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The emergence of Islamic medicine

> It is a remarkable fact that, with few exceptions, most Muslim scholars both in the religious and in the intellectual sciences have been non-Arabs (*ʿajam*) ...
>
> We have mentioned before that sedentary people cultivated the crafts and that, of all peoples, the Bedouins are least familiar with them. Thus, the sciences came to belong to sedentary culture, whilst the Arabs were not familiar with them or with their cultivation.
>
> – Ibn Khaldūn (d. 1406), *Introduction [to World History]*[1]

Health and disease preoccupied man from the earliest days of his existence, and all cultures, however rudimentary, have developed means to preserve health and to restore it when absent. This universal concern for physical and mental well-being led different civilisations to develop a whole host of diverse strategies to cope with illness. The bedouin Arab population, like other peoples, were exposed to bodily harm and disease, and they, too, used different techniques for treatment. By the tenth century, Arabs in the major urban centres had developed a highly sophisticated framework of medical theory and practice, admired by friend and foe. Ideas about maintaining health and avoiding or curing disease that existed in the deserts of pre-Islamic Arabia, however, varied greatly from those of the urban elite in the capital of the ʿAbbāsid empire, Baghdad. The story of how Islamic medicine arose from a diverse background of earlier medical traditions will be told in this chapter.

To begin, it is important to note that Islam as a religious and cultural venture was not born in a vacuum. Looking at the affinities between the Qur'ān on the one hand, and the Hebrew Bible, the Greek New Testament, and the Talmud on the other, scholars have argued that early Islam was heavily influenced by Christian and Jewish ideas; some went even so far as to state that Islam was initially little more than another Jewish sect. Be that as it may, it is clear that the Muslim holy writ appeared in a context where Arabic was the predominant language, and the poetry of the Bedouins, transmitted orally, represented the most revered form of literary expression. On the other hand, certain aspects of Greek culture pervaded even into the deserts of pre-Islamic Arabia. In the realm of medicine, a creative tension between intrinsic Arabic developments and foreign influence

was keenly felt. The emergence of Islamic medicine can only be appreciated against the background of these two trends – namely, the indigenous Arab tradition and the foreign influence. Consequently, we investigate them in turn in order to understand how Islamic civilisation was eventually able to develop such an impressive system of healthcare.[2]

Bedouin medicine

> Many a wailing woman have I sent away, when the star Belletrix rose,
> who wailed, whilst examining the wound so that her palm and wrist disappeared [in the wound],
> [the wound] of a man, whose head is bent and whose wounds exhaled blood,
> [a woman] who separated his joints with a probe as the comb separates the hair hanging down.
> – al-Burayq ibn 'Iyād (*fl.* c. 600–30)[3]

> Civilized Bedouins have a kind of medicine which is mainly based upon individual experience [*tajribah qaṣīrah*]. They inherit its use from the old men and women of the tribe. Some of it may occasionally be correct, yet it is neither based upon any natural law [*qānūn ṭabī'ī*] nor is it consistent with the temperament [*mizāj*]. Much of this sort of medicine existed among the Arabs [Bedouins].
> – Ibn Khaldūn (d. 1406), *Introduction* [*to World History*][4]

In this second extract, Ibn Khaldūn – the greatest Arab historian, who created a philosophy of history foreshadowing modern sociology and political theory – contrasts Bedouin medicine based on individual experience with the learned medical tradition, in which 'natural law' and the 'temperament' were of the utmost importance. In his day, the two existed side by side in a certain creative tension, as we will see later. Yet, this was not always the case on the Arabian peninsula, and in the present section, the medical ideas and provisions of pre-Islamic and early Islamic times will be explored, since they formed the central background against which the Islamic medical tradition emerged.

