

The Development of Galenico-Islamic Medicine: Assimilation of Greek Sciences into Islam



Doctor and his patient; painted by Hossein Sheikh

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Introduction

Paradoxically, what is called “Islamic medicine” is not based on the Koran or Islamic religion. Its theoretical or conceptual foundations are rather Greek. The term “Islamic medicine” was never used during the medieval period in the Islamic countries. Except for specific literatures on religious healing or the books of Medicine of the Prophet, the *Tebb al-Nabi*, or the *Tebb al-a’emma* (medicine of the Imams) which are rather traditions (*sunnah*) of the Prophet and the Shiites Imams, there are no titles of medical treatises written by the Islamic scholars that bear indication of Islam or religion. For example, the major books of Râzi (10th century) were the *Kitab al-Mansuri*, dedicated to Caliph al-Mansur, or the *al-Hâwi* (Comprehensive, or Continent). The book of Majusi, (10th-11th century) was called *Kâmel al-Senâ’a* (perfect Art) or *Tebb al Maleki* (Royal Medicine). Avicenna’s master work was the Canon, and the first classical medical treatise written in Persian was the *Zakhira* (treasure) of Khawrazmi (13th century). And this was the same throughout the following centuries up to the present time.

The embryo of what is called Islamic medicine was forged by a number of scholars who were either Christian, or Jewish. By the time when the Islamic scholars like Razi, Avicenna or Zahrawi wrote their books, almost all medical literature these physicians used in their work had already been translated into Arabic by non-Moslems, most of them Christians or Jewish such as Hunayn b. Ishaq (809-73), Sâbt b. Qurra (born: 835), Shapur b. Sahl (d. 869), the Bokhtishu’ family who provided physicians to the Omayyad and Abbasid Caliphs for several centuries. ^❶

The term “Islamic medicine” was first coined by Western historians principally because of the input of the Islamic scholars in the development of Galenic medicine translated into Arabic. Although the theoretical foundation of this medicine was Galenic and the translation of Galen’s works, the Islamic physicians distinguished themselves by their own understanding of humoral theories in pathology and treatment. For example while in the

❶ See Lucien Leclerc, *Histoire de la médecine arabe; exposé complet des traductions du Grec, les sciences en Orient, leur transmission à l’Occident par les traductions latines*, 2 vols (Paris: E. Leroux, 1876). See also articles of Max Mayerhof, edited by Penelope Johnstone, *Studies in medieval Arabic medicine: theory and practice* (London: Variorum Reprints, 1984).

West the Christian physicians treated a patient of warm temperament by prescribing hot medicaments, the Islamic physicians proposed for such a patient cold medicine in order to restore the balance.^② The term “Islamic medicine” can also be explained by the fact that the Western historians dealing with Islamic countries tend to identify all aspects of these societies by their religion without taking into account socio-political, cultural, linguistic and anthropological differences between them.

The term “Islamic” medicine has also been used by historians of Islamic faith for the same reasons. For example, although in the Indian subcontinent Islam is not the dominant religion, the identification of *Unâni* medicine to Islam is apparent in various historiographical works.^③ During the independence, the link between what the Indian hakims called *Unâni tebb* (Greek medicine) and Islam was emphasized seemingly in an attempt to confirm the identity of their medicine against what they called Western or colonial medicine. The Islamic or religious overtone of Galenic medicine is also illustrated in the term *tebb-e sonnati* (traditional medicine) in Iran. When Khomeyni, the founder of the Islamic regime in Iran, took power he advocated the revival of traditional medicine that, according to him, had been abandoned due to Western influence. In other words, the revival of “traditional medicine” was associated with the revival of Islamic values and culture. It is worth mentioning that while by the end of the 19th century in the West, modern medicine was identified with microbiology,^④ in contemporary Iran the term modern was attributed to be any kind of medical knowledge introduced from Europe regardless of their conceptual or epistemological differentiation. The fact that the theoretical foundation of what Khomeyni called “traditional medicine” was humoral and based on Greek medicine, indicates the extent to which Greek medicine was assimilated by Islam. The purpose of this paper is to examine this assimilation through two processes of the creation of Islamic power and the elaboration of Islamic theology and cosmology.

