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# CONTEXTUALITY IS A CONDITION FOR PRESERVING THE UNIQUENESS OF A HISTORICAL CITY

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#### Abstract

The definition of contextuality is given. The material and non-material components of the urban context are highlighted. The factors of influence on its formation and development have been determined. It was found that the formed certain architectural and urban planning context, which determines the unrepeatability of the city, is the result of the total impact on the internal features and properties of existing buildings and open urban space the external natural, historical-cultural, historical-political, national, religious and socio-economic, and also information technology and legal factors throughout the entire period of the city's existence. The parameters are highlighted as defining characteristics of the "place", according to which it is proposed to evaluate the "sustainability" of the historically established architectural and urban planning context. It is assessed as the preservation and harmonious development of these defining characteristics in eddition with modern new elements and connections. It is important for possible restoration-reconstructive transformations in order to preserve context's uniqueness, ensure sustainable continuity and increase attractiveness through the activation of existing historical accumulations and their addition with modern new ones.

Keywords: Architectural and urban planning context; Contextuality; Sustainability.

## **1. INTRODUCTION**

The modern development of a small historical city should take into account all the features of its formation and change throughout the entire period of its existence. The city was formed and developed based on certain conditions and circumstances, which made up a certain situation (context), which is individual for everyone. There are certain common features for historical cities, but depending on the combinations of various factors and their activity at a certain time interval, the unique characteristics of each city were formed. It should be the same in their modern and in their future development. That is, contextuality should be the basis for all new additions and changes in historical cities, because it is a condition for preserving their uniqueness. The issues of contextuality, the preservation of the historically established urban context and the introduction of new buildings in accordance with it at different times were dealt with by experts from different countries, including: K. Alexander [1], M. Bevz [2], J. Gehl [3], V. Glazychev [4], D. Guley [5], A. Gutnov [6], C. Day [7], A. Ikonnikov [8], O. Rybchinsky [9], B. Rymashevsky [10], V. Tovbych [11], D. Harvey [12], B. Tscherkes [13], V. Shimko [14] and others.

Contextuality means the correspondence of existing and new elements (buildings, structures, spaces, etc.) to the peculiarities of the historically developed situation (context) [15].

The urban context was formed throughout the entire period of the city's existence under the influence of certain conditions and circumstances, which made up a certain situation, which is unique for each city. For an individual element of the system (historical center, city), the context can be defined as a feature of the urban environment at a certain time interval in which this element exists. Each element (building, structure, space, small architectural form) in the system of the historical center and the city has its own individual characteristics that develop over time. Environmental (contextual) signs are layered on them. They, as independent variables, affect the individual characteristics of these elements (for example, certain new forms and new functions appear in buildings, which are formed precisely by this context), or modify the relationships between them (for example, for buildings and open spaces, these are additions or transformations of form, functional changes, overflow of spaces of the square, street and building, the exit of the building function to the space of the square or street in front of it, etc.) [16].

The general state, content and significance of the historical urban environment at a certain time stage make it possible to determine the state, content and significance of its individual constituent elements (buildings and spaces). Changes in the environment affect individual existing buildings and spaces, cause them to change. Just like the appearance of only one new building can lead to changes in the historical center and the small town as a whole. Therefore, in order to decide what this building should be to correspond to the "place", it is important to consider the historical urban environment as a whole, taking into account its temporary changes. This also makes it possible to establish how all the already existing elements and their connections in the system of the historical center work in the conditions of a formed situation (context), and how they can develop, taking into account a certain perspective development of a small city, what additions can be.

Consequently, it is the contextuality in the restoration-reconstructive transformations of the historical center that should become decisive for the preservation and amplification of its features and uniqueness. And the peculiarity of the existing context, in turn, will determine the starting direction-activator for the perspective cumulative development of the city and improving the quality of life in it..

The aim of this paper is to show the methodology for assessing the "sustainability" of the historically formed architectural and urban planning context, which should become the basis for determining possible restoration-reconstructive transformations in a historical city to increase its attractiveness and ensure sustainable continuity, which will preserve its uniqueness.

