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'Āmilī: Bahā' al-Dīn Muḥammad ibn Ḥusayn al-'Āmilī

Behnaz Hashemipour

Born Ba'labakk near Jabal al-'Āmilī, (Lebanon), 18 February 1547

Died Isfahan, Iran, 1 September 1621

Bahā' al-Dīn Muḥammad ibn Ḥusayn al-ʿĀmilī, better known in Iran as Shaykh-i Bahā'ī, was probably the last scholar in the chain of universal and encyclopedic scholars that Islamic civilization was still producing as late as the 16th century. A major figure in the cultural revival of Safavid Iran, he wrote numerous works on astronomy, mathematics, and religious sciences and was one of the very few in the Islamic world to have propounded the possibility of the Earth's movement prior to the spread of Copernican discoveries in astronomy.

Bahā'ī's family came from the village of Juba' near the coastal town of Sidon in southern Lebanon, in the vicinity of Jabal 'Āmil, whence his name. He was still a young boy when his whole family, as part of a wave of Shī'a scholars, migrated to Iran to escape the persecutions of the Shiite Muslims by the Ottomans.

Bahā'ī's father, a prominent scholar with an impressive reputation, was well received in the court of the Safavid monarch Shah Ṭahmāsb, assuming the office of chief jurisconsult in the Safavid administration. Bahā'ī's father takes the credit for Bahā'ī's early education, by virtue of which he mastered the religious sciences. He further studied logic, philosophy, mathematics, and astronomy under the most prominent scholars of the day, excelling in these sciences as well.

Bahā'ī soon rose to prominence in the Safavid court and was appointed to the office of chief jurisconsult in the court of Shāh 'Abbās the Great. Nevertheless, court engagements and public duties never seem to have deterred him from his scholarly activities, both as a teacher and as a writer. He trained many students, some of whom became the most prominent scholars of the period.

Bahā'ī may be counted among the most prolific writers of Islamic civilization, having written more than 100 treatises and books. His works cover a wide range of subjects, from religious sciences to mathematics, astronomy, and the occult sciences. In addition to these, he wrote a literary-religio-scientific anthology known as *Kashkūl*, which, apart from its literary and scientific merits, is of utmost importance in understanding the man and his thoughts. Bahā'ī's *Khulāṣat al -ḥisāb* (Essentials of arithmetic), was to become the most popular textbook throughout the Islamic lands from Egypt to India until the 19th century. This book was translated into German by G. H. F. Nesselmann and published in Berlin as early as 1843; a French translation appeared in 1854.

Our sources do not provide a definitive list of Bahā'ī's astronomical works. However, he seems to have written as many as 17 tracts and books on astronomy and related subjects, including a number of glosses and commentaries on the works of past masters. He also wrote *Risālah dar hall-i ishkāl-i 'uṭārid wa qamar* (Treatise on the problems of the Moon and Mercury), in an attempt to find solutions to the inconsistencies of the Ptolemaic system within the context of Islamic astronomy. In his summary of theoretical astronomy entitled *Tashrīh al-aflāk* (Anatomy of the celestial spheres), he upholds the view of the positional rotation of the Earth, arguing that no sufficient proof has been offered so far to the contrary. In expressing this view, Bahā'ī stands out as one of the

very few Muslim scholars to have advocated the feasibility of the Earth's rotation as early as the 16th century, this independent of Western influences.

Since no serious study of Bahā'ī's scientific works (especially those related to astronomical fields) has been made so far, one cannot make a critical assessment of his achievements and contributions in this area. Yet his works clearly demonstrate the fact that he was a scholar with a critical and disciplined mind. Furthermore, Bahā'ī's works demonstrate the clarity and discipline of a mathematician's mind that is able to present scientific issues in a simple and easy-to-understand manner.

A number of architectural and engineering works have been attributed to Bahā'ī as well, though none can be substantiated by the sources. He is credited with the distribution of the waters of the Zayandeh-Rud River through a complex network of irrigation canals, based on a distribution map known as Bahā'ī's scroll. Furthermore, according to a popular legend he engineered a heating system for a public bath in Isfahan that drew all the energy needed for heating the water and the bath itself from a single candle!

In addition to his many-faceted scientific capabilities, Bahā'ī was a gifted poet and has bequeathed some very fine pieces of poetry, mostly with mystical themes, which are still cherished by the public. Some of Bahā'ī's works, particularly the *Kashkūl*, demonstrate very strong mystical tendencies of the author. He spent part of his life traveling in Ottoman territories, which brought him into close contact with prominent scholars of his time in Aleppo, Damascus, Jerusalem, Cairo, and elsewhere. Brief reports of some of these meetings and exchanges have been recorded in his *Kashūkl*.

Bahā'ī was also famed for his works of charity, which had turned his home into a shelter and refuge for orphans, widows, and the needy. Bahā'ī has remained a very popular figure in public memory, and many anecdotes about him have passed from generation to generation, some even attributing miraculous acts to him. Bahā'ī died in Isfahan and his body was carried to Mashhad (in northeast Iran) to be laid to rest in the shrine of Shi'ism's eighth *imām*, 'Alī ibn Mūsā.

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Corrections/Additions