

Critical Notices
Book Reviews
Book Notes

©2012 The Institute of Mind and Behavior, Inc.
 The Journal of Mind and Behavior
 Winter and Spring 2012, Volume 33, Numbers 1 and 2
 Pages 119–122
 ISSN 0271–0137

Islam and Science: The Intellectual Career of Niẓām al-Dīn al-Nisābūrī. Robert G. Morrison. Culture and Civilization in the Middle East Series. London and New York: Routledge, 2007 [softcover published December 2011], viii + 301 pages, \$168.00 hardcover, \$44.95 softcover.

Reviewed by John Walbridge, Indiana University

Niẓām al-Dīn al-Nisābūrī (or Nishāpūrī, to use a Persian spelling) is not exactly a household name, even for those involved with the history of Islamic science or Islamic thought in general. He was born around 1270 C.E. in Nishapur, at that time a major city in northeastern Iran, and died around 1330. He was probably a Shi'ite, though not aggressively so, to judge from his writings. Like most medieval Islamic scholars, he wrote in several fields. Works of his survive on astronomy, Qur'an commentary, and rhetoric, but this understates his breadth, since his works on astronomy also drew on philosophy, other branches of science, and astrology, while the Qur'an commentary tapped the whole range of religious and secular sciences. His particular fame, such as it was, was based on two of his works on astronomy that were used as textbooks and his Qur'an commentary.

In order to understand why Robert G. Morrison chose to write *Islam and Science: The Intellectual Career of Niẓām al-Dīn al-Nisābūrī* on this relatively obscure figure, it is necessary to have some background on the history and intellectual life of the period and what its relevance has been for Western scholarship, both on Islam and the history of science more generally. Al-Nisābūrī lived during the period of Mongol rule in greater Iran (which at that time included modern Iraq and neighboring areas of Afghanistan, Central Asia, and eastern Anatolia). The Mongol invasion in the 1250's had produced considerable, though not universal, devastation in the eastern Islamic lands, culminating in the sack of Baghdad in 1258, but by the time of al-Nisābūrī's student days, things had returned to something like normal, apart from an unusual degree of tolerance for religious minorities such as Shi'ites and non-Muslims. The thirteenth and fourteenth centuries were, in fact, a particularly creative time both for the religious sciences and for natural science generally, particularly mathematical astronomy. His own chief teacher, Quṭb al-Dīn al-Shīrāzī, was the most important scientist in the central Islamic world from the late 1270's until his death in 1311. Quṭb al-Dīn was particularly important for his work on the mathematical description of planetary

Correspondence concerning this article should be addressed to John Walbridge, Ph.D., Department of Near Eastern Languages and Cultures, Indiana University, 1011 East Third Street, Bloomington, Indiana 47405. Email: jwalbrid@indiana.edu

motions, but he also wrote shorter works on mathematics, an enormous commentary on the theoretical portions of Avicenna's *Canon of Medicine*, and works on various religious sciences. Quṭb al-Dīn's most important teacher was Naṣīr al-Dīn al-Ṭūsī (1201–1274), an immensely important Shi'ite theologian, philosopher, and scientist. Al-Ṭūsī was commissioned by the Mongol ruler to establish an observatory to produce a new and more reliable set of astronomical tables to facilitate more accurate astrological predictions. The observatory in the town of Marāgha in northwestern Iran drew top scientific and intellectual talent from much of the Islamic world and from as far away as China. It is certainly one of the most important scientific institutions ever established in the Islamic world.

More generally, the thirteenth and fourteenth centuries were a time of transition in the Islamic religious sciences, characterized by the rise of a sort of Islamic scholasticism. Around the beginning of the twelfth century, the great theologian al-Ghazālī had written attacking philosophy as contrary to revelation, but he had also written several manuals of Aristotelian logic, one of which served as the introduction to his manual of *uṣūl al-fiqh*, “the principles of religious law,” which is the discipline governing the analysis of revealed texts to derive Islamic law. Certainly, by al-Nīsābūrī's time a religious scholar was expected to have studied logic. Moreover, texts on Kalam, Islamic theology, had moved from common sense expositions of Islamic belief through proof texts from the Qur'an and sayings of the Prophet to sophisticated works in many respects indistinguishable from philosophy and rather similar in spirit to the kinds of theological works produced by European Christian theologians of the period.

