

ABSTRACT

to the dissertation submitted for the degree of Doctor of Philosophy (PhD) in the educational program: 8D07311 - "Architecture" by Anuar Aznamkhan Islyamovich on the topic: "Features of architectural planning solutions for open public spaces taking into account the social phenomenon"

Rationale and Relevance of the Study

In recent years, cities around the world have demonstrated a steady trend toward prioritizing the development and renovation of public open spaces. These processes aim to improve the quality of urban life by creating a safe, comfortable, and socially attractive urban environment. Contemporary public-space development programs focus not only on improvement and aesthetic renewal, but also on the humanization of the environment, preservation of natural and cultural components, and the creation of conditions for social interaction and integration of diverse population groups.

Public open spaces-parks, squares, embankments, pedestrian streets, and small urban parks-serve as the most important elements of the urban structure, forming the "framework" of the city's everyday social life. It is within these spaces that communication, recreation, identity formation, and self-expression occur, which allows the architectural environment of public open spaces to be viewed as a complex socio-cultural phenomenon. Architectural and planning solutions directly influence patterns of social behavior, the intensity of territory use, and residents' perception of the city.

Numerous studies confirm that a well-formed urban environment contributes to regional economic development, increased tourist attractiveness, longer life expectancy, and reduced crime rates. Jan Gehl noted that the history of cities demonstrates a direct relationship between the architectural and planning organization of space and human behavioral patterns, as well as the overall efficiency of the urban environment. Thus, the development of public open spaces has not only architectural, but also social, economic, and governmental significance.

Quality of life is becoming one of the key resources in the global competition among cities. The urban environment is shaped by natural conditions, technical and transport infrastructure, development patterns, and social processes occurring within the urban fabric. All elements of the urban system interact in a complex and dynamic way, and the outcome of this interaction determines the level of comfort and resilience of the urban environment. At the same time, compliance with formal urban planning standards often does not ensure full consideration of social needs and behavioral scenarios of public open space users.

The architectural environment of public open spaces is a dynamic system whose properties change depending on the time of day, seasonal factors, the nature of user activity, and historical transformations of the urban structure. Under conditions of growing motorization and changing spatial mobility, many public

open spaces lose their social function, deteriorate, or are used in ways that do not correspond to the original design intent.

The relevance of this research is driven by the increasing role of public open spaces at both local and citywide levels, as well as their rise to leading positions in architectural and urban planning policy. Active housing development and the implementation of state and municipal improvement programs intensify the need to develop architectural and planning principles and methodological recommendations for shaping public spaces with consideration of the social phenomenon and real-life usage scenarios.

International practice confirms that effective spatial planning policy positively influences economic development, social integration, and urban sustainability. UN-Habitat documents, including the Global Report on Human Settlements and the International Guidelines on Urban and Territorial Planning, emphasize the need to rethink traditional approaches to urban-space design and to strengthen the role of public participation and inclusivity.

In the context of the Republic of Kazakhstan, and the city of Almaty in particular, issues of forming public open spaces are of special importance. Almaty's population continues to grow steadily, accompanied by urban expansion and the development of peripheral districts. The implementation of the "New Almaty" Comprehensive Development Plan and the "city without outskirts" principle предполагает the formation of new polycenters and a rethinking of the role of public spaces as centers of social activity and communication.

The establishment in 2024 of the municipal state institution "Department for the Development of Public Spaces of the City of Almaty" indicates increased attention from the state and municipal structures to the formation of a high-quality urban environment. This fact underscores the relevance of studying architectural and planning solutions for public open spaces with regard to social factors and the need to develop scientifically grounded recommendations for design practice.

Object and Subject of the Study

Object of the study: public open spaces of the city of Almaty.

Subject of the study: architectural and planning solutions for public open spaces considering the social phenomenon.

Scientific Novelty

The scientific novelty of the research lies in the development and integration of approaches to the formation of open public spaces, taking into account social factors in the conditions of a modern large city.

