CITY LANGUAGE AS A PHENOMENON OF THE MEDIA FORMATION OF ARCHITECTURE AND SPACES. EXAMPLE OF LVIV

JĘZYK MIASTA JAKO ZJAWISKO MEDIALNOŚĆI ARCHITEKTURY I PRZESTRZENI. PRZYKŁAD LWOWA

Mariana Parneta
Ph.D student
Author's Orcid number: 0000-0001-9459-3676

Lviv Polytechnic National University
Institute of Architecture and Design
Department of Architectural Design

ABSTRACT

The language of the city is expressed through the informative essence of architecture and urban spaces. This phenomenon is compared with the structure and features of language in linguistics and analyzed on the example of the city of Lviv. This research complements the theoretical understanding of the concept of the city language and can be also used to improve architectural practice.

Key words: architecture informativeness; city language; architecture media formation.

STRESZCZENIE

Język miasta wyraża się poprzez informacyjną istotę architektury i przestrzeni miejskich. Zjawisko to porównuje się ze strukturą oraz cechami języka w językoznawstwie i poddaje się analizie na przykładzie miasta Lwów. Badania rozwijają teoretyczne rozumienie pojęcia języka miasta. Mogą być także wykorzystane w praktyce architektonicznej.

Słowa kluczowe: informatywność architektury; język miasta; medialność architektury.

1. INTRODUCTION

Architecture is not only form or function, it is also the way we think and communicate. The urban environment can tell a lot about its inhabitants and their values.

With the development of structural linguistics and the emergence of semiotics, many cultural phenomena began to be investigated as "language", in particular architecture. The urban environment as an object for analysis is multi-informative. The architectural image of the city provides an opportunity to look at the city through time as a place to live in for people with their specific values and way of life.

Analyzing the informative essence of the city as its language has a number of advantages. Firstly, in this study the city language is considered as a model of its ability to be a carrier of information. Secondly, this approach depicts the communicative properties of urban space in the best way. Thirdly, language has a direct connection with a person's consciousness, his cognitive skills and is manifested through the interpretation of certain information by a person. Taking this into account, it can be argued that this research is relevant in clarifying issues related to the phenomenon of the city language.

The purpose of this article is to reveal the phenomenon of the city language in the media formation of architecture and spaces. For this, the following tasks are set:

–   analyze available materials and methods to clarify the essence of the city's language;

–   compare the language of the city with the language in linguistics;

–   to reveal the structure and characterictics of the city language through the prism of media formation of architecture and spaces and analyze them using the example of Lviv city;

–   to propose promising directions for the development of this topic.

In this study, the author focuses on the Eastern European epistemic perspective. In particular, in the years preceding 1989, the theory of architecture developed different areas of exploration of architectural issues, while others, although similar, developed independently of Western European or American thought. The author is aware that the linguistic correlations of architecture have been studied both by Charles Jencks in his critical essays and monographs (cf. Jencks 1969) and by Mario Gandelsonas, who argues with Jencks and Baird, postulating a more syntactical way of understanding architecture (cf. Gandelsonas 1973). Many successors explored this direction of the relationship between structural linguistics and architecture, sometimes adding other ideas. The source of philosophical inspiration here were, among others, Roland Barthes or Umberto Eco, but also the anti-humanist concepts of Louis Althusser, the structuralist concepts of Noam Chomsky and others. Eastern Europe developed its theory largely not as a belated rejoinder but as an autonomous branch of thought.

2. MATERIALS AND METHODS

Modern science represents urban planning as a universal topic for research in many areas. In particular, such an aspect as informativeness of the environment determines the close connection of architecture with other humanistic disciplines. This is due to the complexity of the multi-level structure of the informative essence of the environment.

