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Arabische Rezeption altägyptischer Hieroglyphen im Mittelalter
Réception arabe des hiéroglyphes au Moyen Âge

Contrary to the prevailing view that the conversion of Egyptians to, first, Christianity, then Islam, put an end to any interest in their own heritage, there is ample evidence that Egyptians continued to study their own past with great pride. Many medieval Arab scholars visited Egypt to study its heritage and ancient scripts, leading to many scholarly attempts to decipher them. A brief survey of the available materials in Arabic shows a wide use of Egyptian hieroglyphs by medieval Arab scholars and artists. These materials also show a continuous process of attempting to decipher Egyptian scripts, sometimes through a medium, or third, script in the same way as later European scholars would do. Coptic, Greek, and Demotic were still available and readable in the early medieval period. Several scholars thus succeeded in deciphering at least half of the known Egyptian alphabetical signs. It is interesting to note that nearly all the authors interested in hieroglyphs were alchemists, many of them being Sufis or mystics (e.g., Jabir Ibn Ḥayyan, Dhu Al-Nun Al-Misri, and Ibn Waḥshiyah). This may account, in part, for Egypt's fame as the land of science, wisdom, and mysticism.

على عكس الرأي السائد بأن اعتناق المصريين للمسيحية ثم الإسلام أنهى اهتمامهم بتراثهم، هناك الكثير من الأدلة التي تُظهر أن المصريين واصلوا دراسة ماضيهم بفخر كبير. فقد زار العديد من العلماء العرب في العصور الوسطى مصر لدراسة تراثها ونصوصها القديمة. وتُظهر الدراسة المختصرة للمواد المتاحة باللغة العربية استخدامًا واسعًا للهيروغليفية المصرية من قِبَل العلماء والفنانين العرب في العصور الوسطى. كما تكشف هذه المواد عن عملية مستمرة لمحاولة فك رموز النصوص المصرية، أحيانًا عبر نصوص وسيطة، بالطريقة نفسها التي اتبعها العلماء الأوروبيون لاحقًا. كانت النصوص القبطية واليونانية والديموطيقية لا تزال متاحة وقابلة للقراءة في الفترة المبكرة من العصور الوسطى. وبفضل ذلك، نجح العديد من العلماء في فك رموز ما لا يقل عن نصف العلامات الأبجدية المصرية المعروفة. ومن المثير للاهتمام ملاحظة أن جميع المؤلفين المهتمين بالهيروغليفية تقريبًا كانوا من الكيميائيين، وكثير منهم كانوا صوفيين أو متصوفة (مثل جابر بن حيان، وذو النون المصري، وابن وحشية). قد يُفسر هذا، جزئيًا، شهرة مصر كأرض للعلم والحكمة والتصوف.

In general, it seems that the classical authors believed that hieroglyphic signs were symbols, each representing a single concept. The same could be said of the early European scholars who attempted to decipher Egyptian scripts. (For a general survey of this historical background, see Parkinson 1999.) This view prevailed in Europe until the work of Athanasius Kircher in the mid-seventeenth century, who started to question the belief of classical authors that hieroglyphic signs were

merely symbols and suggested that hieroglyphs might represent sounds as well as ideas. Kircher's ideas influenced other European scholars, culminating in the work of Thomas Young and Jean-François Champollion.

Meanwhile, there were several reasons for the continued medieval Arabic interest in hieroglyphs: the imagined esoteric quality of the Egyptian script, the alchemical meanings attached to the characters, the quest for secret codes for cryptographers, and the artistic motifs inherent in the writing. Sufis took great interest in Egyptian scripts because of the beauty of their calligraphy, the aesthetics of their enigma, and the vividness of their colors. The sacred and scientific knowledge considered to be hidden in hieroglyphs was seen as a treasure trove for alchemists.

But perhaps a more important motivation for the study of Egyptian language and scripts was the intellectual curiosity seen in study seminars held by medieval Arabic scholars to discuss ancient Egyptian materials and inscriptions as narrated by the Egyptian alchemist Muhammad Ibn Umail (*Sharḥ*, MS Arabe 2609, Bibliothèque National, Paris: fols. 32b and 33a). In his introduction to various ancient scripts, the writer of the Arabic manuscript attributed to Ayub Ibn Maslama echoed a similar idea of learning ancient scripts to acquire knowledge and wisdom (*Aqlam*, MS 10244, Al-Assad Library, Damascus: fol. 3).

Sources Available to Arab Scholars

Arab studies of ancient scripts started as early as the first century of Islam (seventh century CE) (Sezgin 1967, Vol. 1: 934). Some Arab scholars recognized that the ancient Egyptian language was written in three different scripts. One of the earliest to do so was Ibn Fatik (tenth/eleventh century CE), who wrote of Pythagoras's quest for knowledge during his period of study in Egypt: "He attached himself to the priests in Egypt and learned wisdom from them. He excelled in the language of the Egyptians with the three types of script: the script of the commoners, the script of the elite, which is the cursive one of the priests, and the script of the kings" (Ibn Fatik *Mukhtar*, Badawi ed. 1958: 54; author's translation).

An important source for correctly identifying the three scripts, besides personal observation, may have been Clement of Alexandria (d. 220 CE), who stated that the Egyptians used three different scripts, Demotic, hieratic (which he calls the writing of the priests), and hieroglyphs (Cory 1840: 169). Ibn Fatik (*Mukhtar*) follows the same order and uses the same terminology. More generally, authors whose works included references to the ancient Egyptian language and scripts, such as Homer, Herodotus, Plutarch, Chaeremon, Plotinus, Porphyry, and Iamblichus (Budge 1989/1904: 179ff.; Iversen 1993: 38ff.), were well known to medieval Arab scholars through Arabic translations and were widely quoted by the bibliographers Al-Nadim (*Al-Fihrist*, Tajaddud ed. 1988: 315), Ibn Fatik (*Mukhtar*, Badawi ed. 1958: 54), and Ibn Abi Uṣaybiᶜah (*Ṭabaqat*: 50).

An important part in the process of transmission of knowledge about the ancient Egyptian language and scripts was played by Coptic, a continuation of the Demotic language with a substantial admixture of Greek vocabulary, and written in an alphabetic script of 24 Greek letters and seven Egyptian Demotic letters. As Arabic eventually started to replace Coptic in the early second millennium CE, Coptic scholars concerned with the survival of their language started producing Coptic grammars in Arabic along with Coptic-Arabic glossaries, often with Greek as well (Sidarus 2000), thus transmitting much Coptic, and hence native Egyptian, linguistic material into Arabic.

Fascination with ancient Egyptian scripts, even among the Copts, can be seen in the Coptic Gnostic papyri of Nagᶜ Hammadi, in which Hermes advised his disciple to write his teachings on "a stela of turquoise, in hieroglyphic characters" (discourse on the eighth and ninth VI, 6. in Robinson ed. 1996: 326). This idea that connects Hermes and hieroglyphs was popular in medieval Arabic sources, especially in the works of alchemy. The alchemist Abu Al-Qasim Al-ᶜIraqi

mentioned that he used a hieroglyphic text "copied from writings found in the hall of Hermes who is thrice endowed with wisdom [Trismegistus] and crowned with blessing" (*Al-Aqalim*, Add. MS 25724, British Library, London: fol. 11b).

It has been suggested that knowledge of hieroglyphic writing survived among the Copts until at least the seventh century CE (Amélineau 1888: Vol. 1: xxxix; Vol. 2: 140). While this remains highly doubtful, an interest must have continued, and perhaps even expanded, so much so that it was at times a cause of concern for some in the church hierarchy. A work ascribed to the Coptic monastery leader Shenoute (d. mid-fifth century CE) thus includes an invective against hieroglyphs (Young 1981; Thissen 1994: 256). This continued Coptic interest in ancient Egyptian hieroglyphs may explain why, in medieval Arabic writings, Coptic monks were perceived as the keepers of the wisdom and knowledge of the ancient priests. Al-Jobry, a Syrian author who wrote a number of books on astrology, visited Egypt several times in the first half of the thirteenth century CE and was a regular visitor to Coptic monasteries. On one visit to a monastery in Al-Bahnasa (Oxyrhynchus) in Middle Egypt, he encountered a monk named Ashmonit, and wrote of him: "This Elder [monk] is a brilliant philosopher who knows the secrets of the ancient priests, and uncovered their symbols and understood their sciences" (Al-Jobry *Al-Mukhtar*, Shaparo ed. 1992: 144; author's translation).

There is no doubt that much pharaonic/Coptic magic carried on into later times with the result that many ancient Egyptian symbols were known to a wide Arab audience (Bilabel, Grohmann, and Graf 1934; Haarmann 1980: 65; Fodor 1992). Coptic magic spells invoked ancient Egyptian deities (DuQuesne 1991; Meyer and Smith eds. 1994: 22-25) and Coptic scribes can also be seen to reflect some continuity with ancient Egyptian temple culture (Meyer and Smith eds. 1994: 260). It is probable that many of the Coptic magic texts were translations of ancient Egyptian ones and, indeed, in some cases, Demotic parallels to these Coptic texts have been established (DuQuesne 1991: 11). There are numerous claims for pre-Christian survivals of some of the ritual and magic practices of ancient Egypt into Coptic Egypt, as can be seen in the works of a selection of scholars that is by no means exhaustive (e.g., Zimmermann 1912; Lexa 1925, I: 139-153; Wissa-Wassef 1971; Viaud 1978: 13; Vycichl 1991: 1503; Scholz: 1993; Behlmer 1996; Kákosy 1989, 1990; 1999: 33ff.). Even outside Egypt, in Iraq for example, there is evidence for the magical use of Egyptian symbols as displayed in some Ṣabaean magic talismans that seem to show Egyptian hieroglyphic signs (McCullough 1967: 43).

