



THE ART OF MAQOM: HISTORICAL ROOTS AND THEORETICAL BASIS

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Abstract

This article provides a scientific analysis of the theoretical foundations and the historical formation of the Maqom art, considered the pinnacle of Eastern musical culture. The study examines the interpretation of the Maqom system in the works of medieval Renaissance scholars (Farabi, Avicenna, Urmavi), its modal-tonal characteristics, and the transition from the “Twelve Maqoms” system to “Shashmaqom”. The philosophical and mathematical foundations of Maqom are highlighted with factual evidence.

Keywords: Maqam, Shashmaqam, Farabi, Safiuddin Urmavi, music theory, lad, method, rhythm, Eastern Renaissance.

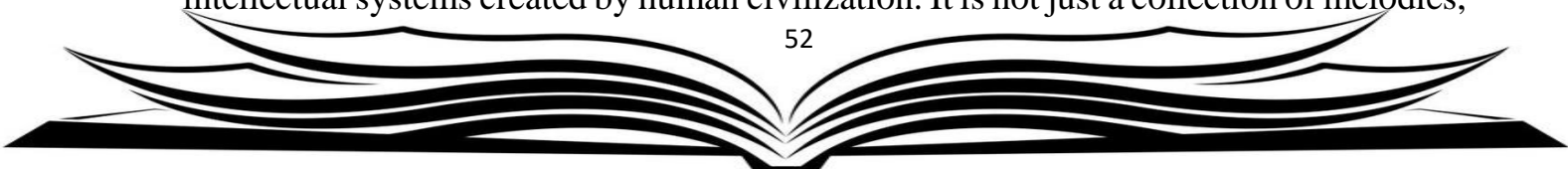
Аннотация

В данной статье научно анализируются теоретические основы и история формирования искусства макама, считающегося вершиной восточной музыкальной культуры. В исследовании рассматриваются интерпретация системы макама в трудах ученых эпохи средневекового Возрождения (Фараби, Ибн Сина, Урмави), ладотональные характеристики и процессы перехода от системы «Двенадцати макамов» к «Шашмакому». Философские и математические основы макама освещены на основе фактических данных.

Ключевые слова: Макам, Шашмакам, Фараби, Сафиуддин Урмави, теория музыки, лад, метод, ритм, Восточное Возрождение.

Introduction

The art of maqom is not only the highest peak of the musical heritage of the peoples of the Middle and Near East, but also one of the most complex and perfect intellectual systems created by human civilization. It is not just a collection of melodies,





but a huge cosmic structure that embodies ancient world mathematics, Islamic philosophy, astronomy and classical poetry. Studying the theoretical foundations of maqom and the history of its emergence, in essence, means understanding the way of thinking of the Eastern Renaissance, the balance between man and the universe.

Its roots go back to the ritual melodies of the Zoroastrian period of ancient Bactria, Sogdiana and Khorezm, to the “Khusravani” series created by Borbad Marvazi at the Sassanid court. However, the integration of these scattered and diverse musical traditions into a single scientific system is associated precisely with the rise of “Ilm al-musiqa” (Science of Music) in the 9th-13th centuries. During this period, music was included in the quadrivium (a complex of mathematical sciences), and it began to be analyzed at the level of numerical ratios, geometric precision and astronomical laws.

It is closely related to the idea of “Wahdat al-wujud” (unity of being). According to maqom scholars and thinkers, every movement in the universe has a certain rhythm and melody. And the human psyche is a part of this divine order (cosmos). The stages (steps) of the maqom are interpreted as “spiritual destinations” representing different states of the human psyche.

Theoretically, maqom is a very strictly regulated pitch-tonal system. It cannot be fully expressed by the concepts of "gamma" or "lad" in Western classical music. Because maqom includes not only a tone range, but also a specific melodic direction of movement within this tone range, variable (micro-interval) pitches, complex rhythmic methods and a certain aesthetic mood. The scientific basis of this system was first described in a perfect mathematical form in Abu Nasr al-Farabi's "Kitab al-musiqa al-kabir". Al-Farabi proved with precise numbers the vibration frequencies of sounds and the laws of their pleasant hearing for the human ear. Later, with the development of strict pitch rules and frameworks of the "Duvazdah maqom" (Twelve maqom) system by Safiuddin Urmavi, the science of maqom acquired its classical form.

