
**TRADITIONS OF THE SAINT PETERSBURG
ARCHITECTURE SCHOOL IN THE REGIONAL
TOWN-PLANNING PRACTICE OF RUSSIA IN
THE XVIII - FIRST HALF OF THE XIX CENTURY
HISTORICAL AND THEORETICAL ASPECT**

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Abstract

The article analyses the connection between the metropolitan and the provincial architecture schools, the influence of the work of the outstanding Russian master of classical architecture K.I. Rossi onto the professional activities of the provincial architects. The article deals with 'architecture school' concept. Invoke this theme is very actual, as Siberian architectural heritage needs a strict scientific justification for its protection, regeneration and reasonable use. Preservation of monuments and the entire cultural heritage as a special activity system requires highly professional attitude that cannot be done without scientific justification. The least studied and the least represented in the peer-reviewed literature aspect is the problem of the influence of St. Petersburg architecture school. There are just a few works directly aimed at the disclosure of 'architecture school' concept in the scientific literature. The author comes to the following conclusions: 1. St. Petersburg's school of architecture made a crucial contribution to the architecture of Siberia in the XVIII - first half of the XIX century. 2. Architecture school of classicism of K. Rossi had a predominant influence on Siberian architecture. Classicism determined the scale of the Siberian city building for many decades, until the end of the XIX century. 3. In the XVIII – the first half of the XIX century, under the influence of St. Petersburg architecture school, the principles of urban planning theory of classicism were implemented in practice: the aesthetics of maximally disclosed space, the system of spatial relations and the establishment of distant spectator perspectives, turning the city into a product of town-planning art.

Keywords: compositional schemes, traditions, project, factory towns, industrial architecture

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1. Introduction

The article has a scientific meaning in the context of introduction into the world humanitarian knowledge of the Russian classicism and the Siberian town planning. The article gives the author's interpretation of the term 'architecture school'; some aspects of direct and indirect influence of St. Petersburg architecture school onto the Siberian town-planning of the XVIII – the first half of the XIX century; also the main traditions were identified and the main directions of the St. Petersburg school of architecture that came out in the town-planning of factory architects were described. The article proves the leading role of the architecture school of K.I. Rossi in representing ideas of classicism into Russian regional construction in the first half of the XIX century; it declares the crucial role of the influence of the St. Petersburg architecture school's traditions in shaping the architectural appearance of historical towns and localities in Siberia, where city-forming factors were metallurgical complexes.

A school (from Greek, Latin *schola* - leisure, exercise, reading, conversation) in the art terminological dictionary is defined as a long-term artistic unity, continuity of traditions, principles and methods [1]. In the history of art, the term 'art school' has a multi-level content and is used:

- in relation to the art of a country,
- in relation to the art of the geographical area or the city in case if it is brightly original within certain chronological boundaries,
- in relation to a group of artists with similar creative position,
- in relation to the group of disciples and followers of the master.

The first attempts of differentiation by type of art schools can be traced in the ancient times (for example, 'The School of Athens', 'Samos school', etc.). Special development the classification by schools gets in the history of art from the Renaissance (for example, 'The Sienese school', 'Florence School,' 'Venice school', etc.). When applied to the art of the XIX century, a predominant importance acquired broad national interpretation (for example, 'Russian school', 'French school', etc.). Art of the XX century is characterized by adding the principles of systematization of art schools by their type. Classification is carried out mainly depending on the specific features of types and genres of art. A place of architecture school in this classification is determined by the specific features of architecture as an art form.

Depending on how the art school is localized in time and space, it is systematized in chronological, territorial, geographical principles. In the opinion of U.A. Vedenina, territoriality is manifested primarily "... through the territorial selectivity and regional specificity of art, through the placement features of the production places and ready-made works of art" [2]. Thus, in the history of art the formation and development of the art school takes place in the peculiar national, provincial-specific, historically local or refracted in a special way conditions in a different cultural environment.