② See online article “Contributions of Muslims to the Field of Medicine” p. 181, in <http://www.cie.org>

③ See for example Sami Khalaf Hamarneh, *Background of Yunani (Unani), Arabic and Islamic Medicine and Pharmacy*, edited by Hakim Mohammad Said (Karachi: MAS Printers, 1997).

④ Anne-Marie Moulin, “Le dialogue médical franco-persan qu XIXe siècle” in Pourjavadi et Z Vesel (eds.), *Sciences, techniques et instruments dans le monde iranien (Xe-XIXe siècle)* (Tehran: iFRi and Tehran University Press, 2004), pp. 305-329, p. 305.

Formation of the Islamic State

The development of what is called “Islamic sciences” was closely linked to the establishment of a central state in Islam. The Umayyad established their state in Damascus in the mid-seventh century by adopting elements of Byzantine and Sasanid administrative systems. As the Umayyad and the Abbasid caliphs needed the expertise and know-how of the elites of the conquered countries, they developed the court patronage and sponsored men of sciences of all creeds, Arab and non-Arab alike, most of whom were naturally non-Moslem or recently converted to Islam, such as Ibn Moqaffa‘ (died ca. 756) and Barmak (ca. 685-725), both of them Zoroastrian converts. ⁵

Although the court patronage was not a new phenomenon, it was developed significantly due to the needs of the nascent Islamic empire. It was this patronage aimed at strengthening the caliphate that eventually helped non-Islamic sciences to be systematically translated and integrated into Arabic literature and, in the long run, created what is called “Islamic sciences”. This was mainly because the reinforcement of the central power went through the acquisition of sciences and techniques. Dimitri Gutas explained how the Sasanians appropriated Greek sciences and attributed them to the Good God, Ahuramazda (or Ohrmazd). Examining three Zoroastrian sources, Gutas describes the Zoroastrian account of the transmission of sciences as follows:

Zoroaster received from Ohrmazd, the Good God the texts of the Avesta, which include all knowledge. The destruction wrought upon Persia by Alexander the Great, however, caused these texts to be dispersed throughout the world. The Greeks and the Egyptians derived their knowledge from these Zoroastrian texts which Alexander had translated into Greek and Copic. Subsequently Sasanian emperors took it upon themselves to collect all these texts and the knowledge that was derived from them from various places where they had been scattered: India, Byzantium and China. ⁶

⁵ About the role of these men in the administrative reforms under the Abbasids, see Muhammad Qasim Zaman, *Religion and Politics under the Early ‘Abbasids: The Emergence of the Proto-Sunni Elite* (Leiden, New York, Koln: Brill, 1997), cf especially Ch. 3. On Ebn Moqaffa‘ and a translation of his book to Caliph al-Ma‘mun for the state and religious reform, see Charles Pellat, *Ibn al Muqaffa‘: «conseiller» du calife* (Paris: Maisonneuve et Larose, 1976).

⁶ Dimitri Gutas, *Greek Thought, Arabic Culture*, pp. 40-41.

According to Gutas this happened through a process that he termed the formation of the “Zoroastrian Imperial ideology”. The elaboration of the “imperial ideology” necessitated the translation of scientific texts, such as medicine, astronomy and philosophy, from around the world and their collection in a royal library that was called the “house of wisdom”. This author maintained that this appropriation made through translation created a “culture of translation” that in turn was transmitted to the Abbasid caliphate when the caliphs borrowed the Sasanid “imperial ideology” along with its administrative system. The culture of translation was thus at the origin of the translation of Greek sciences into Arabic.

The “appropriation of knowledge” was not, however, exclusive to Zoroastrianism but can be seen in other religions and cultures as well. According to Islamic religion, all human knowledge belongs to God and therefore sciences are the manifestation of divine wisdom. They exist on the divine Table, *lowh-e mahfuz* (lit. conserved table), before coming to the minds of men of science, whether Moslem or not. Astarâbâdi, a cleric-doctor in nineteenth-century Iran admonished the modern-educated doctors in the following terms: “You do not appreciate the merit of your medicine [i.e. traditional medicine]. Observe the history of the *Haramân* dome. ⁷ This [medical] knowledge is the heritage of the Prophet Idris and all other prophets used it until the last Prophet Mohammad, who perfected it. The *Tebb al-Nabi* (medicine of the Prophet), the *Tebb al-Rezâ* (medicine of Imam Rezâ) and the *Tebb al-A’emma* (medicine of the Imams), are all available and in fact the source of physicians such as Avicenna were the right Traditions of the Prophets ...”. ⁸ In another case, Ibn Rizwân al-Misri (from Cairo) (died ca. 1067), the eminent physician under the Fatimid in Egypt, claimed that it was Egyptian medicine that was carried to the Greeks. In other words, the Greek authors, such as Hippocrates, Plato, Aristotle, and Theophrastos, who were praised by the Arabs were in fact the bearers of Egyptian (Arab) knowledge. ⁹ As a human phenomenon science and knowledge necessarily become a common heritage. The negative

