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AN ANALYSIS OF THE ASTROLOGICAL DECORATIONS ON THE PORTAL OF THE MIRZO ULUGBEK MADRASA

Abstract. *This article offers a synergetic and symbolic analysis of the astrological decorations on the portal (peshtoq) and portal-niche (qanos) of the Mirzo Ulugbek Madrasa on the Registan in Samarkand. It shows that the geometric girih, calligraphic, and vegetal ornaments of the madrasa are not mere decoration but a precise mathematical and cosmological program reflecting Ulugbek's lifelong devotion to astronomy – encoding stars, galaxies, the seven climes, and a “map of the world” of interconnected gravitational systems. A numbered reading of the qanos composition is provided, interpreting each motif as an astronomical-symbolic element.*

Keywords: *Mirzo Ulugbek Madrasa, Samarkand, Registan, peshtoq (portal), girih, islami ornament, astrological decoration, synergetic analysis, astronomy, Islamic architecture.*

INTRODUCTION

Nowhere in the world has the art of ornament been applied in such a perfect manner as in Muslim architecture (Mamadazimov, 2014:94). Ornament (naqsh) is one manifestation of the beauty created by Allah; it especially flourished in the Middle Ages and occupied a leading place in the rise of Muslim culture. It rose above the level of “mere decoration” to become a distinctive art expressing innovative ideas (Gul, 2000).

The scientific discoveries that are coming to light as a result of studying and applying the life and scholarly activity of the great Sultan, the peerless scholar, the father of the science of astronomy, Mirzo Ulugbek – who shook the whole world of

astronomy and for more than six hundred years has been a legend on the tongues and in the hearts of the world's scholars – still astonish humanity. In recent years, researchers have been illuminating the scholarly and social-life facets of the great scholar in an objective and impartial manner.

MAIN PART

If we look at the architectural monuments created by Mirzo Ulugbek, we acknowledge how highly developed the fine and applied arts were in that era. On the inner walls and ceilings of the observatory built by Mirzo Ulugbek, discoveries connected with the celestial sphere, the terrestrial globe, and the seven climes, together with important signs, symbols, images, and numbers, were rendered.

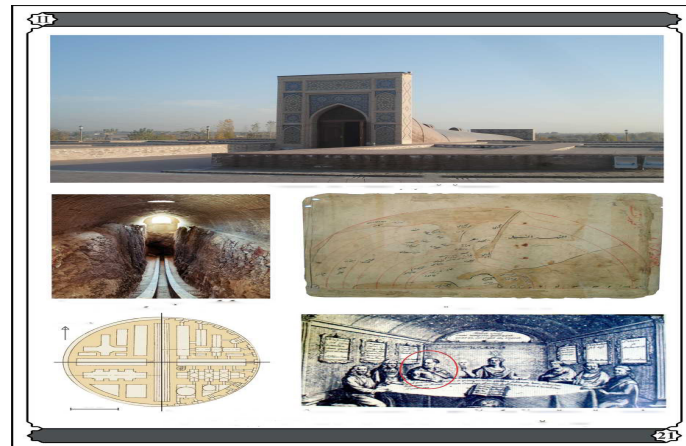


Figure 1. The Mirzo Ulugbek Madrasa, Samarkand.

Among Mirzo Ulugbek's friends and associates, famous mathematician-astronomers such as Qozizoda Rumi, Ghiyath al-Din al-Kashi, and Ali Qushchi drew a map of the seven climes on the wall of the Ulugbek Madrasa. A copy of the map of the seven climes, transferred onto paper, is preserved today.

The composition on the portal (peshtoq) of the Ulugbek Madrasa consists of a floral girih. It is as if the starry sky is manifested in the lens of the human eye. These stars are formed of carved mosaic-tile pieces. Between the girih, carved marble decorations with fine islimi (vegetal) ornament are wrought. The stone-carving masters decorated the qanos (portal-niche) ornaments with geometric and islimi patterns so skillfully that they appear attractive both from afar and from close at hand.

