally colored information. Having a virtual nature, the image is broadcast through mass media channels. The image of science is a product of the efforts of not only scientists but also society and the state, who are interested in large-scale representations of scientific and technological achievements, considered to be an indicator of the socio-political significance of the country. E.A. Volodarskaya points out "...the image of science plays a special role in building a system of relations between science and society, acting as an important tool of social cognition" (Volodarskaya, 2009, p.14). The researcher notes that the basis of the formation of the image of science is "...the use of direct information about it" (Volodarskaya, 2009, p.16). In the system of research, a special place is occupied by consideration of the image of science, its strategic importance, and technologies of the formation.

A.G. Vaganov connects the formation of the image of science with scientific and technological development in general, citing correlative examples: the development of industry under Peter I - the increase in the volume of technical literature; the development of industrial communications in the late 19th century (the development of trade, the construction of railways, etc.) - the growth of scientific and popular science literature: "Almost perfect synchronization of powerful industrial and scientific and technical development with an increase in the circulation of popular scientific literature is observed in countries with completely different political systems" (Vaganov, 2016). Consequently, the image component of science is derived from its financial support. The economy of sustainable growth and the status of scientific knowledge in society depend on the amount of financing.

Science communication, aimed to ensure competent, systematic and operational interaction between science actors and the public, has emerged in recent decades and has received intensive development in the Internet environment. Attention to the problems of positioning science in the media space and the formation of a public demand for awareness of the work of the scientific industries is inherent in target audiences in countries that traditionally have a high level of funding for research and development (USA, Germany, Great Britain, China). The researcher A.G. Vaganov writes that "... in the west since the mid-1990s. a whole block of areas of humanitarian research in the field of interaction between science and society has already taken shape. For example, in the UK: Science in Society; Science in a Social Context (SISCON); Science and Technology in Society (SATIS)" (Vaganov, 2016, p.66). The efforts to work on the image of science act not only as an indicator of the development of public consciousness but also highlight the strategic attitude to scientific research and the social and ideological support of the scientist from the state. According to the established tradition, communication support for scientific projects in Russia since their appearance (from the beginning of the 18th century) has been given mainly by the state. Therefore, it is natural that Russian science, as well as its popularization, which has been in the state's competence for more than 300 years, cannot suddenly impose obligations on financial and PR support on other actors. In the absence of substantial state support in Russia, fundamental science is far beyond the focus of media attention.

The correlation between the image of science and its financial and PR support is indicated by the fact that during the Soviet period, Russian scientific activity possessed a positive "contour" not only at home but also abroad. Some trends in the assessment of Russian science persist by inertia even now. N.N. Yemelyanova and V.V. Omelaenko note that "... the reputation of Russian science in world public opinion is still quite high. According to the National Brand Rating of Simon Anholt (Anholt Nation Brands Index), which takes into account at least 23 parameters, Russia consistently shows high results in the category "Innovations in science and technology" along with the categories "Cultural Heritage" and "Sport". In many respects, a favorable attitude towards Russian science abroad is connected with the heritage and achievements of Soviet science" (Yemelyanova, Omelayenko, 2015, p.147). In the Soviet Union, science was incorporated into ideology as a necessary component. Achievements of science were inseparable from the status and role of the scientist, whose positive image was consistently created by cinema, press and radio. The consistently high volume of media content devoted to scientific fields made science part of the media agenda and formed a request for the profession of a science journalist. The

interaction of scientists and journalists, of course, was determined by the framework of existing ideologies, but as part of this communication scheme, both parties were interested in relaying official newsmaker information.

At present, due to a large number of information flows that are in opposition to each other, it is impossible to apply the Soviet model of propaganda of scientific knowledge. At the same time, the consistent building of communication between scientists and mass media significantly helps the positioning of science "... since it is the mass media that forms the information agenda for a wide audience, the current situation poses a challenge to modern scientists regarding the acquisition of science subjectivity in the media. In general, the isolation of science communication in Western countries into a separate area of public communications, as well as the qualitative growth of scientific journalism as an integral part of science communication in the 1980–1990s, have become one of the most important consequences of the struggle of the scientific community for the formation of a competent information agenda regarding scientific achievements and the organization of scientific activity in Europe and the countries of North America" (Yemelyanova, Omelayenko, 2015, p.144).