Architecture school is an activity of group of architects associated with any educational institution or famous master and developing the tradition of this institution or the master. In broad terms, that is a set of creative traditions manifested in the work of the group of architects in a certain period of time. Philosophical understanding of the tradition comes from understanding the culture in unity and cooperation of all its forms and manifestations on the basis of dialectical development [3]. Modern science provides a new perspective for the tradition as a set of social relays. One of the central concepts of the theory of social relays - kumatoid (from the Greek kuma – a wave) – “a special way of preservation and transmission of social experience, moving from person to person or from generation to generation, i.e. a special mechanism of social inheritance, which in its mode of existence reminds a wave moving along the surface of the pond...” [4] Like a wave, the tradition is a program that moves through this or that material, but depends on it. Traditions exist as a direct or verbalized relays and as samples. Traditions as social programs differ in composition (simple and complex), kind of emergence in culture (naturally formed and artificially created), the period of existence (long and short), heuristic potential and the degree of connectedness with the material. Essential for our research is the definition formulated by E.S. Markarian: “The cultural tradition is expressed in the socially organized stereotypes group experience that by the space and time transmission is accumulated and reproduced in different human groups” [5]. Herewith the process of variable functioning of stereotypes - local, regional, ethnic, etc., is developing.

2. Methods of Research

In this article, the following analytical methods are used: historical method, system method, art criticism method. The concept ‘architecture school’ may include general stable features in a formal structure of architectural constructions:

- presence of common motifs of the landscape,
- stability of the volume composition schemes,
- the general nature of development planning,
- common materials, designs and techniques.

Based on this we can conclude that the architecture school is a community which has its own individual artistic style. Behind the structure of imagery and form appearing in style the principles of its practical, creative implementation are hiding. For their designation in art history a creative method concept is generally accepted. It exists more or less consciously before a work of art creation in the intellectual and emotional sphere of artist, directing his work and realizing it [6]. According to M.S. Kagan, a method that underlies the whole art movement is a certain way of:

- cognition of reality,
- the value interpretation of life,

- transformation of givens of life into imaginative cloth of art (method of art modelling and design),
- building a system of imaginative signs, where the art information is fixed and transmitted.

Thus, the architecture school as a category of historical and artistic process requires availability in art combination of monuments, connected with common principles of the creative method, style, common content, world view.

With this understanding of the term we can identify the main structural elements of the concept 'architecture school':

- specific, characteristic for the era and the region, and creative method having the successive character that dictates methods for solving functional, structural, technical and artistic problems;
- connection of the school with the prevailing system of ideological and aesthetic views;
- organizational structures of the school;
- methods of professional education;
- position and place of architecture in the structure of government activities.

An example illustrating the concept of 'architecture school' is the school of K.I. Rossi that had a great influence on the architecture of Altai mining district.

3. Results

The heyday of the construction of St. Petersburg in the early XIX century coincides with the formation of a special institution called 'Building Commission' and subordinated to the Cabinet of His Imperial Majesty. Cabinet has provided funds for the construction of new palaces and institutions associated with the Imperial Courtyard, it supervised construction work. At the time the building commission was headed by K.I. Rossi. The heterogeneous list of members of the building commission, the difference in their professions, qualifications, social status, financial and living conditions hampered the organization of the commission work. However, K.I. Rossi in virtue of his organizational skills was able to transform the mechanical connection among the members of the building office into the creatively united team able to work. Each member of the commission knew his place and accordingly was guided in his field, so he was able to demonstrate maximum of his technical skills and creative energy. The high authority of K.I. Rossi, his ability as a leader to delve into all the details relating to the construction, accessibility, courtesy and friendly attitude to the staff attracted helpful and loyal persons to the great architect. Despite the professional exactingness of K.I. Rossi, the honour to work with him attained artists who were marked with the title of academician, and artisans who did not have high ranks. Relationships of K.I. Rossi with the commission were difficult. In the role of chief architect, he enjoyed unlimited authority. Employees engaged by him to work, were approved without any objection, regardless of their qualifications, diplomas or degrees, it was enough

to have recommendations from Rossi. Regarded with an impeccable reputation of the chief architect, the building committee and the Cabinet released him funds for the construction without written applications before providing estimates, with only 'verbal demand'. So it was during the construction of the Alexander Theatre and "constructing of the square opposite the Winter Palace" [7]. K.I. Rossi usually carried out the first base of design work personally, and only the words 'it's just as well' was a sign that his team would be involved. This team was always carefully selected by K.I. Rossi. Rossi believed that the results can be achieved only by teamwork of enthusiastic people with a common cause. The construction commission included architects Tkachev, Ruska and Galberg together with K.I. Rossi. Other employees were invited to concrete construction works. Rossi always actively participated in every construction project. Rossi divided architects into two groups on the assumption of the position and the character of work in the creative group:

1. Leading architects, whose responsibilities included the joint design work (small objects) with the main architect, making estimates and working drawings, these works at different times were fulfilled by Tkachev, Galberg, Ruska, Glinka and others.
2. Architectural assistants on mission from Rossi watching the construction work. At various times, his assistants were Beauvais, Jaco, Kavos, Muzovsky, Fedoseyev, Popov, Ivanov and others.

