

SOCIAL ASPECTS OF ARCHITECTURAL DEVELOPMENT IN NORTHERN KAZAKHSTAN

Olga Semenyuk¹, Rakhima Chekaeva², Farid Chekaev³

Abstract: At the present stage, questions of social infrastructure development in connection with history of settling and shaping of Kazakhstan, national traditions, and characteristics have not been answered. The need for a full-fledged social infrastructure in tandem with the requirements of efficiency increase associated with the utilization of territories, with regard to rational environmental management and load reduction on natural economic activity, is not supported by any standard or methodical basis. The change in geopolitical situation causes the need for a radical modernization in social infrastructure of urban spaces by taking into account the scale of the international relations of sovereign Kazakhstan.

JEL Classification Numbers: Z190, H890, **DOI:** <http://dx.doi.org/10.12955/cbup.v3.624>

UDC Classification: 304

Keywords: architecture, town-planning, architectural environment, architectural development, urbanization, social requirements

Introduction

Development of the Republic of Kazakhstan as an independent state has given rise to new social problems in the organization of architectural objects. On the one hand, there is a narrow approach based on building-climatic division into districts by isolating from the socio-demographic differentiation. The other approach involves designing, in isolation from socially-functional bases, by taking into account only the general processes of social development and urbanization, which break the architectural specificity in various areas of the republic.

It is necessary to create complete methodical bases for architectural complex development from the perspective in which the demographic features will be reflected, and will influence the location of town-planning structures, and feature the effect of peculiarities in the working conditions and the livelihood of the population.

The search for a regional specificity gives an opportunity to create a comfortable architectural environment on the basis that is withdrawn from the average specifications of the previous years.

Objectives

The research objective was to create architectural and economic model of the social infrastructure development. The main objectives of this research include:

1. Analyzing the current state of the social infrastructure and architecture of the urban places.
2. Conducting research on the interrelation of socio-economic factors of the social infrastructure with ways of development of specific territories in concrete restrictions of a climatic complex.
3. Forming the methodical bases for social infrastructure development.
4. Providing recommendations for social infrastructure development, based on various administrative importance and population, in the territory of the Republic of Kazakhstan.

¹ Olga Semenyuk, Eurasian National University, Astana, Kazakhstan, ons_31@mail.ru

² Rakhima Chekaeva, Eurasian National University, Astana, Kazakhstan, rahima.chekaeva@mail.ru

³ Farid Chekaev, Eurasian National University, Astana, Kazakhstan, rahima.chekaeva@mail.ru

Scientific research methodology

The research technique is based on a comprehensive and detailed consideration of the solution to the problem and the study of objects and their features in a variety of interrelations and relative independence.

In this work, the following are used: system approach; analytical methods (statistical and selective), sociological researches in the form of polls; statistical data from the state (data on the movement of urban population, placement of social infrastructure objects); collection of archival and historical materials; a study of geographical atlases, climatic reference books, ecological reports, and experts' opinions; data from carrying out on-site investigations for the purpose of detecting the social infrastructure development features.

Results and Discussion

Results of scientific research:

- model of social infrastructure and communications development interconnected with population settlement based on modern social and economic conditions, development history, national traditions, and features of Northern Kazakhstan;
- reconsideration and coordination of climatic and economic division of social infrastructure development into various districts of the Republic of Kazakhstan by modernizing various inhabited places by taking into account the administrative importance and specialization of areas;
- Definition of social infrastructure development prospects, optimization of settlement components, and establishment of a full-fledged service system for the population.

Humanbeings carry out architectural transformation by creating a town-planning environment according to the development and changes in vital processes following to the laws of expediency and beauty. The architect is summoned to study the welfare factors surrounding the design activity; problems of life; questions of psychology, perception, and architectural environment; stability of forms and formations; interactive questions of creative and utilitarian elements in the development of a subject environment (Fomin, 1990).

The new stage in shaping and development of the Republic of Kazakhstan as an independent state has spurred new social problems in architectural development.

City urbanization has not been accepted as a natural form of settling development system for Kazakhstan. The various degrees of extremity in naturally-climatic conditions of the region entails different phases of the socio-demographic development and the urbanization of settlements, each of which creates demands for architectural development. Tendencies toward a more uniform city development have become apparent since the last decade. With population growth rate on a rapid rise the relative density of city settlements with the population of more than 100000 persons has increased as well. Initial forms of urbanization are most prominent in the form of migratory streams in which the most active social and biological adaptation of people is complicated (Avdotyin, 1990). Social factors are identified on the forefront.