The use of mean "language" in the study of architecture and city spaces involves the process of its perception, understanding and interpretation. The theory of architecture uses research in psychology, semiology and phenomenology to study these processes. Currently, these studies are not included in the general theoretical base but are presented as author's concepts. These include the works of C. Norberg-Schulz (Norbert-Schulz 2004), C. Alexander (Alexander 1979), C. Jencks (Jencks 1977).

In modern science the concept of "city text" is used for multidisciplinary research. This term is used in geography, history, linguistics, later it was also used in architecture. It is revealed in researches

of soviet scientists V. Toporov (Toporov 1995), Y. Lotman (Lotman 2000) and their followers. They consider the city a semiotic mechanism, reflection and generator of culture. The Ukrainian researcher L. Matsko tried to consider this problem from the point of semantics view (Matsko 2008). Informational symbols of the city appear as an object of analysis in the research. Today the concept of "city text" turns into the general concept of "city language" and is an important component of the semantic paradigm in various sciences, in particular the theory of architecture.

The language of the city is often considered in postmodern culture, particularly in sociology. The French sociologist M. de Certeau studied the informativeness of the city as its language (Certeau 2011). He claims that architectural activity in the city should be oriented towards interaction with society. Therefore, the understanding of the media formation of the city as communication with its inhabitants determines the uniqueness of the city as an object of research.

Geographer I. Mitin (Mitin 2004) offered an approach to the interpretation of urban space that allows combining geography with other sciences to study space and its semantic specificity. Mitin uses the concept of "palimpsest" for the city which explains the presence in it of many semiotic systems that can manifest themselves in accordance with a specific place. From this we can conclude that any place is constantly reinterpreted and given new meanings which are born from the elements of previous perception. For a city resident this means that his personal attitude to the city space is an important contribution to the "palimpsest" of this city. It is clear that not every given meaning and interpretation of the informativeness of space takes root for a long time. But the task of the architect is to take into account those interpretations of the city that have developed, in order to connect the new meanings of the future project with the existing ones.

3. RESULTS OF STUDYING THE PHENOMENON OF THE CITY LANGUAGE AS A MANIFESTATION OF INFORMATIVENESS OF ARCHITECTURE AND SPACES

The concept of the city language and the concept of language in linguistics are somewhat different because the first is much broader than the traditional understanding of language (Sikora 2016). However, there are common features between them that makes it appropriate to analyze the language of the city as a language in linguistics.

The city language is a phenomenon endowed with polyinformativeness, complex variability, consisting of a set of texts heterogeneous in origin, which constitute an interconnected whole and function in a single urban space as a manifestation of social and cultural human values. Its discovery gives an opportunity to understand the uniqueness of the city.

Similar to language in linguistics, the language of the city is also endowed with semiological and phenomenological perception. This is due to the media formation of architecture and spaces as their informative essence, especially its mental manifestation.

Methods of arrangement of architectural elements in the urban space can be considered as the syntactic structure of the language which determines the regularities in their combination. Unlike the text we are used to, which is deciphered gradually in the process of reading, information in the urban space is perceived simultaneously and its interpretation depends on the conditions of the specific environment. Therefore, the more orderly the architectural space will be, the more understandable its language will be for a people.

3.1. City language as a system

From the point of view of structural linguistics, language is a structured system. Ferdinand de Saussure wrote that language is "a social product, a combination of conventions accepted by society." Therefore, in order to understand the language of the city, it is necessary to study it as a system (Saussure 2011).

The structure of language contains different hierarchical levels: phonemes, morphemes, lexemes, syntaxemes. Linda S.M. compares the sign systems of verbal and architectural language (Linda

2012). Form and content are connected on each of them. This research of the city language expands the model (Fig. 1).

Any architectural element is formed using simple geometric shapes that are endowed with semantic meaning (Habrel, Parneta B., Parneta M. 2021). Therefore, it is proposed to accept an architectural symbol, which is the equivalent of a phoneme, as the smallest unit of the architectural language.

