

Spacial Development of the Courtyards Inside the Late 19th & Early 20th Century Apartment Blocks of Lviv

Abstract

Spacial development of Lviv apartment buildings of the late 19th & early 20th centuries during complex reconstruction requires the assessment of territory opportunities, the improvement of quality of residential environment and more efficient use of areas. The research of the architectural space adaptation of the courtyards of this period to changes in the environment of human life and activities is a complex problem that involves social-psychological, demographic, sanitary, functional, architectural, technical and aesthetic aspects.

The paper describes the transformation of the courtyards of Lviv in the context of the historical development of residential environment, which includes the analysis of its formation and problems of the urban landscaping. This paper presents the results of research aimed at forecasting of functional and spacial development of the courtyards of apartment buildings of the late 19th & early 20th centuries.

Keywords: courtyard, residential environment, transformation of yard space, reconstruction, urban landscaping

Introduction

Courtyard is an inalienable part of space of historical residential environment. The building surrounding was formed along with the appearance of residential construction and dynamically transformed at different stages of society development. Understanding of the process of formation and development of the court was achieved while studying and generalization of archive materials, results of on-site investigations. The adaptation of the yards to the residents' needs is a motivation for conducting the houses reconstruction, yards improvement and finding the perspectives for arranging the building surroundings in the context of the development of historically-formed residential environment of Lviv.

Research & Results

Rapid urbanization development in the middle 19th century and increase of the land price, as well as development of the city transport infrastructure resulted in the increase of the number of floors and building density. These tendencies are reflected in the regulatory environment of the period. The building planning structure became regulated with coming into force of the first building code «Provisions on the construction order in Lviv», 1877. According to this code, the building could not exceed 3 floors¹. According to the other 1885 code, the main buildings should have been located on the main streets, while household and industrial buildings could be located in the depth of the yard. The apartment building was to be blocked with regard to the neighboring house and had to approach the boundary with

the neighboring area, otherwise, the retreat did not exceed 6m. The apartment buildings had to be located along the building line, though, the retreats of not less than 6 m were allowed. In this case, the territory in front of the house was used for arranging the plantation, it was not allowed to arrange the auxiliary buildings and kiosks within this area, and the area enclosure could not hinder visual perception of façade. The buildings could not exceed 4 floors, and attic was considered a separate floor. Three- and four-storied buildings could be constructed only in the places where their height would not exceed the width of the street. In the place where the house already was it was allowed to build a new, not lower than the previous one. On partially built-up streets it was allowed to construct new buildings not lower than the existing buildings. The new houses could not exceed 16 m. The city council determined the streets and squares which exceeded 22 m by their width, and also in the main streets of the downtown of not less than 15 m wide, where the five-storied buildings were constructed of not more than 20 m high. If the house retreats the building line, it was allowed to increase its height by the value of retreat from the regulation line. The building height could not exceed

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il. 1. Small courtyard on 19 Petra Doroshenka Street (photo by author)



il. 2. Courtyard of houses on Bohun Street – example landscaping (photo by author)

22 m. It was measured from the highest point of the pavement to the upper point of principal corner. According to the code, the floor build-up was allowed, as well as the change of roof timber system. It was stated that not less than 25% from the lot total area should be built up, sufficient part of this territory was to be rendered suitable for courtyard. The apartment building courtyards located at the corner of the streets might not comply with this statement. In this case it was allowed to build the area up to the maximum. To enter the courtyard it was allowed to design the entry gates of not less than 1,6 m wide, or ride gates of not less than 2,2 m wide. The 1892 building code stated that new streets should be 20 m wide, big bystreets – 17 m wide, and short bystreets – 14 m².

The apartment quarters of Lviv of the end of 19th – beginning of 20th century were formed on the basis of grouping of the residential buildings on small most frequently rectangular areas, though, other area configurations also occur formed by the street directions. Most frequently, the quarter of Lviv was formed by the residential buildings located along the area perimeter; the quarter internal area was rendered for the household-and servicing functions; the size of quarters with 3-4 storied buildings in one side amounts approximately to 60-80 m; most of the servicing objects were put to the bystreets; there is a functional differentiation of streets in the quarter building-up – transit, trading, pedestrian quarters³.

The appearance of new conceptions and theories at the end of 19th – beginning of the 20th century aimed at improvement of the residential environment quality, facilitated construction of buildings with the high level of comfort. The architects have developed the projects of houses-facades, where the nature integrated within the house structure. During this period the house

building with the court d'honneur appeared – the yards opened from the side of the street, enclosed by the buildings from the other three sides⁴.

