

Hunayn ibn-Ishaq: A Forgotten Legend

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IT DOES NOT MATTER whether we like the history of science or not. If we were to understand the continuity of medical science progress we must study the science of the ancient times, the Middle Ages, and the Renaissance because they are not exclusive but rather overlapping. The Greek miracle of marvelous arts, science and culture over two centuries before the Christian era came very close to perishing if it were not for its transmission through the dark ages. Perhaps it is best stated by Sarton'. "Transmission is as important as discovery." If all of the ancient science had been hidden instead of published or had been lost in transmission it would be almost as if it had never been.z

With the revolution in communications today the transmission of science is almost automatic and instantaneous providing an easy access for the exchange of expertise. This was not the case in earlier ages. Scientists faced enormous economic, logistic, and political difficulties that made the exchange of expertise very slow and limited. Most of the discoveries had to migrate from one continent to another or had to be translated from a language to another before they became integrated in our intellectual patrimony.

Thanks to the Nestorian (Christian) schools and scholars in Mesopotamia (Edessa and Gondi-Shapor) the translations took place from Greek into Syriac or Aramaic and from the Syriac into Arabic during the third to seventh centuries of the Christian era.²⁻³ From Arabic they were translated into Latin and finally into English. Many Christian scientists-mostly physicians-graduated from these schools and became forgotten legends as their contributions to science and humanity are only trivially mentioned today. Even when remembered in the literature they are often referred to as Arabs and /or Moslems, contrary to their national identity as Assyrians and Chaldeans (the indigenous people of Mesopotamia) and contrary to their religious identity as Christians.

As an Assyrian American and a Nestorian surgeon I feel obliged to unravel the facts and pay those giant scholars a tribute they deserve in memory of their dedication to science, medicine, and humanity. Perhaps starting with Hunayn ibn-Ishaq sets the stage for my objectives.

The Life of Hunayn ibn-Ishaq (809-877 AD)

Born to a Nestorian druggist in al-Hira near Babylon Hunayn ibn-Ishaq followed in the footsteps of his father. Being an Assyrian like many other natives of al-Hira at that time he spoke only Syriac. It appears that ibn-Ishaq had to learn Arabic later in life.⁴ However, his knowledge about drugs granted him a position as a drug dispenser to ibn-Massawaih, a prominent Nestorian physician and teacher in the school of medicine in Jondi-Shapor. His enthusiasm and eagerness to learn medicine irritated his master and cost him his position.⁵

ibn-Ishaq left the school determined to study Greek and Arabic languages; he spent several years in Greek towns in Asia Minor and in Basra. Later he was welcomed in Baghdad by Jibra'il Bakhtishu, the court physician to the Caliph al-Ma'mun. Being a liberal Moslem and an admirer of the Greek science and medicine al-Ma'mun appointed ibn-Ishaq to be in charge of an academy and a library, *beit al-hikma* ("house of wisdom"), supervising all of the translations from Greek and Syriac into Arabic.

Hunayn ibn-Ishaq made long journeys through Mesopotamia, Syria, Palestine, and Egypt to find Greek scientific manuscripts. The money for these travels and for the purchase of rare books was provided not

only by the caliphs but also by the prominent men at their courts many of whom were themselves learned scholars of great reputation.

In time-and for the first time-Arab students could read the Arabic translations of a great portion of the works of Hippocrates, Galen, Paul of Aegina, Ptolemy, Euclid, Aristotle, and Plato, an important milestone in the history of science. Arabs and Moslems soon picked up and added their original contributions which were subsequently transferred to Europe via Spain.

Hunayn ibn-Ishaq's Translations

Although preceded and followed by many translators none could be compared with ibn-Ishaq and his pupils. He trained a group of pupils who became competent translators of works into both Syriac and Arabic. His nephew Hubysh was especially proficient in Arabic, and his son Ishaq was competent in Syriac.

Hunayn ibn-Ishaq was without a doubt the greatest and most productive of all translators. He made many original translations as well as revision of many others done by his predecessors as they were inaccurate and many of them had transliterated the Greek with Syriac or Arabic letters.

According to his own list he translated into Syriac 95 and into Arabic 39 books of Galen. In one of his manuscripts entitled *al-Sina'ah al-Saghirah* preserved in the Garrett collection of Arabic and Persian manuscripts in Princeton University, seven books of Galen's anatomy which are lost in the original Greek are fortunately preserved in Arabic through the translations of ibn-Ishaq.⁶ Six more Syriac versions and about 70 Arabic versions were made by his pupils and mostly revised by himself as well as the 50 Syriac versions that had been made by his predecessors including the famous *Corpus Galeni* by Sergius of Ras al'Ayn.

