V Congress of Russian Psychological Society

Peculiarities of Urban Architectural Space Representations

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Abstract

Current rates of urbanization have challenged psychological science with the necessity to study all aspects of the interaction between humans and urban environment. The analysis of psychological effects, including visual effects, that urban environment has on human perception and behaviour occupies an important place in these studies. The purpose of this research project is to identify the basis and specific characteristics of subjective typologies of urban architectural space that are constructed by people who have experience of interaction with urban environment (city dwellers) and those who do not have such experience (villagers). All respondents have individually divided photographs of various urban architectural spaces into several groups which allowed identifying typical and specific parameters of their evaluation and typologisation of urban environment.

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Keywords: urban environment; city perception; evaluation of urban environment; subjective typology of architectural space; city dweller; villager.

1. Introduction

The city as a historical reality knows several thousand years of history and appears to be the basis of modern civilization. However, active exploration of this socio-environmental construct started only a few decades ago. In Russia studies dedicated to this phenomenon started to appear only since the end of 1970s, and the researchers in psychology started to take relatively active interest in this issue only last decade. At the same time, the urban environment is a reality for the majority of population of the developed countries in Europe and North America (75-90 per cent and more). In Russia, according to the report of the Federal Statistics Service published in 2010, 73, 2 per cent of population live in cities [1].

The analysis of psychological aspects of the interaction between individuals and urban environment is becoming one of the focal points in environmental psychology in the international scientific research practice.

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For example, Giuliani et al. [2], who have analysed all scientific publications appeared in two most prestigious journals specialized in the field of humans-environment interaction (Journal of Environmental Psychology and Environment and Behaviour), found out that the analysis of the specific characteristics of urban environment can be viewed as the core of environmental psychology covering most of the empirical research. In fact, the issues concerning urban environmental stress, satisfaction with living in the city and the selection of location attachments are the mainstream research topics in European and American environmental psychology. The situation is very different in Russia where psychological aspects of individual urban-environment interaction are specific and rarely studied. So, when it comes to scientific discussions and conferences organized by Russian environmental psychologists, only 4% of all reports deal with psychological aspects of interaction with the urban environment while the highest percentage of research in environmental psychology in Russia is dedicated to educational and professional environments as well as to the aspects of creation and development of ecological consciousness of an individual (Russian Conferences on environmental psychology, Moscow, 1996, 2000, 2003, 2005, 2008, 2012.). Thus, at present the studies of urban environment in Russia, including psychological aspects of interaction of an individual and the city, have fragmented character.

Yet, the analysis of the psychological effects of urban environment is necessary for understanding of how these factors influence perception, individual behaviour, formation of individual world outlook, satisfaction of personal needs, which create a holistic personality and a structure for human society. According to Davydov [3], on the one hand, the city and its space are physical and include buildings, streets and squares, and on the other hand, they are symbolic and carry some kind of hidden or encrypted information that can have moral, sacred or political nature. The city cannot be reduced to its physical form, the general structure or the architecture; neither can it be considered only as the system of signs or symbolic elements that create the communication field and psychological atmosphere of the city. It represents cultural space, which contributes a lot to the construction of an individual and a society.

The eclectic model of urban environment (Bell et al. [4]) suggests that there are many factors that influence our perception of the city: they are determined by objective factors (the character of visual environment, noise levels in the city streets, the degree of safety), individual differences (sex of the individual, his or her experience, individual psychological characteristics, etc.) and the distinctive features of the city (the historical and cultural heritage, quality of life, level of development, etc.). Due to these factors the city will be perceived differently, either as a friendly and comfortable environment that provides opportunities for development and self-realization or as a threatening and dangerous place full of real and potential negative impacts.

The city perception of an individual is largely a subjective process. Despite the fact that the parameters of city architecture, location of streets, of urban framework and fullness of the urban fabric are objective and clearly defined, every person reacts differently to the combination of various objective factors. Urban environment is not a set of given material elements, it is also individual attitude to these elements; the objects of the environment are always full of personal meaning based on memories, associations, feelings and experiences of an individual. Perceiving the environment here and now, the individual transfers it to all moments of his or her existence, defining it as a time continuum, lasting from "yesterday" through "today" and to "tomorrow." The perception depends on the novelty and the degree of closeness and familiarity of an individual with the environment.