Architectural elements correspond to morphemes, which, like linguistic segmental morphemes, are divided into root and affix. The root is a segmental part that is common to all related elements. In architecture, this is usually a fixed set of symbols. It is the center of the element and the carrier of its meaning. An affix is a service morpheme attached to the root that expresses its peculiarity, helps the element to correspond to the artistic design of the entire object. Also, some elements may be accented or stressed, while others remain unstressed.
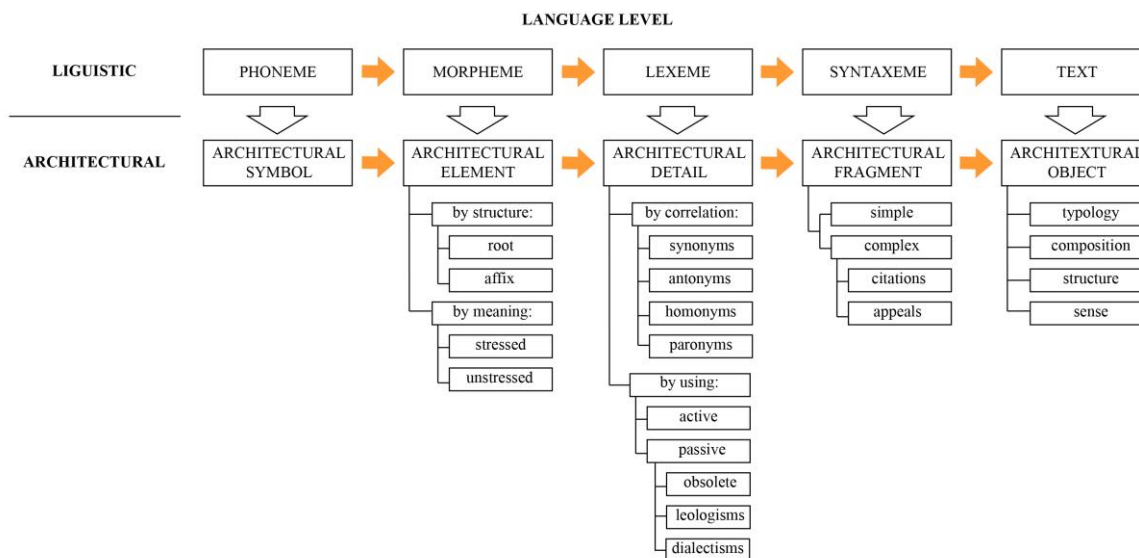

Fig. 1. Structural model of the city language. Source: by author

The equivalent of a lexeme in architecture is a detail. As in linguistics, details can act as synonyms (be similar), antonyms (contrast), homonyms (have the same appearance but different meaning), paronyms (have a similar appearance but different meaning). Architectural details are divided into active (those that are often used) and passive (rarely encountered) by using. The second ones can also be divided according to the rules of linguistics into obsolete (those that were used before, but have now lost relevance), neologisms (new details), dialectisms (specific to a specific region).

Architectural fragments, which can be simple or complex, correspond to the verbal level of syntaxemes. The difference between them is that complex fragments are supplemented with citations or appeals. At first glance, they are difficult to notice but structures borrowed from other buildings are often integrated into the architecture. The most obvious method of citation can be seen on the example of postmodern architecture when the artistic image of objects was formed from fragments characteristic of previous architectural styles. The reception of the appeal thanks to the architectural fragments directly lies in the communicative function of the architectural environment. This makes it possible to convey certain information to residents and influence their consciousness.

The level of the linguistic text is identified with a whole architectural object, the image of which consists of individual fragments. Like a verbal text, we can structure architectural objects by typology, compositional features, structure and their sense.

The task of structural linguistics is to study grammatical structures as the task of architectural semiotics is to study the structures of each hierarchical level. Simplicity, completeness, and logical consistency are considered to be signs of the optimal grammatical structure in linguistics.