There are five main sources for our knowledge of how the Arabs lived in pre-Islamic times: archaeological remains, inscriptions, Islamic religious texts such as the Qur'ān and *ḥadīth*s (sayings attributed to the Prophet and collected by later authors), historical accounts, and Arabic poetry. All these sources have their limitations. Such archaeological remains as have been uncovered tell us little about attitudes towards health and disease, and the inscriptions are equally silent. The Qur'ān says nothing about medical practice. The *ḥadīth*s do contain information about how Muḥammad (d. 632) treated certain illnesses and what he advised. They later gave rise to a medical genre, the so-called 'Medicine of the Prophet (*ṭibb al-nabī*)' or 'Prophetic Medicine (*al-ṭibb al-nabawī*)'. *Ḥadīth*s, however, pose a major problem in source criticism. Medieval Muslim scholars such as al-Bukhārī (d. 860) distinguished between genuine traditions, called

'sound' (*ṣaḥīḥ*), and others. The traditions collected in the books of Prophetic Medicine were not all considered genuine by medieval religious scholars. But even when they were, some 'sound' *ḥadīth*s were later shown to be of highly questionable origin, with many being thought not to go back to the Prophet.[5]

Arabic-language histories and chronicles for this period date from the eighth century onwards, but they also have come under the scrutiny of historical source criticism and been found wanting. Scholars have therefore supplemented their resources by turning to historical writings of Byzantine Greek, Syriac or Armenian authors, although they, too, do not necessarily convey an accurate picture of pre-Islamic Arabia. What is more, none of these historiographic works contains an account of medical practices for this time period.[6]

Because of these methodological difficulties, poetry remains the major avenue through which we can learn about the Arabs' attitudes to body and soul in pre-Islamic and early Islamic times, and observe what means they had at their disposal to treat illness and injury. The passage from the ode quoted above by the poet al-Burayq, who lived in the early seventh century, has two salient features. Firstly, in the scene painted by the poet, it is a woman who treats the wounded warrior, even if her actions are portrayed as the ultimate act of desperation in the face of horrendous wounds. There are many instances where women appear as carers in early Arabic poetry, so that this depiction blends in well with the general image of women being responsible for curing. In other pre-Islamic odes, female practitioners are referred to as physicians (*ṭabā'ib*, singular *ṭabībah*; *awāsin/āsiyah*), soothsayers (*kawāhin/kāhinah*), and sick-nurses (*'awā'id/'ā'idah*).[7]

Secondly, the fourth line of the poem highlights the Greek influence present even in the desert of Arabia. For the probe used to straighten the injured limbs is called *mīl*, a loan-word derived from Greek *mēlē*, also meaning 'probe'. That Greek words and concepts are found in Arabic poetry is not all that surprising, for, over many centuries, the Byzantine empire and the Arabs shared borders, and were, at various times, in both hostile and friendly contact with each other. Some Arabs, such as the Ghassānids, a Christian tribe, even joined forces with Byzantium in their struggle against the Sasanians (about whom more shortly). As a result, there is much evidence for intense cultural exchange even at this early stage.[8]

The war wounds described in this poem were not the only medical problems with which the desert-dwelling Arabs were faced. A great number of terms found in early Arabic poetry signify a variety of illnesses. Some were later used in the medical literature to denote specific diseases such as *zukām* (a cold), *su'āl* (cough), *khunāq* (constriction of throat and inability to breathe) and *kalab* (rabies). Others were rather vague and undefined, never making it into the technical vocabulary of later physicians; the latter include *qudād* (grumbling stomach) and *'araj* (lameness). Other frequently mentioned complaints included

ophthalmia (eye inflammation, *ramad*) and fevers (*ḥummá*). The latter were often interpreted in terms of supernatural causation as is apparent from a learned explanation, a so-called scholion, to a verse by the poet al-Akhnas Shihāb al-Taghlibī. According to this scholion, people in the oasis of Khaybar brayed liked donkeys ten times before entering the area infested by a violent fever. They did this in order to deceive the *jinn*, who they believed inflicted the fever only upon humans: as donkeys, they could escape the scourge. In addition to such apotropaic measures, cupping, cautery, and simple remedies such as camel urine reduced through boiling were employed. Many of these folk remedies reoccur in the later manuals of Prophetic Medicine.[9]

Greek medicine

Ibn Khaldūn contrasted these rather basic procedures of the Bedouins with a medicine guided by 'natural law' (or 'the law of nature') and in accordance with 'temperament'. These two terms refer to concepts which the Greeks had developed and which were later adopted by both the European and the Islamic medical traditions. One cannot appreciate the development of medical theory and practice in the Islamic medieval period without understanding its Greek antecedents.