According to the research conducted by a communications agency SPN.Communications in April 2013- April 2014, up to 58% of research and development materials in the Russian mass media were devoted to political finance and science problems in Russia (including the reform of the Russian Academy of Sciences): the volume of materials that would bring information about scientific results and innovations to target audiences did not exceed 6% of scientific and educational content. The study states that an information vacuum is formed around real scientific achievements and scientists (0.4 public relation specialists per thousand scientists, 2018). In addition, there is a shortage of public relation specialists working in the field of science communication. "... 22% of scientific institutions have press services. From 0.4 to 2 scientific public relation specialists account for per thousand scientists today, and this is clearly not enough to broadcast the specific topics of the general public. If we compare it with other substantively complex areas, for instance, telecommunications, then in the same segment of the cellular communications of the public relation specialists there are 4-7 per thousand people <...>" (0.4 public relation specialists per thousand scientists, 2018). Interesting observations were shared by the publishing company "Indicator", which has been rating the activity of university press services since 2017. (Popularization of science in the universities of the Project "5-100", 2018). The top three included University of Information Technologies, Mechanics and Optics (ITMO), Moscow University of Physics and Technology (MUPH) and Moscow Institute of Steel and Alloys (MISA), which showed high results in writing scientific press releases, posting science news on university websites, aggregators and social networks, including in English, and most importantly in the number of scientific information materials, published in the media on the basis of PR-interactions.

In Russia, the development of science communication has not yet led to an established system of interactions between science and media. The problems of popularization of science are associated with various communicative vectors of journalists and scientists: "... science news in journalists' interpretations cause negative reaction of scientists, because the latter believe (not without reason) that media materials are filled with inadequate factual statements and incorrect conclusions caused by mass media workers' striving for sensations and an increase in the ratings of publications <...> In everyday scientific activities, journalists do not see a newsbreak" (Dolgova, 2017, p.95). Scientists do not always act as the main newsmakers of general political mass media, one of the reasons for this having the fear of being misinterpreted by journalists. But the dialogue between the scientific community and target audiences is a very important part of media education "... the continuous development of an adequate culture of rational and critical perception of the content of media texts and self-assessment of the media activities in society — an information culture based on democratic and humanistic ideals and values, on respect for the principle of cultural diversity" (Korochensky, 2002, p.187). As it is admitted in the "Indicator" about the integrated approach to the problems of the popularization of science: "...people need to make sure that science is important for the country, that it is a source of

wealth. At present, oil, gas, and aluminum are the sources, and false ideas will entertain people no worse than scientific ones" (Separating false ideas from scientific ones is not difficult, but not necessary, 2017). The Russian Academy of Sciences (RAS) also takes an active part in the development of measures and methods of popularizing science, since it is the Academy's function according to the national project "Science". The organizational measures include the creation of separate commissions for the popularization of science, for combating pseudoscience and for countering the falsification of scientific research, developing a program for developing the system of popular science mass media, integrating popular science content into the Internet environment (creating a popular science portal), and creating large educational projects for schoolchildren, such as the Kvantorium network of children's technology parks and educational centers "Sirius".

The popularization of science and the creation of its positive image are promoted by Internet resources. R. Bakanov asserts that "... one of the reasons for the gradual "transition" of the process of popularization of scientific knowledge into the Internet space, in our opinion, is the growing crisis of audience trust in print media, expressed in reducing readership in newspapers and magazines and, accordingly, in reducing their overall and subscription circulations. Therefore, the editorial teams are trying to do everything possible to keep the old and attract the attention of the new audience, selecting the topic for publication in such a way as to interest as many people as possible" (Bakanov, 2018, p.128-134).

The positive trend in the popularization of science is proved by an increase in the demand for scientific topics in the news media in recent years. M. Shipman, for example, notes the role of the mass media in the circulation of scientific information: «... publicizing interdisciplinary research findings through news media makes it more likely that other scholars in all of the relevant disciplines will be aware of the findings» (Shipman, 2014, pp.1-5). N.N. Yemelyanova points out "... it is very illustrative that scientific organizations are striving today for greater openness through Internet communications. A variety of experts in the field of science communication enumerate the most successful options for the rotation of materials written in a journalistic style. They are the web resources of major scientific organizations: Le Center National de Recherche Scientifique (France), the National Institutes of Health and the American Physical Society (USA), Britain's Royal Society (UK), Institute of Physics, Max Planck Society (Germany). In addition to up-to-date information and news, these resources also contain digests and analysis of materials on various branches of science, useful links to specialized resources, the media, and public organizations" (Yemelyanova, 2018, p.137).