The following scientific results were obtained in the study:

1. An adaptive system for classifying the aspects of the formation of open public spaces has been developed;

2. The features of the influence of social factors on the architectural and planning organization of open public spaces in a large city have been identified, which made it possible to clarify the relationship between users' social behavior and the spatial structure of open public spaces;

3. A methodology for assessing the social effectiveness of architectural and planning solutions of open public spaces has been developed, based on a

comprehensive consideration of behavioral, perceptual, and structural characteristics of the urban environment;

4. An architectural and planning model for the formation of socially oriented open public spaces has been proposed, adapted to the conditions of a large post-Soviet city (on the example of the city of Almaty), which can be used in the design and modernization of public territories.

The obtained results expand the existing understanding of the interaction between social practices and the architectural-spatial structure of the urban environment and form a methodological basis for designing socially oriented public spaces in post-Soviet cities.

Aim and Objectives

The aim of the study is to develop principles for shaping architectural and planning solutions for public open spaces with consideration of the social phenomenon and to identify their features in the conditions of the contemporary city.

Objectives of the study:

1. to analyze the theoretical foundations of forming public open spaces;
2. to identify the role of the social phenomenon as a factor in architectural and planning design;
3. to study international and national experience in forming socially oriented public open spaces;
4. to analyze the architectural and planning organization of public open spaces in Almaty;
5. to develop a methodology for assessing the social effectiveness of architectural and planning solutions;
6. to formulate recommendations and a model for forming public open spaces with consideration of social factors.

Research Boundaries

The geographical boundaries of the study are defined by the territory of the city of Almaty, within which an empirical study of open public spaces was conducted, including squares, parks, public gardens, embankments, and pedestrian zones. The choice of the city is conditioned by its status as a large metropolis with pronounced social and functional differentiation of the urban environment, as well as the diversity of social practices and scenarios of public space use.

The historical boundaries of the study are determined by the two-level nature of the analysis and cover different time periods depending on the scale of the object under consideration.

Within the framework of the theoretical-historical analysis, the study covers the period from the 18th century to the beginning of the 21st century, reflecting the evolution of open public spaces in global urban planning practice—from early forms of urban squares and public spaces to modern concepts of socially oriented design.

Within the empirical part of the study, the historical boundaries are limited to the 21st century and are associated with the analysis of the current state of open public spaces in the city of Almaty, a significant part of which was formed

during the Soviet period and currently functions under conditions of transformation of socio-cultural and spatial practices.

Research Methodology

In this study, the concept of the social phenomenon is used as an analytical category that allows consideration of the features of the functioning of open public spaces in the context of the interaction between the urban environment and users' social practices. At the same time, the term is not interpreted as the totality of all social characteristics of urban life but is applied in a narrower sense—as stable forms of social interaction arising in the process of using open public spaces.

Within the framework of the study, the social phenomenon manifests itself through a number of interrelated characteristics reflecting the ways users perceive and appropriate the urban environment (features of social behavior, psychological perception of space, level of visual comfort, formation of spatial identity, elements of environmental responsibility, and communication in the public environment). These aspects are considered not as independent objects of study, but as indicators of the manifestation of the social phenomenon in the urban environment.

The social phenomenon in the study acts as a linking concept that makes it possible to identify the relationship between users' social practices and the architectural and planning organization of open public spaces. This makes it possible to determine how the features of the spatial structure and morphology of open public spaces influence the formation of behavioral patterns and the perception of space by users.

The methodological framework of the study is comprehensive and includes a combination of theoretical, sociological, and spatial-analytical methods, which made it possible to consider open public spaces simultaneously from architectural-planning, social, and behavioral perspectives.

The study employs methods aimed at assessing spatial connectivity, accessibility, and the potential intensity of the use of open public spaces:

- analysis and generalization of scientific sources in the field of architecture, urban studies, and urban sociology;
- architectural-planning and morphological analysis;
- field observations and photographic documentation of spaces;
- sociological survey of users of open public spaces;
- comparative analysis of different types of open public spaces;
- elements of spatial analysis (space syntax approaches).

The empirical base of the study includes the analysis of open public spaces in the city of Almaty. During the research, primary mapping and analysis of 137 open public spaces were carried out, including parks, public gardens, pedestrian zones, boulevards, and other types of urban public areas.

To study perception and practices of space use, a sociological survey was conducted, involving 75 respondents. The survey was aimed at obtaining a generalized assessment of the quality of functioning of the city's open public spaces and identifying the most visited and socially significant areas.

