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Ishāq ibn Ḥunayn: Abū Ya‘qūb Ishāq ibn Ḥunayn ibn Ishāq al-‘Ibādī

Glen M. Cooper

Born circa 830

Died Baghdad, (Iraq), 910/911

Ishāq ibn Ḥunayn was one of the most important translators of Greek scientific and mathematical works into Arabic. He lived in the ‘Abbāsīd capital of Baghdad during the vibrant period of the Graeco-Arabic translation movement, when nearly everything of philosophical or scientific interest from the ancient Greek corpus was translated into Arabic.

Ishāq came from a family noted for its translations. He was the son of the most renowned translator of the period, **Ḥunayn ibn Ishāq**, who hailed from a Nestorian Christian Arab tribe of al-Ḥīra, Iraq. Ḥunayn set the standard of excellence, professionalism, and method for Graeco-Arabic translation, which he passed on to his son. Like his father, Ishāq was a physician and wrote an important history of physicians that supplements our information on that subject derived from classical sources. Ḥunayn reports in the epistle in which he describes the 129 works of Galen he translated or revised that he translated several books of Galen specifically for the use of his son Ishāq, perhaps for him to study as part of his education as a physician.

Although Ishāq was a physician, he understood mathematics and astronomy in order to be able to grasp the sophisticated arguments of Euclid's *Elements* and **Ptolemy's** *Almagest*, both of which he translated from Greek into Arabic. These two works, which were of immense importance for the subsequent development of Greek mathematical astronomy into the Islamic world, were Ishāq's primary contribution to astronomy. The *Elements* were useful not only for instruction in geometry but also as a model for presenting scientific theory systematically and deductively; it was considered by many ancient scholars the foremost example of the methods expounded by **Aristotle** in his *Posterior Analytics*. The *Almagest* was a comprehensive approach to mathematical astronomy from which a long tradition of practice, criticism, and improvement evolved in the Islamic world. Ishāq's translation of the *Almagest* was emended by the practicing astronomer, **Thābit ibn Qurra**, who perhaps refined the mathematical details. Though the *Elements* and the *Almagest* were translated multiple times in the 9th century, which is an indication of the ‘Abbāsīd interest in the ancient Greek scientific heritage and the substantial financial support provided for translation into Arabic, it is important to note that the Ishāq/Thābit translation became standard for both the *Elements* and the *Almagest*.

Ishāq translated a number of other works from Greek. These included Euclid's *Optics*; the *Spherics* of **Menelaus**; *On the Moving Sphere* by **Autolycus**; several Platonic dialogues; and works of Aristotle, including *On the Soul* and the *Physics*.

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