A major role in the Rossi group played masters of stone; sometimes they were getting the architect's assistant position. 'Masters of Stone' based on the study of the Italian construction machinery monitored the proper construction of architectural forms from the working drawings. Keepers of Russian traditions connected with the preparation of mortars were 'Official foremen'; experience of both highly valued and transferred to students from the province.

Architects belonging to the St. Petersburg Architecture school can be divided into groups:

- Russian architects, who have been trained in St. Petersburg, worked in St. Petersburg and in the surrounding areas for a long time, formed professionally under the influence of constitutive elements of the school (A. D. Zaharov, V. P. Stasov and others);
- Foreign architects, who came to St. Petersburg for a long service and were affected by constitutive elements of the St. Petersburg school (Valentin de la Mothe, Thomas de Thomon, Quarenghi, and others);
- Architects, engineering specialists, related to both St. Petersburg and regional traditions (P. Startsev, F. Strizhkov, I. Zlobin and others).

The literature [8] indicates that Rossi had more than forty architectural assistants who participated at different times in the construction of the Mikhailovsky Palace, the Headquarters, the Alexandrinsky Theatre, Theatre Square and other objects in St. Petersburg. Experience of K.I. Rossi is valuable and interesting because it was individual attempt of a talented master to rely in his work not on randomly selected persons, but on a solid group of associates.

Rossi in his creative work showed the skill of constructing architectural composition. Rossi's compositions are simple and clear. The architect avoids unnecessary conglomeration of details, he aims to the volume expression of the main thing in the ensemble of buildings, always focuses architectural means of expression in the centre of the composition; he is able to find an expressive silhouette of hotel building and the ensemble as a whole. Developing the tradition of A. Zakharov, Rossi applied coloration of plastered plane of the wall (grey, yellow and light brown), white columns and stucco sculptural decoration looked advantageous on a coloured background. The colour solution of facades was important in the St. Petersburg climate conditions that have paucity of sunny days. Along with the classical methods Rossi made a practice of free accommodation of bas-reliefs on the walls, reviving the ancient Russian techniques (samples of Vladimir-Suzdal structures of the XII century).

The main source of inspiration for K.I. Rossi except the ideas of classicism was the richest Russian national artistic heritage, traditions of national architecture, social ideals of the best of contemporary Russian society. Rossi's works are characterized by Russian peculiarity, special national features, among which are the brightest - ensemblity, correlation with the landscape and the environment.

Summarizing all the above, we can give the following definition of 'architectural school' concept: school of architecture is a set of creative traditions manifested in the activities of the group of architects associated by common world view, creative method and style. Localized in space and time in chronological order, the territorial and geographical basis, architecture school finds its clearest expression in the national and regional art.

4. Discussion

4.1. The history of Russian art school origins at the turn of the XVII-XVIII centuries

The role of the artistic and educational centre in the Moscow Russia of the period before Peter the Great belonged to the Armory, which arose in the XVI century as an institution designed to maintain one part of the king's custom. Originally associated with the weapon manufacture, the Armory is gradually acquiring broad functions like the manufacture of weapons, jewellery, paintings and ornaments of books, etc. With the start of construction in St. Petersburg the concept of architecture firmly established in the practice of the Armory. It discusses how to prepare design drawings, to lay the foundations of buildings, etc.

Those who trained and practiced, received certification of the six main classes: "Director, Architect - Civilis, mechanic of any mills and sluices, painter of any kind of paintings, sculptor of any kind of business, 'grydor' of any different cases" [7].

Formation of the St. Petersburg architecture school includes the important aspect: the history of domestic architectural education, which is part of the History of architecture in general. The study of this aspect makes it possible to understand how and under what conditions the future masters of the world were formed, how they acquired their professional skills.

In the first half of the XVIII century architectural education centres in St. Petersburg and Moscow have been architectural teams at various government agencies involved in the construction. There were no special pedagogues as staff; education process was led by those architects who headed the teams, sometimes with the help of architect prentices or assistants. Rank of prentice ('gezel') could be given to a student who have already had sufficient amount of knowledge. It was introduced in Russia in the early XVIII century, and in the middle of the century was replaced with the title of architect's assistant. Gezel as well as an assistant had the right to be engaged in independent architectural activity.