⁷ Heramân or Haramân, (two domes) refer to two of the pyramids in Egypt that are said to have been built by the Prophet Idris (from Egypt), or according to some, to Hermes, the Greek, in order to protect sciences from deluge, tornado or storm. See Dehkhodâ, *Loghatnâme*, vol. I, pp. 1571-1573 and vol. XV, p. 23540.

⁸ Astarâbâdi, Safineh-ye Nuh, Quoted by: Hormoz E... Religion and Medicine in Qajar Iran, p. 419.

⁹ Sami Khalaf Hamarneh, *Background of Yunani (Unani), Arabic and Islamic Medicine and Pharmacy*, edited by Hakim Mohammad Said (Karachi: MAS Printers, 1997), pp. 135, 137.

connotation of the term appropriation should not conceal the more important fact that the appropriation of knowledge indicates the approval of that knowledge. Acquisition of sciences has always been made through various discursive strategies.

As far as the Sasanians are concerned, the construction of “imperial ideology”, however, was by no means the goal in itself but an instrument for reinforcing and consolidating the central state. The mere translation of scientific texts and syllabus for practical or educational as well as ideological reasons existed also out of Sasanian Iran. From the fifth century, the Nestorians and Jacobite scholars, who were not under the Sasanian sovereignty, translated Greek writings into Syriac; but this did not create a culture or movement of translation. Under the Sasanians, on the other hand, the house of wisdom was part of the state apparatus and it was within such a framework that the translation of scientific texts took significance and had a long-lasting effect on the transmission of knowledge.

As I have mentioned above, it is important to examine various strategies employed for the acquisition of knowledge. If Islam was going to expand beyond the Arabian desert, it needed to come in peaceful relationship or in cultural entente with the populations of other countries. Insofar as principally all non-Islamic creeds, whether monotheist or not, were refuted by Islam, the message of tolerance of the Prophet towards “the peoples of the Book”, namely, Christians, Zoroastrians and Jews, was a strategy aiming at reducing the enemies of Islam. Another *Hadith* of the Prophet enjoined the believers to “seek ... learning though it be in China” or to “seek knowledge from the cradle to the grave”.¹⁰ Such traditions obviously justified or favoured the acquisition of knowledge be it non-Islamic.

Nevertheless, “the peoples of the Book” should pay *jaziya* or poll-tax if they refused to convert. And even when they converted to Islam, they were treated as an inferior class called *mawâli*, plural of *mawlâ*, meaning client, protected, freed slave. The social segregation between Arab and non-Arab that was created in the aftermath of the early conquests gradually petered out as the conflict of interest arose among the Arabs themselves. As long as the *mawâli* (or the converts) were small in number, they dare did not stand against the Arab domination. With their number growing, however, they raised their voice against the social and racial discrimination practiced by the Umayyad. The Arab dissidents relied on

¹⁰ M.I.H. Farooqi, *Medicinal plants in the traditions of Prophet Muhammad* (Lucknow: Sidrah Publishers, 1998).

discontented *mawâli* to fight against the Umayyad's sovereignty. The resulting political alliance between the Arab dissidents and the *mawâli* provided a favourable ground for social and cultural integration and furthered the assimilation of knowledge and sciences belonging to the *mawâli*.

