

Influence of human lifestyle on creating typological structure of residential urban environment

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Abstract. Social, economic, political and other changes taking place in Russia in recent decades have made little difference in the architecture of residential buildings and apartments that are being built in various Russian cities. The article studies people lifestyle as the main factor that influences the typological characteristics of residential and multifunctional buildings and complexes. The paper considers the comfort criteria of the modern urban environment. It is reported that people lifestyle and its fundamental categories should be decisive in choosing and determining the parameters of apartments, different types of residential buildings and their typological diversity. The paper provides these categories that are the living standard, way of living, life quality and custom. Undoubtedly, lifestyle affects the choice of high-rise buildings, the size and the kind of premises in apartments, the number and quality of service functional elements and a lot of other things related to creating comfortable modern and convenient urban living environment.

1. Introduction

Social, economic and other changes taking place in Russia over the past decades require careful study, revision and solution of a number of important architectural and typological problems. There is no doubt that this has a great effect on designing new architectural buildings, urban planning decisions and the parameters of modern residential urban environment as a whole [1]. In particular, it will help to solve the problems of height and typological structure of buildings, urban housing density, determining the advantages and disadvantages of the development of "compact" or "sprawling" cities [2]. The authors point out that, unfortunately, among a large number of various factors that form the city typological structure and urban system, the lifestyle factor is not studied deep enough and is not taken into account properly in Russia. This philosophical and sociological category of human activity as an individual, a group or the whole society creates not only the architecture of buildings, but also the living environment of the city and the region. The purpose of this research is to study the influence of people lifestyle and its constituent elements on creating the typology of residential and multifunctional buildings and complexes, as well as service functions involved in their structure.

2. Materials and methods

The transformation of people lifestyle, family and the society happens under the influence of the state political ideology and changes in the economic development, level of social and medical services, lifestyle, culture, traditions, etc. The nature of the changes that occurred in the 90s of the XXth



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century in Russia, was to form another model of interaction between a man and a city, a man and architecture, a man and the living environment. It is evident that way of life and its standard depend on many factors that form the idea of it. Each generation has its own individual traits that change over time, however, the main categories that form the concept of lifestyle remain unchanged.

When classifying the lifestyle, experts in the field of sociology and social hygiene distinguish the following four main categories, such as living standard, way of living, life quality and custom. The works of Y.P. Lisitsyn, I.V. Bestuzhev-Lada are referred to. In order to determine the influence of lifestyle on creating the living environment and the typological structure of buildings it is necessary to consider these categories in details. The most important thing is to take into account the changing conditions that undoubtedly change their meaning and content.

Living standard is defined as the provision of population with material, social and spiritual wealth which is necessary for life. Basically, it takes into account the way how work, life and leisure of people are organized. If the living standard rises, spiritual, physical and social needs of people increase. Spiritual needs affect the education, the ability to develop creative skills and professional level. They also influence the accessibility to historical and cultural values, etc. Satisfaction in food, housing, clothing, transport, recreation, the ability to exercise motor activity are referred to physical needs. Social needs are revealed in communication between people, the ability to express themselves, be engaged in social activities, etc.

Regarding the way of living, it should be pointed out that this socio-psychological category of lifestyle reflects the type of daily behaviour and life of the individual, family and social groups. The way a man communicates with others, spends his working and free time, organises his household, represents and behaves himself refers to the way of living. It also includes the behaviour manners, life priorities, hobbies, etc. All the above mentioned is the way of living.

The researchers dealing with the issues of lifestyle and life quality in particular pay attention to the fact that there are no common approaches and common understanding of this definition. This is due to the desire of sociologists, economists, psychologists and politicians to give their own definition of lifestyle category. Sociologists study social character of life quality. Economists try to reveal objective economic properties of improving life quality. Psychologists define subjective perception of life quality. Politicians make attempts to develop the ways to control the life quality of the population. Besides, the researches are made by philosophers and medical workers. This issue which is important in content and structure is studied by over ten independent fields of science. Studying lifestyle as an important factor in building typology, architects can and should contribute to creating a model of modern residential urban environment.

The quality concept itself defines indicators that reflect its low or high level. In literature the following components refer to life quality such as population income, food and clothing quality, environment quality, health care quality, social service quality, education quality, culture, housing comfort, personal security, as well as demographic indicators. The demographic indicators include life expectancy, mortality, birth rate, number of marriages and divorces, etc.

Custom refers to the socio-economic category in the overall structure of lifestyle. This category reflects political, economic and social relationships that have developed historically and are typical for the whole nation or one individual. The main elements are the type of property, the principles of the relationship between people, aesthetic ideas, moral foundations, legal norms, etc. In addition, the custom includes both national habits and historical traditions that are specific for a group of people. Under the influence of many factors, such as natural disasters, wars, the custom changes.

