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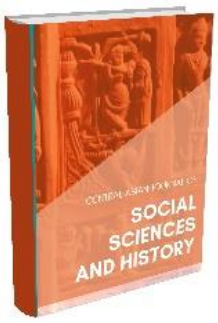


# Opinions and Comments on the Book by Architect M. Bulatov on Geometric Proportions in Architecture

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**Abstract:**
During the so-called Eastern Renaissance in Central Asia and Kazakhstan, such architectural monuments were created that attracted the attention not only of scholars dealing with the history of architecture, but also of art fans on all continents. In many languages of the peoples of the world there are a number of scientific researches devoted to these monuments, works on the history of architecture. Nevertheless, there was a lack of research on the theory of Central Asian architecture. It was as if in ancient Byzantium and Rome, there was no medieval Oriental architecture theorist like Alberti, the great theorist of the Italian Renaissance.

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## Introduction

The book "Geometric harmonization in the architecture of Central Asia in the IX-XV centuries" by Doctor of Architecture Mitkhat Bulatov eliminated the shortcomings in the field of architectural theory and studied it extensively. M. Bulatov's book was prepared at the Hamza Institute of Art History and published at the Nauka publishing house with the foreword of L.I. Rempel in Moscow.

Based on the method of complex analysis, the author explores the form features of architectural monuments, the scope of knowledge of architects on the basis of ideas, facts about architecture in medieval monuments, “pamphlets on architects and achievements of modern science. The book provides the reader with detailed information about the architectural monuments and cultural environment created in the Middle Ages under feudal conditions. The first chapter discusses research on architectural proportions in the Middle East. The second chapter deals with issues related to the socio-historical conditions, scientific-theoretical and construction techniques of Central Asian architecture.

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The question of whether or not the science of architecture was founded in the Middle Ages is resolved positively by the author Abu Nasr al-Farabi in his "Book on the Classification and Definition of the Sciences".

It is known that Aristotle proved that it belongs to the sciences of arithmetic, geometry, astronomy and music-mathematics. Continuing this view, Faroobi again introduced optics, mechanics, and sophisticated methods into the mathematical sciences, that is, knowledge that was of great importance in architecture.

**Materials and methods**

According to Farobi, the sides of a square, the pieces of a circle, serve as a measure in architecture, resembling a syllogism in logic or a clause in poetry. Such insights into the laws of thought, the theory of poetry, and the construction of architectural forms are invaluable to the history of medieval art, especially the theory of architecture.

Also in the book are al-Kindi, al-Farabi. Ibn Sina, the philosophy of the Ikhwan as-Safa, and Umar Khayyam's views on proportion are also reflected. Scholars who have written works in Arabic have come to understand the concept of harmony in a broad sense. Equilibrium is not only related to the structure of the Universe, but is also reflected in specific sciences such as mathematics, astronomy, mechanics, music, medicine, and architecture. Arithmetic and geometry permeated all forms of science and art. For example, the connection of music with the mathematical sciences has given rise to beautiful geometric methods - geometric proportions in architecture - due to the application of the mathematical theory of music to the construction of architectural forms of geometry.

Letters containing scientific, philosophical views, such as the Ikhwan as Safa, which were widespread in the Middle East in the tenth century, placed great emphasis on architecture and equated it with logic, mathematics, and astronomy. It is an inexhaustible source in the philosophical direction, in the field of nature-knowledge, in the field of art, and in the education of men. The philosophical direction of the Ikhwan as-Safa is that proportion applies in nature and art, it is characterized by resemblance and closeness, and it recognizes that the beauty of things in nature depends on the proportion of their parts and fragments.

Consequently, the idea of harmony in medieval aesthetics was also important in architecture, beauty and interest were inseparable, interdependence and interdependence were important factors in the creation of works of art, complex geometric methods in architecture expressed the idea of harmony and developed the ancient Greeks' views on harmony. served as a specific measure of his life and activities.

M. Bulatov discusses about 20 new works in the "Books for Architects" section of the book. Among them are Abul Fadl Muhammad ibn al-Amid's On the Construction of Cities (X) and Rashid ad-Din's Asar and Ahiya (XIII).

The views of medieval thinkers such as Al-Farabi, al-Khwarizmi, Ibn Sina, al-Kashi, Ibn Khaldun on architecture and architects, architectural theory and construction techniques, conditions have been studied in detail. The author's elaboration of such vast but unexplored sources in science has provided an opportunity to take a fresh look at the complex problems of the history and theory of Central Asian architecture. The study found that ancient architects were able to use the remarkable geometric techniques described in the pamphlets in their creations. The work of ancient architects, developed

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from simple methods to complex forms, testifies to the fact that they are based on the theory of universal geometric systems.

The fifth chapter of the book is devoted to the roof-dome shapes that define the stylistic features of medieval Near and Middle Eastern architecture. The author emphasizes that these architectural forms are closely related to the use of building materials, constructive methods, requirements of the period environment and aesthetics. Issues related to the type and methods of construction are also raised in the analysis of the treatises created by Ibn Sina, as-Sidjizi, al-Kuhi in the X-XI centuries.

The last chapter of this great historical and theoretical work, devoted to the history of Central Asian architecture, is devoted to architectural ornament-pattern. Based on the opinion of Abul Vafo and other scholars of the past and present, the author studies the architectural ornament-pattern in the form of wonderful geometric methods. In the scientific literature, it was as if medieval European architects were literate, and Oriental architects were artisans who grew up mainly among the people and had little to do with books.

## Conclusion

M. Bulatov analyzes the works and activities of architects who lived in ancient Egypt, Greece, France, Renaissance Italy and the Eastern Renaissance, noting that Central Asian architects in their time were actively involved in a literate and socio-historical environment. In this book, which will remain an event in the field of culture of our republic, M. Bulatov solved many problems of the history and theory of Central Asian architecture with high knowledge and ingenuity. This book will serve as an important guide for future youth in the study of the architectural structure of ancient historical monuments.

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