Formation of Islamic *shari'at*

The territorial expansion of Islam in a relatively short period between the seventh and ninth centuries was not synonymous with the establishment of the Islamic orthodoxy. The Islamic schools of law were founded in the early years of Islam after the death of the Prophet in the regions close to the birthplace of Islam, but they were far from constituting an orthodoxy not only because there was no central authority able to ensure their dominance but also because the theoretical demarcation of these new born schools had yet to be achieved. ¹¹

The primitive Islamic creed could hardly find audience in the newly conquered territories without a well elaborated corpus of law and religious authority. Although the main schools of Islamic law (Mâleki, Hanafî, Shâfe'i and Hanbali) were principally based on the Koran and the *hadith* (traditions of the Prophet), Islamic scholars also made selective use of non-Islamic sciences. Greek philosophy was of particular interest to them because it could help them to defend their faith against many Christians living in the newly conquered lands that were Hellenised. ¹² It was the need for providing Islamic *shari'at* with intellectual and philosophical consistency that led to the assimilation of non-Islamic sciences.

Aristotelian and Galenic ideas were incorporated into Islam as part of the overall formation of Islamic philosophy, illustrated in the teachings of Avicenna. The assimilation of humoral theories took place because it belonged to a worldview that for example could explain the distinction between the intellectual faculties of the soul, which transcend the body and the sensitive faculties, which are lodged in the body and disappear with death.

¹¹ On the absence of orthodoxy in Islam, see Hawting, *The First Dynasty of Islam*, p. 6.

¹² H. Floris Cohen, *The Scientific Revolution: A Historiographical Inquiry* (Chicago, London: University of Chicago Press, 1994). See also G.E. von Grunebaume, *Islam: Essays in the Nature and Growth of a Cultural Tradition* (London: Routledge, 1969); J.J. Saunders, "The Problem of Islamic Decadence", *Journal of World History* 7 (1963): 701-720.

Such a distinction borrowed from Aristotelian philosophy provided an explanatory tool for the prophecy and the separability of the soul after death, a principal element of escatology.¹³ The relationship, in philosophical as well as medical terms, between spirit, soul and body in Galenic medicine, on the one hand, and the relation between soul, knowledge and God, in existential or theological viewpoints in Islam, on the other, produced over time an intrinsic interrelation between religion and medicine in Islam as seen at different levels in both the medicine of Avicenna and the medicine of the Prophet.¹⁴ It is for this reason that in the medieval period, whether in Islam, Christianity or Judaism, but particularly in Islam, medicine and philosophy went together and usually learned physicians were also philosophers, hence the term *hakim*, that signifies both physician and philosopher.¹⁵

Moreover, the first generation of Islamic scholars were Christian, Zoroastrian or Jewish converts, and the science of their forefathers or cultural legacy informed their input in their new religion. Therefore the link between Islam and Greek sciences was both intellectually and sociologically established and conferred to these sciences a sort of legitimacy rendering them unavoidable for later scholars who, accordingly, divided sciences into two categories: *'Olum-e Avâyel* (pre-Islamic sciences, such as philosophy, mathematics, medicine, music and so forth; and *'Olum-e avâkher* (or Islamic sciences, such as *hadith*, *shari'at* or religious law and jurisprudence, commentary on Koran, etc).¹⁶ This further legitimized Greek sciences that helped to blunt contradiction and antagonism between them or even reconcile them. The involvement of non-Moslems in the formation of Islamic sciences created a sociological background underpinning cultural or conceptual reconciliation. These two bodies of knowledge were therefore taught and discussed in parallel in the Islamic schools. Medicine was one of the pre-Islamic sciences together with mathematics, astrology, music,

¹³ D. Gutas, "Intuition and Thinking: The Evolving Structure of Avicenna's Epistemology", in Robert Wisnovsky (ed.), *Aspects of Avicenna* (Princeton: Markus Wiener Publishers, 2001). For a study of the relation between surgery and Shafe'I school of Law in Islam, see Emilie Savage-Smith, "Attitudes toward dissection in medieval Islam", *Journal of the history of medicine and allied sciences*, 50.1 (1995): 67-110.

¹⁴ See preface of S.H. Nasr to Ibn Qayyim al-Jawziyya, *Medicine of the Prophet*.

¹⁵ Seyyed Hoseyn Nasr, *Science and Civilization in Islam* (Cambridge, Massachusetts: Harvard University Press, 1968), p. 184.