The popularization of science contributes to the creation of a positive perception of science actors, their projects and the state as a whole. It is important to identify the place science occupies on the agenda of those Russian social and political media that quickly create news contents. To study the image representations of science in the information agenda of the Russian Internet media, we turned to the materials of the following Russian social-political Internet mass media: Rossiyskaya Gazeta (hereinafter "RG" official site <https://rg.ru/>), Nezavisimaya Gazeta "(hereinafter -" NG ", official website <http://www.ng.ru/>)," Komsomolskaya Pravda "(hereinafter -" KP ", official website <https://www.kp.ru/>) and" Moskovskiy Komsomolets "(hereinafter - "MK", the official website <https://www.mk.ru/>)". The material studied includes reports for 2017-2018.

The thematic spectrum of science news in the publications under consideration is represented by materials on space exploration, genetic research, features of neurophysiology, wildlife, health problems, etc. The news content of the "cosmic" theme is formed with the help of materials on physics, astrophysics and astronautics. Materials on paleontology, archaeology, ecology and medicine can be thematic constants, while humanitarian studies rarely produce news agenda. The content of informational genres materials are created using data from well-known foreign journals (for example, Nature, Science, Genome Research, Geo, etc.), materials from the NASA website (<https://www.nasa.gov/>), etc. The newsmakers of publications are academicians of the Russian Academy of Sciences, employees of Russian research institutes, spacemen, designers, doctors, etc.



To create a presence of Russian science in the media "field", it is necessary to make its main actors the main characters of the message. In this regard, the mention of the achievements and discoveries of Russian scientists are part of the mass positioning of Russian science. This technology is often used by social and political publications, in which messages about the achievements of domestic scientists are occupied by up to half of the news from the world of science and are devoted to the activities of research centers, research and development that have received approbation and recognition: "Russian specialists have created a unique model of volcanic processes ("MK" 05.05.2017); Astrophysicist Alexander Lutovinov: A grandiose breakthrough in astrophysics became possible thanks to the Russian scientists. Doctor of Physical and Mathematical Sciences, Professor of the Russian Academy of Sciences, Lecturer at the Moscow Institute of Physics and Technology, Head of the Laboratory of the IKI RAS Alexander Lutovinov told our readers about gravitational waves, neutron stars and the role of Russian scientists in the largest discovery of this year" ("KP", 10/17/2017).

The image component is included in the context of the competitive principle in science. So, the achievements of Russian scientists are confirmed by foreign experts: "Solar racer. On the Sochi "Formula 1" track, the first Russian solar vehicle was tested. "Feelings are unusual", - SMP Racing pilot David Markozov admitted after the first trial round" ("RG", 06/21/2018); "US Intelligence admitted: the best face recognition algorithm in the world is from a Russian company. The development of NtechLab won the competition of American special services" ("KP", November 8, 2017). Here you can trace the two strategic vectors in the positioning of Russian research and development: one focuses the target audience on the self-sufficiency of Russian science, the second provides for dialogue and joint activities with scientists from other countries. Both vectors are designed to emphasize the productive nature of scientific activity in Russia and its viability.

For example: "Heaven and Nobel. Russia and Uzbekistan have agreed to complete the construction of the radio telescope "Suffa" for space exploration. The information about the possibilities the completion of the project will bring for the development of science is in an interview of the President of the RAS Alexander Sergeev given to "RG" ("RG", 02.07.2018).

"Live transmission from the Abyss. An uncrewed aerial vehicle (UAV) "Vityaz-D" will study previously inaccessible areas of ocean. Next year, the device will consider all the depths of the Mariana Trench. Foreigners were not invited to the project. The flag at the bottom of the deep will be Russian" ("RG", 10.16.2018).