The middle of the XVIII century can be described as the second period of the formation of the St. Petersburg school of architecture. Since 1740 The Academy of Sciences was transformed into The Academy of Sciences and Arts, and The Office of the buildings into The Commission of the construction of St. Petersburg and Moscow (1762). Joining the European experience of urban planning has led to the embodiment of a desire of Peter I - to the creation of special educational institution for the training architects and artists - the establishment of the Imperial Russian Academy of Arts in St. Petersburg. The charter of the Academy was developed on the model of similar European institutions, but the program of the institution activities has immediately got its own features. Academy of Fine Arts in St. Petersburg was established by a Senate resolution on November 6 (17), 1757 by the initiative of the great Russian scientist M.V. Lomonosov and noble educator who headed it - I.I. Shuvalov. The establishment of the Academy of Arts was the beginning of a professional architectural and art education in Russia. This fact made possible the infiltration of the graduates of the Academy of Fine Arts into other special schools, which also became a sign of a new stage in the history of domestic architectural education. Preparation of architects moved from architect teams to schools which also existed at various institutions. Unlike teams, schools had more or less clear programs of study that included more serious study of creative disciplines. Therefore, schools involved for teaching not only architects who practiced. Thus, V.I. Bazhenov, the head of school at the Expedition of Kremlin structure in 1768-1775, invited F.V. Karzhavin, a graduate of the St. Petersburg Academy of Arts, who made a huge contribution to the development of this institution. That's how Bazhenov estimated the role of Karzhavin in the learning process: "His position and his knowledge are not in the drawings, but in contemplations about mathematical difficulties, in physics, in translation from Latin, French, and Hellenic-Greek works, stately architectural proportions; for explanations of history: where there was beautiful architecture, and so on" [9], but the main element of education in schools was the development of practical

architectural skills by participating in various construction work that led the Commission on the structure of St. Petersburg and Moscow, Construction Commission and other institutions. In future, educational system was developing to the direction of growing the value of the creative training of students.

The third period of the St. Petersburg architecture school is associated with the heyday of classicism (Latin *classicus* - a first-class, exemplary) and the deployment of educational activities of the Academy of Arts in St. Petersburg. Architectural class of Academy of Arts was founded in 1758. The first intake of students consisted of thirteen persons. The general organization of educational process in the architectural class, developed in the XVIII century, was kept mainly even in the first quarter of XIX century. In the decision of the Board of the Academy of Arts of May 14, 1804 it was defined that: "For training students of the architectural class of the fourth age for practical knowledge of the structure send them to the construction of Kazan church every week twice, and in case of an important part of this structure - every day from 6 to 11 o'clock in the morning..." [G.G. Grimm, *Archive of the Academy of Arts*, f. 11, Op. I, d.164, L.2] Education in the architectural class was at a very high professional level; a clear methodical system of teaching was designed. Students of the Academy were provided with classical samples and special literature on architecture and fine arts. A. Losenko created a guide for students of Academy of Arts - 'Explanation of the proportions of a human, based on authentic research of different proportions of ancient statues', I. Urvanov created 'Quick Guide to the knowledge of drawing and painting of the historical kind, based on speculation and experience'; in 1789 A.M. Ivanov translated a book 'The concept of the modern painter as the basis to estimate the works of painters' from Italian and wrote the foreword to it, as well as translated from French 'Note about portraits'; under the direction of Bazhenov the first complete Russian translation of Vitruvius treatise 'On Architecture' was made [9, p. 31]. The books created by A.M. Ivanov, P. Chekalevsky, I. Urvanov and others justify high moral and patriotic purpose of Arts. A special thing of the Academy of Arts was the inclusion in its structure of educational museums. They were conceived as 'training and support institutions', but quickly became the scientific and educational institutions. The most long-standing were the museum of the Russian Academy of Arts and the Mining Institute (XVIII century, St. Petersburg) and Moscow State University (XVIII century). In 30-40s of the XIX century University Charter set out botanical, ecological, mineralogical, agricultural, anatomical museums, the Museum of Fine Arts and Antiques as compulsive. In the first half of the XIX century for the first time in the national history systematic museum catalogues were published, and then card catalogues. Each museum had a rich specialized library.

Russia desperately needed architects. People began to see the ideals of a state built on the principles of reason and justice in the ancient democracies. The main requirement was the simplicity and naturalness, where the rationalist principle was the basis. The urban planning designed projects of cities' configuration, the subject matter of construction were broadening. The front face

of St. Petersburg was created with public, governmental and commercial buildings. The monumental architectural structures reflected the ideas of citizenship and patriotism.

