The Urban Environment: the Revival of Russian Harbin

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Abstract. The research is devoted to the study of the current state of historical buildings in Harbin. This article is about the Pristan area, which was the main functional area of the city in commercial terms. Access to the river Sungari was the main factor. He defined the historical specialization of Pristan - commercial and industrial. A brief overview of the steps involved in the formation of the historical planning of the Pristan area in Harbin is provided in this article. Its features are revealed and the concept of restoration of the historic environment is described.

1. Introduction
Several areas that need to be explored, clearly read in the building of modern Harbin. Because they determine current trends that persist in perspective. 1. Intensive destruction in the area of the central street of the historical buildings of the development period of the Russian Harbin; 2. Construction on the site of the destroyed buildings of new objects, stylized as “old”; 3. Active preservation of historical objects, their systematization, and registration as architectural monuments, which are protected by the state; 4. Reconstruction of streets and restoration of the historic environment of the city.

The construction of buildings in retro-styles and the addition of decorative elements stylized as historical ones are being actively carried out on the Central (Chinese) street in Pristan area. New objects replace lost building. But most of the historic buildings are in disrepair due to the lack of major repairs, constant rebuilding, and redevelopment, barbaric exploitation (extension, additions, temporary structures, etc.). The courtyard areas of historic buildings are in a state of utmost destruction. Studies of these objects (measurements, photographic images) and the determination of effective directions for the restoration of the historical part of Russian Harbin are relevant now.

The peculiarities of the formation of the historical environment of Harbin are considered by the works of researchers Kradin N. P. [1], Kozyrenko N. E. [2, 3], Ivanova A. P. [4], Levoshko S. S [5].

The works of Chang Huaisheng “Art of architecture in Harbin” [6], Yu Binyang "China: Harbin. Impression (1897-1949)” [7], Songfu Liu “Harbin - the Oriental Moscow” [8] and “The typological modernization and the pattern of the typological transformation of city building in Harbin” [9] can be distinguished from foreign publications. The publication “Central Avenue in Harbin, China: a study of centrality and adaptability” by Fay Q [10] is dedicated to the Historical Buildings of Chinese Street.
Modern tendencies of construction in the historic environment of Harbin are examined in the research of Chen L, Yan Li, Dong Xu Zhang, Yu Chen "Russian Architecture Prototype" in the Role of Shaping the Form of Contemporary Architecture in Harbin" [11].

Questions urban planning and adaptation of historic buildings for new functions in their writings were reviewed by researchers Muller-Mennes G. [12], Astorg Bollak F. [13], Lyudmirskaya R. G., Potseshkovskaya I. V. [14], Sotnikov B. E. [15], Grekova A. I., Dolgopolova E. G. [16], Kozodaeva N. V. [17], Romanova L. V., Litvinova O. G. [18].

2. Formation of the planning structure of the Pristan area

Separating the structural units of historical Harbin (Old Town, New Town, Pristan, Alekseyevka, Madyagou, Hospital Town, Fujiazizien, etc.) it can be noted that they had their specific features, both in the planning structure and in the functional organization. Pristan Area was a commercially main functional area. Its economic importance for the city and the whole area of settlement can be compared only with the economic activities of the Chinese city of Fujiazizyan.

The results of the functional-planning analysis of the formation of the Pristan area are given in this study. The territory began to form at the beginning of the 20th century as an independent structural unit. The access to the Sungari River was the main factor that determined the specialization of the Pristan area - commercial and industrial. Spontaneous processes are noted in the building at the first stage (1898-1917). Independent seizure of area, their chaotic development with both capital and temporary structures led to the unplanned organization of space. The environment of the Pristan area was characterized by a mixed development, which consisted of stone houses of entrepreneurs, wooden huts of Russian workers and clay fanza of Chinese craftsmen. The site manager S. N. Khilkov legalized the breakdown of land plots. This is reflected in the scheme of the plan of Harbin 1900. In 1902, the main planning elements of the district Pristan (Chinese, Novogorodnaya, Vodoprovodnaya, and Division streets) were defined.

The main street of Harbin Central (Chinese) was formed at the second stage (1917-1932) of the development of the city in the Pristan area. The nature of the building has radically changed since that time. The active construction of capital brick structures began. They were made in retro-styles (neo-baroque, neo-classic, neo-gothic, modern). The active construction of hotels, restaurants, administrative and bank buildings, commercial establishments defined the area as multifunctional.

