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Fārābī: Abū Naṣr Muḥammad ibn Muḥammad ibn Tarkhān al-Fārābī

Alnoor Dhanani

Alternate name

Alfarabius

Born Fārāb, (Turkmenistan), *circa* 870

Died Damascus, (Syria), 950

Fārābī is mainly known as a philosopher, and his writings on the classification of the sciences, including astronomy and astrology, were influential both in the Islamic world and in Europe. Not much is known about Fārābī's early years. He studied logic with the Nestorian Christian Yuḥannā ibn Ḥaylān (died: *circa* 932) in Marw and then in Baghdad. In Baghdad, Fārābī studied Arabic and was therefore able to participate in the philosophical salons of Baghdad and to make use of Arabic philosophical and scientific works. He then went to Constantinople with his teacher during the reign of the 'Abbāsīd caliph al-Muktafī (902-908) or early during the reign of Caliph al-Muqtadir (908-932). He returned to Baghdad between 910 and 920, spending two decades there writing and teaching philosophy and allied sciences. In 942, Fārābī left Baghdad, probably to escape its instability, going first to Damascus and then to Egypt. He later returned to Damascus to join the court of the Ḥamdānīd Prince Sayf al-Dawla but died a year later.

Fārābī is known primarily for his contributions to Islamic philosophy; he was known as "The Second Teacher" (*al-mu'allim al-thānī*), the First Teacher being **Aristotle**. His works include commentaries on Aristotle and **Plato**; introductory philosophical works; treatises on logic, metaphysics, political philosophy; and other philosophical disciplines; a treatise on the classification of knowledge, and works in the mathematical sciences, which include astronomy and music.

In *The Enumeration of the Sciences* (*Iḥṣā' al-'ulūm*), Fārābī discusses the place of astronomy within the classification of knowledge, its subject matter, its demarcation from astrology, and its relationship with mathematics. He there classifies knowledge broadly into the major divisions of the linguistic sciences, logic, mathematics, physics, metaphysics, the civic sciences of ethics and political philosophy, law, and theology. Mathematics consists of seven branches: arithmetic, geometry, optics, astronomy, music, statics (*i. e.*, "the science of weights"), and technology.

Astronomy, or the “science of the stars” (*‘ilm al-nujūm*), consists of two parts. The first is astrology (*‘ilm aḥkām al-nujūm*), which studies the signs of planets with regard to their relationship with future events, and sometimes also present and past events. The second part of astronomy is “mathematical astronomy” (*‘ilm al-nujūm al-ta’līmī*), which, unlike astrology, is considered one of the mathematical sciences.

Mathematical astronomy investigates celestial bodies and the Earth with regard to their shapes, sizes, and distances; it investigates their motions, the components of these motions, the calculation of positions of planets as a result of these motions at any specific time, and the observable effects of motions, for example eclipses and planetary risings and settings. Furthermore, it investigates the inhabitable areas of the Earth, its climatic regions, and timekeeping, *i. e.*, seasonal hours. The determination that the Earth is entirely at rest at the center of the Universe and that motions of celestial bodies are spherical is made by mathematical astronomy.

Fārābī's grounds for rejecting astrology are clear in two surviving works: *On the Utility of the Sciences and the Crafts* (*Risāla fī faḍīlat al-‘ulūm wa-’l-ṣinā‘āt*) and *On the Aspects in which Belief in Astrology Is Valid* (*Maqāla fī al-jihāt allatī taṣiḥḥu ‘alayhā al-qawl bi-aḥkām al-nujūm*). Fārābī acknowledges that celestial bodies have an effect on terrestrial bodies, but he believes this effect to be mediated through the light radiated by the celestial bodies. There is also a chain of causes from a particular position of a planet to its eventual effect upon a particular terrestrial body. Therefore, one is not dealing with a direct and necessary cause-and-effect relationship between planetary position and an immediate terrestrial effect, but rather with the relationship between a cause and its possible far-removed and remote effect. Any astrological prediction must take into account natural and voluntary obstacles that may prevent the occurrence of the eventual effect. Fārābī concludes that astrology is just conjecture, supposition, smooth talk, and deception.

Fārābī's philosophical cosmology was shaped by astronomy. He discusses the doctrine of the ten intellects in his *On the Opinions of the Inhabitants of the Virtuous City* (*Kitāb arā’ ahl al-madīna al-fāḍila*). The First Intellect necessarily emanates from the First Being, namely God. Like the First Being, the First Intellect is immaterial. As it contemplates the First Being, the First Intellect necessarily brings a third being, namely the Second Intellect into existence. As it contemplates itself, the First Intellect necessarily brings the celestial heaven into existence. The Second Intellect also contemplates the First Being, which necessarily brings the Third Intellect into existence. The Second Intellect's contemplation of itself brings the sphere of fixed stars into existence. Similarly, the contemplation of the Third Intellect brings the Fourth Intellect and the sphere of Saturn into existence, the contemplation of the Fourth Intellect brings the Fifth Intellect and the sphere of Jupiter into existence, and so on through the Tenth Intellect and the spheres of Mars, the Sun, Venus, Mercury, and the Moon. Thus Fārābī combines **Ptolemy's** planetary spheres with Neoplatonic emanationism and necessity into a philosophical cosmology that would become the fundamental tenet of all subsequent Islamic Hellenistic philosophers (*falāsifa*). In their view, the celestial heavens were the realm of celestial intellects, souls, spheres, and planets.

Fārābī's *Commentary on Ptolemy's Almagest* (*Sharḥ al-Majisṭī*) is his only strictly astronomical work. The text has not yet been edited, but a Russian translation has been published, based on **Ibn Sīnā's** shortened recension preserved in a British Library manuscript.

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