

همان جا؛ دایرةالمعارف فارسی، ذیل «جبر خیام»؛ همان،
ذیل «زیج».

از جمله شاگردان او به یحیی ابن غالب، معروف به
ابوعلی خیاط، که تألیفاتی در احکام نجوم داشته،
می توان اشاره کرد. ماشاءالله تا خلافت مأمون عباسی
در قید حیات بوده است (دایرةالمعارف فارسی، ذیل
«ماشاءالله یهودی»).

برخی آثار او بدین قرارند:

۱. کتاب الاسعار، این کتاب در زمینه ارزش کالاها
نگاشته شده و قدیم ترین اثر علمی عربی است که به
دست اروپاییان رسیده است (تهامی، همان جا؛
دایرةالمعارف فارسی، همان جا)؛
۲. کتاب فی صنعة الاسطرلاب، که در ۱۵۸۳ م به چاپ
رسیده است؛

۳. کتاب الامطار والرياح؛

۴. کتاب تحویل سنی الموالید؛

۵. کتاب الحروف؛

۶. کتاب الحکم علی الاجتماعات و الاستقبالات؛

۷. کتاب الدول و الملل؛

۸. کتاب ذات الحق (همان جاها)؛

۹. کتاب السابع العشرین؛

۱۰. کتاب السفر؛

۱۱. کتاب السلطان؛

۱۲. کتاب السهمین؛

۱۳. کتاب مطرح الشعاع؛

۱۴. کتاب الموالید الصغیر (همان جاها)؛

۱۵. کتاب المرطبی؛

۱۶. کتاب الموالید الکبیر؛

۱۷. کتاب الواحد العشرین؛

۱۸. کتاب المعانی.

میشا ابن اثری بغدادی، ملقب به «ماشاءالله»، منجم
یهودی قرن دوم هجری قمری است.

تاریخ تولد وی دانسته نیست و درباره سرگذشت
وی اطلاع چندانی نداریم. از زندگی او همین قدر
می دانیم که در ۲۰۰ یا ۲۰۵ ق درگذشته، و در دوره
منصور و مأمون، در زمینه نجوم فعالیت می کرده است
(تهامی، ج ۲، ص ۱۸۰۶).

گفتنی آنکه مهم ترین اثر نجومی دوره پیش از اسلام
ایران زیج شاهی یا زیج شهریاری بود که در ۵۵۵ م، در
زمان انوشیروان، تألیف شده بود و ابوالحسن تمیمی آن
را به عربی ترجمه کرد. این اثر در شکل گیری نجوم
اسلامی تأثیر ویژه ای گذاشت و بعدها زیج شاهی اساس
فعالیت منجمان اسلامی، چون ابن نوبخت و ماشاءالله
یهودی، در زمان خلافت منصور، شد که در محاسبات
تأسیس شهر بغداد و طراحی و ساخت آن شرکت
داشتند و از آن زیج بهره بردند. ماشاءالله یهودی در
احکام نجوم یگانه روزگار خویش بود. بیشتر کارهای
علمی او در دوره منصور عباسی صورت گرفت.
همچنین وی در این دوره در طراحی و ساخت شهر
بغداد شرکت داشت (لغت نامه، ذیل مدخل؛ تهامی،
همان جا؛ خلاصه زندگینامه علمی دانشمندان، ذیل مدخل).

از میان آثار متعددش فقط یک اثر، که به زبان عربی
است، به جای مانده است، ولی ترجمه های لاتین آثار
دیگر او در دست است. مترجمان لاتینی در
نوشته های شان نام ماشاءالله را به صورت مساهالا و
شکل هایی نزدیک به آن آورده اند، ولی تلفظ اصلی نام
وی منسه است. این دانشمند برجسته یهودی
کتاب هایی درباره نجوم و اسطرلاب و هواشناسی
نگاشته که یوهانس هیسپالنسیس در قرون وسطا برخی
از آثار او را به لاتینی ترجمه کرده است (تهامی،

01 Mayıs 2013

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130910
Ma'sā' allāh b.
Bens

Ğa'far Muḥammad b. Mūsā al-Ḥwārizmī is said to have extracted from the *Geography* of Ptolemy. The fame of Muḥammad b. Mūsā al-Ḥwārizmī, who was active during the Caliphate of al-Ma'mūn and who was known in Europe due to his books on algebra, arithmetic and astronomy, led obviously almost inevitably to his being identified with the Abū Ğa'far al-Ḥwārizmī mentioned on the title page. In reality we know hardly anything at all about the life of al-Ḥwārizmī, author of the algebra and many other works. His *kunya* appears on at least one of the extant manuscripts on algebra as Abu Abdallah. The quotations in the sources derive from "Muḥammad b. Mūsā al-Ḥwārizmī" or only "al-Ḥwārizmī". There is also the possibility of a confusion or identification with Muḥammad b. Mūsā al-Munağğim, i.e. Muḥammad b. Mūsā b. Šākir,¹ who likewise worked during the Caliphate of al-Ma'mūn (see below, p. 243).

The *Šurat al-ard* (see above, pp. 218 ff.) was discovered by Spitta, studied thereafter several times and edited by von Mžik. Its importance for the history of geography lies in any case in the answer to the question how it came into being and what the personal achievement of this Ḥwārizmī is. As we have emphasised elsewhere in the present book, it is very probable, almost certain, that a certain Abū Ğa'far al-Ḥwārizmī took up the task of compiling the coordinates of the world map of the Ma'mūn geographers in a book of tables, and that this was done both from its grid and also from the coastlines and borders of countries, apparently for facilitating the production of further maps. The question remains open to what extent all the possible data of the vulgate map are exhausted in the approximately 3000 coordinates of the tables.

[239] It is of great interest that in a not yet edited manuscript of the Ayasofya library 4830 (f. 199a-200a, see GAS, VI, 143), which perhaps contains a part of the *Ziğ as-Sindhind*, a table of the seven climates by Muḥammad b. Mūsā al-Ḥwārizmī is set out, which does not correspond entirely to the division of the Ma'mūn geography and the other subsequent tables. Compared with the Ma'mūn table, the minutes of the first and third climates are missing here.²

¹ see D. M. Dunlop, *Muḥammad b. Mūsā al-Khwārizmī* in: JRAS (London) 1943, 248-250.

² E. S. and M. H. Kennedy (*Geographical Coordinates*, see preface, p. 24) ascribe the anonymous table to al-Ḥwārizmī without giving reasons. Cf. below, p. 246 ff.

In his *Mu'ğam al-buldān* (IV,545), Yāqūt borrows data about the position of Egypt in the division of climates of the oikoumene from a son of Māšā'allāh's. His father, the well-known Māšā'allāh,¹ astrologer at the court of the early Abbasids, participated in the measurements for the foundation of Baghdad in 145/762; he is said to have witnessed the commencement of al-Ma'mūn's reign and died probably around 200/815 (see GAS, VI, 127-129; VII, 102-108, 324). The contents of the fragment preserved by Yāqūt confirm the assumption that "Ibn Māšā'allāh al-Munağğim" is not a scribal error and therefore does not refer to the father but indeed to his son or one of his sons. In connection with the geographical position of Egypt, Yāqūt compares the representation of Ibn Māšā'allāh with that of a certain "*šāhib az-Ziğ*". Another set of about 30 quotations by Yāqūt show clearly that this *šāhib az-Ziğ* refers to Abū 'Aun Ishāq b. 'Alī, who depended mainly on the Ḥwārizmī table (see below, pp. 299-301). While the Ma'mūn geographers accommodated Egypt only in the third climate by latitude, it extends from the second to the third climate in Ibn Māšā'allāh's work. It is interesting that he introduces in the third climate two places, Atrib and Banā (?), which seem to be missing in the Ma'mūn geography, and that some of his data come closer to the modern value than that of the Ma'mūn geographers. Moreover, the quotation by Yāqūt creates the impression that it goes back to a work which arranged its material according to climates, perhaps without taking the longitudes into account. It is possible that this work was produced—chronologically speaking—shortly after the Ma'mūn geography.

[240]	Ibn Māšā'allāh	Ma'mūn Geography	Ptolemy	modern
	Lat.	Lat.	Lat.	Lat.
Iḥmīm	26°	26°50'	27°20'	26°35'
Ahnās	28°	28°		
Qulzum	28°	28°20'	28°50'	29°59'
Miṣr (Cairo)	29°	29°55'	--	30°03'
al-Faiyūm	29°	28°00'	27°20'	29°19'
Alexandria	30°	31°05'	31°	31°13'
Atrib ²	30°	--	--	

¹ cf. E. S. and M. H. Kennedy, preface, p. 27.

² see Maspéro, J. et Wiet, G., *Matériaux pour servir à la géographie de l'Égypte*,

Masallah

25 MART 1907

STEINSCHNEIDER, M. Maschallah [Māshā'allāh, GAL 5 I, 391]. pp. 434-440. ZDMG, 53 (1899).

04

-Maşallah el-Askeri

Pingree, David B.,

The Astrological History of Masha' allah, Cambridge, Harvard University Press, 1971 (with E. S. Kennedy).

-Maşallah el-Askeri

Kennedy, Edward S.,

The Astrological History of Mashā' allah with David Pingree. Harvard University Press, 1971:

1992
PINGREE, DAVID. Māshā' Allāh: Some Sasanian and Syriac sources. Pp. 5-14 in G. F. Hourani (ed.) Essays on Islamic philosophy and science. Albany: State Univ. of New York Pr., 1975. 935

Masallah

Masallah

STEINSCHNEIDER, M. Maschallah [Māshā'allāh, GAL 5 I, 391]. pp. 434-440. ZDMG, 53 (1899).