Based on the on-site investigations and studying of the archive materials, the basic types of the yards were determined, which comply with the ensemble building of Lviv of the end of 19th – beginning of 20th century. According to the organization principle, the two types may be singled out within the yard buildings: closed and walk-through. Out of them the following subtypes are formed: singular, double, open-ended, half-opened, «passage», enfilade. The closed yard formed one or two residential buildings, and in some cases household structures, located along the perimeter of the area limits. The walk-through court most frequently was formed by several residential buildings, united by the networking. They formed the “passages”, enfilade, walk-through or half-open structure of the yard⁵. The half-open court most frequently had only visual, blurred boundaries with the neighboring courts, and also its separate entry, and sometimes farm buildings. These yards most frequently were subject to modification of their components and build-ups as they evolved. According to the analysis of 100 apartment buildings and their surrounding grounds of the researched period, Lviv is characterized by the yards with the areas from 25 m² t^o 650 m². The



il. 3. Courtyard on 15 Korolenka Street – example arranging annex to the building and galleries glazing (photo by author)



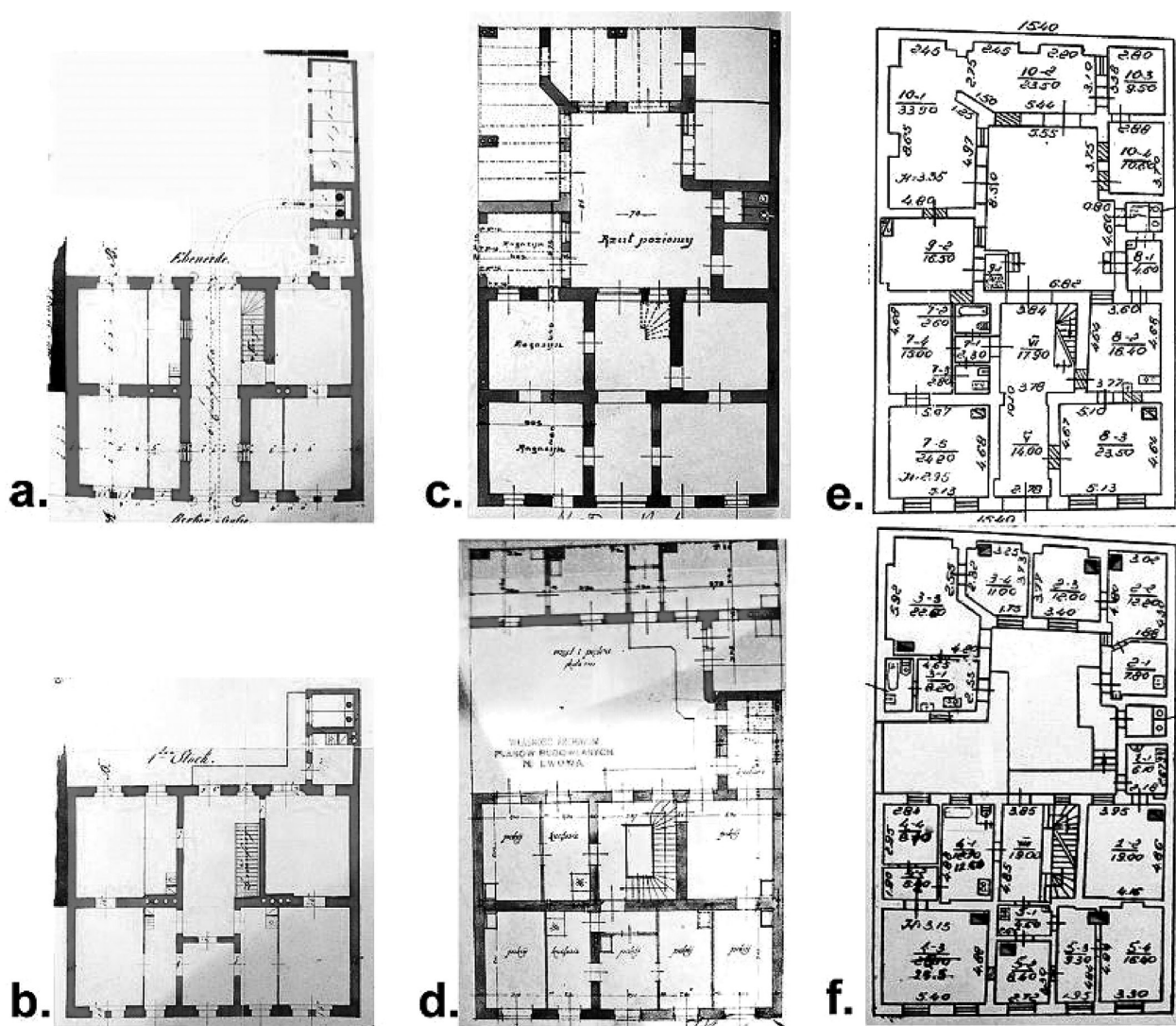
il. 4. Courtyard on 82 Khmelnytskoho Street – example arranging annex to the building at ground and first floors (photo by author)