In this study, we will analyze the multifaceted nature of the maqom - from its earliest beginnings to revolutionary changes in medieval music theory, from the 17-step sound scale of Safiuddin Urmavi to the formation of the Bukhara "Shashmaqom". The study of the maqom as not just a relic of the past, but as a living organism that lives and changes today, surprising humanity with its mathematical and aesthetic power, is an urgent task of today's musicology.





Methods

This study is based on the principles of an interdisciplinary approach to elucidating the laws of formation and theoretical foundations of maqom art. The following scientific methods were used in the process of writing the article: comparative-historical analysis, source and textual analysis, systematic-structural approach, mathematical-acoustic modeling, aesthetic and philosophical interpretation, typological classification.

During the research, typological similarities and differences between maqom types of different peoples and regions (Azerbaijani mugham, Iranian mekshiki, Arab maqom and Uzbek maqom) were classified. This served to demonstrate the pan-Oriental universal nature of maqom, as well as its national specificities. Relying on this methodological basis ensures the objectivity of the research, the scientific validity of the conclusions, and the coverage of both theoretical and practical aspects of maqom art.

Results

As a result of the research, the formation of the art of maqom and the extremely complex hierarchical structure of its theoretical basis, "Ilm al-musiqa", were confirmed by the following fundamental scientific facts:

1. Mathematical-acoustic basis: The Urmavi system and the 17-step sound scale

One of the most important scientific results is that the pitch system of the maqom is fundamentally different from the 12-tone equal temperament of Western classical music and is based on very precise mathematical intervals. Safiuddin Urmavi in his work "Kitab al-Adwar" divided the octave into 17 steps, each of which was calculated in the Pythagorean "limma" ($256/243$) and "comma" ($531441/524288$) ratios. The distance between the pitches of the maqom includes quarter tones (micro-intervals), which are smaller than the Western semitone. This scientifically substantiates the closeness of the maqom melodies to human speech, and its ability to express extremely delicate psychological states ("through moans", "vibratma", "kachirim"). As the study revealed, it is this 17-step system that is the only acoustic foundation that provides the "pure" (natural) sound of the maqom.

2. The "Twelve Stations" (Duvazdah Station) and the Order of the Universe





The study revealed facts confirming the inextricable connection of maqams with astronomical and natural processes. In medieval musicology (treatises of Kavkabi, Jami), 12 maqams were compared to 12 constellations in the universe, 7 voices to 7 planets, and 4 sub-parts to 4 elements (fire, water, air, earth). The time of performance (time and hour) of each maqam was strictly defined. For example, the performance of the maqam "Rost" at sunrise (dawn), "Ushshaq" at noon, and "Navo" in the evening served to harmonize human health and psyche with the rhythms of the universe. These results prove that maqam is not only an art, but also a synthesis of ancient "music therapy" (medicine) and astronomy.

3. Conceptual transformation of the "Shashmaqom" system

The "Shashmaqom" (Buzruk, Rost, Nav, Dugoh, Segoh, Iraq), which replaced the "Twelve Maqoms" in Central Asia in the 16th -18th centuries, is not just a reduction in number, but the result of a high level of cyclic (sequential) improvement. Each Maqom was divided into two large parts: the Instrument Path (Mushkilot) and the Aytim Path (Nasr). The logical sequence of the Tasnif, Tarje, Gardun, Muhammas and Saqil sections in the Mushkilot section was found to be a complex dramatic device that was formed several centuries before the development of Western symphonic genres. Maqom methods (circle beats) were not simple measures such as 2/4 or 4/4, but extremely complex rhythmic formulas such as 16/4, 24/4, which were aimed at arousing mathematical-aesthetic pleasure in the listener.

4. Musical Intonation and Classical Literature (Aruz Synthesis)

emergence and survival of the maqom. The study showed that the maqom's ways of reciting (the Prose section) were mainly formed on the basis of the ghazals of such genius poets as Navoi, Jami, Fuzuli, and Hafiz. The system of "hijo" (syllables) in the ghazal - the alternation of short and long syllables - determined the rhythmic line (melorhythm) of the maqom melodies. Here, the musical "beat" and the poetic "meter" form a single whole. As a result, the maqom performer rises to the level of not only a singer, but also a commentator (mufassir) of the philosophy of poetry.