18 AGUSTOS 1991

Masallah b. Esar

68- Goldstein, B.R., "The book on eclipses of Masha'allah", *Egyptology*, 1964, 6: 205-13.

69- Goldstein, B.R., "Evidence for a supernova of A.D. 1006", *Astronomical j.*, 1965, 70: 105-14.

06 ARALIK 1995

PINGREE, DAVID. Māshā' Allāh: Some Sasanian and Syriac sources. Pp. 5-14 in G. F. Hourani (ed.) Essays on Islamic philosophy and science. Albany: State Univ. of New York Pr., 1975.

Masallah

BURNSTEIN, L. H. Maschallah [Māshā'allāh, GAL 5 I, 391]: eine Bemerkung zu der im *Fihrist* I, 273, gegebenen Deutung seiner hebräischen Namensform M158. ZDMG, 53 (1899), p. 600.

20 AGUSTOS 1991

06 ARALIK 1995

Masallah b. Esar

Kennedy, E.S., "A horoscope of Messehalla in the Chaucer equatorium manuscript", *Speculum*, 1959, 34: 629-30.

Identification of a horoscope in the Peterhouse Ms. 75.1 concerned with Chaucer as being computed by Māshā'allāh ibn Atharī al-Basrī.

کشف هویت طالعی در نسخه‌ای لاتینی مربوط به چار که توسط ماشاء الله بن اشری بصری محاسبه شده است.

Māshā'allāh

Masallah b. Esar el-Basri (v. 200/815) Suter, 5-6.

- 2303- Brockelmann, C., *Gesch. der arabischen Lit.*, 1: 221; Supplementband, 391-2. (ILT)
- 2304- Leclerc, L., *Hist. de la méd. arabe*, 2: 506.
- 2305- Ruska, J., "Māshā'allāh", *ET*, 3: 390-1.
- 2306- Sarton, G., *Introd. to the hist. of sci.*, 1: 531.
- 2307- Steinschneider, M., "Maschallah", *ZDMG*, 1899, 53: 434-40.
- 2308- Suter, H., *Die Math. und Astronomen der Araber*: 5-6; Nachträge: 158.

= X MĀSĀ'ALLĀH

MĀSĀ'ALLĀH b. Aṭarī (od. Sāriya), einer der ältesten arabisch schreibenden Astrologen (s. o. S. 102), hat Themen der Astrometeorologie nicht nur gelegentlich in seinen verschiedenen Werken angeschnitten, sondern ihnen auch eigene Monographien gewidmet.

1. - *K. al-Amṭār wa-r-riyāh*, Buch der Regen und Winde, aufgeführt von IBN AN-NADĪM und erhalten in lateinischer Übersetzung u. d. T. *Epistola in pluviis et ventis*, übersetzt von JOHANNES HISPALENSIS oder DROGON, zu Hss. s. CARMODY S. 37; gedr. in: *Cat. Cod. Astr. Gr.* 12/1936/210-216. Nach M. A. F. G. ŠANGIN, dem Herausgeber der lat. Übers., soll das im Vatikan befindliche arabische Fragment unter der Überschrift *Bāb al-amṭār fī sana* (Barb. Or. 46, ff. 3-6, 9. Jh. H., s. DELLA VIDA S. 242) eine Paraphrase dieser Abhandlung sein (a. a. O. S. 210). Das arabische Fragment wurde ediert und ins Italienische übersetzt von LEVI DELLA VIDA, *Un opuscolo astrologico di Māsā'allāh* in: *RSO* 14/1934/270-281.

2. - *Masā'il* (meteorologisch-astrologische Fragen) Leningrad, Az. Muz. B 70 (ff. 158-161), ebd. B 150/12 (ff. 220-223, s. B.A. ROZENFEL'D in: *Fiz. Mat. Vost.* 1/1966/259).

3. - Kap. 25-27 des in lateinischer Übersetzung erhaltenen *De scientia motus orbis* (*De elementis et orbibus coelestibus*) (s. GAS VI, 129) befaßt sich mit Änderungen in der Atmosphäre infolge der Position der Planeten in den Tierkreiszeichen.

GAS. VII. 2. 15. 324, 1973 (LEIDEN) S. 5-15 (ILL)

-Maşallah

MASHALLAH (d. c. 815/820)

GOLDSTEIN, Bernard. The book on eclipses of Masha'allah. *Physis*. 1964, 6: 205-13.

KENNEDY, E.S. A horoscope of Messehalla in the Chaucer Equatorium manuscript. *Speculum*. 1959, 34: 629-30.

THORNDIKE, Lynn. The Latin translations of astrological works by Messahala. *Osiris*. 1956, 12: 49-72.

MAZARLIK

24 MAYIS 1993

06 ARALIN 1990

-Maşallah b. Escri
Levi della Vida, G., "Appunti e quesiti di storia litteraria araba: 6^o Un opuscolo astrologico di Māsā'allāh", *RSO*, 1933, 14: 270-81.

Goldstein, Bernard R..

"The book of eclipses of Masha'allah," *Physis*, 6(1964). pp. 205-13.

× GOLDSTEIN, BERNARD. The book on eclipses of Masha'allah. *Physis*. 1964, 6:205-213.

Masha'allah (d. c. 815) was a Jewish astrologer who worked for the early 'Abbasid caliphs in Baghdad.



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ESSAYS ON ISLAMIC PHILOSOPHY
AND SCIENCE

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— Masha'allah

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their cultivation been indispensable for the maintenance and growth of Islam as a doctrine, an order, a way of life. The "Arab" sciences are closely bound together. From prosody to the *furū' al-fiqh* it is possible to trace a chain of connections consciously established, the unity of the sciences being based on their service to religion, and specifically to the Holy Book and the Sacred Tradition, whose understanding and whose utilization for the structuring of Muslim society and a Muslim life required studies of various kinds, precisely those which the Muslim scholars classified together as those of the Arabs, as their own. In this sphere, the *uṣūl al-fiqh*, the theory of *tafsīr*, the critique of the *ḥadīth*, do provide the epistemological link between theology (which takes the place of philosophy) and the individual sciences. In this sphere, the functional interdependence is every whit as tight as among the Greeks of the great period, at the height of Latin scholasticism and in the post-Kantian (I should prefer to say, post-Cartesian) era of occidental thought.

To the "silent majority" of classical Islam (including Jews and Christians integrated into its civilization) philosophy was suspect and certainly not a need, while the natural sciences were an objectionable or unobjectionable luxury. The community might enjoy their pursuit, it might, in a manner hard to define, profit by it, but their assiduous cultivation was not essential for the community's survival as the community of true believers. There were sciences of an intermediate sphere—geography, for instance, descriptive, political, astronomical—where changing concepts of need and changing views of purpose and method significantly modified the structure of the science in question, in this particular instance to the detriment of mathematical knowledge and the advantage of descriptive and ethnographic knowledge. This was a victory of concern for the earth and especially the *mamlakat al-islām* over speculation about the universe, and perhaps also a victory of the Iranian over the Hellenizing tradition. To the extent that such sciences could be expected to yield results of which the community stood in direct need, the interrelations among scope, method, and world view were firmly embedded in their intellectual structures and remained functionally operative. That such should have been less the case in geography than in law is but an indication of the relative indispensability of the "Arab" sciences to what the community considered its primary *raison d'être*.

Lacking support as they did in the fundamental aspirations and institutional needs of the *umma*, indeed more often than not being considered an actual or potential menace to the existence of the community as defined and determined by divine ruling, the extraordinary vitality over some five centuries of philosophy and, perhaps for an even longer period, of the secular sciences is an irresistible and justified cause of that 'ajab, that thrilled wonderment of what God has wrought, which is the sentiment that the Muslim writer and artist aspires to evoke.

MĀSHĀ'ALLĀH: SOME SASANIAN AND SYRIAC SOURCES

DAVID PINGREE

Māshā'allāh ibn Atharī,¹ a Jew (and perhaps a Persian Jew) from Basra, first appears as an authority on astrology as a member of the commission which determined for al-Manṣūr that the propitious moment for the founding of Baghdad fell on 30 July 762. He continued to have an influential position at the Abbāsīd court throughout the reigns of the succeeding caliphs, and is said to have lived on into that of al-Ma'mūn, which began in 813, though the latest secure date that we have for him is 809. He wrote prolifically on the various branches of the art of astrology; and, though only a half dozen of his works (together with numerous citations of varying authenticity) survive in Arabic, many others are preserved in Latin translations. His dependence on Sasanian sources for his astrological history and for many of his computations of planetary positions used in casting horoscopes has been discussed elsewhere in detail;² these studies have established his knowledge of Pahlavī. This paper is intended to clarify the tradition of one of the Pahlavī sources he had available when he wrote about genethliology (natal astrology), and to reveal the possibility of his having used two Syriac texts in composing what appears to be the first detailed discussion in Arabic of the principles of Aristotelian physics and meteorology, and a virtually unique description of a non-Ptolemaic Greek model of planetary motion. Before embarking on this project, however, it may be useful briefly to review something of what we know about Sasanian genethliology.

It is affirmed by Zoroastrian tradition that the Sasanian monarchs of the third century sponsored the translation of scientific texts both from Greece and from India into Pahlavī,³ and that these translations were revised in the sixth century under Khusrau Anūshirwān.⁴ These affirmations have been amply confirmed in the case of astronomy;⁵ they will shortly be shown to be true of astrology as well.