The image of Russian scientists is created with the help of a statement of recognition of their merits and the presentation of awards, including international ones. This is natural since such messages will be included in the news agenda and, therefore, participate in creating the image of the state as a whole. In addition, such messages are important for intra-corporate public relations: "The rector of Vyatskiy State University (VyatSU) received a letter of thanks from the President of Russia" ("MK", 11/23/2018).

The image was constructed using the technology of repeated repetition of a concept. The concept "Russian scientists" became this concept in the materials under consideration: "Russian scientists created a robot analyzing the press" ("MK", 03.21.2018); "Laureate of the UNESCO Prize said: "I was awarded for studying insidious tumor. In Paris, the awarding of the best female scientists took place. The second in the history of the woman-scientist from Russia was among the 15 best colleagues - laureates of the international competition "For Women in Science". ("MK", 03.30.2018); "Russian scientists have created a T-shirt that can shoot an electrocardiogram" ("MK", 16.04. 2018); "Russian scientists have tested a key element of the cosmic nuclear engine. It was possible to solve the problem of heat removal" ("MK", 10.29.2018), etc.

Such materials are also frequent in "KP": Russian scientists have found a way to slow down cell aging using the sleep hormone. This can be achieved through the normalization of the work of mitochondria" ("KP", 02/09/2017); "The Russian mathematician proved the hypothesis of Thoth. It took 44 years to cope with the task" ("KP", 6.12.2017); "In Russia, a "constellation" of satellites will be created to provide the Internet and communications. The project is designated as "Russian OneWeb", its task is to deploy low-orbit satellites and to

compete with the same groupings SpaceX and OneWeb" ("KP", 11/24/2017); "With the help of artificial intelligence, they create a translator from a nightingale language to a human. Russian ornithologists, specialists in artificial intelligence, linguists and artists took on a very strange, but extremely interesting task" ("KP", 08.20.2018).

The national pride that users experience when looking through such materials leads to an increased sense of patriotism, the importance of which in positioning the country is difficult to overestimate. "Patriotism has a significant, often decisive influence on the formation of people's positions and orientations in the political sphere, as applied to various components of political culture. Analyzing his own political experience through the prism of love for the motherland, an individual makes an ideological choice, relating known political concepts to a greater or lesser extent with global interests and the specific needs of his country and his people" (Nikitin, 2017). The achievements of Russian scientists are becoming an integral part of the concept "Motherland".

With the wide possibilities of modern information exchange, the share of inclusion from the regions in the agenda of communications has increased. This contributes to the growth of the potential number of information events and, as a consequence, the growth in the number of references to Russian scientists.

The specificity of the content of the "RG" includes the breadth of scientific "geography", presented, as a rule, in the context of the presentation of scientific achievements and the potential of different regions of Russia: "I can imagine myself. Don scientists will teach to think the UAVs of the Ministry of Emergency Situations" ("RG", 13.04.2017); "The Paleolithic Venus was found under Bryansk" ("RG", 04/17/2017); "The Barnaul schoolgirl will present her theorem at the world competition of young scientists" ("RG", 19.04.2017); "Petersburg scientists have created a laser that will increase the accuracy of GLONASS" ("RG", 05.10.2018); "In Rostov, we presented unique fire resistant battens that protect hands from burns and cuts. For their manufacture luminous reinforced fabric was used" ("RG", 05.10.2018); "In Primorye, for the first time in the world, they have achieved captive breeding of an ancient shark" ("WG", 07/31/2018).

At the same time, the news of Russian science is most often associated with the Siberian region: "In Tyumen, they invented a method of cleaning the soil with flowers" ("RG", 13.04.2017); "A new generation heat-resistant alloy for space has been developed in Tomsk. Tomsk scientists have created a unique heat-resistant alloy that can withstand temperatures above 1400 degrees Celsius. The development can be used in shipbuilding, aviation and the space industry" ("WG", 10.17.2018); "A citizen of Novosibirsk invented the wheelchair-all-terrain vehicle with telepathic control. The author of a unique development is preparing to release a "smart" bed" ("KP", 05/23/2018); "Perm scientists are developing a program to automate judicial practice" ("MK", November 26, 2018).