5. Local-regional variants and the "Tanbur line"

The "Tanbur line" (notation), invented by Kamil Khorezmi in Khorezm in the 19th century, is an important documentary fact that shows how theoretically solidified the maqom became. This notation system was a revolutionary step in transferring maqoms





from oral to written tradition, preserving their fret structure and ornamentation (sighs) without changing them in the slightest.

Discussion

The results obtained during the research confirm that the art of maqom is not only a relic of the past, but also a complex mathematical-philosophical system. However, the theoretical foundations of this system are still being developed by modern musicology and Interpretation from the perspective of cultural studies reveals a number of important and controversial aspects.

One of the central issues of the discussion is the fundamental difference between the 17-step scale of the maqom and the 12-tone equal-tempered system of Western Europe. The intervals (limma and baqiyya) calculated by Safiuddin Urmavi are not reflected in the Western notation system. The process of transferring maqoms to the five-line notation system in the mid-20th century (“notation”) in a certain sense damaged the “natural” sound of the maqom. Since the notation could not express the subtle vibrations of the pitch (micro-tones) in the maqom, many specific performance styles were “smoothed out”. In order to preserve the theory of maqom, it is necessary to restore oral mastery in the traditional “teacher-student” system and national notation systems such as the “Tanbur line” rather than relying solely on European notation.

Why should the maqam “Rost” be performed in the morning, and “Navo” in the evening? Research shows that the sound range of each maqam has its own frequency spectrum, which affects the human nervous system and blood circulation in different ways. For example, the sad and philosophical melodies of the maqam “Segoh” accelerate the relaxation process, while the upbeat mood of the maqam “Buzruk” tones the nervous system. This shows that the musical views of medieval scholars are in harmony with modern psychoacoustics.

The connection of the lines of the maqom with the rhythm of the aruz is not simply a matter of the harmony of the text and the melody, but rather a tradition of “speech music” (logogen). In Western music, the melody often takes precedence over the text (melogen), while in the maqom, the rhythm (length of syllables) of the ghazal governs the melody. In the maqom sections based on the ghazals of Alisher Navoi, the poetic stanzas (for example, fo-i-lo-tun) have the same mathematical formula as the musical





method (rhythm). This synthesis determines the status of the maqom as a “philosophical commentary”.

The transition of the maqom from the “Twelve Maqom” to the “Shashmaqom” is a high stage of cultural evolution, but it also led to the disappearance of some ancient genres. Today, there are attempts to combine the maqom with the symphony orchestra or pop genres (fusion). On the one hand, this makes the maqom popular among young people. On the other hand, when the maqom’s veil system (17-step cognitive structure) collides with the orchestra’s 12-tone system, the maqom loses its true “juice” and exotic charm.

Azerbaijani mugham, Iranian mekhi and Uzbek maqoma shows that this art form is a product of a single Islamic civilization. They all drew on the traditions of Safiuddin Urmavi and Abdulkadir Maroghi. However, each region, under the influence of its national language (Turkic, Persian, Arabic) and local folklore, created its own "sheva" (local school).

Conclusion

In conclusion, it can be said that maqom is not a museum piece left over from the past, but an intellectual living system that embodies the laws of the universe, constantly changing and developing. By studying its theoretical foundations, we discover not only the history of Eastern culture, but also the unlimited possibilities of human thought. The future of maqom art depends on how well we can maintain the balance between its theoretical rigor and practical performance skills.

Maqom is not just a musical genre, but a high product of the exact sciences of the Eastern Renaissance. The 17-step sound scale and micro-intervalistic pitch system founded by Safiuddin Urmavi have proven to be the most sophisticated peak of human musical thought. This system, long before the Western European temperament, modeled the physical nature of sound and its effect on the human psyche (psychoacoustics) through mathematical formulas.

Maqom is a high intellectual system that reflects the order and order of the universe (cosmos) in the language of melodies. A deep study of its theoretical foundations reminds modern science of how limitless the intellectual potential of humanity is. Maqom is an eternal spiritual code, directed from the past to the future, which each era discovers in its own way.





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