## 2. COMPONENTS OF THE URBAN CON-TEXT AND FACTORS OF INFLUENCE ON THEIR FORMATION

The material and non-material components of the urban context and the factors influencing their formation were identified. The following were classified as non-material.

- 1) Historical past. It is displayed through the presence of places associated with certain historical events and personalities that influenced the formation and development of the city. The factor of influence is historical-political. It was defined as both formative (due to the influence of historical personalities) and transformative (due to the influence of historical events).
- 2) Cultural layers. They feel through the presence of the characteristic features of different cultures reflected in existing monuments and urban plans, through the introduction of different peoples into the life and architecture of a given city at different times the dominant features of their culture and architectural style in their cities at that period. The factor of influence is historical-cultural. It has been identified as formative.
- 3) National, ethnic and religious diversity. It manifests itself in the multinationality of the townspeople and their belonging to different religions, in the regional mentality, urban traditions. It influenced the peculiarity of the urban planning and the volumetric-spatial solution of the centers of historical cities due to the close location of the temples of different religious parishes, often on the same city square. They have become urban dominants and have enriched the city silhouette with their various forms. The historical settlement of city residents, depending on their nationality and type of activity, also influenced the formation of certain city quarters and squares by the type of their activity. Various traditions are aimed at the functional filling of the urban environment. The factor of influence is national-religious. It was defined as formative and preserving the national identity of the city.

An illustration of the above can be the historical planning and development of Bar, Vinnytsia region. In the XVI century this town was divided into "Polny", "Russian" and "Gurny" Bar [17]. The market square was formed precisely in the "Polny" Bar, where Poles, Ukrainians, and Jews, who were engaged in handicrafts and trade [18] lived. It still has a partially preserved historical layout and volumetric-spatial composition and partially fulfills its historical traditional function.

- 4) Social stratification. It manifests itself in the peculiarities of the mentality, lifestyle, as well as occupation, and in the formation of the corresponding urban development (together with the influence on this of the national-ethnic and economic component). Historically, it was reflected in the morphology and typology of urban development, figurative, decorative, and coloristic features of buildings, in their functional content. In certain cases, it can be attributed to the "destructive" component, which causes uneven development of different parts of the city. The modern high-quality urban environment is characterized by the elimination of social stratification due to the social "mixing" of residents and ensuring its accessibility for all. The factor of influence is socio-economic. Its social component was defined as formative and preserving. It is the inhabitants who always form and preserve the "soul" of the city.
- 5) The economic component can be simultaneously attributed to both material (regional materials, funding) and non-material (regional technologies, traditional crafts, development of society) components of the urban context. The factor of influence is socio-economic. Its economic component was attributed to the transformative. The economic processes that took place in different periods in historical cities, during their existence, contributed to the growth of production and exchange of goods and stimulated the formation and development of various socio-cultural practices. Relationships and connections between people, communities, and institutions have shaped and changed the living space, that is, space where all the processes of human life, their mandatory and optional social practices, took place and are now taking place. We are talking about their social, industrial, political, spiritual, cultural, emotional life. Space for living, working, communication, meeting, spiritual enrichment, interaction, spending free time [19].

An example for illustration can be the town of Medzhybizh of the Khmelnytsky region, where the development of the market square and the adjacent shopping street was formed by the housing of Ukrainians, Poles, Jews, Greeks, and Armenians, who were engaged in trade and crafts. Their buildings, two-story with shops and workshops on the ground floor, have been partially preserved to this day. The city flourished as a trade center at the end of the 16<sup>th</sup> – beginning of the 17<sup>th</sup> centuries. In it,

"a magistrate was created, handicraft workshops were organized, two trades were held weekly and several fairs a year" [20]. At that time, the city had 12 thousand inhabitants. Now there are about 1.5 thousand. The Trinity Church, the priest's house, the shopping arcade with the town hall were erected on the market square and a synagogue was built in the neighboring quarter during that period. They became city dominants and formed a characteristic city silhouette. This is an example of a combination of national and religious diversity, social and economic components, and their joint influence on the formation of the architectural and urban planning component of the urban context.