3. Results and Discussion

Studying the influence of people lifestyle on creating the typology of buildings, it is necessary to identify those categories of factors that have the most significant impact on their space-planning structure. Currently, there is an active debate in Russia regarding the high-density urban environment, which is created by high-rise buildings. On the other hand, a significant number of city and regional authorities and architects stand up for the idea of low-rise city development [3]. Referring to

somewhere and once conducted surveys, nowadays an attempt is made to form an opinion that a cottage is the ideal housing for people living in Russia. Only a certain part of people, allegedly, prefer living in a multi-storey residential building. There is no doubt that the decisive role in this dispute should belong to people and the members of their families living in a particular city or town. It is necessary to specify that the "opponents" of high-density construction give "horror" examples of residential buildings of 9–18 floors which have no relation to high-rise construction. In Russia, buildings with a height of over 25 floors or 75m belong to high-rise construction, while abroad only the buildings of over 100m are considered to be high-rise.

Currently, the most reliable information about the requirements of people to a particular type of housing come from real estate agents (realtors) engaged in real estate. Based on their data, we can identify a number of requirements that are imposed by residents of cities when choosing the area of residence, the type of residential building, as well as apartments. First of all, people are interested in the cost of housing, which is closely tied to the apartment floor area, layout of the premises, the view from the apartment. The proximity to the work place is considered to be the next important factor mentioned by realtors. Walking distance to the place of work is crucial for the residents of large cities when choosing a place of living. An equally important requirement for housing is the degree of infrastructure development, i.e. the security of residence, availability and close location of shops, parking lots, kindergartens, schools, cultural and recreational centres, sports and playgrounds, squares and a lot more.

A clear and useful experience is methods of creating a highly urbanized living environment in Hong Kong. Having come a long way to finding the optimal solution for affordable public housing, Hong Kong has developed a structure of high-rise public housing complexes. By concentrating residential cells vertically high-rise construction allows using valuable land resources most effectively in order to create comfortable living environment that combines the urban lifestyle with the natural environment. All modern public housing complexes have a well-developed territory, which is rich in elements that are necessary for a healthy lifestyle (children and sports grounds, green areas for recreation and walks, etc.).

A high density public housing complex "Shui Chuen O Estate" can be taken as the example. The building was completed in 2015 and integrated into a unique natural landscape surrounded by two national parks (Fig. 1). It consists of 18 towers and is located on a plot of 124 459 m² with a relief difference between the highest and lowest elevations of about 90m.

The complex hosts 11100 families and amounts 28 000 residents. The area of apartments varies from 14.05 to 36.95 m². In addition to housing, there are various service functions (a bus station, parking lots, social and cultural facilities, a large shopping centre, an indoor market, etc.), that are compositionally grouped in a cascade profile, combined with the profile of the mountain. Despite the difficult terrain, there is an elaborate system of pedestrian communication, consisting of 9 pedestrian bridges, 10 sets of escalators and 6 lift towers with elevators, which connect all the properties, as well as provide easy access to the subway. The entire pedestrian network has been designed to meet the requirements of a barrier-free environment to make daily access of residents easier and more convenient. The total length of covered pedestrian crossings is about 700m.

Despite the multi-level design solution, all points that connect different elements of pedestrian traffic are located at the same levels, so people do not need to go up and down the stairs. Vertical connections are made by elevators and escalators. Some parts of the pedestrian bridges have been designed to provide the seating. In general the whole pedestrian network is full of "nodes of activity" such as the open area for public celebrations, recreation areas, playgrounds for all ages, etc. A point of interest is a steel arch pedestrian bridge "Shui Chuen O Estate" with a span of 73 meters linking the main entrance to the complex with the metro station (MTR Sha Tin Wai) that is located on the lower level and accessed via a lift elevator tower with a height of 50m.

This example shows that the high density of development obtained through the use of high-rise buildings in public housing complexes in Hong Kong allows creating a comfortable, people-focused and humane living environment. The concentration of residential cells in high-rise towers gives the

opportunity to create developed and landscaped surrounding area under the conditions of limited land resources.

