



ENCYCLOPAEDIAS, PERSIAN

ENCYCLOPAEDIAS, PERSIAN *Pre-modern*. In Persia, as in other Islamicized lands, the notion of an encyclopaedia developed out of the “need for inventory” of the knowledge acquired through numerous translations of foreign (mainly Greek) scientific texts subsidized by Baghdad (Arnaldez et al., p. 448). The newly introduced sciences were variously combined with indigenous sciences. The first Persian author who distinguished himself in the encyclopaedic field was Abū Naṣr Fārābī (d. 339/950) in his *Eḥs-Ā’ al-’olūm*, composed in Arabic (ed. Amin, Cairo, 1931-48). During the next centuries, Persia herself produced a number of specialized works of an encyclopaedic nature. In philosophy and science, some works in Arabic dealing with a particular field (e.g., *Šefā’* on philosophy and *Qānūn* on medicine by Avicenna [q.v.]; *al-Qānūn al-mas’ūdī* on astronomy and *al-Taḥḥīmle awā’el šenā’at al-tanjīm* on astrology by Bīrūnī [q.v.]) were soon followed or already paralleled by works of the same kind in Persian by the bilingual authors themselves, e.g., Avicenna’s *Dāneš-nāma-ye ’alā’ī* (q.v.) on philosophy; the Persian version of *Taḥḥīm* by Bīrūnī; Esmā’īl Jorjānī’s monumental medical encyclopedia *Daḳīra-ye k̄vārazmšāhī* (q.v.); and *Dorrat al-tāj le ḡorrat al-Dabbāj* on philosophy and exact sciences by Qoṭb-al-Dīn Maḥmūd Šīrāzī. Many encyclopaedic works and important compilations in the traditional fields such as religion, sufism, history, grammar, lexicography, and poetry (See ARABIC iv) were frequently abridged in Persian.

Works of a more general scope intended to collect and summarize the vast available knowledge began to appear in Persia through the compilation of



various manuals in Arabic for high-ranking secretaries with important responsibilities. The authors sometimes adopted the arbitrary division of knowledge into the *'olūm-e awā'el* (sciences of the first ones) and the *'olūm-e awā'ker* (sciences of the later ones). The former roughly correspond to *'olūm-e 'aqlī* (rational/speculative sciences), referring to disciplines introduced after the advent of Islam; the latter approximately correspond to *'olūm-e naqlī* (traditional sciences), that is, the branches of knowledge supposedly possessed by the Arabs in pre-Islamic times (for an outline of these categories, see Āmolī, I, pp. 16-21). Of the aforementioned manuals, two deserve special attention.

1. The *Jawāme' al-'olūm* was composed in 327-44/938-55 by Še'yā b. Farīgūn (Sezgin [GAS II, p. 388] reads the name as Motağabbī [Matabgā] b. Foray'ūn; for a discussion of this name, see Qadiv-e Jam, pp. 150-52), a pupil of Abū Zayd Balkī (q.v.), for Amīr Abū 'Alī Aḥmad b. Moḥammad Čagānī (See [ĀL-E MOḤTĀJ](#)). It is a sketch of “sciences,” mostly presented in the form of genealogical trees and apparently produced for secretaries in charge of registering land taxes, drafting official documents, and performing other functions as advisers to kings and rulers. This compendium is divided into two sections: (a) Arabic grammar; *ketāba* (secretarial art), including the moral qualities expected from good secretaries, calligraphy and penmanship; knowledge of arithmetic, geometry, and *mesāḥa* (land surveying); religious duties and practices; vices and virtues; etc. (b) Very confused and of unequal presentation, this section deals with government, administration, faith, worship, morals, different sciences (e.g., theology, mathematics, natural sciences), as well as with the occult arts and similar subjects.