The city environment is a model system not only in terms of hierarchical levels but also in terms of their value. The media formation of architecture and urban spaces has a double value: material-practical (physical) and informative-aesthetic (mental) because it provides a person's ability to navigate in space and organize life activity in it.

3.2. Signs of the informative essence of the city as a language

Analysis of the concept of city language involves the identification and definition of its characteristics according to urban linguistics (Sikora 2016). The language of the Lviv city as a manifestation of the media formation of architecture and spaces is characterized by multi-components, which is shown in the figure below (Fig. 2).

A wide variety of tools for creating infomativeness of urban space determines the polyvariability of the city's language. In urban space of Lviv people constantly encounter text, words, symbols, signs, advertising, slogans, images, etc. No wonder Y. Lotman called the city "a melting pot of many codes and texts" (Lotman 2000). The language of the city includes not only visual, but also sound, smell, and tactile information embedded in the architectural space. For example, characteristic sounds for Lviv are screeching of trams, sound of traffic on cobblestones, singing of street musicians in the evening, noise from fountains. As an example, the space of Mytna Square is place where all these sounds are found. With the beginning of the full-scale Russian invasion of Ukraine air alarm sirens became an integral part of the sounds in the city (Parneta 2022). Also the sound in the space can be associated with a specific object, such as, for example, with the Arena Lviv stadium, near which the sounds of football fans are definitely not to be confused with anything. As for smells, Lviv is most often associated with the smell of coffee, so this applies to all coffee shops and takeaway coffee spots. The remains of its medieval walls, the rough surfaces of the Renaissance buildings, and the shiny surface of the cobblestones give tactile information to the image of the city.

The language of the city is a universal multiplicity of elements of the city's culture united by its individuality (Patron 2013). The city as a complex semiotic mechanism can be so only because it is a collection of texts and signs that are arranged in different ways, belong to different languages and different levels that are constantly changing. Containing various social, national, and cultural texts, the city carries out their various combinations and hybridizations. Any space is constantly being changed, reinterpreted and given new meanings, so we can call the language of the city dynamic.

Changes in the medial formation of architecture can be considered both during its historical development and within a specific period of time (in linguistics – within both diachrony and synchrony). The architecture of different historical eras includes many messages that convey the history of the city and the values of its inhabitants. We observe how the city is transformed in the process of replacing one worldview with another.

Today we can trace the dynamics of the city language of Lviv on the example of the changes made to the public space of Dvirtseva Square in front of the main railway station. In 2021 the square was reconstructed, the space was organized in a new way and modern elements of urban design were added, which accordingly changed its informative essence. An example of the dynamics of language at the level of an architectural object is the glass hotel on Shukhevycha Street which appeared in a historically formed environment, changing it and attracting all the attention in the space. The dynamics at the level of the decoration element can include components that simplify the lives of residents and meet the needs of today. In the space of Lviv these are charging stations for electric cars, public transport stops with digital display boards, modern drinking fountains, etc.

The binary oppositions of the city language as autotextuality and intertextuality determine the absence or presence of interaction between the languages of different cities. The reason is urban environment that is characterized, on the one hand, by closedness, and on the other hand, by openness. Modern Ukrainian cities, in particular Lviv, are characterized by cross-linguistic intertextuality caused by the influence of the English language. Increasingly in urban space, we come

across words of foreign origin and neologisms (newly coined terms) that not everyone understands. An example is the popularization of hubs and co-working spaces in Lviv. One of the most famous is the "Futura Hub" center which solves one of the modern problems of society – a need for a place for freelancers to work. Futuristic building forms, materials and integration of screen into facades testify to the modernity of this object, at the same time distinguishing it among the buildings familiar to the residents.