At the same time, the specific perception of urban environment will largely determine individual’s behaviour, push him or her to commit certain acts, provoke his or her emotional reactions, regulate psychophysiological states. For example, the visual characteristics of certain residential constructions created in 1950s often provoke involuntary the activation of teenage reactions of grouping, emancipation, protest, etc., especially when individuals are surrounded by this environment (when groups of adolescents and young adults gather in the yards, vandal acts become more frequent, etc.) [5]. Reasons of such "provocations" are not clear enough and the following question arises: why does such environment initiate the association of people in groups and encourages their deviant behaviour?
2. Hypothesis and methods of study

Most of the elements of urban environment in contemporary Russian cities have emerged as a result of the economic, strategic, cultural, and political planning, but the psychological effects have never been taken into account or even studied. The questions of how they are perceived by people, what is the basis of the evaluation system of the architectural environment of the city and how it can affect a particular type of behaviour are very relevant today. Many people use the subjectively created typology of architectural space based on their experience and knowledge when they perceive the environment and create its image. At the same time, the perception of any spatial environment is significantly affected by personal space of an individual: the surrounding area and his or her familiar world.

It is the familiar world that becomes the reference point and the centre of the coordinate system in all personal evaluations. Consequently, it is possible to assume that people with diverse backgrounds and experience of visual perception (the villagers and the city dwellers), as well as people having different social status (students and teaching staff) will perceive and evaluate urban environment differently, highlighting some specific elements in it, as well as the evaluation parameters for the creation of a typology of urban space.

A study that allows testing this hypothesis was conducted; it included 60 respondents: professors, lecturers and students who live in a big city (Yekaterinburg, Russia), teachers and students from rural schools and villagers (village Martynovo, located more than 100 km away from Yekaterinburg). Respondents were given 78 black and white photographs of buildings of various architectural styles and functional value, taken in different Russian and European cities. The respondents were asked to arrange photographs into groups according to subjectively formed characteristics (they were allowed to create up to 10 groups) and explain their choice.

3. Discussion of the results

After having processed the data, the following results have been obtained.

Students from rural areas have distinguished the following most common clusters of buildings (some examples of their most personal and colourful comments are given in brackets):
- architectural monuments;
- ordinary buildings ("more simple" houses);
- unusual constructions (fiction, interesting structure);
- countryside buildings (village, rustic style, merchant village, private sector);
- modern building (new-built quarters);
- block of flats ("Bachelors", apartments);
- wooden buildings;
- shopping centres and office buildings;
- museums;

Some respondents identified several additional groups (special cases):
- historical buildings (old times, stables, buildings of Catherine II period);
- high-rise building (high-rise, tall buildings);
- religious buildings (church);
- urban buildings (city, metropolis);
- old buildings (ancient times, old buildings, "it is time to demolish, to take down", old houses).

The total body of commentary and individual names given to the groups of photographs allowed identifying the main evaluation parameters and the basis for classification which is represented by the following dichotomies: historical / contemporary, rare / frequent, high / low, urban / rural, simple / fantastic, residential / administrative, beautiful / ugly, spacious / cramped.
Indentifying space type and classifying it within a specific cluster depend in this group of respondents on the following characteristics:

a) the material of the construction (glass, wood, stone);

b) associative form (a labyrinth, a lighthouse, a chess board, a crown, a ship or a tower);

c) function (churches, apartments, offices, shopping centres, banks, educational institutions, museums, offices, airports);

d) class or group affiliation (upper, middle class).

*Teachers in rural schools* have identified the following clusters of urban architectural space (some examples of their most personal and colourful comments are given in brackets):

- foreign constructions (European, international);
- original buildings;
- low buildings;
- old houses (old brick buildings, the building of the "old style");
- office buildings;
- architectural monuments (culture, grandeur of the architecture);
- old buildings (squalid, outdated);
- office buildings (offices, firms);
- wooden buildings (wooden houses, cottages, village);
- modern housing and urban high-rise buildings (apartment buildings, skyscrapers, high-rise sector).

The group of "unusual buildings" can be mentioned as a special case (unconventional, unusual layout). The main criteria for evaluation and classification for the rural teachers are the following dichotomies: historical / contemporary, original / standard, round / rectangular, residential / administrative, domestic / foreign, compressed / fragmented, luxury / poor, diverse / uniform, urban / rural, peripheral / central, traditional / non-traditional.

Indentifying space type and classifying it within a specific cluster depend in this group of respondents on the following characteristics:

a) material (wood, stone);

b) relative age of a construction (old, new);

c) function (commercial buildings, administrative, residential);

d) degree of familiarity (the familiar or ordinary, unusual).

