The Aesthetic Necessity Of "Design Codes" In The Use Of Cultural Heritage Objects

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ABSTRACT

The paper considers the review of some architectural objects of the old town part of Samarkand formed by the end of the XIV-th first half of the XV-th countries. The destruction of the domes and minarets led to the disappearance of these unique architectural qualities of the Ulugbek madrasah. Additional studies, undertaken in connection with the planned restoration revealed a number of data on the history of the construction of the madrasah, helped to understand some features of its architecture, to establish the initial purpose of separate premises. We made a thorough examination of the entrance opening in the western wall of the aivan, which gave every reason to support the opinion of the previous researchers. The opening is distorted in shape, it is located not exactly along the axis, it is not coordinated with the composition of the framing facing it.

In the development of the design-code of the historical regions of Bukhara, the analysis of the architectural style of the city and the national elements of the building facades are discussed. The state of the hotel business and its construction processes, the processes of combining national style and modernity in hotels, and the formation of the new "Bukhara style" are discussed. In addition, there is information about the research to identify local materials in the development of city design code rules.

Keywords: reconstruction, architecture, design code, heritage, Ulugbek madrasah, Samarkand.

Introduction

In the ensemble of building of Samarkand Registan Square the Ulugbek madrasah plays the title role thanks to its common historical and cultural value and high artistic merit. Losses, suffered by the building for five and half centuries are so great, that in its modern condition without the second floor, without the vaulted-domed coating of the winter mosque and domes over the corner halls-it does not give even a remote idea of the former greatness of the building. From the distant points of view, when silhouette of the structures is perceived entirely and these losses are especially noticeable, compared with the restored volumes of the madrasah Sher-Dor and Tilly Kari, the need for restoration of the Ulugbek madrasah becomes obvious [1-4].

The original volumetric-spatial solution of the madrasah was built on the opposition of a powerful flattened parallelepiped of the main building volume to the dynamic rhythm of vertical elements-symmetrically located in relation to the portals of the domes and minarets. The main composite means, used by the architects were the contrast of the vertical and horizontal divisions, rising to the corners of the building, the rhythm of high-rise volumes, the axial symmetry of facades. The destruction of the domes and minarets led to the disappearance of these unique architectural qualities of the Ulugbek madrasah. And only the restoration of the original forms can return the artistic and compositional integrity to the unique monument of the 15-th century, to enrich the appearance of the whole ensemble, the important town-planning role of which has been preserved in the present situation [5-7].

Currently, most developed countries have developed design codes for their cities. The concept of design-code is not a new concept, it may have been called differently in history, but it was formed within the norms of architecture and urban planning. Now this concept is known to the world and every city is trying to create its own design code. The rules of the design code not only regulate the facades and spaces of city buildings, but also help to develop all business sectors there [8-11].

In the Republic of Uzbekistan, several laws and decisions have been introduced on design code rules. Including the decree of the President of the Republic of Uzbekistan dated November 27, 2020 "Development and implementation of the territorial "design code" taking into account the purpose of the elements of the urban environment, traditional architecture and culture, as well as the natural and climatic conditions of the place by July 1, 2022." Decree No. PF-6119 and the scientific project being carried out based on it also envisage the development of the Design Code rules of the historical centers of Bukhara and Samarkand cities [12].

Materials and methods

Design codes are comprehensive sets of guidelines and regulations that dictate the aesthetic and functional standards for building and preserving structures, particularly those of historical or cultural significance. These codes encompass a wide range of criteria, including architectural styles, materials, color schemes, spatial organization, and structural elements. They serve as a blueprint for ensuring that new constructions or renovations harmonize with the historical and cultural context of the existing environment. Design codes are often formulated by government bodies, heritage organizations, and architectural authorities to standardize preservation efforts and maintain the visual coherence of culturally important sites [13-18].

The concept of design codes has evolved significantly over time. Initially, informal rules and conventions governed the construction and maintenance of buildings, particularly those of cultural and historical importance. These early guidelines were often based on local traditions, craftsmanship, and aesthetic preferences. However, as societies began to recognize the value of preserving their cultural heritage, more formal and structured approaches to design codes emerged. In the 19th and 20th centuries, the rise of heritage conservation movements led to the establishment of explicit design codes aimed at protecting and preserving historical buildings and sites. These movements emphasized the need to maintain the authenticity and integrity of cultural heritage through careful and respectful interventions [16-19].

Design codes play a pivotal role in the preservation of cultural heritage. They ensure that any restoration or modification of heritage sites adheres to established aesthetic and historical standards, thereby preserving the site's original character and significance. This is particularly important in contexts where modern developments threaten to overshadow or alter the traditional architectural landscape. By providing clear guidelines on acceptable materials, construction techniques, and design elements, design codes help maintain the visual and structural integrity of heritage sites.