By the end of the XVIII century a complex of engineering and construction disciplines have emerged from a unified system of architectural knowledge. Professions of architect and civil engineer begin to separate. Before that, the concept of 'architect' belonged to the builder of bridges, hydraulic structures, not just to designers of buildings and architectural ensembles. Architectural School of Russia gets the further development. In Moscow in 1801 on a basis of the school of M.F. Kazakov at the Expedition of Kremlin construction architectural school was opened. This school for a long time had no official recognition and in the archival documents was called the architecture school of the Expedition of Kremlin construction or architectural school (in 1831 it obtained the official name of 'Moscow Palace architecture school' and maintained it until its liquidation in 1866). At the turn of XVIII - XIX centuries it became a specialized departmental architectural educational institution, which had a great influence on the development of architectural education in Russia. In the first few years system of education in the school was very similar to the system in the schools and architectural teams in the XVIII century. Its main element was the development of practical architectural skills by participating in various construction works that the Kremlin expedition led. Subsequently training system developed to the direction of growing the value of creative training of students. The leading teachers of architectural subjects were heads of Architectural Expedition Team, combining this position with the leadership in the school – R.R. Kazakov (1802-1803), I.V. Egotov (1803-1814), A.N. Bakarev (1815-1817). They determined the methodology of teaching and led the implementation of educational projects. In addition to them, other architects of the Expedition were engaged in educational activities. It should be noted that the teaching work was not their main occupation and it was considered as secondary in comparison with the main - practical architectural activity. Therefore, they were not the school staff and did not receive payment for teaching, which makes it impossible to know who they were. It is known that in 1804-1807 students were taught by 'stone-maker' of the Expedition F.I. Rushko, and in 1822-1831 – E.D. Tyurin. It is possible that other architects of the Expedition also were engaged in educational activity – I.T. Tamansky, N.I. Kuzmin, F.I. Kamporezi. Such a structure of the teaching staff, consisting, again, mostly of practicing architects, reflected the nature of learning in the school. Under the leadership of staff architects of the Kremlin Expedition students not only studied the theoretical disciplines, but also mastered practical skills. Students took part in almost all the construction work that their teachers were managing - restructuring of the Poteshny Palace in Kremlin (I.V. Egotov), the construction of the Synodal Printing (I.L. Mironovsky), the construction of the church of St. Catherine in Kremlin according to the design of K.I. Rossi (A.N. Bakarev) and others. Participation in such work allowed them not only to learn the skills of construction, but also had a certain influence on the formation of their

architectural tastes and style preferences. In the early years of school, it was a common practice inherited from the teams and schools of the previous century to involve the cleverest senior students in pedagogical work. These, so to speak, 'the younger teachers' usually taught drawing skills, mathematical disciplines that were auxiliary to the architecture, as well as general subjects. A few years after the creation of the school full-time teachers began to appear for whom teaching was the main work. First we need to say about P.S. Maksyutin who taught at the school from 1809 to 1856 and has never been engaged in practical activities. Teachers of artistic disciplines were much more than teachers of architecture. Some of them were previously engaged in pedagogical activities in architectural institutions. Most of teachers of artistic disciplines were graduates of the St. Petersburg Academy of Arts – I.F. Mertsalov, Z.E. Uryadov, E.O. Scotnikov, D.C. Scotty, A.A. Borzakovsky, I.T. Durnov and others; there were artists and foreigners among them – I.I. Vivian, I.F. Bazetti, S. Tonchi. Those teachers had some specialization - paysage, miniature, historical painting, ornaments, 'the drawing of heads and figures' and so on. There was a special post of inspector of drawing classes, which have rather been administrative than teaching. It was held by famous artist Salvatore Tonci who all the art teachers obeyed. It should be noted that many teachers and artists did not receive salaries for their teaching activities, working 'on their own means'. However, the work in the school gave them significant benefits on retirement, since they were considered to be in the public service, so those wishing to teach in the school have always been enough. Management of the school tried to adapt system of education of the artistic disciplines to the needs of practical architectural training, so the principles of their teaching have changed many times. For the first time in history of school there was a kind of competition between the academic system of architectural education with thorough artistic background, and the Moscow traditions of teaching architects where such training has played a secondary, not a major role. That's why quite often some artistic items were excluded from the program, and teachers were fired. In the late 1810s in the program of the school history was included. The first teacher of this discipline was D.E. Vasilevsky - a prominent lawyer, a law professor at Moscow University, formerly taught at the Academy of Fine Arts. In college he taught until 1834, when he was replaced by well-known historian, M.S. Gastev, author of several books on the history of Moscow, as well as a textbook on geography, which was used at the school for teaching that subject. Increasing workload, training of new specialists with new knowledge and skills assumed obligatory participation of personal students of master ('viucheniki') as assistants to complete the construction work and later it became the rule set out in the special instructions. Enrolling to the masters provided general and special training for several years in various institutions (for example, to the Office of the buildings).