2. The *Mafātīḥ al-'olūm*, a different kind of work, was composed by Abū 'Abd-Allāh Moḥammad K̄vārazmī in 365-81/976-91 for Abu'l-Ḥasan 'Obayd-Allāh Aḥmad 'Oṭbī, the vizier of the Samanid Nūḥ II b. Maṣṣūr. It is a valuable dictionary of technical terms and uncommon names likely to be encountered by secretaries of the period using works about different sciences, which K̄vārazmī divided into two categories (p. 5): sciences of the *šarī'a* (Islamic law) and “allied sciences,” and sciences of the 'Ajam (q.v.) (non-Arabs, i.e., the Greeks and others). The former, corresponding to the *'olūm-e awā'ker*, are *feqh* (Islamic jurisprudence), *kalām* (theology), Arabic grammar, *ketāba*, poetry, prosody, and chronicles (*aḳbār*); the latter, corresponding to the *'olūm-e awā'el*, comprise philosophy, logic, medicine and pharmacology, arithmetic, geometry, astronomy/astrology, music, mechanics (*ḥīal*), and alchemy/chemistry.

The same binary division of sciences was adopted by the two major Persian



encyclopaedists, Faḳr-al-Dīn Moḥammad Rāzī and Šams-al-Dīn Maḥmūd Āmolī (q.v.), only under the headings *‘aqlī* and *naqlī* sciences.

Rāzī, an Ash‘arite theologian, is the author of *Jāme‘ al-‘olūm*, also called *Ketāb settīnī* or *Ḥadā‘eq al-anwār fī ḥaḳā‘eq al-asrār*, written in Persian in 574/1179 for the Ḳvārazmšāh ‘Alā‘-al-Dīn Tekeš and intended as a repertory of knowledge available at the time (p. 3). It is extant in differing versions (Dānešpažūh, ed., p. *dāl*, Monzawī, *Nosḳahā*, pp. 656-57; Storey, II, pp. 351-52). The *naqlī* sciences dealt with by Rāzī are theology (*kalām*); polemics (*jadāl*); controversial issues in *feqh* (*kelafīyāt*); *‘elm al-madḥab* (different opinions about the problems concerning religious obligations, practices, etc.); *farā‘eż* (lit. “appointed or obligatory portions,” i.e., fixed shares in an estate given to certain heirs); *waṣāyā* (testamentary dispositions); interpretation of the Qur‘ān; reasons for *e‘jāz* (inimitability of the Qur‘ān); different readings of the Qur‘ān; prophetic traditions; history, including the Prophet’s military expeditions; Arabic syntax, morphology (*taṣrīf*), and lexical derivations; proverbs; and prosody, rhyme, poetry, and rhetoric.

The *‘aqlī* (rational) sciences include: logic, physics, oneiromancy, physiognomy, medicine (particularly dietetics), anatomy, pharmacology, *‘elm al-ḳawāṣṣ* (miraculous properties attributed to many things), alchemy, mineralogy (particularly gemology), talismans, agriculture, stain removal (*ḳal‘-e āṭār*), veterinary medicine, falconry, geometry, *mesāḥa*, moving and lifting heavy objects (*‘elm-e atḳāl*), weights and measures, unusual engines of war, Hindu arithmetic, *ḥesāb-e hawā‘* (mental calculation), algebra, arithmetic, science of magic squares (*‘elm-e wefq-e a‘dād* or *a‘dād-e wefq*), optics, music, astronomy, astrology, geomancy, metaphysics, religions and sects, morals, politics, home economics, science of the *ākera* (the hereafter, i.e., how to secure felicity for oneself in the hereafter by reading the Qur‘ān and performing prayers and other religious duties), royal ethics (*ādāb al-molūk*), and chess. Some of the chapters have been studied: politics by de Fouchécour (pp. 425-29) and the section on arithmetic by Brentjes (pp. 77-99). The chapter on music was edited by Pūrjawādī (pp. 88-110).

Šams-al-Dīn Āmolī, lecturer at Solṭānīya in the time of Oljāytū (Öljeitū) and Abū Sa‘īd Bahādor Khan (q.v.), is the author of *Nafā‘es al-fonūn fī ‘arā‘es al-‘oyūn*, composed in Persian around 740/1340 for Shaikh Abū Eṣḥāq Īnjū (q.v.). Although the author initially proceeds with a different, more systematic classification of sciences (I, pp. 14-16) by dividing these into philosophical (*ḥekmī*) and non-philosophical (*ḡayr-e ḥekmī*) ones, each with numerous