- 6) Political-legal component (laws, permits, regulatory documents). Its influence on the existing urban context is manifested through the regulation at the local and state levels of migration processes and the loss of national-cultural identity by increasing the economic interest of locals and creating a comfortable urban environment for their living, work, and free time, which will stimulate them to stay and develop their own city. By improving the regulatory framework for design, implementation of restoration-reconstructive transformations, and new construction in historical cities to support their cumulative development. This will stimulate their "revitalization" and provide sustainable continuity at the same time. The factor of influence is legal. It should be classified as both formative and transformative.
- 7) Information-technology component (IT-technology, advertising, branding). Its influence on the urban context is manifested through the creation of information sites to promote the advantages of the city and attract different people to it, in different qualities, which will contribute to its development. Also, through the positioning of the city - its branding, which will show its uniqueness - the "spirit of the place", combining all the advantages of the existing components of the urban context authenticity, beauty, convenience of the "place" (its historical, natural, architectural features), the uniqueness of the "inhabitants" (national-ethnic and religious characteristics) and interesting "traditions" at the heart of regional production, "creative economy', local cultural events, holidays and functional content of the city. This will interest many people in visiting it, "revive" it and stimulate the economy. The impact on the urban context is also manifested through the use of IT-technology to improve the ecology in the city, the value and

quality of its existing and new buildings, living conditions and stay in it. The factor of influence is information-technology. It should be classified as transformative.

The following were attributed to the material components of the urban context.

- 8) Natural landscape situation. This is the dependence of the urban context on the existing climatic, hydro-geological, landscape features. It manifests itself in the presence in the existing buildings and urban planning characteristic features of their adaptation to certain weather conditions, temperature, precipitation, wind; soil characteristics; the features of the relief, landscape, and available water bodies, respectively. The factor of influence is natural and it as classified as formative.
- 9) Architectural and urban planning situation (existing buildings and open urban spaces and their connections). It manifests itself through the features of urban planning and volumetric-spatial composition (building composition) formed under the influence of all other components; morphology of urban planning and development (squares, streets, quarters, and buildings that form them); urban silhouette (urban landmarks and their connections); parcels of quarters and buildings that form them; materials for construction and decoration, textures of their surfaces; as well as through figurative; style; constructive; decorative and coloristic; typological; functional; infrastructure features.

Each component of the existing urban context was formed under the influence of a corresponding factor or group of factors. Formed certain architectural and urban planning context can be defined as the resulting total impact on the internal characteristics and properties of existing buildings and open urban space of external natural, historical-cultural, historicalpolitical, national, religious, and socio-economic, as well as information technology and legal factors during the entire period of the history of the city. These factors influenced the formation of the corresponding components of the existing urban context and through them on its architectural and urban planning component, which determines the uniqueness of the "place".

## 3. THE ASSESSMENT OF THE "SUS-TAINABILITY" OF THE HISTORICALLY FORMED ARCHITECTURAL AND URBAN PLANNING CONTEXT

It is proposed to determine the preservation and quality of the modern development of the historically formed features of the "place" – the historically developed architectural and urban planning context through the assessment of its "sustainability". The "sustainability" of the historically formed architectural and urban planning context is considered as the preservation and harmonious development of the defining characteristics of the "place" while complementing it with modern new elements and connections. To assess "sustainability", it is proposed to single out the following parameters as defining characteristics of the "place":