courtyard width ranges between 5 and 19 m, and length from 5 to 36 m. The houses located at the streets corners are the smallest in size and in the courtyard area. The yard-wells of 2,5 m wide were found (il. 1).

Evolution of residential buildings of Lviv of the end of 19th – beginning of 20th century was gradual and accompanied by multiple reconstructions. The building size enlarged due to the intensive reconstruction and building-up, and due to the increase of the houses length. With the general structure preservation its density increased. As every building is separate, therefore, the reconstructions were conducted independent of the neighboring buildings, without causing the damage to their integrity.

In Lviv the apartments built at the end of 19th century, started being reconstructed already in several days after their construction. For this purpose the reconstruction projects were developed, which presupposed the building-up of additional spaces to the apartments to increase the number of living premises, arrange the civil-servicing warehouses, increase the apartment areas, arrange additional staircase, auxiliary premises of the houses. The additions to the principal building or the house wing were constructed in the courtyard. Many reconstructions were conducted at the beginning of 20th century in the houses built at the end of 19th century to arrange the bathrooms and toilets. The sanitary conveniences were arranged in the annexed premises on each floor of the house, which influenced the courtyard configuration. According to the reconstruction projects on the surrounding territory the household structures were built, to enlarge the auxiliary buildings the underground of the yard was used. Among the reconstruction projects of 20–30-s of 20th century the reconstruction examples occur presupposing the additional premises to the apartment buildings, to increase the number of premises

in them, as well as the auxiliary premises of the house. Change of the political situation in 1939 led to the social and economic changes which caused the structural deformation of historical neighborhoods, decrease of the level of their development, safety, and social intensity of use. Due to the ownership cancelation the territory acquired the status of common area and was transferred to the state ownership, which led to the loss of the limits of responsibility for the surrounding territory. This caused the degradation of the courtyard. During the Soviet times the reconstruction accompanied by the increase of the house building capacity, was mostly the result of the house size increase in the plan. For this purpose the works were conducted on the building enlargement due to the arrangement verandas, glazed balconies from the elevation facing yard, in the surrounding territories one-, two- or multistoried additions were built along the court façade of the house or wing of the house. Additional house area which was a result of building-up, could be the part of public facility (on the lower levels), apartment or additional residential premises were arranged within the area. From 90–s of the 20th century and till now the tendency of apartment enlargement due to the addition and build-ups from the side of court, balcony glazing or galleries, still continues (il. 3). This resulted in the arrangement of large rooms in the structure without natural light



il. 5 (a-f). Residential house on 3 Balabana Street (Berka Joselowicza Street): a) Ground Floor Plan, b) First Floor Plan, project J. Michael, 1875; c) Ground Floor Plan, reconstruction project I. Kornharber, 1936; d) First Floor Plan, reconstruction project architect. I. Kornharber, 1923 [6]; e) Ground Floor Plan, f) First Floor Plan designed by 1979

or the rooms lighted by lamps and overloading of the surrounding area (il. 4). This testifies to the residents' desire to enlarge their apartments, neglecting the lighting of the other premises. Vivid example of the courtyard transformation as a result of change of the house planning structure during different historical periods is the house located in 3 Balabana Street. In 1875 the constructor Johann Michael developed the project for two-storied masonry (№ K 806 2/4), according to which this house was built (Fig. 5(a,b)). The part configuration approaches the square and the area is 160 m². In 1912 the two projects were approved: the first one provided for the rearrangement of the part of premises on the ground floor for the shop, and the second one – building of one-storied wing for the supervisor and warehouse. In 1923 Lviv magistrate approved the house reconstruction projects made by the architect and constructor Ignasiy Kornharber (il. 5(d)). According to the projects the second floor was built up and the two-storied wing was added. On May 28, 1936 the magistrate approved a project developed by Kornharber, according to which one-level public facility was added (il. 5(c))⁶. During

the Soviet epoch the changes were made to the planning structure of the house and some addition was made from the courtyard, as well as the second floor above the wing (il. 5(e, f)). The reconstruction of different periods resulted in the building of the area perimeter (increase of the building area) and decrease of the surrounding territory to 48 m².