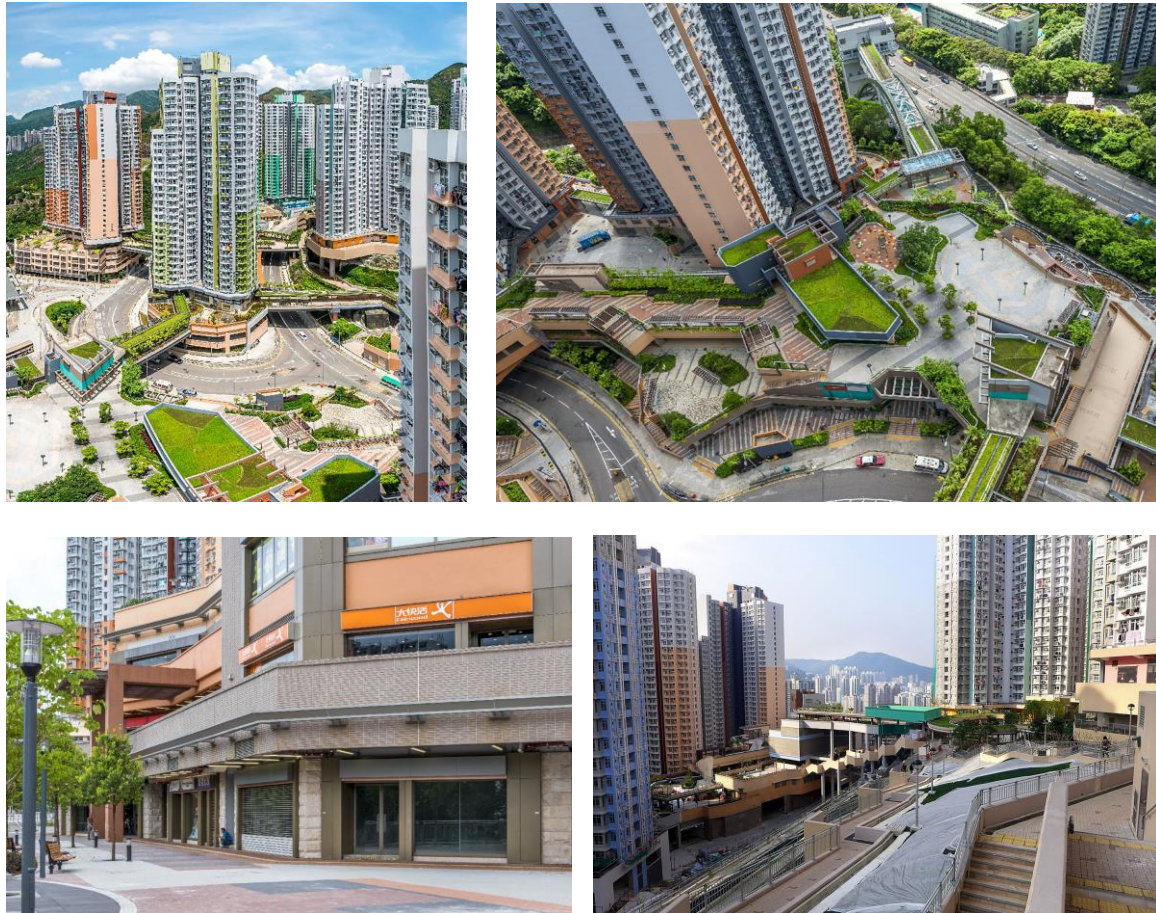


Figure 1. «Shui Chuen O Estate», Hong Kong.

4. Conclusion

In our opinion people lifestyle is the main factor that influences the search for typologically new buildings and the creation of the new residential urban environment. This is a kind of a system of human and family behavior. Under the influence of political, ideological, economic, social, cultural and other factors, people lifestyle is constantly changing. Architects, urban planners and other professionals involved in creating a comfortable and convenient residential urban environment are required to study the changes carefully and respond to these changes in time [4, 5].

But the opposite effect should also be noted. This happens when the created living environment transforms and forms the different lifestyle, sometimes not the lifestyle a man has been dreaming about. According to sociologists, Russian society still does not have the necessary integrity and stability of people lifestyle. People are divided into lower and higher groups according to their income and living standard. The following things as nature of work, leisure, social activity and social climate within the family, staff and society change.

On the basis of the research results and the data got from realtors about the demand for the urban living environment, it is possible to create a certain architectural image, i.e. a kind of "layout" of the space-planning typological element. In our opinion, it is a residential or multifunctional building or a complex of buildings with a developed structure of service functions involved in the structure of this building or complex. The service functions include garages, covered parking lots, shopping, cultural

and recreational areas, facilities for children and sports, etc. As they can be placed only with a sufficiently large number of residents, only high-rise multifunctional buildings or complexes can be considered. And only in this way it is possible to create convenient, comfortable modern housing for a certain category of people.

Besides, it should be noted that one of the most serious problems in creating a decent comfortable urban environment and new types of apartments and residential buildings is the poverty of Russian population, which, as noted above, is an integral component of people lifestyle. According to Rosstat, at the beginning of 2019 about 20 million people (15% of the population) had incomes that are below the minimum subsistence level. At that, the average age of the poor is from 46 to 48 years old. The changes taking place in post-Soviet Russia and their impact on people lifestyle should be carefully studied. They should be under constant and close attention of architects. Lifestyle is a basic, fundamental factor in creating new typological structures in the architecture of residential buildings and in the architecture of cities of the future.

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