Unfortunately, little of an astrological nature survives in Pahlavī itself; scientific texts in general were not preserved by those Zoroastrians who survived the Muslim invasions and resisted conversion in Iran or who fled to the west coast of India. The principal extant passage that is relevant is found in the fifth and sixth chapters of the *Bundahīšn* in which the nativity of Gayomart is discussed.⁶ In this horoscope the ascendent was in Cancer

180081

SONNE BLER FOKURMAN

GESCHICHTE DES ARABISCHEN SCHRIFTTUMS

BAND XIII

MATHEMATISCHE GEOGRAPHIE UND KARTOGRAPHIE
IM ISLAM UND IHR FORTLEBEN IM ABENDLAND

AUTOREN

VON
FUAT SEZGIN

Türkiye Diyanet Vakfı İslâm Araştırmaları Merkezi Kütüphanesi	
Dem. No:	180081
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2007

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an der Johann Wolfgang Goethe-Universität
Frankfurt am Main

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- Cihannûma
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- Yakub b. Ğariq
- Ğarizmi Muh. b. Mûsâ
- Ğarizmi Muh. b. Ahm.
- Mâşâ'allâh b. Eserî
- Ferganî
- Kindî Ya'kubî'shak
- Ĥabep et-Ĥasib

Mashallah el-Iseri

18. MASHALLAH

Māshāllāh (mā shā' Allāh = what Allah wished) ibn Atharī al-Baṣrī (d. ca 815), a Jew from Basra (his Jewish name was Menasseh). He was known in Europe as "Messahalla". Astrologer, worked in Baghdad under Caliphs al-Manṣūr, Hārūn al-Rashīd (786-809), Amīn (809-813), and al-Ma'mūn (813-833). He participated with Nawbakht (No 7) in the preliminary survey for the foundation of Baghdad in 762-763.

See: GAL (I 249), GAL² (I 391-392), GAS (VI 127-129, VII 102-108, 324), IHS (I 531), KF (273-274), KF² (27), KZ (I 175), MAA (5-6), MAMS (II 34-35), PL (II 38-39), SSM (31) TH (327); Baldi [1] (429-431), Goldstein [3], Kennedy [10], Kunitzsch [22, 43], Lemay [18] (ENWC), Pingree [16] (DSB), [18], Ruska [19] (EI), Samsó [24] (EI²), Steinschneider [3] (15-83), Thorndike [3], Wensinck [5] (EI²).

- A1. Book on Prices (Kitāb fi'l-as'ār) - Cairo (Ṭal'at miqāt 157/3), Oxford (II 285/6). Astrological treatise.
- A2. The Book Known as Twenty-Seventh (al-Kitāb al-ma'rūf bi-'l-sābi' wa-'l-'ishrīn) - is mentioned in KF. Latin translations under titles "On Science of the Movement of Spheres" (De scientia motus orbis) and "On Elements and Celestial Spheres" (De elementibus et orbibus coelestibus): Mashallah [1-2]. Book in 27 chapters. Research: Duhem [2] (II 204-206) - on the precession of equinoxes.
- A3. Keys of Solutions (Mafātiḥ al-qaḍā') = Chapters of Keys (Abwāb al-mafātiḥ) P - Paris (II 895).
- A4. Book on the Construction of Astrolabes and their Operations. (Kitāb ṣan'at al-aṣṭurlābāt wa-'l-'amal bihā) - is mentioned in KF. Latin translation: Reisch [1], Gunther [1] (195-231). English translations: Gunther [1] (137-193), Thomson [1] (179-185 - chapters 17-18).
- A5. Book on Conjunctions, Religions, and Nations (Kitāb fi'l-qirānāt wa-'l-adyān wa-'l-milal). Edition with English translation of other astrological works by Māshāllāh: Kennedy and Pingree [1]. Research: Pingree [14]. KF lists also his works:
- A6. Book on an Armillary Sphere (Kitāb dhāt al-ḥalaq).
- A7. Book of Mysteries (Kitāb al-asrār) - Cairo (Ṭal'at miqāt 157/3).
- Mt1. Book on Rains and Winds (Kitāb al-amṭār wa-'l-riyāḥ). Only a medieval Latin translation is extant. Research: Shangin [2] of a horoscope of Māshāllāh: Kennedy [9].

ما لهم لا يبارك الله فيهم كيف لم يخف عنهم كتابي

وحدث ابوب بن الحكم انه كان جالسا عند ماسرجويه وهو يتظر في قوارير البول
اذ اتاه رجل من الخوز فقال اني بليت بدم لم يبل احد بمثله فسأله عن دائه فقال أصبح
وبصري مظلم على وأنا أصيب مثل حس الكلام في معدتي فلا تزال هذه حالي حتى
اطعم شيئاً فاذا طعمت سكن عني ما أجد الى وقت اتصاف النهار ثم يعاودني ما كنت
فيه فاذا طودت الاكل سكن باقي الى وقت صلاة العتمة ثم يعاودني فلا أجد له دواء
الاعاودة الاكل فقال له ماسرجويه على ذلك هذا غضب الله فانه قد أساء لنفسه
الاختيار حين قرنها بسفلة الناس ولوعودت أن هذا الداء تحول الي والى صبياني فكنت
اعوضك بما نزل بك مثل نصف ما أملك فقال له ما أفهم عنك فقال له ماسرجويه هذه
سحة لا تستحقها أسئلك الله تنالها عنك الى من هو أحق بها منك

[مسلمة بن أحمد] أبو القاسم المعروف بالجريطي الاندلسي كان امام الرياضيين
بالاندلس وأعلم من كان قبله بعلم الافلاك وحركات النجوم وكانت له غناية بارصاد
الكواكب وشغف بتفهم كتاب الجسطي . وله كتاب حسن في شمار العدد وهو المسمى
المعروف بالاندلس بالمعاملات . وكتاب اختصر فيه تعديلات الكواكب من زيج البناني
وعني بزيج محمد بن موسى الطوارزمي ونقله تاريخه الفارسي الي التاريخ العربي ووضع
أوساط الكواكب لأول تاريخ الهجرة وزاد فيه جداول حسنة على انه اتبعه على خطأ
فيه ولم يثبه على مواضع الغلط منه وتوفي مسلمة قبله الفتنمة بالاندلس في سنة ثمان
وتسعين وثلاثمائة وقد أنجب له تلاميذ جلة

[ماشاء الله] للجهنم اليهودي واسمه ميشي بن أبري كان يهوديا في زمن المنصور
وعاش الى أيام للأمون وكان فاضلا أوحد زمانه في الاخبار بأمور الحدنان وكان له حظ
قوي في سهم الغيب اشهر ذلك عنه وري ان سفيان الثوري لقي ماشاء الله فقال له أنت
تخاف زحل وأنا أخاف رب زحل وأنت ترجو المشتري وأنا أرجو رب المشتري وأنت
تعدو بالاستشارة وأنا أعوذ بالاستشارة فكتم بيننا فقال له ماشاء الله كثير ما بيننا حالك
أرجي وأمرك أجمع وأحجي

ولما شاء الله من التصانيف . كتاب للواليد الكبير . كتاب القرانات والأديان والملل
• كتاب مطرح الشعاع • كتاب المعاني • كتاب صنعة الاصطراب والعدل بها • كتاب ذات
الخلق • كتاب الامطار والرياح • كتاب السهمين • الكتاب المعروف بالسابع والعشرين
• كتاب ابتداء الاعمال في الأول • الكتاب الثاني في دفع التدبير • الكتاب الثالث
في المسائل • الكتاب الرابع في مشهورات الكواكب • الكتاب الخامس في الحدود

[محفوظ بن عيسى] بن المسيحي الحكيم أبو العلاء الطليبي النصراني النبلي نزيل
واسط كان طبيباً فاضلاً نبيلاً مسذكوراً في وقته عالماً بصناعة الطب مرتقياً بها جميل
للمشاركة محمود العالجة وله مع ذلك أدب طري وخالط في النظم سري وكان موجوداً
بالعراق سنة تسع وخمسين وخمسمائة

[للمظفر بن أحمد] الطيب الكامل أبو الفضل الأصفهاني المعروف باليزدي فارق
أصفهان طفلاً وأقام بالشام حتى تعلم الطب والأدب ونظم الشعر ورجع الى أصفهان في
أيام ملككشاه ومجا بلده أصفهان فقال

هي ترثي لكنني كارتقتها طفلاً ولم أعيق بلوم تراها

شبهتها ككوهها وكوهها كشيء خهاوشيوخها ككلاها

وله أيضاً

اذ لم يكن لي منك جاه ولا غني ولا عند ما يعتالي الدهر موئل

فشكل سلام لي عليك تكرم وكل التفات لي اليك تفضل

وعارض الحماسة كل بيت منها بيت من قوله وهذه النسخة في خزانة الكتب بمدرسة
النظام بأصفهان

[ميخائيل بن ماسويه] أخو يوحنا كان أبوهما ماسويه يعمل في دق الأدوية في
بيرانستان جنديسابور المدينة المشهورة ببلاد خوزستان وكان ماسويه لا يقرأ حرفاً واحداً
بلسان من الأسمنة الا انه عرف الأمراض وعلاجها بالدرية والمباشرة وخبر الأدوية
فأخذ جبرائيل بن بختيشوع وأحسن اليه وعشق ماسويه جارية لدارد بن سرافيون
فابتاعها له جبرائيل بثلاثمائة درهم ووهبها له فرزق منها ميخائيل هذا وأخاه يوحنا ولما

اطمحين

Abharqi-Hukema, s. 214-215, (H. 1326) (HISIR)

MĀSHĀLLĀH

wrong
definition
give other
meanings

His real name was probably Manasseh (in Arabic, Mishā). Latin translators named him Messahala (with many variants, as Macellama, Macelarama). Māshāllāh is a contraction of mā shā' Allāh meaning "What wonders Allāh has willed." (What hath God wrought.) Flourished under al-Manṣūr, died c. 815 or 820. One of the earliest astronomers and astrologers in Islām, himself an Egyptian (?) Jew. Only one of his writings is extant in Arabic, but there are many mediaeval Latin and Hebrew translations. The Arabic text extant deals with the prices of wares and is the earliest book of its kind in that language. He took part with the Persian astrologer al-Naubakht in the surveying preliminary to the foundation of Bagdad in 762-63. His most popular book in the Middle Ages was the "De scientia motus orbis," translated by Gherardo Cremonese.