Many documents from pre-Islamic Egypt were written in more than one language, often comprising a text with its translation into another language or its transcription into another script, the best-known example being the Rosetta Stone or the obelisks of Philae, inscribed in Egyptian hieroglyphic and in Greek. There are also mummy labels and various other documents in Demotic and Greek, or in hieroglyphs, Demotic, and Greek (Clarysse 1978; Pezin 1978; Depauw 1997: 42). Such combinations of scripts would have made it possible for an Arab scholar versed in Greek or Coptic to, with some application, read, or at least intuit, bilingual texts. A visiting Arab scholar could also draw upon local knowledge, since among native Egyptians there were those who knew Greek and Coptic, and perhaps also Latin (Clarysse 1983: 56).

Dioskouros, a native Egyptian from the later part of the sixth century CE, had thus composed a Greek-Coptic glossary, which undoubtedly served as a manual for bilingual work (Clarysse 1983: 57). Demotic texts from the library of Dioskouros suggest that he may still have been able to read Demotic as well (Clarysse 1983: 59). The papyrus Casati, for instance, is in Demotic characters with a Greek translation. There are a few texts that combine more than three languages, in which we have Demotic, Greek, and Latin, in addition to an as yet unidentified language (Coles 1981). During the first two centuries of

the Roman Empire there was occasional demand for translating Latin or Greek into hieroglyphs for obelisks and other monuments (Roccati 1992: 292) thus maintaining some knowledge and use of hieroglyphs, albeit in a limited way. In much later times, Latin, Greek, and Coptic conversation manuals, as well as Greek-Coptic wordlists are found (Diethart and Satzinger 1983). Texts showing a mixture of two languages or scripts are also known, e.g., Phoenician and hieratic (Shisha-Halevy 1978); Hebrew and hieratic (Aharoni 1966; Kaufman 1967; Yeiven 1969); Old Coptic and Greek (Satzinger 1994); and Aramaic texts in Demotic script (Bowman 1944).

Many Arab scholars learned Coptic in their general quest for knowledge (ᶜAbdeen 1964: 90). Fourteenth-century scholar Ibn Al-Dawadari (*Kanz*, Vol. 3, Gamal Ad-Din ed. 1981: 214, 215) referred to the "The Coptic Book" (*Al-Kitab Al-Qibṭi*), widely available for those interested in the history of Egypt, and remarked that Al-Masᶜudi had used it, as had he himself (ibid. 36; Haarmann 1982: 207). There indeed once existed such a book that referenced some biblical events, for example, the creation story (Schenke 1999), which was a major topic of interest for most medieval Arab writers. It is also possible that some of the Coptic prophecies that referred to the Arabs and to the Muslim prophet Muhammad (Martinez 1990: 248) were circulated by the native Copts to impress Muslim readers and interest them in Coptic literature.

Coptic was known not only in Egypt but also, for example, in Syria, according to the medieval Coptic legend of Apa Jeremias, who conversed with the Syrian king in Coptic (van Esbroeck 1998: 3, 19). Even if allowance is made for the perhaps legendary nature of such a story, the perception that Coptic was known outside Egypt is an indication that it was not limited to Egypt. Indeed, there is evidence for well-established contacts between the Coptic and Syriac churches (Fiey 1972 – 1973: 320ff.; Van Rompay and Schmidt 2001). Coptic was also the language of religious services and thus was used wherever a Coptic mission was established or a Coptic service took place, examples being found in Sudan, Ethiopia, and Jerusalem.

Arabic Names of Egyptian Scripts

Arabic sources feature a number of different names to refer to Egyptian scripts:

• *Al-Qalam Al-Barbawi* القلم البرباوى - The Pen of the Temples

• *Qalam Al-Ṭayer* قلم الطير - Pen of the Birds

• *Al-Qalam Al-Kahini* القلم الكاهنى - The Priestly Pen (hieratic)

• *Al-Qalam Al-Musnad* القلم المسند - The Pen of South Arabia/Yemen

• *Al-Qalam Al-Ḥimyari* القلم الحميرى - The Pen of South Arabia/Yemen

• *Al-Qalam Al-Qibṭi* القلم القبطى - The Coptic Pen

• *Qalam Hermes* قلم هرمس - Pen of Hermes

• *Qalam Al-Simiya* قلم السيمياء - Pen of Natural Magic

• *Qalam Al-Nirinjat* قلم النيرنجات - Pen of the Magical Incantations

• *Qalam Al-Ṭalismat* قلم الطلسمات - Pen of the Talismans

• *Qalam Al-Qalfaiṭriat* قلم القلفطريات - Pen of Magical Spells (?)

• *Al-Lisan Al-Miṣri* اللسان المصرى - The Egyptian Tongue

• *Al-Qalam Al-Laqmi* القلم اللقمى - (?)

Regarding the references to South Arabia in the names *Musnad* and *Himyari* above, medieval Arabs would have observed objects inscribed in South Arabian scripts and found in an Egyptian context, such as those discovered by Petrie (1914: 32 and plate 22, no. 136e).

Arab Works on Decipherment

The Arabic sources show that Egyptian hieroglyphs were thought to have had two aspects—as letters of a language with phonetic value and also as symbols representing ideas. Such thinking may indicate that Arab scholars were influenced by the Egyptian philosopher Plotinus (d. 270 CE), who was generally very popular in medieval Arabic scholarship, and who suggested this in his *Enneads* (V 8.6).

Al-Nadim (*Al-Fihrist*, Tajaddud ed. 1988: 423) reported that he had seen books by an Iraqi alchemist known as Ibn Waḥshiyah, written in the latter's own hand and containing ancient scripts, and had also seen them copied by Abu Al-Ḥassan Ibn Al-Kufi, who had collected them from the library of the Egyptian historian Ibn Al-Furat. Al-Nadim was impressed with those copies, a sign of the prevailing popularity of Ibn Waḥshiyah's works. He then referred to two different scripts that were called "Letters of the Copts[?]" or "Letters of the Alphabet[?]" (*ḥuruf al-faqiṭus/alphabetus*), and "Letters of South Arabia/Hieroglyphs" (*ḥuruf al-musnad*), plus a third one, *ḥuruf al ᶜanbath*, which he suggested were the letters that should be used as keys to decipher the other two ancient scripts (Al-Nadim *Al-Fihrist*, Tajaddud ed. 1988: 423-424; Dodge ed. 1970, Vol. 2: 864, with notes 185-186). Al-Nadim's idea that one language could be used as a medium or key to decipher another is the very principle on which was based the later European decipherment of Egyptian scripts, using a known language—in this case Greek—to help decipher the unknown hieroglyphic and Demotic signs.

Other authors, such as Al-Idrisi (*Anwar*, Sezgin ed. 1988: 100ff.) and Al-Qalqashandi (*Ṣubḥ*, Shams Al-Din ed. 1913 – 1920), were aware that the ancient Egyptians, whom they called *al-qibṭ al-'awwal*, "the first Copts," had between 32 and 36 letters in their alphabet. Both authors also referred to the fact that Coptic was linked to the ancient Egyptian language by their designation of the latter as *al-qibṭiyah al-'ula* (the first Coptic [language]). This link was made through observing that some Coptic monks were able to read old Egyptian texts (or were at least perceived to have such knowledge), as we learn from tenth-century CE author Al-Masᶜudi (*Muruj*, ᶜAbd Al-Ḥamid ed. 1988, Vol. 1: 347ff.), who recounts the story of an Old Copt hosted by Ibn Tulun in the ninth century to help quench his thirst for knowledge of Egypt's past. The Old Copt tells Ibn Tulun that "Coptic script is a mixture of the ancient native letters and those of Greek" (ibid.: 350-351).

At least some medieval Arab scholars were thus aware of the connection between the Coptic language and its ancient Egyptian predecessor and were able to pass on this knowledge from one generation to another. It became fashionable for some Arab authors writing of ancient Egyptian matters to include either a few lines of an Egyptian script, or what was perceived as an Egyptian alphabet, with its phonetic value in Arabic. The medieval Arab use of hieroglyphic signs became more widespread, as scientists found them inspiring as symbols in designing alchemical tools and equipment (fig. 1), or useful as signs for their drawings of mechanical devices (Blochet 1907: 210), such as the automated ones designed by Al-Jazari (twelfth/thirteenth century: *Al-Hiyal Al-Handasiyya*, No. 3472, Topqapi Serai Library, Istanbul). Hieroglyphs were also used in Islamic art for their symbolism as well as for their aesthetic value and, according to Blochet (1907: 222), with full understanding of their original meaning, a view also supported by later scholars (e.g., Mayer 1933: 13). The images in the Mamluk emblems shown in Figure 2 resemble the ancient Egyptian signs for ***nb***, ***Mꜣᶜt***, ***Rᶜ***, and perhaps also ***tꜣwy***, prominently found in ancient Egyptian royal names and in epithets such as "the Sun (god)," "Lord of Justice," and "Lord of the Two Lands." These all fit well with the Mamluk rulers' views of themselves, as exemplified, for instance, by Baybars I (reign 1260 – 1277). These blazons may also have been inspired by some Christian symbols (Kurz 1977).