Based on the analysis of survey results, the most frequently mentioned public spaces were identified and subsequently selected for in-depth architectural-planning and morphological analysis. Thus, the sample of case studies was formed based on the combination of sociological data and spatial analysis.

To analyze the quality of functioning of public spaces, a system of evaluation criteria was developed, based on survey results and analysis of user feedback.

The main groups of criteria included:

- spatial accessibility (ease of access, transport and pedestrian connectivity);
- comfort and safety (lighting, level of visual and psychological comfort);
- functional richness (availability of various scenarios for space use);
- social activity (intensity of space use and diversity of user groups).

Subjective user assessments (survey data) were compared with objective characteristics of spaces obtained through field observations, analysis of planning structure, and photographic documentation. Additionally, user comments and reviews posted in open online sources were taken into account, which made it possible to expand the empirical base of the study.

Additional monitoring of the intensity of visits to public spaces was carried out based on data from digital navigation services and mapping applications, where average visitation indicators on different days of the week (weekdays and weekends) were analyzed.

The study applied selected approaches of space syntax aimed at analyzing spatial connectivity and accessibility of the urban environment. It should be noted that this method was used not as a primary quantitative tool, but as an auxiliary analytical approach.

Elements of spatial analysis were used to assess the spatial integration of public spaces into the urban structure, the connectivity of pedestrian routes, and the potential intensity of space use.

The obtained results were compared with observed behavioral practices of users and data on the attendance of public spaces.

Degree of Problem Elaboration

The theoretical basis of the research relies on the works of domestic and foreign scholars in the fields of architecture, urban planning, sociology, and ecology. The socio-functional aspects of architectural design were considered in the works of M. Vilkovsky, K. Kartashova, K. Kiyanenko, V. Molchanov, Z. Yargina, and others. Studies of social interaction and behavioral scenarios in the urban environment are presented in the works of J. Mead, V. Bani, R. Smith, as well as J. Jacobs.

A significant contribution to the study of the architectural qualities of public spaces was made by K. Lynch, V. Glazychev, A. Krasheninnikov, and I. Lezhava, who examined the spatial structure of the city, levels of centrality, and the porosity of urban fabric. Foreign studies by W. Whyte, J. Gehl, and E. Peñalosa demonstrated the influence of small architectural forms, planning solutions, and micro-environmental factors on the intensity of the use of public spaces.

A significant expansion of the theoretical framework of the study is achieved through reference to contemporary international concepts of the social production and perception of space. In the works of H. Lefebvre, space is substantiated as a socially constructed category formed through the interaction of practices, representations, and symbolic meanings. This position makes it possible to consider open public spaces not only as a result of architectural and planning decisions, but also as a product of social relations and everyday practices of users. The development of these ideas is presented in the studies of D. Harvey, who introduces the concept of the “right to the city,” emphasizing inclusivity, accessibility, and the fair distribution of urban resources.

In the context of the social production of public spaces, the works of S. Low are of particular importance, revealing the mechanisms of the formation of spatial identity, symbolic appropriation, and cultural practices in the urban environment. This approach is complemented by the concept of public space by M. Carmona, which considers it through the prism of multi-level interaction of morphological, functional, visual, and social parameters, as well as criteria for the quality of the urban environment.

The global context of the study is strengthened by reference to sustainable development indicators, in particular the UN Sustainable Development Goal 11.7, aimed at ensuring universal access to safe, inclusive, and accessible public spaces. Consideration of these indicators makes it possible to integrate local architectural and planning solutions into the international sustainable development agenda and to form comparable criteria for assessing the quality of open public spaces.

Additional theoretical substantiation of the socio-behavioral aspects of the urban environment is provided through the inclusion of the interdisciplinary field of psychogeography, which studies the influence of spatial structure on the emotional state and behavior of a person. Classical ideas of psychogeography, formulated by G. Debord, consider the city as a field of affective experience and spontaneous movement (drift), making it possible to identify hidden scenarios of space use. These approaches were further developed in the works of M. de Certeau, who analyzes everyday practices of appropriating the urban environment, as well as in the studies of M. Augé, who introduces the concept of “non-places” as transit spaces devoid of identity.

