



The Reconstruction of Mirzo Ulugbek Madrasa Minaret

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Abstract: Attention to Islamic architectural monuments built and rebuilt in Turkestan in the early XIX–XX centuries is increasing. Along with the demolition of mosques, madrassahs, tombs, and tombs in the territory of Turkestan at that time, the issue of their preservation was on the agenda. Study, the transfer to the next generations of the scientific and spiritual heritage related to the Islamic religion and its influence on the formation of the architectural culture inherent in the way of life, customs and traditions of the peoples of the world for millennia, is one of the most urgent tasks of today. In this article highlights of the reconstruction of the historical heritage Mirzo Ulugbek madrasa minaret and it's historical root in the country.

Keywords: Turkestan, Russian Government, Islamic Monuments, Mosque, Madrasa, Minaret, Historical Root.

Introduction

Interest in historical and cultural monuments in the territory of Uzbekistan began in the middle of the 19th century with the conquest of Tsarist Russia. It is known from dispatches of members of Russian and other foreign embassies located in the Bukhara and Khiva Khanates and other regions of Turkestan under the protectorates of the Russian Empire in the early 19th and 20th centuries. During scientific expeditions organized by the "Turkestan Circle of Archaeological Lovers," the "Russian Archaeological Society," and other scientific organizations, the first scientific information about Islamic monuments in Turkestan was obtained and collected.

In the XX century, the preservation of Islamic architectural monuments was considered by many historians, archaeologists, and representatives of other humanitarian spheres. They have not lost their scientific significance to this day. In particular, since the middle of the 20th century, remarkable work has been done on the historical study of the cultural monuments of Uzbekistan. The studies carried out on this topic can be divided into three groups. The first group is the one that can be said about the work done in the Soviet era. The works created during this period include O.D. Chekhovich, R.Mukhminovas on endowments, S.Gorshenina, V.L. Varanina, A.A. Sukhareva, M.E.

Masson, G.A. Pugachenkova, L.Y. Mankova, Lunkova, and other researchers of the material.

Methodology

In Central Asia, there has always been great interest in memorial sites and monuments. Foreign travelers to this region have been amazed by the ancient heritage left from ancient times, and they have shown great interest in them. In publications from 1870 to 1917, particularly in the "Turkestanskii Vestnik" published in Tashkent, records were made about the ancient monuments of Turkestan (Betger, 1970). Extensive scientific research has been carried out by the "Russian Committee" (formerly the Imperial Archaeological Commission) in organizing Middle and Central Asia with archaeological expeditions and investigations in the field of ancient monuments and archaeology. Archaeological findings have been collected from funds allocated by this committee (in Samarkand, by N.I. Veselovskii, V.V. Bartold, and V.L. Vyatkin). The Turkestan archaeologists who worked actively in Tashkent from 1895 to 1917 made a significant contribution to the study of ancient Islamic monuments in Turkestan (Umnyakov, 1929).

In 1917, the political events that unfolded led to the suspension of the study and preservation of ancient monuments in Central Asia for a certain period. However, from 1920 onwards, there was a felt need for an organization tasked with the study and preservation of ancient monuments in Central Asia, particularly in Tashkent. The specific task was to organize, preserve, repair, and promote the Islamic historical monuments of Turkestan, as well as to unite several local scientific organizations to appoint representatives to this work. As a result, the Museum and Preservation of Ancient and Cultural Monuments Committee of the Turkestan Republic People's Commissariat (National archive of the Republic of Uzbekistan) was established, later in 1924 renamed as "Sredazkomstatis" following the establishment of national borders in Central Asia.

At the end of the 19th century and the beginning of the 20th century, significant efforts were made to study Islamic architectural monuments in Central Asia. Some monuments were thoroughly and extensively studied from an archaeological perspective, while others were discovered (for example, in Termez). Until that time, only monuments with known names were researched (such as Old Urgench, Turkmenistan monuments, and others).

According to the information provided by V.L. Vyatkin, the Inspector of Monuments in Turkestan appointed by Tsarist Russia on November 28, 1907, a collapse of the earth occurred in Samarkand. Along with other monuments, the Mirzo Ulugbek Madrasa also suffered significant damage. The facade (the upper part of the building facade with a pediment, as well as the cornices above the windows and doors, executed in the same style) of the madrasa's courtyard collapsed: the southern vault was weakened, the northern and western arches leaned forward, the southern side of the classroom's dome collapsed, the western minaret and the northern arch between the dome's base collapsed to the extent that it was likely to collapse completely, and large cracks appeared in the

walls filled with bricks, starting to crumble. To prevent the collapse of the leaning walls, the earthen part of the dome was saturated with a mud solution, and the brick part was reinforced with plaster (National archive of the Republic of Uzbekistan). In document No. 8635 dated May 5, 1914, addressed to the Archaeological Commission, V.L. Vyatkin, the Inspector of Monuments in Samarkand, reported the following: "During these days, the mud walls of the Mirzo Ulugbek Madrasa were reinforced with iron rods. Because every year, a large courtyard requires careful watering and internal humidity control. The large mosque, divided into two halves, located on the north and south sides, with two arches each on the sides, without being restored, suffered from dampness throughout the year, the dampness of the floor, and the lack of light in the walls. Muslims' windows are installed to ventilate the building. The walls are built in such a way that they do not detract from the external appearance" (National archive of the Republic of Uzbekistan).