¹⁶ Shams al-din Mohammad b. Mahmud Âmoli, *Nafâyes al-fonûn fî 'arâyes al-'oyûn*, The precious branches of learning in the quintessential sources of knowledge, edited by Hâj Mîrzâ Abul-Hasan Sha'rânî, Library Eslâmiyeh, 3 volumes, Tehran, 1958.

and others. This also helped a non-Islamic science such as Greek medicine based on humoral physiology to be integrated institutionally into Islamic scholarship and therefore to be assimilated into, or added to, magic and religious healing. Conversely, this institutional devise helped the medicine of the Prophet and the Imams to integrate elements of humoral physiology. The result of this mutual integration was the creation of a vast literature that incorporated both religion and magic healing as well as Galenic medicine. ¹⁷

Once the Islamic community was permeated by the Islamic faith, everything was to be justified by the Hadith and by the Koran. In such a situation everything, including medical knowledge, whether it belonged to the Islamic community or not, was to be blessed or approved by the words of Koran or the Prophet and other saints. In this light, the prophetic medical instructions or precepts seemed to be rather the result of observations or experience that were made by others and collected in the book that was attributed to the Prophet, called “medicine of the Prophet”. Just as in other prophetic “traditions”, the medical instructions were narrated down to the contemporary *ommah* through several narrators who were considered the great authorities in Islamic knowledge.

For example, a *hadith* (lit. An event or experience that occurred in the life of the Prophet or an advice of the Prophet to his companions) about the utility of one of the medicinal plants, such as safran, was narrated by Zaid b. Arqam, who narrated from Tirmizi, who narrated from Ibn Maja, who narrated from Masnad Ahmad, who narrated from the Prophet. ¹⁸ It seems unlikely that the Prophet collected or systematically made these observations. The fact that some of these traditions talk about medical qualities of herbs or foods that were unknown to the contemporary community of the Prophet sustains this idea. In one tradition, for instance, the Prophet says: “rice has healing powers”. This was narrated by ‘Ayesha and Al-Soyuti. However, rice, a principal cereal of the wet regions of the tropics was not the staple food of the Arabs during the time of the Prophet. ¹⁹

¹⁷ See for example: Mirzâ Musâ Sâveji, *Dastur al-Atebbâ*, and many other tracts on cholera or plague.

¹⁸ Farooqi, *Medicinal plants*, p. 78.

¹⁹ Farooqi, p. 150.

Islam and medicine in the modern period

The intimate link between the formation of the Islamic religion and the development of sciences in Islamic countries not only led to the Islamisation of sciences and philosophy, but also to the monopoly of the religious establishment on education. Consequently, when modern sciences were introduced into Islamic countries the religious scholars were among the first who became familiar with modern medicine. As education was controlled by the religious establishment, most learned physicians in Islamic countries were religious scholars, the Mullahs. It is not surprising therefore that the Unâni medicine in the Indian subcontinent, a version of Galenico-Islamic medicine has preserved its faith in religion despite the fact that it has integrated many concepts and techniques of modern medicine, and undergone institutional and professional transformation similar to what happened in the West.²⁰ The inherent link between Galenico-Islamic medicine with religion can be illustrated in the words of the physicians of Unâni medicine who believe that traditional medicine is not only a science but also an art and many of its principles cannot be explained, while modern Western medicine is meant to be pure science.²¹ Nevertheless, as the professionalisation of medical institutions developed, religious scholars could not assume, neither theoretically nor institutionally continuity or reconciliation between Islam and modern medicine. The intimate relation between religion and medicine in Islam and the inflexibility of Islam as faith vis à vis modern sciences made it no longer possible that religious scholars pursue distinct professions in medicine or education.²²

As far as the Islamic societies in general are concerned, however, the introduction of both medieval Greek medicine and modern Western medicine into Islamic countries was conditioned by socio-cultural and political factors. The state patronage played a fundamental role in their promotion and development. However, with regard to religion, the reactions of Galenico-Islamic and modern medicines were different. While in the medieval period,

²⁰ For an account of changes undergone by Unani medicine see C. Liebeskind, "Unani Medicine of the Subcontinent", in Jan van Alphen, et al (eds.), *Oriental Medicine* (London: Serindia Publications, 1995), pp. 39-65.

²¹ See Foreword by Hakeem Abdul Hameed, to the book of Altaf Ahmad Azmi, *Basic Concepts of Unani Medicine: A Critical Study* (New Delhi: Hamdard Nagar, 1995).

²² On this question see H. Ebrahimnejad, "Religion and Medicine in Iran: From Relationship to Dissociation", *History of Science*, 2002.