A key figure in this transition is another Islamic scholar who looms large in al-Nīsābūrī's career, the theologian Fakhr al-Dīn al-Rāzī (1149–1209). Like al-Ghazālī, al-Rāzī influenced the move towards the use of philosophy by his criticisms of it. Two of his many works are particularly important for our purposes. The first was a rather critical commentary on the *Hints and Admonitions*, Avicenna's last and somewhat telegraphic work of philosophy. Together with the counter-commentary by al-Ṭūsī, this work is one of the foundational texts of later Islamic philosophy. Second, al-Rāzī's *Great Commentary on the Qur'an* was the work that al-Nīsābūrī abridged and adapted for his own commentary. This vast work deals with theological issues of every sort in long digressions, prompting a later reader whose patience had been tried to remark, “It contains everything except a Qur'an commentary.” But again, this work made philosophical issues central to the agenda of Islamic theologians.

Finally, the content of Islamic philosophy changed significantly in this period under the influence of two colorful and influential thinkers. The elder was Shihāb al-Dīn Yaḥyā al-Suhrawardī (ca. 1155–1191), who was executed for heresy at the orders of Saladin. He was an unabashed Neoplatonist whose criticisms of Avicenna's Peripatetic thought, particularly of his epistemology and metaphysics, are still debated by traditional Iranian philosophers. The other was the Spanish Sufi Ibn 'Arabī (1165–1240), who propounded a monistic mystical metaphysics that had enormous influence on later Islamic theological and philosophical thought.

This said, it is also the case that this period has not received the scholarly attention it deserves. Al-Suhrawardī and Ibn 'Arabī have been studied, and there have been important studies of the astronomy of al-Ṭūsī and his school, but beyond that, scholarly output on the science and philosophy of this period has been spotty. A further problem is that most of the scholars of this period were polymaths, writing large books on a variety of fields. Looking at the works of an individual author, it is often difficult to know how these works relate to each other or what the contribution of a particular author was within a particular field. The latter problem is not helped by two attitudes of

medieval Muslim authors: assuming that it would be condescending to think that the reader does not know who is being referred to, thus making it unnecessary to name the person whom the writer is talking about, and the belief that originality is bad, thus requiring authors to pretend that their original ideas are actually derived from earlier authors. It is difficult, and thus uncommon, for a modern scholar to attempt to produce an integrated study analyzing the interrelationships among an author's works in several fields or his overall relationship between his works in a single field and his predecessors.

Robert G. Morrison is attempting to tackle these problems in the works of a single author, mostly dealing with works on two subjects: astronomy and Qur'an commentary. Al-Nisābūrī was not, as I indicated, an especially important figure — and nothing in Morrison's book changes that evaluation — but he was a typical medieval Islamic scholar and scientist. Morrison is primarily a historian of astronomy, and al-Nisābūrī's best work was evidently in astronomy, so it is al-Nisābūrī's mathematical astronomy that gets his closest attention, but Morrison attempts to place that astronomy in the context of his author's education and his religious works.

There is little information on al-Nisābūrī's education, the subject of the first chapter, though Morrison teases out a plausible picture based on hints in his works and what is known of the educational and intellectual culture of the time. What is certain is that al-Nisābūrī received an education in both the religious and rational sciences. Though it has often been claimed that Islamic civilization turned away from the rational sciences after al-Ghazālī (d. 1111), by al-Nisābūrī's time it was quite normal for a religious education to include fairly serious study of logic and Aristotelian philosophy, as well as some instruction in scientific topics like basic astronomy, which was useful for timekeeping, and mathematics. Al-Nisābūrī was unusual in that he acquired an expert knowledge of astronomy, the subject of his first major book, a commentary on al-Tūsī's recension of the *Almagest*. Morrison analyzes some of the topics discussed in this work, particularly eclipse observations and solar positions, but this is not a topic I am competent to comment on.

