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## **Expedition of the Russian Academy of Sciences and the Study of China in the first half of the XIX Century, the documentary-organizational aspects**

This article shows, by means of several examples, how the Academy of science implemented its expeditionary programs actively collaborate with various agencies, companies and academic institutions both within the country and abroad. The joint expeditions were one of the forms of the mutual cooperation. Thanks this cooperation the Academy of Sciences could to conduct research in remote or enclosed areas to researchers (the Caucasus, Central Asia, and China).

**Keywords:** Russian Academy of Sciences, China, expeditions, first half of the XIX century, documentary aspects.

The first contacts of Russia and China were in the XVI century. Russia has received the reliable data about China, when Russia began to explore the lands of the Far East and Siberia. In the XVII century a question about the exact definition of the Russian-Chinese border

has risen, and from the Russian side there were the attempts to establish the diplomatic relations with China. The first credentials between Russia and China have dated 1619, 1649 and 1654. These documents have regulated the trading and territorial questions between Russia and China. However, they did not solve all the problems when the first contacts mainly were the cross-border armed conflicts. During one of the Russian-Chinese conflicts on the Amur River, in 1685, the Albazin's fortress was captured by the Chinese. 45 Cossacks were captured and transported to Beijing. Chinese emperor has transferred to this Cossacks Buddhist templo for departure of religious practices. The presence of the inviting priests also were allowed by the Chinese emperor, that was the beginning of many years' residence of the Russian Orthodox Mission in China. Russian Spiritual mission has organized in Beijing in 1715 by Peter's I decree. In addition to their religious mission, the Russian spiritual legation in China performed the role of a diplomatic mission in the country, closed to foreigners (Тихвинский, Пескова, 1977).

In the first half of the XIX century the policy of self-isolation was consistently pursued by China. The only reliable source of knowledge about this country was the task of the Russian Orthodox Mission in Beijing. Along with missionary work, the priests of the mission carried out the linguistic, ethnographic, botanical and other studies in China, translated the historical books and documents, and collected a variety data (I. K. Rassokhin, O. Kovalevsky, P. I. Kafarov). In addition, the priests, working in China, transmitted to the Academy not only collections and books, but also their own compositions (N. Bichurin).

Russian Ambassador in China failed to get permission from the Chinese government in Beijing for organization the secular Russian consulate. Even in the form of the Mission, the availability of this diplomatic representation, allow for Russian Empire to be only one of all the European countries having this representative office in Beijing.

The beginning of mission' existence was put by Peter I, on June 18, 1700 having issued the decree about "finding" for occupation of mitropolichy chair in Tobolsk. Except the priests, for studying Chinese, Manchurian, Mongolian and other east languages, local customs and the Chinese culture the two students were entered into the structure of mission. From 1715 to 1917 the structure of mission was replaced 18 times. 10–12 people, as a rule, were arranged in the mission, including students (4–6), which joined the mission from 1727 to 1864 (Православие на Дальнем Востоке, 1993). The structure of Orthodox mission changed every 10 years, but at desire, this term could be prolonged. For instance, mission of 1792 in connection with a delay accidents at the Russian-Chinese border has worked up to 1805.

Siberian metropolitan, resided in Tobolsk, carried out the ecclesiastical jurisdiction about the Orthodox mission. Financial support of the mission was carried out not only on the part of the Russian Empire, but the Tribunal External Affairs (China). The monthly salary to the members of mission was appointed by Tribunal. The Chinese government had, therefore, put the members of the Orthodox mission in the service along with the Chinese. Unlike the Catholic and Protestant clergy, the Russian Orthodox mission was not engaged in the spread of Orthodoxy among the Chinese, and not interferes in the internal affairs of the empire, so Chinese government was more loyal to it.

In Kyakhtinsky (1727) and Tyantszinsky contracts (1858) the legal basis of existence of Orthodox mission in China (its site, the status, structure, and the contents) was fixed. The main terms of stay in Beijing, material security, its ways of communication with Russia, subjects of occupations of her members were defined by the Instructions made by the Ministry of Foreign Affairs and the Synod of the Russian Empire.

The colonial policy of the European countries has been activated in the XIX century. At the beginning of XIX century the state of the China was weakened by the destructive internal processes (Manchurian uprising led by the secret society “Baylyan jiao” (White Lotus Society) (Поршнева, 1963).

Political weakness of China allowed the British and French increase the pressure on the government and gradually undermined the Chinese sovereignty. Thus, a policy of isolationism, help the Manchurian Qing dynasty maintain the integrity of the country.