Despite the divergence of the courtyard organization in Lviv at the end of 19th – beginning of 20th century number of main principles can be determined, characteristic of all courts. The first principle of the courts spatial composition is their shape proportion: the correlation between the planning solution and functional purpose, possibility of development due to the additional spaces, and intimate space and façade proportions allow making comfortable residential environment.

The second principle of courtyard organization of the period is the double functionality of residential environment arrangement: in case of common use of courtyard many apartments have separate entries from the street, sometimes even to the first floor.

The third principle of the courtyard organization is the building randomness. As it was mentioned above, the existing building of the end of 19th – beginning of the 20th century during the exploitation period underwent reconstruction, building-up and addition within the court, usually made at the expense of residents. Changes of the socio-economic life conditions and residents' needs facilitated the environment transformation. As a result, the residential environment was formed which reflected the residents' life and was closely connected with the people's activity.

The fourth principle is the residential environment replenishment with the aesthetic elements and details: benches, fountains, etc.

The fifth principle may be considered the presence of the green areas. They are insufficient in size but quite important for residential environment improvement. Flowerbeds, flower gardens, lawns, bushes and separate trees are usually planted by the residents in the places of recreation, communication and leisure (il. 2).

Summary & Conclusions

The reconstruction of the courtyard requires the preliminary analysis of existing situation: analysis of existing city-planning situation, transport, socio-economic, historical-cultural, practical characteristics of the courtyards and problems of each court. On the basis of analysis conducted the court transformation directions are determined as well as the necessity of preservation, recovery or complete reconstruction of its elements. The projecting procedure should take into account the cultural significance and stylistic characteristics of the court environment, define the ways of elements formation, as well as form the principles of planning and artistic court solution. It would be appropriate to improve the building territories of the end of 19th – beginning of the 20th century according to the projects developed by the design organizations. After planning the current situation and its thorough analysis the functional territory zoning takes place which presupposes the step of its improvement.

The quality of apartment residential environment of the end of 19th – beginning of 20th century depends upon the spatial char-

acteristics of the courtyards: floor area ratio, functionality and abundance of the functional zones; court land-marking; courtyard types; layout size of courtyards (size, area, and plot configuration); volume of courtyard (depends upon the building height and the distance between the exterior parts of the opposite building parts).

The researched adjoining territory of the apartment buildings has its individual peculiarities. Despite general unsatisfactory condition of the courtyard of the end of 19th – beginning of 20th century, they have a big potential for improvements of the residential environment condition.

ENDNOTES:

- 1 CSHA of Ukraine in Lviv, f.146, d. 7, c. 4153.
- 2 SALR, f. 2, d. 26, c. 10 «The Case for Reorganization of the Third (Technical) Department of Lviv Magistrate», p. 426.
- 3 M. Habrel *Architectural and planning parameters residential structures that affect the efficiency of open spaces*. Journal of Kyiv National University of Construction and Architecture. Urbanism and Spatial Planning, 2003, No. 15, p. 44–52.
- 4 S. Linda, A. Rybczynski *Courtyards in the structure of historic cities: development and current problems*. Journal of Kyiv National University of Construction and Architecture. Urbanism and Spatial Planning, No. 48, p. 267–272.
- 5 Y. Idak *Composition Aspects of Town-planning Regulation of the Front Residential Areas in Lviv (at the end of XVIIIth – beginning XXth Centuries)* [Monograph]. Lviv: Publisher "Raster 7", 2011, p 96-97.
- 6 SALR, f.2, d.1, c. 7013 «Berka Joselowiczka Street no. 3», p. 61

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- [4] Linda S., Rybczynski A. *Courtyards in the structure of historic cities: development and current problems*. Journal of Kyiv National University of Construction and Architecture. Urbanism and Spatial Planning, No. 48, p. 267-272.
- [5] SALR, f. 2, d. 26, c. 10 «The Case for Reorganization of the Third (Technical) Department of Lviv Magistrate», p. 426.
- [6] SALR, f.2, d.1, c. 7013 «Berka Joselowiczka Street no. 3», p. 61.