Nowadays, there are two tendencies in the architecture of Kazakhstan. On the one hand, there is a regionally narrow approach based on building-climatic division into districts by isolating from the socio-demographic differentiation. The average norms do not consider various attitudes toward social and utilitarian environmental functions (Glaudinov, 1999). Meanwhile, social requirements have a priority value on program definitions and orientations of architectural development.

The other tendency of design approach is toward an isolation from the socially-functional bases associated with more common processes of social development and urbanization universal for various climatic areas of the country. It leads to a misunderstanding of architectural specificity in various areas of the Republic (Abilov, 2002). Once transferred into practice for construction in Northern cities, inhabited dwellings and cultural buildings bear characteristics drawn from other breadths without taking into account the structural and dynamic requirements of the local population.

Nowadays, the demographic makeup in Kazakhstan has a more stable structure. Since the last decade, children and female population, as well as the elderly, has been increasing (Spector, 2011).

Social requirements for architecture and types of residential buildings should be differentiated and take into consideration such factors as age, family structures, etc. Thus, factors of socio-demographic development in a modern society are important; they are necessary for reflecting various social programs in construction and architecture, which are of great importance to the inhabitants. Family and individuals are the main social reference points for architectural development of the inhabited environment. The family concentrates on itself and takes the greatest measures to satisfy interests of individual development. The family is a social group, non-uniform in its structure. It acts as a microhabitat uniting interests of the persons and other social groups to which its members belong. The leading parts in differentiation of family requirements play a role in its social parameters, depending on the social structure. Even within the same demographic type of family, there are various models of value systems and cultural specificity that require topological dwelling expansion (Yargina & Hachatryan, 1990).

It is necessary to make a transition from unequivocal criteria of habitation estimation on the number of family members, the number of square meters per person, and the total area of actual living space to the socio-spatial models of inhabited complexes and residential buildings respondent to qualitative distinction of settlement categories based on their actual livelihood. The comfort of staying in the inhabited environment should be high for all generations of family. Thus, architecture acts as the factor of self-sufficiency increase in the various strata of the population by eliminating or smoothing negative factors.

The main type of population's leisure is contact, as a family, and out family. Socially active policy in architecture and in construction should promote new types of regional decisions on residential and public buildings construction. Complex development of inhabited environment needs to be considered based on the synthesis of inhabited, recreational, trading, household, sports, and cultural aspects.

The concept of social development and regional researches on the conditions of residential specificity can provide a key direction to creative searches in architecture (Nazarova, 2010).

It is necessary to develop complete methodical bases for inhabited complex development from the perspective in which the demographic features should reflect demographic peculiarities, effect of habitation site in town-planning structure, influence of extremity in working conditions, and livelihood.

The search for regional specificity enables us to create a new inhabited and town-planning environment on the basis of a withdrawal from the average specifications aside from their differentiation that takes into account features of population contingency, its dynamics and orientation on the primary forms of service (Ryblova & Nazarova, 2010). The young capital of Kazakhstan, Astana, is a potentially highly urbanized city in its environment in which the most progressive architectural decisions on its social plan can be embodied. The impulse of social and economic development acceleration is expressed in a more active display of the human factor during the design and construction. It is shown by an increase in architectural, anthropogenetic qualities and an individualization of inhabited complexes on the structure of their socio-cultural functions. The universal scale (models of similarity and distinction) of the habitation topology should be developed by social criteria, based on sets of alternative habitation types,

quality of demographic structures, and according to the characteristics of the protective functions recommended by climatology.

The actual problem of architectural development of the inhabited environment is the perfection of mass habitation type at all levels: topology of apartments, houses, structure of available housing, and the organizations of territorial community. Projected objects can be considered as a complete system of various socio-demographic, ecological, town-planning, climatic, and nationally-common conditions. Participation of the citizens in social program development for inhabited complexes will raise the quality of design methodology. Development of socio-cultural functions of inhabited complexes is a way to achieve harmonious individual development, expression of a person's creative potential. These functions of architecture are especially actual at the present stage of state development. Maintenance of habitation with population should be realized with either formal consumers or scientifically proven criteria. Research on the social functions of dwellings in Kazakhstan allows us to draw some conclusions about regional specificity requirements, which exhibit the architectural design. It should reflect the national structure and a level of socio-demographic development of a family, a way of life in urbanization on which the city social infrastructure influences. For example, highly urbanized way of life in the capital creates the greatest differentiation among various types of families and increases their requirements to live in and to use an apartment space, which requires a variety of services. Therefore, the reconstruction of available housing should be exhibited as an expansion of the apartment-type dwellings by increasing the living room, in particular, the common room, which is a joint space for family activities. This in turn would lead to the development of economic zone apartments. Special attention is necessary for accommodating national household traditions, such as a custom of welcoming long-staying relatives who are visiting from the other areas of the republic. This demand leads to a consideration for multi-room apartments.