Greek medicine, as an integral part of the Greek sciences, became involved in the formation of Islamic cosmology,²³ and therefore crossed through religion, in the 18th-19th centuries, modern medicine was opposed by Islamic orthodoxy and therefore its assimilation into the society necessitated its circumventing religion. The different relationship between religion and medicine in ancient and modern times is due to different worldviews. Dissection of the human body existed in both medieval Galenico-Islamic medicine and in modern anatomical pathological medicine as a principal method of understanding the body and its illnesses. However, this principle became a dead letter in Islamic medicine because for Islam the human body was sacred, and humans the noblest creatures of God. The situation was not much better in Christian countries. Surgery was markedly absent in Latin and Anglo-Saxon medical writings at the end of the first millennium.²⁴ Although bloodletting and bonesetting were current in the Byzantine Empire, surgery with a knife was not a major part of the Byzantine medical practice.²⁵ This was at the origin of the gap between theory and practice in Galenico-Islamic medicine, and accounts for the fact that Galenic medicine did not make progress throughout the medieval period in anatomy and pathology.

Modern medicine, on the other hand, posed the human body as an object of knowledge; it was not sacred any more and therefore could be dissected. The bookish nature of medical knowledge affected both medicine and surgery and many physicians read them in the books and never even attempted to practice; it was even said that Hippocrates himself was responsible for such a system as he asked his students to practice surgery and devoted his work to humoral medicine.²⁶ Most learned medical books, such as *Majma' al-javâme'* of 'Aqili (18th century), that contained large chapters on surgery, pharmacology and hospitals, were essentially based on theoretical knowledge and not practical anatomy.

²³ About the formation of Islamic cosmology, see S.H. Nasr, *An Introduction to Islamic Cosmological Doctrines* (Albany: State University of New York Press, 1993). About the integration of humoral medicine in the Islamic culture, for an anthropological study see Byron Good & Mary-Jo DelVecchio Good, "The Comparative Study of Greco-Islamic Medicine: The Integration of Medical Knowledge into Local Symbolic Contexts", in C. Leslie and A. Young (eds.), *Paths to Asian Medical Knowledge* (Berkeley, Los Angeles, Oxford: University of California Press, 1992), pp. 257-271.

²⁴ Audrey Meaney, "The Practice of Medicine in England about the Year 1000", *Social History of Medicine* 13.2 (2000), pp. 221-237; Klaus-Dietrich Fischer, "Dr Monk's Medical Digest", *Social History of Medicine* 13.2 (2000), pp. 239-251.

²⁵ Emilie Savage-Smith, "The Practice of Surgery in Islamic Lands: Myth and Reality", *Social History of Medicine* 13.2 (2000), pp. 307-321, p. 307.

²⁶ Anonymous Persian Manuscript on the establishment of hospitals, ca. 1865 (Tehran, Majel Library, MS 505).

Despite these contradictions between religion and modern medicine, however, they were absorbed by socio-political factors that underpinned the assimilation of modern medicine. The study of this question for all countries where Galenico-Islamic medicine was dominant at the turn of the 19th century falls out of the scope of this paper. The cases of Iran and India can illustrate this process.

In Iran, modern medicine was introduced into the country through state patronage. The Qājār elite in their endeavours to reinforce the central state needed to modernise the army and with it they introduced modern sciences and techniques without taking into account that they could come into conflict with Islamic tenets or with the religious establishments. Nevertheless, for the latter, the threat of modern sciences was not immediately felt. First because it was not widespread but limited to the activity of some court physicians and a few regiments, and secondly, the education of modern sciences was also limited in mid-nineteenth century to one state school, the Dâr al-Fonun. Moreover at the Dâr al-Fonun, both modern and traditional sciences were taught. Thirdly, the Qājār state was not under colonial domination and the education of modern sciences by the Europeans did not provoke a strong anti-Western reaction. Accordingly, despite the fact that socio-political movements in Iran were more influenced by the religious establishment than in India, Galenico-Islamic medicine did not become a political instrument against Western influence. We can better appreciate this point if we bear in mind that the basic medical education took place in the *madrasa* (Islamic college of theology) and that, as we have explained above, medicine was epistemologically linked to religion. The socio-political movements that developed towards the end of the nineteenth century were influenced by the religious establishment that aimed to make use of it to strengthen its power threatened by the centralisation of the Qājār state. Therefore, the opposition to modern Western medicine was not an ideological issue but the consequence of socio-political circumstances.