- scale ratios (maintaining the traditional scale of planning and development). The new quarter, which fits into the existing architectural and urban planning context, must be subordinate to the traditional historical planning and not exceed the size of the existing historical quarters in order to maintain continuity. In addition, it should be smaller than the territory of the dominant monument in order to preserve the historically established subordination of the ordinary quarters of the dominant's territory. The new building should be commensurate with the existing dominant, accents or ordinary-buildings, depending on its place and role in the city-wide composition;
- proportional ratios (of individual elements in the general system to preserve its integrity); preservation of the traditional subordination of ordinary elements to accent and dominant ones;
- modular ratios (between individual elements and their constituent parts). The module size should be taken as the overall dimensions (width, depth, height), which are typical for existing historical ordinary, accent, and dominant buildings. New buildings should be formed on the basis of certain modules-sizes, respectively, for ordinary buildings, accents, and dominants;
- characteristic layout and volumetric-spatial composition of the development of the historical center, its squares, streets, quarters. When introducing a new element to supplement them or to eliminate the existing destruction, it is necessary to compare them with historical plans to preserve the characteristic ratio of built-up and open urban spaces,

regularity, directions, and sizes. The composition of the development of new quarters should be formed in accordance with the traditional in the explored city, namely: perimeter solid with an inner courtyard; perimeter with gaps; frontal solid; frontal with gaps; dispersed; or mixed;

- the characteristic morphology (shape and volume) of the planning and development of the historical center, its squares, streets, quarters, and buildings that form them. When creating new quarters or fitting individual buildings into the historical urban environment, one should take into account the size and shape of the preserved historic quarters, squares, directions, and red lines of streets that are characteristic of the explored city. To do this, it is necessary to compare the historical and existing modern urban plans by superimposing them; historical and modern buildings - according to existing iconographies and photographs and field surveys; create a scheme of possible shaping for a given context. New quarters should not be larger in size and should be similar in shape to the preserved historic quarters. In terms of size and shape of plans and volumes, new buildings should be subordinate to existing historical ones (ordinary, accent, dominant) corresponding to their importance in the city-wide composition;
- the characteristic silhouette. The presence of disharmonious (in height and volume) elements or gaps in the panorama of historical buildings, as well as losses of historical dominants, which violate the panoramic integrity or impoverish the silhouette, is investigated. For new buildings – observance of the traditional number of stories; the shape of the tops (roofs) of new buildings should support the historical silhouette; creation of an equally high ordinary new development to highlight the existing historical dominants; holistic restoration of destroyed and recreating of lost historical dominants to preserve and restore the characteristic historical city silhouette;
- species disclosure; integrity of visual connections between historical dominants and accents. The presence of disharmonious elements that break the visual connection between dominants and accents is investigated;
- parceling of quarters and facades of buildings that form them. The missing parts of the quarters must be filled with new buildings, taking into account the historical parceling. Facades of new buildings erected on the site of historical losses as compensatory development should support and continue

the parceling of facades of existing historical buildings;

- style features (facades' plastic, details, decor).
  Depending on the degree of value and destruction of the existing historical building, a stylistic and figurative solution of facades for new compensation buildings can be made, namely: using the techniques of imitation or stylization of historical forms, as well as in new modern forms with observance of historical parceling, color, texture and finishing materials;
- constructive features. Preservation and restoration of the historical constructive system of monuments during their adaptation to a new function, functional development, addition;
- features of materials, textures, colors. There should be certain common materials, the same characteristic surface textures, a single color scheme for all elements of the explored historical urban environment in order to preserve unity. This should be seen in the decoration of the buildings' facades, in their details, in the arrangement of open spaces, in the elements of their physical content;
- typology and functions of existing buildings, formed on the basis of the traditional way of life and the type of activity of locals; new buildings or new open spaces should receive new functions that do not disrupt but complement the well-preserved, or revitalize the abandoned historical urban environment;
- connections between individual elements in the general system of the historical center and the city as a whole; the presence of violations in these connections, which lead to the system's destruction (planning, volumetric-spatial, functional, socioeconomic);
- figurative and emotional associations connected with a certain place (preservation of the "spirit of the place"). To attract, enhance the impression and revitalize the "place", it is proposed to create "objects- performances" and activate various types of "urban performance", relying on traditions;

Each of the defined 18 parameters for a new building, space, or fragment of the urban environment should be that close (subordinate) to the corresponding parameters of the historically formed architectural and urban planning context in order to correspond to this particular "place" and ensure its sustainable continuity.