Social factors in designing habitation should be considered not only in development of apartments, but also in connections of apartments with services and with surrounding space. An apartment carries with it a huge demand in family-related services as there are various forms of communication and interaction with in the domestic spaces. Families' household traditions and forms receive huge influence from national household traditions. In this connection, the high social class has the development of apartment housing structure or a complex include premises for economic and recreational purposes in its structure. One of the directions in dwelling types development points toward a residential building structural change that includes normative maintenance outside of room as a premise with equipment for children's recreations, premises for storage of sports and equipment, etc. Demands for decisions on interconnected normalization of habitation and services in the domestic space. The existing topological schemes of building focus on climatic factors and demand additional completion in view of social, demographic, psychological, and physiological criteria. The new type of habitation should be equipped with modernized, embedded systems with as much equipment as possible, complete with household items and facilities kitchens, refrigerators, washing machines, etc.

Social criteria are important at all stages of architectural quality management from researches all the way to design, estimation of real construction objects, financing and planning, development of housing construction programs, perspective planning, and concrete distribution of house resources.

In general, problems in architectural housing construction and town-planning development are uniform. Mass construction in Astana is conducted on new lands, and existing building is becoming more condensed. In the past decades, building areas used to be half as condensed in terms of square kilometers as they are now. An increase in town-planning maneuverability of housing construction and development of an operating mode in a condensed conditions creates a significant architectural, town-planning, social, and economic effect. The out-of-date panel buildings from the Soviet's first generation construction demand a planned extreme makeover and a social renewal. Therefore, in the modern city

environment, it is necessary to combine processes of condensation, reconstruction, active transformation of old blocks.

Development of a new city surrounding is characterized by the increase in the number of stories. Building scale was not always considered in an ecological mode, especially in the cities of Northern Kazakhstan, including the capital—Astana. The optimal number of stories in a structure is one of the most actual problems for housing construction and town-planning in which the correct decision will demand reorientation of building industry base and principles of building design. Housing construction puts an aim on special political and social importance for architects. Construction of habitation should completely correspond to functional planning and hygienic specifications.

The importance of building quality increases the degree of architectural environment. Nowadays, the city population is hardly satisfied by monotony and chronic backlog of accomplishment in the complexity of inhabited spaces.

Conclusion

The research on interrelation of socio-economic factors with town-planning development of specific territories in concrete restrictions of a climatic complex promotes identification of the principles of settlement system and social infrastructure development in the conditions of integrating Kazakhstan in the Eurasians space. Formation of methodical bases for social infrastructure development of the Northern Kazakhstan cities promotes definition of development prospects and use of the existing urban places, based on various administrative importance and population size.

Activation problems of housing construction potential, perfection of the city environment, and construction methods form a large program problem in the design plan activity development. Formation of a new stage in architectural building activity presents two prominent problems on which a decision must be made. The first is according to objects, structures, accommodation, normative, and architectural characteristics of an end-product—the city environment and objects to be constructed. The second is according to the realization methods of these objects by taking into consideration growing efficiency requirements of the building design activity.

Development of traditional and new cultural values through an architectural means is a harmonious inclusion of its forms in a variety environmental contexts by configuration volumetrically-planned elements those are substantially and plastically different.

The idea of socio-economic acceleration using architectural building activity should be realized through the stimulus of multi-dimensional consumer values.

References

- Abilov, A. Zh. (2002). Town-planning and a sustainable development of settlements in Kazakhstan. *Construction and architecture*. Almaty: KAZGASA.
- Avdotyin, L. N. (1990). *Town-planning design*. Moscow: Stroyizdat.
- Fomin, G. N. (1990). *Town planning and architecture. Problems and ways of improvement*. Moscow: Stroyizdat.
- Glaudinov, B. A. (1999). *History of architecture of Kazakhstan*. Almaty.
- Nazarova, M. P. (2010). City as sociocultural phenomenon. *City Sociology*, 4, 3-6.
- Ryblova, M. A., & Nazarova, M. P. (2010). Sotsiometriya of city culture. *City Sociology*, 4, 32-36.
- Spector, M. D. (2011). *Development and device of territories*. Astana: Foliant publishing house.
- Yargina, Z. N., & Hachatryan, K. K. (1990). *Social bases of architectural design*. Moscow: Stroyizdat.