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THE INFLUENCE OF ISLAMIC PHILOSOPHY AND ETHICS ON THE DEVELOPMENT OF MEDICINE IN THE ISLAMIC CIVILISATION

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Introduction

Although Islamic philosophy is of great diversity and richness, it is characterized by certain features that are of special significance for both an understanding of it and for an appraisal of its impact on the world at large.

One must remember that this philosophy existed at a time in which strict obedience of the Islamic religion was customary. Islamic philosophy was also concerned with the basic issue of the harmony between human reasoning and the revelations provided to the Muslims in the holy Qur'an. As a result, all sorts of sciences were studied in order to determine that relation between the universe and the human being, on one hand, and the creature of that universe, Allah, on the other hand.

The impact of Islamic philosophy on the scientific and medical activity in the lands of Islam was enormous. First and foremost, Islamic philosophy originates from a time when Islam had a great influence on everyday life. The mere fact that Islamic philosophy was able to operate in such a fundamentalist environment greatly effected the renaissance of intellectual activities, for it served as an example to the thinkers of that time – how to present new, radical ideas without angering religious fundamentalists, who were the church at that time. Without Islam's example, the Renaissance thinkers may have presented their ideas in a much more provocative form, setting them back hundreds of years due to widespread hate, distrust and non-acceptance of what people would perceive to be overly radical ideas.

Secondly, Islamic philosophy always leads to one main conclusion, that the power of Allah was supreme and that His words are the absolute Truth.

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Figure 1. Names and portraits of Greek physicians on the opening page of an Arabic medical manuscript written in the region of Mosul (Iraq) between 1220 and 1250. Source: David W. Tschanz, "History of Medicine: Arab Roots of European Medicine" (<http://www.hmc.org.qa/hmc/heartviews/H-V4%20N2/9.htm>).

Thirdly, many of the ideas of the European Renaissance philosophy are based on ancient Greek, Persian and Indian texts, which the Muslims translated, as well as the philosophy of the Muslims themselves. The Muslims were responsible for creating the foundation for the "building" of philosophy that the Renaissance thinkers would later "construct."

Finally, Islamic philosophy greatly encouraged science, particularly mathematics and medicine. Without philosophy's constant encouraging of scientific development, the large number of discoveries made by the Muslims may never have taken place.

I will take Medicine as an example and I will highlight the reasons of such good success of those Muslims in the field of Medicine. As medical ethics is one of the hottest issues in medicine these days, and ethics can be described as a sub-branch of applied philosophy that seeks 'what are the right and the wrong, the good and the bad set of behaviours in a given circumstance', I will shed some light on the influence of Islamic medical ethics on the advancement of medicine during that Islamic 'Golden Age'.

So, what are the factors behind the success of the Muslim scientists and how Islamic philosophy encouraged them to be leaders in many branches of science, especially in the medical sciences?

1. Islam and the Promotion of Science

As the Muslims challenged the civilized world at that time, they preserved the cultures of the conquered countries. On the other hand, when the Islamic Empire became weak, quite a lot of the Islamic contributions in art and science were destroyed. This was done by the Mongols who burnt Baghdad (1258 CE), and by the Spaniards in Spain. The teachings of Islam had played extensive roles in the promotion of science by:

1. Stressing the importance and respect of learning. For example, the first word revealed to Prophet Muhammad was "Read". In that time, a captured enemy was freed if he paid a ransom or taught ten Muslims writing and reading. In the Qur'an, the importance of knowledge has been repeatedly stressed. We read in it, for instance: "*Say (unto them, O Muhammad): Are those who know equal with those who do not know? (39-9)*". Prophet Muhammad stressed learning by saying: "*One hour of teaching is better than a night of praying.*"

2. The general philosophy in Islamic medicine is that the Healer is Allah and the doctor is the instrument that Allah uses to heal the people. The doctor-patient relationship is stronger in Islam than it is in modern medicine as he has responsibilities which he will be asked about them by Allah on the Day of Judgment. The relationship now is medical/legal; the emphasis has become one that has slipped into more materialism. Because the relationship between doctor and patient has become one that is based more on money than before, the level of trust has been decimated between the doctor and his patients.