Moreover, each historical urban environment must

be consistently analyzed at three interrelated levels: urban planning, volumetric, functional. At the urban planning level, where the urban planning and volumetric-spatial solution should be considered, attention should be focused on the existing development of the historical center as a whole - buildings, structures, and open urban space that unites them. At the volumetric level, one should consider the volumetricplanned, constructive, and stylistic-figurative characteristics of buildings and structures that form this historical center; their details. At the same time, each building and structure should be analyzed as an integral part of a single architectural and urban planning context. At the functional level, the influence of the existing functions of buildings, structures, and open spaces on their condition and activity and on the quality and activity of the historical center as a whole should be taken into account.

The assessment of the "sustainability" of the historically formed architectural and urban planning context is carried out using the method of expert assessment, in points, with the definition of the degree of "sustainability" and the possible RRT in it. For each parameter, the studied historical urban environment can receive 3 points - as the most preserved (harmoniously supplemented), 2 points - partially preserved (with the presence of point deformations in the historically formed architectural and urban planning context), 1 point - significantly changed (with the presence of significant deformations in the historically formed architectural and urban planning context), 0 points – broken (with a completely deformed historical architectural and urban planning context). The maximum possible number of points received is 54; the minimum is 0. According to the scores received, the degree of "sustainability" of the historically formed architectural and urban planning context and the possible degree of restoration-reconstructive transformation in it (preservation, amplification, correction, or change) are determined. Namely: 54-45 points - I degree of "sustainability" (all additions correspond to the historically formed context) - preservation and amplification is possible; 44-27 points - II degree of "sustainability" (presence of point additions that contradict the historically formed context) – correction is possible; 26–9 points - III degree of "sustainability" (the presence of significant additions that contradict the historically formed context) - correction and change are possible; 8-0 points - IV degree of "sustainability" (the historical architectural and urban planning context is completely deformed) - change is possible.

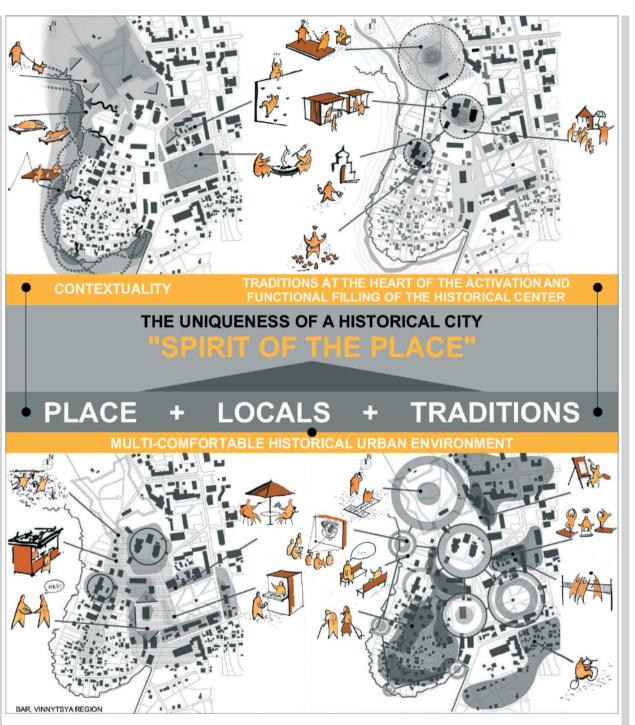
So, the selected parameters and a certain degree of "sustainability" affect the possible degree of restoration-reconstructive transformations and the corresponding methods (preserving, restoring, renewing, or transforming) and the characteristics of possible new buildings and open spaces that will correspond to this particular city, ensure its sustainable continuity and will increase the attractiveness by activating existing historical valuable accumulations and complementing them with modern new ones.