*University students* (residents of the big city) have identified the following clusters of architectural spaces:

- buildings with a specific function (commercial, administrative, entertainment, business centres, hotels);
- foreign constructions (European buildings, foreign buildings);
- historical buildings (buildings with rich décor, buildings with columns, bay windows, unusual windows);
- office buildings;
- modern residential high-rise buildings;
- aesthetically-attractive buildings (liked, beautiful building);
- residential buildings of the twentieth century (old houses, houses of the 80s., houses of the 50s, 60s.)
- unsightly buildings ("freaks", scared away, did not like);
- modern glass buildings ("glass" houses, a lot of glass);
- typical residential buildings (simple domestic buildings, nothing special, boring, ordinary high-rise buildings, the standard panel houses).
The main criteria for evaluation and classification for the university students as the residents of the city are the following dichotomies: standard / original, modern / historical, low / high, low rise / high-rise, administrative / residential; repulsive / attractive, soulless / animated, beautiful / ugly, rounded / rectangular, individual / mass, boring / fun.

Identifying space type and classifying it within a specific cluster depend in this group of respondents on the following characteristics:

a) style (pseudo antique, classicism, modern);

b) association with other cities and countries (Saint-Petersburg, Europe, foreign, Russian);

c) presence of additional elements of decor (with domes, towers or columns, castles, palaces);

d) time of construction (pre-revolutionary, 50-60s. twentieth century, 1980s, contemporary);

e) function (entertainment, business, office and hotel).

University professors and lecturers (residents of the big city) have identified the following clusters of architectural spaces:

- business structures (business districts, large firms, modern offices);
- private sector buildings;
- shopping centres;
- high-rise buildings ("ant hills", high-rises, skyscrapers);
- old buildings (abandoned, "abundance of the past", "to demolish", barracks);
- glass and concrete buildings;
- standard buildings ("Khrushchevki");
- public buildings;
- cultural heritage (national values, culture, wooden architecture);
- modern building (modern housing, modern urban planning);
- architectural monuments ("witnesses of past luxury");
- residential houses (private housing).

The main criteria for evaluation and classification for the university professors and lecturers are the following dichotomies: large / small, high / low, pompous / strict, luxury / poor, new / old, stable / dynamic, residential / business, normal / unusual, individual / mass, eclectic / uniform, historical / contemporary, sad / happy, gray / bright, aesthetic / unsightly, pride-provoking / shame of our time; locally-business/ multipurpose.

Identifying space type and classifying it into a specific cluster depend in this group of respondents on the following characteristics:

a) time of construction (mid XIXth century, Soviet, old);

b) material (wood, glass, concrete);

c) specific development trends (the private sector, the barracks, "Stalinka", "Khrushchevka," mansions);

d) functions (commercial, educational, industrial, medical).

4. Conclusions

In result, it seems possible to make the following conclusions:

1) Both city dwellers and villagers use the same universal parameters to evaluate urban architectural space (namely old / new, round / rectangular, normal / unusual, high / low, residential / business, beautiful / ugly) that reflect essentially the general patterns of the urban space evaluation transmitted by mass media and other sources of information. These patterns create the general representation of what the city should be and how it differs from the other types of habitation and they also define the superficial patterns of behaviour in various urban situations (business, commercial, residential or other areas).

2) The villagers use some specific characteristics in addition to the general parameters of the evaluation of urban space. These specific characteristics have more shades of meaning than the criteria used by the city
dwellers. It appears that the villagers are more sensitive to the “foreign origin” of the elements in contrast to their normal existence and they estimate indirectly the probability of the appearance of similar elements in their life. They are more likely to notice the information that is not noticed by the city residents due to its irrelevance to their safety and comfort. As the flow of information in the urban environment exceeds considerably the optimum of information an individual can perceive and process, the city dwellers adapt and filter data leaving out everything unimportant and irrelevant. Consequently, they impoverish their “inner picture” of the urban environment.

3) The evaluation parameters of the city dwellers are more numerous and systemic since they have to consider the minor details of the architectural space in order to build constructive interaction with their environment. They cannot just give personal assessment of particular space, but they have to develop a whole system, their subjective typology that includes the characteristics of norms and rules of conduct in different environments.

4) City dwellers give emotional connotations to their evaluations more often than villagers using such words as “like”, “nice”, “fun”, “boring”, etc. These words reflect profoundly personal perception of the urban environment, its interweaving with personal meanings and value system of the respondents, the dependence of mental well-being and satisfaction of needs of the city resident from his or her urban environment. Villagers are more formal and emotionally distant in their evaluations of architectural space. They rely primarily on general visual characteristics of the given stimuli in identifying groups of architectural spaces.

5) Teachers, professors and lecturers mention cultural and historical significance of the architectural space more frequently than students, appreciating its socialisation potential as an instrument of the development not only of the aesthetic taste of an individual, but also his or her cultural and national identity.

References