When mentioning the 'temperament', Ibn Khaldūn alluded to the idea that the human body is made up of four humours (or 'juices') which are in a state of relative balance, resulting in health, or imbalance, resulting in illness. This idea – known in modern scholarship as 'humoral pathology' and to be described in greater detail in the next chapter – was first developed in the Hippocratic treatise *On the Nature of Man*. This text is part of the so-called *Hippocratic Corpus*, a collection of writings attributed to Hippocrates of Cos (mid-fifth century BC), the 'father of medicine' in the view of both Europe and the medieval Islamic world. In Hippocrates' time as well as in the centuries to follow, there was a great plurality of approaches to medicine. This is especially apparent from the writings of the most important Greek physician, Galen of Pergamon (d. c. 216), who was born in 129 in Asia Minor, modern Turkey. He argued against different rivalling medical 'sects' or schools such as the rationalists, favouring the use of reason and analogy (Greek *logos*, Arabic *qiyās*); the empiricists, advocating that experience (*empeiria*, *tajribah*) ought to take centre stage in medical investigations; and the methodists, followers of a specific method (*methodos*, *ḥīlah*) (not to be confused with the modern protestant movement founded by John Wesley in the eighteenth century).

Galen's own approach was characterised by a strong eclecticism. He did not believe that any of these sects held the key to correct medical practice. On the other hand, Galen was responsible for establishing Hippocrates as *the* medical

the Chinese idea of *qì* and Greek *pneuma* (spirit); or between the Persian idea of a fire of life and Greek 'innate heat' (*emphuton thermon*), an energy source powering the vital functions of the body. It is important, however, to resist the temptation to explain the other medical systems in terms of Greek theory.[28]

Other earlier medical traditions which had flourished in the territories later to be conquered by Islam are the Egyptian, Mesopotamian, and Ancient Iranian ones. Because certain concepts or drugs filtered through to the Islamic world, often via numerous intermediaries, it might seem that they deserve fuller discussion here. Their impact in the realm of medicine, however, was very limited, and this may partially be explained by the fact that they placed emphasis on surgery and medication, whilst the Greek tradition favoured diet and regimen.

The immediate environment into which Islam erupted is the world of Late Antiquity where Greek thought pervaded not only Alexandria and other traditional strongholds of Hellenism, but also the Persian- and Syriac-speaking lands. When conquering peoples of different cultures and creeds, Islam adopted and adapted the scientific and medical heritage of those who came under its sway. Moreover, the structural parallels of humours and balances between the Greek medical tradition and those of India and China facilitated the process of integrating some of their drug lore into the system of humoral pathology. A translation movement of unprecedented scale, which put the Islamic medical tradition firmly on the map, largely fuelled this process of transferring medical knowledge.

Transformation through translation

> The Works of the Indians are rendered [into Arabic], the wisdom of the Greeks is translated, and the literature of the Persians has been transferred [to us Arabs]. As a result, some works have increased in beauty, while others have remained virtually unchanged. If one were to transpose the wisdom of the Arabs [into another tongue], however, then the wonderful splendour of the metre would be lost, and those attempting to do so would not comprehend the meaning. For this reason, non-Arabs do not mention it [Arabic poetry] in their works, which they [the non-Arabs] composed for their livelihood, intelligence and wisdom. These [foreign] books were transmitted from nation to nation, from century to century, and from language to language, until they ended up in our possession. We are the last to inherit and study them. It is true that these books are more successful in recording the achievements [of past generations] than monuments and poetry.
> – al-Jāḥiẓ, *The Book of Animals*[29]