Figure 1. Egyptian hieroglyphs/symbols inspired tool designs in medieval Arabic alchemy, as shown in Abu Al-Qasim Al-ᶜIraqi's *Kitab Al-Aqalim Al-Sabᶜah*, fol. 11a.

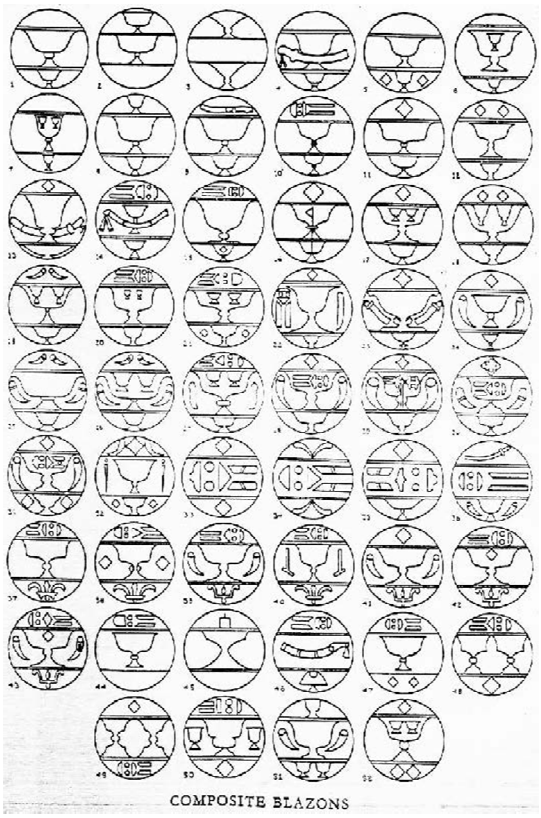

Figure 2. Use of hieroglyphs ***nb, Mɜᶜt,*** and ***Rᶜ***, and perhaps ***tɜwy***, in Mamluk emblems. These would have denoted the epithets "Lord of Justice," "the Sun," and perhaps "Lord of the Two Lands."

Listed in chronological order, the following manuscripts, along with their authors, are relevant to a discussion of how Arab scholars might have worked towards deciphering some of the ancient Egyptian signs:

• Ayub Ibn Maslama (attributed; first half of the ninth century): *Kitab Aqlam Al-Mutaqaddimeen*, MS 10244, Al-Assad Library (formerly Al-Ẓahiriyah), Damascus.

• Dhu Al-Nun Al-Miṣri (first half of the ninth century): *Ḥall Al-Rumuz wa Bar' Al-Asqam fi Kashf ᶜUlum Uṣul Lughat Al-Aqlam*, MS Muallim Cevdet K 290, Ataturk Kitapligi, Istanbul.

• Ibn Waḥshiyah (ninth/tenth century?): *Kitab Shauq Al-Mustaham fi Maᶜirfat Rumuz Al-Aqlam*, MS Arabe 6805, Bibliothèque Nationale, Paris.

• Abu Al-Qasim Al-ᶜIraqi (thirteenth / fourteenth century): *Kitab Al-Aqalim Al-Sabᶜah*, Add. MS 25724, British Library, London, and *Kitab Ḥall Al-Rumuz wa Fakk Al-Aqlam*, MS Arabe 2676, Bibliothèque Nationale, Paris.

Many of these manuscripts are not in the original handwriting of their authors: some are copies made centuries later. Occasionally the copyist was not familiar with the shape of the ancient scripts and unwittingly distorted them. There are a few other Arabic manuscripts reputed to contain hieroglyphs, but these have not yet been studied due to their inaccessibility.

The first Arab scholar known to take an interest in Egyptian scripts is Jabir Ibn Ḥayyan, who lived between the mid-seventh and mid-eighth centuries CE. His study of Egyptian scripts was so widely known that later writers (e.g., Dhu Al-Nun, *Ḥall*, fol. 78, and Ibn Waḥshiyah, *Shauq*, fols. 47-48) ascribed to him an ancient script assumed to be Egyptian and called it "The Script of Jabir Ibn Ḥayyan" (*Qalam Jabir Ibn Ḥayyan*). Indeed, Ibn Waḥshiyah (ibid.) referred his own readers who wanted to learn more about ancient scripts to a much more detailed work of Jabir on this subject, entitled *Ḥall Al-Rumuz wa Mafatiḥ Al-Kunuz*. Unfortunately, no surviving work of Jabir on Egyptian scripts has yet been located. But it is clear from what we know of his other writings that he knew several ancient tongues, citing many in his book *Al-Ḥaṣil*, while discussing alchemical terminology in those languages (Ryding 1997: 236), which comprised Arabic, Greek, Alexandrian, Persian, and Himyarite (South Arabian). The Alexandrian script (*Al-Khaṭ Al-Iskandarani*) is certainly not Greek since the latter is listed as such beside it (Kraus 1986: 261).

Jabir developed what may be termed a "philosophy of letters," which he called "Balance of Letters" (*Mizan Al-Ḥuruf*). He believed the forms of letters were indications of the nature of things and therefore the forms were of equal importance to the ideas and meanings they denoted. This is one reason why he took so much interest in Egyptian scripts with their rich and varied forms. For him, the letters of the alphabet

were designated figures for the notation of sounds, and the ordered composition of these figures signified meanings (Haq 1994: 85). As we know today, this is indeed a major aspect of Egyptian hieroglyphs (Goldwasser 1995).

Another early scholar whose main interest was ancient scripts is Ayub Ibn Maslama, described by *Al-Idrisi* (*Anwar*, Sezgin ed. 1988: 61) as an Egyptian scholar with great knowledge of ancient Egyptian scripts, and said to have translated various texts inscribed on the pyramids and other places for the Caliph Al-Ma'moun during the ruler's visit to Egypt in the year 831 CE. We are not told how Ayub Ibn Maslama translated these texts other than that he had "knowledge of deciphering the letters of the hieroglyphs" (*maʿrifat ḥall ishkal ashkal* [*sic*] *ḥuruf al-aqlam al-birbawiyah*). Al-Idrisi also noted that if these writings on the pyramids had been in Greek or Syriac, then the Caliph would not have needed to seek out the scholar's help, since he already had with him translators of these languages. Al-Idrisi additionally describes an old, badly damaged book by Ayub Ibn Maslama, titled *Priestly Talismans* (*Al-Talismat Al-Kahiniya*), which purportedly contained translations of many ancient Egyptian inscriptions. The book itself has not successfully been traced. The manuscript in Damascus cited above, *Kitab Aqlam Al-Mutaqaddimeen* (*Pens/Scripts of the Ancients*), attributed to Ayub Ibn Maslama by Sezgin ed. 1988, is likely not this work.

The next author credited with knowledge of Egyptian scripts and books on the subject is Dhu Al-Nun Al-Miṣri, who was probably a contemporary of Ayub Ibn Maslama, or who lived perhaps slightly later. The book *Kitab Ḥall Al-Rumuz*, attributed to Dhu Al-Nun Al-Miṣri, is known only from a single manuscript in Istanbul (MS Muallim Cevdet K 290, Ataturk Kitapligi). On folio 96a, "this book called *Ḥall Al-Rumuz* (*Deciphering Symbols/Signs*) of Dhu Al-Nun Al-Miṣri" confirms the attribution on the title page, but it is possible that copyists added sections to his original material, as a script is named after him in the book (e.g., folio 67a). Between folios 3a and 9b there are 14 pages, each containing two tables, each headed by a letter of the Arabic alphabet with its phonetic value. Below the Arabic letter are 28 squares containing the form of that letter in 28 different scripts. All the tables include signs that have a close resemblance to the equivalent Egyptian scripts. In addition to Egyptian, there are South Arabian Himyarite, Persian, Greek, and Latin scripts, to name a few, but it would be a major research project to try to identify the languages and all the symbols, as the book contains in abundance of 300 scripts.