3. There was no censorship in Islam on scientific research, be it academic to reveal the signs of Allah in His creation, or applied aiming at the solution of a particular problem. Freedom of scientific research should not cause harm to any human being or even subject him to definite or probable harm, with holding his therapeutic needs, defrauding him or exploiting his material need. On the other hand, scientific research shall not entail cruelty to animals, or their torture. Suitable protocols should be laid upon for the non-cruel handling of experimental animals during experimentation.

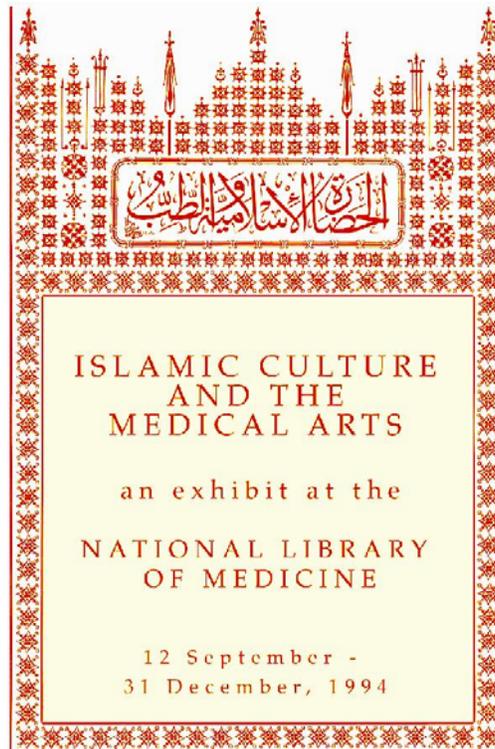


Figure 2. The On-line version of a brochure (by Emilie Savage-Smith, University of Oxford) that accompanied the exhibition in celebration of the 900th anniversary of the oldest Arabic medical manuscript in the Collections of the National Library of Medicine in 1994. Source: http://www.nlm.nih.gov/exhibition/islamic_medical/islamic_00.html#toc

4. Islam provides a basis for the protection and safeguarding of the human body as well as the spirit and seeks to prevent any hindrance to either body or soul. The Qur'an says: "*and whoever saves a life it would be as if he saved the life of all the people*" (5-32). Perhaps there is no better way to implement this concept than in the area of saving lives by transplanting donated organs to replace failing vital ones. It is in this sense that the *hadith* of the Prophet states: "*Whoever helps a brother in difficulty, God will help him through his difficulties on the Day of Judgment.*"

5. Islam developed in Muslims the respect of authority and discipline. For example, realizing the scourges and terror of plague, the Prophet Muhammad decreed that "*No man may enter or leave a town in which plague broke out.*" And to make this law all the more binding and effective, he promised the blessing of heaven to those who die of plague by stating that if a man died of plague he would be considered a martyr.

6. Islam tolerated other religions. The Islamic religion recognizes Christianity and Judaism and considers their followers to be people with holy books like Muslims. Moreover, they candidly treated the Jews at an era when the latter were persecuted in Europe. Dr. Jacob Minkin, a reputable Rabbi and scholar says: "It was Mohammadan Spain, the only land of freedom the Jews knew in nearly a thousand years of their dispersion. While during the Crusades, the armoured Knights of the Cross spread death and devastation in the Jewish communities of the countries through which they passed, Jews were safe under the sign of the Crescent." They were not only safe in life and possessions, but were given the opportunity to live their own

lives and develop a culture. So, there were many Christian and Jewish physicians who contributed in the Islamic renaissance (e.g. Jibrā'il Ibn Bakhtishū'e , Yūhannā Ibn Māsawayh, Ishāq Ibn Hunayn and Ishāq Ibn Mūsā). They were part of that 'Golden Age'.

2. The Attitude and Contribution of the State

The Islamic empire in the early 8th century was the inheritor of the scientific tradition of late antiquity. It preserved it, elaborated it, and finally passed it to Europe. At this early date, the Umayyad dynasty showed an interest in science. It was the era of Dark Ages for Europe, but for the world of Islam the centuries from the 8th onwards were the time of intense philosophical and scientific discoveries and achievements. The Arab-Islamic civilisation at the time not only assimilated the ancient wisdom of Persia and the classical heritage of Greece, but adapted their own distinctive needs and ways of thinking.