Furthermore, the Qajar state continued sponsoring traditional *tabibs* (physicians) after it employed also Western physicians at the court. This policy was due to the relatively strong presence of traditional medicine at the court. Even though there was a marked preference among the Qajar elite for Western medicine, this preference was not translated into any discriminative policy towards local traditional physicians. As modernization of medicine was part of the state building process, the local elites, including the court physicians,

participated in this modernization.²⁷ They were actively involved in the establishment of modern medical institutions, especially the military hospitals and sanitary councils. This institutional involvement of traditional court physicians favoured an intellectual environment that thwarted the formation of ideological opposition to modern medicine.

Moreover, within such institutional and intellectual contexts, traditional physicians did not find it necessary to seek religious justification for the practice of modern medicine. While in the medieval period, Galenic medicine was taken on board within the framework of the formation of Islamic scholarship in general, in the modern period, modern Western medicine was accepted and assimilated as such without going through religious or faith criteria.

In colonial India, on the other hand, the situation was different. The *Unâni* (or Greek) medicine was introduced into India since the twelfth century and it flourished especially under the Mughal emperors from mid sixteenth-century onward who also sponsored some emigrant Iranian physicians. The Mongol invasion and the destruction of the caliphate helped Persian to revive and become again the official language at many Islamic courts, including India. In general the patronage of physicians and the construction of hospitals by the Mughal princes was more extensive than in Iran. During the Mughal reign, some European physicians came to India during the seventeenth and eighteenth centuries and were also sponsored by the court. The Indian *hakims* became acquainted with some aspects of modern (clinical medicine). So far there was no fundamental opposition to Western modern ideas. The conflict began with the establishment of the British India government that favoured modern medicine but declined to support *Unâni tebb*. *Unâni* medicine continued to be taught at the Native Medical Institute in Calcutta until 1835 and at Lahore University up to 1907, and some *hakims* were also employed in the rural areas but these were not aimed at further developing *Unâni* medicine.²⁸

²⁷ On this question see Hormoz Ebrahimnejad, *Medicine, Public Health and the Qajar State: Patterns of Medical Modernization in Nineteenth-Century Iran* (Leiden, Boston: Brill, 2004).

²⁸ J.C. Hume, "Rivival Traditions: Western Medicine and Yunani Tibb in the Punjab, 1849-89", *Bulletin of the History of Medicine* 51 (1977): 214-231.

The end of state patronage was a bitter experience for the hakims who were traditionally sponsored by the Indian Sultans for several centuries. Consequently, in the eyes of local Hakims Western modern medicine was associated with colonial power and the opposition to modern Western medicine in India took far more a nationalist overtone and nature than in Iran.

Nevertheless, the anti-colonial stance of Unâni medicine and its revival especially during the Independence did not prevent the assimilation of modern medicine in India. In fact the Unâni medicine integrated elements of modern medicine in order to survive. Naturally this survival was only at the institutional level. It could not be theoretical because of the contradiction between anatomo-pathological medicine on the one hand and the Unâni medicine on the other. For this reason, this survival is more institutional than theoretical. Consequently, in such a move, Unâni medicine ignored its ideological links to religion, just as did the traditional Galenico-Islamic medicine in Iran in the process of its transition to modern medicine in the nineteenth and twentieth centuries.

Conclusion

Today, there are many discussions about the revival of traditional or alternative medicine and especially the role of religion in medical practice and in healing. The question of antagonism between religion and modern medicine is also considered an outdated issue, for anthropological or even conceptual reasons. No doubt sacred healing, whether genuine or opportunistic, used even in modern European societies,²⁹ should be studied as social and anthropological phenomena. It is, however, undeniable that, as this survey of the formation of Islamic medicine in this paper aims to show, there is no epistemological link between religion and modern medicine. Such a relationship was rather inherent in Galenico-Islamic medicine in that they were formed through parallel intellectual and ideological as well as socio-political processes. Setting aside theoretical issues, we can say that with modern sciences becoming pervasive in everyday life, unlike in the medieval period, it is no longer necessary or feasible to retain the relationship between religion and medicine or to justify the practice of modern medicine by reference to religion or tradition.

²⁹ In Russia, for instance, faith healing has become a flourishing practice despite the statistics showing that it has an extremely poor record, and in some cases has led to disaster.