Translation was fundamental to the formation of the Islamic medical tradition, and, more generally, has played a pivotal role in the fate of many a nation throughout history from the earliest times until today. For instance, when the Assyrians defeated the Sumerians, the former translated the works of the latter

to forge their own literary tradition, which, in turn, had an impact on the nascent Greek literature. The story of Gilgamesh first told in Sumerian texts and then rendered into Akkadian, indirectly inspired Homer's *Odyssey*. Not only was the literature of Ancient Greece influenced by 'eastern' models, but the Greek medical tradition was as well. Recent research has shown that Hippocratic concepts of epilepsy have their precursors in Babylonian medical texts. Greek medical theory and practice were later also adopted and adapted by the Romans from the late third century BC onwards, even if some proud inhabitants of the eternal city such as Cato the Elder (d. 149 BC) deplored what they perceived as foreign and pernicious influence. He called Greek doctors 'butchers' and advised his fellow countrymen to stick to Roman virtues such as exercise and frugality, rather than the complicated medical tradition of these 'charlatans'. Greek medical ideas were again transmitted by translation to others, such as speakers of Persian and Syriac, who, in their turn, transformed and altered them according to their own needs. The importance of these translations, however, pales in comparison with what happened in ninth-century Baghdad, where virtually all the Greek medical texts then available were rendered into Arabic.[30]

The Graeco-Arabic translation movement

Islamic medicine is largely a continuation and further development of the Greek medical tradition. So great was the influence of Greek medicine that it had an impact not only on the learned medicine found in works by such famous authors as al-Rāzī (Rasis, d. 925) and Ibn Sīnā (Avicenna, d. 1037), but also, to a lesser extent, on treatises about Prophetic Medicine. For this reason, the formative period of Islamic medicine is the time of translation, when the medical concepts which were to govern Islamic medical thought were first expressed in Arabic.

There are some legendary reports about translations from Greek into Arabic being produced in Damascus during the reign of the first Islamic dynasty, the Umayyads (661–750). It was said, for example, that prince Khālid ibn al-Yazīd (d. 704) commissioned the translation of Greek medical and alchemical works, but, for the most part, such accounts lack any historical foundation. In general we know precious little about medical literary activity – let alone medical practice – during the Umayyad period.[31]

The first powerful patron systematically to have sponsored Graeco-Arabic translations appears to have been al-Manṣūr (r. 754–75), the second ʿAbbāsid caliph. This occurred after the ʿAbbāsid dynasty had moved the centre of power from Damascus (a thoroughly Hellenised city) to newly established Baghdad. Reportedly, al-Manṣūr asked Jurjīs ibn Jibrīl ibn Bukhtīsūʿ (d. 768) and al-Biṭrīq, both Nestorian Christians, to translate a number of medical works. While no translation which can securely be attributed to the former has come down to us,

we are in the fortunate position to possess some Arabic versions by the latter. They represent the earliest stage of Graeco-Arabic translation activity. This translation movement received its major impetus, however, during the reigns of renowned caliphs such as Hārūn al-Rashīd (r. 786–809), al-Amīn (r. 809–813), and al-Ma'mūn (r. 813–33). They and their heirs extended patronage to physicians able to translate Greek medical works, the most illustrious examples being Yuḥannā ibn Māsawayh (d. c. 857) and his precocious pupil Ḥunayn ibn Isḥāq (d. c. 873). The latter ultimately surpassed his master both as translator and as a medical author in his own right.

We are extremely well informed about Ḥunayn Ibn Isḥāq's activity as a translator. He wrote an epistle (*risālah*) in which he gave a detailed report of all the Galenic works (some 129 in total) which he and his collaborators translated into Syriac and Arabic. Among the latter, we find his son Isḥāq ibn Ḥunayn (d. 910) and his nephew Ḥubaysh ibn al-A'sam (*fl.* c. 860). Ḥunayn described the practicalities of translation in a number of entries, the one about the *Method of Healing* lending itself particularly well to illustrating a number of points:

> Galen's *Book on the Method of Healing* [*Therapeutikē methodos*, consisting of 15 books]: ... [1] The first six books of this work were translated into Syriac by Sergius [of Rēsh 'Aynā] when he was still a very weak translator. After he had acquired experience as a translator, he translated the remaining eight books and produced a better translation than that of the earlier books ...
>
> [2] A few years later I translated the work from the beginning for Bukhtīshū' ibn Jibrīl. [3] For the last eight books, a number of Greek manuscripts were at my disposal. These I collated and produced a single correct copy from them, which I then translated with the utmost accuracy (*istiqṣā'*) and in the best style (*balāghah*) I was able to master. [4] For the first six books only a single manuscript, and moreover a very faulty one, was at my disposal at the time. I was therefore unable to produce these books in the manner required. [5] Later I came across another manuscript and collated the text with it and corrected it as much as possible. It would be better if I could collate a third manuscript with it, if only I were fortunate enough to find one. [6] For Greek manuscripts of this work are rare, since it does not belong to the works that were read in the school (*kuttāb*) of Alexandria.
>
> [7] From the Syriac manuscripts of my translation Ḥubaysh ibn al-Ḥasan translated this work for Muḥammad ibn Mūsá. [8] Then, after he had translated the work, he asked me to go through the last eight books critically for him and correct possible mistakes, and I did this for him successfully.[32]

This short account shows a number of salient features of Ḥunayn's activity: he often translated into Syriac first, not into Arabic directly, although he sometimes also did the latter. He consulted previous translations, insofar as they existed [1]. In this instance, there is one by Sergius of Rēsh 'Aynā, whom we have encountered earlier. Ḥunayn's work was commissioned by prominent patrons: he prepared the Syriac version for a member of the Bukhtīshū' family

originally from Gondēshāpūr [2]. Bukhtīshūʿ ibn Jibrīl (d. 870), referred to here, was the personal physician of three caliphs: al-Ma'mūn and his successors al-Wāthiq (r. 842–7) and al-Mutawakkil (r. 847–61). The Arabic translation, on the other hand, was ordered by one of the Banū Mūsá, three sons of the infamous highwayman turned plutocrat Mūsá ibn Shākir [3]. Their father Mūsá, who had close connections to the caliph al-Ma'mūn, gave his sons an impeccable education, so that they became proficient in subjects such as medicine, mathematics, mechanics and astronomy. The most famous of the three sons was Muḥammad, mentioned here, some of whose works on scientific subjects are still extant today. Both Bukhtīshūʿ ibn Jibrīl and Muḥammad ibn Mūsá were intimately linked to the caliphal palace, which eagerly sponsored Graeco-Arabic translation activity.[33]

The question arises, however, why the ʿAbbāsid elite would want to fund Nestorian Christians to translate Greek texts into Arabic, or, to put it differently, what their political agenda was in doing so. The causes for this phenomenon, as for most momentous historical events, are multiple. Unlike the Umayyads in Damascus, the ʿAbbāsids were a dynasty which did not hail from Arab stock, but came from the Persian East. As such, they had an interest in promoting a cultural policy which went beyond the restricted remit of pure Arab heritage to forge a more cosmopolitan identity. Another factor was their wish to portray themselves in some way as successors to the Sasanians, whose medical system, as we have seen, was already influenced by Greek ideas. Moreover, the Nestorian milieu in Mesopotamia – especially in the newly founded capital of Baghdad, the 'City of Peace (*Madinat al-Salām*)', as it was then called – was itself heavily Hellenised, and this also helped increase the interest in Greek learning. The Greek medical system in the form of humoral pathology had already penetrated and influenced many other cultures. Finally, there was the attraction for elite scholars of the day to Greek thought in its own right. For all these various reasons, it is not surprising that the ʿAbbāsids came under its spell as well.

Apart from the importance of patronage, the extract from Ḥunayn's epistle makes manifest two significant features of his translation method: philological acumen and stylistic accuracy [3]–[5]. Ḥunayn states that for part of the work he had only one Greek manuscript at his disposal, which rendered his task more difficult. When he later got hold of a second one, he collated it with the first in order to emend the text – that is to say, he compared the two in order to arrive at the correct reading. He even remarks that he would have preferred to have a third one, in order to improve it further. This technique of collation and emendation is essentially the same used by scholars today, and Ḥunayn had already adopted it over a millennium ago.