A specific feature of the Pristan area was the construction of Orthodox churches and churches. Iverskaya, Ilnskaya, Petropavlovskaya, Sofia (first), Sofia (second), Annunciation, St. Nicholas prison churches created an impressive silhouette of the building. They were different in scale, architectural and style decisions. But they created extraordinary fragments of the environment, being the centers of gravity of the inhabitants of the city. They became compositional accents in the panorama of the city and formed its picturesque, Russian silhouette.

Active construction was carried out on the periphery of Harbin in the third stage during the period of Japanese rule (the state of Manzhou-Guo, 1932-1945) — high-speed railways, large planning districts, military-industrial complexes. This is noted in the “General Plan of the Metropolis”, 1936. Historic areas of the city remained unchanged. Special changes are not noted in the building area of the Pristan area in this period. The demolition of temporary and dilapidated buildings and the construction of new large objects in their place is an exception.

The fourth period begins with the formation in 1945 of the PRC. The development of the area with typical residential buildings begins at this stage in the Pristan area. Construction is underway on historic streets and inside neighborhoods. The valuable historical buildings were significantly lost in this period, but the changes did not affect the Central Street.

The same processes are characteristic of other areas of Harbin. Planned residential construction has particularly affected the area of the Railway, Myadogo, Old Town, the village of Alekseyevka.

The construction boom is scheduled for the fifth stage in Harbin. He was associated with the formation of the image of Harbin as a large Northern Metropolis. The development of the blocks is carried out by large hotel complexes and shopping centers. As a consequence of this, a great loss of
historical buildings occurs. New objects are characterized either without a stylistic decision or made in retro-styles.

3. Features of the construction area of the Pristan area

The structure of the Quarter quarters was fundamentally different from other districts of Harbin - New Town, Fudziadzian, Old Town, Mugiagou, Slavonic Town. The construction of large complexes and architectural monuments was actively conducted in the New City, like the Pristan area. Most of the similarities were found in the Pristan area with the Fujiadan district: the solution of facades in retro-styles, the building height of 2-3 floors, the inner courtyard, the cut corners of buildings. But the Fujiadan district has characteristic differences: the curvilinearity of the streets, the chaotic structure, the different shape of the quarter and their sizes, the two facades of buildings in European and Asian styles. The two facades of the historic buildings in the Pristan area were European, unlike Fujiadan. The courtyards differed insular isolation, the size of the courtyards depended on the size of the building.

Enclosed inside yard space characteristic of the building of the historic streets of the Pristan area [19]. This can be traced to the plans of the preserved historical buildings. The courtyards had not only residential buildings. The small courtyard has a restaurant “Miniatures”. The complex construction plan and the building adjacent to its end form a space. Similar yards have such well-known historical buildings as the German Consulate, the Commercial Department, the Modern Hotel, the Civil Administration Building of the Eastern Provinces of a special region, the Private Jewish Hospital, etc.

A total of 22 preserved historical courtyards were examined during a study on the streets perpendicular to the street of China.

The historical building of the trapezoid quarter along Korotkaya Street is now almost completely preserved. The changes affected only its central part, where the construction of modern high-rise buildings was carried out. Half of the historic quarter on the street on the borders of Novotorgovaya and Chinese streets also preserved. Separate historical buildings with courtyards were found on the streets of Yamskaya and Konnaya.

Two quarters preserved the configuration of historical buildings completely. The first is preserved within the boundaries of Mostovaya, Chinese, Novotorgovaya and Market Streets. The second is located within the boundaries of Shirokaya, Chinese, Novotorgovaya and Mostovaya streets. The survey showed that quarters are formed by several enclosed inner courtyards. The entrance is through arches. And only one entrance was available in each yard.

The configuration of the space could be simple rectangular, formed by courtyard facades of rectangular, L-shaped, U-shaped in terms of buildings. The courtyard on Mostovaya Street can be cited as an example.

A more complex configuration of the courtyards revealed in the neighborhoods that are adjacent to the streets Skvoznay (see Figure 1), Shirokaya and Konnaya. Small narrow aisles were discovered during a field study between separate buildings. They ended in dead-ends in the form of blank brick walls. Probably the aisles were made for insolation.

Separate courtyards are limited to buildings on three sides, enclosed by a brick wall with a fourth. Two courtyards on the Skvoznay and Mostovay streets can be cited as examples.

The architecture of the domestic territories was represented by brick style. Metal and wooden stairs were among the most frequently encountered elements of space. They serve to climb the second-floor gallery. Historical objects along Korotkaya and Mostovaya streets can be cited as examples of buildings with galleries. Galleries could be as part of the facades (see Figure 3) and serve as a transition between buildings and opposite wings of buildings. They formed open bridges (see Figure 2) under which a passage could be made. Similar structures were found in two courtyards along Korotkaya and Konnaya streets during field studies.