Characteristic of the city language	Hierarchical level		
	Urban space	Architectural object	Decoration element
Polyvariabi-lity	Mytna Square	Lviv Arena	Coffee to go
Dynamism	Dvirceva Square	Hotel IBIS	Charging electric cars
Intertex-tuality	Rudanskogo Street	Futura Hub	Graffiti
Authenti-city	Rynok Square	Dnister Building	Mosaics «Ocean»
Memoriality	Heaven Heroes Memorial	Potocki Palace	ZUNR monument
Technology	Opera House Fountain	«Forum Lviv»	Windows-screens

Fig. 2. Manifestations of characteristics of the city language at different hierarchical levels of Lviv research. Source: by author

A very controversial and new element of urban design is graffiti which radically broke into the spaces of Lviv at the end of the 20th century. This is a case when it is difficult to see the difference between art and vandalism.

An example of the intertextuality of city language at the level of public space is the transformation of transport streets into pedestrian ones and the narrowing of roads to reduce count of cars in the central part of the city and give priority to pedestrians in the historical environment. This method has long been the norm in Europe but in Lviv it started to be used recently and it is subject to a lot of criticism and disapproval from residents. One of the successful examples of the implementation of this method is the reconstruction of Rudanskogo Street which began to look much nicer and cozier than before.

An important concept in the study of language for linguists is differential dialects which make a language unique to a specific area. The basis for the city language of Lviv is its native speech, in which the dialectal and literary segments of the language are intertwined. The development of the modern language of Lviv began at the end of the 90s of the last century and continues to this day that is connected not only with the active migration of the rural population to the city but also with people's interest in the dialect language. The integration of dialectics into city space is evidence of the authenticity of the city's language and the self-awareness of its residents as a nation. The dialectal segment of the Lviv language is formed by the names of coffee shops, for example, "KRE-DENS-KAFE", "Liguminka", "Na Bambetli", "Tsvibak", "Tsukernya"; restaurants "Gasova lampa", "Spatser na dahu", "Shkotska", "Kryivka"; stores: "Fayni liody", "Lvivski pliatsky", "Chokolyadka", "Budenni bombony", etc. The action of dialectics is most clearly manifested in public architecture that is connected with its high level of saturation of communication with residents and guests of the city.

Authenticity creates a unique of the city, performs an identification function based on drawing attention to originality of the city. Historical spaces, architectural objects and elements are the most important components of the city language. Speaking about the authenticity of the city's language, it is also worth emphasizing the importance of preserving history. Great importance in Lviv is attached to historical monuments and their preservation because they form its unique image and distinguish its language from others. This fact is confirmed by a sociological survey, which was conducted by the author in December 2022 to determine people's perception of informativeness of architecture and urban spaces of the city of Lviv. The required number of respondents was calculated according to the formula:

$$n = 1 / \Delta^2,$$

where n is the volume of the sample population; Δ is the proportion of the specified sampling error (according to sociological standards, we accept $\Delta = 0,05$). Thus, it was necessary to interview the number of respondents (n) 400.

According to the results of a survey the most associations with the city are made by its historical objects: the Opera House, Rynok Square, the Church of Sts. Olga and Elizabeth, the Dominican Cathedral, the Potocki Palace and the Lviv Railway Station (Fig. 3).

A large number of objects in Lviv are dedicated to the memory of certain historical events, so memoriality is a feature of the city. Objects dedicated to tragic events create the most emotional response in people. One of these spaces in Lviv is the Heaven Heroes Memorial. This is a modern conceptual space which contains metaphors related to the tragic events of 2014. Taking into account the situation in Ukraine in 2022, we can predict the emergence of more than one such memorial related to losses during the war in every Ukrainian city.