One of the early Umayyad princes, Khālid Ibn Yazīd (end of the 7th century), gave up his treasure for the study of medicine and chemistry. It is reported that he studied medicine under John the Grammarian of Alexandria, and chemistry under Merrinos the Greek. He also encouraged several Greek and Coptic medical books to be translated into Arabic.

During the 8th and 9th centuries, the Abbasid Caliphs encouraged the Christian and Muslim scholars to translate into Arabic the medical knowledge and built medical centres in Baghdad, the capital of their empire. With further expansion east, the Arabs through contacts with India and China, brought ideas and methods, not only in medicine, but also in mathematics, chemistry, philosophy, etc.

3. Characteristic Features of Hospitals in the Islamic Civilization

The Muslims developed what would become the world's first hospitals. They eventually constructed 34 of these hospitals throughout their empire. These hospitals had different wards for the treatment of various diseases, special quarters for the insane, outpatient departments for the treatment of minor injuries and dispensaries, which provided virtually every kind of remedy then known.

These hospitals had specific characteristics:

a. Secular: Hospitals served all peoples irrespective of colour, religion, or background. They were run by the government, and their Directors were commonly physicians assisted by persons who had no religious colour. In hospitals, physicians of all faiths worked together with one aim in common: the well-being of patients.

b. Separate wards and nurses: Patients of different sexes occupied separate wards. Also different diseases, especially infectious ones, were allocated different wards. Male nurses were to take care of male patients, and female nurses were to take care of the female patients.

c. Proper records of patients: For the first time in history, these hospitals kept records of patients and their medical care.

d. Baths and water supplies: Praying five times a day is an important pillar of Islam. Sick or healthy, it is an Islamic obligation; of course physical performance depends on one's health, even he can pray while lying in

bed. Therefore, these hospitals had to provide the patients and employees with plentiful of clean water supply and with bathing facilities.

e. Practicing physicians: Only qualified physicians were allowed by law to practice medicine. In 931 CE, the Abbasid Caliph al-Muqtadir ordered the Chief Court-Physician Sinān Ibn-Thābit to screen the 860 physicians of Baghdad, and only those qualified were granted license to practice.

It is worth mentioning also that the physicians in that era earned a high prestige. Although anyone, irrespective of his social status, can study medicine, yet the route was long and tedious. He had to finish religious studies, philosophy, astronomy, art, chemistry, etc. before being accepted as a medical student. Therefore, the physician was an educated person who had wisdom and knowledge. In fact, the Arabic translation of a physician is *hakīm*, which means sage, wise. In the 9th and 10th centuries, the Court-Physician was in the protocol ahead of the Chief-Justice. Many eminent physicians, as we will discuss later, showed enough talent, social knowledge, political capabilities, and wisdom to be appointed by the Caliphs as Prime Ministers. Owing to the high prestige and connections of physicians, generous funds for hospitals were easily obtained.

f. Medical Regulation: Before the Muslims, medicine had been an unregulated profession, where one could easily fall into the hands of an unqualified doctor. However, the Muslims' introduction of regulation ensured that all doctors were qualified. Prophet Muhammad said: "*He who practices medicine and is not therein versed is deemed like a guarantor*". The regulations also ensured that doctors did not cheat their patients when it came to drug composition. The concept of medical regulation affected the Renaissance's physicians for it set an example for them, leading them to found various medical associations and guilds for the purpose of regulating their profession too. Hence, one could say that the Muslims' regulation of medicine lead to a safer and more professional medical institution during the Renaissance, which doubtlessly saved countless lives that would have been lost due to medical incompetence.