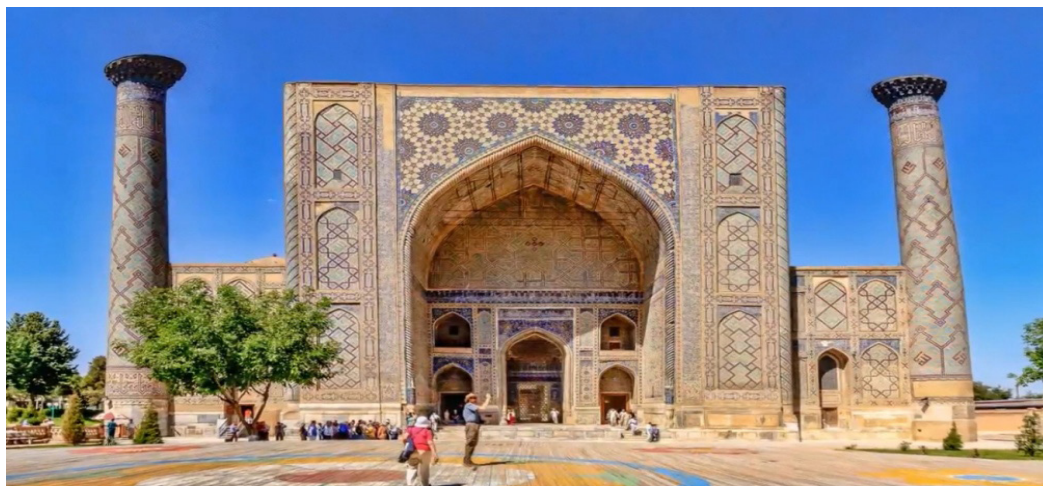


Figure 2. The portal (peshtoq) of the Ulugbek Madrasa.

In analyzing the depictions of historical monuments, one studies them on the basis of the criteria of artistic, astrological, philosophical, psychological, symbolic, and synergetic types of analysis. Let us carry out a synergetic analysis of the astrological decorations on the portal-niche (qanos) of the Mirzo Ulugbek architectural monument in Samarkand.

The architect of the Ulugbek Madrasa is considered to be Qavomiddin Sheroziy (1440, 15th century), who served in the court of Ulugbek Mirzo's father, Shohruh Mirzo.

Of all the structures built on the Registan in the 15th century, the one that has reached us is the Ulugbek Madrasa. Its plan is characteristic of the composition of educational institutions of this kind. Around the courtyard, two-storied cells (hujras) for students were built; on the western side, a mosque; on the four sides of the building, shaded ayvans (porticoes) where students studied on summer days; on the eastern side, two lofty minarets occupy the two flanks; and in the corners of the deeply recessed entrance arch a star-patterned girih, that is, the starry sky, is depicted. This theme was, of course, not accidental for Ulugbek. Having devoted his life to the science of the celestial sphere, he meant to indicate that the madrasa students should master the sciences thoroughly and that the order of teaching should not be confined within the bounds of religious rules alone.

The girih, consisting of geometric ornaments, determines the division of the arch-vault into the main ornamental sections. The large-scale ornaments of the side portals are intended to be observed from afar. Above them it is as if a calm, geometrically patterned carpet has been spread.

