Spatial models of local identity

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Abstract. The strive for local identity is an expected public request and a challenge for urban planners. The basic topology of settlements reflects archetypes of places that had stand the test of time and change of fashions. The spatial structure of the city is the complex shape of relationships, functions, symbolic meaning, time, experience, and other features of a particular place. The proposed macro-space is a model of the urban territory that embraces several places under conditions of pedestrian proximity, circulation, and identification. In the article we discuss spatial factors affecting the local identity of urban spaces that are composed of three groups. First, the layout of streets and urban landscape. Secondly, the social characteristics of the urban environment: crowding, liveliness, connectivity, and behavior of residents. Thirdly - virtual, semantic and symbolic factors: events, myths, etc.

1. Introduction

Residents and tourists, employees and schoolchildren have different understandings of the same facts and signs of the urban environment: graffiti on a garage gate for one group can be considered an achievement and for another a rude violation of the order. Age, education, occupation, and other socio-demographic characteristics, alter interpretations of meanings. Understanding of pattern language of the special groups of residents is the modern source of architectural design. That is especially important in the redevelopment of large areas of mass housing.

People establish the correspondence of place and event very quickly. The images of the environment fixed in the collective consciousness become archetypes such as "Street," "Boulevard," «Down-town». Archetypes of real places receive their names that complement the "cultural landscape". The social structure of the city is built on the streams and events, accessibility of places, and connectivity of population on the particular sites of territory. Historically, the size and extent of the urban parts depend on pedestrian, or horseback, or bicycle commuting and accessibility. Generally, the dimensions of pedestrian areal vary from 100 to 2000 meters with important benchmarks at 150, 600, 2400 m. These intervals are embedded in the consciousness through the senses and motor patterns.

The images of various social groups compete for the attention and commitment of the public. Social events transform the environment and modify the attitude towards places. The transformed environment sets new impulses or reinforces social stereotypes. The residents of the city identify the same pace in their way since their impressions are determined by upbringing, culture, traditions, their own experience, etc. However, this is not an excuse for lessening the role of architecture and urban planners. As one of the founders of sociology E. Durkheim has long noted: “... - people of the same civilization imagine space in the same way”. At the same time, a cumulative effect is observed: the

more people associate themselves with a locus or context, the faster the place continues to "gain weight".

The architectural space of historic cities allows spontaneous navigation and adequately responds to events and situations of social life. The identification of the spatial and socio-cultural patterns support the “reasonable” and “generally accepted” environmental behavior.

People adapt to the urban fabric after settling in new places and at the same use to change the surroundings. In the everyday trill, personal stories and mass media narratives the images of the place obtain the mythical content and daily practice modifies the logic of urban layout.

The well-known concept of the image of the city that was proposed by K. Lynch and translated into the Russian language by V. Glazychev [1]. Along with this concept, we can propose that the local identity of urban spaces consists of three factors. Firstly: - the architecture of buildings and urban layout. Secondly: - the social characteristics of the urban environment such as location, density, liveliness, connectivity and livability. Thirdly: - virtual, semantic and symbolic factors of the cultural landscape: real and virtual events, myths, status and brand, the way the place is presented in a world of mass communications, etc.

The subject of research for urban planners is primarily the spatial structure of the urban fabric, but also the social topology of the cultural landscape. That is why the cognitive models of the urban environment could help to find the most appropriate methods to enforce local identity [2].

The image of an urban environment is the order of recognizable places: micro-, mezzo-, macro-spaces, associated with the behavior of people and the sense of place in the cultural landscape. These places have a spatial representation in the real world. Socio-spatial cells are hybrids of cognitive representations of social space and the real physical environment of social activities in a built environment.

Micro space is the name for an immediate place of interpersonal communication that can last even for a few seconds. In micro-scale of the built environment, people in immediate proximity and mobility of a group are the indicators of a certain type of “environmental behavior”.

Mezzo space is the name for a "convex space" of social control. Segmentation of the urban landscape into places with specific public control is a way to classify the built environment into segments of different "places" and associated "scenarios". The four basic models of mezzo space: "yard", street, park, and a lane are a conceptual framework for urban planners, and landscape architects.

Macro space is the name for a pedestrian areal that offers the image of the place for "mental maps". Macro spaces are distinguished by the conditions of pedestrian accessibility and social connectivity [3].

Transport and communication frames bind the space of the city and plays the role of a bearing structure for urban fabric. The communication framework is the most resilient structure of the city. The frame of the «urban planning system» forms the conditions for the development of “urban tissue”, and “tissue” creates conditions for mobile and variable “plasma of urban environment”. The well-known differentiation of structural plans into Framework, Tissue, and Plasma [4] can be used to analyze and understand the complexes of built environments that are smaller in size and scale. "Plasma of the urban environment" is formed by micro-spaces of people's locations; "The Framework of the urban environment" is a sponge of macro-spaces around central and transit convex and axial public spaces formed by buildings, highways, landscape elements embankments and the sites with limited access. Cognitive urbanism unites the study images of the cultural landscape, with the planning and design of the urban environment.