The next major work on Egyptian scripts known to date is that of Ibn Waḥshiyah. Al-Nadim (*Al-Fihrist*, Tajaddud ed. 1988: 423ff.) mentioned that he saw a text in the handwriting of Ibn Waḥshiyah and that the latter had corresponded with a disciple of Dhu Al-Nun named ʿUthman Ibn Suwaid Al-Akhmimi (cf. Fück 1951: 105ff.). This work of Ibn Waḥshiyah is now known from three copies. The Paris copy cited above (MS Arabe 6805) was bought in Malta and used by Kircher. A second copy is now in the Library of Sipahsālār, Tehran (Al-Ṭabaʿ 2003: 126). A third copy is that used by Orientalist Joseph Hammer, whose work deserves attention. Hammer purchased the copy in Cairo and published its Arabic text together with his English translation in London (1806) under the title *Ancient Alphabets and Hieroglyphic Characters Explained; with an Account of the Egyptian Priests, their Classes, Initiation, and Sacrifices, in the Arabic Language by Ahmad Bin Abubeker Bin Wahshih; and in English by Joseph Hammer, Secretary to the Imperial Legation at Constantinople.* The current whereabouts of Hammer's Arabic manuscript are unknown. In his introduction, under the title "Translator's Preface" (pages xviiff.), Hammer refers to the copy used by Kircher, which is now kept in the Bibliothèque Nationale in Paris and is the most complete of the three copies. Hammer's introduction further describes how his copy of the text had "escaped the researches of the French Savants, who, though successful in collecting many valuable Oriental books and manuscripts, failed in their endeavours to produce a satisfactory explanation of the Hieroglyphics" (ibid.). This shows his

awareness that French scholars were searching for Arabic manuscripts that might shed light on deciphering hieroglyphs, and indeed Arabic manuscripts were among the loot confiscated from the defeated French by the British forces (Budge 1913/reprint 1989: 25). Hammer (1806) had problems trying to establish a date for Ibn Waḥshiyah, but it is clear that he was still alive in 903 CE, when he dictated his famous book *Nabaṭaean Agriculture* (*Al-Filaḥa Al-Nabaṭiyah*) (Fahd 1971; Fahd ed. 1993, Vol. 1: 5; Al-Zerekly 1999, Vol. 1: 170-171). It is interesting to note that Hammer's English translation of Ibn Waḥshiyah was regarded by Solé and Valbelle (2001: 102) as the "English contribution" to the decipherment progress, with no mention of the original Arab author.

Ibn Waḥshiyah's work covers more than 80 different ancient scripts, including the Egyptian ones. After his introduction he gives the name of each script, these being based generally on the names of kings, priests, and philosophers. He then gives a list of hieroglyphic signs with their meanings, and it is quite probable that here he was drawing upon works such as Horapollo's Hieroglyphica (see 1993 Boas translation), since he followed the same pattern.

These books on the decipherment of ancient scripts may have been a source used by later writers attempting to render translations of various ancient texts. For example, Al-Maqrizi (Khiṭaṭ, Sayyid ed. 2003, Vol. 2: 425-429) gives an account of the demolition of some old walls and gates in Cairo, during which ancient objects with inscriptions were found. He describes these objects and leaves us a translation of the texts. His description is fairly detailed and probably accurate, but he does not claim that the translation was his own. He instead refers to "Script Readers" being called upon to read it. In his account of the demolition of the Bab Al-Baḥr ("Gate of the River," of the Fatimid palace in Cairo, built by Al-Ḥakim Bi-Amr Allah at the end of the tenth century and demolished in 1273 CE during the reign of Al-Ẓahir Rukn Al-Din Baybars), Al-Maqrizi (ibid.: 425-427) states:

"While demolishing this gate to take away some of its columns for some Sulṭanate building, they uncovered a box in a wall built around it, and immediately witnesses and a large crowd came and the box was opened. A statue was found in it. It is hollow yellow copper on a seat similar to the pyramid, its height is about a hand-span with four legs supporting the seat. The idol sat cross-legged with his hand raised high. He holds a scroll (*ṣaḥifah*) about three hand-spans wide and in this document are standing figures. In the middle there is a picture of a head without a body encircled with Coptic writing and *Qalfeṭeriat* (magical signs?). [Author's note: For the translation of *Qalfeṭeriat* as *signes magiques* ("magical signs"), see Henein and Bianquis (1975: p. 29 of the French text and p. 16 of the Arabic text); cf. Ibn Waḥshiyah, MS Arabe 6805: folio 112, where one of the ancient Egyptian scripts is referred to as *Qalam Al-Ḥakeem Qalfeṭrius* ("Script of the Sage *Qalfeṭerius*").] Next to it in the document is a figure in the shape of an ear of wheat bearing two horns. On the other side is a figure with a cross on his head, and another with a walking stick in his hand and a cross on his head. Under their feet are figures of birds. Above the heads of the figures is some script. Also found in the box with this idol was a boy's writing palette of the type used for writing in the *makatib*. [Author's note: This plural term refers to the small classes in which children were taught the Qur'an, with lessons in reading, writing, and reciting poetry.] One of its sides was painted white and the other red, from which most of the writing had fallen off because of the long passage of time. The palette has deteriorated and so has the writing, hence I am leaving spaces of lacunae free where writing has disappeared. The white side was written in the same Coptic script as the written remains on the red side, in the following order [of lines]:

1st line – Alexander…

2nd line – the land he gave to him…

3rd line – he tried for all…

4th line – companions…

5th line – and he guards…

6th line – and his strong holding…

7th line – the king begs and gates…

8th line – changed his house seven…

9th line – a wise scholar knowledgeable in his mind…

10th line – its description [so do] not spoil…

11th line – remover of every evil and the one who shaped it/them [are] women…

12th line – walled also all Lion's antiquities of Baybars and it is one…

13th line – Baybars, king of all time and wisdom, the Word of Allah, the Glorious.

"This was the picture of what was found on the palette. It was said that this palette is in the handwriting of Caliph Al-Ḥakim. The most peculiar thing about it is that it contains the name of Sulṭan Baybars, who saw it and ordered it to be read, so it was shown to the Readers of the Scripts [*qura' al-aqlam*] and was read. It is in the Coptic script and its content is a talisman made for Al-Ẓahir, son of Al-Ḥakim, in which his mother's name was written, together with names of angels, spells [*ʿazaim*], incantations [*ruqi*], spirits' names [*asma' ruḥaniya*], and images of angels, most of which were for the protection of the land of Egypt and its ports, and to repel enemies. This talisman was carried to the Sulṭan and remained among his treasures. It was also seen in an old book called by its writer *The Will of the Imam Al-ʿAẓiẓ Bi-Allah, Father of the Imam Al-Ḥakim Bi-Amr Allah for His Abovementioned Son*. He mentioned in it the talismans made on the palace gates to give power to the Sun King [*Al-Shams Al-Malik*] over his enemies" (author's translation).

Al-Maqrizi (*Khiṭaṭ*, Sayyid ed. 2003, Vol. 2: 427-429) also narrates what was found during the demolition of another gate, *Bab Al-Riḥ* (Gate of the Wind), of the same palace:

"A statue of a person was found, and when that news reached me I went to the Emir in charge of the demolition, Emir Jamal Al-Din Yosef Al-Istadar, and asked him to bring it. He told me that he was brought a person of stone, short, with one eye smaller than the other. I said, I have to see it, so he ordered the man in charge of constructions to bring it while I was with him at the site of the gate, after the demolition of the whole building. The man said he had thrown it into the building stones and that it broke and was mixed up with the rest of the stones and that he could not distinguish it. The Emir pressed the man hard but they failed to bring it, so I asked the man to describe it. The man said that they found a circle with writing in it, and in the middle was a short person with one of his eyes smaller than the other. This sounds very much like the Emir Jamal Al-Din just mentioned" (author's translation).

These quotations from Al-Maqrizi show his awareness of many of the issues that an archaeologist today takes into account: the provenance and context of the find; a description of the object; and the need to offer an interpretation of the object and to postulate its purpose and function. Al-Maqrizi's analysis was attempted within the framework of the then available understanding of magic and angels. His limited historical knowledge did not stop him from sharing his interest with his readers. The most important feature of his description of the palette is his attempt at accuracy in recording the words in every line and at noticing the breaks, lacunae, and damage. There is also his attempt at internal textual criticism, if only in the form of wondering at the supposed presence of the current ruler's name on the palette (*wa ʿajab mafih ism al-Sulṭan Baybars*). It may be that Baybars's fascination with things ancient Egyptian—such as sphinxes (lions being his emblem)—caused him to commission the addition of his name to ancient objects. Baybars also became the hero of one of the most popular folktales in medieval Egypt, *Sirat Al-Ẓahir Baybars*, which remained popular well into the twentieth century, as seen in the account of author Ṭaha Ḥussayn (Reynolds 1995: 23).

Egyptian Signs Correctly Deciphered

For the sake of simplicity, reference is made here to the figures showing Egyptian signs correctly identified as phonetic signs or determinatives. Correctly cited Coptic with the correct phonetic values can be seen in the work of Dhu Al-Nun in *Ḥall*, folios 12a, b (fig. 3).

Figure 3. The Coptic alphabet with its phonetic values in Arabic and order correctly identified. Dhu Al-Nun Al-Miṣri (Ḥall, fol. 12).

In his work *Shauq*, Ibn Waḥshiyah distinguishes certain hieroglyphic signs as phonetic symbols, with several letters correctly identified in folios 92b and 93a (fig. 4, right and left, respectively) and 93b (fig. 5, right). Ibn Waḥshiyah presents the Egyptian alphabets according to the *Hermetics* (*ra'i al-ḥaramisah*; the wisdom teachings attributed to Hermes Trismegistos), in which there are a total of 38 letters (Arabic has 28 letters), and he then gives the hieroglyphic sign with its phonetic value below it. All 38 signs are correctly copied and twelve of these are certainly used in the Egyptian alphabet, and perhaps more, if we assume that he was using the hieroglyphs of the Ptolemaic and Roman Periods, as almost all the still-intact temples accessed by medieval Arabs dated to this period (e.g., the temples of Dendara, Esna, and Edfu). On folios 94a (fig. 5, left) and 94b (fig. 6, right), he gives the names of these letters.

