



## FĀRĀBĪ V. MUSIC

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In the history of Middle Eastern music Fārābī remains unequalled as a theorist, but this aspect of his manifold achievements has been obscured by his more widely known writings on philosophy. Scholars of medieval European music are seldom aware of Fārābī's importance for music theory or the significance of his commentaries on the works of the ancient Greek music theorists. At the same time, his contributions to musical theory are often entangled in legendary accounts which bestow a supernatural dimension on his powers as a musician, relating that he could make his audience laugh, cry, and sleep against their will (Bayhaqī, pp. 30-35; Ebn Kallekān, tr. de Slane, III, p. 309).

Of the approximately one hundred and sixty works attributed to Fārābī, eight are on music, but only four have survived (Sawa, 1983-84, p. 3). The first and least significant is the very short chapter on music in *Ketāb eḥṣā' al-'olūm*. Paradoxically, it was this sketchy work alone that was available in medieval Europe through several Latin translations (Farmer, 1934). Fārābī's masterly and comprehensive *Ketāb al-mūsīqī al-kabīr*, as well as his *Ketāb al-īqā'āt* and *Ketāb eḥṣā' al-īqā'āt* (on rhythms) remained unknown.

Fārābī wrote *Ketāb al-mūsīqī al-kabīr* for Abū Ja'far Muḥammad b. al-Qāsem Karkī, the vizier of the caliph al-Rāzī (d. 329/940), who wished to learn about



the science of music according to the ancient Greek theorists. Fārābī agreed to the request because he had found serious shortcomings in the Greek works available to him in Arabic translation (through Syriac). He blamed the shortcomings on the poor quality of the works chosen for translation or that of the translations themselves. He also found shortcomings in the Arabic writings of his predecessors (*al-Mūsīqī*, ed. Kašaba, pp. 35-37; Sawa, 1989, p. 14), including the philosopher Kendī (d. after 256/870) and the singer, lutenist, composer and theorist Eshāq Mawṣelī (q.v.; d. 235/850). As a philosopher, rather than a practicing musician, Kendī uncritically followed Greek musical theories (in Arabic translation) that were unrelated to Middle Eastern practice. On the other hand, Eshāq Mawṣelī lacked the necessary philosophical training to apply a rigorous, logical approach to his writings on the science of music. In contrast, Fārābī's training as a logician and a practicing musician meant that his theory reflected practice in a clear discourse. He did indeed expound Greek music theory but he also made his readers aware of those aspects not applicable to music in the Middle East. In addition to the Greek theories he also described the musical practices of his own time and provenance, i.e. the early 'Abbasid era from Iraq, Persia, and Transoxiana, as well as the reported practices of the Omayyads and early Islamic era in Mecca, Medina, and Damascus (Sawa, 1989, pp. 14-17). As the vizier was not knowledgeable in the art and theory of music, Fārābī explained music by borrowing terms, concepts and paradigms from the Greek sciences and contemporary disciplines such as arithmetics, Euclidean geometry, Aristotelian logic, architecture and textile, civil and mechanical engineering, politics, Arabic grammar, phonology, prosody, poetics, rhetoric, and koranic sciences (Madian; Sawa, 1981, p. 80; idem, 1990).

The *Ketāb al-mūsīqī al-kabīr* was supposedly composed of two books. The second, which was intended as a commentary on the works of previous writers, is lost and perhaps was never finished. The first book is in two parts. Part one is an introduction (*madkhal*) to the art of music, consisting of two discourses, one dealing with the philosophy of music and the other with elementary acoustics. Part two deals with the craft (*ṣenā'a*) of music, arranged according to three arts (*fann*). The first art comprises basic theoretical elements such as acoustics, music intervals, and melodic and rhythmic modes. Fārābī reports that the Greeks as well as the early writers in the Middle East confined their investigation to this art alone (*al-Mūsīqī*, ed. Kašaba, pp. 38-39; Sawa, 1989, p. 15). In contrast, the discussion of the second skill is, in Fārābī's words, his own innovation (*al-Mūsīqī*, ed. Kašaba, pp. 38-39; Sawa, 1989, p. 15).



It deals at length with the description of common musical instruments and how the tone systems discussed in theory could be obtained on them. These instruments include the *ūd* (lute), the Baghdadi as well as the Khorasani *ṭonbūr* (pandore), the *mezmār* (flute or reed pipe), the *sornāy* (oboe), the *rabāba* (rebec), the *me'zafa* (lyre) and the *ṣanj* (harp). The discussion of the third art deals with musical composition, consonances and dissonances, melodic movements and rhythmic modes used in practice, and specific details regarding vocal and instrumental performance practice, the relation between language and music, classification of voice types, and the purpose of music. Thanks to Fārābī's lucid description of musical practices, we can see how much has survived to our own time (Sawa, 1981). The treatise exists in a number of manuscripts (Farmer, 1965, pp. 27-28; Sawa, 1989, pp. 18-20; Shiloah, 1979, pp. 104-07), as well as in an Arabic edition (Kašaba) and a French translation (D'Erlanger). However, more work is needed to elucidate the ambiguous and obscure passages in the book. Part of the problem is inherent in the subject itself: music being a non-verbal and non-visual art, Fārābī had to resort to many disciplines to express his thoughts. The modern reader must therefore be familiar with these disciplines in their 10th century context and must be equally aware that at times Fārābī freely borrows technical terms from a discipline and applies them to music, distorting their original meaning in the process.