In interstate relations with Russia, China has been conducted the position of “highest to lowest”, placing it on a par with vassal states (Мясников, 2004). For the relations with Russia in China were responsible management agency vassals, which were in charge of the affairs of both management Mongolia, Huhunorom and Muslim principalities in West China. China’s relations with Russia gives priority to political interests, Russia is committed to have sustainable economic relations with the China Empire. In fact, equality in the relationship has been recognized with the China side (and then relatively) only in the middle of XIX century, after the defeat of the Empire against the Western countries — Britain, France and the United States (Внешняя политика России ..., 1979). By the colonial wars these countries have began to involve China in the global political and economic ties. Russian government had considered both states (Russia and China) as natural allies in resisting the onslaught of Western countries.

The closed nature of the country, lack of interest in the development of China’s relations with Russia (the desire to delay the talks the Chinese side of the border and the status of p. Cupid), and intrigue, Catholic missionaries in Beijing and British residents in Guangzhou have been explained the difficulties faced by the expedition of the Academy of Sciences in China. Many of them have not been able to fulfill their tasks.

### **Documentary aspects of the organization of the expeditions**

Months or years of hard organizational and administrative preparations, were preceded by expeditions of the Academy of Sciences in the first half of the XIX century, which largely depended on the success of the enterprise.

This work included the preparation of the necessary things and writing instruction for scientists leaving for the expedition, as well as obtaining permits and accompanying papers and podorojnyi (books, which have been written arrival station and money spent on travel).

Before departure in expedition, the scientist should provide the plan of the forthcoming expedition for Conference consideration. In the documents were reflected: 1) scientific justification of expedition, 2) structure of alleged participants and 3) estimate of expenses. after approval, the plan of expedition was transmitted to the president of Academy of Sciences, and then to the minister of national education. Sometimes the president (the president of Academy, count S. S. Uvarov — from 1818 to 1855) combined a position of the president of Academy of Sciences and the minister of national education. The minister of national education sent all complex of documents to the Cabinet of Ministers. The final decision about the organization of expedition was accepted by the emperor (SPb BARAN. F. 2. L. 1. F. 1). After the royal statement paper came back to the Cabinet, and then was transferred to the minister of national education. And further, through the President and Conference of Academy of Sciences, paper with necessary approval reached to the organizer of expedition. After the final positive decision on expedition, addressed to the president of Academy

of Sciences the highest command from the emperor who concretize terms of expedition, structure of her participants and ways of financing registered have been came. The same command went to ministers: finance (when financing was from the State Treasury), the Military and Sea ministries (at joint expeditions).

All this procedure usually took up about half a year, therefore if the academicians wished to go to expedition in summer months, in order to submit the application on travel permission the documents should be submitted in the autumn of previous year. Besides, for purpose of financing of expedition from the State Treasury, it was necessary to include it the next fiscal year.

Due to the strict regulation of documentation in the Russian Empire in the XIX century, the correspondence between the ministries and the Academy of Sciences was extremely diverse and rich. Any question of the expedition, demanded written confirmation and clarification. Thus the nature of the interaction between the organizations in the Russian Empire can better define the studying of the joint expeditions of the Academy of Sciences with the Navy Department, War Ministry and the Russian Orthodox Church and other institutions.

In addition to the preparatory documents (various notes, relationships and command (the ministers and the emperor) before the departure of the expedition had to be prepared and the accompanying documents, such as the “open letter”, passport, roadside (the book, which was recorded the way the cost of the expedition and horses) and Cord of the book (the book, which recorded expenses of the expedition).

In the first half of the XIX century, there was the concept of “open list”. The open list signed by the emperor, has provided to the presenter the assistance of the local authorities. In these sheets was prescribed — who, for what purpose, and where have to direct. Open letter to be issued by the Ministry of Finance, the Ministry of Internal Affairs, Ministry of Education, the Holy Synod, the Russian-American Company.

## **Expedition of the Academy of science to China in the first half of the XIX century**

In 1805, Emperor Alexander I decided to send a large embassy to China to notify the Chinese emperor on his accession to the throne. However, the main objective was to assess the capabilities of the Embassy of diplomatic and permanent trade relations between Russia and China (Козырева, 1999). The aspiration to development of economic and political connections between the countries also was connected with growth of the economic development of Siberia, expansion of international trade. Using different diplomatic manners, the Russian government tried to solve a number of issues of Russian-Chinese relations and above all, the question of trade across the border line, or at least on the border with Xinjiang, China's entry into its ports of Russian ships on the navigation on the Amur River, and on the border territories (Amur, Primorye). In September 1805 the embassy head by Count Y. A. Golovkin came to Irkutsk. With him in Beijing followed next, 9<sup>th</sup> Spiritual Mission.