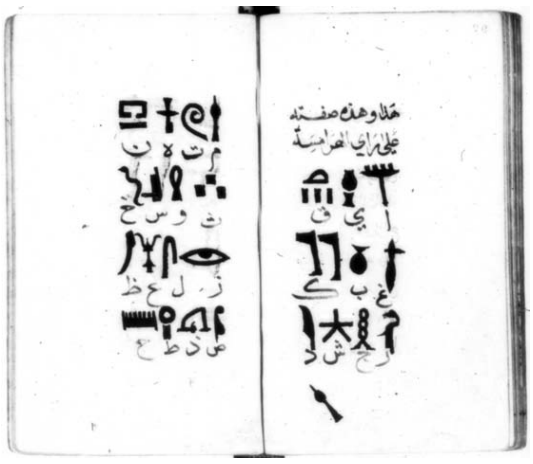

Figure 4. Egyptian alphabet according to Ibn Waḥshiyah (*Shauq*, fol. 92b at right and fol. 93a at left).

Figure 5. Ibn Waḥshiyah, *Shauq*, fol. 93b at right and 94a at left.

Figure 6. Ibn Waḥshiyah, *Shauq*, fol. 94b at right.

In an earlier section of *Shauq*, Ibn Waḥshiyah gives long lists of words written with hieroglyphic signs, each representing an epithet. Folios 56 and 57 (figs. 7, 8) give some good examples of word-signs or determinatives, which he distinguished from alphabetic signs. For example, in folio 56a (fig. 7, left), the sign in the middle of the top line is identified as *al-ʿadl*, "justice," reflecting the idea that justice was dispensed in temples (which could be true: compare van den Boorn 1985; Derchain 1995), as it was in churches in medieval times. (Note that the actual hieroglyph, O9, in fact stands for the goddess "Nephthys," not for any words pertaining to the semantic field of "justice"; the similar sign O20 stands for different words for, or types of, "shrine" rather than for "justice": sign-list, Gardiner 1957: 493, 495.) The sign-group in the middle of the bottom line of the same folio shows a forearm with two signs of the letter *t,* with the meaning *al-tadbir*, "provisions," "preparations," etc. The similar group in hieroglyphs as we understand them today could indeed stand for the more general meaning "give" and the like. On folio 56b (fig. 8, right), the sign on the far right of the second line shows a seated figure with a flail symbolizing "authority," *al-salṭanah*, a meaning that is broadly compatible with that of the ancient hieroglyph. In this case, as in the preceding one, Ibn Waḥshiyah could have correctly intuited the broad general meaning of the iconic shape of the signs, as these would have been meaningful in both the ancient Egyptian and his own cultural contexts.

Finally, the works of Abu Al-Qasim Al-ʿIraqi show several correctly copied and sometimes also correctly identified hieroglyphs. In his manuscript *Al-Aqalim*, on folios 21b (fig. 9) and 22a (fig. 10), he gives a list of hieroglyphic signs with their phonetic values in Arabic. It is possible to establish that he identified four hieroglyphic letters correctly. The top line of Figure 9 shows (right to left) the correct sign for *ḥ*, and the last sign on this line may well be the letter *ḳ*, written in Egyptian as a basket with a handle. On the bottom line, the sign for *a/i* is presented as a stroke, which is also correct. In

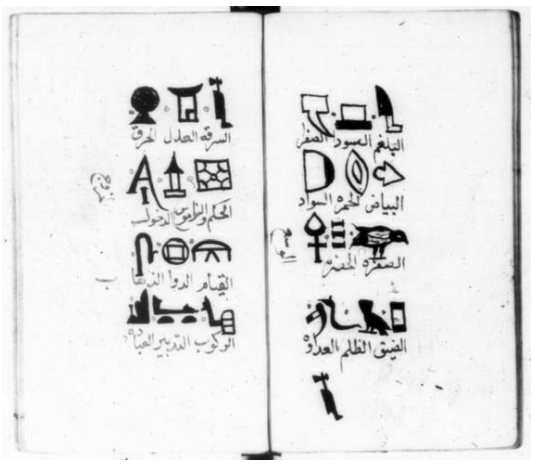

Figure 7. Ibn Waḥshiyah, *Shauq*, fol. 56a at left.

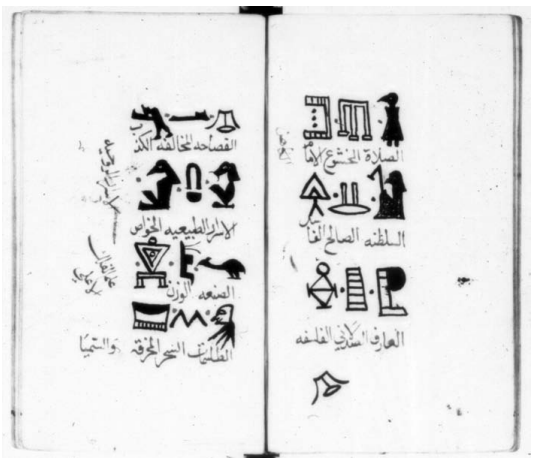

Figure 8. Ibn Waḥshiyah, Shauq, fol. 56b at right.

Figure 10, the top hieroglyphic line shows the letter *sh* correctly identified.

In his additional manuscript (MS Arabe 2676, Bibliothèque Nationale, Paris), folio 18b, Abu Al-Qasim gives us a table with the complete hieroglyphic alphabet (fig. 11). It is clear that he identified correctly the first three signs on the top line (right to left): *a*, *ḥ*, and *t*. On the second line, the third sign from the right is correct (*ḳḥ*), and on line three, the third sign from the right is also correct (*ẓ*). Abu Al-Qasim (fol. 50a) also copied an entire stela from which it is now easy to identify the name and titles of King Amenemhat II of the Twelfth Dynasty (c. 1928 – 1893 BCE) (see fig. 12).

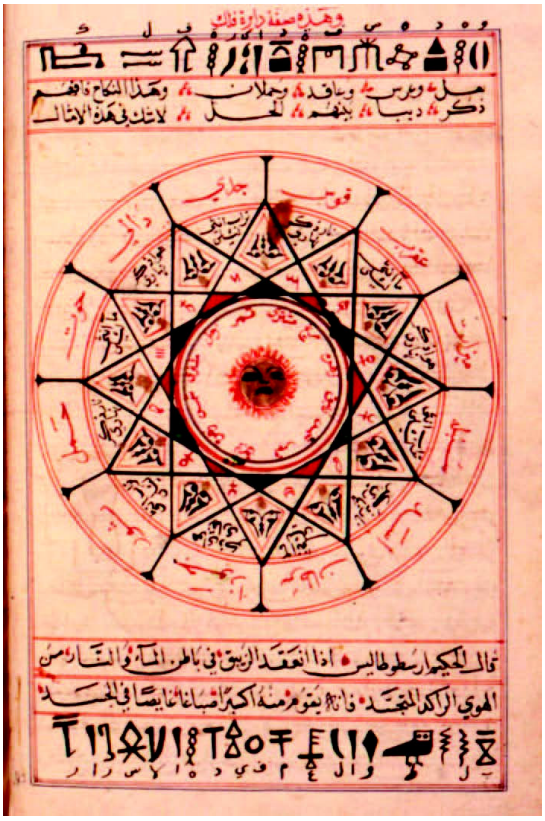

Figure 9. Hieroglyphic signs with their phonetic values in Abu Al-Qasim Al-ᶜIraqi's *Al-Aqalim*, fol. 21b.

Figure 10. Hieroglyphic signs with their phonetic values in Abu Al-Qasim Al-ᶜIraqi's *Al-Aqalim*, fol. 22a.

Among the hundreds of scripts cited by Dhu Al-Nun (*Hall*, fol. 36b, top), one, as mentioned above, is named after Jabir Ibn Ḥayyan, and many of its signs may be identified as Demotic. On comparing the script of Jabir (fig. 13) to the Demotic letters from a modern work (e.g., du Bourguet 1976: 75), many signs can be seen to have been correctly written and identified by Dhu Al-Nun. Despite the number of changes the original handwriting must have gone through during the process of copying over hundreds of years, we still can see that the letters *a*, *b*/*p*, *t*, *g*, *ḥ*/*H*, *kh*, *d*, *r*, *sh*, *q*/*k*, *l*, *m*, *n*, *w*, and *i*/*y* have, on the whole, been correctly written and deciphered.

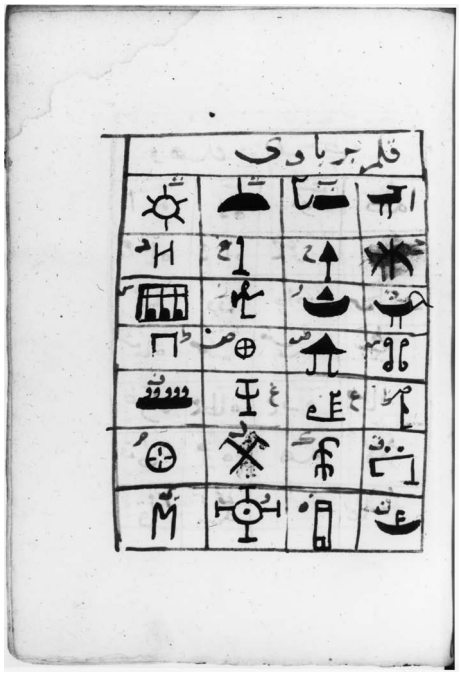

Figure 11. Egyptian alphabet deciphered in Abu Al-Qasim Al-ᶜIraqi's MS Arabe 2676, fol. 18a.