subdivisions, he actually presents his material under the categories *'olūm-e awāker* and *'olūm-e awā'el*. The *'olūm-e awāker* consist of: (a) literary sciences (*adabīyāt*): calligraphy, lexicology, etymology and lexical derivation (*ešteqāq*), morphology, syntax, semantics, rhetoric (*'elm al-ma'ānī wa'l-bayān*), rhetorical embellishment (*badī'*, q.v.), prosody, rhyme, poetry, acquaintance with the poems of major Arab and Persian poets as well as the ability to quote from them (*'elm-e davāvīn*), proverbs, epistolary art, and the science of *estifā'* (state accountancy); (b) religious sciences (*šar'iyāt*): *kalām*, exegesis of the Qur'ān, *'elm al-aḳbār* (i.e., evaluation of the authenticity of Prophetic traditions), *feqh*, *da'wat* (invocations or prayers transmitted from the prophets and Imams), etc.; (c) Sufism (*taṣawwof*) and its subsidiary sciences, such as arithmomancy (*jafr*, *'elm al-ḥorūf*); (d) the art of conversation (*moḥāwara*), including the topics usually brought up in high-class company (e.g., history, witticism, pleasantries, different religions and sects, imamology, the Prophet's military expeditions, literary puns, and puzzles). The *'olūm-e awā'el* consist of: (a) philosophy (*ḥekmat*): ethics, politics, and *tadbīr-e manzel* (including home economics and childhood education); (b) theoretical philosophy (*ḥekmat-e naẓarī*): logic, first philosophy (*falsafa-ye ūlā*), theology (*'elm-e elāhī*); natural science (*'elm-e ṭabī'ī*): cosmology, meteorology, and the three kingdoms of nature; (c) principles of mathematics (*oṣūl-e rīāzī*): geometry, astronomy, arithmetic, and music; (d) subsidiary natural sciences (*forū'-e ṭabī'ī*): medicine, alchemy, *sīmīā* (talismans, exorcism), oneiromancy, physiognomy, astrology, *ḳawāṣṣ al-ašyā'*; natural professions or skills (*ḥeraf-e ṭabī'ī*): veterinary science, falconry, stain removal, agriculture, *'elm-e aktāf* (scapulimancy), palmomancy (*eḳtelāj-e a'żā*); two Hindu sciences: *'elm-e dam* (divination by interpreting someone's breath, expiration) and *'elm-e wahm* (self-delusion, illusion); and (e) mathematical subdivisions (*forū'-e rīāzī*): cosmography, optics (*'elm-e manāẓer*), intermediate sciences (*motawasseṭāt*; an introduction to Euclidean geometry, Ptolemaic astronomy, etc.), arithmetic, algebra, land surveying, the study of celestial constellations, astrology, horoscope, astrolabe, etc., geography (*'elm-e masālek o mamālek*), magic squares; geomancy, mechanics, and games: chess, backgammon, etc.

On the whole, Āmolī's work, a fluently written book covering 160 sciences, is particularly instructive on the evolution of the subdivisions of Aristotelian classification of sciences (applied physics and mathematics) following Avicenna's *Resāla fī aqṣām al-'olūm al-'aqlīya*. The chapter on *fotowwat* was included in *Rasāyel-e Javānmardān* (ed. Šarrāf, pp. 58-68); the vocabulary was studied by Tarwatīān.



Institutionalized transmission of philosophy and science, which was minimal, took place mainly through the court, intellectual circles, and family lineages (Makdisi, introd.) There was no common format for encyclopaedias in Persia either for instruction or for use as a model “book containing all the sciences.” The contents of an encyclopaedia (sometimes designated as *jāmeʿ* [sing.] /*jawāmeʿ* [plur.]; but florid literary titles were preferred) depended very much on the personal knowledge of the author and libraries accessible to him. The term *ʿelm* was used indiscriminately for all religious and secular sciences, arts, and the like. Therefore, besides the works of Rāzī, Āmolī, and some later authors influenced by them (Dānešpažūh, ed., p. *dāl*, Monzawī, *Noskaha*, p. 664; Storey, II, pp. 358-59), which are rather close to the modern concept of an encyclopaedia, there were other Persian models of this kind of literature favoring either foreign or Islamic sciences in their practical aspect. Outstanding examples among them include:

1. The anonymous *Yawāqīt al-ʿolūm wa darārī al-nojūm*, written in Persian for a governor of Qazvīn before 573/1177. It contains thirty chapters, each arranged under twelve questions and answers (for a general discussion of this genre, see Daiber). Fourteen chapters concern religious sciences, seven literary and linguistic sciences, one history, and eight ancient (*awāʿel*) sciences: oneiromancy, *roqyas* and *afsūns* (incantations, spells), medicine, agriculture, astronomy/astrology, land surveying, reckoning, and divination.