Thus, we can talk about interactions between St. Petersburg and Moscow architecture schools.

4.2. Dynamics of development of architectural school of Russia in the XIX century

In the first third of the XIX century the Russian classical architecture reached its peak, which is reflected in the construction of St. Petersburg, which expressed the idea of the Patriotic War of 1812. Outstanding architects A. N. Voronikhin, O. I. Bove, Thomas de Thomon, A.D. Zakharov, K.I. Rossi, V.P. Stasov brilliantly solved problems facing the architecture of the time, and identified a shapely appearance of St. Petersburg. The idea of creating the grand urban ensembles embodied in the works of the brilliant architect K.I. Rossi, a student of I.F. Brenna, who got architectural education in the Office of the buildings. In the first third of the XIX century a creative team of K.I. Rossi was developed. Since 1809 to 1832, under his leadership there worked more than 40 architects (Galberg, Glinka, Shchedrin, Ruska, Tkachev, Popov, Ivanov et al.). By the 30s of the XIX century there was developed a holistic and rigorous architectural appearance of the historic centre of St. Petersburg. During that period, in St. Petersburg, a series of regulations aimed at improving the quality of design work were adopted. V.I. Hastie takes part in their development and implementation. In the 30s-40s of the XIX century artistic traditions of Russian classicism begin to fade. But by this time the influence of St. Petersburg architecture school was widespread, connections with Moscow architectural school where many graduates of the St. Petersburg Academy of Arts worked, were strengthened. This is clearly illustrated by the history of the Palace Moscow School. In 1842 the school was headed by a graduate of the Academy of Fine Arts F.F. Richter. Richter moved to Moscow in 1841 as part of a large group of St. Petersburg architects sent to build Grand Kremlin Palace and the Cathedral of Christ the Saviour with a project of K.A. Ton. These constructions have become the field of active interaction between Moscow and St. Petersburg architectural schools, because there worked not only St. Petersburg but also Moscow masters. Visiting architects had a notable influence on the history of the Palace School. In particular, the composition of the school conference significantly changed; it included some St. Petersburg architects – K.A. Ton, I.I. Svyazev and Moscow architects who worked on the construction of the Kremlin Palace – N.I. Chichagov, V.A. Bakarev, P.A. Gerasimov. However, the greatest impact on the training system made the architects who were invited by Richter for direct teaching in school and who became teachers of architectural disciplines – I.A. Rezantsev and F.A. Klages. Both were graduates of the Academy of Fine Arts and before coming to Moscow had some time to work in the northern capital. Rezantsev worked under the leadership of Ton to build a church of the Initiation in Semenov regiment, and Klages was in the Commission for the restoration the interiors of the Winter Palace after the fire and the construction of the Pulkovo Observatory (in both cases under the leadership of A.P. Bryullov), as well as for the construction of the Mariinsky Palace under the leadership of A.I. Shtakenshteyder. In Moscow, they both worked as draughtsmen in the commission on the construction of the Cathedral

of Christ the Saviour. Thus, when teaching at the school, on the one hand, they have gained considerable experience, and on the other – they were familiar with the works of the leading representatives of the St. Petersburg school of architecture.

Therefore in that period the system of education in the school was close to the academic, which, in particular, appeared in the cancellation of the innovations proposed by Bykovsky that were not in the academy. Richter, however, considered it necessary to not only reproduce academic principles of architectural education in the school, but also to maintain, or rather, to restore important feature of the Moscow architecture school that was lost under Bykovsky - a thorough practical training. Students of the school, as in the first period of its history, begin to take an active part in the construction work, which the Palace Office led. These works (mainly in the Kremlin) were led, at least initially, by the St. Petersburg architects. Therefore, in this period, the influence of the St. Petersburg school on architectural education in Moscow was especially great. In 1840s students were taught a course on the art of stucco, which led I. Dylev, a former serf, who led the stucco work in the interiors of the Grand Kremlin Palace. At the same time there were elective courses on the Principles of mechanics (N.A. Strakhov) and Chemistry (A.F. Godvillo). Broadening the range of subjects taught at the school and, consequently, the emergence of new teachers is a manifestation of the trend towards the universalization of architectural education, specific of the middle of the XIX century.

