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Principles of Combination of Architecture in the Process of Restoration and Conservation of Architectural Monuments

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Abstract: ***The article deals with the history of construction of monuments in Uzbekistan, architectural formation, the initial task, architectural and functional changes that took place before our arrival, the historical value of the monument, material, structural, artistic and architectural aspects. the degree of preservation, the principles of determining the need for conservation and restoration of monuments, as well as their drawings, ie history, style, appearance of devices, decorations, patterns he worked on the spreads, fragments, sketches and projects of Nigorlam, and in some cases the model or layout of the future building, the proportions of architectural forms, paigor in drawing, all the proportions used in architecture, the law of proportions in architecture, the principles are explained as architectural decorations are designed in accordance with the shapes of the building.***
Keywords: Historical cities, architectural monuments, cultural and natural cultural heritage, architecture and urban planning, principles, forms, construction, restoration, conservation.

I. INTRODUCTION

We all know that research is carried out before the development of a project for the restoration or conservation of an architectural monument.

They include the history of construction of the monument, its architectural formation, its initial function, architectural and functional changes that took place before it reached us, the historical value of the monument, the degree of material, structural, artistic and architectural preservation, such as determining how much the monument needs to be repaired. Based on this complex research, the scope of work on the monument and the method of its repair will be determined. For example, the need for minor repairs, complete repairs, or conservation is determined.

If a method of complete restoration is chosen for a monument, it will be necessary to determine the method used in the initial design of the monument, that is, the law of architectural harmony and harmony of forms, before working on its repair project. Only then can the parameters (height, width, height) of the collapsed parts of the monument be determined correctly. After that, a project to restore the monument will be launched.

The fact is that before the architects of the past built the buildings and structures that have survived in the form of monuments, their drawings, ie history, style, appearance of devices, ornaments, patterns, spreads, fragments, drawings and projects, and in some cases even worked out a model or mock-up of the future building. Examples include drawings found in the archives of 16th-century Bukhara architects, 15th-century miniatures of Sharafuddin Ali Yazdi's “Zafarnoma”, and personal drawings by Yusufali Musaev, a well-known master architect who lived and worked in the early 20th century. Among these drawings, the works of the Bukhara architect are especially noteworthy.

These drawings show the design of the khanaqah, the caravanserai, the sardoba, and the architectural decoration. In working on this drawing, the architect made extensive use of the modular system, the unit of measurement of the time - "gaz", ie the type of scale square cells.

The architectural parts of buildings and structures constructed in this way are integrated into a coherent and balanced system. The parts of the building drawn on the scale of the paper are designed in a symmetrical composition with respect to the central longitudinal vertical plane. performed in proportions and sizes. This allowed the building to be artistically mature, well-shaped and beautiful. Thus, the architect of Bukhara used a modular system in the design of the building, that is, the scale type method as a means of achieving harmony in architecture, as a law of form proportions.

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In addition to the law used by the Bukhara architect, modern scholars who conducted research on the theory of architectural heritage (M.S. Bulatov, L.l. Rempel, G.A. Pugachenkova, P.Sh. Zohidov, K.S. Kryukov, A.S. Uralov, M.K. Akhmedov) Many tools of proportionality and hand-to-hand balance have identified the laws of architectural harmony used by architects of the past over the centuries, which are mainly:

1) In order to achieve the harmony of architectural forms, it is necessary to use a square, an Egyptian triangle (sides 3: 4: 5), an equilateral triangle, and a whole number of simple ratios based on them. The ratio of a half-square or a double square with a diagonal S5 derived from a square is also important in restoring the beauty of shapes;

2) The so-called "golden ratio" (1: 0.618) is one of the important factors in achieving harmony and its products in harmony with architectural forms. This ratio is obtained by hand construction on the sides and diagonals of a half-square, so that the half-square itself is the product of the square;

3) The shape of the circle, which can be obtained with the help of a pile in the drawing, and on the construction site with the help of a simple peg and plan, is also a procedure often used to ensure the beauty of architectural structures;

4) The effect of using the type of squares obtained on the basis of square diagonals, circles drawn inside and outside the square, created the law of "dynamic squares" in architecture. This law has also been widely used as an important tool in achieving architectural harmony;

5) The main order that connects and integrates all the proportions used in architecture (integer simple ratios, irrational ratios obtained by hand construction) is a modular system. It facilitates the work of an architectural project and helps to implement it on the construction site, ie determines the proportions of the building or structure, determines the size of the object, connects the accepted length measure with the building module, determines the scale of the building, is a creative method that converts handwritten and mathematical expressions of proportions into simple numerical ratios. It is a means of uniting all the beauties and peculiarities of arithmetic, geometric, and harmonic balances into a single architectural system;

6) In architecture, in the form of the law of proportion and harmony, the human body and its specific proportions, and as a unit of measurement, the heel (foot), which makes up 1/6 of the human body, the elbow, which makes up 1/4, or "gas", the part of the human hand from the tip of the fist to the shoulder (60-62 cm) was adopted. the building material brick was easy to adjust;

7) In addition to the above-mentioned proportions, symmetrical approach, compositional integrity, rhythm of repetition of the element of forms, priority of the main form (volume), attention to the location of the chair, threshold and finish, as well as the principles of decoration of the building included in the means of ensuring the beauty and harmony of forms;

8) Architectural decorations are designed in accordance with the forms of the building: the harmony of architectural forms in the composition is of primary importance, and the decorations are of secondary importance. The composition of ornaments consists of basic and auxiliary (complementary) patterns. The main patterns are designed to be seen from a distance, while the auxiliaries are designed to be seen closely, serving as a background. The harmony of the patterns is based on rapport-distribution, rhythm, scale type, symmetry, and color contrast. The ornaments are divided into poster majestic colors, gishtkori, koshinkori, ganchkori, girix, islimi, writing, carving, perfect and kundal types. All patterns had modular scale and handmade styling styles and unique color gamut.

