## IN MEMORIAM

Abdelhamid Ibrahim Sabra 1924–2013

Abdelhamid Ibrahim Sabra, Professor Emeritus of the History of Arabic Science at Harvard University, passed away on December 18 in Lexington, Massachusetts after a long illness. Born in 1924 to a family of modest means in the Egyptian city of Tanta, Sabra was able to receive an education because he was his parents' only child to survive infancy. After attending the local Coptic school, he won a scholarship to study philosophy at the nascent Alexandria University, where studied with scholars such as Yusuf Karam and Abu al-'Ala 'Afifi. He maintained a deep attachment to that institution throughout his life. His group of college friends included the literary critic, poet, and translator, Mohammad Mustafa Badawi, the actor Mahmoud Morsi, and the novelist Edward al-Kharrat.

In 1950, the Egyptian government sent him to study at the London School of Economics. Sabra later described this opportunity as "one of those generous, long-term scholarships which only poor countries, like Egypt, could afford." He pursued a doctorate in Philosophy of Science under the supervision of Karl Popper. His dissertation was later published by the Cambridge University Press under the title Theories of Light from Descartes to Newton. Sabra remained a devoted friend and disciple of Popper, visiting him in England when he could, until Popper's demise. Sabra was a Popperian not so much in the formal vein of *The Logic of Scientific Discovery*, but rather more in keeping with the dialogical style of Conjectures and Refutations. When I was preparing a paper for the volume edited by Sabra and Jan Hogendijk, The Enterprise of Science in Islam: New Perspectives (Cambridge, USA, and London: MIT Press, 2003), I asked him whether he would mind if I put a question mark at the end of the title. He replied, "As a student of Karl Popper, I think that every sentence should end with a question mark!"

It was in England that he met a fellow student, Nancy Sutton, whom he married in 1955, just before returning to Egypt to teach at his beloved alma mater, Alexandria University. In 1961, the Sabras decided to leave Egypt. Sabra took up a position at the Warburg Institute in London, where he rose to the position of reader. He developed a close friendship with Otto Kurz, whose picture he placed on the shelf at his office at Harvard. Other friends included Ernst Gombrich, Frances Yates, and D. P. Walker.

In 1972, Sabra accepted an offer to join the History of Science Department at Harvard, where he was appointed Professor of the History of Arabic Science. He taught there until his retirement in 1996, and the chair in the History of Arabic Science has remained vacant ever since. Relocating to the United States involved not a little culture shock for this very Anglified Egyptian, who had to adapt to new and strange customs. For example, Americans insist upon speaking to colleagues on a "first-name basis"; it was in response to this odd custom (his many friends in England simply called him 'Sabra') that he revived the name "Bashi", by which he was called by his many new friends and colleagues ever since.

Sabra's rare combination of a thorough mastery of the primary sources as well as the contemporary intellectual discourse, taken together with Popperian engagement and English verve, enabled him to make medieval Arabic science directly relevant to many beyond his specialty. One of the most congenial people I have ever met, Sabra did as much or more than anyone else to promote the history of Arabic science, both by training a generation of specialists, as well as by bringing the results of specialized research to wide audiences. He did all of this without polemics or invective; advancing the cause of Arabic science was not to be achieved by downplaying the achievements of other civilizations, nor by ignoring the contributions of Jews and Christians to Arabic science. Indeed, he credited a series of lectures by Popper on Einstein with fixing his decision to embark on a career in the philosophy of science, rather than philosophy, and historians of European science the likes of Frances Yates with teaching him the meaning of historical research.

Sabra's own work certainly taught many throughout and beyond the academy about the depth and originality of Arabic science, and, in his later work, about the innovative project of the kalām. On the other hand, he met with less success in gaining proper recognition for the Egyptian scholars under whom he studied and whose work he continued. Even towards the end of his career, after having met the cream of European and American academia, he could, in his acceptance speech for the Sarton medal in 2005, look back upon "the distinguished, inspiring faculty who taught me philosophy and logic in Alexandria . . . they embodied standards of learning, integrity and devotion as high as I have seen anywhere."