2. The rather voluminous *Nozhat-nāma-ye ʿalāʾī* of Šahmardān b. Abīʾl-Ḳayr, written in Persian between 488/1095 and 513/1119) for ʿAlāʾ-al-Dawla Abū Kālījār Garšāsp, ruler of Yazd (p. 50), is as representative of the personal interests of Šahmardān, author of various works (see Jahānpūr’s intro., pp. 19-21), as of the cultural taste of the Kakuyid dynasty, whose rulers were well known for their patronage of Avicenna and other learned and literary men (see, e.g., Bayhaqī, I, pp. 110-11, no. 65). The *Nozhat-nāma* deals with: (a) the three kingdoms of nature, particularly their *ḳawāṣṣ* (marvelous properties), namely, human beings, domestic animals, wild beasts, birds, insects and reptiles, plants, agriculture, and minerals; and (b) physics, including a description of the universe, arithmetic, astronomy and astrology, logic, reckoning, astrological seals, practical astrology (*eḳtīārāt*, i.e., favorable/unfavorable days), physiognomy, meteorology, oneiromancy, and some “sciences and mechanics” (such as alchemy, everyday mechanics, tricks, perfumes, eye remedies, etc.). Although he incorporates a wide range of sources, Šahmardān mainly develops the practical sciences. In 580/1185 Abū



Bakr Moṭahhar Jamālī Yazdī composed his *Farroḳ-nāma-ye Jamālī* to complement the *Nozhat-nāma*. He dedicated this work, also written in Yazd, to Amīr Esfahsālār Bahā'-al-Dawla Moḥammad b. Rūzbehān and to his own son (pp. 5-6). The contents are limited to the *ḳawāṣṣ al-ašyā'* and to some occult sciences (scapulomancy, palmomancy, astrology, and theurgy). The principal topics supplemented by Jamālī include: scapulomancy, palmomancy, a table to predict an ill person's early recovery or impending death, poisons and antidotes, cryptography, and a long chapter (pp. 309-29) on "the meanings of Pahlavi words" (i.e., early N. Pers. words obsolete at the time). Vladimir Ivanov (pp. 863-68) considered *Nozhat-nāma* and *Farroḳ-nāma* as the most important sources for the study of superstition in medieval Persia.

3. The *Nawāder al-tabādor le-toḥfat al-Bahādor*, written in Persian by Šams-al-Dīn Moḥammad b. Ayyūb Donayserī in 682/1283 for an unknown amir of Qaraḥešār. The work was obviously intended for practical use as well as for pleasant reading. The subjects range from the divisions of philosophy to miracles and include astronomy, astrology, medicine, poisons, precious stones, physiognomy, "marvels," *ḳawāṣṣá*, agriculture, etc. The editors have published a second version of the text in the same volume (pp. 285-333), as well as an interesting list of sources (pp. 278-81).

Several Persian encyclopaedias, particularly of later periods, still await study and critical editions. Among those produced in India, the most important ones are *Maṭla' al-olūm*, by Wājed-'Alī Khan in 1261/1845-46 (Storey, II, pp. 366-67), and *Šajara-ye dāneš*, written before 1059/1649 by Nežām-al-Dīn Aḥmad Gīlānī (Monzawī, *Nosḳahā* I, pp. 673-74).

Two factors influenced the development of pre-modern Persian encyclopaedias in the Islamic period. First, a pragmatic division was made between foreign and Islamic sciences, providing a flexible frame for the inventory of all known branches of knowledge at any given period. Second, the dynasties ruling Persia obviously were interested in learned literature. Works not accessible to them in Arabic were translated and frequently discussed at court banquets, as noted in introductions to Persian scientific treatises. Such court interest favored the composition of encyclopaedias in Persian rather than in Arabic, with the latter largely reserved for specialized fields and professional circles.