Text and Translation—The De scientia motus orbis is probably the treatise called in Arabic "the twenty-seventh;" printed in Nuremberg 1504, 1549. The second edition is entitled: De elementis et orbibus coelestibus, and contains 27 chapters. The De compositione et utilitate astrolabii was included in Greg. Reisch: Margarita phylosophica (ed. pr., Freiburg, 1503; Suter says the text is included in the Basel edition of 1583). Other astronomical and astrological writings are quoted by Suter and Steinschneider.

An Irish astronomical tract based in part on a mediaeval Latin version of a work by Messahalāh. Edited, with preface, translation, and glossary, by Maura Power (Irish Texts Society, vol. 14, 194 p., 1914. A relatively modern translation of the De scientia motus orbis; the preface is uncritical).

Criticism—Fihrist (273-274. Also in commentary, p. 129, note 10). H. Suter: Die Mathematiker und Astronomen der Araber (5-6, 1900; Nachträge, 158, 1902). M. Steinschneider: Die arabische Literatur der Juden (15-23, Frankfurt, 1902). P. Duhem: Système du Monde (vol. 2, 204-206, 1914. On the precession of the equinoxes).

AL-NAUBAKHT^o

Astrologer to al-Manṣūr; he died c. 776-77. Persian astronomer and engineer. Together with Māshāllāh he made the measurements preliminary to the construction of Bagdad (762-63). A book on astrological judgments (Kitāb al-aḥkām) is ascribed to him.

H. Suter: Mathematiker und Astronomen (3, 1900; 158, 1902).

AL-FADL IBN NAUBAKHT

Abū Sahl al-Faḍl ibn Naubakht. Son of the preceding, thus of Persian origin. Chief librarian to Hārūn al-Rashīd; died c. 815-6. Muslim astronomer. He made translations from Persian into Arabic for the caliph. He wrote various astrological treatises.*

Two other astrologers of the same family, presumably grandsons or nephews of al-Faḍl, flourished a little later (first half of ninth century): Al-Ḥasan ibn Sahl ibn Naubakht (who was also a translator from Persian into Arabic) and (his brother?) 'Abdallāh ibn Sahl ibn Naubakht.

* Better than Nūbakht. Naubakht means, in Persian, new luck.

* This construction took place under the direction of Khālid ibn Barmak.

* The "Liber alfadhōl i. est arab de bachi" (?) quoted among the writings of Gherardo Cremonese may be the translation of one of these treatises?



Sarton, c. 1, s. 531, 1975 (NEW YORK)

حمزة بن حسين بن قاسم بن محمد النعيمي, استدراقات على تاريخ التراث العربي,

ISAM 090261 .

الجزء الثامن, جدة 1422. ص. 100

257 - (1) - مختصر كتاب الأحكام النجومية *
مَا سَاءَ لِلَّهِ
بِ. ESERI . لما شاء الله بن أثري اليهودي البصري (ت 200 هـ).

منه نسخة في مكتبة رضا - رامبور في الهند ضمن مجموع، رقم (M596) في

(47) ورقة منسوخة في القرن الثاني عشر الهجري (3).

258 - (2) - تسيير النيرين وما يدلان عليه *

ذكره ابن النديم (4).

259 - (3) - شهادات الكواكب *

ذكره ابن النديم (5).

(3) Catalogue of the Arabic manuscripts in the Raza library Rampur
5 : 478 .

(4, 5) فهرست لابن النديم : ص 222 .

AL-SUNNA
50/10/1998

BERNARD R.
GOLDSTEIN

THE BOOK ON ECLIPSES OF MASHA'ALLAH

SUMMARY. — Masha'allah (d. ca. 815), a Jewish astrologer who worked for the early 'Abbasid caliphs in Baghdad, composed many important astrological treatises in Arabic. Though few of his Arabic works are at present available, much material is preserved both in Hebrew and Latin translations. In this paper, his treatise, *The Book on Eclipses*, is discussed followed by an English translation based on the Hebrew version of Abraham Ibn Ezra (d. 1167). Of particular note is a cosmological reference to magnetism in the first chapter, to which there is joined another such reference from an early Hindu source, both of which have escaped the notice of historians of magnetism.

In the history of the exact sciences before modern times, astrology plays a role disproportionate to the low esteem it now enjoys. As is well-known, many astronomers were practitioners of astrology, and much information concerning astronomy is preserved in the astrological writings.

The study of astrology has also proved to be helpful in reconstructing facets of the social setting in antiquity, otherwise unknown or misunderstood.

Masha'allah (d. ca. 815), a Jewish astrologer who worked for the early 'Abbasid caliphs in Baghdad, composed many important astrological treatises in Arabic which exerted a strong influence on later generations of astrologers until the end of the Renaissance. In the Latin sources he is variously called Messalah, Messahala, Messalach, Messalla, etc. Inasmuch as he became one of the canonical authors for later astrologers, it is well to set out his ideas as we see them in his own writings, rather than to depend on frequently unreliable remarks about him.

Rather few of the original Arabic manuscripts of his writings are at present known, and even less is published. Of the latter, I am only aware of a short extract in Arabic published by Levi della Vida in « *Rivista degli Studi Orientali* », 14, 270 ff. concerning weather predictions. A long Arabic manuscript in 75 chapters, without title but containing a treatise on astrology by Masha'allah, was found in Istanbul by M. Krause (v. *Quellen und Studien zur Gesch. der Math.*, Abt. B, 3 (1936), 444).

* This research has been supported by a National Science Foundation post-doctoral fellowship in the History of Science.

Ankara, Saib 199, 22^a) unter die berühmten astrologischen Werke seiner Vorgänger. Daraus ist mir z. Z. nur ein Zitat bekannt bei as-Siğzi, *K. al-Ma'ānī fī aḥkām an-nuğūm*, Hamidiye 837, 112^a. S. noch u. S. 179.

MĀŠĀ'ALLĀH

MĀŠĀ'ALLĀH b. Aṭarī (oder Sāriya) ist einer der bedeutendsten unter den ältesten arabisch schreibenden Astrologen, deren Werke uns bekannt sind. Er war Jude. Schon am Anfang des abbasidischen Kalifats betätigte er sich als Astrologe und beteiligte sich im Jahre 145/762 an den Messungen für die Gründung Bagdads. Er erlebte den Beginn des Kalifats von al-Ma'mūn und starb vermutlich gegen 200/815.

Seine uns im Original und in lateinischen Übersetzungen erhaltenen Werke machen deutlich, daß MĀŠĀ'ALLĀH zu denjenigen Gelehrten gehört, die der synkretistischen persischen Schule angehörten, in der die babylonischen, griechischen und indischen Wissensgüter aus der Zeit kurz vor und nach dem Aufkommen des Islam zusammengefloßen waren. Daß er noch nicht in der Lage war, über die Ergebnisse seiner Vorgänger merklich hinaus zu gehen, war anscheinend schon in der zweiten Generation nach ihm bekannt, wie aus den Antworten von ABŪ MA'ŠAR auf Fragen eines Schülers hervorgeht¹. Auch AL-BĪRŪNĪ (*Tamhīd al-mustaḡarr* 89) weist darauf hin, daß MĀŠĀ'ALLĀH und 'UMAR B. AL-FARRUḤĀN Nachfolger der Pehlevi schreibenden Gelehrten seien, worauf die Unstimmigkeiten zwischen ihren Ausführungen und denen des ABŪ MA'ŠAR zurückzuführen seien. Nicht selten sind die Späteren in der Lage gewesen, die Ausführungen MĀŠĀ'ALLĀHS in seinen Quellen nachzuweisen. Dies hat z. B. ABŪ MA'ŠAR getan, als er das von MĀŠĀ'ALLĀH bevorzugte Verfahren der Projektion der Strahlen (im astrologischen Sinne) auf das Buch von ĠĀMĀSB (s. o. S. 86) zurückführte². Aus einem in byzantinischer Übersetzung erhaltenen

¹ „*Wa-Māšā'allāh lam yubdi' min qibal nafsihī šai'an wa-innamā 'amila 'alā ašlīn 'amila bihī ahl Bābil wa-l-mutaḡaddimūn*“, *Asrār 'ilm an-nuğūm*, Ankara, Saip 199, 18^b.