Figure 3. Miniaturised pages of a treatise of surgery that the Ottoman physician Sharaf Ed-Din wrote around 1465. Source: <http://www.bium.univ-paris5.fr/aspad/expo51.htm>.

g. Medical schools: The hospital was not only a place for treating patients, but also for educating medical students, interchanging medical knowledge, and developing medicine as a whole. To the main hospitals, there were attached expensive libraries containing the most up-to-date books, auditoria for meetings and lectures, and housing for students and house-staff.

h. Rulers' involvement in building hospitals: The Caliphs of the Islamic empire built magnificent hospitals for religious reasons, as Islam teaches that money spent on charity is a good investment for Judgment Day; and for political reasons when they showed their people that they cared, and were interested in them. Whatever the motive of the ruler, the population benefited and good hospitals were established.

i. Adequate financing to run the hospitals: The rulers set aside generous funds to run these hospitals. There was a special system called *al-Waqf* (charitable endowment). A person can donate part or all of his wealth to charity. The government takes care of such a donation, and its revenues help to maintain and build mosques, hospitals, and schools. Another source of funds and an important pillar of Islam is *al-Zakāt* (2.5% of property value).

Thus, the main hospitals of the Islamic civilisation were models for medieval hospitals built later in Europe. They were rather medical schools to which those seeking advanced medical knowledge, from the East or West, attended.

4. Muslim Physicians

Medicine in the Islamic civilisation passed through three stages:

1. The first stage is the stage of translation of foreign sources into Arabic. It extended mainly during the 7th and 8th centuries.
2. The second stage is the stage of excellence and genuine contribution in which the Islamic physicians were the leaders and the source of new chapters to medicine. This stage extended during the 9th through the 13th centuries.
3. The third stage, after the 13th century, is the stage of decline where medicine, as well as other branches of science, became stagnant and deteriorated.

During the first stage, Syrian and Persian scholars did a marvellous job by translating honestly the ancient literature from Greek and old Syriac into Arabic. They translated different branches of science including philosophy astrology, and medicine. The works of Hippocrates, Aristototle and Galen were among those translated from Arabic, the classic Greek literature was later translated into Latin, after that some important Greek original sources were lost but preserved only in Arabic translation. If the Arabs did only one thing, namely, preserving the ancient literature and handing it honestly to Europe, that would have been a sufficient contribution in itself. The Muslim rulers encouraged translation, e.g. Caliph Al-Ma'mūn Al-'Abbassi paid the translator the weight of his translation in gold. Among the eminent physicians who took part in the first stage were Jurjīs Ibn-Bakhtishū', his grandson Jibrāīl, Yuhannā Ibn-Māsawaih, and Hunayn Ibn-Ishāq. Most of them were Christians, yet they were respected and well treated by the Muslem rulers.

5. The impact of some Muslim physicians

- Al-Rāzī (Rhazes) was said to have written more than 200 books, with 100 books on medicine alone. Al-Rāzī's work had a significant impact on the Renaissance. Firstly, al-Rāzī's discovery of smallpox was the first

differentiation of a specific disease from many eruptive fevers that assailed man. His methods of differentiation were to be utilized by the physicians of the Renaissance when they attempted to do the same with other diseases hundreds of years later. Additionally, his treatise of smallpox was used by Renaissance physicians to treat cases of this disease throughout the Renaissance, saving countless lives. His works on hygiene set an example that Renaissance physicians followed and attempted to improve on. The result was medical procedures that were much more hygienic, again saving countless lives that would have been lost through infection. Finally, his monumental book encyclopaedia *Al-Hāwī* offered striking insights for its time, and it had a huge impact shaping European medicine during the Renaissance and later on.

- Ibn Sīnā (Avicenna) was honored in the West with the title of the '*Prince of Physicians*'. Ibn Sīnā's works also had a significant impact on the Renaissance. Firstly, his *Canon of Medicine* was the most widely studied work of medicine in Europe from the 12th to the 17th century. It also served as a chief guide to medical science in European universities. Needless to say, the impact of this book on Renaissance science was enormous, as it was a major source of medical information. Ibn Sīnā's discovery that certain diseases could be spread through water and soil affected the research of many Renaissance physicians. Since they knew how the disease was transmitted, it made their job of finding cures for diseases much easier. It also provided a base for their studies into how disease was spread.