The beginning of the fourth period of the formation of the St. Petersburg school of architecture can be designated clearly. This period is connected with the work of the student of the St. Petersburg Art Academy K.A. Ton and official recognition of ‘Russian-Byzantine’ style that he developed. Dissemination had a use of various forms of architectural styles of the past - the Gothic, Romanesque, Renaissance and others - as ornamental decorations for the buildings with new functions. This period is characterized by a high level of planning activity, a ramified system of building committees. There was created a special institution called the Building Committee, subordinated to the Cabinet of His Imperial Majesty. Practical results of the activity of all forms of organization of the St. Petersburg architecture school (from ‘Team of architect’ to the Academy of Fine Arts) embodied in the construction of the northern capital. The initial period of its formation was the construction of St. Petersburg. Peter the Great tried to implement the idea of a regular city, built on a single plan. It was quickly overcome the element of spontaneity in the building of St. Petersburg. Promptly the regular features were clearly outlined: straight wide streets intersecting at right angles were laid out, houses were located along the red lines of streets, the artistic techniques associated with a new understanding of architectural forms and, firstly, order system were made up; in the decoration of buildings pilasters were used, rustication, curly gables, towers with high spires. All construction activity of St. Petersburg in the first half of the XVIII century was held under the auspices of the Office of the buildings (1706) and the Academy of Sciences with drawing classes and engraving chamber (1724). The most important construction

projects in that period were the Admiralty (1704) - Dockyard, Curiosities (1718-1734) - a museum and a library, the building of the Twelve boards (1722-1740), designed to accommodate the administrative institutions of the state. Thus, a significant place in the initial construction of St. Petersburg belonged to the industrial, administrative and public buildings. At the same time regular palaces and parks and the monastery ensemble similar to them on the basis of planning were created: Summer Palace and Garden (1710), the ensemble of Peterhof and Oranienbaum, Alexander Nevsky Monastery (engraving of P. Pikart, 1723). In the same period it was the beginning of the development of 'model projects' for houses, differentiated for various segments of the population; construction of residential buildings was strictly regulated by these projects [10].

The middle of the XVIII century can be described as the second period of the formation of the St. Petersburg architecture school. As a result of reforms of Peter's time and victorious Northern War, Russia has become a major world power. A palace and park construction in St. Petersburg, Moscow and the surrounding areas becomes leading. Herewith the principle of regularity is maintained in the planning composition, but it is enriched by the solemn and magnificent forms of Russian baroque. For the decoration of buildings three-quarter columns are used, often Corinthian order, columns are grouped in different rhythms, broken frontons are widely used as well as pilaster eaves, delicate stucco, decorative sculpture, two-tone intensive colour of the walls, gilding. Creativity of V.V. Rastrelli is the top of that period. At that time some palaces in St. Petersburg were built: Stroganoff (1752-1754), Winter (1754-1762), Country Catherine Palace in Tsarskoye Selo, the Grand Palace in Peterhof. A brilliant example of the monastic complex was the Smolny Convent in St. Petersburg (the beginning of the construction is 1750). Solemn, rich forms of architecture are typical for contemporaries of V.V. Rastrelli – S.I. Chevakin, D.V. Ukhtomsky, I.F. Michurin for the works of serf architect F.S. Argunov. Thus, the grandeur of the Russian Empire and the success of Russian culture in the middle of the XVIII century, found their expression in the splendour and the decorative richness of architecture of the period.

The third period of the St. Petersburg architecture school is associated with the heyday of classicism. The ideals of a state built on the principles of reason and justice are seen now in the ancient democracies. These views determined the development of classicism. The main requirement was the requirement of simplicity and naturalness with the rationalistic source in the basis. The city planning projects were developed in the urban planning, the theme of construction was getting broader. Ceremonial face of St. Petersburg was created by public, governmental and commercial buildings. The monumental architectural structures reflected the ideas of citizenship and patriotism. During that period, a building of the Academy of Arts in St. Petersburg was built (architects A.F. Kokorinov, Valen - De la Mothe, 1764-1772) and occupied a prominent place among the most grand buildings in the city, Mikhailovsky (Engineers') Castle (architect V.I. Bazhenov, Brenno, 1797-1800); in the forms of strict classicism Neva Gates and Paul Fortress (architect

N.A. Lvov) and the building of the Academy of Sciences (architect J. Quarenghi) were built.