Simultaneously with re-equipment Embassy in China, the Academy received an offer to join scientists to the spiritual mission. On March 20, 1805 President of the Academy of Sciences, N. N. Novosiltsev read in the meeting of the Academy a few letters from the Minister of Foreign Affairs of the A. A. Czartoryski. One of them, according to the highest command, ordered academician F. I. Schubert (astronomer) and M. I. Adams (associate in zoology) to go to the Russian Embassy in China. Another letter from the Academy was instructed to provide travelers detailed instructions. By the end of 1805 it became known that this embassy, along with F. I. Schubert and M. I. Adams, I. I. Redovsky (associate in botany), L. Pansner (mineralogist, PhD) and J. Klapproth (associate in oriental languages and literature). According to the instructions, M. I. Adams received an order to collect samples of animals and produce stuffed. J. Klapproth had to acquire a variety of works that could enrich the collections of the Library of the Academy of Sciences. For I. I. Redovsky an instructions were given by T. A. Smelovsky (botanist, physician, pharmacist). I. I. Redovsky had to buy some tea bushes and learn everything related to the plant, in particular, and what type of soil is suitable for growing tea. Instructions mineralogical part was composed academician V. M. Severgin (mineralogy). In addition to V. M. Severgin and T. A. Smelovsky instructions were given by A. K. Storch (economist and statistician) and A. F. Sevastyanov (naturalist). Expedition financed of the State Treasury and included a list of expenses on acquisition of botanical, zoological collections and historical collections (Ширина, 1987).

After arrival in Urga, the embassy was compelled to refuse further following on the territory of China. The reason for the incapacity of the future mission of the embassy was a condition of the Chinese court, namely, the ambassadors were to perform the ceremony nine-fold prostration before the attributes that symbolize the identity of the Chinese emperor (About embassy of count Yu. A. Golovkin, 1807). This procedure protocol was perpetrated by vassal states. Russian Ambassador Y. Golovkin could not accomplish this because of fear of dropping the authority powers. As a result, the embassy returned to St. Petersburg from Urga. The real reason for the failure of the Embassy was isolationist policy of the Chinese Empire, which was not interested in developing relations with foreign powers and, in particular, sought to postpone talks with Russia on the issue of the Amur. A role in determining the position of the Chinese court played Chinese merchants in Kyakhta, who feared that the organization of systematic and regular trade across the line of the Russian-Chinese border, their interests may be affected, and the intrigues of the Catholic missionaries in Beijing and British residents in Guangzhou also played role in this (Внешняя политика России ..., 1979).

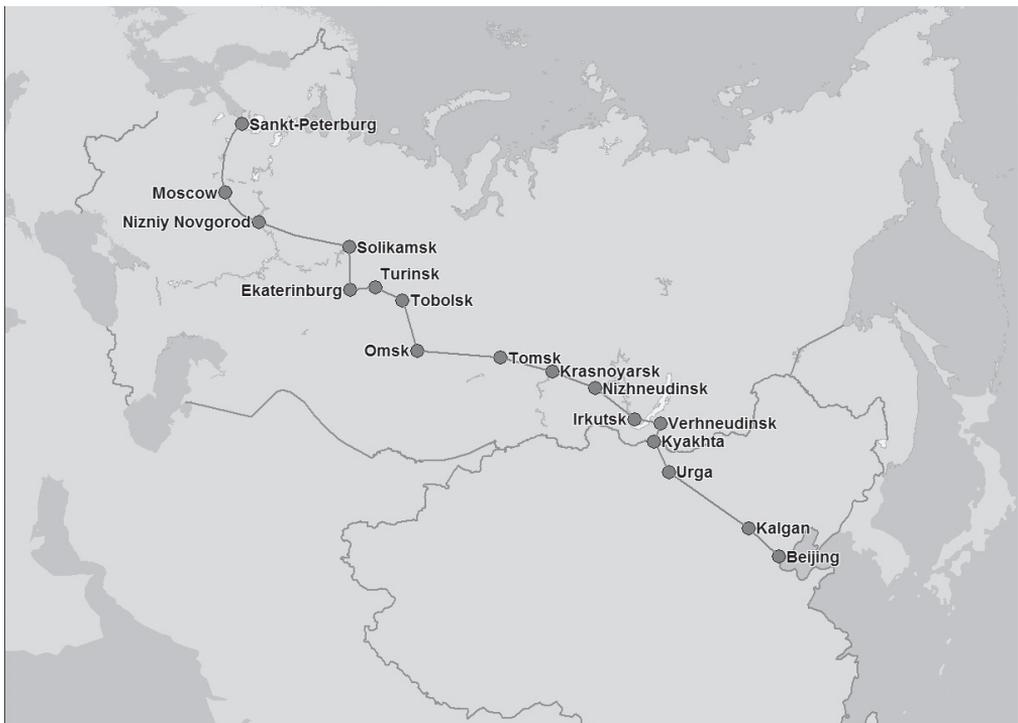
From behind of the impossibility of travel in China with the Embassy, scientists were forced to rely on their own resources and replace journey through the Chinese empire survey south-eastern regions of Russia. M. I. Adams made the trip on the Lena River to the shores of the Arctic Ocean, during which he discovered one of the first skeleton of a mammoth. I. I. Redovsky planned to explore the Sayan Mountains and Abakan, the Kuril Islands and Sakhalin (the expedition was not completed due to the death of the scientist). J. Klapproth gathered a wealth of material on the life and language of the Tungus, Bashkirs and Yakutas.