It is worth noting that the pathos of mass media is not always optimistic, since publications often touch on the problems of modern Russian science, which include optimization of management activities in its field or lack of funding (for example, "Baikal scientists are not expecting surprises, but solutions" (RG), 16.04.2017.) However, the problems concerned do not have a negative impact on the image of science, but, on the contrary, emphasize the citizenship of scientists.

Appealing to the glorious past is one of the technologies of positioning the image of science. In the case of Russian science, there is a breeding ground for such representations. Image constructs here have one significant thematic dominant - space exploration: "The first artificial satellite of the Earth: a step into space. 60 years ago, the Soviet Union launched the first artificial Earth satellite into orbit" ("KP", October 4, 2017); "Life and unusual adventures of cosmonaut Sergey Krikalev. On August 27, the executive director of Roscosmos for pilot-controlled programs is celebrating 60th anniversary" ("KP", 08.27.2018); The astronauts' psychologist: "Tastes, smells in orbit are extremely necessary. Every new food supply is a holiday". The "KP" columnist talked with the head of the laboratory of the Institute of Biomedical Problems what is true and what is false in the series "The Particle of the Universe" ("KP", 04.23.2018).

In addition to the longreads, essays and interviews about the circumstances, problems,



details of the life of astronauts, flight preparation and space achievements, other publications on Russian scientists and the scientific and technical role of Russia and the world are also frequent: "Made in Russia: inventions, that changed the world. The journalist, popularizer of science Tim Skorenko tells us about what and whom we can rightly be proud of in the program "Data Transfer" on Radio "Komsomolskaya Pravda" ("KP", 09.27.2017); "Alexander Popov: the man who gave the radio to the world. A graduate of a theological seminary became one of the eminent physicists. March 16 is the 159th anniversary of the birth of the scientist" ("KP", 16.03. 2018); "Zhores Alferov: "The future of Russia is science and technology, not the sale of raw materials". March 15 was the 88th anniversary of the scientist whose discoveries in the field of semiconductor physics helped create solar cells and launch the Mir space station" ("KP", 15.03.2018).

To prove the priority of Russian scientific activity, the technology of "exaggeration" is used: "Ahead of science as a whole. Science is for the first time declared a national project in Russia. The President of the Russian Academy of Sciences Alexander Sergeev said "... to fulfill the goals set in the national project, it is necessary that 30,000 young scientists come to science" ("RG", 25.09.2018); "Progress cargo vehicle reached the ISS in a record three hours. In a few years, in the same speed manner, they will be able to reach the station and ships with astronauts" ("KP", 10.07.2018). For example, the message of the rubric "Society": "The President of the Russian Academy of Sciences: a laser installation of megascience class will be built in 7-8 years" ("RG", 09/10/2018) was on the main page in connection with the biggest scientific event - the Nobel Prize in Physics.

One of the options for representing the image of Russian science is the image of "the youth in science". Its appearance is due to the fact that young people, being one of the main strategic resources of society, symbolize the future and the concepts of "progress" and "development" associated with them. The "stake" on young science is also supported by the data that many mathematicians, physicists, and programmers made their discoveries at a young age: by the age of 23, Newton developed differential and integral calculus, color theory, and the law of the world wide web. G. Riemann gave the foundations of the theory of functions of a complex variable at the age of 25, Einstein developed a special theory of relativity at the age of 26, P. Dirac substantiated the existence of a positron at the age of 26, and K. D. Anderson fixed it at the age of 27, K. Gödel proved the theorems on incompleteness at the age of 24, and the A. Turing team completed the design of the Bombe encryption machine when he was 29 years old. An important factor is the fact that recent technical developments that led to the functioning of the modern Internet environment were also developed and introduced by young people, recent students: Steven Jobs team completed the development of Apple 2, when its leader was 21 years old, the social network Facebook was created by M. Zuckerberg at the age of 20, Nikolai and Pavel Durov founded "VKontakte" when they were 22 and 26 years old respectively.