One of the difficult areas in the *Ketāb al-mūs'iqī al-kabīr* is the treatment of rhythm. The outstanding German scholar Eckhard Neubauer rightly considers the two chapters on rhythm as an impenetrable thicket and thinks that Fārābī himself realized, or perhaps was persuaded by friends, that a revision was needed (Neubauer, 1968-69, pp. 196-97). This was done in two subsequent treatises, the *Ketāb al-īqā'āt* and *Ketāb eḥṣā' al-īqā'āt* (Sawa, 1989, pp. 20, 36-37). The latter was discovered only recently (in 1951) by Ahmet Ateş in Manisa, Turkey (Sawa, 1983-84, p. 4; 1989, p. 20). In these two treatises Fārābī perfected his rhythmic theory and rhythmic notation system. He developed general formulae, which he named the basics, and codified sixteen contemporary ornamental techniques which altered and beautified rhythms and allowed for an infinite number of rhythmic variations. Of immense value are his notated examples of rhythms in their basic and ornamented forms, as well as meticulous captions supplied under the notated examples explaining the arrangement of the basic rhythmic attacks and ornamental additions. With this kind of accuracy the problem of understanding, deciphering, and transcribing the medieval rhythmic modes was at last solved (Sawa, 1983-84;



1989, pp. 35-71). Additionally, the *Ketāb eḥṣāḍal-īqā'āt* is of great importance for the early history of rhythms: in a section of the treatise Fārābī quotes and comments on the writings of Eshāq Mawṣelī and Kendī (fol. 79b-81b, 88a-89b; Sawa, 1989, pp. 235-36), thus preserving for us unique documents from the 3rd/9th century.

As mentioned above Fārābī twice revised his theory of rhythm and rhythmic modes after he wrote the *Ketāb al-mūsīqī al-kabīr*. Unfortunately no such revision was made in the case of his work on the melodic modes, which to this day have resisted decipherment. For this reason, the focus here will be on his rhythmic theory. He defined rhythm as “the motion through the notes within durations well defined as to their length and proportions” (*al-Mūsīqī*, ed. Kašaba, pp. 435-36). He explained that musical sounds are produced by the action of an attack (*naqra*) as in the striking of the membrane of a drum, the plucking of a string, the impact of the air pushed out of a wind instrument or a singer’s throat. The attack is further defined as being timeless, that is, it carries no time in itself, and it occurs in the present (*ān*) which separates the past from the future. He imagined the attack as the striking of a solid body by a very thin body, the thinner the better, so that the contact is imagined as a point. This led Fārābī to borrow Euclid’s postulate in geometry: as a point has no length, as the line has no surface, as the surface has no volume, the attack has no duration; furthermore as a point is separated from another by a line, as a line is separated from another by a surface, as a surface is separated from another by a volume, an attack is separated from another by a duration. Then he defines the durations starting with the shortest perceivable time as the standard of measurement, a concept he borrowed from Greek music (*chronos protos*). He refers to this shortest time by the symbol *ta*, and double the shortest time by the symbol *tan*, and double that by the symbol *tann*. By naming and defining these durations and their proportions he created a very precise tool to describe as well as define the rhythmic modes which were current in his time and before his time. Side by side with measured music built on rhythmic modes, which is comparable to poetry, there existed unmeasured types of music comparable to speech. In the latter music the proportions of the durations are not integer numbers. It is significant to note that these genres of music still exist to this day in the Middle East: the unmeasured is comparable to the Persian *āvāz* (q.v.); the Arabic *mawwāl*, *layālī* and *taqṣīm*; and the Turkish *gazel* and *taksim*; whereas the measured is comparable to the Persian *taṣnīf*, the Arabic *mowašṣaḥ* and the Turkish *peşrev* and *semaî*.



Fārābī's work is of interest to musicologists doing research on Ancient Greece or medieval Europe, but for the history of music in the Middle East it is absolutely crucial. His terminology, concepts, and methodological approach have had a lasting impact on later music theorists, be they Arab, Persian, or Turkish. Furthermore, because of strong continuity in the musical traditions of the Middle East from the medieval to the modern era, Fārābī's writings continue to offer useful models for music analysis in the region today.

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