The Head of the 9-th Mission priest Iakinf (N. Bichurin), spent 10 years in China, and with the help of local scientists and Beijing residents translated into Russian different Chinese sources, "Syshu" (Four Books) — a set of teachings of Confucius and Confucian, geographical work in three volumes, a summary history of China in the 17 volumes, Chinese history, "Description of Tibet," "description Dzungaria," "Description of Beijing," essays on religion, philosophy, law, medicine, economics, agriculture, trade and others. Iakinf was

also a multi-volume Chinese-Russian dictionary, translated into Russian by the Manchu-Chinese dictionary in 4 volumes.

Another 10-th change of the Russian Orthodox Mission was sent to China in 1819, 4 students were joined to mission for studying Chinese and Manchurian. The students were: N. I. Vosnesensky (20 years), V. K. Abramovich (24), K. G. Crimsky (25) and Z. F. Leontief (22). They were given detailed instructions by the Academy of Sciences. Students are instructed, according to their knowledge, to pay attention to the Chinese medicine, literature, philosophy and history. One of the students had to study ways of farming. In addition, the student — a philologist was found in Chinese chronicles mention of “Fo Mozhno” (this name in China was called Christ) and, if possible, to find descriptions of the western countries (SPb B ARAN. F. 2. L. 1. F. 1).

Students, who went along with the mission, instructed to contact the Imperial Peking Mathematical Tribunal and report Chinese scientists on all of the latest improvements in the field of topography and geography, made at that time in Europe. Dissemination of knowledge among the Chinese astronomer should promote books, which were translated into Chinese by students. The necessary tools for researching Chinese, scientists recruited through St Petersburg, Russian topograthysts supposed, what Chinese scientists, after training in modern methods of engraving and topography maps, would have made the necessary adjustments, sending several improved copies of maps to Russia. Thus, instead of using its own scientists, and without organizing a separate expedition, Topographic Depot of the General Staff and the Academy of Sciences could get the most detailed and reliable information about the state (SPb B ARAN. F. 2. L. 1. F. 1).



Due to the fact that the students' skills in drawing and engraving of cards was not enough, the Academy of Sciences supposed to send the skilled artists from the Imperial Military Topographical Depot together with the spiritual mission in China. Send them along with the 10-th mission in 1819 was not possible due to the failure of the Chinese side to pass surveyors territory the Chinese Empire. For the students it was impossible to follow the detailed instructions made by the Academy of Sciences and the Military Topographical Depot. The translation the Old and New Testaments from the Russian language to Chinese was the only one result of this expedition.

Next change of the Mission sent to China was in 1829. The Academy of Sciences offered to the minister of education K. A. Lieven to attaches to the new mission two scientists, who would gather collections and data treatment. The Emperor approved the project of the expedition.

E. N. Fus (astronomer) was sent to China in the rank of astronomer, and A. A. Bunge was sent to China like the naturalist.

In Urga the linguist and orientalist O. M. Kovalevsky joined to the mission. In Beijing O. M. Kovalevsky studied the languages and acquired books and manuscripts for the library in Irkutsk.

Implementation of the plan of the expedition was fraught with financial difficulties, because the Academy did not have its own funds and was forced to ask to allocate funds from the State Treasury in the amount of 13,000 rubles. The money was given in the form of silver bullion. Bullion transported together with a salary for the other members of the mission to China. The mark as "the silver for the mission" has been made on the bullions (RGIA. F. 733. L. 12. F. 401).

The sums about 6000 rubles were allocated by the Academy of science out of economic sums in order to purchase the necessary equipment and tools.