Thus, for the successful implementation of the image concept "young scientist" in the Russian mass media space, priority is given to the young audience, that is currently the flagship in the creation of scientific and technical developments. This trend is fully represented by the popular science space "RG": "On Don, a hearing aid was developed that allows you to "feel" the sound. A Student of Don State Technical University (DGTU) has developed a unique hearing aid that converts sound into tactile sensations. The novelty is intended for people with complete loss of hearing and has already passed the first tests" ("RG", 09/27/2018); "Engineers of the Future" shared innovative developments. Within the framework of the forum "Engineers of the Future-2018", a roundtable discussion "Engineers of the Future as Locomotives of Growth" was held. Young developers submitted their innovative projects to the approval of the experts" ("RG", 07.18.2018). Messages on this topic can be found in other mass media: "For the first time, the Moscow State University team won the 2018 ACM ICPC world championship on programming. Among the Russian teams in the medal standings were also representatives of MIPT, Ural Federal University (UrFU), ITMO and Saint Petersburg State University (SPSU)" ("KP", 04.19.2018); "A schoolboy from Ufa has developed an application for communicating deaf-blind with the help of vibration. An eleventh grader has already received a half-million grant" ("KP", February 13, 2018).

As analyzed above, the mention of top officials in the country and large structures (for example, state corporations) in the context of mass media about science in Russia automatically leads to its inclusion in the news agenda: "Tasks for academics. Dmitry Medvedev discussed with the head of the Russian Academy of Sciences the implementation of the project "Science" ("RG", 05.06.2018); "Roscosmos is going to carry six tourists a year to the International Space Station (ISS). Anna Kudryavtseva, Director of the Commercial Projects Development Department, informed how they will make money on a pilot-controlled space program" ("KP", June 28, 2018).

In addition, image strategies are also implemented in correlating the activities of Russian scientists with the achievements of their foreign colleagues who won the Nobel Prize. Academician Sergeev hopes "... the award of the 2018 Nobel Prize in Physics to Gerard Moore, who worked at the Institute of Applied Physics of the Russian Academy of Sciences, will help advance this project in a significant way". And he emphasizes that "the concept of the future installation is based on both the ideas of Gerard Moore and the physicists from Nizhny Novgorod. Today's meeting of scientists with journalists in Nizhny Novgorod and the recent award of the Nobel Prize in Physics are directly related to each other. Recall that one of the three winners - Gerard Muru - was noted for the discovery, which was the subject of his multi-year cooperation with the scientists from the Institute of Applied Physics of the Russian Academy of Sciences". According to Yefim Khazanov, the deputy director of the Institute of Applied Physics (IAP), their colleague from France was able to solve what was considered unsolvable for a long time: "Gerard Moore and Donna Strickland together found a way to strengthen laser pulse" ("RG", 09.10.2018).

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## 4. Conclusions

The article proves that the scientific and technical policy is an integral part of the socio-economic policy of the state. To achieve the effectiveness of communication and the establishment of a dialogue between the scientific community and other social actors, a series of measures are being implemented, the purpose of which is to obtain PR-support by science, including the formation of its positive image. It is noted that this kind of activity is designed to carry out science communication. The image of science is reviewed on the materials of the Russian socio-political Internet media: Rossiyskaya Gazeta, Nezavisimaya Gazeta, Komsomolskaya Pravda, and Moskovsky Komsomolets, which demonstrate similar technologies in its creation. It was revealed that the corpus of technologies of image formation included statements of recognition of the achievements of Russian scientists, achievements and potential of different regions of Russia, a repetition of the concept "Russian scientists", appeal to the "glorious past", use of the image of "the youth in science", mention of the first persons in the country and large state structures.

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## Bibliographic references

- Abramov, R.N. (2014). Professionalization of scientific journalism in Russia: society, knowledge, media. Tomsk State University Bulletin. Philosophy. Sociology. Political science. № 1, pp. 111-123.
- Bakanov, R. (2018). Modern popular science journalism in Russia: the search for new forms of interaction with the audience. Multimedia journalism: collection of articles. International scientific practice conference. Minsk, March 1-2, 2018. - Minsk: BSU, pp. 128-134.
- Dolgova, N.V. (2017). Coverage of scientific and technical programs of the Union State of Belarus and Russia in Internet publications: news and analytical aspects. International Journalism 2017: the idea of integration of integration and media: materials of the VI International Scientific and Practical Conference. MINSK. Belarus State University, pp. 94-102.
- Gauchat, G. (2012). Politicization of Science in the Public Sphere: A Study of the Public Trust in the United States, 1974 to 2010. American Sociological Review. Vol. 77. No. 2, pp. 167-187.
- Indicator. URL: <https://indicator.ru/article/2018/09/18/populyarizaciya-nauki-v-prezidiume->

ran (appeal date 10/12/2018).