Hunayn ibn-Ishaq translated works into Syriac for very prominent (Nestorian) Christian physicians and scholars⁷-to mention a few: Gibra'il ibn Bakhtishu', Yuhanna ibn Masawaih, Salmawaih ibn Bunan, Bakhtishu' ibn Gibra'il, Zakariyya at-Taifuri, Isra'il at-Taifuri, Shirishu' ibn Qurtub, and others. The Arabic versions were made for prominent Moslems, some of whom had recently converted to Islam such as Ali ibn Yahya, secretary of the caliph al-Mutawakkil; Muhammad ibn Abd al-Malik az-Zayyat, Vizir of the caliph al-Mu'tasim; Muhammad and Ahmad ibn Musa, mathematicians and physicists; Ahmad ibn Muhammad al-Mudabbir, governor of Egypt under al-Mutawakkil; Ishaq ibn Ibrahim al-Tahiri, governor of Khurassan under al-Ma'mun; and Ishaq ibn Sulaiman, former governor of Egypt.

ibn-Ishaq's method of translation was admirable and satisfies the demands of modern philology. He severely criticized his own early translations and those done by his predecessors and often had them redone. At the time of his death in 877 AD he was engaged in making a translation of Galen's *De constitutione artis medicae*.

Hunayn ibn-Ishaq's Own Works

ibn-Ishaq was the author of more than 100 original works, but only few of these are extant today. In addition to a Greek-Syriac dictionary, his writings can be divided into the following areas:

General Medicine and Various Subjects⁷

ibn-Ishaq became famous in medieval Europe by his introduction to the *Ars Parva Galeni*, which was translated into Latin under the title *Isagoge Johannitii*. His greatest success among Asians came by his *Questions on Medicine and Ophthalmology*. Other books covered diverse subjects such as the diet of the old, the diet of convalescent patients, different remedies, symptoms, pulse, fever, urine, bath, hygiene, veterinary medicine, anecdotes of ancient philosophers and medical men, colors, actions of the sun and

moon, the reason why seawater is salty, etc. He also wrote about logic, syntax, universal history, religion, and a missive (*Risala*) on the misfortunes of his own life.

*Ophthalmology*⁷

Perhaps Hunayn ibn-Ishaq's greatest achievements were in ophthalmology. He authored many books, some of which are still preserved today. A few of the titles are: *The Ten Treatises on the Eye*, *The Questions on the Eye*, *On the Structure of the Eye*, *The Book of Colours*, *The Divisions of Eye-Diseases*, *The Choice of Remedies for Eye-Diseases*, and *The Operative Treatment of Eye-Diseases*. His achievements were certainly the starting point for Arab ophthalmology.

Hunayn ibn-Ishaq's Morals and Ethics

Under the caliph al-Mutawakkil ibn-Ishaq reached the summit of his glory as a translator and as a medical practitioner, but at the same time the mistrust of the caliph, a very orthodox and fanatical Moslem, and the envy of ibn-Ishaq's Christian colleagues caused him a series of bad experiences. Although favored by most of the caliphs his integrity as a person and as a professional was heavily and seriously tested.⁷

The caliph al-Mutawakkil bade him to prepare a poison for an enemy offering him rich rewards if he would do so. ibn-Ishaq refused and was imprisoned for a year. When brought again before the caliph and told he would be put to death if he did not obey the order, he replied:

Two things forbid it, my religion and my profession. My religion commands us to do good, even to our enemies, so much more to our friends, and my profession forbids us to do harm to our kindred as it is instituted for the benefit and welfare of the human race, and God imposed on physicians the oath not to compose mortiferous remedies.

After he was pardoned al-Mutawakkil told him that he had only desired to test his loyalty to the standard traditions of medical practice!

A few years later new misfortunes befell ibn-Ishaq when some of his colleagues denounced him to the caliph as a heretic. He was imprisoned in his house for several months and was flogged from time to time, and the caliph deprived him of his goods and (what was the worst punishment to him) his books. In his own words (*Missive*), he related the following: "I had lost all the books which I had gradually collected during the course of the whole of my adult life in all the lands in which I had traveled, all of which books I lost at one blow. . ."

Later on he began to regain the favor of al-Mutawakkil after a successful cure and had his fortunes restored and honors and rich presents bestowed on him. From this time ibn-Ishaq devoted himself with an astonishing zeal to the translation work. He pardoned his former enemies and disdained to take revenge on them.

No doubt Hunayn ibn-Ishaq set a rare example for a true scholar and a legend. He kept very high moral and ethical standards in his professional conduct. By translating the marvelous heritage of Greek science into Syriac and Arabic and by adding more than 100 original works he managed not only to preserve but to transfer and enrich the existing fund of knowledge ensuring its safe passage to future generations through the dark ages.

REFERENCES

1. Sarton G. Introduction to the History of Science, Vol I. Carnegie Institution of Washington. Baltimore: Williams and Wilkins Co, 1927. |
2. Whipple AO. Role of the Nestorians as the connecting link between Greek and Arabic medicine. Ann

Med Hist New Ser 1936;2:313-323.

3. Whipple AO. The role of Nestorians and Moslems in the History of medicine. Princeton, NJ: Princeton University Press, 1967.

4. O'Leary D. How Greek Science Passed to the Arabs. London: Routledge and Kegan Paul, Ltd., 1948.

5. Browne EG. Arabian Medicine. Cambridge, UK: Cambridge University Press, 1921.

6. Hitti PK. History of the Arabs; London: Macmillan and Co., Ltd., 1937

7. Meyerhof M. The Book of the Ten Treatises on the Eye Ascribed to Hunayn ibn-Ishaq (809-877 A.D.). Cairo, Egypt: Government Press, 1928.

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