² „*Qāla Šādān: qultu li-Abī Ma'šar: Maṭraḡ aš-šu'ā' bi-aiy 'amalin yakūnu aṣaḡḡ? Fa-qāla: huwa bi-'amal Baṭlamiyūs ḡasanun ḡiddan wa-bi-'amal Māšā'allāh a'malu wa-'alaihi 'timādi, wa-Māšā'allāh kāna ya'malu min kitāb Ġāmāsb . . .*“ (*Asrār 'ilm an-nuğūm*, a. a. O. S. 18^a).

Mit den Vermessungen bei der Gründung Baġdāds war außer Naubaht auch der Jude Māšā'allāh [ibn Sāriya bzw. ibn Aṭarī?] beauftragt. Sufyān at-Taurī nannte ihn den kenntnisreichsten Astrologen, der je gelebt hat⁷. Um das Jahr 200/815 ist Māšā'allāh gestorben⁸.

⁷ Gāhiz Bayān IV 13 ult. f. Vgl. auch Tauhidī Muqābasāt 6r, 13 ff.; Zauzanī Muntahabāt 327,7-10.
⁸ Ya'qūbī Buldān 238,15; Mas. Taubīh 199,5; 222,10 ff.; Yāqūt Buldān IV 545,6 ff.; Zauzanī Muntahabāt 156, -4; 327,3-16; Barhebr. Duwal 237, 4-6; Moritz Steinschneider, Maschallah, in: ZDMG 53, 1899, 434-440; Steinschneider Arab. Lit. Juden p. 15-23 (§ 18); Suter Mathematiker p. 5f. (nr. 8); Nallino Raccolta V 13f.; 50; 200; 203; 233; Julius Ruska, EI¹ III 451a.

Ibn an-Nadīm (Fih. 273,23-274,6) kennt neunzehn Bücher von Māšā'allāh, die fast alle astrologischen Inhaltes sind. Leider ist davon in arabischer Sprache nur wenig erhalten geblieben. Weit mehr ist durch die lateinischen Übersetzungen bewahrt worden, aber auch diese bilden noch einen unaufgearbeiteten Komplex¹, in den sich zudem manches unechte Gut gemischt haben dürfte. Im folgenden sind einige Schriften genannt, von denen Reste erhalten sind.

Das *K. al-Mudhal* des Māšā'allāh „as-Sindī“ ist bei 'Imrān b. Aḥmad p. 111,3 ff. zitiert.

Das *K. al-Mawālīd al-kabīr* hat nach ibn an-Nadīm (Fih. 273,25 f.) 14 Bücher umfaßt. Es ist bei 'Imrān b. Aḥmad p. 195; 196, -3 ff.; 202,13 ff. mehrfach zitiert. Das erste Kapitel der 4. Maqāla handelt über den Einfluß der Sterne auf die Entwicklung des Embryos (→ Teil I 256 Anm. 1). Weitere Zitate stehen: Ḥayyāṭ Sirr 243, -3; Bīrūnī Āṭār 79,12 ff.

Das *K. fī l-Qirānāt wa-l-adyān wa-l-milal*, das ibn an-Nadīm (Fih. 273 paen.) erwähnt, ist in lateinischer Übersetzung erhalten². Sein Inhalt, astrologische Geschichtskonstruktion, geht auf sāsānidische Quellen zurück, insbesondere auf den *Ziğ as-šāh*, der zur Zeit des Ḥosrau Anōšarwān zusammengestellt wurde³. Das *K. al-Qirānāt* wurde später von ibn Hibintā (→ S. 329) gekürzt (→ Nachträge).

Die *Risāla fī l-Kusūfāt wa-l-qirānāt* umfaßt zwölf Kapitel, die über folgende Gegenstände handeln: Die unterschiedliche Wirkung der Planeten je nach den verschiedenen Klimata (Kap. 2), die Naturen der Tierkreiszeichen (Kap. 3), der Umlauf der Jahre (Kap. 4), die Bedeutung der Mondfinsternis (Kap. 5) und der Sonnenfinsternis (Kap. 7), die Wirkung der Konjunktion aller Planeten (Kap. 8), die der oberen Planeten (Kap. 9), schließlich die große, mittlere und kleine Konjunktion (Kap. 10-12). Die kleine Schrift ist von Johannes Hispalensis übersetzt worden; sie trägt im Lateinischen den Titel *Epistola de rebus eclipsium et de coniunctionibus* bzw. *De ratione circuli et stellarum*⁴.

Ebenfalls nur lateinisch erhalten ist das *K. Tahāwil sinī l-'ālam*⁵.

Das *K. Māšā'allāh al-munağğim fī Qiyām al-hulafā' wa-ma'rifat qiyām kull malik* ist im 10., den Fragen des Sultāns gewidmeten Kapitel des

¹ Steinschneider Europ. Übs. A p. 49f.; Millás Traducciones p. 226; Lynn Thorndike, The Latin Translations of Astrological Works by Messahala, in: Osiris 12, 1956, 49-72; Thorndike Notes p. 117 nr. 8; p. 150 nr. 46.

² Carmody Translation p. 26f.; Thorndike Notes p. 117 nr. 8; p. 150 nr. 46.

³ Vgl. Pingree Thousands Index.

⁴ Steinschneider Europ. Übs. A p. 49. Ed.: Nicolaus Pruckner, im Anhang zu Firmicus Maternus, Basileae 1551, p. 115-118.

⁵ Millás Traducciones p. 200; Carmody Translation p. 25f.; Thorndike Notes p. 131 nr. 26; p. 150 nr. 46.

12. Abū Ġāfar M. b. al-Ḥ. war etwas jünger als al-Ḥuġandī.

Suter, 183, Nachtr. 168. 1. Abh. über die Auffindung rechtwinkliger Dreiecke mit rationalen Seiten, Paris 2457, 20, 49, franz. Übers. v. Woepcke, Atti dell' Acc. Pont. dei Nuovi Lincei XIV (1861), s. Cantor, Vorl. I, 1646, 2708. 2. Über die Auffindung zweier mittleren Proportionalen zwischen zwei Geraden auf dem Wege der festen Geometrie, Paris 2457, 4, verkürzte franz. Übers. v. Carra de Vaux, Bibl. Math. XII, 3, 4. 3. Über die Dreiteilung des Winkels aus dem Buche der Kegelschnitte in der Verbesserung des M. b. al-Ḥu. al-Ḥārī, Alger 1446, 10.

Zu S. 220

14. KAPITEL

Astronomie und Astrologie

C. Nallino, *ʿIlm al-falak taʾriḥuhū ʿinda ʿl-ʿArab fiʿl-qurūn al-wustā mulahḥaṣ al-muḥāḍarāt allatī alqāhā biʿl-Ġāmīʿa al-Miṣriya* I, II, Roma 1911, 2 (Publ. Un. Egiz.).

G. Sarton, Introduction to the History of Science I, From Homer to Omar Khayyam, Baltimore 1929 (Carnegie Inst. Publ. 376).

1a. Abū Ishāq Ibr. b. Ḥabīb *al-Fazārī*, durch Verwechslung mit dem Traditionarier (b. Qotaiba, *Maʿārif* 257, Ṭabarī III, 2549) manchmal M. b. Ibr. genannt.

Fih. 273, al-Masʿūdī, *Murūġ* IV, 37—40, b. al-Qiftī 57 (K. 42), 270 (K. 177), b. Ṣāʿid, *Ṭab. al-umani* 19, 5ff, aṣ-Ṣafadī, *al-Wāfi* I, 336 (wo ihm eine *Ziġa* in Gestalt einer *Muzdawīġa* in Versen, sonst auch *al-Qaṣīda fiʿn-nuġūm* genannt, zugeschrieben wird), Nallino, *ʿIlm al-falak* 156—68. Zu dem von ihm übersetzten ind. Werke s. G. Thibaut, Grundr. d. ind. Phil. III, 9, Astr. 58, Boll in Cat. Astr. Graec. V, 1, 156. K. *ʿAmal al-aṣṭurlāb* s. zu S. 233.

1b. Einem *Naubaḥt*, d. i. doch wohl a. Sahl al-Faḍl b. Naubaḥt, der Bibliothekar Hārūn ar-Raṣīd's, wird in NO 2951, f. 137a—138b ein K. *fiʿhī Sarāʿir min aḥkām an-nuġūm* beigelegt (s. ḤḤ V, 35).

Suter No. 2, Iqbāl, *Hāndāni Naubaḥt* 11. Omar, astrologus Arabs, de Nativitate, Basileae 1551.

1c. *Māšāʾ allāh* (als Jude Manasse) b. Aṭarī al-Baṣrī galt unter al-Manṣūr und al-Maʾmūn als der erste Astrolog s. Z. und starb um 200/815.

360–361, 364, 370–371, 380, 380–381, 397–400; Hāsimī, *'Ilal az-zīgāt* 96^b, 114^b; Ibn Masrūr, *'Ilal az-zīgāt* ff. 46–47; zur englischen Übersetzung und zu Kommentaren s. PINGREE, a. a. O. S. 105–120.

2. – *K. az-Ziğ al-mahlūl fi s-Sindhind li-darağa darağa*, wird von Ibn an-Nadīm aufgeführt und soll aus zwei Teilen bestanden haben, aus *'ilm al-falak*, Wissenschaft der Sphäre, und *'ilm ad-duwal*, was „Chronologie“ bedeuten könnte¹. Der erste Teil der Schrift scheint in Werken späterer Gelehrter u. d. T. *az-Ziğ* oder *K. al-'Ilal*, z. T. auch ohne Titel zitiert worden zu sein: Hāsimī, *'Ilal az-zīgāt* 96^b (vgl. PINGREE, a. a. O. S. 98–101), 97^a, 115^a; Birūnī, *Qānūn* 547; ders., *Tahqīq mā li-l-Hind* 259, 351–352, 356; ders., *Tamhīd al-mustağarr* 30, 54; ders., *Ifrād al-maqāl* 51, 53, 84, 94, 127, 131 (s. PINGREE, a. a. O. S. 102–105, 120–123); ders., *Sair sahmai as-sa'āda* 85^b.