Modern. Notwithstanding the trend of encyclopaedism in the Iranian world in the past centuries, it was only in the first half of the 20th century that, owing



to the impact of Western cultures, encyclopaedias in the modern sense of the word (i.e., comprehensive, objective, methodical, and usually alphabetical) began to be compiled in Persia. Both the term *dā'erat/dāyerat al-ma'āref* and the methods were borrowed from the *Dā'erat al-ma'āref*, which the Lebanese scholar Boṭros Bostānī began publishing in Beirut in 1876, as well as from the twenty-volume *Dā'era ma'āref al-qarn al-ēsrīn* published in 1938 in Egypt by Moḥammad Farīd Wajdī. Because the Islamic contents of these encyclopaedias were thought by Persian scholars to be unfair to Twelver Shi'ism, attempts were made to rectify this imbalance. The first venture was by 'Abd-al-'Azīz Jawāher-kalām, who spent "about forty years" to prepare the *Dā'erat al-ma'āref-e eslāmīya-ye Īrān o hamagī-e ma'āref-e Šī'a-ye etnā-'ašariya*, but only six fascicles thereof—from *alef* to *al-ḥojjat al-bālēga*—were published in 1336-39 Š./1957-60 (Mošār, *Fehrest* II, col. 1971; for an appraisal of this work, see *Dāyerat al-ma'āref-e tašayyo'*, intro., I, pp. xi-xiii). The currently published *Dāyerat al-ma'āref-e tašayyo'*, represents another attempt to produce an encyclopaedia reflecting the Twelver Shi'ite viewpoint and beliefs; the contributors include many Persian authorities on Islamic subjects. So far three volumes have been published (Tehran, 1366-71 Š./1988-92).

The major encyclopedias with a wider scope include: the encyclopaedic dictionary *Lōgat-nāma* (Tehran, 1325-58 Š./1946-79) by 'Alī-Akbar Deḥkodā (q.v.); *Dāyerat al-ma'āref-e fārsī* (q.v.); *Dāneš-nāma-ye Īrān o eslām* (q.v.); *Dāneš-nāma-ye jahān-e eslām*, so far (October 1996) six fascicles (*b* to *Baḥr-e ṭawīl*) have appeared (articles translated from *EI2*, *EIr.*, and encyclopaedias published in Turkey as well as original articles); *Dāyerat al-ma'āref-e bozorg-e eslāmī*, represents a colossal academic enterprise treating the Islamic civilization past and present, with a Twelver Shi'ite approach. Thus far six volumes—from *ā* to *Aḥmad b. 'Abd-al-Malek*—have been published (Tehran, 1367-73 Š./1988-94). Two volumes of the Arabic version thereof, *Dāyerat al-ma'āref al-eslāmīya al-kobrā*, have been published.

The only encyclopaedic work in Persian exclusively devoted to all aspects of Persia, both in historical and contemporary perspectives, is the large two-volume (2142 pages) *Īrānšahr*, published by the UNESCO National Commission in Iran (Tehran, 1342-43 Š./1963-64). A great number of Persian scholars have contributed to the production of this encyclopaedia, which is arranged by topic.

Persian encyclopaedias published outside Persia are: *Ārīānā dā'erat al-ma'āref*, published by the former Anjoman-e Dā'erat al-ma'āref-e Afḡānestān in Kabul.



Originally planned on a grand scale (cf. vols. 1-3, *ā-Ūkrāyn*, [1328-35 Š./1949-56] each consisting of a thousand pages), it was later drastically reduced in volume and coverage (vols. 4-6 *ūltīmātūm-Yūnos* [1341-48 Š./1962-70] include only 2,371 pages taken collectively); *Entsiklopediyai sovetii tojik* (q.v.; Tajik Soviet Encyclopedia), in Tajiki Persian in Cyrillic alphabet, sponsored by the Academy of Sciences of the (former) Soviet Socialist Republic of Tajikistan, with M. S. Asimov as its general editor (Dushanbe, 1978); it is international in coverage, with special emphasis on subjects directly concerning Tajikistan.

BIBLIOGRAPHY

Šams-al-Dīn Moḥammad b. Maḥmūd Āmolī, *Nafā'es al-fonūn fi 'arā'es al-'oyūn*, ed. A. Šarānī, 3 vols., Tehran, 1377-79/1957-59.