Architectural objects that have existed for a certain period of time are automatically memorials of their history (Potsky Palace). As a separate type of memorial buildings, it is worth mentioning museums that often perform the function of preservation and demonstration of historical heritage.
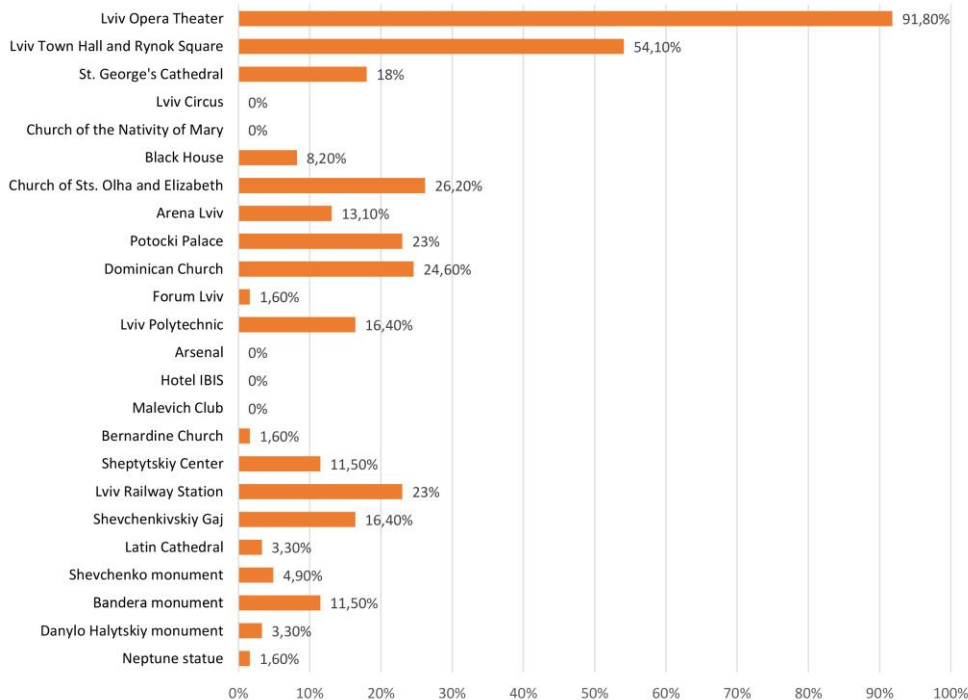
Fig. 3 Objects that evoke the most associations with Lviv. Source: by author

At the level of decoration elements, the most common embodiments of commemoration are monuments in honor of certain people or events (for example, ZUNR monument). They also include memorial plaques and even the names of streets or squares.

The requirements for the modern city are constantly increasing, today the latest technologies are actively integrated into the urban environment that need to offer relevant and structured information. Therefore, we can consider technology as another feature of the city language. Media facades, screens, and digital signs are increasingly common in Lviv. Historical facades are the most criticized for these tools. A good example of the technology of the city language is the reconstruction of the fountain in front of the Opera House in 2020, for which the latest technologies that allow playing musical compositions and RGB LED lighting systems were used. A weather station is also installed in the fountain that analyzes the wind direction and air humidity and adjusts the height of the water jets accordingly. The most optimal is the use of technological means of informativeness in modern architecture, for example on the facades of offices or shopping centers ("Forum Lviv"). On such facades, modern lighting and multimedia tools look organic and underline the uniqueness of the artistic image of the building.

4. DISCUSSION OF RESULTS AND IDENTIFICATION OF PROMISING DIRECTIONS FOR THE STUDY OF THE CITY'S LANGUAGE

Any language is characterized by three types of constitutive properties: universal (inherent in all or most languages), typological (characteristic only for a certain language group), specific or individual (inherent only in a specific language) (Steriopolo 2017). These properties can be identified by comparing them with other languages (in this case, other cities). Therefore, a promising development of this research is the comparison of the language of Lviv with the languages of other cities.

Another direction of the development of this topic is the study of changes in the informative essence of the architectural space during its development. The classification of these changes can be borrowed from linguistics (Karpilovska 2011) and reduced to three main types: 1) emergence and

development of new components; 2) replacement of some components by others; 3) uncompensated loss of components. At the same time, it is worth identifying trends to change, namely temporal, structural, formal-semantic, functional-stylistic and communicative-pragmatic.