Contemporary studies of urban environment perception and visual comfort are presented in the works of C. Ellard, who analyzes the influence of architectural parameters on the psycho-emotional state of users, as well as in the works of S. McQuire, devoted to the role of media in shaping the visual perception of the urban environment and behavioral practices. A significant contribution to the study of cognitive perception of urban structure was also made by K. Lynch, who proposed the concept of the image of the city and elements of spatial legibility.

In recent years, Kazakhstani research has paid considerable attention to the analysis of the transformation of open public spaces in large cities, primarily Almaty and Astana, under conditions of post-Soviet socio-economic changes and

shifts in urban planning priorities. The works of A. Khozhikov, A. Abilov, V. Yaskevich, and D. Abaidulova examine the processes of adaptation of Soviet public spaces to modern forms of urban activity, identifying problems of fragmentation, insufficient connectivity, and functional monotony of the environment, and emphasize the need to transition from formal благоустройство to user-oriented environmental design. Studies by N. Kozbagarova, K. Ibragimova, Z. Karakbayeva, and other authors expand the understanding of the spatial potential of the centers of Kazakhstani cities, analyzing the quality of public spaces in the context of post-Soviet urbanization and the possibilities for their intensification through multi-level and underground solutions. The works of B. Kusspangaliyev, G. Sadvokasova, M. Glaudinova, and Zh. Tolegen, G. Maulenova, V. Musabayeva, D. Abaidulova examine the features and principles of the formation of modern urban public spaces, while the works of K. Baipakov, A. Margulan, T. Basenov, M. Mendikulov, B. Glaudinov, B. Kusspangaliyev, K. Samoilov, M. Kenzhebekov address the historical development of urban public spaces. At the same time, most domestic works focus primarily on volumetric-planning, transport, and regulatory aspects, whereas socio-behavioral mechanisms of space use, empirical observation methods, and comprehensive methodologies for assessing the social effectiveness of open public spaces, including the integration of sociological data with spatial analysis (space syntax, digital modeling), remain insufficiently developed.

Despite the high level of theoretical development of the problem, there remains a lack of research aimed at the comprehensive identification of the relationship between architectural and planning solutions and the social phenomenon in specific local contexts, including post-Soviet cities. This determines the need for further research focused on the development of practice-oriented architectural and planning models.

Research Hypothesis

The research hypothesis assumes that the social effectiveness of public open spaces is determined by the nature of architectural and planning solutions that reflect the specifics of social phenomena and users' behavioral scenarios. It is assumed that consideration of social practices, spatial and temporal variability of use, and informal ways of appropriating space during the design and reconstruction of public open spaces makes it possible to increase the level of inclusion of various social groups and to ensure the sustainability of space functioning in contemporary urban conditions.

Provisions Submitted for Defense

1. It is substantiated that public open spaces should be regarded not as improvement objects but as elements of the urban environment that support everyday processes of communication, leisure, movement, and citizens' self-organization. This requires expanding their classification beyond a formal typological approach and considering functional roles, activity scenarios, and spatial characteristics.

2. It is established that the social phenomenon in the architecture of public open spaces acts as a design factor, since users' behavior, the nature of

social interactions, duration of stay, and the degree of involvement of different population groups directly depend on the architectural and planning structure of the space.

3. It is revealed that the social effectiveness of public open spaces is formed as a direct consequence of spatial organization-including route connectivity, entrance logic, visibility, the rhythm of stops, functional distribution, and the possibility of user appropriation of the environment-rather than as a result of the formal level of improvement or aesthetic design.

4. It is proved that transforming transit flow into stable user stay is possible only when the architectural and planning structure includes planning “stop pockets” and attraction nodes, whereas the absence of such elements leads to the formation of transit-type spaces with low social effectiveness.

5. It is established that subjective safety in public open spaces is прежде всего an architectural and planning category and is determined by the structure of visibility, lighting, active frontages, the absence of “blind” zones, and an even distribution of activity across the territory, rather than by the number of prohibitions or formal control measures.