Modern architects and repairmen, based on the architectural and archeological measurements made and carried out in the monument before working on the repair projects of the architectural monument, determined the law of harmony of forms and architectural proportions. , that is, it is expedient to study, research, and determine the method of initial architectural design and construction of the monument.

Determining which of the laws of architectural harmony and harmony of forms we have applied above in the monument under repair will increase the level of error-free repair of the monument, creating opportunities for spontaneity in the repair. This means that architects can identify the laws of architectural harmony and .linklliir proportions that were originally used in the monument before the implementation of the project to repair the monument, compare them with the measurement drawings of the monument, and in this way it will be possible to achieve the correctness and accuracy of the repair work.

The correct definition of the law of architectural harmony of the monument is a reliable guarantee of the restoration of the monument. This method can be used not only for monuments that are practically completely restored, but also for monuments that are being graphically restored. This approach can also be used to computerize repair projects in the future.

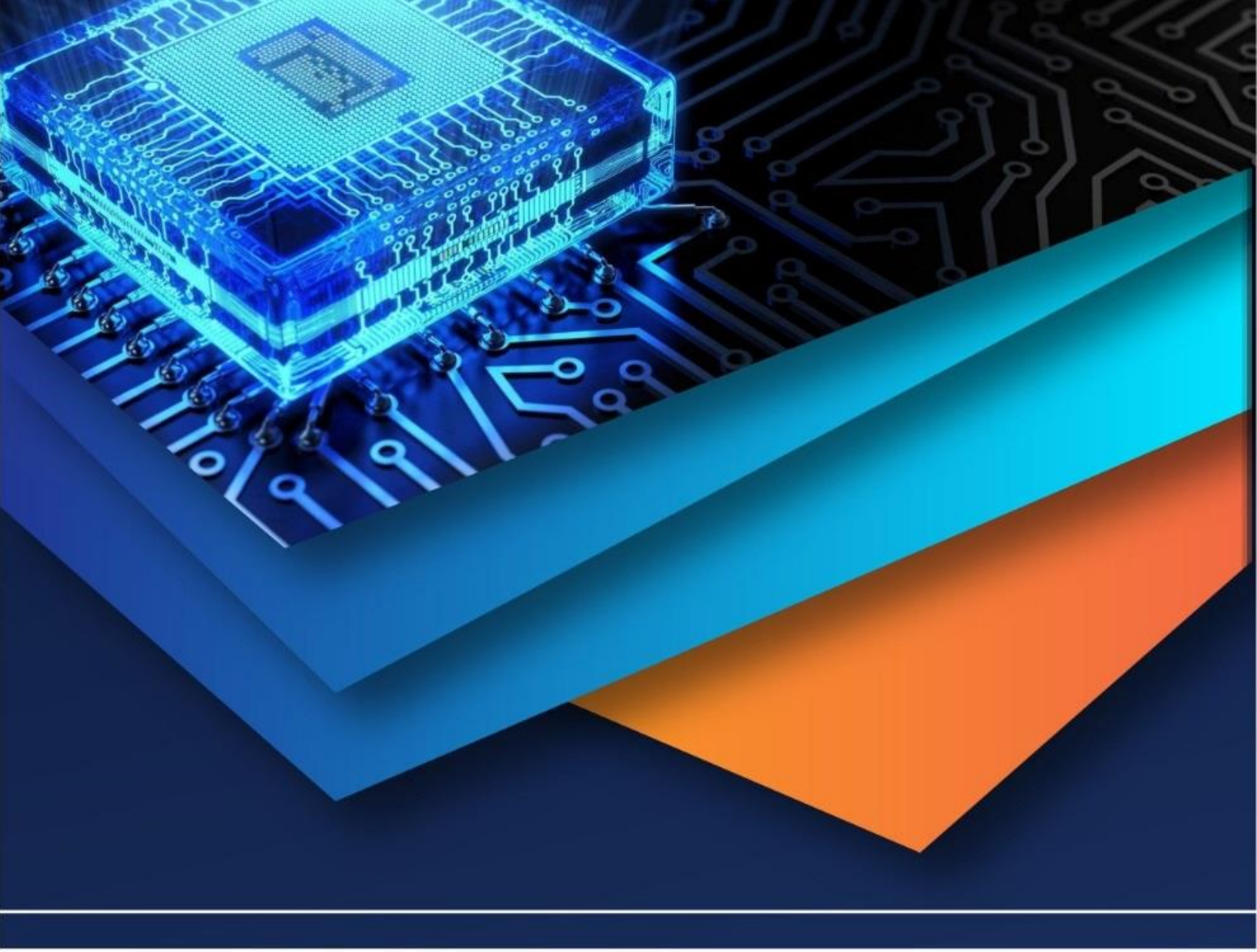
Thus, the laws of harmony used by architects in the eighties and served as a reliable program for thousands of years, that is, as a method of architectural design, are a theoretical "bridge" connecting the present with the past. you can be sure that the lib will serve.

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