According to V.L. Vyatkin, in the ensemble of the Samarkand Registan, alongside the Tilla-Kori and Sher-Dor Madrasas, the Ulugbek Madrasa is also among the oldest in Central Asia [4. Vyatkin V.L.]. According to inscriptions on the facade, construction began in 820/1417 and was completed in 823/1420.

According to the attention and care of "Turkomstaris," the focus was primarily on the preservation of Samarkand monuments. According to researchers' opinions, the "pride of Turkestan," the Islamic architectural monuments of Samarkand, were very ancient and well-preserved examples (Umnyakov, 1929). The efforts to study the architectural monuments of Samarkand began from the time when Turkestan was under Russian rule. During the era of Tsarist Russia, these monuments were under the auspices of the Archaeological Commission. This commission submitted reports on local management regarding the preservation and repair of these monuments, primarily funded by repair works and allocated funds. In particular, caretakers and service personnel were engaged in maintaining and preserving Islamic architectural monuments. Preservation activities were limited so as not to disturb the monuments, allowing them to age gracefully. In 1919, a special council was convened in Samarkand to discuss the preservation, completion, and repair of monuments. However, due to the shortage of funds and construction materials, progress was delayed. In 1920, the issue of preserving and repairing Samarkand monuments was raised again, leading to the establishment of the Commission for the Preservation, Repair, and Restoration of Samarkand Monuments (Samkomstaris). According to the findings of this commission, the condition of Samarkand monuments was divided into two groups: 1) those in need of restoration, having deteriorated significantly (such as Bibi-Khanym Mosque, Chiluchor Mosque, Ishratkhona Mausoleum), and 2) those that could be preserved with timely repairs.

In 1918, during the autumn, book merchants and sellers, who conducted trade in the Rigestan, noticed the tilting of the north-eastern minaret of the Mirzo Ulugbek Madrasa, and appealed to the official inspector of the ancient monuments of Samarkand, V. Vyatkin. He, in turn, together with the provincial architect Mikhail Fedorovich Mauer, inspected the minaret (Masson, 1968).

The archaeologist and engineer Boris Nikolaevich Kastalsky was also included in the "Commission for Prompt Assistance to the Minaret." Kastalsky, known for his straightforward and swift actions, suggested dismantling the minaret immediately and then rebuilding it. However, Mauer opposed this idea, suggesting the theoretical and practical possibility of repairing it without dismantling (Masson, 1968). Mauer insisted on treating such a historic monument with the utmost care, while Kastalsky strongly disagreed with his opinion (It is known that one of the four minarets of the Ulugh Beg Madrasa collapsed in 1870 as a result of a severe earthquake. Similarly, two of the minarets from the Ari Amir Mausoleum—one in 1868 and the other in 1903—collapsed. In 1897, the last remaining upper part of the four minarets of the Bibi Khanum Mosque was demolished by architect Nelly. Fund. P-2773, Op.1, d. 117).

Soon after, a deep trench was dug around the courtyard of the madrasa, and scaffolds were erected to support the collapsing upper part of the minaret. The minaret, weighing 36 tons, was reinforced with 24 iron cables, stretched from its base. Monitoring equipment recorded a gradual decrease in the tilt of the minaret over the following days. After several attempts, the upper part of the minaret was successfully straightened to within 1.8 degrees of the normal position (Arnautov, 1981).



Figure 1. The minaret, weighing 36 tons, was reinforced with 24 iron cables, stretched from its base

Result and Discussion

At that time, under the leadership of the painter A.K. Tatevosyan, the Ancient Monuments Preservation Commission was established within the Provincial Commissariat of Public Education. This commission began its activities by collecting trade receipts obtained from the sale of ancient artifacts and primary materials in the Registan area.

In late May 1920, officials from the RSFSR State Archive, the Turkkomissiya of the All-Russian Extraordinary Commission for Combating Counter-Revolution and Sabotage (VChK), and representatives of the RSFSR SNK (Council of People's Commissars) visited Samarkand. At the suggestion of V.V. Kuibyshev and M.R. Frunze, members of the SNK, a commission was formed consisting of three sections (technical-construction, art, and archaeology) to preserve the architectural and ancient monuments of Samarkand. Vasily Lavrentievich Vyatkin was appointed as the chairman, and Boris Nikolaevich Kastalsky led the construction section. M.F. Mauer was tasked with the responsibility of supervising the restoration of the minaret. M.E. Masson, the youngest member of Samkomstaris and the director of the Samarkand Provincial Museum, was appointed to lead the archaeology section.