Ḥunayn was, however, not only concerned with questions of textual criticism and philological accuracy, but also with style. As he himself states at the end

of [3], he prepared the Syriac translation 'in the best style I was able to master'. Likewise, when working on Arabic versions, he strove to be idiomatic rather than following his source too closely. In an oft-quoted passage, the fourteenth-century historian al-Ṣafadī (d. 1363) put his appreciation of Ḥunayn's translation technique thus:

> The translators use two methods of translation. One of them is that of Yuḥannā ibn al-Biṭrīq, Ibn al-Nā'imah al-Ḥimṣī and others. According to this method, the translator studies each individual Greek word and its meaning, chooses an Arabic word of corresponding meaning and uses it. Then he turns to the next word and proceeds in the same manner until in the end he has rendered into Arabic the text he wishes to translate. This method is bad [...]
>
> The second method is that of Ḥunayn ibn Isḥāq, al-Jawharī and others. Here the translator considers a whole sentence, ascertains its full meaning and then expresses it in Arabic with a sentence identical in meaning, without concern for the correspondence of individual words. This method is superior, and hence there is no need to improve the works of Ḥunayn ibn Isḥāq.[34]

These two methods are sometimes also called *verbum de verbo* (word for word) and *sensum de sensu* (meaning for meaning) after a well-known expression by Cicero, the famous Roman statesman, orator, and philosopher (d. 43 BC). Although this characterisation is not entirely true, as can be seen from the extant Arabic versions by these translators, yet it is still the case that Ḥunayn surpasses his colleagues and competitors not only in philological accuracy but also in style.[35]

To return to Ḥunayn's account of the translation of Galen's *Method of Healing*, it is Ḥubaysh ibn al-Ḥasan called al-A'sam ('having withered limbs'), the nephew and pupil of Ḥunayn, who translates the text from Syriac into Arabic in the first place [7]. Ḥunayn later corrects and improves this Arabic, presumably by comparing it to the Greek source [8]. In general, the picture which emerges from the entry on the *Method of Healing* in Ḥunayn's epistle is confirmed by the other entries and can be summarised as follows. Quite a number of people participated in the translation of Galen's compostions into Syriac and Arabic. Patrons of these translations were part of the Christian and Muslim elite of the time and belonged to, or had ties with, the 'Abbāsid ruling class. They paid handsomely for the privilege to be able to read the works in question. Most of the translators working with Ḥunayn ibn Isḥāq were Nestorian Christians, and although they sometimes drew on previous work, they generally produced new Syriac and Arabic translations.

Common misconceptions about the translation movement

Three misconceptions regarding the translation movement have arisen in scholarly and popular literature. The first concerns the factors which motivated

the translation process. Raymond Le Coz has claimed that, in essence, Nestorian physicians such as Ḥunayn ibn Isḥāq instigated the translation movement and taught the Greek sciences, and especially medicine, to the Arabs. Dimitri Gutas, on the other hand, has amply demonstrated that the translation movement was the result of intense patronage by ʿAbbāsid rulers who became increasingly interested in Greek science, medicine, philosophy, and astronomy for reasons discussed above. Although some Syriac-speaking Christians in pre-Islamic times, such as Sergius of Rēsh ʿAynā, had translated certain Greek medical texts into Syriac, the vast majority of Graeco-Syriac translation activity took place under the aegis of the ʿAbbāsids. Surely, Nestorian Christians played a crucial role in the transmission of medical knowledge from the Greeks to the Arabs. To call them 'masters of the Arabs', however, as Le Coz does, overlooks the historical and intellectual forces at work in ninth-century Baghdad, where the ruling elite and their entourage set not only the political, but also the cultural and scientific, agenda.[36]

The second misconception regards the selection of texts to be translated, allegedly made primarily for reasons of taste, interest, or inclination. Bernard Lewis has claimed that they were deliberately chosen for their usefulness, and that Muslims had no interest in Greek literature, poetry or drama, saying:

> This was clearly a cultural rejection: you take what is useful from the infidel; but you don't need to look at his absurd ideas or to try and understand his inferior literature, or to study his meaningless history.[37]

The reality was quite different. As Ḥunayn himself stated, the availability of Greek manuscripts (and hence Greek texts) depended on whether or not they were read in the 'School of Alexandria' (see [6] in the previous section). It is true that some Muslim authors such as al-Jāḥiẓ, quoted above on p. 23, believed that it is impossible or extremely difficult to translate poetry, because metre and diction cannot be transferred adequately. This did not, however, stop many Muslim authors, including al-Jāḥiẓ, from taking a keen interest in Greek history and legend, or even Greek poetry.[38]

The availability of Greek poetry in Arabic translation depended heavily on the fads and fashions of Late Antiquity. A good example is Greek drama. By the time of the Arab conquest in the mid-seventh century, the classics of tragedy and comedy were no longer performed. Instead, the more popular genre of the pantomime, in which a sole actor entertained the audience through dance, song, and monologue, found favour with the audience. No wonder, then, that the Arabs turned to Sophocles (d. c. 406 BC) and Aristophanes (d. c. 386 BC) only during their modern Renaissance (c. 1870–1950), and did not translate them in ninth-century Baghdad. Likewise, the most prominent exponent of the New Comedy, Menander (342–291 BC), had long ceased to be put on stage. Certain memorable one-liners (*monostichoi*) from his plays, however, enjoyed the favour

of the public and were copied, as the papyrus record shows, and these *monostichoi* circulated in different Arabic collections.[39]

Another extremely well-liked text in Late Antiquity was the so-called *Alexander Romance*, an account of the great conqueror's exploits, in which fact and fiction were intimately intertwined. Its reception in the Arabic world ranges from the Qur'ān (18:82–98) to longwinded narratives. Moreover, there is much Arabic historical writing which explores the ancient Greek past as well as contemporaneous Byzantium. There can therefore be no doubt that most members of the Muslim intelligentsia would not consider Greek ideas absurd or Greek history meaningless, as Lewis polemically put it. Rather, to cite Franz Rosenthal, 'the fundamental importance of the ancient Greeks and their intellectual achievements for the formation of Islamic civilisation was fully realised among Muslims'. The choice of what to translate was determined by the availability of texts as well as the taste and tendencies in Late Antiquity, and not by some innate philistinism.[40]

The third and most prevalent misconception or 'myth' about the translation movement is that it took place in a famous House of Wisdom (*Bayt al-Ḥikmah*). This 'House of Wisdom', it is said, was a translation academy with a library, founded by Hārūn al-Rashīd's successor, al-Ma'mūn, where Ḥunayn and his colleagues carried out their tasks. Reliable evidence for this legend, however, is virtually non-existent. Dimitri Gutas, who has recently reviewed the available sources, concludes that if such a 'House of Wisdom' ever existed, it is best explained as a library where translations from Persian into Arabic were stored. In any case, it was completely unrelated to the Graeco-Arabic translation movement of the ninth century.[41]

Graeco-Arabic translation techniques

Ever since Max Simon in 1905 published those parts of the Arabic translation of Galen's *Anatomical Procedures* which were lost in Greek, academics have endeavoured to describe by what means and through what mechanisms Greek words, expressions and phrases were rendered into Arabic. Generally speaking, with time, scholars have grown less and less confident that they have found specific linguistic criteria which would allow them to identify individual translators. There is, however, a notable exception, afforded to us in a recent study by Manfred Ullmann. Because of a curious quirk of fate, two different Arabic versions of book six of Galen's *On the Powers of Simple Drugs* have come down to us: the older by al-Biṭrīq or his son Ibn al-Biṭrīq (version **A**), and the younger produced by Ḥunayn towards the end of his life, in the 870s (version **B**). These two versions represent respectively the initial and the mature stage of Graeco-Arabic translations, since al-Biṭrīq was one of the first to render Greek medical texts into Arabic, whilst Ḥunayn brought this activity to an impressive level