3. – *K. Ma rtafa'a min qaus nişf an-nahār*, „über das, was sich über die Höhe des Meridianbogens erhebt“, aufgeführt von Ibn an-Nadīm.

4. – *Taqī' kardagāt al-ğib*, über die Ermittlung des Sinus eines Kreisbogens, aufgeführt von Ibn an-Nadīm.

Über seine Methode zur Berechnung des Sichtbarwerdens des Neumondes ist erhalten eine anonyme *R. fi 'Amal ru'yat al-hilāl 'alā madhab Ya'qūb b. Ṭāriq* Oxford, Bodl., Marsh. 663 (S. 207, 640 H.). Inc.: „*I'rif maudi' an-naiyirain fi waqt mağib aš-šams wa-'rif 'ard al-qamar wa-ğihatahū tumma huđ tululaihi wa-htağiz bihī tumma huđ al-fađl alladī min an-naiyirain bi-darağ al-maṭāli' li-n-nağir . . .*“. Ins Engl. übersetzt von E. S. KENNEDY, a. a. O. S. 131.

MĀŠĀ'ALLĀH

MĀŠĀ'ALLĀH b. Aṭarī, ein Jude, einer der Hofastrologen des Kalifen al-Manşūr, wurde anscheinend durch Berechnungen, die er für die Astrologie brauchte, zur angewandten und theoretischen Astronomie geführt. Eine seiner Schriften, die in lateinischer Übersetzung seit dem 12. Jahrhundert eine gewisse Verbreitung auch im Abendland gefunden hat, ist von D. PINGREE dem Inhalt nach bekannt gemacht worden (*Māshā'allāh: Some Sasanian and Syriac sources* in: *Essays on Islamic Philosophy and Science*. Ed. G. F. HOURANI, New York 1975, 5–14). PINGREE sagt im Zusammenhang mit der Autorschaftsfrage (S. 9), daß man die Echtheit nicht absolut beweisen könne, man jedoch auch keinen bestimmten Grund habe, sie zu bezweifeln. Sehr aufschlußreich ist Pingrees Untersuchung der Rezeption und Assimilation der von anderen

¹ NALLINO (a. a. O. S. 171–172) ist geneigt, „*'ilm ad-daur*“ zu lesen und darunter das Thema der großen Jahresperioden zu verstehen. PINGREE (a. a. O. S. 97) liest „*ad-duwal*“ und übersetzt „the sciences of dynasty“.

setzung des von dem indischen Gelehrten Kankah (?) gebrachten astronomischen Werkes „*Siddhânta*“ zu besorgen. Auf diese Übersetzung gründete dann Muh. b. Mûsâ el-Chowârezmî seine astronomischen Tafeln.^{a)} Der Fih. reiht ihn unter die Grammatiker ein und führt an, daß er eine sehr korrekte Schrift besessen habe. El-Safadî (n. Flügel) und H. Ch. IV. 549 schreiben ihm die *Qašide* über die Astrologie zu, die der Fih. (p. 273) dem Vater zuteilt. Flügel irrt sich jedenfalls, wenn er seinen Tod in die erste Hälfte des 3. Jahrh. d. H. setzt, ich möchte ihn etwa in die Jahre 180—190 (796—806) legen.^{b)} (Fih. 79; C. I. 428—29 n. Ibn el-Q.; Flügel, gramm. Schulen d. Araber, 207; Reinaud, *Mém. sur l'Inde*, 313.)

7. El-Fadl b. Nûbacht, Abû Sahl, der Sohn von Nr. 2, ebenfalls Astrolog und zwar hauptsächlich im Dienste des Chalifen Hârûn el-Rašid, von dem er auch zum Oberaufseher der Bibliothek ernannt wurde. Er gehörte auch zu den Übersetzern aus dem Persischen ins Arabische. Er schrieb: Das Buch *el-nahmatân* (?)^{c)}, über die Geburten. Über den astrologischen Fâl. \ Das Buch über die Geburten: einzig in seiner Art (oder auch „selten“). \ Über den Umlauf der Geburtsjahre. \ Das Buch der Einleitung. \ Über die Vergleichung und die Allegorie (?). Das Buch der Zitate aus den Sentenzen der Astrologen über die Prophezeiungen, Fragen, Geburten und and. Er wird ums Jahr 200 (815) gestorben sein. (Fih. 274, Übers. 28; Abulfar. 224, Übers. 145; C. I. 421 n. Ibn el-Q.)

8. Mâ-šâ'-allâh (d. h. „was Gott will“), zusammengezogen Mâšâllâh^{d)} b. Atarî,^{e)} ein Jude, dessen eigentlicher Name Manasse^{f)} war, lebte unter el-Mansûr bis auf die Tage el-Mâmûns. Er war einer der ersten Astrologen seiner Zeit und überhaupt der Araber, und wurde auch bei der Gründung von Bagdad (145) von el-Manşûr mit el-Nûbacht (s. Art. 2) zusammen zum Leiter der Vermessungen und der Fundamentierungen ernannt. Er wird gegen das Jahr 200 (815) gestorben sein. Es werden ihm folgende Werke zugeschrieben: Das große Buch über die Geburten in 14 Abschnitten. Das

^{a)} Und wohl auch Ja'qûb b. Târiq die seinigen und ebenso Ahmed b. 'Abd-allâh, genannt Habaš, seine ersten Tafeln.

^{b)} Es ist nicht zu verkennen, daß hier Verwechslungen zwischen Vater und Sohn stattgefunden haben können, und daß vielleicht dem Vater Ibrâhîm die Besorgung der Übersetzung des indischen Werkes übertragen wurde, zumal dasselbe nach el-Birûnî schon 154 übersetzt worden sein soll; aber el-Birûnî und Ibn el-Q. haben ausdrücklich „Muh. el-Fazârî“.

^{c)} Sollte wohl heißen „*nimûdâr*“, das pers. Wort für Horoskop.

^{d)} Dies ist der Messalah od. Messahala od. Messahalach etc. des Mittelalters.

^{e)} Ja'qûbî hat „Sârîje“, das Berliner Ms. Lbg. 68, welches die Astrologie seines Schülers Abû 'Alî el-Chaijât enthält, hat „Marzûq el-Basrî“.

^{f)} Von den Arabern gewöhnlich durch „Mîšâ“ wiedergegeben.

khuffayn. However, Djarīr b. 'Abd Allāh al-Badjalī, who was converted after the revelation of the Medinan sūra al-Mā'idā (V), which contains instructions relating to ablutions and to the *tayammum* (see above), claimed that he himself had seen Muḥammad passing the hand over his shoes; but his colleagues contested the validity of his statements and declared that the revelation of the verses in question had *ipso facto* put an end to the legality of this practice. This testimony, which has not been retained by al-Bukhārī, does not seem to have shaken the conviction of later *fukahā*, any more than another more or less controversial tradition which official doctrine has retained, no doubt because it provides an additional benefit: according to Khuzayma b. Thābit and Abū Bakra, the Prophet was reported to have permitted the Muslim to observe the *mash* 'alā 'l-*khuffayn* for a day and a night when he is in fixed residence (*mukim*), and for three days and three nights when he is travelling.

According to another "authentic" *hadīth*, al-Mughīra b. Shu'ba, who travelled in the company of Muḥammad, bent down to take off his shoes in order to perform his ablutions, but the Prophet said to him: "Leave them, for I put them (= the feet) into [my boots], when they were in a state of ritual purity (*ṭahirātān*)", and he passed his hand over his shoes. From this *hadīth*, the *fukahā* have retained the obligation, for the believer who wishes to cleanse himself of a minor defilement (*hadath* [q.v.]) by means of this indulgence, to wash his feet and polish his shoes before putting them on, and not to take them off in the meantime.

Regarding the legal manner of performing the *mash*, Ibn Abī Zayd al-Kayrawānī, of the Mālikī school, describes it clearly in his *Risāla* (ed. and tr. L. Bercher, Algiers, 1949, 50/51): "The believer will place the right hand on the upper part of the shoe [for the right foot], beginning with the extremity of the toes. He will place his left hand underneath and thus make the hands glide as far as and including the pegs. He will do the same for the shoe of the left foot, putting his left hand above and his right hand underneath. But he will not let his hand touch the ground which may be under his shoe, or touch the dung of a beast of burden. He must previously raise his foot when rubbing or washing." The author adds that, according to another opinion, "the believer must wet the underside of the shoes, beginning with the pegs and ending with the extremities of the toes."

The classical manual of Western Mālikism, the *Mukhtaṣar* of Khalīl b. Ishāq (tr. G. H. Bousquet, Algiers 1956, i, 34-5) presents an even more detailed account of the *mash* 'alā 'l-*khuffayn*. It envisages in fact the use of a kind of slipper (*ḡharab*) inside the boot proper, and prescribes that the *mash* should be performed on both pieces of leather; it forbids the use of a slipper which is too large or torn, because it must be firmly fixed to the foot, cover it completely and not let water penetrate through any crevice. This author also considers cases where the *mash* is invalidated, for example if the *ghust* [q.v.] is obligatory, if the individual has forgotten to pass his hand over the upper part of the shoe, etc.