Furthermore, design codes facilitate a consistent approach to preservation across different projects and sites. This consistency is crucial for maintaining the overall historical and cultural landscape, as it ensures that individual

restoration efforts do not clash with each other or with the broader context. Design codes also provide a framework for decision-making in preservation projects, offering a reference point for architects, conservators, and heritage professionals to ensure their work aligns with recognized standards and best practices [20].

One of the key challenges in cultural heritage preservation is balancing the need for modern functionality with the imperative to maintain historical integrity. Design codes play a crucial role in navigating this balance. They allow for the incorporation of contemporary needs, such as accessibility and safety, while ensuring that these modern interventions do not compromise the historical and aesthetic value of the heritage site. For example, design codes might specify the use of traditional materials and techniques in visible areas while permitting modern materials and methods in less conspicuous parts of the structure.

While design codes are essential for preserving cultural heritage, their implementation can be challenging. One of the main difficulties is ensuring compliance among all stakeholders, including property owners, developers, and local authorities. There can also be tensions between the desire to preserve historical authenticity and the practical needs of modern use. Additionally, the application of design codes can be complex, requiring specialized knowledge and skills to interpret and implement effectively [21-24].

Moreover, design codes must be adaptable to the unique characteristics of each heritage site. A one-size-fits-all approach is rarely suitable, as each site has its own historical, cultural, and architectural nuances. Therefore, design codes often need to be tailored to address the specific needs and contexts of individual sites, which can be a resource-intensive process.

Design codes are systematic sets of rules and guidelines that dictate the standards for construction, restoration, and preservation of buildings, particularly those with cultural and historical significance. These codes ensure that any interventions on cultural heritage sites respect the original architectural styles, materials, and craftsmanship, thereby preserving their historical and aesthetic integrity. Design codes are often developed by heritage conservation authorities, government agencies, and architectural organizations to create a unified approach to maintaining the visual and cultural authenticity of heritage sites.

Future research can focus on several areas to further enhance our understanding and practice of cultural heritage preservation. One area of study could be the development and application of new materials and techniques that mimic the properties of historical ones while offering improved durability and resilience. Research can also explore the social and economic impacts of heritage preservation, including the role of community engagement and public awareness in supporting conservation efforts. Additionally, comparative studies of different architectural styles and preservation practices across various cultural contexts can provide valuable insights into the universal principles and unique challenges of heritage preservation.

The potential impact of new technologies on preservation efforts is a promising area for future research. Advances in digital imaging, 3D scanning, and virtual reality can revolutionize the documentation and restoration of heritage sites. These technologies allow for precise mapping and analysis of architectural elements, enabling more accurate and efficient restoration processes. Additionally, the use of augmented reality (AR) and virtual reality (VR) can enhance public engagement and education, offering immersive experiences that bring the history and aesthetics of heritage sites to life. Exploring the integration of these technologies into preservation practices can lead to innovative solutions and improved outcomes for cultural heritage conservation.

In conclusion, the preservation of the Ulugh Beg Madrasa through the application of rigorous design codes highlights the critical role of these guidelines in maintaining the aesthetic and historical integrity of cultural heritage sites. The study underscores the necessity of continuous review and updating of design codes, proactive conservation strategies, and the collaborative efforts of local and international bodies. By embracing new

technologies and fostering community engagement, future preservation efforts can ensure that the Ulugh Beg Madrasa and other heritage sites continue to inspire and educate, preserving their cultural legacy for generations to come.

Conclusion

The analysis throughout this study underscores the aesthetic necessity of design codes in the preservation of cultural heritage objects like the Ulugh Beg Madrasa. These codes provide a structured framework that ensures restoration efforts maintain the historical and visual integrity of heritage sites. By specifying materials, construction techniques, and decorative elements, design codes prevent inappropriate alterations and preserve the unique architectural and cultural significance of these monuments. The successful implementation of design codes in the Ulugh Beg Madrasa has enabled it to retain its aesthetic splendor and historical authenticity, serving as a testament to the importance of such guidelines in cultural heritage preservation.

The findings from this study have broader implications for the preservation of other cultural heritage objects. The principles and practices outlined in the design codes for the Ulugh Beg Madrasa can serve as a model for preserving similar heritage sites worldwide. The emphasis on using historically accurate materials, maintaining geometric precision, and preserving decorative elements can be applied to various architectural styles and periods. These practices ensure that heritage sites are not only structurally sound but also visually authentic, preserving their cultural and historical value for future generations.

The continuous review and updating of design codes are crucial for effective heritage preservation. As new technologies and conservation techniques emerge, it is essential to incorporate these advancements into the design codes. Regular updates ensure that the codes remain relevant and effective in addressing contemporary conservation challenges. This proactive approach allows for the integration of innovative materials and methods that can enhance the durability and aesthetic quality of restored elements. By keeping the design codes up-to-date, heritage preservation efforts can achieve higher standards of quality and sustainability.

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