Figure 12. A stela of King Amenemhat II (c. 1928 – 1893 BCE) of the Twelfth Dynasty, as copied in Abu Al-Qasim Al-ᶜIraqi's *Al-Aqalim*, fol. 50a.

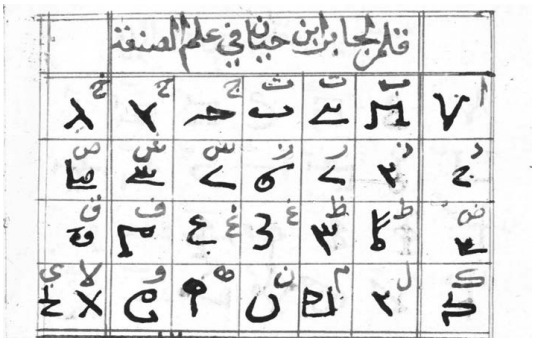

Figure 13. A script named after the Sufi/alchemist Jabir Ibn Ḥayyan in Dhu Al-Nun's *Ḥall*, fol. 36b. Many letters resemble Egyptian Demotic.

It is obvious from the above that there is still an enormous amount of research to be done before one can speak authoritatively on the subject of medieval Arab processes of decipherment, and issues such as motive and extent also require further study. It would furthermore be of interest to explore the idea that hieroglyphic signs may hold the key to understanding the enigmatic letters at the beginning of a number of *suras* in the Qur'an. This has been advocated in a fairly recent controversial study published in Egypt with the provocative title *Hieroglyphic Explains the Holy Qur'an* (Al-ᶜAdl 2002).

To sum up, the medieval study of Egyptian hieroglyphs attracted very diverse groups, including nationalist natives, Sufi wisdom seekers, alchemists, code breakers, and artists. Most of the medieval Arab manuscripts reflecting interest in ancient Egypt are in need of detailed study and publication. They are treasure troves of knowledge waiting to be discovered.

Bibliographic Notes

The present entry is a shortened version of Chapter 5 of the present author's book on the same subject (El-Daly 2005). Stephan (2017) is a summary, notably of El-Daly (2005). The reader wishing to explore further aspects of the problematic is referred to the different presentation by Sundermeyer (2020), with a detailed analysis of the various methods of sign interpretation in Arabic sources set in perspective with values of ancient Egyptian of hieroglyphs.

References

ᶜAbdin, ᶜAbd Al-Majid
1964 *Lamaḥat min Tarikh Al-Ḥayah Al-Fikriyah Al-Miṣriyah qabl Al-Fatḥ Al-ᶜArabi wa Baʿdah*. Cairo: Al-Shibukshi Press.

Aharoni, Yohanan
1966 The use of hieratic numerals in Hebrew ostraca and the shekel weights. *Bulletin of the American Schools of Oriental Research* 184, pp. 13-19.

Al-ᶜAdl, S.
2002 *Al-Hieroghlyphiya Tufasir Al-Qur'an Al-Kareem*. Cairo: Madbouli.

Al-Ṭabaᶜ, Iyad Khalid
2003 *Manhaj Taḥqiq Al-Makhṭuṭat wa maʿahu Kitab Shauq Al-Mustaham fi Maʿrifat Rumuz Al-Aqlam*. Damascus: Dar El-Fikr.

Al-Zerekly, Khayr Al-Din
1999 *Al-Aʿlam*. Fourteenth edition. Eight volumes. Beirut: Dar El-ᶜIlm li-Al-Malayin.

Amélineau, Émile
1888 *Contes et romans de l'Égypte chrétienne*. 2 volumes. Paris: Ernest Leroux.

Behlmer, Heike
1996 Ancient Egyptian survivals in Coptic literature: An overview. In *Ancient Egyptian literature: History and forms*, ed. Antonio Loprieno, pp. 567-589. Leiden: Brill.

Bilabel, Friedrich, Adolf Grohmann, and Georg Graf
1934 *Griechische, koptische und arabische Texte zur Religion und religiösen Literatur in Ägyptens Spätzeit*. Heidelberg: Verlag der Universitätsbibliothek.

Blochet, Edgar
1907 Peintures de manuscrits Arabes à types Byzantins. *Revue Archéologique* 9, pp. 193-223.

Bowman, Raymond
1944 An Aramaic religious text in Demotic script. *Journal of Near Eastern Studies* 3, pp. 219-231.

Budge, E. A. Wallis
1989 *The Rosetta Stone*. Reprint: First published 1913. London and New York: Dover.

Clarysse, Willy
1978 Notes on some Graeco-Demotic surety-contracts. *Enchoria* 8(2), pp. 5-8.
1983 Literary papyri in documentary "archives." In *Egypt and the Hellenistic world: Proceedings of the International Colloquium, Leuven 24 – 26 May 1982*, Studia Hellenistica, ed. E. van 't Dack, P. van Dessel, and W. van Gucht, pp. 43-61. Leuven: Lovanii.

Coles, Revel
1981 A quadrilingual curiosity in the Bodleian Library in Oxford. In *Proceedings of the 16th International Congress of Papyrology, New York, 24 – 31 July 1980*, pp. 193-197. Chicago: Scholars Press.

Cory, Alexander Turner
1840 *The hieroglyphics of Horapollo Nilous*. London: William Pickering.

Depauw, Mark
1997 *A companion to Demotic studies*. Brussels: Fondation Égyptologique Reine Élisabeth.

Derchain, Philippe
1995 La justice à la porte d'Évergète. In *3. Ägyptologische Tempeltagung: Systeme und Programme der ägyptischen Tempeldekoration*, Ägypten und Altes Testament 33.1, ed. Dieter Kurth, W. Waitkus, and S. Woodhouse, pp. 1-12. Wiesbaden: Harrassowitz.
Diethart, Johannes, and Helmut Satzinger
1983 Eine Griechisch-koptische Wörterliste. In *Festschrift zum 100-jährigen Bestehen der Papyrussammlung der Österreichischen Nationalbibliothek: Papyrus Erzherzog Rainer (P. Rainer Cent.)*, pp. 206-213; plate 17. Vienna: Brüder Hollinek.
Dodge, Bayard (ed.)
1970 *The* Fihrist *of al-Nadim: A tenth-century survey of Muslim culture*. 2 volumes. New York and London: Colombia University Press.
du Bourguet, Pierre
1976 *Grammaire fonctionnelle et progressive de l'Égyptien Démotique*. Leuven: Peeters.
DuQuesne, Terence
1991 *A Coptic initiatory invocation (PGM IV 1-25)*. London: Darengo.
El-Daly, Okasha
2005 *Egyptology: The missing millennium: Ancient Egypt in medieval Arabic writings*. Oxford and New York: Routledge.
Fahd, Toufiq
1971 Ibn Waḥshiyya. In *Encyclopaedia of Islam, Vol. III*, second edition, ed. Peri Bearman et al., pp. 963-965. Leiden: Brill.
Fahd, Toufiq (ed.)
1993 *L'Agriculture Nabatèenne: Ibn Waḥshiyya*. 2 volumes. Damascus: Institut Français de Damas.
Fiey, Jean-Maurice
1972- Coptes et Syriaques: Contacts et échanges. *Studia Orientalia Christiana – Collectanea* 15 (1972 – 1973), pp. 297-365.
Fodor, Sándor
1992 Traces of the Isis Cult in an Arabic love spell from Egypt. In *The intellectual heritage of Egypt: Studies presented to László Kákosy*, Studia Aegyptiaca 14, ed. Ulrich Luft, pp. 171-186. Budapest: Eötvös Loránd University Press.
Fück, J. W.
1951 The Arabic literature on alchemy according to An-Nadim (A.D. 987). *Ambix: The Journal of the Society for the Study of Alchemy and Early Chemistry* 4, pp. 81-144.
Gardiner, Alan
1957 *Egyptian grammar, being an introduction to the study of hieroglyphs*. Third edition. Oxford: Oxford University Press.
Goldwasser, Orly
1995 *From icon to metaphor: Studies in the semiotics of the hieroglyphs*. Orbis Biblicus et Orientalis 142. Fribourg: Academic Press; Göttingen: Vandenhoeck & Ruprecht.
Haarmann, Ulrich
1980 Regional sentiment in medieval Islamic Egypt. *Bulletin of the School of Oriental and African Studies* 43, pp. 55-66.
1982 Quellen zur Geschichte des islamischen Ägypten. *Mitteilungen des Deutschen Archäologischen Instituts, Abteilung Kairo* 38, pp. 201-210.
Hammer, Joseph (ed.)
1806 *Ancient alphabets and hieroglyphic characters explained; with an account of the Egyptian priests, their classes, initiation, and sacrifices in the Arabic language by Ahmad Bin Abubekr Bin Wahshih; and in English by Joseph Hammer, Secretary to the Imperial Legation at Constantinople*. London: Bulmer.
Haq, Syed Nomanul
1994 *Names, natures and things: The alchemist Jabir ibn Hayyan and his* Kitab al-Aḥjar (Book of Stones). Boston Studies in the Philosophy of Science 158. Dordrecht, Boston, and London: Kluwer Academic Publishers.
Henein, Henri Nassim, and Thierry Bianquis
1975 *La Magie par les Psaumes*. Edition and translation of the Arabic text. Cairo: Institut Français d'Archéologie Orientale.