Bibliography: All the *hadīths* concerning the *mash* have been conveniently assembled by Ibn al-Djārūd al-Naysābūrī (d. 307/919-20) in his *Kitāb al-Muntakā min al-sunan al-munada 'an Rasūl Allāh*, ed. Cairo 1382/1963 by 'Abd Allāh Ḥaṣḥīm al-Yamanī al-Mudānī, who has taken care to indicate in his notes (37-9) the more or less important collections in which they figure; the same editor has proceeded in the same fashion with the *Djam* 'al-fawā'id min

djāmī 'al-usūl (Medina 1381/1971, i, 104-7) of the Moroccan Muḥammad b. Muḥammad b. Sulaymān (1039-94/1630-83). See also R. Strothmann, *Kultus der Zaiditen*, Strasburg 1912, 21 ff.; A. J. Wensinck, *The Muslim creed*, Cambridge 1932, index, s.v. *shoes*; J. Schlacht, *The origins of Muhammadan jurisprudence*, Oxford 1950, 263-4.

(CH. PELLAT)

MĀSHĀ' ALLĀH (A.), a phrase occurring in the Kur'ān (VI, 128; VII, 188; X, 50; XVIII, 37; LXXXVII, 7; cf. XI, 109-10, LXXII, 8) and widely used in the Islamic lands of the Middle East with the general meaning of "what God does, is well done". The formula denotes that things happen according to God's will and should therefore be accepted with humility and resignation. In a cognate signification, the phrase is often used to indicate a vague, generally a great or considerable, but some times a small, number or quantity of time (Lane, *Lexicon*, s.v., who refers to S. de Sacy, *Relation de l'Égypte*, 246, 394). One might compare *ilā mā shā'a Allāhu* "forever and ever" (Wehr, *Dictionary of modern written Arabic*, s.v.). The phrase is also the equivalent of the English "God knows what", and, as signifying "what God has willed", expresses admiration or surprise.

According to TA. in Lane, *Lexicon*, s.v., a Jew addressed the Prophet, objecting to his people's saying *mā shā'a Allāhu wa-shī'atū* "what God has willed and I have willed", as implying the association of another being with God. The Prophet then ordered them to say *mā shā'a Allāhu thumma shī'atū* "what God has willed and then I have willed".

In Konya, blue hemispheres are found, representing half an eyeball, covered with silver-thread textile with which the phrase is embroidered. Because of the decorative character of the Arabic script, the hemispheres are also worn as ornaments (R. Kriss and H. Kriss-Heinrich, *Volks Glaube im Bereich des Islam*, ii, 12, 65 and pl. 7). As a charm to protect from the effect of the evil eye, the phrase is found on *zār* [q.v.] amulets and on amulets worn by children and domestic animals (*ibid.*, ii, 43, 66, 67, 153, and pl. 76; F. Th. Dijkema, *The Ottoman historical monumental inscriptions in Edirne*, Leiden 1977, 137; the amulet collection of the Ethnographical Museum, Cairo; Lane, *Manners and customs*, ch. xi). According to L. Einnsler, *Das böse Auge*, in ZDPV, xii (1889), 200 ff., there were silver amulets in Jerusalem with the formula on the obverse, the reverse bearing the invocations *yā kāfī*, *yā ḡafī*, *yā ḡafī*, *yā amin*. In Turkey, the phrase is often found on the fronts of trucks and cars.

Bibliography: In the article, and see also M. Piamenta, *Islam in everyday Arabic speech*, Leiden 1979; idem, *The Muslim conception of God and human welfare as reflected in everyday Arabic speech*, Leiden 1983. (Ed.)

MĀSHĀ' ALLĀH B. ATHARĪ OR B. SĀRIYA. Jewish astrologer of Basra (although the frequent confusion between Baṣrī and Miṣrī has sometimes led to him being considered an Egyptian). His Hebrew name was perhaps Manassch (the *Fihrist*, 273-4, and Ibn al-Kiṭī, 327, call him Mīshā) and in Persian he was known as Yazdānkāh "ast which, like Māshā'allāh, signifies "that which God wills".

According to the *Fihrist*, the period of his activity extended from the reign of al-Manṣūr (135-58/754-75) to that of al-Ma'mūn (198-218/813-33), but the last date to be placed definitely within his lifetime is 193/809 (in *Fi kiyām al-khulafā'*), he shows in fact that he knew that of the death of al-Raṣhīd). With Nawbakht, 'Umar b. Farrukhān al-Ṭabarī and al-Fazārī, he drew the horoscope favourable to the founda-

tion of Baghdād (3 Djumādā I 145/30 July 762); this horoscope, which has been preserved (see al-Birūnī, *al-Aḥḡār al-bakīya*, ed. Sachau, Leipzig 1923, 270-1), had probably been calculated on the basis of the Pahlavi original text of the *Zīdī al-Shāh*. On the evidence of his *Kitāb al-Kirānāt*, he seems to have been of pro-Iranian and anti-'Abbāsīd sentiment; he hoped in fact that the caliphate would be overthrown in 200/815 and that power would pass to the Persians.

In the *Fihrist*, Ibn al-Nadīm mentions 19 works of Māshā' allāh, and al-Kiṭī reproduces this list in his *Ta'rikh al-Hukamā'*. The generally most complete and most recent studies which mention the titles of these works and the mss. in which they are preserved are those of D. Pingree, *Māshā'allāh*, in *Dict. of scientific biography*, New York 1974, 159-62, and F. Sezgin, *G.A.S.*, vi, 127-9, viii, 102-8.

Of the corpus of known works, discussion here will be limited to the following:

— *Fi 'l-kirānāt wa 'l-adyān wa 'l-milal* ("On conjunctions, religions, and communities"), an astrological history of mankind, and of Islam in particular, which is known to us by means of a summary by Ibn Hibintā. E. S. Kennedy and D. Pingree (*The astrological history of Māshā'allāh*, Cambridge, Mass. 1971, 1-25) have published a facsimile of the ms., with a translation and a study of the summary of this work, which is based on an amalgam of the Sāsānid theory which explains the major changes which have taken place in human history by reference to conjunctions of Jupiter and Saturn, and of the Zoroastrian theory of millennia which attributes a thousand years to each planet from the time of the creation of the world (-8291), the cycle being repeated up until the figure of 12 millennia which will be reached in the year 3709 A.D. Ibn Hibintā's summary also contains 16 horoscopes, probably those of Māshā'allāh himself and calculated on the basis of the *Zīdī al-Shāh*; Kennedy and Pingree have made use of the numerical figuring in these horoscopes, combined with the sparse information supplied by other sources (essentially al-Birūnī) to reconstruct the principal parameters employed in the Persian tables mentioned above (see also J. J. Burckhardt and B. L. van der Waerden, *Das astronomischen System der persischen Tafeln I*, in *Centaurus*, xiii [1968], 1-28).

— *Fi kiyām al-khulafā'* *wa-ma'rifat kiyām kull malik* ("On the accession of caliphs and knowledge of the accession of each king"), of which the original Arabic, preserved, has been translated and studied by Kennedy and Pingree, in *The astr. history*, 129-43. After a general theoretical survey, the work contains horoscopes of the spring equinoxes at which the Prophet and 18 caliphs (from Abū Bakr to Ḥārūn al-Raṣhīd) acceded to power. To calculate these, Māshā'allāh also made use of the *Zīdī al-Shāh*.

— *Kitāb al-Mawālīd* ("Book of genethliac themes"), known only through some quotations made by a disciple of the author, Abū 'Alī al-Khayyāt, and through a Latin translation edited and studied by Pingree (*The astr. history*, 145-74). It contains 12 natal horoscopes dating from between 36 and 542 A.D.: three of them derive from the *Penitentiary* of Dorotheus of Sidon (50-75 A.D.), and the other nine from an unknown Greek astrological work dating from the 6th century. He interprets the horoscopes according to the doctrine of Dorotheus, whose work he probably knew through the Pahlavi translation. The influence of this writer is also perceptible in the *Super significationibus planetarum in nativitate* of Māshā'allāh, which survives only in Latin translation.

— *De receptione*, preserved in Latin translation (ed. J. Heller, Norimbergae 1549), comprises 6 horoscopes

dating between 791 and 794. One of them figures in the Peterhouse ms. 75.1, which contains the treatise of Chaucer (ca. 1340-ca. 1400) on the equator (E. S. Kennedy, *A horoscope of Messahalla in the Chaucer Equatorial manuscript*, in *Speculum*, xxxiv [1959], 629-30; repr. in E. S. Kennedy (ed.), *Studies in the Islamic exact sciences*, Beirut 1983, 336-7; cf. Kennedy-Pingree, *The astr. history*, 175-8).

— *De scientis motus orbis or De elementis et orbitis celestibus or De sphaera mota*, preserved in Latin translation, contains a study of the *Physics* of Aristotle (chs. 1-7), as well as an introduction to astronomy (chs. 8-24), both of these based on Syriac sources. The astronomical source mentions Ptolemy and Theo of Alexandria, but the planetary models described are pre-Ptolemaic Greek (they do not, in fact, employ the equant and introduce no specific apparatus for the moon and Mercury) and similar to those found in Sanskrit texts since the end of the 5th century (cf. D. Pingree, *Māshā'allāh: some Sasanian and Syrian sources*, in G. F. Hourani (ed.), *Essays on Islamic philosophy and science*, Albany 1975, 5-14).