The basis of understanding any language, including the city language, is a communication model that requires more detailed research. The analysis of the language of Lviv city shows that communication in the architectural environment consists of such components as source, reciever, message, context and tools of communication. In this case, the source is an architect who selects the tools of communication, taking into account the context of the environment, and uses them in such a way that it becomes possible to correctly decode his message to the recierer, namely the city dweller (Fig. 4).

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┌───────────┐    ┌───────────┐    ┌─────────┐    ┌─────────────┐
│ ARCHITECT │ ⇒  │  MESSAGE  │ ⇒  │  TOOLS  │ ⇒  │ INHABITANTS │
└───────────┘    └───────────┘    └─────────┘    └─────────────┘
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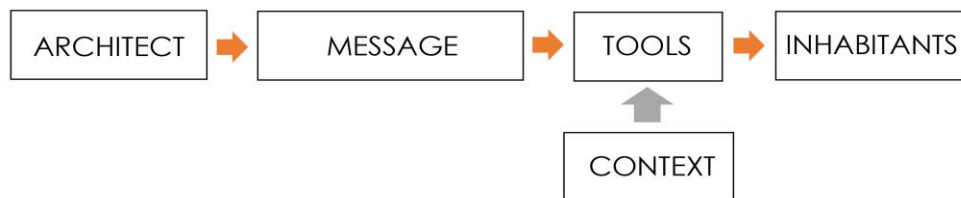
Fig. 4. A model of communication embedded in the language of the city. Source: by author

There is a problem that consists in the residents' lack of understanding of the informative essence of objects and spaces. This is caused by such factors as ignorance of the public, oversaturation and chaos of information in the urban space, faulty design in the existing environment that creates an imbalance both in the physical environment itself and in its psychological perception by residents. Architects should also pay attention not only to the language of the city itself but also to how it is used by the people living in it. At the same time, it is necessary to take into account social and cultural factors that can affect the informative essence of the environment. The solution to these issues is the introduction of a socio-cultural approach to design, which consists in checking the feasibility of integrating certain information into the space and involving the community in the design process. The new architecture should not prevent a person from living in the space of his city. The form should not dominate the person; it should be organically integrated into existing environment with respect for each of its elements. After all, living in an urban space today means being a part of its language, reading the stories of those who lived here before us, and creating your own on top of theirs.

5. CONCLUSIONS

1. The multilevel structure of the informative essence of the environment determines the involvement of materials and methods from various scientific fields in the study of the city language, such as linguistics, phenomenology, semiology, psychology, sociology, geography. The language of the city can be defined as a set of informational values, metaphors and symbols in the architectural space.

2. The understanding of the city language in the theory of architecture, due to its multilevel, is broader than in linguistics, where the language is considered only as a system of sound and graphic signs. Architecture, its style, memorial value, social and cultural signs - all this is the language of the city addressed to us.

3. The language of the city should be considered as a system that has material-practical and informative-aesthetic value. Polyvariability, dynamism, intertextuality, authenticity, memoriality and technology are highlighted among the features of the city language of Lviv. Each of these features characterizes the language of the city from both an architectural and a linguistic point of view.

4. Proposed theoretical understanding of the concept of "city language" through the media for-
    mation of architecture and spaces expands the limits of its functioning in the theory of architec-
    ture. Prospective directions for the study of the city language are proposed: a comparison of
    the language of Lviv with other cities, the study of changes in the informative essence of the
    architectural space and the study of the model of communication in the architectural environ-
    ment. These topics contribute to the resolution of problems related to residents' non-
    acceptance of new architecture in cities.

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AUTHOR'S NOTE

Postgraduate student, assistant of the Department of Architectural Design, Institute of Architecture and Design, Lviv Polytechnic National University, Ukraine. The sphere of scientific interests is the informativeness and semiotics of architecture and urban spaces.

Contact | Kontakt: maryanaparneta@ukr.net