6. A methodology for assessing the social effectiveness of architectural and planning solutions for public open spaces has been developed and tested, based on the integration of morphological and socio-behavioral analysis and including parameters of accessibility, safety, flexibility, and intensity of use. Its application in Almaty confirmed its diagnostic and design applicability.

7. A model of a socially effective adaptive-type public open space has been formed, reflecting a cause-and-effect relationship between architectural and planning solutions, everyday practices, and social effects, enabling the formulation of requirements for the design and reconstruction of public spaces in a contemporary city.

Theoretical and Practical Significance

The theoretical significance of the dissertation lies in expanding and уточнение scientific understanding of forming public open spaces with consideration of the social phenomenon, and in creating a theoretical and methodological basis for further research aimed at studying the social effectiveness of public spaces, mechanisms of everyday practice formation, and the development of new scientific approaches to socially oriented urban design.

The practical significance is determined by the possibility of directly applying the obtained results in design, analytical, and managerial activities related to the formation and reconstruction of public open spaces.

The dissertation results may be used:

1. in architectural design practice when developing concepts and projects for the reconstruction and improvement of public open spaces ориентированных on real everyday usage scenarios;

2. in the work of local self-government bodies and city administrations when assessing the social effectiveness of existing public spaces and making decisions about development priorities;

3. when conducting pre-project and post-project diagnostics of public spaces using the developed methodology for assessing the social effectiveness of architectural and planning solutions;

4. in education and training of architects, urban planners, and urbanists within disciplines related to public-space design, social urbanism, and architectural typology.

The methodology and model developed in the dissertation make it possible to move from descriptive analysis to the formulation of specific design requirements and recommendations aimed at increasing the social effectiveness and sustainability of public spaces in contemporary urban conditions.

Approbation of Research Results

Based on the research results, scientific articles reflecting the main provisions and conclusions of the dissertation were published:

1. Aznamkhan Anuar, Glaudinova Mekhribanu, Alias Abdullah, The interrelation between socio-cultural aspects and the quality of public open spaces in Almaty, Kazakhstan, *Planning Malaysia*, 22(33), pp. 564-583, 2024, <https://doi.org/10.21837/pm.v22i33.1568>;

2. A.I. Anuar, M.B. Glaudinova, A.B. Abdullah, Classification of public open spaces, *Bulletin of the Kazakh Leading Academy of Architecture and Civil Engineering*, Vol. 4, No. (98), 2025, pp. 7-20, <https://doi.org/10.51488/1680-080X/2025.4-01>;

3. M.B. Glaudinova, A.I. Anuar, A.B. Abdullah, Typology of Almaty's public open spaces by spatial planning, *Bulletin of the Kazakh Leading Academy of Architecture and Civil Engineering*, Vol. 4, No. (98), 2025, pp. 46-61, <https://doi.org/10.51488/1680-080X/2025.4-03>.

Structure and Volume of the Work

The dissertation is presented on 196 pages of typed text and consists of an Introduction, three chapters, findings and conclusion, a list of references (120 items), two Appendices, and illustrative material that forms an integral whole with the text.

The first chapter examines the theoretical foundations for forming public open spaces with consideration of the social phenomenon. The concept and classification of public open spaces has been revealed, and their main typological and functional characteristics are defined. The social phenomenon is analyzed as a factor in the architectural and planning formation of the environment, and the influence of social processes and usage scenarios on spatial organization is considered. Global experience of architectural and planning solutions for socially oriented open spaces is analyzed, and contemporary approaches and trends are identified.

The second chapter analyzes and assesses the architectural and planning organization of public open spaces using Almaty as a case study. The architectural and planning structure of public open spaces is examined, social usage scenarios are analyzed, and features of spatial functioning depending on the character of the urban environment are identified. Based on field observations and analytical and comparative methods, a methodology is proposed for assessing the

social effectiveness of architectural and planning solutions, enabling determination of the degree to which spaces correspond to user needs and the intensity of their use.

The third chapter develops architectural and planning principles for forming socially effective public open spaces. The influence of architectural and planning solutions on users' social behavior and interactions is considered, and contemporary tools and technologies for designing socially oriented urban environments are defined. Based on the results, recommendations and an architectural and planning model for a public open space solution considering social factors are proposed, aimed at improving the quality of the urban environment and the effectiveness of its use.