Horapollo
1993 *The* Hieroglyphics *of Horapollo*. (English translation of Horapollo's *Hieroglyphica*.) Translated and introduced by George Boas; with a new forward by Anthony T. Grafton. Bollingen Series XXIII. New Jersey: Princeton University Press.
Iversen, Erik
1993 *The myth of Egypt and its hieroglyphs in European tradition*. Second edition; first published 1961. Princeton: Princeton University Press.
Kákosy, László
1989 Survival of ancient Egypt: Religion, other domains of culture, Egyptian influence on Gnosticism and Hermetism: A brief survey. In *Studia in honorem L. Fóti*, Studia Aegyptiaca 12, pp. 263-287. Budapest: Chaire d'Égyptologie de l'Université Eötvös Loránd.
1990 Survival of ancient Egyptian gods in Coptic and Islamic Egypt. In *Coptic studies: Acts of the Third International Congress of Coptic Studies, Warsaw 20 – 25 August 1984*, ed. Włodzimierz Godlewski, pp. 175-177. Warsaw: PWN-Éditions Scientifiques de Pologne.
1999 *Egyptian healing statues in three museums in Italy*. Turin: Museo Egizio.
Kaufman, Ivan
1967 New evidence for hieratic numerals on Hebrew weights. *Bulletin of the American Schools of Oriental Research* 188, pp. 39-41.
Kraus, Paul
1986 *Jabir Ibn Ḥayyan: Contribution à l'histoire des idées scientifiques dans l'Islam*. Reprint: *Mémoires présentés à l'Institut d'Égypte* 44-45 (1942 – 1943). Paris: Les Belles Lettres.
Kurz, Otto
1977 Mamluk heraldry and *interpretatio Christiana*. In *Studies in memory of Gaston Wiet*, ed. Myriam Rosen-Ayalon, pp. 297-307. Jerusalem: Institute of Asian and African Studies, Hebrew University Jerusalem.
Lexa, François
1925 *La magie dans l'Égypte antique*. 3 volumes. Paris: Librairie Orientaliste Paul Geuthner.
Martinez, Francisco J.
1990 The king of Rūm and the king of Ethiopia in medieval Apocalyptic texts from Egypt. In *Coptic studies: Acts of the Third International Congress of Coptic Studies, Warsaw 20 – 25 August 1984*, ed. Włodzimierz Godlewski, pp. 247-259. Warsaw: PWN-Éditions Scientifiques de Pologne.
Mayer, Leo
1933 *Saracenic heraldry: A survey*. Oxford: Oxford University Press. Reprinted by Sandpiper Books 1999.
McCullough, William S.
1967 *Jewish and Mandaean incantation bowls in the Royal Ontario Museum*. Toronto: University of Toronto Press.
Meyer, Marvin, and Richard Smith (eds.)
1994 *Ancient Christian magic: Coptic texts of ritual power*. San Francisco: Harper.
Parkinson, Richard
1999 *Cracking codes: The Rosetta Stone*. London: British Museum Press.
Petrie, William Matthew Flinders
1914 *Amulets*. London: Constable & Company, Ltd.
Pezin, Michel
1978 Les étiquettes de momies du Musée de Picardie à Amiens. *Enchoria* 8(2), pp. 9-12; plates 3-4.
Reynolds, Dwight
1995 *Heroic poets, poetic heroes: The ethnography of performance in an Arabic oral epic tradition*. Ithaca and London: Cornell University Press.
Robinson, James M. (ed.)
1996 *The Nag Hammadi Library in English*. Fourth edition. Leiden: Brill.
Roccati, Alessandro
1992 Writing Egyptian: Scripts and speeches at the end of pharaonic civilization. In *Life in a multi-cultural society: Egypt from Cambyses to Constantine and beyond*, ed. Janet Johnson, pp. 291-294. Chicago: The Oriental Institute of the University of Chicago.
Ryding, Karin
1997 The heritage of Arabic alchemy: The multicultural matrix. In *Perspectives arabes et médiévales sur la tradition scientifique et philosophique grecque: Actes du colloque de la SIHSPAI (Société Internationale d'Histoire des Sciences et de la Philosophie Arabes et Islamiques), Paris, 31 mars – 3 avril 1993*, ed. Ahmed M. Hasnawi, A. Elamrani-Jamal, and Maroun Aouad, pp. 235-248. Leuven and Paris: Peeters.

Satzinger, Helmut
1994 An Old Coptic text reconsidered: PGM 94 ff. In *Coptology: Past, present, and future: Studies in honour of Rodolphe Kasser*, Orientalia Lovaniensia Analecta 61, ed. S. Giversen, M. Krause, and P. Nagel, pp. 213-224. Leuven: Uitgeverij Peeters.
Schenke, Hans-Martin
1999 Das Berliner "Koptische Buch" (P. 20915) und seine Geheimnisse. *Zeitschrift für Ägyptische Sprache und Altertumskunde* 126, pp. 61-70.
Scholz, Piotr
1993 Die Kontinuität des Altägyptischen in der Ikonizität und Theologie des orientalischen Christentums. In *Sesto Congresso Internazionale di Egittologia*, Vol. 2, ed. Gian Maria Zaccone and Tomaso Ricardi di Netro, pp. 471-477. Turin.
Sezgin, Fuat
1967- *Geschichte des arabischen Schrifttums*. 17 volumes (1967 – 2000). Leiden: Brill; Frankfurt: Institut für Geschichte der Arabisch-Islamischen Wissenschaften.
Shisha-Halevy, Ariel
1978 An early North-West Semitic text in the Egyptian hieratic script. *Orientalia* 47, pp. 145-162.
Sidarus, Adel
2000 La tradition sahidique de philologie gréco-copto-arabe (manuscrits des XIII^{e}-XV^{e} siècles). In *Études Coptes 7: Neuvième journée coptes, Montpellier, juin 1999*, ed. N. Bosson, pp. 265-304. Leuven and Paris: Peeters.
Solé, Robert, and Dominique Valbelle
2001 *The Rosetta stone: The story of the decoding of hieroglyphics*. (Translated by S. Rendall from the French *La pierre de Rosette*, published 1999, Paris: Seuil.) London: Profile Books.
Stephan, Tara
2017 Writing the past: Ancient Egypt through the lens of medieval Islamic thought. In *Arabic humanities, Islamic thought: Essays in honor of Everett K. Rowson*, ed. Joseph E. Lowry and Shawkat M. Toorawa, pp. 256-270. Leiden and Boston: Brill.
Sundermeyer, Annette
2020 Interpretations and reuse of ancient Egyptian hieroglyphs in the Arabic period (tenth – sixteenth centuries CE). In *The Oxford handbook of Egyptian epigraphy and palaeography*, ed. Vanessa Davies and Dimitri Laboury, pp. 176-192. New York: Oxford University Press.
Thissen, Heinz-Josef
1994 Horapollinis Hieroglyphika Prolegomena. In *Aspekte spätägyptischer Kultur: Festschrift für Erich Winter*, ed. Martina Minas-Nerpel, Jürgen Zeidler, et al., pp. 255-263. Mainz am Rhein: Philipp von Zabern.
van den Boorn, G. P. F.
1985 *Wḏ^{ꜥ}-ryt* and justice at the gate. *Journal of Near Eastern Studies* 44, pp. 1-25.
van Esbroeck, Michel
1998 La légende d'Apa Jeremias et Apa Johannes et les fragments Chester Beatty Copte 829. *Orientalia* 67, pp. 1-63; tables I-V.
Van Rompay, Lucas, and Andrea Schmidt
2001 Takritans in the Egyptian desert: The monastery of the Syrians in the ninth century. *Journal of the Canadian Society for Syriac Studies* 1, pp. 41-60.
Viaud, Gérard
1978 Magie et coutumes populaires chez les Coptes d'Égypte. Paris: Éditions Présence.
Vycichl, Werner
1991 Sullam. In *Coptic encyclopedia*, Vol. 8., ed. Aziz Suryal Atiya, pp. 204-207. New York: Macmillan.
Wissa-Wassef, Cérès
1971 *Pratiques rituelles et alimentaires des Coptes*. Bibliothèques d'études coptes 9. Cairo: Institut Français d'Archéologie Orientale.
Yeiven, Schlomo
1969 An ostracon from Tel Arad exhibiting a combination of two scripts. *The Journal of Egyptian Archaeology* 55, pp. 98-102.
Young, Dwight
1981 A monastic invective against Egyptian hieroglyphs. In *Studies presented to H. J. Polotsky*, ed. Dwight Young, pp. 348-360. Massachussetts: Pirtle and Polson.