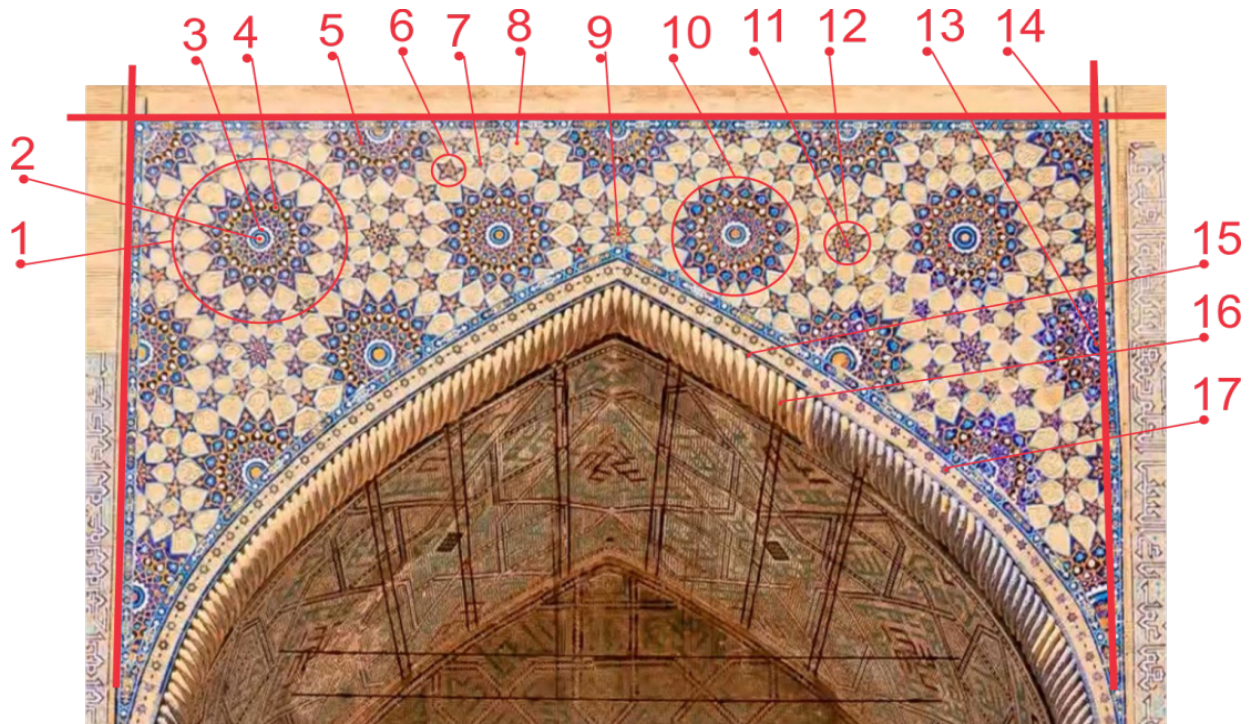


Figure 3. The decorations of the qanos (portal-niche) of the Ulugbek Madrasa, with the numbered analytical legend.

Geometric ornaments, calligraphic ornaments, and vegetal ornaments occupy the decorations of the Ulugbek Madrasa. The most frequently used ornament is the geometric girih, that is, geometric patterns. Geometric ornaments require very great mathematical precision. All of them point to existence (being) as possessing exact measure and form. The frequent use of star-shaped ornaments signifies that Ulugbek dedicated his whole life to the science of the celestial sphere (Mamadazimov, 2014:100-104). On the minarets, the calligraphic ornaments within the geometric ornaments are executed in harmony. On the qanos, a 5-8-16-pointed star girih composition is wrought, depicted in the form of circular motion. The girihs are organically connected with one another. In the decorations of the qanos of the Ulugbek Madrasa, the map of the world – a system of infinite gravitational systems in which galaxies are connected on the basis of a net-like, chain-like mutual force of attraction – has found its reflection.

The image above shows the appearance of the decorations on the qanos of the Ulugbek Madrasa in Samarkand; let us carry out a symbolic analysis of these decorations one by one. 1. Galaxy. 2. The aperture in the galaxy's core. 3. The ring in the galaxy's core. 4. Tiny stars. 5. Net-like islimi ornaments. 6. Stars. 7. The axis of the stars. 8. Vegetal ornaments among the geometric ornaments. 9. The center of the eight-pointed

star. 10. The sixteen-pointed star. 11. The axis of the sixteen-pointed star. 12. The eight-pointed star. 13–14. The repetition of the munabbat (relief) ornament on four sides. 15. Mihrab. 16. Morpech, that is, a rope-like spiral ornament. 17. A border-like ornament composed of six-pointed starlets.

CONCLUSION

The analysis shows that the decorative program of the Mirzo Ulugbek Madrasa is far more than surface ornament: its geometric girih, calligraphic, and vegetal motifs constitute a mathematically exact, cosmological language in which stars, galaxies, the seven climes, and the gravitational “map of the world” are encoded. In this way the portal and the qanos of the madrasa give visual form to Ulugbek’s astronomical worldview and to his conviction that the study of the heavens and of the exact sciences stands at the heart of learning.

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