In the 30-40s of the XIX century, artistic traditions of the Russian classicism start to fade. The beginning of the fourth period of the formation of the St. Petersburg school of architecture can be clearly marked. This period is connected with the work of the student of the St. Petersburg Art Academy K. A. Ton and official recognition of 'Russian-Byzantine' style that he developed. Various forms of architectural styles of the past were wide spread: Gothic, Romanesque, Renaissance and others - as the ornamental decorations for the building with new functions. An example is a railway station in Peterhof (architect N.L. Benois, 1853-1857 in Gothic forms).

5. Conclusions

Thus, the subjects of the St. Petersburg school of architecture in XVII - the first half of XIX century were the Office of the buildings (1706), the Academy of Sciences with the drawing classes and engraving Chamber (1724), Imperial Academy of the three noblest Arts (1757, 1764), the Commission on building of St. Petersburg and Moscow, architectural 'teams', drawing workshops, Construction Commission, subordinated to the Cabinet of Her Majesty, the Committee for Construction and hydraulic works and other educational institutions of architectural and artistic, architectural and engineering profile. By the middle of the XIX century the impact of the St. Petersburg school of architecture was spread over the Moscow architectural educational institutions and the Moscow building practice.

The idea formulated by Peter the Great about the constructing a city according to single plan as well as the principles of regularity and ensemble are general for all the periods of the St. Petersburg architecture school formation. The periods varied in typology of construction, changing styles, the means of artistic expression. Each period is characterized by the works of great masters of architecture that the architecture school of St. Petersburg is formed around.

Thus, the development of the St. Petersburg architecture school during the XVIII – the first half of the XIX century has been moving in the following directions:

- organization of the form of architecture personnel training in the structure of various government agencies (Office of the buildings, etc.) with the dominance of the acquisition of knowledge and skills in the practical development in architectural teams led by major architects;
- creation of special schools for the training of professional architects - architectural class at the Academy of Arts in St. Petersburg with a combination of theory (academic content of training) with practice (participation in the construction of concrete objects) [7, 11];
- a practice of construction of St. Petersburg that included the development of model projects for mass building, change of the style from the Petrine architecture, Baroque Classicism to eclecticism, i.e. the development of

forms of European architecture on the basis of ancient urban planning traditions and forms of ancient Russian architecture.

Thus, the author considers it possible to draw the following conclusions:

1. The direct contribution of the St. Petersburg architecture school into the formation of the mining and metallurgical complexes architecture of Altai mining district is characterized by the activity of the subjects of this school, where, first of all, belong the following subjects:
 - Commission on construction of St. Petersburg and Moscow, Construction Commission, the Cabinet of Her Majesty, the Russian Academy of Arts in St. Petersburg;
 - architectural 'teams' led by St. Petersburg courtier architect K.I. Rossi;
 - St. Petersburg architects developing drafts of plans, constructions and buildings of Kolyvan-Voskresensky (Altai mining district) plants (N.A. Lvov);
 - St. Petersburg architects who developed 'model' projects of industrial, administrative, public and residential buildings (Hastie, Ruska, Stasov and others).
2. Architectural School is a complex of creative traditions manifested in the activities of the group of architects associated by common world view, creative method and style. Localized in space and time in chronological order, the territorial and geographical principle, school of architecture finds its clearest expression in the national and regional art.
3. St. Petersburg school of architecture made a decisive contribution into the architecture of Siberia of the XVIII – the first half of the XIX centuries.
4. Architectural School of classicism of K. Rossi had a predominant influence on Siberian architecture. Classicism determined the scale of Siberian urban development for decades, until the end of the XIX century.
5. In the XVIII – the first half of the XIX century under the influence of St. Petersburg architecture school the principles of urban planning theory of classicism were implemented in practice: aesthetics of maximally disclosed space, the system of spatial relations and the establishment of distant spectator perspectives, turning the city into a work of urban art.
6. Classicism in the province until the middle of the XIX century stays not only a monument to the style of the past, but also the bearer of a viable architectural and urban conception, creative potential, which bequeathed to descendants the idea of an orderly and harmonically ordered and holistic city.

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