Instructions for scientists were written by E. I. Parrot (physicist), A. Kupfer (chemist, mineralogist), F. Schmidt (Orientalist) and A. K. Mertens (Botany, Zoology). According to them, scientists had to conduct the following research: "astronomical observations to determine longitude and latitude of settlements along the route, barometric elevation measurement, magnetic and meteorological observations, zoological and botanical researches." In addition to barometric and topographical studies, scientists were required to acquire for the Asiatic Museum of the Academy of Sciences dictionaries and philological manuscripts in Tibetan and Mongolian languages, as well as other works of historical nature. Scientists have got 3,000 rub to buy those too. Scientists used the priests' help, who worked in the Russian Orthodox mission, in the acquisition of books and manuscripts (SPb BARAN. F. 2. L. 1. F. 1).

In addition, priests have helped scientists with the direct purchase of books, served as an interpreter to communicate with the Chinese.

A. A. Bunge has described collecting material in his book "Enumeratio plantarum quas in China boreali collegit" (St Petersburg, 1831) and "Plantarum Mongolico-Chinensium decas I" (Kazan, 1835). A. A. Bunge also compiled a large botanical collection containing 365 herbarium sheets.

E. N. Fus gathered a large collection of zoology, ethnology and linguistics samples.

On the way back from China, E. N. Fus, separate from the main expedition, was ordered to determine the astronomical position of the settlements in southern Siberia and west of the Yenisei River.

Expedition E. Fus lasted 8 months. The result of this expedition was a series of geographical studies, subsequently published. Fus has identified more than 50 sites lying from

east of the Yenisey to Nerchinsk. The magnetic deviation and inclination were observed by E. Fus in the 30 points.

This expedition to China was the first scientific expedition to the country. In addition to the rich natural science collections, the scientists brought to St. Petersburg collections that reflect the life and culture of China (all the collections were either received as a gift from the local residents and members of the Mission, or were purchased with money specifically allocated for this purpose the Academy of Sciences). Collection in the future placed in the museums of the Academy of Sciences (ethnographic, botanical) allowed Russia and Europe to learn more about nature, culture and traditions of China.

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From the XVII century, China entered the sphere of interest of the Russian Empire. Extended common border with one hand was to facilitate trade between the states, and on the other hand, the political unsettlement of the boundary line gave rise to constant conflicts. Establishment of normal diplomatic relations hindered isolationist policies of the Chinese empire, and the intervention of Britain, France and the United States who would like to take in the East Asian strategic positions, including the bases for territorial expansion. Russian Empire pushed in this region the process of colonization and settlement of the Transbaikalian and Eastern Siberia, the growth is agriculture, cities and trade. Unlike other countries, Russia has managed to obtain from the Chinese government permission to establish a Orthodox Mission in Beijing. This mission fulfilled mission functions for the Russian Cossacks, who living in China and diplomatic function. In addition to the priests of the Orthodox mission included scientists from the Academy of Sciences, who, under the auspices of the mission have been studying the country closed to foreigners. Due to the interaction of scientists of the Academy of Sciences and Beijing Orthodox Mission, Russian science has been enriched by the knowledge of the closed Chinese empire, and academies museum enriched by the collections of unique items. Thus, being in China since the XVIII century Orthodox mission played an unique role as the exclusive — Russian — embassies in China and have a major positive impact, both on the development of Russian-Chinese political relations and the cross-cultural ties between Russia and China.

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СПбФ АРАН. Ф. 2. Оп. 1-1819. Д. 1. (SPb B ARAN. F. 2. L. 1-1819. F. 1.)

СПбФ АРАН. Ф. 2. Оп. 1-1839. Д. 1. (SPb B ARAN. F. 2. L. 1-1839. F. 1.)

РГИА. Ф. 733. Оп. 12. Д. 388. (RGIA. F. 733. L. 12. F. 401.)

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## Bibliometric analysis of Russian and Chinese publications on modernization in DBs Web of Science

Bibliometric analysis of publications on modernization in leading countries of the world was carried on. The results, based on Web of science data (1945–2011), are given in tables and figures. Special attention is paid to the dynamics of modernization publications in Russia and China.

**Keywords:** Russia, China, publications on modernization, Web of Science, bibliometrics, research activity, period 1945–2011.

### Introduction

‘*Modernization*’ is one of the most frequent words in public discussions in Russia, China and other countries. Research group for China modernization strategies China Center for Modernization Research Chinese Academy of Science presented a report outlook for the period 2001–2010, which included annual reports on modernization in the world and China. The translation of this book in Russian was published in 2011 (1).

The aim of the present paper is to compare those two countries in DBs Web of Knowledge as far as modernization goes. The methods of bibliometrics will be used for this purpose.