### 4. THE UNIQUENESS OF THE CITY

Concentration on one small territory (now in the historical center of the city) of "evidence" of the historical past, multicultural layers, national and religious diversity, reflected in the preserved monuments, urban planning, and volumetric-spatial composition of buildings, together with the existing natural landscape and, most importantly, mentality and the way of life of local residents determine the individuality and mood of each city, determine the "spirit of the place" – its uniqueness.

So, the uniqueness of the city is determined by the multi-layered context of the place in combination with its inhabitants and local traditions. That is, the next formula for the uniqueness of the city "Place + Locals + Traditions" = "Spirit of the place" works (Fig. 1).

The place is the first, material, component of this formula for the uniqueness of the city. It is determined by the peculiarities and "sustainability" of the historically formed architectural and urban planning context, as the result of the total impact of all the components of the urban context identified above. Historical cities have unique monuments of architecture and urban planning of local and national importance, which clearly trace their history of formation and development. These monuments constitute the "genetic code" of each city, they reflect its natural, historical, cultural, and mental characteristics. Unfortunately, at present many of them are in a state of disrepair and in a dull and disharmonious environment.





The formula for the uniqueness of the historical city. Developed by N. Leshchenko

ARCHITECTURE

Traditions are the second, intangible, component of the city's uniqueness. They are reflected in the way of life. Traditions are associated with the preserved historical urban functions and the activity of modern urban life – "urban performance", every day (permanent) and festive (periodic). Now they can be traced in the peculiarities of the location and development of the preserved historical quarters, streets, and squares, which were formed according to the traditional occupation of their inhabitants. This is evidenced by their surviving names, for example, "market square", "shopping street", "blacksmith street", "craft quarter" and others.

It is the revival of historical traditions, as well as the formation of new ones, their use for the functional filling of the historical urban environment, and the activation of various types of "urban performance" that will lead to the "revitalization" of the city, firstly, and, secondly, will arouse interest in it from different people who together will contribute to economic development and the growth of the well-being of local residents.

Local residents are the main component of the city's uniqueness. The city's uniqueness is manifested not only in the peculiarities of its planning, volumetricspatial composition, building architecture, that is, in the material components that have been formed throughout its entire existence, but is also felt in its peculiar mood – "soul". This is something that cannot be touched, but it is invisibly present and causes certain sensations in this particular city.

The "soul" of a city is what it lives with, these are the sensations and impressions that make it easy to distinguish it from other cities. These sensations are formed in a person immediately, when he first gets into it, or gradually, over time, when he learns its squares, streets, buildings, courtyards, or rather life in them. It is the peculiarity of life in a given city that determines its uniqueness [21].

There are many cities that are similar in natural conditions, in architecture, but it is impossible to find at least two identical cities in terms of the received sensations, according to the "soul". This is because the "soul" of a city is formed by its inhabitants, and their uniqueness is reflected in the uniqueness of their city. Local residents are the main treasure of every city. And it is on them that life in it and its further development depends. Therefore, first of all, it is for them that the urban architectural environment should be multi-comfortable.

## **5. CONCLUSIONS**

So, contextuality with an appeal to the historical and the formation of new traditions and ensuring the multi-comfort of the urban environment for living, working, and spending free time is the key to preserving the uniqueness of each historical city. And this means, firstly, it is necessary to highlight, use and enhance the historically formed features and advantages of "place" to preserve and enhance the uniqueness of the city. Secondly, this city must be of high quality for the modern residence of locals who will stay in it and provide it with life. And the preserved, restored and new traditions will contribute to its attractiveness and interest in it from different people to visit it, to invest and, thereby, to stimulate its economic development.

The proposed methodology for determining the degree of "sustainability" of the historically formed architectural and urban planning context with the allocation of its four degrees of "sustainability" will help to correctly determine, respectively, the possible degree of restoration-reconstructive transformations in the historical city (preservation, amplification, correction, or change), which will simultaneously increase its attractiveness and quality of life in it and ensure its sustainable continuity, thereby preserve its uniqueness.

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