The voluminous output of Professor Sabra spanned many different fields, principally optics, astronomy, and logic (the title of his volume in the Variorum Collected Studies Series, Aldershot: Ashgate, 1994), but also geometry, philosophy, and kalām. Most were close studies of Arabic texts, whose precise meaning was ferreted out, then situated historically. He formulated his guiding principle in seeking the correct balance between textual studies and "big questions" in an article

published in *Isis* in 1996: "it is only by attempting to formulate appropriate questions that can be fruitfully examined in light of what we now know that we make it possible for others to come up with deeper and more probing questions in the future."

However, some studies offered observations of a more general nature. By far the most seminal of these was his essay, "The Appropriation and Subsequent Naturalization of Greek Science in Medieval Islam: A Preliminary Statement," first published in History of Science in 1987, reprinted in his Variorum volume, and again in Tradition, Transmission, Transformation, the volume of studies that came out of a conference held in his honor at the University of Oklahoma (edited by F. Jamil and Sally Ragep, with Steven Livesey, Leiden: Brill, 1996). The main task Sabra set out for himself was to see just what the transmission of Greek science to medieval Islam meant for Islamic civilization: to look at "science in Islam as a phenomenon of Islamic civilization – a phenomenon that must be understood in terms peculiar to that civilization." The starting point of the inquiry is the recognition that Greek science was not merely "thrust upon" Muslim society. Instead, Muslims of the eighth and ninth centuries actively sought out, took hold of, and finally made their own "a legacy which appeared to them laden with a variety of practical and spiritual benefits. And in so doing they succeeded in initiating a new scientific tradition in a new language which was to dominate the intellectual culture of a large part of the world for a long period of time."

Though this essay was written some fifteen years after taking up his chair at Harvard with the specific example of medieval Islam in mind, the notion of appropriation, as a general theory for the movement of ideas, was something that he had been thinking about for a very long time. In his acceptance speech for the Sarton Medal he confided, "I found myself gradually enticed by questions of the movement of scientific knowledge across cultures, which movement I eventually came to understand as an act of appropriation, I mean a creative process of making your own something not originally your invention."

Sabra's doctorate and first book were on the history of optics, and his primary life-long project concerned that science as well; a full edition, translation, and commentary to the *Kitāb al-Manāzir*, or *Optics*, of Ibn al-Haytham. Ibn al-Haytham, one of the greatest scientists produced by Islamicate civilization, contributed to most of the sciences of his day. Sabra published several important studies on the man and his work. However, no work displayed the originality and insight of Ibn al-Haytham so much as his book on optics, nor did any other of his writings have such an impact on the subsequent developments in the field. Spread over seven *maqālāt*, *al-Manāzir* investigates the psychological, mathematical, and physical aspects of light and

vision, taking a new and at times experimental approach. Moreover, the first substantial modern research on al-Manāzir was published by an Egyptian professor of physics, Muṣṭafā Naz̄īf (al-Ḥasan ibn al-Haytham: Buḥūthuhu wa-kashūfuhu al-baṣariyya, two volumes, Cairo, 1942–43). As Sabra remarks in the preface to the Introduction of his own study, Naz̄īf's penetrating study has been fairly well ignored in both western and eastern scholarship. It seems to me that in taking up the project on al-Manāzir, Sabra was not only making known the accomplishments of an Egyptian scientist of the tenth century, but also carrying forward a major achievement of an Egyptian academic of the twentieth.

Sabra served as editorial consultant or adviser to a score of international journals published in the U.S., Europe, and the Middle East, Arabic Sciences and Philosophy among them, and as associate editor of the Dictionary of Scientific Biography. He was a member of many academic societies and was elected to several academies, including the American Academy of Arts and Sciences and the Académie Internationale des Sciences. In 2005, he was awarded the George Sarton Medal for lifetime achievement by the History of Science Society. He also was awarded a prize by the Kuwait Foundation for the Advancement of Sciences. He is survived by his wife of fifty-eight years, Nancy, and his sons, Adam and Peter.\*

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