Cognitive models of urban space offer the key to analyzing and shaping of local identity. These models express a complex functional relationship, symbolic meaning, time, experience and other parameters of a place. A new and important features of the proposed theoretical models of urban environment are: 1 - the three interconnected scales of micro-, mezzo-, and macro spaces in built environment; 2 - the three diapason of distances of personal communication, social control and connectivity of places; 3 - classification of prototypes and interrelation of their optimal spatial and

social parameters; 4 - the diagram of environmental behavior for scripting the content of street life and scenario-based design of places in public realm.

In the next paragraphs, we will consider patterns that increase the identity of basic macro spaces: an enclave - a territory surrounded by borders on all sides, a region - a territory affected by the center, a district - a pedestrian areal with the name and identity.

2. Borders and portals of pedestrian enclaves

The identity of the regions is built around a leading social function of its center, by the directions of ray streets and by the short-distance site views. Some researches indicate an interrelation of the structural complexity of urban fabric and the density of social activity. We can notice that the size and latitude of public spaces in historic urban centers are a cast of the most significant and repeated mass events. The length of pedestrian routes and sequential functional processes forms linear and star-shaped structures that develop along with the directions of pedestrian connections. Several converging roads and alleys form star-shaped intersections. It looks like the tentacles of octopuses or starfish. We can imagine public spaces as a living organism.

The starfish has a ductile "body frame" that can be solid or ductile as needed. In animals, the plasticity of the form depends on the hard state of the connective tissue. The connective tissue of public spaces is people who fill and shape public spaces. The life of public space depends on the presence of people in complex functional processes and socio-cultural events. The consolidated placement of anchor points induces the flow of people, and as a consequence increased the flow of people attracts services [5]. There is a strong correlation between people's density and the structural complexity of urban fabric in region-type macro-space.

3. Centres and ray of pedestrian regions

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4. Nodes and belts of pedestrian districts (okrug)

The identity of *okrug* is expressed by the name associated with the central streets and squares offering special features and the long-distance view of landmarks. The important source of recognition is the feeling of community, self-organization of residents and local traditions. The unique buildings and layout of streets achieve the attractiveness of macro space, by iconic sights and elements of the natural landscape. The role of central core is reinforced by belts and rings of alleys and boulevards, and supported by the nodes of the transport infrastructure that add to the complexity of structural plan.

A structural analog of the Macro space in a living nature could be found among living organisms that could easily change their body shapes, such as jellyfish and octopus. These marine animals do not have bones or shells; their body shape is constantly changing, maintaining integrity. Their spatial structure could have a central core, belt-like formations, and power nodes [1]. Similar structural

elements should be sought inside the *okrug*, where the squares and streets interlink into the network of a central core with iconic architecture that is supplemented by belt-shape and semi-ring alleys and boulevards.

Architecture and public spaces of the city create the most durable part of the urban environment, forming the basis of identity, recognition of places and conditions for comfortable urban living [6]. In this sense, the public spaces of the city form the structural basis of areas where an atmosphere and spirit of the place is created.

5. Conclusion

The "Identity" of a place means a combination of such features as recognition, uniqueness, and brand. [2] A noticeable lack of "identity" in the areas of industrial housing and even in city centers has a negative social and economic consequence. For a post-industrial city, the identity of the districts becomes a condition for competition and survival.

Planning structure of macro spaces can be meaningful, recognizable, prestigious territories, or- on the contrary – can be empty, useless and uninteresting for communicative, social life.

The accessibility of place and the connectivity of people are just as important for the image of the place as the configuration of borders, nodes of axes and dimensions of spaces [2]. The segmentation of the city space into macro-spaces reflects our desire for order and security. However, not the entire urban environment can be explored and build up as understandable macro spaces. Poorly structured marginal territories surround the intensively developed central core of the city. The marginal territory can be quite convenient to its residents but is uncomfortable for visitors and symbolize socio-cultural uncertainty and poor governance. Marginal areas [3] are dominated by objects that could not find a space in more expensive parts of the city territory: industrial and communal-warehouse enterprises, large recreational areas, sections of medical and special institutions, large sports facilities, shopping malls, etc. During the renovation of marginal territories, it is important to create a clear vector of change and offer to residents a range of participation in the development of their neighborhood. That will stimulate social interaction and create the basis for local identity.

The studies of transformations in the city plan give the evidence to the fourth dimension of urban space: the time. The renovation programs for the urban environment become a part of history. The memory of the place serves as a support for the perception of sociocultural phenomena and become an incentive for the generation of the new cultural landscape. The heritage of city space transformations adds to the identity of the place and should be carefully treated while renovations of the urban environment.

References

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