Figure 4. Latin translation of Ibn Sīnā's *al-Qānūn fit'tibb: Liber Canonis* (around 1320). Source: <http://www.bium.univ-paris5.fr/aspad/expo51.htm>

- Ibn Al Nafīs discovered the pulmonary circulation which was re-discovered by modern science after a lapse of three centuries. He was the first to correctly describe the constitution of the lungs and gave a description of the bronchi and the interaction between the human body's vessels for air and blood. Also, he elaborated the function of the coronary arteries as feeding the cardiac muscle.
- Al-Zahrāwī (Abulcasis): The Spanish-born Muslim in the 10th century who wrote about the science of surgery. He was able to perform remarkably complex operations for his time, including cranial and vascular surgery, operations for cancer, delicate abdominal surgery involving the use of drainage tubes, and the amputation of diseased arms and legs.
- Ibn Juljul of Cordoba in 943 became a leading physician at the age of 24. He compiled a book of special drugs found in al-Andalus.
- Ibn-Māsawayh wrote the oldest systematic treatises on ophthalmology. The book, titled *al-'Ashr Maqālat fi al-'ayn* (the Ten Treatises on the Eye), was the earliest existing text book of ophthalmology.

In the curative use of drugs, some amazing advances were made by the Muslims. They established the first apothecary shops, and founded the earliest school of pharmacy.

The Muslims were also one of the first people to use anesthetics to render patients unconscious.

6. Medical Ethics in Islam

Specific works written by Muslim physicians on the subject of ethics and medicine include the substantive works written in the 9th and 10th centuries by 'Alī al-Tabarī and Ishāq al-Ruhawī on medical ethics.

The medical profession was a well respected specialty and its leaders kept it this way by laying down proper ethics. Ishāq ibn 'Alī al-Ruhawī (d. ca 940 CE) wrote a book entitled *Adab al-tabīb* or 'The Ethics of the Physician'. His predecessor 'Alī ibn Rabbān at-Tabarī (d. ca. 850s or early 860s), who was chief physician, described also the Islamic code of ethics in his book *Fardous al-Hikma* (The Paradise of Wisdom), stressing on good personal characters of the physician, the physician's obligations towards his patients, community and colleagues. He stated:

"The physician should be modest, virtuous and merciful... He should wear clean clothes, be dignified, and have well-groomed hair and beard.... He should select his company to be persons of good reputation... He should be careful of what he says and should not hesitate to ask forgiveness if he has made an error... He should be forgiving and never seek revenge... He should be friendly and a peacemaker.... He should avoid predicting whether a patient will live or die, only Allah knows... He ought not to lose his temper when his patient keeps asking questions, but should answer gently and compassionately... He should treat alike the rich and the poor, the master and the servant God will reward him if he helps the needy... He should be punctual and reliable... He should not wrangle about his fees. If the patient is very ill or in an emergency, he should be thankful, no matter how much he is paid... He should not give drugs to a pregnant woman for an abortion unless necessary for the mother's health. ...He should be decent towards women and should not divulge the secrets of his patients... He should speak no evil of reputable men of the

community or be critical of any one's religious belief... He should speak well of his colleagues... He should not honour himself by shaming others..."

So, although bioethics took birth and developed in the western world, consequently most of the philosophical bases of bioethics are derived from concepts of eastern philosophies. In the last 25 years, the Islamic world has felt the need to introduce courses in Islamic bioethics in order to study the Islamic ethics in the medical field which has been established hundreds of years ago and also to appreciate what Islamic law (*sharia*) has to say about the predominant bioethical issues (informed consent, abortion, IVF, euthanasia, and organ transplantation, and many others). It is essential that one is introduced to the tenets of Islamic legal philosophies and theories.

At the end of this article, it is worth mentioning that the First International Conference on Islamic Medicine held in Kuwait in January 1981 published the oath of Muslim doctor which says :

I swear by God... The Great... To regard God in carrying out my profession... To protect human life in all stages and under all circumstances, doing my utmost to rescue it from death, malady, pain and anxiety.. To keep peoples' dignity, cover their privacies and lock up their secrets ... To be, all the way, an instrument of God's mercy, extending my medical care to near and far, virtuous and sinner and friend and enemy... To strive in the pursuit of knowledge and harnessing it for the benefit but not the harm of mankind... To revere my teacher, teach my junior, and be brother to members of the Medical Profession... and to join in piety and charity... To live my Faith in private and in public, avoiding whatever blemishes me in the eyes of God, His Apostle and my fellow Faithful... And may God be witness to this Oath.

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