— *Kitāb al-Amṭār wa 'l-riyāḡ* ("Book of the rains and the winds"), ed. and tr. by G. Levi Della Vida (*Un opuscolo astrologico di Māshā'allāh*, in *RSO*, xiv [1933-4], 270-81), concerns the astrological procedure for predicting rain. A Latin version also exists.

— *Epistola de rebus eclipsium, De ratione circuli et stellarum, Liber Messahalla in radiis revolutionum or Epistola Messallach de planetarum efficacis* (cf. J. M. Millás Vallicrosa, *Las tables astronómicas del rey don Pedro el Ceremonioso*, Madrid-Barcelona 1962, 87), preserved in Latin translation (by John of Seville, ed. Basle 1551) and Hebrew translation (by Abraham b. 'Ezra). The latter, which is entitled *Sefer li-Māshā'allāh bi-kadrūt ha-levanah ve ha-shemesh*, has been translated by B. R. Goldstein (*The Book on eclipses by Māshā'allāh*, in *Physis*, vi [1964], 205-13). It is divided into 12 chapters, of which the first contains a curious reference to magnetism in a cosmological context: the ascending node, the stars and the planets exert an influence on the earth in the same manner that magnetic stone attracts iron. It is appropriate also to mention the use, in this text, of a classification of planetary conjunctions distinct from that which figures in *Fi 'l-kirānāt*.

— Ibn al-Nadīm attributes to Māshā'allāh a *Kitāb Ṣan'at al-asturlābāt wa 'l-'amal bi-hā* ("Construction and use of astrolabes"), often identified with the treatise on the astrolabe in Latin, which has been edited, notably by R. T. Gunther (*Early science in Oxford*, v, Oxford 1929, 195-231). A second treatise on the astrolabe in a Latin version, likewise attributed to Māshā'allāh, has been edited by Millás Vallicrosa (in *Las traducciones orientales en los manuscritos de la Biblioteca Catedral de Toledo*, Madrid 1942, 322-7). P. Kunitzch has rejected the attribution of the two texts to Māshā'allāh (see *Typen von Sternverzeichnissen in astronomischen Handschriften des zehnten bis vierzehnten Jahrhunderts*, Wiesbaden 1966, 313-21; idem, *On the authenticity of the treatise on the composition and use of the astrolabe ascribed to Messahalla*, in *AHS*, xxxi [1981], 42-62). A part at least of the text edited by Gunther appears to be linked to the school of Maslama al-Madjrīṭī (d. ca. 398/1007-8; cf. R. Marti and M. Viladrich, in J. Vernet (ed.), *Textos y estudios sobre astronomía española en el siglo XIII*, Barcelona 1981, 79-99, and in idem (ed.), *Newsos estudios sobre astronomía española en el siglo de Alfonso X*, Barcelona 1983, 9-74; M. Viladrich, *On the sources of the Alphonsine treatise dealing with the construction of the plane astrolabe*, in *JHAS*, vi [1982], 167-71).

The work of Māshā'allāh is that of a writer who has

the mark will have no meaning or signification; thus if it be said that the square of -5 , or the product of -5 into -5 , is equal to $+25$, such an assertion must either signify no more than 5 times 5 is equal to 25 without any regard to the signs, or it must be mere nonsense or unintelligible jargon.

Curiously enough, in addition to Maseres, two other contemporary mathematicians opposed the generalized concept of positive and negative integers: William Friend, father-in-law of De Morgan, and Robert Simson. Maseres unfortunately influenced the teaching of algebra for several decades, as may be seen from textbooks of T. Manning (1796); N. Vilant (1798); and W. Ludlam (1809).

Perhaps the many publications with which he strove to bring mathematics to a much wider public were the most notable aspect of Maseres' legacy. Some were original works; others were reprints of the works of distinguished mathematicians. His original books are characterized by extreme prolixity, occasioned by his rejection of algebra, and the consequent proliferation of particular cases. For example, in the *Dissertation* alluded to above, which is virtually a treatise on elementary algebra, the discussion of basic rules and the solution of quadratic and cubic equations occupy three hundred quarto pages.

Of the reprints that Maseres made at his own expense, the most significant is the *Scriptores logarithmici* (1791–1807), six volumes devoted to the subject of logarithms, including the works of Kepler, Napier, Snellius, and others, interspersed with original tracts on related subjects. Other republications include the following: (1) *Scriptores optici* (1823), a reprint of the optical essays of James Gregory, Descartes, Schooten, Huygens, Halley, and Barrow; (2) Jakob I Bernoulli's tract on permutations and combinations; (3) Colson's translation of Agnesi's *Analytical Institutions*; (4) Hale's Latin treatise on fluxions (1800); and (5) several tracts on English history. Presumably a number of authors were indebted to Maseres for financial assistance of this sort. There can be little doubt of his sincerity and generosity, even if somewhat misplaced.

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MĀSHĀ'ALLĀH (fl. Baghdad, 762–ca. 815), *astrology*.

The son of Atharī (his father's name is sometimes written Abri or Sāriya), Māshā'allāh was a Jew from Baṣra (sometimes wrongly written Miṣr [Egypt]). His name in Hebrew was Manasse (Mishā, according to Ibn al-Qifṭī); in Persian, Yazdān Khwāst (British Museum, MS Add. 23,400). This last form is of particular interest, since Māshā'allāh was one of

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indicates that he or his family came from Mardin, now in southern Turkey, but biographical information is lacking; indeed it is not even clear where he worked. He is often confused with his grandson, Sibṭ al-Māridīnī.

Badr al-Dīn al-Māridīnī, known as Sibṭ al-Māridīnī, lived in Cairo, ca. 1460. He was a grandson (Arabic *sibṭ*) of Jamāl al-Māridīnī and was one of the leading astronomers in Cairo. He compiled a large number of treatises, including many short works on the standard instruments of his time, the trigonometric and astrolabic quadrant and sundials. These treatises became extremely popular and exist in hundreds of copies. In fact they were studied by everyone in Egypt who was interested in astronomy in the succeeding centuries. As a result of this, more significant works were forgotten and the level of astronomy declined.

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MĀSHĀ'ALLĀH Māshā'allāh ibn Atharī was a Jewish astrologer who was born in the southern city of Basra ca. 730 in the later Umayyad caliphate and survived till ca. 815. If he was ever converted to Islam, as his name Māshā'allāh seems to imply, it is not made clear in any of the original sources such as the *Fihrist*. His respectful tone toward the Caliphs in his *Fī qiyām al-Khulafā'* would certainly befit a Muslim more than a Jew. At any rate he wrote extensively in Arabic, and he was called upon by the second Abbasid Caliph al-Manṣūr (754–775) to assist in the laying of the foundations of Baghdad in 762. Hence by that time he was surely a well known astrologer active in the Babylonian region, representative perhaps of the Jewish culture long settled in the area.

A celebrated astrologer in his time, Māshā'allāh was either the founder or a leader of a school of Jewish astrologers in Mesopotamia. Apart from his participation in the laying of the foundations of Baghdad, we know rather little of the circumstances of his life. Though sparse on biographical details, the principal Arab bibliographers al-Nadīm (*Fihrist*, AD 987) and Ibn al-Qifṭī (*Tārīkh al-ḥukamā'*, ca. AD 1248) credit Māshā'allāh with a sizeable number of works. On the other hand, the *Jewish Encyclopedia* confuses him in part with Maslama al-Majrītī, probably because of the similarity of names. Paul Kunitzsch has recently established that the Latin treatise on the astrolabe long ascribed to Māshā'allāh and translated by John of Seville is in fact by Ibn al-Ṣaffār, a disciple of Maslama al-Majrītī.

In his astrological doctrine Māshā'allāh seems to have depended principally on the Persian tradition, though a late Byzantine translation of one of his works shows that he could also quote from Greek authors such as Plato, Aristotle, and Hermes. Māshā'allāh's works have not survived extensively in Arabic and it is thanks to the Latin translations, mostly by John of Seville in twelfth century Spain, that we have access to a large number of those ascribed to him.

Māshā'allāh's contribution in Arabic astrology must be linked with the widespread use of astrological prognostication in the Mesopotamian area since very ancient times. The thirteenth century bibliographer Ibn Khallikān recalls the extensive use of this "projective tool" in the politics and social life of the early Arab empire. What has survived of Māshā'allāh's works shows that the substance of his astrological knowledge owes but little to Greek philosophy proper. Assuredly, there flourished in Sassanian times a trend to borrow from Greek (Alexandrian) astrology, apparently only to consolidate a native tradition of learning. And it is this Sassanian lore above all that nourishes Māshā'allāh's production. On the other hand, it is historically confirmed that the passion for Greek learning among the Arabs was engendered by the caliph al-Ma'mūn's (813–833) enthusiasm for the philosophy of Aristotle, too late for Māshā'allāh to share significantly in this outburst. The fresh start taken by "scientific" astrology under al-Ma'mūn's prodding is noticeable in the works of al-Kindī, of Abū Ma'shar, and the members of the *Bayt al-Ḥikma* (House of Wisdom) founded by al-Ma'mūn. Compared with their works, those of Māshā'allāh and of his generation show no clear and systematic use of the axioms of peripatetic philosophy to buttress the principles of astrological science as was done so decidedly a generation later.

Māshā'allāh's reputation remained high in the following generation as witnessed by Abū Ma'shar's praise of him, according to the *Mudhakarāt* (Memorabilia) of Ṣa'id ibn Shaḍān. Yet, it is mostly for one single astrological topic, the

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