Using the resources of Samkomstaris, Mauer embarked on extensive research on the Ulugh Beg Madrasa. Starting from its construction, he delved into its deep history. His workspace was filled with literature on the cultural heritage and arts of Central Asia and neighboring Eastern states. Books collected from libraries, museums, and personal collections became indispensable for his work.

To gain detailed knowledge about the Ulugh Beg Madrasa, Mauer extensively studied translations from Eastern languages into European ones. He even mastered the Persian language to a sufficient degree to grasp additional meanings in some historical texts.

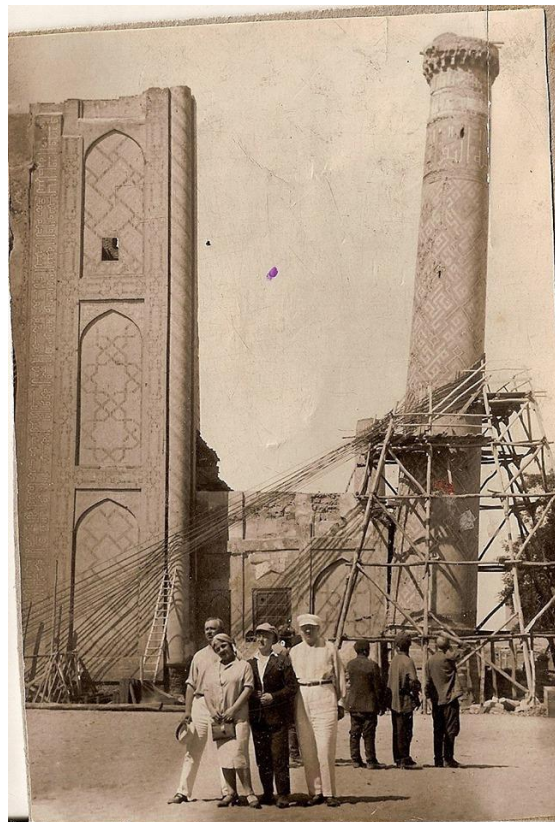
The archaeological section of Samkomstaris had the fewest members. They included V.L. Vyatkin, I.A. Kastanie, and later M.E. Masson, who initiated research at the Ulugh Beg Madrasa. Initially, excavation works were focused only on the foundations of the partially destroyed minaret. However, the excavations provided intriguing data, expanding the scope of the work. By the third month, within the territory of the Ulugh Beg Madrasa, 16 large and 1 smaller trench were excavated in the north-western part of the Sher Dor Madrasa minaret. Some trenches reached depths of up to 11 meters.

During the construction of the madrasas, extensive foundation walls were discovered. The main portal and minarets were excavated deeply. They were filled with ancient water multiple times in advance (before digging began). According to the architectural layering, the madrasa was raised to 2 meters above the late medieval urban level of the Registan area.

A large group consisting of local and qualified workers was assembled to study the "partially destroyed minaret." Based on the information provided by Mauer, the first

project for the restoration of the minaret was prepared by Kuznetsov. However, this project was rejected due to concerns about the risk of causing damage by erecting a reinforcement structure weighing several tons, as proposed in the project. Subsequently, Mauer turned to his colleague, the famous Moscow specialist engineer Vladimir Grigorievich Shukhov, who developed a second project. Mauer traveled to Moscow to discuss details with Shukhov at length in order to implement this project.

In 1927, the "Mosmet" factory sent steel structures to Samarkand. Mauer excavated and inspected the main parts of the reinforcement with a meter and magnifying glass, identifying some defects. He reported to Moscow, informing Shukhov about the consequences of a millimeter error in the reinforcement and asking him to rectify the minaret using this reinforcement. The factory acknowledged the mistakes and re-prepared some parts of the structure according to their calculations.



And finally, in 1932, the reinforcement intended for raising the minaret was put into action. The damaged lower part was carefully removed, starting from the foundation, and taken down several meters. In its place, reinforced concrete was laid. Using a force of 12 tons, the shortening and tilting of the structure were gently corrected, leaning towards the side that had gradually subsided. The iron beams from the reinforcement were removed, and the minaret was installed in its new starting position. With the installation of steel cables and guy ropes, the minaret regained its original appearance.

Conclusion

In this way, for the first time in Central Asia, a medieval minaret, a monument of Islamic architectural heritage, was saved. It became the first historical monument from the Eastern monuments to be preserved in the world restoration process. The meticulousness, simplicity of purpose, and precise technical execution contributed to the achievement of this goal. It is possible to testify to the great importance of the significant work done on the main facade of the ancient 500-year-old Ulugbek Madrasah in Registan.

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