Journalism, Science, and Society. Science Communication between News and Public Relations / Ed. by M. Bauer, M. Bucchi. London, Taylor & Francis Group, 2008, 299 p.

Korochensky, A.P. (2002). Fifth power? The phenomenon of media criticism in the context of the information market. Rostov, International Institute of Journalism and Philology, 272 p.

Nikitin, V.Yu. (2017). Patriotism in the process of formation of political culture. Science. Society. Defense. № 1 (10). URL: <https://www.noo-journal.ru/nauka-obshestvo-oborona/2017-1-10/article-0098/>

Sharabchiev, Yu.T. (2014). Social functions of science and socio-psychological aspects of scientists' activities. International Reviews: Clinical Practice and Health. No. 2, pp. 134-149.

Shipman, M. (2014). Public relations as science communication. Journal of Science Communication, 13 No. 3, pp. 1-5. URL: [https://jcom.sissa.it/sites/default/files/documents/JCOM\\_1303\\_2014\\_C05.pdf](https://jcom.sissa.it/sites/default/files/documents/JCOM_1303_2014_C05.pdf)

Shmatko, M.V. (2007). The image of science in the mass consciousness of modern Russian society: diss ... Cand. Philosophy sciences. Omsk, 187 p.

Surdin, V.G. (2016). Sensation and science. In defense of science [ed. by E.B. Alexandrov]. The RAS Commission for Combating Pseudoscience and Falsification of Scientific Research. Moscow. Bulletin No. 17, pp. 52-60.

The popularization of science in the universities of the Project "5-100": what has changed in six months // Indicator [Electronic resource] URL: <https://indicator.ru/article/2018/07/02/rejting-press-sluzhb-5-100/> (circulation date 10.12.2018).

The official website of the Nobel Prize. URL: <https://www.nobelprize.org/prizes/economic-sciences/2018/press-release/> (circulation date 10.12.2018).

The strategy of innovative development of the Russian Federation for the period up to 2020. Order of December 8, 2011 No. 2227-r. [Electronic resource] URL: <http://government.ru/docs/9282/>.

Trench, B. (2008). How the Internet science journalism. Journalism, Science, and Society. Science Communication between News and Public Relations. Ed. by M. Bauer, M. Bucchi. London, Taylor & Francis Group, pp. 133-141.

Vaganov, A.G. (2017). The population of Russia is losing its "innovative" instinct. Certainly, only 18% of citizens are sure of the benefits of science and technology. Nezavisimaya Gazeta. URL: [http://www.ng.ru/science/2016-09-28/9\\_innovations.html](http://www.ng.ru/science/2016-09-28/9_innovations.html) (the date of appeal November 22, 2017).

Vaganov, A.G. (2016). The evolution of forms of the popularization of science in Russia: XVIII-XXI centuries. The science. Innovation. Education. № 3 (21), pp. 64-77.

Volodarskaya, E.A. (2009). Dynamics of the image of science in the process of developing research skills of students. Psychological Journal, Vol. 3. No. 1, pp. 14-31.

Volodarskaya, E.A. (2010). Dynamics of the image of science in society (the mid-20th century - the beginning of the 21st century). Scientific journals. No. 15, pp. 69-78.

Yemelyanova, N.N. (2018). Scientific information in the media: the specificity of generation and reproduction. Philosophy of Science and Technology. V. 23. No. 1, pp. 128-140.

Yemelyanova, N.N., Omelayenko, V.V. (2015). Russian science in the media context. Philosophy of Science and Technology. V. 20. No. 2, pp. 142-163.

Yurevich, A.V., Tsapenko, I.P. (2010). Science in modern Russian society. Moscow, Institute of Psychology, Russian Academy of Sciences, 334 p.

0.4 public relation specialists per thousand scientists. SPN Communications has measured the number of specialists employed in the press services of scientific organizations in Russia // SPN Communications. URL: [http://spncomms.com/news\\_1379.htm](http://spncomms.com/news_1379.htm) (accessed 10.12.2018).

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