Of more interest to me is Morrison's view of the relationship between astronomy, philosophy, and religion. In the introduction to his commentary, al-Nisābūrī talks about the religious justification of astronomy as providing evidence of the wise Creator and, in turn, justifying the study of certain aspects of philosophy. While there is no particular reason to doubt his sincerity in this, it seems to me that Morrison may be overstating the significance of such statements. It was the normal practice for a medieval Islamic book to begin with an exordium linking the topic to religion, usually with clever allusions to the Qur'an and other Islamic texts. While this might — or might not — be evidence of the author's piety, it cannot be taken at face value as evidence of the author's primary motivation. After all, al-Nisābūrī spent years working on astronomy, when God's goodness was adequately attested by the cycle of the seasons. Obviously, the man must have been motivated in large part by curiosity and enthusiasm for the subject. What is of more importance, I think, is that an astronomer could unselfconsciously link his enterprise with both Islam and philosophy — evidence that astronomy, at least, had been domesticated within the Islamic intellectual realm.

The third chapter attempts to pin down al-Nisābūrī's religious thought. The period of Mongol rule in Iran was complex in religious terms. Since the Mongols were not converted to Islam for some time, they allowed an unusual freedom of religion. Al-Nisābūrī studied with Sunnis, particularly members of the Shāfi'ī legal school, and was influenced by Ash'arite theology, in contrast to the Mu'tazilite theology more characteristic of the Shī'ites. Morrison uses these disputes to frame al-Nisābūrī's discussion of astrology in his next major work and his mathematical astronomy in a third astronomical work.

The later chapters of the book deal with the opposite problem, how al-Nisābūrī's scientific views influenced his religious thought, specifically in his commentary on the Qur'an. Such commentaries were written from a variety of viewpoints, and his was heavily based on al-Rāzī's, which had a strongly theological and philosophical bent. Thus, Morrison finds fairly free use of scientific material in this commentary but also much material reflecting Sufi mystical thought. The book concludes with three appendices of more technical material, the first dealing with the dating of al-Nisābūrī's work, the second with his astronomical observations of eclipses and solar positions, including information on the use of astronomical apparatus, and the third with his mathematical models.

Morrison's book attempts to deal with an important and difficult problem — the place of science in medieval Islamic intellectual culture. I think that he has made progress in dealing with two historiographical problems. First, as I have mentioned, there has been a tendency to think of Islamic science and rationalism as having ended with al-Ghazālī or soon after. Some of this is based on older scholarship that considered only authors known in medieval Latin translation. This particular misunderstanding has more or less vanished from the study of Islamic philosophy, but it is still often found in work on medieval European science and its relation to the Scientific Revolution. Whatever al-Nisābūrī's personal merits, he was clearly doing serious astronomy two centuries after al-Ghazālī. Second, historians of Islamic science, faced with masses of unpublished, unstudied, and usually unread scientific manuscripts, have tended to focus on understanding the scientific ideas of particular texts and authors. While this has been valuable, these historians of science have usually ignored the intellectual and cultural contexts of medieval Islamic science, matters of much more general interest than the details of particular astronomical models, for example. Morrison has attempted to bridge this gap by first looking at al-Nisābūrī's education and then attempting to interrelate his scientific and religious ideas. I suspect that he has portrayed these relationships as more problematic than they really were. However, he has attempted, with considerable success, to put a typical medieval Islamic scientist into his intellectual, religious, and cultural contexts, and this is a valuable contribution.

A NOTE ON OUR BOOK REVIEW POLICY

We will accept book reviews for publication each issue. Authors wishing to submit book reviews are urged to write with the above interdisciplinary framework firmly in mind. All books *solicited* from publishers will be sent to selected individuals for review. JMB also accepts unsolicited reviews. Reviews should be absent of all titles except the name of the work reviewed, author of work reviewed, place of publication, publisher, date of latest publication, number of pages, and cost. Any individual wishing to submit a review should contact our Book Review Editor for further information: Steven E. Connelly, Ph.D., Department of English, Indiana State University, Terre Haute, Indiana 47809. Email: sconnelly@isugw.indstate.edu

JMB is abstracted or indexed in: *Cultures, Langues, Textes: La Revue de Sommaires*; *Current Contents (Social and Behavioral Sciences)*; *EMBASE/Excerpta Medica*; *International Bibliography of Book Reviews*; *International Bibliography of Periodical Literature*; *Linguistics and Language Behavior Abstracts*; *Physics Abstracts*; *Psychiatric Rehabilitation Journal*; *PsychINFO/Psychological Abstracts*; *Research Alert*; *Social Science Citation Index*; *Social Work Abstracts*; *Sociological Abstracts*; *The Philosopher's Index*. The Journal of Mind and Behavior website is located at www.umaine.edu/jmb/.