As a rule, central-axial symmetry is characteristic of courtyard facades of historical objects. The bay window can be placed in the center of the facade. The staircase is located inside the bay window.
The completion of the bay window is often distinguished by attic decorated with arches or triangular gables. Two-story and three-story gallery houses are found in separate courtyards. The entrance to the apartment is from the street. The remarkable details in their architecture are the design of the eaves of the roofs with carvings and forged grilles.

The closed nature of the building is preserved in the design of modern buildings. The small size of the courtyards and the small length of buildings within the neighborhoods along the streets of Strahov, Polev, Chinese and Novogorodnaya can be noted by analyzing the historical buildings of the central part of the Pristan area that has developed so far in general. Larger planning structure formed between the street. Commercial, Diagonal, Artillery, and Chinese. Monuments of architecture, such as the German Consulate and the Jewish Emigration Service, the Civil Administration Building of the Eastern Provinces of a special region and long-lived residential buildings with courtyards, wells can be found in the front of residential buildings of these streets.

The urban environment of the Pristan area currently retains its heterogeneity. Several layers make up the structure of its volume-spatial composition and subject system. The content - advertising, shop windows, signs, small forms (benches, lamps) - is the most dynamically changing layer. Relatively free spaces have been filled with permanent or temporary art objects in the last decade. They reflect the historical scenes of the city.

4. Projects for the restoration of historic buildings in the Pristan area
Projects for the restoration and reconstruction of three streets and a group of buildings located in the center of the Pristan area have been designed to restore the historic environment of Harbin. The reconstruction results are highlighted in the album of historical objects. Proposals are being reviewed by Chinese experts at this time.

Restoration projects of preserved historical objects must be completed and made functionally active. The possibility of redevelopment of buildings will be investigated in each case for these purposes. All inspected buildings require repair of facades, roofing, restoration of stylistic features,
replacement of utilities, and reinforcement of supporting structures. Various finishing materials can be
used during work on the restoration of houses. But the main rule is the preservation of the original
appearance (the identity of color, the preservation of texture and shape). It is important to preserve the
unique, original appearance of the building while using modern technologies and building materials.

Reconstruction of the quarters will be the next direction (see Figure 4). They consist of closed
courtyards, formed by longitudinal and transverse firewalls (firewall building area). The courtyards of
the Prystan district are today carriers of a peculiar town-planning code and way of life, despite all the
destruction. The qualities possessed by quarters and which must be preserved were determined:
architectural and typological wealth, both of architectural objects and structural urban planning units
(quarters); a variety of functional elements on the ground floor level; comfortable scale of the
environment due to the low number of historic buildings; developed social infrastructure of the Pristan
area; many cultural objects. However, some disadvantages must be eliminated during the restoration
of buildings and the restoration of the historic environment: a high degree of destruction of the real
estate fund; communal discomfort; investment unattractiveness; the inexpressive architecture of
modern objects.

Figure 4. The project of restoration of the courtyard facade (Skvoznay st.) Drawing by D. A.
Lava.

Dismantling of modern outbuildings that distort the courtyard elements; restoration of supporting
structures, damaged and lost parts of yard objects; functional filling of closed courtyard spaces; the
restoration of the historic environment by transmitting the spirit of the time with the help of the means
of environmental design are the main tasks in the reconstruction of courtyards.

The studied historical objects and nearby buildings form 9 closed courtyard spaces. They were not
actively used either in the historical past or in the present. The economic function was the main for
them. Yards can be restored by the method of conflict-free reconstruction [20] and methods of
analytical restoration. The ability of the historical environment to self-development should be restored
as a result, increased attractiveness for tourists, business and visiting residents.

5. Conclusion
The historical stages of the formation of the architectural and planning environment of Harbin have
been identified. Each of them has its own characteristic features: Stage 1 - 1898-1917; Stage 2 - 1917-
1932; Stage 3 - 1932-1945; the fourth stage - 1945-1980; fifth stage - 1980 - present. Characteristic
features of the construction of the Pristan area and its similarities with the Fujyadan area were noted
during the study: the solution of the facades in retro-styles, the building height of 2-3 floors, the
courtyard, cut corners of buildings. But the two facades of the historic buildings in the Pristan area
were European, the courtyards were isolated and isolated, the size of the courtyards depended on the
size of the building, unlike Fujyadan. Characteristic features of the construction of the Pristan area are
highlighted. They were noted in the course of natural research and were not considered by other
researchers: isolation of courtyards, development of areas within the boundaries defined at the
beginning of the 20th century, the permanent functional transformation of buildings, etc. Project proposals for restoring the historic environment of the Pristan area were developed.

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