Zimmermann, Fritz
1912 Koptisches Christentum und altaegyptische Religion. *Theologische Quartalschrift* 94, pp. 592-604.

Primary Arabic Sources, Annotated with Information (as Accessible) on Editions and Translations

• Al-Idrisi, Abu Jaᶜfar Muhammad Ibn ᶜAbd Al-ᶜAziz (d. 1251)
Anwar ʿUlwiyy Al-Ajram fi Al-Kashf ʿan Asrar Al-Ahram
1988 Edited by Sezgin, Ursula, *Light on the voluminous bodies to reveal the secrets of the pyramids*. Facsimile edition of John Rylands University Library of Manchester 262. Translated by Ursula Sezgin. Frankfurt am Main: Institut für Geschichte der Arabisch-Islamischen Wissenschaften, Johann Wolfgang Goethe-Universität.
1991 Edited by Haarmann, Ulrich, *Pyramidenbuch des Abu Ga'far Al-Idrisi*. With an introduction in German by Ulrich Haarmann. Beiruter Texte und Studien 38. Beirut and Stuttgart: Steiner Verlag.

• Al-Jazari, Badiᶜ Al-Zaman Abu Al-ᶜIzz Ismaᶜil Ibn Al-Razzaz (twelfth/thirteenth century)
Kitab fi maʿrifat Al-Ḥiyal Al-Handasiyyah
1990 Fascimile publication of Arabic text No. 3472 in Topqapi Serai Library, Istanbul. Ankara: Kültür Bakanliği.
Hill, Donald R. (ed.)
1974 *The book of knowledge of the ingenious mechanical devices*. Translated and annotated by Donald R. Hill. Boston: Reidel.

• Al-Jobry, ᶜAbd Al-Raḥim (d. 1264)
Al-Mukhtar fi Kashf Al-Asrar wa Hatk Al-Astar
1992 Edited by ᶜIṣam Shaparo Beirut: Dar Al-Taḍamun.
1979 Translated by René Khawam, *Le Voile arraché: L'autre visage de l'Islam*. French translation. 2 volumes. Paris: Phébus.

• Al-Maqrizi, Abu Al-ᶜAbbas Ahmed Ibn ᶜAbd Allah (d. 1440)
Kitab Al-Mawaʿiẓ wa Al-Iᶜtbar fi Dhikr Al-Khiṭaṭ wa Al-Athar [*Khiṭaṭ*]
2002- Edited by Ayman Fu'ad Sayyid. 5 volumes (6 parts) (2002 – 2004). London: Al-Furqan.

• Al-Masᶜudi, Abu Al-Ḥasan ᶜAli Ibn Al-Ḥussain (d. c. 956)
Muruj Al-Dhahab wa Maʿadin Al-Jawhar
1988 Edited by Muhammad ᶜAbd Al-Ḥamid. Reprint. Beirut: Al-Maktabah Al-ᶜAṣriyah.
1861- French translation (*Les Prairies d'or*) by Charles Barbier de Meynard and Abel Pavet de Courteille. 9 volumes (1861 – 1877). Paris: Société Asiatique.
1965- Critical Arabic edition by Charles Pellat. 7 volumes (1965 – 1979). Beirut: University of Lebanon.

• *Al-Fihrist*, Al-Nadim, Abu Al-Faraj Muhammad Ibn Abi Yaᶜqub Isḥaq (d. 920)
1988 Edited by Tajaddud, Riḍa, Al-Fihrist*: A tenth century AD survey of Islamic culture*. Third edition. Tehran: Dar Al-Masirah.
1970 Edited by Dodge, Bayard, *The* Fihrist *of al-Nadim: A tenth-century survey of Muslim culture*. 2 volumes. Edited and translated by Bayard Dodge. New York: Columbia University Press.

• Al-Qalqashandi, Shihab Al-Din Abu Al-ᶜAbbas Ahmed Ibn ᶜAli Al-Miṣri (d. 1418)
Kitab Ṣubḥ Al-Aᶜsha fi Ṣinaʿat Al-Insha [Ṣubḥ]
1913- Edited by M. Shams Al-Din. 14 volumes (1913 – 1920). Cairo.

• Ibn Abi Uṣaybiᶜah, Muwafaq Al-Din Abi Al-ᶜAbbas Ahmad Ibn Al-Qasim (d. 1270)
Kitab ʿUyun Al-Anba' fi Ṭabaqat Al-Aṭibba' [*Ṭabaqat*]
1998 Beirut: Dar Al-Kutub Al-ᶜIlmiyah.

• Ibn Al-Dawadari, Abu Bakr Ibn ᶜAbd Allah (fourteenth century)
Kanz Al-Durar wa Jamiʿ Al-Ghurar
1981 Edited by M. A. Gamal Ad-Din. Volume 3. Cairo and Wiesbaden: Steiner.

• Ibn Fatik, Abu Al-Wafa' Al-Mubashshir (tenth/eleventh century)
Kitab Mukhtar Al-Ḥikam wa Maḥasin Al-Kalim
1958 Edited by Abd Al-Rahman Badawi. Madrid: Instituto Egipcio de Estudios Islámicos.

Arabic Manuscripts

• Abu Al-Qasim Al-ᶜIraqi (thirteenth/fourteenth century)
Kitab Al-Aqalim Al-Sabʿah, Add. MS 25724, British Library, London.
Kitab Ḥall Al-Rumuz wa Fakk Al-Aqlam, MS Arabe 2676, Bibliothèque Nationale, Paris. (Cf. MSS Arabe 2657 and Arabe 2703 in the same library, and also Add. MS 23420 in the British Library, and MS 10244 in the Al-Assad Library [formerly Al-Ẓahiriyah], Damascus.)

• Ayub Ibn Maslama (attributed; first half of the ninth century)
Kitab Aqlam Al-Mutaqaddimeen, MS 10244, Al-Assad Library (formerly Al-Ẓahiriyah), Damascus.

• Dhu Al-Nun Al-Miṣri (first half of the ninth century)
Kitab Ḥall Al-Rumuz wa Bar' Al-Asqam fi Kashf ᶜUlum Uṣul Lughat Al-Aqlam, MS Muallim Cevdet K 290, Ataturk Kitapligi, Istanbul.

• Ibn Waḥshiyah (ninth/tenth century?)
Kitab Shauq Al-Mustaham fi Maʿrifat Rumuz Al-Aqlam, MS Arabe 6805, Bibliothèque Nationale, Paris.

• Muhammad Ibn Umail (tenth century)
Sharḥ Al-Ṣiwar wa Al-Ashkal, MS Arabe 2609, Bibliothèque Nationale, Paris.

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Figure 1. Egyptian hieroglyphs/symbols inspired tool designs in medieval Arabic alchemy, as shown in Abu Al-Qasim Al-ᶜIraqi's *Kitab Al-Aqalim Al-Sabʿah*, Add. MS 25724, British Library, London, fol. 11a.

Figure 2. Use of hieroglyphs ***nb, Mɜᶜt,*** and ***Rᶜ***, and perhaps ***tɜwy***, in Mamluk emblems. These would have denoted the epithets "Lord of Justice," "the Sun," and perhaps "Lord of the Two Lands." After Mayer (1933: 30). (By permission of Oxford University Press.)

Figure 3. The Coptic alphabet with its phonetic values in Arabic and order correctly identified. Dhu Al-Nun Al-Miṣri (*Ḥall*, MS Muallim Cevdet K 290, Ataturk Kitapligi, Istanbul, fol. 12).

Figure 4. Egyptian alphabet according to Ibn Waḥshiyah (*Shauq*, MS Arabe 6805, fol. 92b at right and fol. 93a at left). (Courtesy Bibliothèque Nationale, Paris.)

Figure 5. Ibn Waḥshiyah, *Shauq*, fol. 93b at right and 94a at left. (Courtesy Bibliothèque Nationale, Paris.)

Figure 6. Ibn Waḥshiyah, *Shauq*, fol. 94b at right. (Courtesy Bibliothèque Nationale, Paris.)

Figure 7. Ibn Waḥshiyah, *Shauq*, fol. 56a at left. (Courtesy Bibliothèque Nationale, Paris.)

Figure 8. Ibn Waḥshiyah, *Shauq*, fol. 56b at right. (Courtesy Bibliothèque Nationale, Paris.)

Figure 9. Hieroglyphic signs with their phonetic values in Abu Al-Qasim Al-ᶜIraqi's *Al-Aqalim*, fol. 21b.

Figure 10. Hieroglyphic signs with their phonetic values in Abu Al-Qasim Al-ᶜIraqi's *Al-Aqalim*, fol. 22a.

Figure 11. Egyptian alphabet deciphered in Abu Al-Qasim Al-ᶜIraqi's MS Arabe 2676, fol. 18a. (Courtesy Bibliothèque Nationale, Paris.)

Figure 12. A stela of King Amenemhat II (c. 1928 – 1893 BCE) of the Twelfth Dynasty, as copied in Abu Al-Qasim Al-ᶜIraqi's *Al-Aqalim*, fol. 50a.

Figure 13. A script named after the Sufi/alchemist Jabir Ibn Ḥayyan in Dhu Al-Nun's *Ḥall*, fol. 36b. Many letters resemble Egyptian Demotic.