Arnaldez et al., "La science arabe," in *La science antique et médiévale (des origines à 1450)*, ed. R. Taton, Paris, 1966.

'Alī b. Zayd Bayhaqī, *Tatemma šewān al-ḥekma*, ed. M. Šafī', Lahore, 1935.

S. Brentjes, "Das Kapitel *'ilm al-arīṭmāṭīqī* aus der persischen Wissenschafts-Enzyklopädie von Faḥr al-Dīn ar-Rāzī: Edition, Übersetzung und Kommentar," *Persica* 13, 1988-89, pp. 77-106.

H. Daiber, "Masā'il wa adjwiba" in *EI2* VI, pp. 636-39.

Dāyerat al-ma'āref-e tašayyo', ed. A. Šadr, K. Fānī and B. Ḳorramšāhī, Tehran, 1366 Š./1988-.

M.-T. Dānešpažūh, ed., *Yawāqīt al-'olūm wa darārī al-nojūm*, Tehran, 1345 Š./1967.

Šams-al-Dīn Moḥammad b. Ayyūb Donayserī, *Nawāder al-tabādor le-toḥfat al-Bahādor*, ed. M.-T. Dānešpažūh and Ī. Afšār, Tehran, 1350 Š./1971.



- Ebn Farīgūn, *Jawāme' al-'olūm*, facs. ed. F. Sezgin, Frankfurt am Main, 1985.
- C.-H. de Fouchécour, *Moralia*, Paris, 1986.
- V. Ivanov, "Faraḥ-Nāma-i Jamālī," *JRAS* 4, 1929.
- F. Jahānpūr, "Nozhat-nāma-ye 'alā'ī," *Rāhnemā-ye ketāb* 19, 1355 Š./1976, pp. 622-31, 896-904; 20, 1356 Š./1977, pp. 399-414, 867-77.
- Abū Bakr Moṭahhar Jamālī Yazdī, *Farroḡ-nāma*, ed. Ī. Afšār, Tehran, 1346 Š./1967.
- Ḥ. Kaḍiv-e Jam, "Ketāb-e *Jawāme' al-'olūm* taṣnīf-e Ša'yā b. Farīgūn. . ." in Ḥ. Yaḡmā'ī et al., eds., *Nāma-ye Mīnovī*, Mojtabā Mīnovī's festschrift, Tehran, 1350 Š./1971, pp. 148-62.
- Abū 'Abd-Allāh Moḡammad b. Aḡmad K̄vārazmī, *Mafātīḥ al-'olūm*, ed. G. van Vloten, Leiden, 1895.
- G. Lazard, "Un amateur de sciences au Ve siècle de l'hégire, Shahmardān de Rai," in *Mélanges Henri Massé*, Tehran, 1963, pp. 219-28.
- A.-Ḥ. Pūrjawādī, ed., "Elm-e mūsīqī bargerefta az *Jāme' al-'olūm*-e Faḡr-al-Dīn Rāzī," *Ma'āref* 10/2-3, 1372/1993.
- Faḡr-al-Dīn Moḡammad b. 'Omar Rāzī, *Jāme' al-'olūm*, Bombay, 1323/1906, repr. with intro. and indices by M. Tasbīḥī, Tehran 1346 Š./1967.
- Šahmardān b. Abi'l-Ḳayr Rāzī, *Nozhat-nāma-ye 'alā'ī*, ed. F. Jahānpūr, Tehran, 1362 Š./1983.
- M. Šarrāf, ed., *Rasāyel-e javānmardān, moštamel bar haft "fotowwat-nāma" (Traité des Compagnons-chevaliers: Recueil de sept "Fotowwat-Nāmeḥ")*, with intro. by H. Corbin, Tehran, 1352 Š./1973.
- B. Ṭarwatīān, *Farhang-e eṣṭelāḡāt o ta'rīfāt-e Nafāyes al-fonūn*, Tabrīz, 1353 Š./1974.
- E. Yār-e Šāṭer (Yarshater), "*Dāneš-nāma-ye Īrān o Eslām*," published as an appendix to *Rāhnemā-ye ketāb* 19/7-10, 1355 Š./1976-77.